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 11138/1
Permit type:	Purpose permit
Applicant name:	Lucid Carbon Pty Ltd
Application received:	14 June 2025
Application area:	29 hectares of native vegetation
Purpose of clearing:	Irrigated fodder production
Method of clearing:	Mechanical
Property:	Lot 33 on Deposited Plan 238058
Location (LGA area/s):	Shire of Murchison
Localities (suburb/s):	East Murchison

1.2. Description of clearing activities

Lucid Carbon Pty Ltd is proposing to undertake the clearing of native vegetation within Lot 33 on Deposited Plan 238058, East Murchison. The clearing is proposed to facilitate irrigated fodder production. The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5).

1.3. Decision on application

Decision:	Refused
Decision date:	8 September 2026
Decision area:	29 hectares (see Figure 1, Section 1.5)

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 28 days and no submissions were received.

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

- the site characteristics (see Appendix B),
- relevant datasets (see Appendix F.1),
- a Department of Primary Industries and Regional Development (DPIRD) assessment (see Section 3.2.1),
- 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 land degradation advice given by DPIRD via the office of the Commissioner of Soil and Land Degradation (CSLC).

In particular, the Delegated Officer considered the CSLC's advice (2025; 2026a; 2026b) that:

- The proposed clearing and proposed end land use, is likely to present an extreme risk of land degradation resulting from secondary salinity due to the soil type and brackish groundwater proposed to be used for irrigation,
- The application area falls within the Belele Land System and soil mapping has indicated that the area consists of shallow red-brown soils (20-100 cm deep) over a siliceous hardpan of 1-20m deep that is likely to restrict drainage,
- Other similar horticultural development within the region, on similar soil types, have been proven to be unsustainable, noting that irrigation with brackish (800mg/l) groundwater has resulted in gradual concentration of salts above the underlying hardpan causing surface scalds within 10 years of development,
- Insufficient information and management measures regarding the restrictive drainage due to the presence of rock (red-brown hardpan).

After consideration of the available information and the CSLC advice, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is likely to lead to appreciable land degradation in the form of secondary salinity and cannot be appropriately minimised and managed through the avoidance and mitigation measures proposed by the applicant.

Given this, the Delegated Officer determined that the risk of appreciable land degradation resulting from the proposed clearing represents an unacceptable risk to the environment and that it would not be appropriate to manage this environmental impact through conditions on a clearing permit. Consequently, the Delegated Officer decided to refuse Lucid Carbon Pty Ltd's application.

