Vegetation, Flora, Fauna and Environmental Considerations Report

No. 23 Dam – Quast Road, Salmon Gums

Report compiled by:

[redacted]

Shire of Esperance

Together, we make it happen!

Acknowledgement of country

The Shire of Esperance acknowledges the Kepa Kurl Wudjari people of the Nyungar nation and Ngadju people who are the traditional custodians of this land and their continuing connection to land, waters and community. We pay our respects to Elders past, present and emerging, and we extend that respect to other Aboriginal Australians today.

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LIST OF ABBREVIATIONS

BAM Act: Biosecurity and Agriculture Management Act 2007 (WA)
BC Act: Biodiversity Conservation Act 2016 (WA)
BOM: Bureau of Meteorology
DBCA: Department of Biodiversity, Conservation and Attractions
EP Act: Environmental Protection Act 1986 (WA)
EPA: Environmental Protection Authority
EPBC Act: Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
IBRA: Interim Biogeographical Regionalisation for Australia
IUCN: International Union of Conservation Nature
LGA: Local Government Area
NVIS: National Vegetation Information System
PEC: Priority Ecological Community
PF: Priority Flora (Under BC Act)
SOE: Shire of Esperance
SLK: Straight Line Kilometres (Main Roads WA)
TEC: Threatened Ecological Community
TF: Threatened Flora (Under BC Act)
TPFL: Threatened and Priority Flora Database (DBCA)
TPRF: Threatened and Priority Flora Report Form
WAH: Western Australian Herbarium (PERTH)
WAOL: Western Australian Organism List
WONS: Weeds of National Significance

Executive Summary

The Shire of Esperance (SOE) Environmental Team was commissioned by the Shire of Esperance Asset Management department to undertake a review of the vegetation, flora, fauna and environmental values on a number of Government Dams in the north of the Esperance Shire over 2024. The eleven sites will be applied for under the Shire of Esperance's Government Dams Purpose Permit.

The proposed development involves the clearing of 5.439 ha of native vegetation for the purpose of dam catchment upgrade.

This report details the results from the Environmental Impact Assessment completed by Shire of Esperance Environmental Services team over spring 2024.

Vegetation Condition varied between Very Good and Degraded and with a majority of the No. 23 Dam project area in Good condition.

No Threatened or Priority Ecological Communities occur within the 20km buffer of the project site; no Threatened or Priority Ecological Communities were relevant to the site.

A total of 67 vascular plant taxa from 51 plant genera and 25 plant families were recorded within the No. 23 Dam survey area during the 2024 survey. This total included 58 native species and 9 introduced species.

No threatened and priority flora species were recorded within the No. 23 Dam survey area.

Suitable habitat for three threatened fauna species identified in the desktop survey was also present in the No. 23 Dam project area.

1 Introduction

The Shire of Esperance is the responsible land manager for a number of government dams. There are over 50 Government Dams within the Esperance Shire. The dams were constructed from 1910-1930 by the Public Works Department to provide water for new settlers as they arrived in Salmon Gums, Scaddan, Cascade and Grass Patch districts, where there were no large natural freshwater sources. Most of the dams include a graded catchment, with a dam (sometimes roofed). The dams provide valuable water for road construction, firefighting and can often be used as drought relief dams for stock when farm dams become dry.

All of the dam sites applied for under the Shires Government Dams Purpose Permit have been previously cleared, however due to many of them previously being in the Shire of Dundas, there was not a periodical maintenance program to regrade the catchments and many of the catchments have become overgrown. The dam catchments applied for under this strategic purpose permit would not be exempt under Regulation 5, Item 15, of the Clearing Regulations as these sections have not been cleared in the last 10 years.

1.1 Location and Scope of Project

The proposed works are located 22km north-north-west of Salmon Gums townsite, within the SOE managed Reserve 19872. Specifically, it is located on Lot 1212 on Plan 152024 Quast Road, Salmon Gums near the corner of Hobby Road. A point within the proposed clearing permit area is 6372150mN, 376648 mE (UTM Zone 51 H, GDA94).

No. 23 Dam project is required for drought relief, road construction and firefighting purposes. The project involves clearing and grading the previously cleared catchment. On 4 September 2024, the dam contained no water, however re-clearing the catchment should ensure water runoff into the dam is again restored and this water source replenished.

The Shire of Esperance has attempted to avoid, reduce, minimise impacts by keeping as much as possible to existing cleared areas. A total of 5.439ha of clearing is proposed.

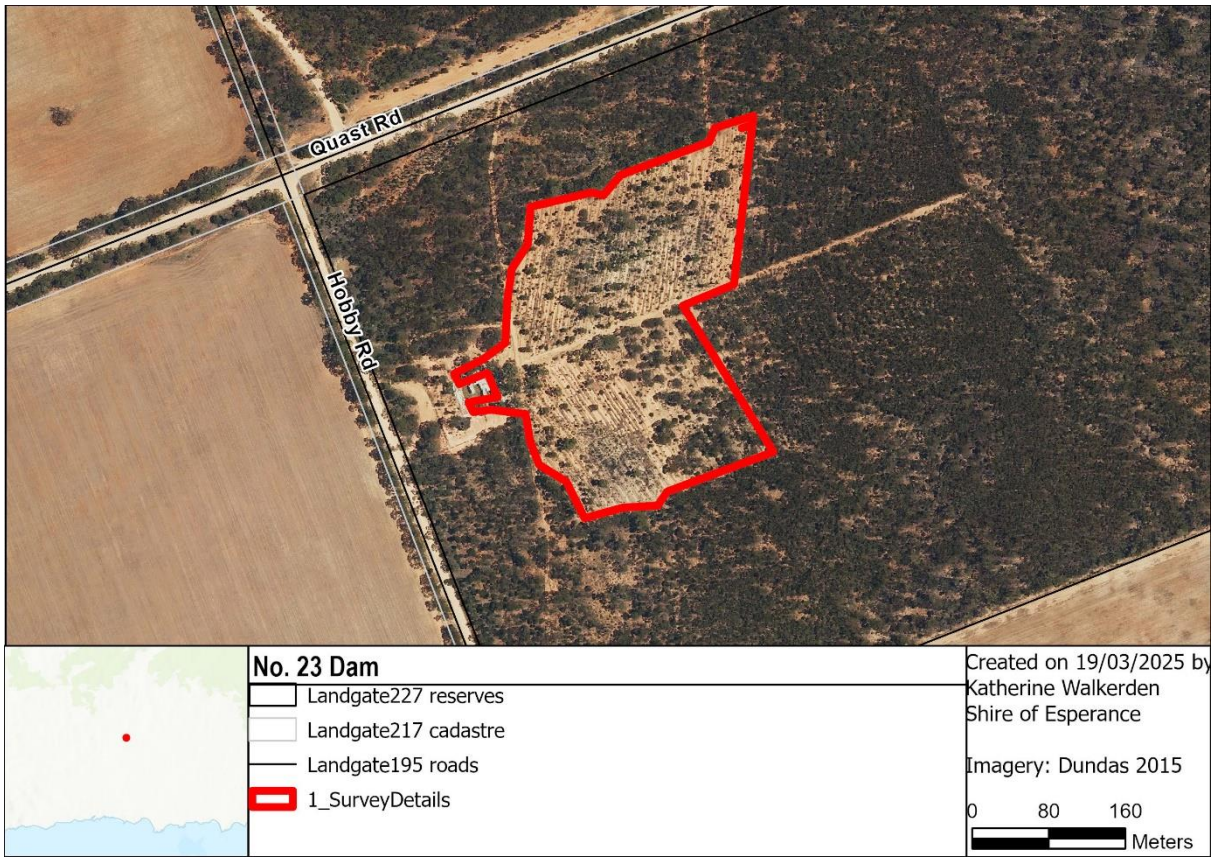

Figure 1. Location of No. 23 Dam.

