

Native Vegetation Clearing Permit Supporting document

Neerabup Resource Recovery Precinct



Prepared for City of Wanneroo

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1 Introduction

1.1 Background

Talis Consultants (Talis) have been commissioned by the City of Wanneroo (the City) to develop this Native Vegetation Clearing Permit (NVCP) for the clearing associated with the Neerabup Resource Recovery Precinct (NRRP) Master Plan (the Project) located on Lot 600, 570 Wattle Ave, Neerabup.

The Project is located approximately 31km north of Perth, Western Australia (Figure 1-1). The proposed facilities include a waste transfer building, a material recovery facility, a community recycling centre and supporting infrastructure for the southern portion of the NRRP. The NRRP is designed to provide infrastructure for recyclables, organics, and residual waste, including a Waste to Energy (WtE) facility, Material Recovery Facilities (MRF), Food Organics/Garden Organics (FOGO) processing and a Waste Transfer Station (WTS). The NRRP will help address the lack of waste infrastructure in northern Perth while increasing material recovery, generating local employment opportunities and reducing transportation costs and emissions.

Lot 600 covers an area of 47 Hectares (ha) however the buildable area is limited by gas, transport and power services and their easements and restriction zones which are in place across Lot 600. The phased development of the project will start with the facility contained within the boundary of both CPS 6359/3 and this proposed clearing application (Figure 1-2).

Under Section 51C of the *Environmental Protection Act 1986* (EP Act), the clearing of any native vegetation requires an approved clearing permit, unless an exemption applies. This NVCP is to clear 8.90 ha of native vegetation.

1.2 Purpose of Clearing Permit Application

The purpose of this NVCP supporting document is to present the results of an assessment of the clearing aspects of this proposal against the ten clearing principles as outlined in the (then) Departments of Environment Regulation (DER)'s *A guide to the assessment of applications to clear native vegetation* (2014) under Part V Division 2 of the EP Act. This report identifies the potential environmental impacts associated with the proposal based on the best available data. This report and accompanying NVCP Purpose Permit application form will be submitted to DEMIRS for assessment.

1.3 Proposed Timeframes

Clearing is proposed to commence in Q3 2025 with clearing for the facility likely to be completed by 2026.

1.4 Responsible Applicant

City of Wanneroo is responsible for the implementation of the clearing described within this report. Correspondence relating to this NVCP application should be addressed to:









2 Site overview

2.1 Climate

The Project is located in the Western Australian Swan Coastal Plain, approximately 31 km North of Perth. Perth has Mediterranean climate characterised by hot, dry summers and mild, wet winters. The closest weather station is the Pearce RAAF (station id 009053) with is approximately 22 km northeast of the project area.

The mean max temperature peaks in January at 33.6° and the mean minimum drops to 8.3° in August. The annual mean rainfall is 671.8 mm with majority of the rainfall occurring from May to September, the remaining months of the year are relatively dry.



Figure 2-1: Long-term and Monthly total Rainfall, Maximum and Minimum Temperatures for Pearce RAAF 009053 (Bureau of Meteorology, 2025).

2.2 Topography

The topography across Lot 600 does not vary significantly, with elevations ranging from 56 metres Australian Height Datum (mAHD) in the south-western corner, to 44 mAHD on the eastern border of Lot 600. On average there is a 1.6% change in grade across Lot 600. In the Proposed Clearing area just 1 m of variation of topography across the area from 45 mAHD to 46 mAHD. The topography of the proposed clearing area is shown in Figure 2-2.

2.3 Soil Landscape Systems

Soil landscapes and land system mapping of WA describes broad soil and landscape characteristics from regional to local scales, and has been captured at scales ranging from 1:20,000 to 1:250,000 (DPIRD, 2020). The Project was mapped over one Soil Landscape System as shown in Table 2-1.



Table 2-1: Land Systems (DPIRD 2020)

Mapping Unit	Land system	Description	Extent (ha)	%
211Sp	Karrakatta Sand Yellow Phase	Low hilly to gently undulating terrain. Iron podzols. Banksia spp woodland with <i>E. todtiana</i> and depauperate <i>E. marginata;</i> dense shrub layer.	8.90	100





2.4 Hydrology and Wetlands

Lot 600 is in the Swan Avon Lower Swan catchment and partially intersects the Lake Pinjar geomorphic wetland in the east. No drainage lines or other hydrological features intersect the survey area of Lot 600.

