Environmental Impact Assessment (EIA)

Brazier Road, Yanchep

Native Vegetation Clearing Permit Application Supporting Documentation

December 2024.

City of Wanneroo

Contents

1. Introduction 3
2. Background 3
3. Scope 4
Figure 1 Clearing Plan- 0.037ha Permanent Clearing Area and Temporary Clearing Area 0.131 ha 4
4. Flora and vegetation 5
4.1 General information 5
4.1 Site assessment and photographs 5
Figure 2: Photograph of vegetation taken on 21st November 2024..**Error! Bookmark not defined.**
Figure 3: Photographs of degraded areas within proposed clearing site (November 2024). ..... **Error! Bookmark not defined.**
4.2 Bush forever 7
Figure 4: Bush Forever site shown in green hatching, Regional Ecological Linkage shown in blue and proposed clearing area shown in red. 7
4.4 Environmentally Sensitive Areas (ESA) and Ecological Linkages 7
Figure 5: Environmentally Sensitive Area (ESA) shown in orange shading and the location of Yanchep foreshore..... **Error! Bookmark not defined.**
5. Fauna 8
6. Clearing Principles 8
9. Conclusion 16
10. References 17

1. Introduction

The City of Wanneroo (the City) is proposing to undertake the clearing of vegetation within Road Reserve PIN 12186401 and land parcels boundaries Lot 521 and Lot 522 Deposit Plan 406005 Brazier Road, Yanchep. The proposed clearing is to facilitate the construction of a footpath that will connect Yanchep Road to Brazier Road and allow for pedestrian access to the shore. In addition, the City will also take this opportunity to install parallel parking bays near the shore for motorist. This Environmental Impact Assessment (EIA) document focuses on the impact of the proposed installation of a footpath and parallel car park on Brazier Road.
Table.1 below contains detailed land parcel information of the proposed installation of the footpath and car park on Brazier Road. A Certificate of Title for the affected land parcel is included as **Attachment 11. Certificate of Title**.

Table 1: Land Parcel Information

Project	Lot number	Deposited Plan	Reserve number	Address	Landowner	MRS zoning
Road Reserve. PIN 12186401 Land Type Road						
Brazier road pathway and traffic treatments.	521	406005	Class A reserve 12439	1 Brazier Road, Yanchep 6035	Crown Land- Power to Lease	Department of Planning, Lands and Heritage.
Brazier road pathway and traffic treatments.	522	406005	Class A reserve 12439	2 Brazier Road, Yanchep 6035	Crown Land- Power to Lease	Department of Planning, Lands and Heritage.

2. Background

The proposed project consists of a 3.5m red asphalt path west and parallel carpark on the north and south side of Brazier Road which will be located within the road reserve in the north and Lot 522 on the south of the road, intersecting Class A reserve 12439 (Newman Park)
The project will align with the Strategic Community Plan 2021-2031, Goal 5: *A well planned safe and resilient City that is easy to travel around and provides a connection between people and places.*
To facilitate the clearing of vegetation within the proposed project footprint, the City submits this supporting documentation to assist the Department of Water and Environmental Regulation (DWER) assessment of the clearing permit application.

3. Scope

The purpose of this document is to provide an assessment against the Environmental Protection Act 1986- Ten Clearing Principles to determine whether the proposed clearing is likely to have a significant impact on the environment. The clearing of native vegetation is proposed below adjacent to the Yanchep Beach Road and Brazier Road reserve.

The City is proposing to permanently clear 0.037 ha of native vegetation within road reserve PIN 12186401 and temporarily clear 0.132 ha of native vegetation within the project area. This will result in a total clearing of 0.169ha of clearing. The temporary cleared area (0.132ha) will be revegetated as soon as construction of the footpath and parking bays is completed. The revegetation will comprise with some only native species identified during the vegetation assessment conducted 24 November 2024.

Please find **Figure.1** below showing the clearing plan for the proposed works.

