GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9080/1
Permit Holder:	Shire of Coolgardie
Duration of Permit:	From 24 October 2021 to 24 October 2026

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 expansion and development of Coolgardie Waste Facility.

2. Land on which clearing is to be done

Lot 501 on Deposited Plan 255090 (Crown Reserve 3497), Coolgardie

3. Clearing authorised

The permit holder must not clear more than 24.7 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

PART II – MANAGEMENT CONDITIONS

4. 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.

5. Weed management

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

(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 during *clearing* activity;

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

(d) at least once in each 12-month period, the permit holder must remove or kill any *weeds* growing within areas cleared under this permit.

6. Directional clearing

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

PART III - RECORD KEEPING AND REPORTING

7. 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 direction of clearing; (e) the size of the area cleared (in hectares); (f) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 4; and (g) actions taken to minimise the risk of the introduction and spread of *weeds* in accordance with condition 5.
2.	In relation to weed management pursuant to condition 5(d)	(a) Record the date(s) the permit holder killed or removed any *weeds* growing within areas cleared under this permit and, (b) the species composition, and density of

No.	Relevant matter	Specifications
		any *weeds* killed or removed under this permit. (c) Record the location were *weed* control activity was carried out, pursuant to condition 5(d), 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.

8. Reporting

(a) The permit holder must provide to the *CEO*, on or before 31 December of each calendar year, a report containing:
   i. The records required to be kept under condition 7; and
   ii. Records of activities done by the permit holder under this permit between 1 July of the preceding calendar year and 30 June of the current calendar year.

(b) If no *clearing* authorised under this permit has been undertaken, a written report confirming that no *clearing* under this permit has been undertaken, must be provided to the *CEO* on or before 31 December of each calendar year.

(c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to expiry date of the permit, a written report of records required under condition 7, where these records have not already been provided under condition 8(a).

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/s	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.
EP Act	*Environmental Protection Act 1986* (WA)
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
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