Lot 600 is part of the Neerabup Industrial Area (NIA) which is situated within the Gnangara Underground Water Pollution Control Area, specifically in the Wanneroo Proclaimed Groundwater Area and borders to the Gnangara Proclaimed Groundwater Area in the north.



3 Flora and Vegetation Assessment

Ecoscape Pty Ltd (Ecoscape) conducted a basic fauna and detailed flora and vegetation survey in October 2020 for the purpose of this NVCP. The survey area included the entire lot 600. The full survey can be found in Appendix A. Some of the results discussed herein refer to the portion of the survey area relating to the proposed clearing for this NVCP, This area is referred to as the project area, which is a subset of the survey area.

3.1 Flora Assessment

Ecoscape completed a flora and vegetation survey on the 29th and 30th of October 2020 for lot 600 and included the 8.90 ha proposed for the development of this NVCP for the Facility (the project area).

The flora and vegetation surveys found 113 flora species from 93 genera and 39 families from 15 floristic quadrats, opportunistic observations, and searches for conservation-listed flora. The proposed clearing area had just 20 species of flora recorded including 7 introduced species.

The desktop assessment was conducted using both the PMST search and DBCA database search with an 8 km buffer. Together these searches found three Threatened Flora, three Priority 1, four Priority 2, six Priority 3 and three Priority 4 taxa. Despite these findings through the desktop search; the field survey recorded no Threatened or Priority Flora. The likelihood of occurrence desktop survey considered 4 conservation listed species as possible to occur within the survey area which were all revised to unlikely, in the post-survey assessment.

3.2 Interim Biogeographic Regionalisation of Australia

The Interim Biogeographic regionalisation of Australia (IBRA) divides Australia into 89 bioregions based on major biological, geographical and geological attributes. These bioregions are subdivided into 419 subregions as part of a refinement of the IBRA framework (Department of Climate Change, Energy, the Environment and Water, 2023) The Project is located within IBRA Bioregion of the Swan Coastal Plain in the Perth Subregion (SWA2), which is generally characterised by low lying coastal plain mainly covered with Tuart or Banksia woodlands on sandy soils, *Casurina obesa* on outwash plains and paperbark swamp areas.

3.3 Pre-European vegetation Types

Mapping of pre-European vegetation within Western Australia was completed on a broad scale (1:1,000,000) by Beard (1990). One of Beard's pre-European vegetation associations are mapped within the survey area (Figure 3-1):

• Association 6 (Spearwood): Jarrah, marri, and wandoo *Eucalyptus marginata*, *Corymbia calophylla*, *Eucalyptus wandoo*.

The extent of the Beard vegetation unit within the survey area is less than 30 percent (%) for Vegetation association 6, however the extent for the IBRA biogeographic subregion of Perth within the Swan Coastal plain is, at 23.65% and well above the 10 % threshold for the Perth Metro area (DER,2014). Table 3-1 details the remaining proportion of the Vegetation Association 6 that lies within the proposed clearing footprint.



Vegetation Association Scale		Pre European extent (ha)	Current extent (ha)	Remaining (%)	Hectares (ha) within the Proposed Clearing Area	% of current extent within the Proposed Clearing Area
	State: WA	56,343.01	13,362.25	23.72	8.90	0.07
	IBRA biogeographic region (Swan Coastal plain)	56,343.01	13,362.25	23.72	8.90	0.07
6	IBRA biogeographic Subregion: Perth	56,343.01	13,362.25	23.72	8.90	0.07
	LGA: City of Wanneroo	12,662.10	2,777.67	21.94	8.90	0.32

Table 3-1: Extents of vegetation associations mapped within the survey area





3.4 Vegetation communities

The survey undertaken by Ecoscape identified 2 ecological communities within the proposed Project area (Table 3-2, Figure 3-2).