1.2 Environmental Legislation and Guidelines

The following legislation is relevant to this survey:

Commonwealth (Federal):

- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Western Australian (State):

- *Biodiversity Conservation Act 2016* (BC Act);

    - *Biodiversity Conservation Act 2016* Biodiversity Conservation (Listing of Native Species) (Flora) Order 2022;
    - *Biodiversity Conservation Act 2016* Biodiversity Conservation (Listing of Native Species) (Fauna) Order 2022;
- *Biosecurity and Agriculture Management Act 2007* (BAM Act); and
- *Environmental Protection Act 1986* (EP Act).

Western Australian (State) guidelines relevant to this survey are:

- Environmental Factor Guideline: Flora and Vegetation (Environmental Protection Authority (EPA) 2016);
- Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment (EPA 2016);
- A guide to the assessment of applications to clear native vegetation, Under Part V Division 2 of the Environmental Protection Act 1986 (DWER, 2014); and
- Technical Guidance - Terrestrial vertebrate fauna surveys for environmental impact assessment (EPA, 2020).

2 OBJECTIVES

The objective of this survey was to undertake a vegetation, flora, fauna and environmental assessment of the No. 23 Dam survey area to enable an informed decision to be made in respect to the potential environmental impacts of the project. This is inclusive of the following:

- Undertake a desktop study of the vegetation, flora, fauna, threatened ecological communities, soils, geology, landform, aboriginal heritage, cadastre, important wetlands, soils of the No. 23 Dam survey area using all available resources. This includes spatial interrogation using the Shire of Esperance's Desktop Environmental Impacts Spatial Interrogation Program (DEISIP), aerial photography interpretation and the Commonwealth Protected Matters Search Tool.
- Review available historical literature of the No. 23 Dam survey area;
- Undertake a field survey of the No. 23 Dam survey area, and collect and identify the vascular plant species present;
- Define and map the vegetation communities present and their condition in the No. 23 Dam survey area;
- Define and map the location of any threatened flora (TF) and priority flora (PF), TECs, fauna and priority fauna habitat located within the No. 23 Dam survey area;
- Provide recommendations on the local and regional significance of the vegetation communities;
- Define any management issues related to any environmental values; and
- Provide recommendations to the Shire of Esperance Asset Management department in relation to environmental management of the project.

3 METHODS

3.1 Desktop Assessment

Desktop information was collated for all areas within a 20km buffer zone of the site using DBCA datasets sourced under agreement. These data sources are listed below:

- Threatened and Priority Flora Database (TPFL; DBCA 2024a);
- Western Australian Herbarium data (DBCA 2024b)

- DBCA's Esperance District Threatened Flora spatial dataset (DBCA 2024c);
- Threatened and Priority Ecological Communities (TECs & PECs; DBCA 2024d);
- Threatened, Specially Protected and Priority Fauna (DBCA 2024e); and
- Black cockatoo / Carnaby's cockatoo roost and breeding sites (DBCA 2024e).

Additionally, the EPBC Act Protected Matters Search Tool (PMST), was also checked to identify the possible occurrence of Threatened and Priority flora, fauna and ecological communities within the No. 23 Dam area. Search parameters were 'by polygon' and a 20km buffer was applied to the search area; standard used in this IBRA subregion.

Historical and State documentation and datasets consulted include:

- Vegetation mapping of the region, principally the coarse-scale vegetation associations of Beard (1973) (DDIRP-006);
- Vegetation Extent by Statewide Pre-European mapping statistics (Department of Parks and Wildlife 2018);
- Soil landscape mapping (Schoknecht, et al 2004);
- EPBC Act list of TECs; (2024)
- Priority Ecological Communities for Western Australia Version 35 (DBCA 2023c);
- Nomination or listing descriptions of TECs or PECs, where available and relevant (State and Federal);
- Recovery Plans, Approved Conservation Advices, Significant Impact Guidelines and / or other relevant reports or documentation relating to the preferred habitats / distributions of TECs / PECs, Threatened flora and fauna;
- Dieback Information Data Management System (DIDMS 2024; Gaia Resources);
- Shire of Esperance Weed Mapping Data (2024);
- Existing site digital orthophotos (Dundas_3232 2015);
- Atlas of Living Australia database (2024)
- Hydrographic Catchments (DWER-028); and
- Crown Reserves (Landgate-227).
- RAMSAR sites (DBCA-010)
- Directory of Important Wetlands (DBCA-045)

3.2 Field Survey

The site was initially inspected on 6 December 2023, by Julie Waters (SOE Environmental Coordinator). A general assessment of possible ecological impacts included historical clearing, impact of fire regimes, regeneration from disturbance, waterlogging, senescence, weeds, erosion, sedimentation, invasive fauna, *Phytophthora* Dieback, and illegal dumping of rubbish.

A detailed field assessment of the flora and vegetation of the No. 23 Dam survey area was undertaken by SOE botanists Katherine Walkerden and Mary Hoggart on the 4 September 2024 in accordance with

methods outlined in Technical Guidance – Flora and vegetation surveys for environmental impact assessment (EPA 2016). All botanists held valid collection licences to collect flora for scientific purposes, issued under the BC Act.

The methodology for assessing threatened and priority flora consisted of traversing by foot the entire No. 23 Dam survey area. Botanists used handheld Garmin GPS units loaded with the No. 23 Dam survey area boundary, walking every second graded row to cover the entire area recording all species, and collecting all but the very common, well known species.

For threatened or priority flora species identified in the desktop survey as possible to occur, scans of pressed specimens from either the WAH or local Esperance District Herbarium were taken into the field. Suitable associated habitat for TF or PF identified in the desktop study were particularly focused on, and extensively searched. If suspected or known conservation significant flora species were encountered, a specimen was collected for subsequent identification with GPS coordinates and plant numbers recorded for the population. During the survey, a field herbarium for No. 23 Dam was also constructed.

All species unknown in the field were collected, pressed and dressed in accordance with WAH instructions, and later identified by the SOE's three Botanists, using keys, WA Herbarium's Florabase, literature and reference material from the Esperance District Herbarium. Any species that were unable to be identified were submitted to the WAH for identification.

The vegetation communities of No. 23 Dam were assessed for the presence a TEC or PEC (DBCA 2023, 2024d) comparing that to descriptions in approved conservation advice for these communities. PEC's do not have published approved conservation advice. Comparison of the vegetation community occurred using 'Priority Ecological Communities for Western Australia, Version 35 (DBCA 2023)' definitions, and other relevant documentation.

Only a basic fauna survey was conducted as per EPA (2020) guidelines. Observations of fauna presence, such as call sounds, footprints and scats were noted, and the area assessed for suitability of habitat within 'No. 23 Dam' for any fauna species identified in the desktop survey.

3.3 Survey Timing

According to Table 3 in the Technical Guidance – Flora and vegetation surveys for Environmental Impact Assessment (EPA 2016), the primary survey timing for the South-west and Interzone Botanical Province is Spring (September-November), which is the peak flowering period for this region. As all surveys at No. 23 Dam were conducted in September, survey timing falls within this period.

3.4 Vegetation Descriptions

Vegetation communities present within the survey area were assessed during the field survey. Broad vegetation types defined by structure and composition were recorded and described using the National Vegetation Information System (NVIS; ESCAVI 2003) classification system.

Condition of vegetation was assessed using Table 2 of the Technical Guidance – Flora and vegetation surveys for Environmental Impact Assessment (EPA 2016) categories, as 'Excellent', 'Very Good', 'Good', 'Degraded' or 'Completely Degraded'. This illustrates how healthy vegetation is, determined by vegetation structure, weed cover, presence of dieback, historical clearing, grazing and other signs of disturbance.

Additionally, possible environmentally sensitive areas, such as wetlands or granite, were noted. Overall, an assessment of environmental impacts to Department of Water and Environmental Regulation's (DWER) 10 Clearing Principles were inspected and evaluated.