30 September 2021

Schedule 1

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

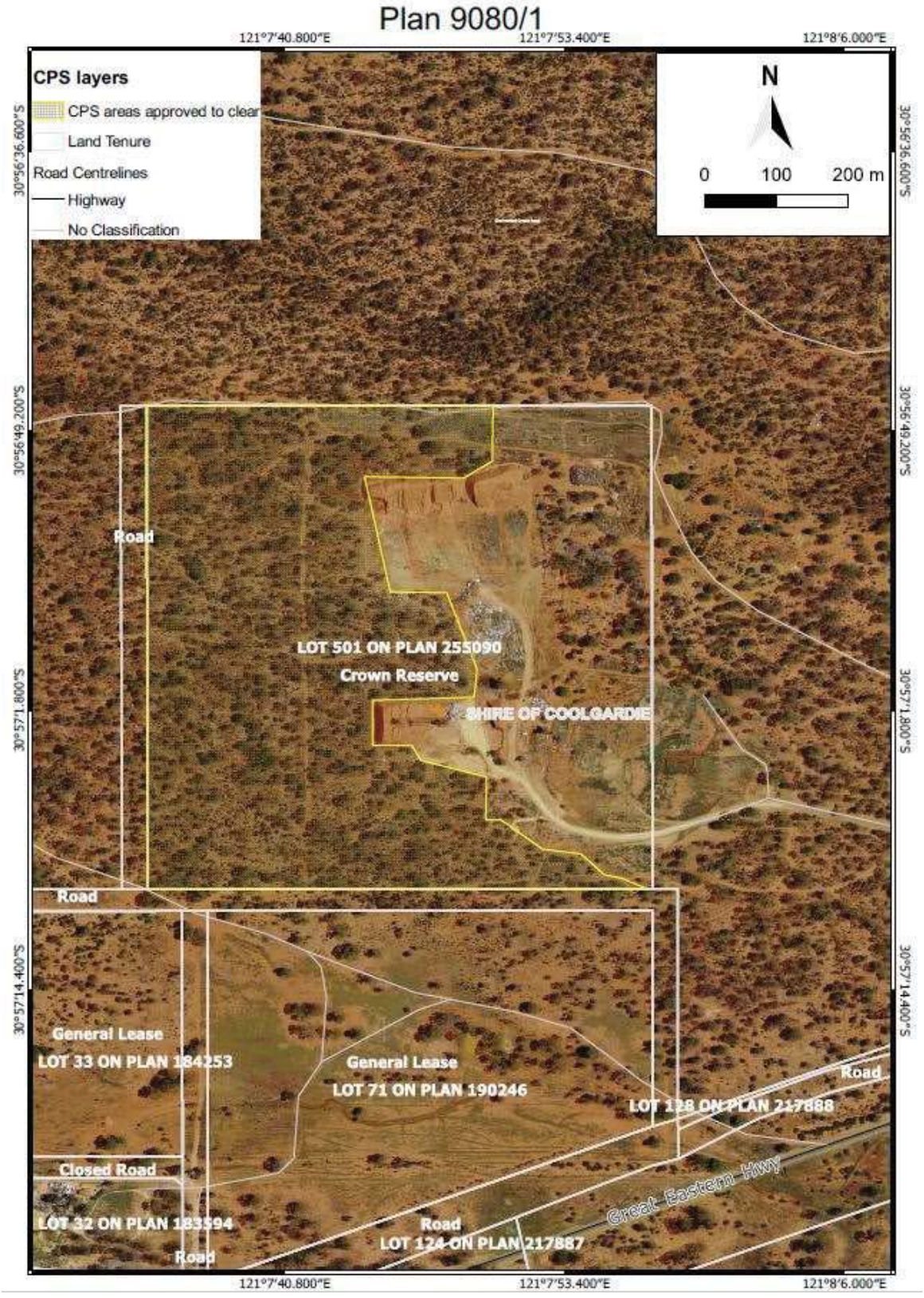

Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9080/1
Permit type:	Purpose permit
Applicant name:	Shire of Coolgardie
Application received:	9 October 2020
Application area:	24.58 hectares of native vegetation
Purpose of clearing:	Development of Coolgardie Waste Facility
Method of clearing:	Mechanical
Property:	Lot 501 on Deposited Plan 255090 (Crown Reserve 3497)
Location (LGA area/s):	Shire of Coolgardie
Localities (suburb/s):	Coolgardie

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.3), adjacent to the current Coolgardie waste facility. The north-east portion of the application area has been previously cleared but has been included in this application to cover the clearing of any regrowth of native vegetation.

1.3. Decision on application

Decision:	Granted
Decision date:	30 September 2021
Decision area:	24.58 hectares of native vegetation as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E1), the findings of a flora and fauna survey (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

After consideration of the available information, Delegated Officer determined the application area is unlikely to contain any Threatened or Priority ecological communities, or conservation significant flora. As the application area is absent of evidence of Malleefowl breeding activity and any ranging birds within the application area are able to move into adjacent undisturbed extensive tracts of native vegetation, impacts to this species will be minimal.

The assessment identified that the proposed clearing will result in:

- the loss of native vegetation that is suitable habitat for malleefowl (*Leipoa ocellata*); and
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

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;
- weeds to be monitored and controlled within the land fill facility; and
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