1.5. Site map

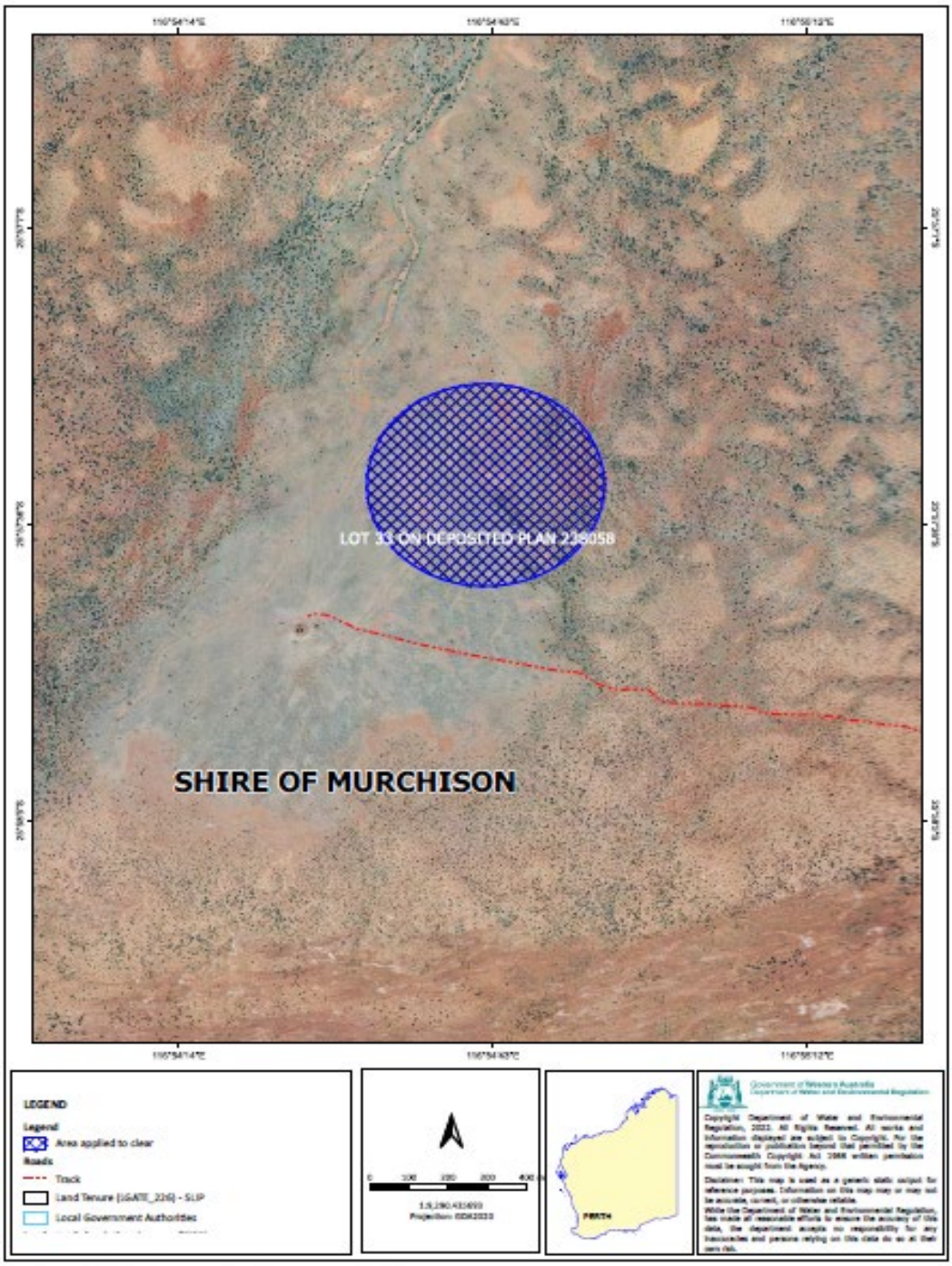


Figure 1 Map of the application area

2 Legislative context

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

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

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)
- *Soil and Land Conservation Act 1945* (WA) (SLC Act)

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)
- *Soil and Land Conservation Regulations* (1992)

3 Detailed assessment of application

3.1. Avoidance, minimisation and mitigation measures

Lucid Carbon have advised the following avoidance, minimisation and mitigation measures for the application (Lucid Carbon, 2025):

- Avoided more dense vegetation areas, the proposed site has minimal perennial vegetation,
- Nearby (ephemeral) creek line to the west has been avoided and the Murchison River has been avoided (to the south),
- Initial proposal for 120 hectares of irrigation (3 x 40 hectare pivots) has now been staged to ensure impacts are monitored and managed, or avoided, if necessary,
- Current proposal is for Stage 1, 20 hectares of pivot irrigation plus 9 hectares of infrastructure clearing. Subject to the outcomes of Stage 1, including groundwater and agronomic/soils monitoring, Stage 2 applications will be submitted,
- Potential for weed spread from the irrigated field will be limited by the shortage of surface water in surrounding areas which limits germination of seeds, and
- Site rehabilitation, returning to current condition, will be undertaken if and when required.

After a request for further information, Lucid Carbon have proposed the additional avoidance, minimisation and mitigation measures for the application area in the form of a Salinity Management Plan (SMP) (Cygnium, 2026a):

- Confine the centre-pivot footprint to where surface elevation is highest (347–349 metres AHD) and the sandy profile is equal to 1.3 metres. This avoids the lower-lying south-west of the surveyed area and minimises the volume of subsoil salt store underlying the irrigated footprint,
- Exclude Sites 2, 16, 17 and 18 (shallow soils, depth to rock 70–90 centimetres) from the pivot envelope. These zones have insufficient soil depth to safely host deep-drainage management and will be retained as native vegetation/pasture,
- Relocate pivot to area indicated in Figure 2, centred on position coordinates 25.960384S 116.909458E, avoiding shallower depth to rock and higher pH areas,
- Comply with any groundwater licence conditions imposed by DWER in relation to the proposed 300,000 water licence, including those relating to water quality.,
- Centre-pivot design with low-pressure drops to minimise spray evaporation and improve application efficiency to 85 per cent,
- Soil-moisture-triggered irrigation scheduling using a network of moisture probes. The schedule will be designed to maintain root-zone moisture within 50–90 per cent of plant-available water and to limit deep drainage,
- Cropping sequence biased to species which extract water from the full 1.5m profile and minimise drainage past the rooting zone. Advice from a qualified agronomist will be sought,
- Select salinity- and acidity- tolerant species (e.g. Rhodes Grass), and
- Lime application as recommended in CSBP interpretation reports, with maintenance of soil pH to within the target range, to support root development and soil structural stability.