3.5 Survey Limitations

A general assessment was made of the survey against a range of factors that may have limited the outcomes and conclusions of this report (Table 1). Based on this assessment, the present survey has not been subject to constraints which would affect the thoroughness of the survey, and the conclusions which have been formed.

Table 1: Potential limitations affecting the conclusions made in this report.

Potential Survey Limitation	Impact on Current Survey
Availability of contextual information at a regional and local scale	**Not a limitation:** Reference resources such as Beard's mapping, together with online flora and vegetation information, have provided an appropriate level of information for the current survey. The vegetation of the Esperance shire has previously been mapped by Beard (1973).
Resources (i.e. were there adequate resources to complete the survey to the required standard).	**Not a constraint:** Adequate resources were made available by SOE to complete the surveys.
Competency/experience of team carrying out survey; experience in the bioregion surveyed	**Not a limitation:** Botanists had extensive experience working within the Shire of Esperance and wider areas. Two of the botanists have consistently worked within this bioregion for more than 15 years. Botanists were familiar with flora in the area. Any unknown or potential threatened or priority flora species were collected and identified, utilising resources available at the Western Australian Herbarium and consultation with expert taxonomists.
Proportion of flora collected and identification issues	**Potential limitation:** While many plants were in flower during the survey, a proportion of plants encountered during the survey were sterile and may impact the chance of identification of some specimens to species level. Orchid species may not emerge each year if conditions are not favourable. Although these may affect the completeness of the species list, it is not expected to have a significant effect on mapping reliability, nor on the identification of threatened and priority species in the area as the majority were perennial species. Surveys were only undertaken in one year
Effort and extent of survey	**Potential limitation:** The survey area was thoroughly covered. The threatened and priority flora search undertaken by botanists by means of foot-traverse between vegetation quadrat sites ensured thorough coverage of the survey area. Flora that was unknown or resembled threatened or priority flora were collected, the location and habitat noted, and the number of plants counted.

Mapping reliability	**Not a constraint.** Handheld GPS units were used for the survey, which for a majority of field conditions have an accuracy level of ± 5m.
Survey timing, rainfall, season of survey	**Not a limitation:** The EPA (2016a) recommends that flora and vegetation surveys in the South – West Botanical Province be conducted in Spring (September-November). All surveys have been conducted in September which falls within this period.
Disturbances (fire/flood/clearing)	**Not a limitation:** The No. 23 Dam survey area has no history of fire.

4 DESKTOP ASSESSMENT RESULTS

4.1 Climate

The Salmon Gums climate is described as Mediterranean, characterised by cool wet winters and dry warm summers (BoM 2024). The Salmon Gums locality receives an average annual rainfall of 350mm.

4.2 Catchment

No. 23 Dam project is mapped as being present within the Balladonia catchment area.

4.3 Geology, Soils and Topography

A single geological unit was identified by Schoknecht et al. (2004). This was: 'Thin Tertiary sediments with additions of calcareous aeolian material over weathered bedrock'.

Within the area, there has been one soil type recorded by Schoknecht et al. (2004). This was: 'Alkaline grey shallow sandy duplex soils and calcareous loamy earths with minor non-cracking clays'.

Within the area, there has been one landform unit recorded by Schoknecht et al. (2004). This was: 'Level plain or plateau of low relief and poor external drainage and extensive Gilgia microrelief'.

4.4 Regional Vegetation

The site is located within the Eastern Mallee (Mal01) Interim Biogeographic Regionalisation of Australia (Thackway & Cresswell 1995) region. The Mal01 is described as: "the south-eastern of Yilgarn Craton is gently undulating, with partially occluded drainage. Mainly Mallee over Myrtaceous-Proteaceous heaths on duplex (sand over clay) soils. Melaleuca shrublands characterize alluvia, and Halosarcia low shrublands occur on saline alluvium. A mosaic of mixed Eucalypt woodlands and Mallee occur on calcareous earth plans, and sandplains overlying the Eocene Limestone strata in the East. Semi-arid (dry) and warm Mediterranean".
Beard (1973) mapped the Salmon Gums_486 vegetation association (VA) within the No. 23 Dam area (Table 2). Salmon Gums 486 is moderately cleared with 37% of its Pre-European extent remaining within the Eastern Mallee Ibra-subregion, the vegetation association is poorly represented with only 6.7% of its current extent conserved in IUCN areas.

Table 2. Vegetation associations mapped by Beard (1973) within the No. 23 Dam, and statistics on pre-European remaining areas.

Vegetation Association	Salmon Gums_486
Description	Mosaic: Medium woodland; salmon gum & red mallee / Shrublands; mallee scrub *Eucalyptus eremophila*
Pre-European extent in IBRA sub-region Mal01 (%)	37.38
Pre-European extent in LGA (%)	39.38
Current extent conserved in IUCN area (%)	6.70

4.5 Surrounding Land Use

The area directly included in the clearing permit application No. 23 Dam is a previously cleared catchment and dam surrounded by intact and vegetated 'water tank' reserve, managed by SOE. The surrounding land use is broadacre agriculture. The area is within rural zoning. The project area is in a highly cleared area with 16% of vegetation within 5km of the project remaining.

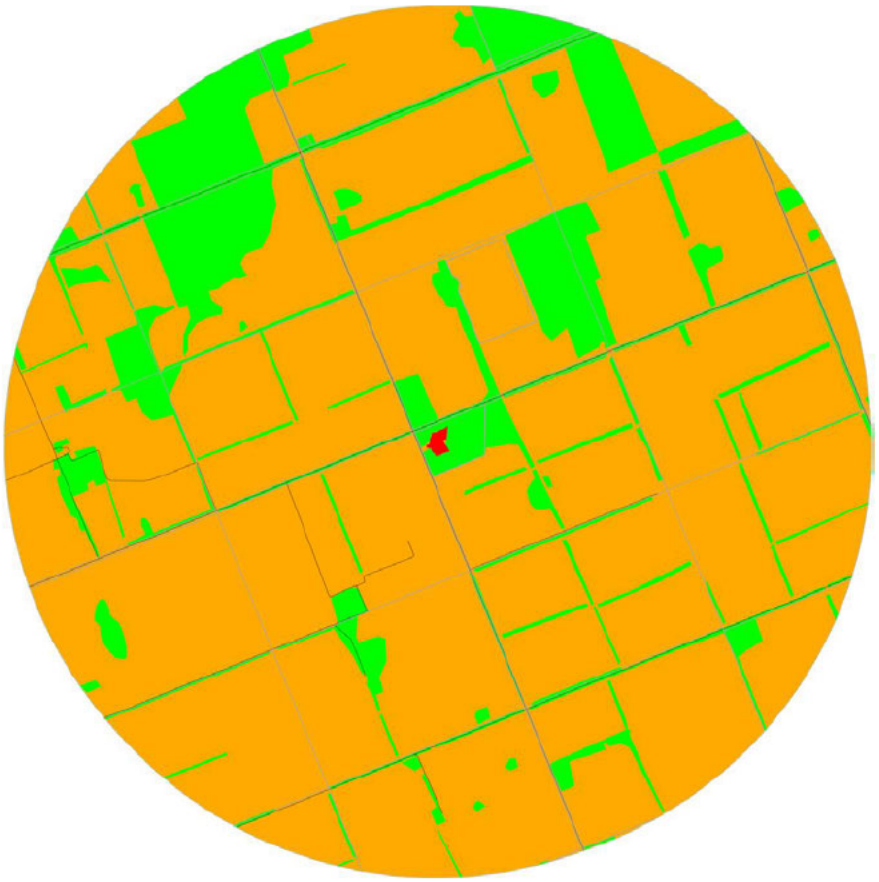

Figure 2. Map of remnant vegetation within a 5km buffer produced by DEISIP. Project area is highlighted in red, remnant vegetation is in green and cleared vegetation is in orange, road centrelines are in black and cadastre boundaries are in grey.