1.5. Site map

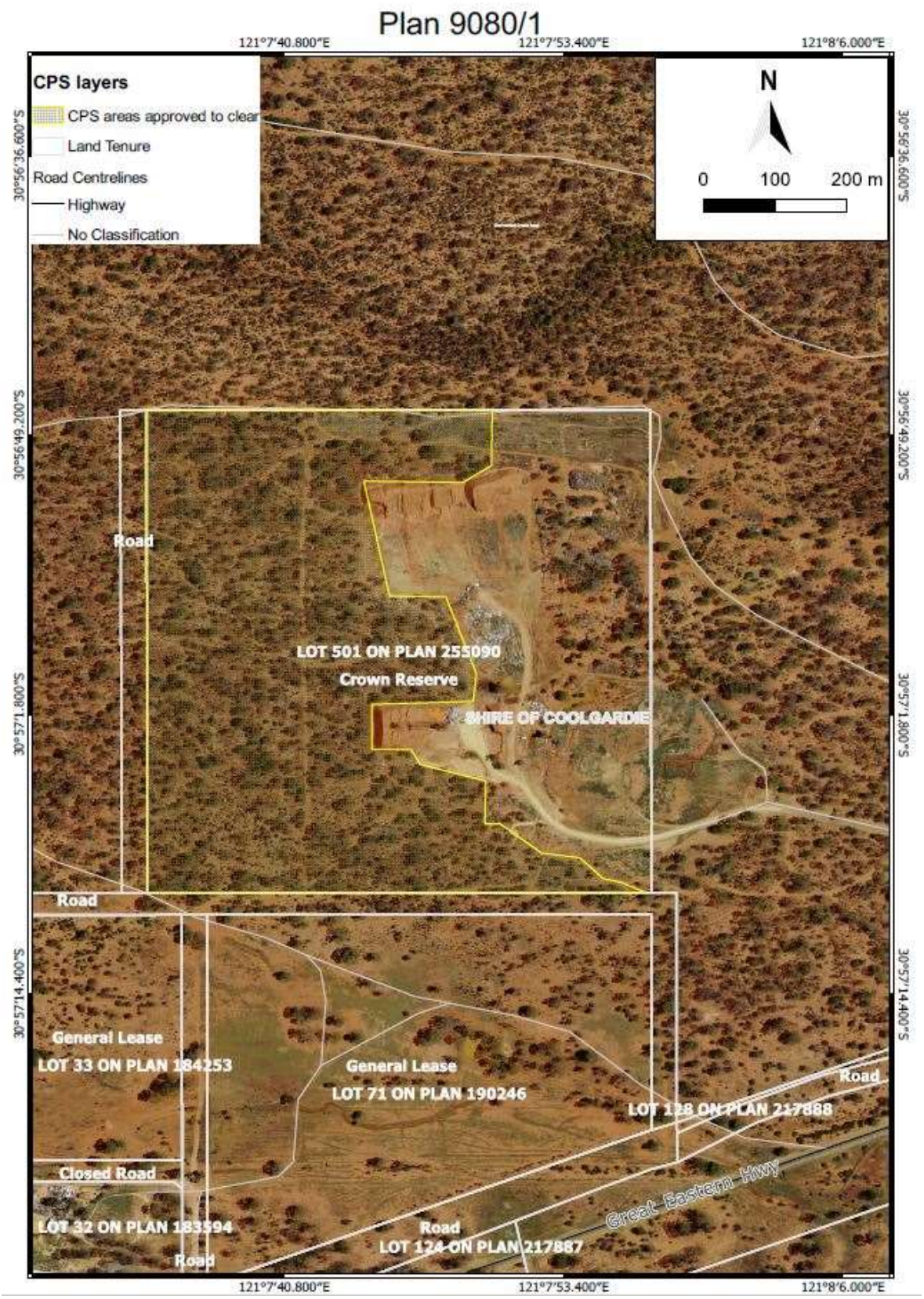

Figure 1 Map of the application area. The area in yellow indicates the area authrosied to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the *Environmental Protection Act 1986* (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, the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

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

Other legislation of relevance for this assessment include:

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

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)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

No evidence of avoidance or mitigation measures was provided to support the application.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) 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 B) identified that the impacts of the proposed clearing may present a risk to biodiversity of fauna and flora. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (flora) - Clearing Principles (a) and (c)

Assessment

The application area was subject to a targeted flora survey (Strategen 2020) in October 2020, which falls within the flowering period for the majority of the 24 conservation significant flora recorded within the local area. Vegetation within the application area was determined to be in Very Good (Trudgen 1991) condition, but the vegetation observed was not consistent with existing regional vegetation mapping. According to available spatial data the vegetation of the application area is mapped as Coolgardie 9 (Shepherd et al. 2001), which is an open woodland of single trunk trees species. This differs from the Mallee dominated woodland described in the targeted survey (Strategen 2020).