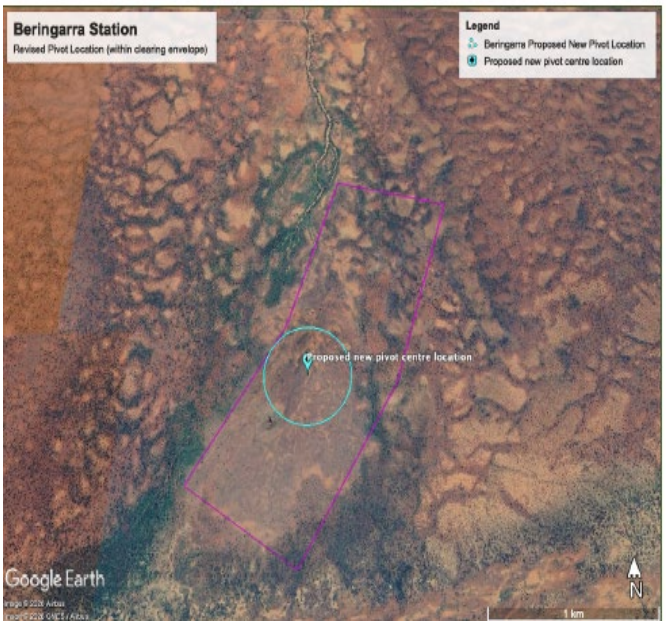
Lucid Carbon Pty Ltd (Cygnium, 2026b) provided further additional minimisation and management measures:

- Seek to implement desalinisation, supplemented by natural dilution arising from rainfall recharge events so that the TDS align with the brackish water threshold of 800 mg/L. Compliance will be verified using automated Electrical Conductivity (EC) data loggers and telemetry,
- Committed to deficit irrigation (no greater than 110% of crop evapotranspiration) and soil-moisture-triggered scheduling, specifically to minimise deep drainage below the rooting zone,
- Relocation of centre pivot to better drained soils,
- The moisture probe network limits profile saturation, noting standing water level at the Eranninie production of approximately 6-7 metres.

Based on the above response and advice received from CSLC (2025; 2026a; 2026b) (see Section 3.2.1), the Delegated Officer was not satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing and end land use on land degradation.



Original pivot site location



Proposed relocated pivot

Figure 2. Original pivot location and the proposed pivot relocation as advised in the SMP (Cygnium, 2026a)

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 will significantly impact 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. Land and water resources (land degradation) - Clearing Principle (g)

Assessment

The soil within the application area is mapped as Belele System (272Be) which is described as depositional surfaces, almost flat alluvial plains with water and wind modified broad banks of aeolian sand. Hardpan plains subject to sheet wash passing around Wanderrie banks and sand patches which are mainly transverse to the direction of flow but also oblique or elongated downslope and forming connected patterns locally. Central drainage tracts receiving concentrated flow (CSLC, 2025). Soils within the application area are likely to be red-brown hardpan soils (shallow to moderately deep 20-50 centimetres) and sands or loams overlying siliceous hardpan.

An assessment was undertaken by CSLC (2025) to assess the land degradation impacts of the proposed clearing. It was advised that the siliceous hardpan of 1-20 metres deep is likely to restrict drainage. It was noted that other similar horticultural development within the region, on similar soil types, have been proven to be unsustainable, noting that irrigation with brackish (800mg/L) groundwater has resulted in gradual concentration of salts above the underlying hardpan causing surface scalds within 10 years of development. As a result, the CSLC (2025) advised that the proposed clearing and the subsequent landuse is likely to cause appreciable land degradation in the form of secondary salinity.