No conservation vested reserves were within 10km of the site. The site was 10.29km from Reserve 42943 the closest conservation reserve.

4.6 Potential Threatened and Priority Flora

One threatened flora (TF) and 21 priority flora (PF) were recorded within a 20km radius of the proposed impact site (Appendix 2)). Of these, no TF species and 10 PF species had suitable known associated habitat that corresponded with vegetation communities and soil type of No. 23 Dam project.

4.7 Potential Threatened and Priority Ecological Communities

No TEC's or priority ecological communities (PEC) were identified by the desktop study as being within the No. 23 Dam or within a 20km buffer of the site.

4.8 Potential Threatened and Priority Fauna

One threatened fauna and one priority fauna was recorded within a 20km radius of the proposed impact site (Appendix 3)). Both species were residents (not migratory).

4.9 *Phytophthora* Dieback

The Department of Biodiversity, Conservation and Attractions defines the vulnerable zone for Dieback as areas with over 400mm of annual rainfall. The rainfall in the area of No. 23 dam is too low to be vulnerable to Phytophthora dieback.

5 FIELD SURVEY RESULTS AND DISCUSSION

5.1 Vegetation Communities

Two vegetation communities were identified within the No. 23 Dam, as defined by structure and composition (Table 3). It is believed that the Beard (1973) vegetation associations identified in Section 4.4 are an appropriate match for the vegetation within the project area.

Table 3. Vegetation communities identified within proposed No. 23 Dam project area.

Type	Description	Figure	Closest Matching Beard Vegetation Association	Area (ha)
A	Mixed mallees over sparse mixed shrubland with Acacia, Daviesia and Eremophila shrubs	4	Salmon Gums_486	3.17
B	*Eucalyptus dundasii* woodland over mixed mallees with Melaleuca shrubs and low shrubs	5	Salmon Gums_486	2.27

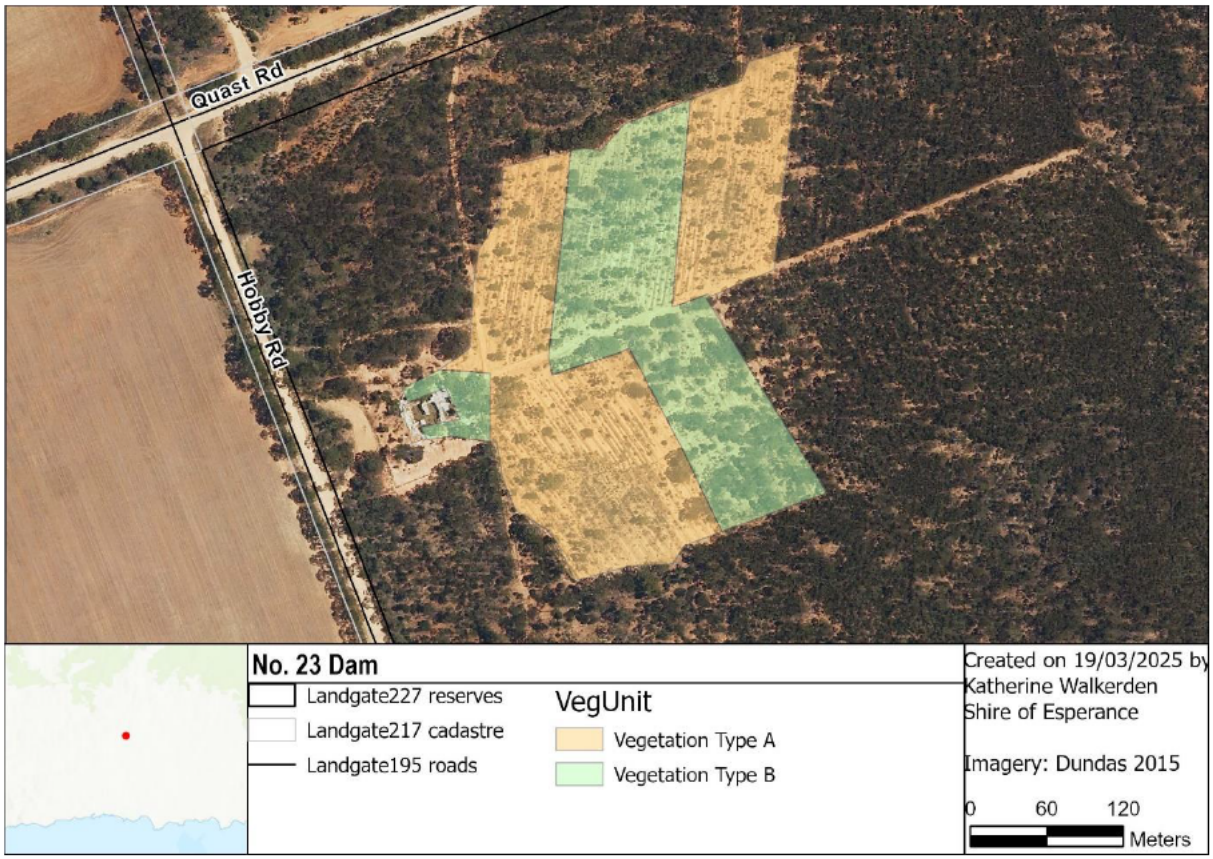

Figure 3. Vegetation types within the No. 23 Dam area.

Figure 4. Vegetation type A identified in No. 23 Dam project, described as: Mixed mallees over sparse mixed shrubland with Acacia, Daviesia and Eremophila shrubs.

Figure 5. Vegetation type B identified in No. 23 Dam project, described as: *Eucalyptus dundasii* woodland over mixed mallees with *Melaleuca* shrubs and low shrubs.

5.2 Vegetation Condition

The vegetation within the No. 23 Dam project area has all been historically cleared for the purposes of constructing a dam and associated dam catchment. A majority of the site was listed as being in a Good condition (4.279 ha) being highly sparse and lacking a significant understory. A 1.130ha section of the catchment was identified as being in a Very Good condition, this area had not been cleared in the most recent clearing event and was much denser and had a mostly intact understory. A small section totaling 0.031ha was heavily invaded my herbaceous weeds and mostly lacking in native vegetation, this was determined to be in a Degraded condition.