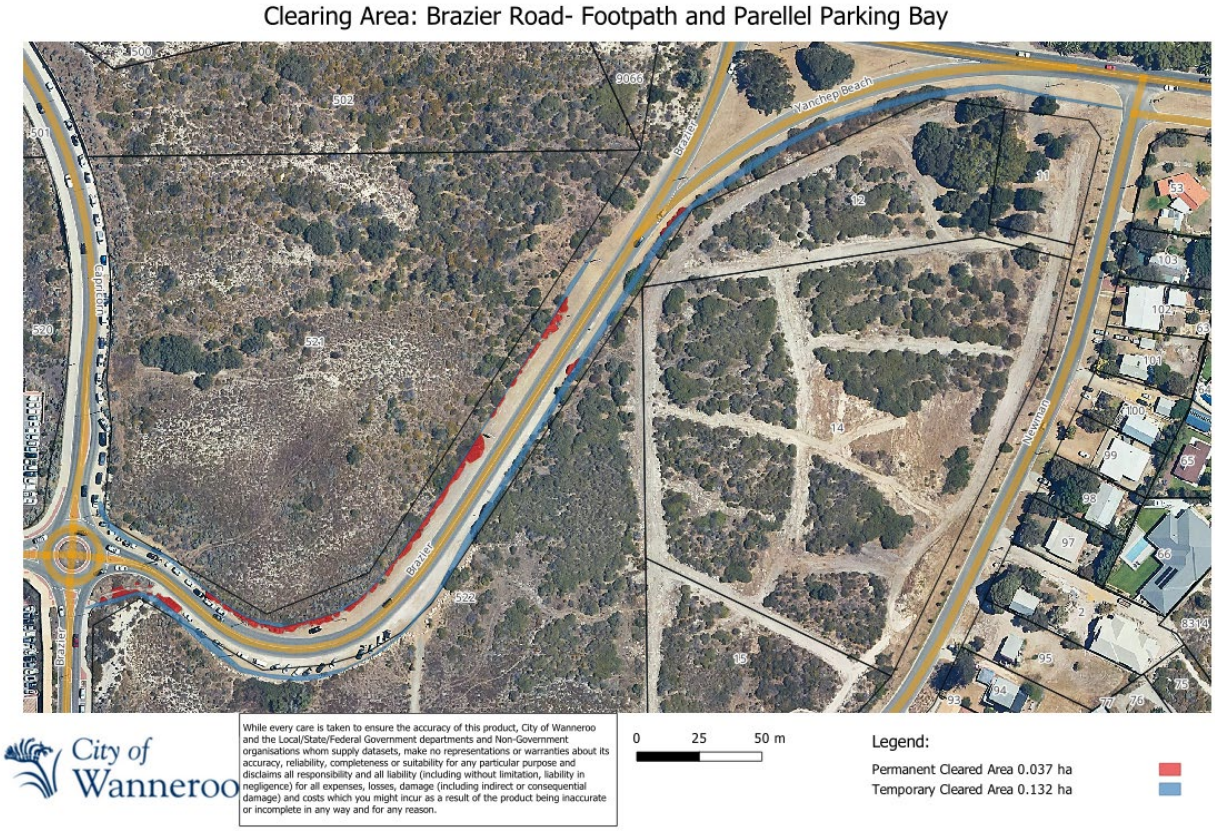


Figure 1 Clearing Plan- 0.037ha Permanent Clearing Area and Temporary Clearing Area 0.131 ha

4. Flora and Vegetation

4.1 General information

The City engaged Terrestrial Ecosystems (2020) and One Tree Botanical (2020) to undertake a targeted Flora and Vegetation survey of the reserve adjacent to the Brazier Road proposed project site in 2020 (**Attachment.10**).

The reserve adjacent to Brazier Road Yanchep retains native vegetation representative of the Guilderton Scrub- heath/ Thicket and is mapped within the IBRA region of Swan Coastal Plain, vegetation complex 55- Quindalup Complex (Heddle, 1980). The adjacent area retains remnant vegetation and is within an Environmentally Sensitive Area (ESA) 0.654 Ha. The vegetation within the proposed clearing site was assessed on the 21st November 2024and was predominantly in a degraded condition. More information in 4.2 below.

4.2 Site assessment and photographs

On 21 November 2024, the City's Environmental Officer conducted vegetation assessments of the proposed 0.169-ha Brazier Road clearing area (**Attachment 3-** Clearing Plan and **Attachment 4**- Clearing Area Shapefiles) identifying a total of 33 native flora and 22 weed/ non-natives species.

The Brazier Road clearing area subject to this application is predominantly in degraded condition, (**Figure 2**). One Tree Botanical's (2020) report found dominant native species to include *Conostylis candicans sub sp. Calcicola intergrade C. pauciflora sub sp. euryrhipis* (P4). The site was observed on the 21st of November 2024 to also have high weed cover with the dominant weed species being *Lagurus ovatus* (Hare's Tail Grass)*, Bromus diandrus* (Great Brome)*, Eragrostis curvula* (African Love Grass) *and Euphorbia terracina* (Geraldton Carnation Weed).