As a result of this advice, further information in the form of a detailed soil investigation, carried out by a soil scientist, to determine the depth of soil over the red-brown hardpan, plus details of proposed management measures to

mitigate the risk of extreme land degradation was requested from the applicant. The applicant was advised that the soil investigation must include site specific information on:

- Soil texture of the site.
- The depth of the sandy top layer and claypan, if present. A sandy layer of at least 1.5 to 2 metres above the claypan is necessary.
- Slope of the land – Ideally the slope of the site should be 0.5-1% and no more than 2 % after which there is likely to be a risk of soil erosion; and
- Proposed avoidance, mitigation and management measures to reduce risk of salinity, including a vigorous salinity monitoring plan that includes frequent soil sampling and analysis.

In response to this request, the applicant commissioned a detailed soil investigation and provided a Salinity Management Plan that outlined management measures to mitigate the land degradation risks. The applicant has proposed the following:

- Confine the centre pivot footprint to where elevation is the highest
- Relocate pivot area to avoid shallow soils and sub-soil salt store,
- Comply with any groundwater licence conditions imposed by DWER in relation to the proposed 300,000 water licence, including those relating to water quality,
- Centre-pivot design with low-pressure drops to minimise spray evaporation and improve application efficiency to 85 per cent,
- Soil-moisture-triggered irrigation scheduling using a network of moisture probes. The schedule will be designed to maintain root-zone moisture within 50–90 per cent of plant-available water and to limit deep drainage,
- Cropping sequence biased to species which extract water from the full 1.5m profile and minimise drainage past the rooting zone. Advice from a qualified agronomist will be sought,
- Select salinity- and acidity- tolerant species (e.g. Rhodes Grass),
- Lime application as recommended in CSBP interpretation reports, with maintenance of soil pH to within the target range, to support root development and soil structural stability, and
- Implementation of desalination to achieve water applied to crops at average of 800mg/L.

After a review of this information and further advice from the CSLC (2026a; 2026b), it is considered that:

- The provided soil data was only to a depth of up to 1.5m in some places and therefore is insufficient to determine if a suitable sandy layer of at least 1.5 to 2 metres above the claypan occurs within the application area;
- The risk of increasing salinity on drawdown and the risk of secondary salinity is still present even with the proposed management measures given the uncertainty of the depth to claypan within the application area;
- The implementation of desalinisation to address water quality issues would require a submission of an Intent to Pump under s5(1) of the *Soil and Land Conservation Regulations 1992*; and
- Implementation of desalinisation to achieve 800mg/l TDS is still likely to result in secondary salinity given the potential presence of a shallow claypan within the application area.

Given the above, the Delegated Officer determined the risk of appreciable land degradation risks remain high.

Conclusion

Based on the above assessment, the proposed clearing will result in an extreme risk of land degradation resulting from secondary salinity. For the reasons set out above, it is considered that the risk of appreciable land degradation is unlikely to be reduced through onsite mitigation measures currently proposed or permit conditioning. Given this, the Delegated Officer determined that the risk of appreciable land degradation resulting from the proposed clearing represents an unacceptable risk to the environment.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on DWER's website on 30 July 2025, inviting submissions from the public within a 21-day period. No submissions were received.

The application area is located within the Gascoyne Groundwater Area proclaimed under the RIWI Act. Advice received from DWER's Mid-West Licencing branch indicates the applicant does not hold any groundwater or surface water licences, 5C to take water or 26D to construct any new water supply bores (DWER, 2025). It was also advised that the water quality levels of 1100mg/L TDS proposed to be used for irrigation purposes are at the upper levels of irrigated water quality, and consultation with DPIRD was recommended (DWER, 2025).

Additional advice received from DWER's Mid-West Licencing branch indicated that the applicant was required to complete a H1-level hydrogeological assessment to progress the assessment for a licence. It was advised that this remained outstanding (DWER, 2026).