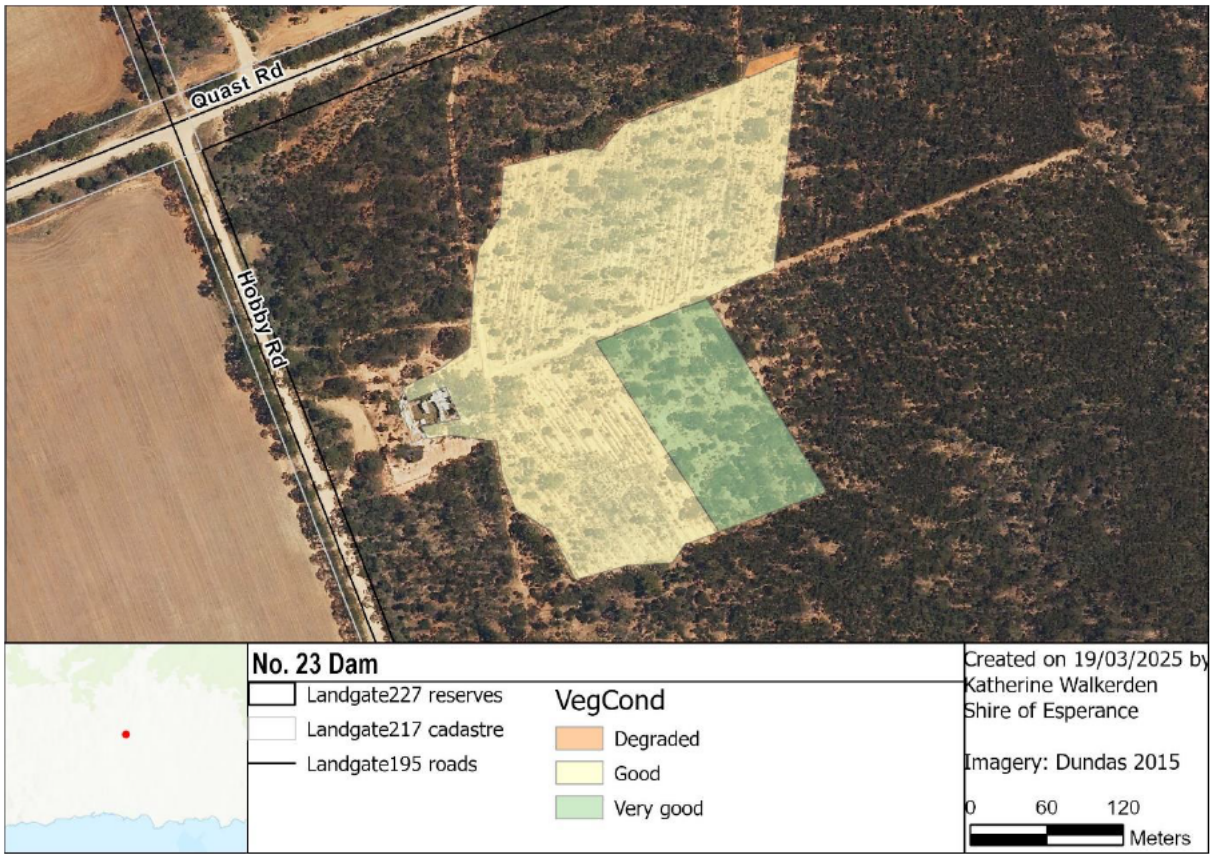

Figure 6. Vegetation condition across 'No. 23 Dam' project, ranging from Very good to Degraded condition.

Table 4. Quantifying vegetation to be cleared by vegetation type and condition within No. 23 Dam project area

Vegetation Type	Very Good	Good	Degraded	Total
A	0.135	3.004	0.031	**3.170**
B	0.995	1.275	-	**2.270**
Total	**1.130**	**4.279**	**0.031**	**5.439**

5.2.1 Weeds

Within the catchment there was a minor burden of herbaceous weeds. Some species such as *Arctotheca calendula* and *Carrichtera annua* were common within the reserve. Overall, 9 invasive species were identified within the project area (Appendix 1). None of these were Weed of National Significance (WONS) species, Declared Pest under the Biosecurity and Agriculture Management (BAM) Act, 2007 or priority environmental weeds in the Shire of Esperance's Environmental Weed Strategy 2009-2018.

The small (0.031ha) section mapped as Degraded condition vegetation was heavily invaded by herbaceous weeds.

5.3 Threatened Ecological Communities

No TEC's or priority ecological communities (PEC) were identified by the desktop study as being within the No. 23 Dam or within a 20km buffer of the site. During the site visit it was determined that no TECs or PECs known to occur in the region were relevant to the site.

5.4 Flora

A total of 67 vascular plant taxa, representative of 51 genera and 25 families, were recorded within the No. 23 Dam survey area. Of these 58 were native species and 9 were introduced. The majority of taxa recorded were representative of the Asteraceae (14 taxa), Chenopodiaceae (7 taxa) Myrtaceae (10 taxa) and Fabaceae (9 taxa) families (see Appendix 1 for the complete incidental species list).

Numerous specimen's unknown to surveyors were collected and verified at the WAH as non-threatened species, such as *Eucalyptus melanoxylon* (Accession 11153; KSW04124).

A number of plant specimens collected could not be identified accurately to the species level due to the absence of sufficient taxonomic characters to enable accurate identification. The principal reasons for not being able to fully identify some of the collected specimens to species level were:

- Plant material was sterile or lacked sufficient taxonomic features to permit accurate identification to species level. In these cases, the species is identified as, for example, *Hordeum* sp.

5.4.1 Flora Range Extensions

Specimen's that resulted in a range extension were also sent to WAH. A specimen of *Vittadinia humerata* (Accession 11153; KSW04624, Specimen retained) was a new record for the Shire of Esperance, new to the Mallee IBRA subregion and a 120km southern range extension. A specimen for this species was also accessioned from the No. 18 Dam.

5.5 Threatened and Priority Flora

The targeted flora survey did not identify any priority or threatened flora species.

5.6 Fauna

Of the species identified within the Desktop survey, only the Grey falcon and Peregrine falcon had potentially suitable habitat within the proposed clearing permit area. The pre-cleared vegetation likely would have provided suitable habitat for the Malleefowl and the Chuditch, but due to the sparse understory and a lack of dense leaf litter the historic catchment was not suitable.

5.6.1 Grey falcon, *Falco hypoleucos,* Vulnerable

The Grey falcon lacked any records within 20km of the No. 23 project area, the species was listed as may occur by the Commonwealth Protected Matters Search Tool. The project area provided potentially suitable hunting and nesting habitat for the species.

5.6.2 Peregrine falcon, *Falco peregrinus,* Other specially protected

The Peregrine falcon was recorded as occurring 13.24km from the project area. The project area project area provided potentially suitable hunting and nesting habitat for the species.

5.6.3 Chuditch, *Dasyurus geoffroii,* Vulnerable

The Chuditch lacked any records within 20km of the No. 23 Dam project area, the species was listed as may occur by the Commonwealth Protected Matters Search Tool. Given their large home range of 400ha, the project area provided marginal hunting habitat for the species, when the dam contains water encouraging prey to the site.

5.6.4 Habitat trees

During the survey a total of 6 potential habitat trees were identified, at least one of these had hollows. All of the potential habitat trees were *Eucalyptus dundasii.* Circumference of the trees were measured, with these trees having a circumference between1.82m and 2.9m. All potential habitat trees will be flagged out prior to clearing and will be avoided.