Figure 2: Photograph of vegetation taken on 21st November 2024. (Photo ID Brazier 51)

Table 2 Species identified during the vegetation assessment on 21 November 2024

NATIVE SPECIES	WEED SPECIES
Acacia cyclops	*Avena barbata*
Acacia l. var. lasiocarpa	*Bidens pilosa*
Acacia xanthina	*Bouteloua dactyloides*
Acacia lasiocarpa Benth	*Bromus diandrus*
Acanthocarpus preissii	*Cynodon dactylon*
Austrostipa flavescens	*Ehrharta longiflora*
Clematis linearifolia	*Eragrostis curvula*
Clematis linearifolia	*Euphorbia terracina*
Conostylis sp	*Hordeum leporinum*
Dianella revoluta	*Lagurus ovatus*
Ficinia nodosa	*Melaleuca alternifolia*
Hardenbergia comptoniana	*Pelargonium capitatum*
Hemiandra glabra	*Plantago ovata*
Kennedia prostrata	*Schinus terebinthifolia*
Leptomeria preissiana	*Spinifex longifolius*
Leucophyta brownii (planted)	*Symphyotrichum squamatum*
Leucopogon insularis	*Taraxacum khatoonae*
Leucopogon parviflorus	*Trachyandra divaricata*
Lomandra maritima	
Melaleuca cardiophylla	
Melaleuca systena	
Myoporum insulare	
Olearia axillaris	
Phyllanthus calycinus	
Rhagodia b. subsp. Baccata	
Santalum acuminatum	
Scaevola t. subsp. Thesioides	
Spyridium globulosum	
Tricoryne elatior	

4.2 Bush Forever Site 397

Part of the proposed clearing area is part of the larger (400 ha) Bush Forever Site 397: Coastal Strip from Wilbinga to Mindarie. Terrestrial Ecosystems (2000) states this site has approximately 83 native taxa and 27 weed taxa which was estimated >60% of the expected flora based on Government data.

The proposed clearing areas will only permanently impact 0.00875% of the bush Forever site. Thus, making impact of proposed works very minimal.



Figure 4: Bush Forever site shown in green hatching, and proposed clearing area shown in red.

4.4 Environmentally Sensitive Areas (ESA) and Ecological Linkages

Part of the proposed clearing area lies within an Environmentally Sensitive Area (**Figure 3**) and therefore no possible exemptions may be applied under *Part V* of the *Environmental Protection Act 1986.*



Figure 3: Environmentally Sensitive Area (ESA) shown in orange shading and the location of proposed works in red.

5. Fauna

No Fauna was observed and documented within the extent of the proposed clearing area during the 21st of November 2024 vegetation assessment.

The City of Wanneroo's (the City's) Intramap's Environmental Planning Considerations Report (EPCR) identified the following (see Attachment A for further details):

- Records of State and Federally listed Threatened fauna species.
- Records of State Priority listed fauna species.
- 'Remnant Vegetation' Carnaby cockatoo (*Zanda latirostris*) and a 'Confirmed feeding habitat', 'Confirmed Roosting Area' and 'Confirmed breeding area buffer'.
- Key Biodiversity Area for Birds (Northern Swan Coastal Plain IBA). The IBA is bounded by Moore River to the north, Darling Range to the east, Swan River to the South and Indian Ocean to the West and includes remnant vegetation in Spearwood and Bassendean North Heddle vegetation types.
- Contains vegetation mapped as Potential Quenda (*Isoodon obesulus*) Habitat.

Terrestrial Ecosystems (2020) identified the potential presence of Quenda (Priority 4) and Black-striped Snake (Priority 3) in the area surrounding the proposed project site. However, the works are unlikely to impact fauna, and fauna management measures will be implemented during the project

6. Clearing Principles

An Environmental Planning Considerations Report (EPCR) (**Attachment 6**) and a Desktop Assessment Report for Native Vegetation Clearing (NVC) Application (**Attachment 7**) were generated for Brazier Rd footpath and parallel parking bays using the City's Mapping

program Intramaps' as supporting documentation for the below clearing principle assessment. These two (2) reports, along with additional data sources provided by various state and federal departments, were reviewed to determine the level of impact and the level of variance to the clearing principles

The following table summarises potential environmental impacts and the level of variance against the 10 clearing principles.