Of the above flora, the threatened *Gastrolobium graniticum* occurs 1.6 kilometres from the application area and is recorded as occurring in close association with granite outcropping and shallow sandy soils (Western Australian Herbarium 1998-). *Gastrolobium graniticum* flowers in August to September (Western Australian Herbarium 1998-) and may have been present and not detected in the targeted flora survey. However, spatial data and aerial imagery indicated that granite outcropping does not occur within the application area and therefore it is unlikely that *Gastrolobium graniticum* was present and undetected.

Nine additional priority flora are closely associated with vegetation types, habitats and soils not occurring within the application area. This includes *Austrostipa blackii*, (P3), *Grevillea georgeana*, (P3)., and *Lepidosperma* sp. Parker Range (P1), associated with iron stone and laterite outcropping (Western Australian Herbarium 1998-), *Dampiera plumose* (P1), *Chrysocephalum apiculatum* subsp. *Norsemanense* (P3), *Hakea rigida* (P2), *Phebalium appressum* (P1), *Phebalium. clavatum* (P2), associated with sand plains and open heath (Western Australian Herbarium 1998-) and *Austrostip*a sp. Carlingup Road (P1), associated with heavy clay soils and clay pans (Western Australian Herbarium 1998-). The above species are recorded as flowering in October except *Phebalium appressum.*

The targeted flora survey (Strategen 2020) did not record any of the remaining 14 priority flora listed in Appendix A3. According to available databases these species have been recorded in similar habitats, soil type or vegetation to the

Coolgardie 9 vegetation type mapped in the application area. Noting all but three of the 14 species are recorded as flowering in October (Western Australian Herbarium 1998-), it is considered unlikely that these species were present and not detected.

The three species not recorded as flowering in October included *Allocasuarina eriochlamys* subsp. *grossa* (P3), *Eremophila veronica* (P3), and *Thryptomene* sp. Coolgardie (P1). *Allocasuarina eriochlamys* subsp. *grossa* and *Eremophila veronica* are distinctive shrubs with persistent fruits and are distinguishable in their sterile phase. *Thryptomene* sp. Coolgardie is poorly known and currently no habitat data is available. Considering the level of systematic searching carried out in the targeted survey (see Appendix F) it is considered unlikely these species were present and also not detected.

The proposed clearing is for the purpose of expanding the existing Coolgardie landfill facility. Refuse transported to the facility may contain waste material, with the potential to spread weeds into adjacent vegetation. Therefore, the implementation of conditions to prevent the spread of weeds is required.

Conclusion
Based on the above assessment, of the 24 conservation significant flora, the proposed clearing is unlikely to result in a significant loss in biodiversity or impact significant populations of threatened and priority flora, as suitable habitat is unlikely to occur within the application area. The end land use may result in the spread of weeds into the surrounding native vegetation.

Conditions
To maintain the vegetation in Very Good (Trudgen 1991) condition, the following management measures will be required as conditions on the permit:

- Weed hygiene measures that ensure vehicles area free from weedy material.
- Weeds are monitored and controlled within the land fill facility.

3.2.2. Biological values (fauna) - Clearing Principles (b)

Assessment

Of the fauna species of conservation significance recorded within the local area, the malleefowl (*Leipoa ocellata*) is most likely to occur within the application area. The malleefowl is recognised as a threatened species under State and Commonwealth legislation. The species is listed as vulnerable under the BC Act and EPBC Act.