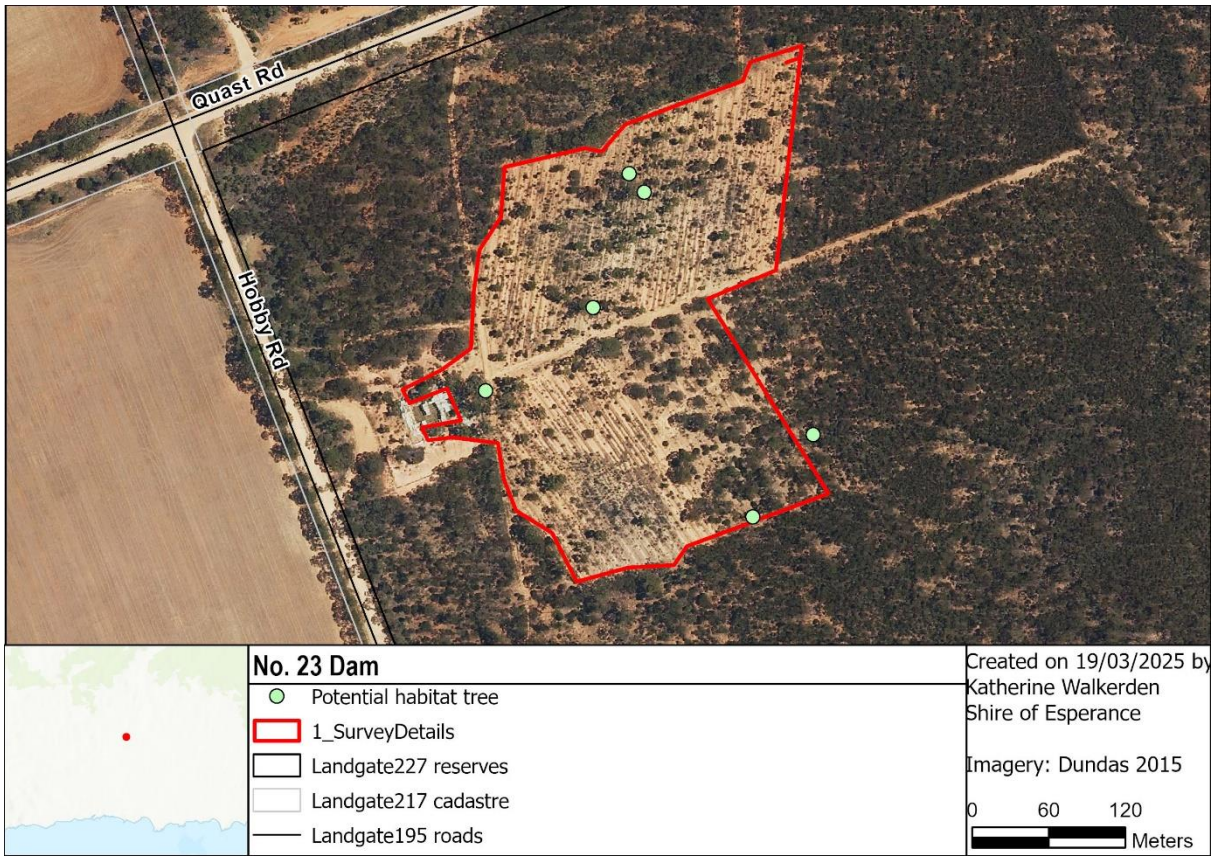

Figure 7. Map of potential habitat trees within No. 23 Dam.

Figure 8. Photos of potential habitat trees present within the site.

6 REVIEW OF 10 CLEARING PRINCIPLES FOR NATIVE VEGETATION

The No. 23 Dam' project may be at variance to some of the clearing principles that the Department of Water and Environmental Regulations (DWER) assess applications, as listed under Schedule 5 of the Environmental Protection Act 1986 (DWER 2019).

6.1 Principle (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Not at Variance: Biodiversity at this site was moderate with 58 native species recorded over two vegetation communities

6.2 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 indigenous to Western Australia.

May be at Variance: The project area provided potentially suitable hunting and nesting habitat for the Peregrine falcon, Grey falcon, and Chuditch. The pre-clearance vegetation within the catchment would have also provided suitable habitat for the Malleefowl.

6.3 Principle (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Not at Variance: No threatened or priority flora were recorded within the project area.

6.4 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.

Not at Variance: No Priority or Threatened ecological communities were present within the project area.

6.5 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.

Likely at Variance: The local area was highly cleared with only 16% of native vegetation remaining within 5km of the project site. The vegetation within Reserve 19872 is connected to other large patches of remnant vegetation within local area which are connected via a network of narrow road reserves and native vegetation retained as windbreaks.

6.6 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.

Not at Variance: Vegetation in this area was not growing in association with watercourses or wetlands.

6.7 Principle (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Not at Variance: Vegetation within the project is completely surrounded by native vegetation, providing ample protection from wind erosion.

6.8 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.

Not at Variance: There was no conservation areas within 10km of the project area.

6.9 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.

Not at Variance: Clearing of the catchment will enable more runoff to enter the dam providing a valuable water source in a semi-arid environment.

6.10 Principle (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Not at Variance: The clearing area will be used to channel water towards the dam, and thus will not increase flood risk.

7 RECOMMENDATIONS

As Shire Environmental Coordinator signs off on project work packs the following recommendation will be included within the internal SOE approval process for the road project

- The 6 mapped habitat trees will be flagged out prior to clearing and will be avoided.
- All vehicles and construction equipment to be cleaned prior to start of the project.
- Regular washdowns to occur during the project to reduce spread of weed and pathogens within the project area.

8 LIST OF PERSONNEL

The following Shire of Esperance Staff were involved in this project.

Name	Julie Waters
Position	Environmental Coordinator
Project Involvement	Report review
Qualifications	BEnvSc (Hons)
Experience	20 years working in environmental field including Flora Conservation Officer for previous DBCA, and 15 years' experience as a botanist in the region
Scientific Licence	FT61000787-2

Name	Katherine Walkerden
Position	Environmental Officer
Project Involvement	Desktop and Field Survey, Specimen Identification, GIS Mapping, Data Interpretation and Report writing
Qualifications	BSc, MEnvSc
Experience	3.5 years' experience as a Botanist in the region
Scientific Licence	FT61000788-2

Name	Rosamund Mary Hoggart
Position	Environmental Assistant
Project Involvement	Field Survey, Specimen Identification
Qualifications and Experience	BSc (Hons)Ag
	15 years' experience as a botanist in the region and is highly regarded by Esperance Wildflower Society and her peers in Esperance as one of the best botanists in Esperance.
Scientific Licence	N/A

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Appendix 1: Incidental species list

Family	Taxon	Weed	Herbarium Reference
Amaranthaceae	*Ptilotus holosericeus*		
Apiaceae	*Daucus glochidiatus*		
Asparagaceae	*Thysanotus manglesianus*		
Asphodelaceae	*Asphodelus fistulosus*	X	
Asteraceae	*Angianthus tomentosus*		
Asteraceae	*Arctotheca calendula*	X	
Asteraceae	*Asteridea athrixioides*		
Asteraceae	*Brachyscome ciliaris*		
Asteraceae	*Cratystylis conocephala*		
Asteraceae	*Isoetopsis graminifolia*		
Asteraceae	*Monoculus monstrosus*	X	
Asteraceae	*Olearia muelleri*		
Asteraceae	*Onopordum acaulon*	X	
Asteraceae	*Panaetia tepperi*		
Asteraceae	*Rhodanthe pygmaea*		
Asteraceae	*Senecio glossanthus*		
Asteraceae	*Sonchus oleraceus*	X	
Asteraceae	*Vittadinia humerata*		KSW04624, ACC11153
Boraginaceae	*Halgania andromedifolia*		
Brassicaceae	*Carrichtera annua*	X	
Caryophyllaceae	*Spergularia diandra*		KSW04324, ACC11153
Chenopodiaceae	*Atriplex acutibractea* ssp. *karoniensis*		
Chenopodiaceae	*Enchylaena tomentosa*		
Chenopodiaceae	*Eriochiton sclerolaenoides*		
Chenopodiaceae	*Maireana erioclada*		
Chenopodiaceae	*Maireana suaedifolia*		
Chenopodiaceae	*Maireana trichoptera*		
Chenopodiaceae	*Sclerolaena diacantha*		
Crassulaceae	*Crassula tetramera*		
Fabaceae	*Acacia deficiens*		
Fabaceae	*Acacia erinacea*		
Fabaceae	*Acacia evenulosa*		
Fabaceae	*Acacia lachnophylla*		
Fabaceae	*Acacia pritzeliana*		
Fabaceae	*Daviesia argillacea*		
Fabaceae	*Medicago truncatula*	X	KSW04524, ACC11153
Fabaceae	*Pultenaea arida*		
Fabaceae	*Senna* sp. Pallinup River		KSW04424, ACC11153
Goodeniaceae	*Scaevola spinescens*		
Lamiaceae	*Westringia rigida*		

Lauraceae	*Cassytha melantha*		
Montiaceae	*Calandrinia eremaea*		
Myrtaceae	*Eucalyptus calycogona* ssp. *calycogona*		
Myrtaceae	*Eucalyptus diptera*		
Myrtaceae	*Eucalyptus dundasii*		KSW04024, ACC11153
Myrtaceae	*Eucalyptus extensa*		
Myrtaceae	*Eucalyptus gracilis*		
Myrtaceae	*Eucalyptus melanoxylon*		KSW04124, ACC11153
Myrtaceae	*Eucalyptus oleosa* ssp. *cylindroidea*		
Myrtaceae	*Eucalyptus phenax* ssp. *phenax*		KSW04224, ACC11153
Myrtaceae	*Melaleuca pauperiflora* ssp. *pauperiflora*		
Myrtaceae	*Melaleuca podiocarpa*		
Orchidaceae	*Caladenia microchila*		
Orchidaceae	*Pterostylis mutica*		
Plantaginaceae	*Plantago hispidula*		
Poaceae	*Bromus rubens*		
Poaceae	*Austrostipa elegantissima*		
Poaceae	*Hordeum* sp.	X	
Primulaceae	*Lysimachia arvensis*	X	
Proteaceae	*Grevillea acuaria*		
Rhamnaceae	*Spyridium minutum*		
Santalaceae	*Exocarpos capnodioides*		
Santalaceae	*Santalum acuminatum*		
Sapindaceae	*Dodonaea stenozyga*		
Scrophulariaceae	*Eremophila decipiens*		
Scrophulariaceae	*Eremophila dempsteri*		
Scrophulariaceae	*Eremophila psilocalyx*		