Table 3: Assessment of the proposed Brazier Road projects' likely impacts against the 10 Clearing Principles and level of variance to each clearing principle

Clearing Principle and Impacts (Flag colours)	Proposed Project Impacts
Principle (a) – Native vegetation should not be cleared if it comprises a high level of biological diversity	**The Brazier Road application area may be at variance with clearing principle (a)** A survey by One Tree Botanical (2000) of the adjacent reserve to the proposed Brazier Road site, found that the vegetation is in a good or better (Keighery 1994) condition and there is flora, fauna, PEC, and TEC records within 5km of the application area. However, the 21/11/2024 vegetation assessment identified vegetation within the proposed project site as mainly degraded The City's EPC and NVC Reports identified the following flora and fauna attributes within 1 and 2 Brazier Road Yanchep. • Records of State and Federally listed Threatened fauna species. • Records of State Priority listed fauna species. • 'Remnant Vegetation' Carnaby cockatoo (*Zanda latirostris*) and a 'Confirmed feeding habitat', 'Confirmed Roosting Area' and 'Confirmed breeding area buffer'. • Key Biodiversity Area for Birds (Northern Swan Coastal Plain IBA). The IBA is bounded by Moore River to the north, Darling Range to the east, Swan River to the South and Indian Ocean to the West and includes remnant vegetation in Spearwood and Bassendean North Heddle vegetation types. • Contains vegetation mapped as Potential Quenda (*Isoodon obesulus*) habitat. • No record of special protected flora. • Priority 4 taxa *Conostylis candicans subsp, calicicola intergrade C. pauciflora subsp. Euryrhipis* In comparison to the surrounding environment, there is minimal impact to native vegetation due to the proposed clearing zone being within the road reserve and the condition of vegetation being degraded with low comparable diversity, **therefore, the Brazier Road application area may be at variance with clearing principle (a).**
Principle (b) – Native vegetation should not be	**The proposed clearing will likely not be at variance with Principle (b)**

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	The City's EPC and NVC Reports identified the area being within an important birding area (Northern Swan Coastal Plain IBA) and containing Carnaby's Cockatoo foraging habitat and within confirmed 'feeding', 'roosting' and 'breeding' area buffer as well as a Potential Quenda habitat A survey conducted by Terrestrial Ecosystems (2020) found that the vegetation condition ranged from a high-quality fauna habitat to a highly degraded fauna habitat included areas of significant disturbance. Highly degraded areas included bitumen roads, cleared native vegetation and sealed carparks. The survey found there are few suitable feeding resources for Carnaby's and Forest Redtail Black-Cockatoos, so they are unlikely to be significantly impacted by vegetation clearing. Hollows were not found in the area at the time of assessment; however, Cockatoos are known for breeding in Yanchep National Park (within 5km). There is a low probability that the Peregrine Falcon, Osprey and Fork-tailed Swift would be seen flying over the project area. Considering the project will be within current road reserve and the condition is degraded, better quality habitat for fauna is present in surrounding areas and nearby Yanchep National Park, therefore, **the proposed clearing will likely not be at variance with Principle (b)**.
Principle (c) – Native vegetation should not be cleared if it includes or is necessary for the continued existence of, rare flora.	**Proposed clearing is likely to be a Variance with Principle (c)**. One Threatened Flora (TF) species protected under the BC Act 2016 or the EPBC Act 1999 was recorded for the project area, *Conostylis candicans sub sp. Calcicola intergrade C. pauciflora sub sp. euryrhipis* (P4). This same priority 4 species was identified in the proposed clearing area during the vegetation assessment conducted by the City 21 November 2024 **Likely to be at variance with Principle (c).**
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	**Proposed clearing is unlikely to be at variance with Principal (d).** The City's EPC report (Attachment 6) identified 146 Threatened Ecological Communities (TEC) within a 5km radius of the application area and is summarised in the table below. Bush forever site 397 is present within the Brazier Road site (Lot 521) and (Lot 522). The application area is within and Environmentally Sensitive Area (ESA).

Threatened Ecological Community.

Table 4: TEC and Priority EC within 5km buffer

Summary of Threatened and Priority Listed Ecological Community's Records Intersecting EPC Site within 5km Buffer	
Threatened- EPBC Act Listed	71
Threatened/Specially protected- State listed	4
Priority	71

A Threatened Ecological Community (TEC) protected under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999 were recorded for the project area; "Tuart Woodlands and Forests of the Swan Coastal Plain". A potential 'type or sub-type' of a TEC protected under the BC Act 2016 may be present in the project area; TEC SCP30a: "*Callitris preissii* (or *Melaleuca lanceolata*) forests and woodlands, Swan Coastal Plain" (Terrestrial Ecosystems, 2020). The proposed clearing area is next to a Threatened Ecological Community (TEC), but the proposed clearing area is in the road reserve, and it won't affect the TEC. **Therefore, it's unlikely to contradict Principle (d).**

Principle (e) - Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been significantly cleared.