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

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
A response to the departments ITR letter dated 29 August 2025	See Section 3.1
A SMP was submitted on the 22 May 2026	See Section 3.1
A response to the departments second ITR letter dated 9 July 2026	See Section 3.1

Appendix B. Site characteristics

B.1. Site characteristics

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

Characteristic	Details
Local context	The application area is a 29-hectare patch of native vegetation in the intensive land use zone of Western Australia. It is adjacent to the Murchison River and surrounded by intact remnants of native vegetation and agricultural land. The local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 99.99 per cent of the original native vegetation cover.
Ecological linkage	The application area does not intersect any formally mapped ecological linkages.
Conservation areas	No conservation areas are mapped within the application area. The closest conservation area is Muggon National Park which is located approximately 12.3 kilometres southwest of the application area.
Vegetation description	The desktop assessment and a photograph supplied by the applicant indicates the vegetation within the application area consists of sparse low woodland. This is mostly consistent with the mapped vegetation types: • Beard 29, which is described as sparse low woodland; mulga, discontinuous in scattered groups (Shepherd et al, 2001), • Beard 183, which is described as low woodland; mulga, *Acacia victoriae* and snakewood (Shepherd et al, 2001). The mapped vegetation types retain approximately 99.94 and 100 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the application area is in Good to Degraded (Keighery, 1994 –) condition.

Characteristic	Details
	The full Keighery (1994) condition rating scale is provided in Appendix D.
Climate and landform	The application area is a predominantly a flat plain (approximately 350 AHD) with annual mean rainfall of 200-250 mm.
Soil description	The soil within the application area is mapped as: • Belele System (272Be) which is described as a hard pan wash plains with *Acacia* tall shrublands, and low sandy banks supporting shrubland with wanderrie grasses
Land degradation risk	The soils within the application area are mapped as having an extreme risk of secondary salinity (DPIRD, 2025).
Waterbodies and hydrogeography	The desktop assessment and aerial imagery indicated that the application area is adjacent to the Murchison River. The application area is located within the Gascoyne Groundwater area which is proclaimed under the RIWI Act. Groundwater salinity within the application area is mapped at 3000-7000 milligrams per total dissolved solids.
Flora	The desktop assessment identified that two conservation significant flora species have been recorded within the local area, both being priority flora species (Western Australian Herbarium, 1998-). None of these existing records occur within the application area, with the closest record being an occurrence of *Ptilotus lazaridis* approximately 6.9 kilometres from the application area. With consideration for the relevant datasets (see Appendix F.1), the habitat preferences and conservation statuses of the aforementioned species, the distribution and extent of existing records, the application area is unlikely to provide significant habitat for threatened or priority flora species.
Ecological communities	The desktop assessment identified that there are no conservation significant ecological communities within the application area. The closest mapped ecological community is the Mount Dugal/Mount Nairn Vegetation Complexes (banded ironstone formation) which is listed as a Priority 1 ecological community (PEC) by DBCA in Western Australia, which is located 4.02 kilometres north of the application area. With consideration for the site characteristics and relevant datasets (see Appendix F.1), the application area is not considered likely to contain vegetation representative of a Threatened Ecological Community (TEC) or PEC.
Fauna	The desktop assessment identified that three conservation significant fauna species have been recorded within the local area including one threatened fauna species, one priority fauna species and one specially protected fauna species. None of these existing records occur within the application area, with the closest being an occurrence of *Falco peregrinus* approximately 8.9 kilometres from the application area. With consideration for the site characteristics set out above, relevant datasets (see Appendix F.1) and the habitat preferences of the aforementioned species, the application area is unlikely to provide significant habitat for conservation significant fauna species.

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	28120586.77	28044823.42	99.73	2185987.96	7.77
Vegetation complex					
Beard vegetation association 29*	2956382.06	2955695.34	99.98	93019.80	3.15
Beard vegetation association 183*	148868.60	148868.60	100	-	-
Vegetation complex in IBRA bioregion					
Beard vegetation association 29*	7903991.45	7898973.24	99.94	297087.90	7.81
Beard vegetation association 183*	369231.79	369231.79	100	110125.85	49.97
Local area					
20km radius	138615.86	138615.86	100	-	-

*Government of Western Australia (2019)

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: The application area is unlikely to contain locally or regionally significant flora, fauna, habitats, or assemblages of plants.	Not likely to be at variance	No
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The application area is unlikely to contain significant habitat for conservation significant fauna.	Not likely to be at variance	No
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The application area is unlikely to contain habitat for threatened flora species.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 application area is unlikely to contain species that can indicate a TEC.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. 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: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the application area, the proposed clearing is not growing in an environment associated with a watercourse or wetland.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: Advice from the CSLC (2025; 2026a, 2026b) is that the proposed clearing is likely to cause appreciable land degradation in the form of secondary salinity. Given that the proposed management measures are insufficient to mitigate the significant residual impacts, it is considered that the proposed clearing is 'at variance' with this principle.	At variance	Yes
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.	Not likely to be 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 a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from

Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

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

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

Appendix E. Photographs of the vegetation and SMP excerpts (Cygnium, 2025; 2026)



Figure 3. View south towards the Murchison River from the north of Stage 1 pivot area (Cygnium, 2025)

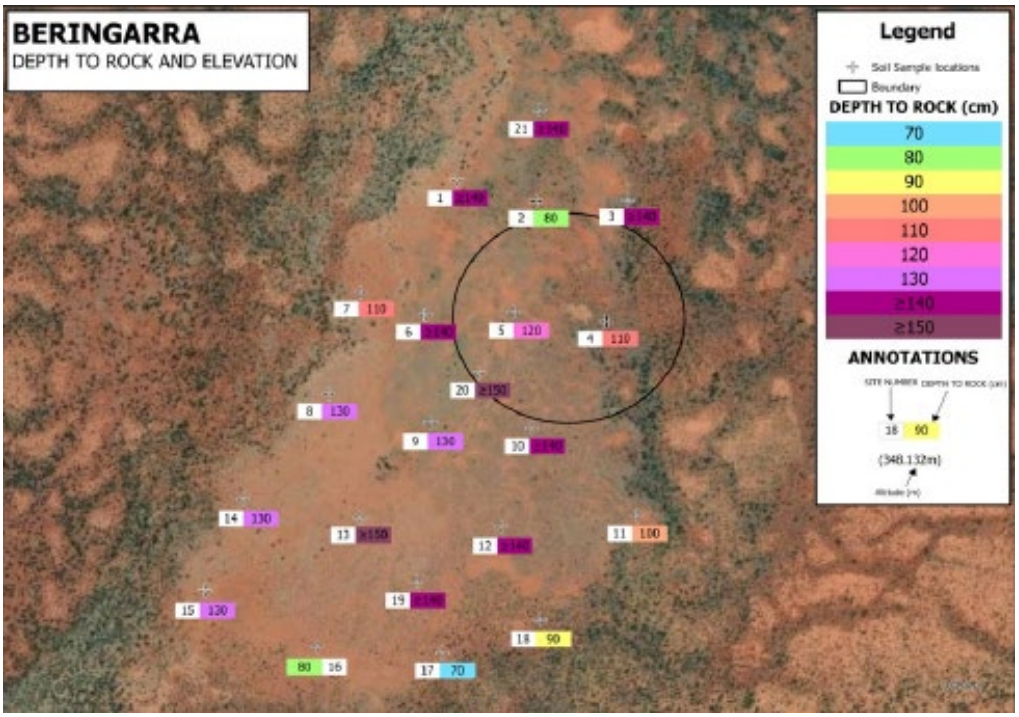


Figure 4. Soil test sites and depth to rock, showing the original pivot location (Cygnium, 2026a)

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)
- 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)
- 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

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)

F.2. References

Commissioner of Soil and Land Conservation (CSLC) (2025) *Land Degradation Advice and Assessment Report for clearing permit application CPS 11138/1,* received 11 August 2025, Department of Primary Industries and Regional Development, Western Australia (DWER Ref: DWERDT1176365).

Commissioner of Soil and Land Conservation (CSLC) (2026a) *Additional advice from Buddy Wheaton for clearing permit application CPS 11138/1*, received 3 July 2026. Department of Primary Industries and Regional Development, Western Australia (DWER Ref: DWERDT1355366).

Commissioner of Soil and Land Conservation (CSLC) (2026b) *Additional advice from Buddy Wheaton for clearing permit application CPS 11138/1*, received 12 August 2026. Department of Primary Industries and Regional Development, Western Australia (DWER Ref: DWERDT1376499).

Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.

Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.

Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development.* Government of Western Australia. URL: https://maps.agric.wa.gov.au/nrm-info/ (accessed 30 July 2025).

Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2025) *Rights in Water and Irrigation Act 1914. Advice for clearing permit application CPS 11138/1*, received 14 August 2025 (DWER Ref: DWERDT1180966).

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2026) *Rights in Water and Irrigation Act 1914. Additional advice for clearing permit application CPS 11138/1*, received 2 July 2026 (DWER Ref: DWERDT1353994).

Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019.* WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

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