Malleefowl occur in arid and semi-arid areas dominated by mallee eucalypts on sandy soils. They are known to also occur in Mulga (*Acacia aneura*), Broombush (*Melaleuca uncinata*), Scrub Pine (*Callitris verrucosa*), Eucalyptus woodlands and coastal heathlands. Malleefowl require abundant leaf litter and a sandy substrate for the successful construction of nest mounds (Department of Parks and Wildlife 2016).

Although 33 records exist for malleefowl in the local area, a reconnaissance fauna survey conducted by Strategen (2020a) did not find any tracks, scratchings, or nest mounds within the area of proposed clearing. Though no evidence of breeding was present, it is likely that malleefowl use the application area as foraging habitat. Radio-tracking studies have shown Malleefowl may range from their breeding sites over one to several square kilometres over the course of a year (Booth 1987; Benshemesh 1992). As the application area forms part of an extensive tract of relatively undisturbed vegetation, the high number of records in the local area would suggest that malleefowl may regularly range through the area.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to significantly impact malleefowl as the application area is absent of evidence of breeding activity. Also, any ranging birds within the application area may be able to move into adjacent undisturbed vegetation.

For the reasons set out above, it is considered that the impacts of the proposed clearing can be managed by slow directional clearing to allow malleefowl to move into adjacent vegetation.

Conditions:

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

- Slow directional clearing to allow malleefowl to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include Works approval / licence issued under Part V Division 3 of the EP Act. The Shire of Coolgardie was issued with the relative works approval (W6534/2021/1) on 02 September 2021.

Several Aboriginal sites of significance have been mapped within the application area and surrounds. 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.

Appendix A. Site characteristics

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

A.1 Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is approximately 2.8 kilometres east of Coolgardie and forms part of an expansive tract of native vegetation. Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 97.58 per cent of the original native vegetation cover.
Ecological linkage	The majority of the vegetation within the local area is relatively undisturbed, with little to no fragmentation. Therefore, the application area does not function as an ecological linkage.
Conservation areas	Kangaroo Hills Timber Reserve 1.7 kilometres to the south of the application area. A timber reserve gazetted under the CALM Act 1984 - Section 5(1)(b) and 5(1)(g).
Vegetation description	The Vegetation survey (Strategen 2020) describes the vegetation within the proposed clearing area as mallee woodland of *Eucalyptus yilgarnensis*, *Eucalyptus oleosa* subsp. *oleosa* and sometimes *Eucalyptus celastroides* subsp. *celastroides* over open shrubland of *Scaevola spinescens*, *Acacia ? hemiteles*, *Eremophila ionantha* and *Eremophila scoparia* over isolated native shrubs and herbs, with emergent *Eucalyptus salmonophloia*. This vegetation type is not consistent with the mapped Beard vegetation type: • Coolgardie 9, which is described as Wheatbelt; York gum, salmon gum etc. *Eucalyptus loxophleba, E. salmonophloia*. Goldfields; gimlet, redwood etc. *E. salubris, E. oleosa*. Riverine; rivergum *E. camaldulensis*. (Shepherd et al. 2001). The mapped vegetation type retains approximately 97.58 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Vegetation survey (Strategen 2020) indicate the vegetation within the proposed clearing area is in very good condition (Trudgen, 1991) condition. The full Trudgen (1991) condition rating scale is provided in Appendix C.
Climate and landform	• Mean annual rainfall: 308 millimetres • Temperature: mean annual minimum: 25.6 Degrees centigrade • Temperature: mean annual maximum:26.6 Degrees centigrade • Landform: Gently undulating valley plains and sediments; some outcrop of basic rock
Soil description	Chief soils are alkaline red earths (Gn2.13) with limestone or limestone Nodules at shallow depth (< 24 in.) on gently sloping slightly concave plains with low gentle rises of (Gc1.12) soils. Associated are (Ug5.38) clay plains flanking ultrabasic rock outcrop; some (Um5.41) soils on steeper slopes; and some small inclusions of units BB5, AC1, and Mx41. There are some breakaways in places marginal to units AC1, SV2, and SV15, (DPIRD 2019).
Land degradation risk	The Department of Primary Industries and Regional Development (DPIRD), provides a series of soil degradation risk mapping at the system level (DPIRD 2019). The application area is located within the Mx43 system. Soil degradation risks within the application area, including surface salinity, wind, erosion water erosion, water logging and acidification risk, are all low - between 0-25 percent of map unit. A more detailed analysis is available in section C4.