Table 5-2: Ecological Communities recorded at Lot 600, Neerabl						
gical Community	Area (ha)					
W: Melaleuca preissiana and Eucalyptus rudis subsp. rudis mid						

Table 3-2: Ecological	Communities	recorded	at l	ot 600.	Neerabu	D
Tubic o El Ecological	communes	1 CCOI aCa			I CCI GOG	r

MpMW: <i>Melaleuca preissiana</i> and <i>Eucalyptus rudis</i> subsp. <i>rudis</i> mid woodland over * <i>Ehrharta calycina</i> , * <i>Carpobrotus edulis</i> and * <i>Bromus</i> <i>diandrus</i> mid open tussock grassland/forbland with Astartea scoparia tall isolated shrubs	7.52
EtLMW: <i>Eucalyptus todtiana</i> and <i>Nuytsia floribunda</i> mid mallee woodland /low woodland over * <i>Ehrharta calycina</i> mid open tussock grassland	0.26

3.5 Vegetation condition

Ecolo

The vegetation condition was degraded throughout roughly 87.5 % of the proposed clearing area and the remaining 12.5 % had no vegetation as it had been previously cleared, although there is some evidence of recolonisation, based on current aerial imagery. (Figure 3-3). The main factor affecting vegetation condition was disturbance from weeds and vehicles as evidenced by the number of vehicle tracks observed within the survey area and project area.







3.6 Groundwater Dependent Vegetation

The Groundwater Dependent Ecosystems Atlas (Australian Government & BoM 2020) indicated the survey area is considered as low and medium potential for terrestrial GDEs to occur.

3.7 Weeds

Twenty six introduced flora species (weeds) were recorded during the field survey, representing 23.01% of the overall flora inventory. **Ehrharta calycina* (Perennial Veldt Grass) was the most commonly recorded introduced species occurring in 13 of 15 quadrats and was a major contributor to vegetation condition assessment. Two of the introduced flora species have significance:

- *Asparagus asparagoides WoNS (Weeds of National Significance) and Declared Pest
- *Moraea miniata Declared Pest

3.8 Environmentally Sensitive areas

The eastern boundary of Lot 600 intersects an ESA, the Lake Pinjar conservation category geomorphic wetland. Lake Pinjar is a shallow surface expression of an unconfined aquifer and is roughly 24km long chain of wetlands. The project area will not intersect the ESA itself, however the facility will be utilising the area within the 50 m buffer (Figure 3-4). The vegetation survey described the buffer to have either degraded vegetation or no vegetation (cleared) in the buffer areas of the Lake Pinjar wetland.

3.9 Threatened ecological communities

The database searches (DBCA, 2020) completed by Ecoscape identified TEC's within the 8km buffer search to the proposed clearing area. The area search found that the Banksia Woodlands on the Swan Coastal Plain PEC/TEC, or its buffers, occurred within the survey area, however the field survey found that no banksia woodland vegetation occurs within the boundary of the proposed clearing area. No clearing of banksia woodland is occurring as a result of the clearing from this NVCP (Figure 3-5).







4 Fauna

A basic Fauna survey was conducted late October 2020 including targeted surveys on significant fauna and habitats at Lot 600, DP 302260 (Ecoscape, 2021).

Additionally, the survey identified the likelihood of species occurrence as part of the desktop study and was re-analysed post-survey with a remaining five conservation listed species having a medium, high or recorded (in the case of the rainbow bee-eater) likelihood of occurrence, post survey.

A total of 18 vertebrate fauna species were recorded during the survey, consisting of; three mammals (two introduced), 14 birds (one introduced) and one reptile. No fauna species were recorded in the proposed clearing area. Summarised in Table 4-1 are the species found during the survey along with their Conservation status and likelihood of occurrence.

The Rainbow Bee eater was the only significant species found during the survey listed as marine and protected under the EPBC act. The species has a broad habitat suitability and therefore the survey area is unlikely to be significant habitat for this species. Additionally, the recording was outside of the proposed clearing area.

Species	Common name	Post Survey Likelihood of occurrence	Cwth EPBC Act status	Western Australian BC Act status
	Mammals			
*Canis familiaris familiaris	Dog	recorded	-	-
*Oryctolagus cuniculus	Rabbit	recorded	-	-
Macropus fuliginosus melanops	Western Grey Kangaroo	recorded	-	-
Isoodon fusciventer	Quenda	High		P4
Notamacropus irma	Western Brush Wallaby	Medium		P4
	Birds			
*Dacelo novaeguineae	Laughing Kookaburra	recorded	-	-
Todiramphus sanctus	Sacred Kingfisher	recorded	-	-
Cacatua roseicapilla	Galah	recorded	-	-
Coracina novaehollandiae	Black-faced Cuckoo-shrike	recorded	-	-
Cracticus tibicen	Australian Magpie	recorded	-	-
Falco berigora	Brown Falcon	recorded	-	-