Appendix 2: Description of Threatened and Priority Flora Species with the Potential to occur within the No. 23 Dam Survey Area

Threatened or priority flora identified by the desktop study to be present within a 20 km radius of No. 23 Dam project area, using Threatened and Priority Flora Reporting (TPFL; DBCA 2024a), WA Herbarium (DBCA 2024b) and Esperance District Threatened Flora (DBCA 2024c).
Nt. Acronyms used in the table include priority flora (P), threatened flora (TF), Biodiversity Conservation (BC) Act 2018, Critically Endangered (CR) endangered (EN) and Vulnerable (VU).

Taxon	BC Act (EPBC) Conservation Status	Associated Habitat	Likely to occur	Distance from site (km)
Eutaxia andocada	P1	Open mallee over shrubland. Sandy duplex soils, Loam.	Possible	7.15
Cyathostemon sp. Esperance (A. Fairall 2431)	P1	Margins of salt lakes, saline watercourses. Sand or sandy gravel.	Unlikely	10.34
Eucalyptus dissimulata ssp. plauta	P1	Sandy loam. Mallee woodland.	Possible	12.29
Angianthus sp. Salmon Gums (G.F. Craig 3074)	P1	Red-brown loam, salt lakes and granite outcrops.	Unlikely	17.87
Cyathostemon sp. Dowak (J.M. Fox 86/271)	P1	Margin of salt lake, saline depression.	Unlikely	10.83
Aotus sp. Dundas (M.A. Burgman 2835)	P2	Open mallee woodlands and margins of salt lakes on sand, Sandy-loam and loam. Associated with fire and chained firebreaks.	Unlikely	10.48
Drosera salina	P2	Margins of salt lakes. Sand.	Unlikely	15.60
Conostephium uncinatum	P2	Sand, Sandy loam. Margins of salt lakes, Eucalyptus woodlands.	Unlikely	19.71
Pimelea halophila	P2	Margins of salt lakes.	Unlikely	19.11
Acacia amyctica	P2	Loamy and sandy clay plains in low woodland, mallee and open shrubland.	Possible	7.88
Eucalyptus histophylla	P3	Granite outcrops, shallow soil over granite, sandy gravel.	Unlikely	5.39
Acacia dissona var. *indoloria*	P3	Open mallee in undulating plains in sand, sandy loam and loam.	Possible	10.29
Cyathostemon sp. Salmon Gums (B. Archer 769)	P3	Margins of salt lakes, near salt lakes.	Unlikely	10.32
Bossiaea flexuosa	P3	Deep sandy soil. Edges of salt lakes. Associated with fire.	Unlikely	10.34

Eremophila compressa	P3	Eucalyptus woodland, Clay, loam, clay loam, sandy loam.	Possible	11.12
Micromyrtus elobata ssp. *scopula*	P3	Sand, loam, sandy loam, sandy clay. Mallee woodland over tall shrubland or heath, shrublands.	Possible	12.16
Eremophila chamaephila	P3	Eucalyptus woodland, tall shrubland. Associated with fire and mechanical disturbance.	Possible	13.84
Eutaxia actinophylla	P3	Open Eucalyptus woodland. Red-brown loam, red sandy-loam.	Possible	15.81
Eucalyptus creta	P3	Eucalyptus woodland. Clay loam, sandy clay, loam, limestone.	Possible	17.78
Conostephium marchantiorum	P3	Sand. Margins of salt lakes, saline watercourses, sandplains.	Unlikely	19.88
Frankenia glomerata	P4	Margins salt lakes, saline watercourses, saline floodplain.	Unlikely	10.08
Eucalyptus merrickiae	T	Sand, Sandy clay, margins of salt lakes.	Unlikely	13.83

Appendix 3: Description of Threatened and Priority Fauna Species with the Potential to occur within the No. 23 Dam Survey Area

Threatened or priority fauna identified by the desktop study to be present within a 20 km radius of No. 23 Dam project area, using Threatened and Priority Fauna dataset (DBCA 2024e) and species identified by the EPBC protected matters search tool.

Nt. Acronyms used in the table include priority flora (P), threatened flora (TF), Biodiversity Conservation (BC) Act 2018, EPBC Act (1999), Extinct (EX), Critically Endangered (CR) endangered (EN) and Vulnerable (VU).

Taxon	Common Name	BC Act Status	EPBC Status	Associated Habitat	Likely to occur	Distance from site (km)	EPBC Protected Matters Tool
Aphelocephala leucopsis	Southern whiteface		Vulnerable	Single Esperance record from 1981, from the North Cascade locality. Open woodlands and shrublands usually dominated by Acacia or Eucalyptus with an understorey of grasses and/or shrubs. Feed exclusively on the ground and favour open habitats with herbs in the litter. Nesting birds build bulky domed nests of grass, bark and roots in a hollow, crevice or low bush.	No	-	X
Calidris acuminata	Sharp-tailed sandpiper	MI	VU & MI	Widespread in both inland and coastal locations of fresh and saline habitats. Utilises fresh to hypersaline aquatic environments; edges of mudflats, sewage ponds, wetlands, and inundated pastures. Roosts on rocky and sandy beaches, and wetland vegetation. Omnivorous; diet of seeds, worms, molluscs, crustaceans, and insects.	No	-	X
Calidris ferruginea	Curlew sandpiper	CR	CR & MI	Occasionally occurs in suitable inland wetland environments. Widespread in coastal and subcoastal plains, especially around the Esperance Lakes area.	No	-	X
Dasyurus geoffroii	Chuditch, Western quoll	VU	VU	Wide habitat range, requiring dense understorey for ambush hunting and an abundance of small to medium-	Possible	-	X

				sized mammalian, avian, amphibian and invertebrate prey.			
Falco hypoleucos	Grey falcon	VU	VU	Semi-arid and arid areas where it hunts over timbered lowland plains of mulga scrub and treed watercourses. Favours tussock grasslands and open woodland where it predates on birds such as doves, ducks, finches, small parrots and small mammals. Nests in largest trees in the landscape, usually mature *E. camaldulensis* and telecommunication towers.	Possible	-	X
Falco peregrinus	Peregrine falcon	OS		Requires abundance of medium-sized birds such as waterfowl, doves, pigeons, parrots and passerines as prey. Requires open space for hunting, preferring to hunt over marshes, open water bodies, valleys, fields and grasslands. Utilising high perches, such as bare eucalypt stags, to surveil for potential prey.	Possible	13.24	
Leipoa ocellata	Malleefowl	VU	VU	Long-unburnt mallee woodland with abundant leaf litter and debris to build nest mounds and forage for seeds, small invertebrates and lerps. Semi-arid regions across southern Australia.	No	9.76	X
Thinornis cucullatus	Hooded plover	P4		Open, flat sandy beaches with abundant seaweed / beach wrack, and backed by low sand dunes, avoiding steep, narrow beaches. Sometimes occur on inland salt lakes. Often sighted near water's edge and lay their eggs in shallow scrapes in the sand along the upper beach or in low dunes between August and February, sometimes to April.	No	19.73	

Appendix 4: EPBC Act Protected Matters Report

Listed Threatened Ecological Communities

Community Name	Threatened Category	Presence	
		Rank	Text
Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia	Endangered	May	Community may occur within area