Characteristic	Details
Waterbodies	 Figure 2. Water bodies adjacent to application area (blue lines). Two unnamed non-perennial water courses run east-west approximately 50 and 300 metres respectively, from the southern boundary of the application area. The salt lake Lake Lefroy occurs approximately 17 kilometres to the east of the application area.
Hydrogeography	The application area falls within Goldfields Groundwater Area Management Plan, 1994, under the *Rights in Water and Irrigation Act 1914* (RIWI Act).
Flora	According to available databases, a total of 24 conservation significant flora are recorded within the local area. Refer to the Flora Analysis table section Appendix A3 for further flora analysis of all conservation significant flora are recorded within the local area.
Ecological communities	There are no Priority or Threatened ecological communities found within the local area.
Fauna	The number of conservation significant fauna species was low and included Malleefowl (*Leipoa ocellata*), Common Greenshank (*Tringa nebularia*) and Common Sandpiper (*Actitis hypoleucos*). Refer to the fauna analysis table section Appendix A4 for further fauna analysis of all conservation significant flora recorded within the local area.

A.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*					
Coolgardie	12,912,204	12,648,491	98.0	2,114,349.37	16.37
Vegetation complex					
Beard vegetation association 9 *	240,441.99	235,100.97	97.78	18,984.28	7.97
Local area					
20km radius	130,441.5	127,296.2	97.58	-	-

*Government of Western Australia (2019)

A.3 Flora analysis table

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]
Gastrolobium graniticum	T	No	No	No	1.6	3	No
Thryptomene planiflora	P1	Yes	Yes	No	1.6	1	Yes
Phlegmatospermum eremaeum	P3	No	No	Yes	1.6	1	Yes
Acacia websteri	P1	Yes	Yes	No	2.5	13	Yes
Thryptomene sp. Coolgardie	P1	No data	No data	No data	2.7	2	No
Lepidium merrallii	P2	No	No	Yes	2.7	1	Yes
Eremophila veronica	P3	Yes	Yes	Yes	3.2	8	Yes
Chrysocephalum apiculatum subsp. *Norsemanense*	P3	No	No	No	3.2	1	Yes
Grevillea georgeana	p3	No	No	No	4.3	1	Yes
Austrostipa blackii	p3	No	No	No	6	1	Yes
Acacia coatesii	P1	Yes	Yes	Yes	7	5	Yes
Eucalyptus websteriana subsp. *Norsemanica*	P1	No	Yes	No	9	2	Yes
Austrostipa sp. Carlingup Road	P1	No	No	No	9	1	Yes
Dampiera plumosa	P1	No	No	No	9	1	Yes
Allocasuarina eriochlamys subsp. *Grossa*	P3	No	No	Yes	9	1	Yes
Lepidosperma sp. Parker Range	P1	No	No	No	10	1	Yes
Austrostipa sp. Dowerin	P2	Yes	Yes	Yes	10.4	2	Yes
Eremophila caerulea subsp. *merrallii*	P4	Yes	Yes	Yes	12	1	Yes
Acacia sclerophylla var. *teretiuscula*	P1	Yes	Yes	Yes	12.5	1	Yes
Phebalium appressum	P1	No	No	No	13	2	Yes
Hakea rigida	P2	No	No	No	13	1	Yes
Phebalium clavatum	P2	No	No	No	14.5	3	Yes
Diocirea microphylla	P3	Yes	Yes	Yes	17.6	1	Yes
Notisia intonsa	P3	No	No	Yes	17.6	2	Yes