Table 4-1: Likelihood of occurrence of fauna species



Species	Common name	Post Survey Likelihood of occurrence	Cwth EPBC Act status	Western Australian BC Act status
Lichmera indistincta	Brown Honeyeater	recorded	-	-
Phylidonyris novaehollandiae	New Holland Honeyeater	recorded	-	-
Merops ornatus	Rainbow Bee- eater	recorded	МА	
Petroica goodenovii	Red-capped Robin	recorded	-	-
Platycercus spurius	Red-capped Parrot	recorded	-	-
Platycercus zonarius	Australian Ringneck	recorded	-	-
Rhipidura Ieucophrys	Willie Wagtail	recorded	-	-
Threskiornis spinicollis	Straw-necked Ibis	recorded	-	-
Calyptorhynchus banksii naso	Forest Red-tailed Black Cockatoo	High	VU	VU
Calyptorhynchus latirostris	Carnaby's Cockatoo	High	EN	EN
	Reptiles		·	·
Ctenophorus adelaidensis	Western Heath Dragon	recorded	-	-

4.1 Habitat Types

Degraded woodland was the only habitat type recorded in the proposed clearing area. The degraded open woodland comprised of Paperbark (*Melaleuca preissiana*), Flooded Gum (*Eucalyptus rudis*) and Coastal Blackbutt (*Eucalyptus todtiana*) over scattered shrubs and grasses on white sand, with patches of sedgeland on seasonally wet soil. This habitat is suitable for Woodland Birds, Western Grey Kangaroo, Rabbit and more significantly, foraging habitat for Black Cockatoo species. The cleared areas contained little to no native vegetation had little suitable habitat to support fauna species.

The habitat is of low value for most fauna species, particularly small ground dwelling species, but is still of moderate value to bird species. The remnant trees of the Degraded Woodland provide habitat structure and foraging opportunities for bird species such as Purple-crowned Lorikeets, Rainbow Beeeaters, Sacred Kingfishers and Red-capped Robins. This area is also likely to provide foraging resources to Black Cockatoos. The seasonally wet sedgelands provide a water source throughout part of the year. The remnant trees in an otherwise degraded area may still provide nesting and breeding opportunities for suitable bird species. The habitat is also utilised by introduced predators such as Dogs, Foxes and Cats and grazing animals such as Rabbits and Western Grey Kangaroos.



4.1.1 Conservation Significant Habitat

Trees suitable for breeding by Black cockatoos were surveyed across the proposed clearing area. Each tree was assessed for the potential to provide breeding habitat for the Black Cockatoo species (Forest Red-tailed Black Cockatoo, Baudin's Cockatoo and Carnaby's Cockatoo) as per Commonwealth guidelines (DSEWPaC, 2012). The survey area was also assessed for quality of foraging habitat where the degraded woodland was assessed as may be utilised as roost sites and as foraging resources No evidence of Black Cockatoo presence was found during the survey.

Three potential breeding trees were located within the proposed development area (Figure 4-1). All three of the recorded *Eucalyptus rudis* trees were classified as class 5 when scored using the scale developed by Dr Mike Bamford (Bamford 2016). These Class 5 trees do not currently exhibit the characteristics necessary for Black Cockatoo use for nesting however, due to the trees being of a suitable size to potentially provide suitable nesting hollows in the future, they were recorded during the survey. These trees, including a 5 m buffer will be excluded from the clearing permit area. The area beneath the tree canopy will not be cleared if larger than the estimated 5 m buffer.

Section 5 describes the mitigation used to avoid any potential harm to the trees.





5 Environmental Management Measures

5.1 Avoidance

To mitigate the clearing impact of the Project, The City will avoid any potential risk to conservation significant habitat, or environmentally sensitive areas by adhering to the demarcated areas.

The proposed clearing area includes 5 m buffers surrounding the three potential cockatoo habitat trees as the project will incorporate the trees into the design of the facility, hence avoiding any harm to the potentially habitable trees. If the area beneath the tree canopies is larger than 5 m in radius, that area will not be cleared to avoid any impact to the trees.

Lake Pinjar Geomorphic wetland will not be impacted by the project as the design of the facility has ensured no clearing will occur within the boundary of the ESA. The buffer of the wetland will however be incorporated into the design of the facility but no impact will occur as a result of the development of the facility, due to its current degraded and cleared status. Additionally, the surface of the facility ensures the water does not flow towards the ESA and captures all potential run off through the Surface Water Management System (SWMS).