Listed Threatened Species

Scientific Name	Common Name	Simple Presence	Threatened Category	Migratory Status
Calidris ferruginea	Curlew sandpiper	May	Critically Endangered	Migratory
Leipoa ocellata	Malleefowl	Likely	Vulnerable	
Aphelocephala leucopsis	Southern whiteface	May	Vulnerable	
Dasyurus geoffroii	Chuditch, Western quoll	May	Vulnerable	
Calidris acuminata	Sharp-tailed sandpiper	May	Vulnerable	Migratory
Falco hypoleucos	Grey falcon	May	Vulnerable	

Appendix 5: BC Act Threatened and Priority Flora and Fauna Definitions

Category	Definition
T – Threatened	Taxa that have been adequately searched for and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such (Schedules 1 to 4 of the Wildlife Conservation (Rare Flora) Notice under the WC Act). Threatened flora are further ranked by the DBCA to align with IUCN Red List categories and criteria: **CR:** Critically Endangered – considered to be facing an extremely high risk of extinction in the wild (Schedule 1); **EN:** Endangered – considered to be facing a very high risk of extinction in the wild (Schedule 2); or **VU:** Vulnerable – considered to be facing a high risk of extinction in the wild (Schedule 3). **EX:** Presumed Extinct – taxa that have been adequately searched for and there is no reasonable doubt that the last individual has died (Schedule 4)
P1 – Priority 1 (Poorly known taxa)	Taxa that are known from one or a few collections or sight records (generally less than five), all on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, Shire, Westrail and Main Roads WA road, gravel and soil reserves, and active mineral leases and under threat of habitat destruction or degradation. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes.
P2 – Priority 2 (Poorly known taxa)	Taxa that are known from one or a few collections or sight records, some of which are on lands not under imminent threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. Taxa may be included if they are comparatively well known from one or more localities but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes.
P3 – Priority 3 (Poorly known taxa)	Taxa that are known from collections or sight records from several localities not under imminent threat, or from few but widespread localities with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Taxa may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and known threatening processes exist that could affect them.
P4 – Priority 4 (Rare, Near Threatened and other taxa in need of monitoring)	**1. Rare** - Taxa that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection, but could be if present circumstances change. These species are usually represented on conservation lands. **2. Near Threatened** - Taxa that are considered to have been adequately surveyed and that do not qualify for Conservation Dependent, but that are close to qualifying for Vulnerable. **3.** Taxa that have been removed from the list of threatened species during the past five years for reasons other than taxonomy

Appendix 6: EPBC Act (1999) Definition of Threatened Flora and Fauna Species

Category Code	Category
Ex	**Extinct** Taxa which at a particular time if, at that time, there is no reasonable doubt that the last member of the species has died.
ExW	**Extinct in the Wild** Taxa which is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or it has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
CE	**Critically Endangered** Taxa which at a particular time if, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
E	**Endangered** Taxa which is not critically endangered and it is facing a very high risk of extinction in the wild in the immediate or near future, as determined in accordance with the prescribed criteria.
V	**Vulnerable** Taxa which is not critically endangered or endangered and is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
CD	**Conservation Dependent** Taxa which at a particular time if, at that time, the species is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.

Appendix 7: BC Act Definition of Threatened Ecological Communities

Category Code	Category
PTD	**Presumed Totally Destroyed** An ecological community will be listed as Presumed Totally Destroyed if there are no recent records of the community being extant and either of the following applies: (i) records within the last 50 years have not been confirmed despite thorough searches or known likely habitats or; (ii) all occurrences recorded within the last 50 years have since been destroyed.
CE	**Critically Endangered** An ecological community will be listed as Critically Endangered when it has been adequately surveyed and is found to be facing an extremely high risk of total destruction in the immediate future, meeting any one of the following criteria: (i) The estimated geographic range and distribution has been reduced by at least 90% and is either continuing to decline with total destruction imminent, or is unlikely to be substantially rehabilitated in the immediate future due to modification; (ii) The current distribution is limited ie. highly restricted, having very few small or isolated occurrences, or covering a small area; (iii) The ecological community is highly modified with potential of being rehabilitated in the immediate future.
E	**Endangered** An ecological community will be listed as Endangered when it has been adequately surveyed and is not Critically Endangered but is facing a very high risk of total destruction in the near future. The ecological community must meet any one of the following criteria: (i) The estimated geographic range and distribution has been reduced by at least 70% and is either continuing to decline with total destruction imminent in the short term future, or is unlikely to be substantially rehabilitated in the short term future due to modification; (ii) The current distribution is limited ie. highly restricted, having very few small or isolated occurrences, or covering a small area; (iii) The ecological community is highly modified with potential of being rehabilitated in the short term future.
V	**Vulnerable** An ecological community will be listed as Vulnerable when it has been adequately surveyed and is not Critically Endangered or Endangered but is facing high risk of total destruction in the medium to long term future. The ecological community must meet any one of the following criteria: (i) The ecological community exists largely as modified occurrences that are likely to be able to be substantially restored or rehabilitated; (ii) The ecological community may already be modified and would be vulnerable to threatening process, and restricted in range or distribution; (iii) The ecological community may be widespread but has potential to move to a higher threat category due to existing or impending threatening processes.

Appendix 8: BC Act Definition of Priority Ecological Communities

Category Code	Category
P1	**Poorly-known ecological communities** Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist.
P2	**Poorly-known ecological communities** Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, unallocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation.
P3	**Poorly known ecological communities** (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: (ii) Communities known from a few widespread occurrences, which are either large or within Significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or; (iii) Communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing and inappropriate fire regimes.
P4	Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
P5	**Conservation Dependent ecological communities** Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

Appendix 9: EPBC Act Definition of Threatened Ecological Communities

Three categories exist for listing threatened ecological communities under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.

Listing Category Code	Explanation of Category
Critically endangered	If, at that time, it is facing an extremely high risk of extinction in the wild in the immediate future.
Endangered	If, at that time, it is not critically endangered and is facing a very high risk of extinction in the wild in the near future.
Vulnerable	If, at that time, it is not critically endangered or endangered, and is facing a high risk of extinction in the wild in the medium term future.

Appendix 10: BAM Act Categories and Control of Declared (Plant) Pests in Western Australia

Control Category	Control Measures
C1 (Exclusion) '(a) Category 1 (C1) — Exclusion: if in the opinion of the Minister introduction of the declared pest into an area or part of an area for which it is declared should be prevented' Pests will be assigned to this category if they are not established in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State.	In relation to a category 1 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to destroy, prevent or eradicate the declared pest.
C2 (Eradication) '(b) Category 2 (C2) — Eradication: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is feasible'. Pests will be assigned to this category if they are present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still a possibility.	In relation to a category 2 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to destroy, prevent or eradicate the declared pest.
C3 (Management) '(c) Category 3 (C3) — Management: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is not feasible but that it is necessary to — (i) alleviate the harmful impact of the declared pest in the area; or (ii) reduce the number or distribution of the declared pest in the area; or (iii) prevent or contain the spread of the declared pest in the area.' Pests will be assigned to this category if they are established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest.	In relation to a category 3 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to — (a) alleviate the harmful impact of the declared pest in the area for which it is declared; or (b) reduce the number or distribution of the declared pest in the area for which it is declared; or (c) prevent or contain the spread of the declared pest in the area for which it is declared.

Appendix 11: Definition of Vegetation Condition Scale

For the south west and interzone botanical provinces

Condition Rating Description	Condition Rating Description
Pristine (1)	Pristine or nearly so, no obvious signs of disturbance
Excellent (2)	Vegetation structure intact; disturbance affecting individual species; weeds are non-aggressive species.
Very Good (3)	Vegetation structure altered; obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires; the presence of some more aggressive weeds; dieback; logging; & grazing.
Good (4)	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; & grazing
Degraded (5)	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; & grazing.
Completely Degraded (6)	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.