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

A.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]
Malleefowl (*Leipoa ocellata*)	Vulnerable	Yes	Yes	5km	33	Yes
common greenshank, greenshank (*Tringa nebularia*)	International Agreement	No	No	6km	1	Yes
Common Sandpiper (*Actitis hypoleucos*)	International Agreement	No	No	6km	3	Yes

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

A.5 Land degradation risk table

Land Qualities summary (% Map Unit column 1 most limiting, 4 least, DPIRD 2019))

C	C1	C2	C3	C4
pH				
0-10 acidity	very strongly acid: 0 %	strongly acid: 0 %	-	-
0-10 alkalinity	strongly alkaline: 0 %	alkaline: 25 %	-	-
50-80 acidity	very strongly acid: 0 %	strongly acid: 0 %	-	-
50-80 alkalinity	strongly alkaline: 5 %	alkaline: 65 %		
Acidification risk	presently acid: 0 %	high: 0 %	moderate: 0 %	low: 100 %
SALINITY				
surface salinity	extreme: 0 %	high: 0 %	moderate: 0 %	slight to nil: 100 %
Wind erosion	extreme: 0 %	high: 0 %	moderate: 0 %	slight to nil: 100 %
Water erosion	extreme: 0 %	high: 0 %	moderate: 0 %	slight to nil: 100 %
Phosphorus export	extreme: 0 %	high: 0 %	moderate: 0 %	slight to nil: 100 %

Appendix B. 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: Thirteen priority flora were recorded within the local area in vegetation types, habitats, or soils similar to those mapped within the application area. A targeted flora survey did not record any locally or regionally significant flora, fauna, habitats, or assemblages of plants, within the application area.	Not likely to be at variance	Yes Refer to section 3.2.1
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: Malleefowl (*Leipoa ocellata*) is widespread throughout the region and has been recorded within five kilometres of the application area. The area proposed to be cleared is unlikely to contain breeding habitat for malleefowl but may contain foraging or dispersal habitat. Common greenshank (Tringa nebularia) and Common Sandpiper (Actitis hypoleucos), were also recorded in the local area. Both are migratory shore birds known to utilise salt lakes in the region between breeding seasons. No salt lakes or inland flats occur within the application area; therefore, the proposed clearing will not impact the local habitat of these species.	Not likely to be at variance	Yes Refer to section 3.2.2
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The threatened *species Gastrolobium graniticum* was recorded 1.6 kilometres from the application area. Flora analysis determined that the specific habitat for this species did not occur within the application area. A targeted flora survey did not record any threatened flora within the application area.	Not likely to be at variance	Yes Refer to section 3.2.1
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared does not contain species consistent to indicate a threatened ecological community.	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 the mapped native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. As very little fragmentation occurs within the local area, the vegetation proposed to be cleared is not considered to be part of a significant ecological linkage.	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: The distance to the nearest conservation area, Kangaroo Hills Timber Reserve is 1.7 kilometres to the south of the application area. Given the, distance from the above reserve, the proposed clearing is not likely to have an impact on the environmental values of the adjacent conservation area.	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: A mapped non-perennial water course occurs 50 metres south of the application area (C.1 figure 2). The vegetation within the clearing area is not representative of riparian or wetland vegetation. The proposed clearing is unlikely to impact off-site hydrology and water quality.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not susceptible to wind / water erosion, nutrient export, or salinity. The flat landscape of the application area and the condition of the adjacent vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not at variance	No.
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no significant water courses, wetlands or Public Drinking Water Sources Areas are recorded near the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not 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: Given there is less than 10 metres range in elevation across the application area, clearing is unlikely to effect the hydrology of the two Non-perennial water courses recorded at 50 and 300 metres south of the application area,. Mapped soil types do not indicate the proposed clearing will contribute to an increased risk of waterlogging.	Not at variance	No

Appendix C. 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 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 D. Biological survey information excerpts (Strategen 2020)

Figure 3. White lines indicate transects traversed by botanists during the targeted flora survey.

Appendix E. Sources of information

E.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)

E.2. References

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