5.2 Mitigation measures

5.2.1 Introduced species management

To reduce impact of introduced weed species to the proposed clearing area and surrounding environment, the site will carry out clearing with clean machinery and will clean equipment used after clearing to reduce the risk of spread of introduced species and specifically reduce potential to spread declared pest and WoNS species, *Asparagus asparagoides*

5.2.2 Impacts to Surface and Groundwater

Drainage channels will be used to effectively transport any surface water run-off to the storm water retention ponds for sedimentation or diversion. Each of the three facilities will have its own storm water retention pond all to prevent any adverse impacts to the surrounding environment and the Environmentally Sensitive Area (ESA).

Environmental risks associated with surface water within the overall Site boundary will be managed through the establishment of a best practice and operationally flexible SWMS. The design features incorporated to achieve this, are shown in Table 5-1.



Table 5-1: Objectives and Associated Design Features of the Surface Water Management System

Objective	Design Feature
	Develop hardstands that are graded to ensure the capture of all stormwater run- off within the Site's operational areas
Proactively Manage	Ensure the surface water management system is appropriately sized to manage a 1-in-20-year Annual Exceedance Probability (AEP), 24-hour duration storm event
Surface water	Consideration of the environmentally sensitive area adjacent to the Site (i.e., the wetland conservation area)
	Establish controlled discharge points for surface water

All waste materials will be received in separate receptacles with appropriate containment measures, such as bunding. Additionally, all waste handling will take place within a fully contained space, minimising the risk of stormwater contact and leachate generation. This proactive approach reduces the potential for environmental impacts. This will reduce the risk of any leachate, if generated, being released from these areas into other parts of the Site or the environment.

All operational areas of the Site will have hardstands made of asphalt or concrete. Depending on the final design and grading of the hardstands, surface water run-off will be managed using either swales or pit and pipe drainage channels, with culverts used where necessary.

The swales and/or drainage channels will run throughout the Site, connecting to their respective stormwater retention pond. The ponds will be constructed to effectively retain sediment during small rainfall events and provide a safe discharge point during larger events. The ponds will be lined with Geosynthetic Liner (HDPE) to avoid the surface water infiltrating into the ground and groundwater levels and cause any contamination. Evaporation will be utilised as the preferred stormwater management technique on site. However, during large storm events exceeding the 1-in-20-year, 24-hour duration threshold, the lined stormwater retention ponds will overflow into either a single shared infiltration basin or multiple individual basins, to be constructed on-site. This will allow for highly diluted stormwater to be released in a control manner into the environment. The ponds and the infiltration basins will be located outside the wetland conservation area.

There will be a pipe connecting each lined pond to its infiltration basin. If a fire was to occur at the Site, this connection pipe would be closed ensuring that no fire wash water is released into the environment. This fire wash water can then be collected from a vacuum truck and tankered off site.



6 Assessment Against the Ten Clearing Principles

Table 6-1: Assessment of Project against the Ten Clearing Principles

Principle	Assessment	Outcome
Principle (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.	The Remnant vegetation condition of the proposed clearing area is either degraded or has been previously cleared with a high proportion of introduced weed species, and disturbance due to dirt bike activity throughout Lot 600. Ecoscape's survey (Ecoscape, 2021) found the Proposed clearing area does not intersect the ESA, contain TECs or any threatened flora species.	Not likely to be a variance to this Principle
Principle (b) Native vegetation should not be cleared if it comprises the while or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.	The 3 Eucalyptus rudis trees located within the proposed clearing area were assessed as class 5 against the Bamford assessment tool (2016) The potential black cockatoo habitat trees located within the proposed clearing area will not be cleared as they have been excluded from the proposed clearing footprint.	Not likely to be a variance to this Principle
Principle (c) Native Vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	The survey conducted by Ecoscape (2021) found the Proposed Clearing area has no Priority or threatened flora species. The likelihood of occurrence desktop survey considered 4 conservation listed species as possible to occur within the survey area which were all revised to unlikely post-survey.	Not likely to be a variance to this Principle
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.	The survey conducted by Ecoscape (2021) found the Proposed Clearing area does not intersect the ESA, contain TECs or any Threatened flora species. The Banksia woodlands TEC buffer identified in the desktop survey, was not represented in the in-field survey. There is no presence of the Banksia woodland TEC within the boundary of the Proposed Clearing Area.	Not likely to be a variance to this Principle
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.	Pre-European vegetation association mapping indicates that the vegetation type have greater than 23.72% of the IBRA biogeographic subregion of Perth (Ecoscape, 2021). The DER's (2014) guidance of constrained areas has a minimum threshold of retention of 10%, the vegetation type within the Perth metro area and the proposed clearing area is above this threshold. The remaining vegetation within the clearing area represents 0.07% of the remaining vegetation in	Not likely to be a variance to this Principle

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Principle	Assessment	Outcome
	the IBRA biogeographic subregion of Perth within the Swan Coastal plain and 23.65% will be remaining after the clearing for this project.	
Principle (f) Native vegetation should not be cleared if it is growing in, or in association with a watercourse or wetland.	The Proposed clearing area is adjacent to the Lake Pinjar geomorphic wetland ESA. The Project will not intersect the ESA itself however the facility will be utilising the area within the 50 m buffer. The vegetation survey described the buffer to have either degraded vegetation or no vegetation (previously cleared). The design of the facility itself has taken topography and run off into consideration and has a closed cycle drainage system. No Surface water runoff will directly impact the wetland.	Not likely to be a variance to this Principle
Principle (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	 The Department of Environmental Regulation, 2014 (now DWER) has defined land degradation as: The clearing of vegetation; Decline in vegetation condition; Soil erosion and soil acidity (caused by wind and water erosion due to vegetation clearing); Salinity; or Waterlogging/flooding The degraded condition of the existing vegetation in the proposed clearing footprint is due to pre-existing vehicle tracks and weed presence. Clearing vegetation within the proposed clearing area is unlikely to cause appreciable land degradation to the areas adjacent to the proposed clearing area. The works associated with the clearing are unlikely to cause appreciable land degradation that is different or more significant than what has already occurred within Lot 600 and the surrounding area to date. 	Not likely to be a variance to this Principle
Principle (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have impact on the environmental values of any	The Proposed clearing area is adjacent to the Lake Pinjar geomorphic wetland ESA. The Project will not intersect the ESA itself however the facility will be utilising the area within the 50 m buffer. The vegetation survey described the buffer to have either degraded vegetation or no vegetation (previously cleared) in the areas in the 50 m buffer of the wetland. The design of the facility itself has taken topography and run off into consideration and has a closed cycle drainage system. No Surface water runoff will directly impact the wetland.	Not likely to be a variance to this Principle

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Principle	Assessment	Outcome
adjacent of nearby conservation area.	The survey conducted by Ecoscape (2020) found the Proposed Clearing area does not intersect TECs, PECs or their buffers. The Banksia woodlands TEC buffer identified in the desktop survey, was not represented in the in-field survey. There is no presence of the Banksia woodland TEC within the boundary of the Proposed Clearing Area.	
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.	The wetland to the east of the project will not be impacted by surface water runoff as drainage channels will be used to effectively transport any surface water run-off to the storm water retention ponds for sedimentation or diversion. The Groundwater Dependent Ecosystems Atlas (Australian Government & BoM 2020) indicated the survey area is considered as low and medium potential for terrestrial GDEs to occur. Environmental risks associated with surface water and groundwater within the overall Site boundary will be managed through the establishment of a best practice and operationally flexible Surface Water Management	Not likely to be a variance to this Principle
Principle (j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	Diversion channels, bunds, handstands and lined retention ponds will be installed to maintain controlled surface water flow around the facility, to minimise risk of flooding and reduce risk of contamination events due to flood events. Evaporation will be utilised as the preferred stormwater management technique on site. However during large storm events exceeding the 1-in-20-year, 24-hour duration threshold, the lined stormwater retention ponds will overflow into a infiltration basin which will allow for highly diluted stormwater to be released in a control manner into the environment. The ponds and the infiltration basins will be located outside the wetland conservation area. Pipes connecting each lined pond to its infiltration basin would be closed during any potential fire or contamination event to ensure no fire wash water or contamination is released into the environment. This potential contamination can then be collected from a vacuum truck and tankered off site.	Not likely to be a variance to this Principle



7 Summary of Assessment

The assessment concludes that the clearing of 8.90 ha of native vegetation for the development of the Project is not at variance with the Ten Clearing Principles.

The Potential Black Cockatoo Habitat Trees are being avoided and will be retained for the Project. The ESA will not be impacted as a result of the Clearing associated with this Project. The Banksia woodlands TEC and its buffers identified in the desktop survey, was not represented in the in-field survey. There is no presence of the Banksia woodland TEC within the boundary of the proposed clearing area. No conservation significant flora or fauna is expected to be impacted by the project.



8 References

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