Proposed clearing is unlikely to be at variance with principal (e). The Brazier Road application area is mapped in the Swan Coastal Plain complex, Quindalup Complex and Guilderton remnant vegetation

The table below summarises the native vegetation statistics as described by the Department of Biodiversity, Conservation and Attractions (DBCA) (Government of WA, 2019).

Table 5: Native vegetation statistics (Government of WA, 2019).

IBRA bioregion	Pre-European Extent (ha)	Current Extent (ha)	Extent remaining %
Swan Coastal Plain/ Perth (SWA02)- Guilderton	96,791.41	82,491.30	85.23

Given the proposed clearing area is degraded and in road reserve and that the temporarily cleared area will be revegetated, **it is unlikely to contradict Principle (e).**

Principle (f) - Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or a wetland	**Proposed clearing is unlikely to be at variance with Principle (f)**. The area does not contain a watercourse or wetland. **Unlikely to be at variance with Principle (f).**
Principle (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	**Proposed clearing is not likely to be at variance with Principle (g)**. The Department of Primary Industry and Regional Development's (DPIRD) Natural Resource Information (WA) mapping tool maps the proposed clearing zones as one soil landscape: • 211 Perth Coastal zone described as coastal sand dunes and calcarenite. Late Pleistocene to Recent age. Calcareous and siliceous sands and calcarenite (Quindalup and Spearwood systems) (DPIRD, 2024). DWER's Perth Groundwater Map identifies the surface geology within the footprint area as: Safety Bay Sand, predominantly Aeolian and beach lime sand (DWER, 2024). The Groundwater Salintiy (Total Dissolved Solids) within the proposed clearing area footprint has a salinity range of between 500-1000mg/L (DWER, 2024). The surrounding area receives an annual rainfall mean of 729mm (DPIRD) and is not located in an Acid Sulphate Soil risk area (CoW, 2024b). This is a coastal area with unconsolidated sand dunes which may be fragile and vulnerable to weed invasion once disturbed (Terrestrial Ecosystems, 2020). Table. 6 below summarises the land degradation hazards as described by DPIRD (2024). **Table 6:** Summary of land degradation hazards for the surrounding area of Brazier Road. Hazard categories | Hazard ratings and descriptions

Wind erosion	A large proportion of Brazier Road,80% of map unit has a high to extreme hazard of wind erosion.
Water erosion	45% of map unit has a very high to extreme hazard water erosion risk.
Water repellence	100% of the map unit has a high susceptibility to water repellence.
Salinity hazard	<3% of map unit has moderate salinity hazard.
Subsurface acidification	<3% of map unit has moderate subsurface acidification susceptibility.
Subsurface compaction	<3% of map unit has moderate subsurface compaction susceptibility.
Flood hazard	<3% of map unit has moderate to high flood risk hazard.
Water logging and inundation risk	3-10% of map unit has moderate to high water logging and inundation hazard risk.

Because of the current conditions including the proposed site being within a road reserve and the vegetation is degraded in nature, it is not likely for the clearing to result in appreciable land degradation and, therefore, **is not likely to be at variance to Principle (g).**

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.	**The proposed clearing area is unlikely to be at variance with Principle (h).** This is part of the Bush Forever 397 site: “Coastal strip from Wilbinga to Mindarie” (Government of Western Australia, 2000b). There are three Bush Forever Site (BF) within 5km of Brazier Road project area: bf 397 (within 0km), BF 289 (1.7km), BF 288 (3.1km). The proposed clearing is unlikely to cause fragmentation of the vegetation or impeded the movement of fauna throughout the reserve as the proposed clearing area is adjacent to the reserve and within the road reserve. **The proposed clearing area is unlikely to be at variance with Principle (h).**

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.	Wetlands or watercourses are not located within the Brazier Road clearing permit area. T**herefore, the proposed clearing area is not likely to be at variance with Principle (i)**
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.	According to DPIRD (2024) <3% of map unit has moderate to high flood risk hazard. The proposed clearing is not likely to cause or exacerbate the incidence or intensity of flooding. **The proposed clearing is not likely to be at variance with Principle (j)**

***Red** – Likely to be at variance, **Orange** – May be at variance, **Green** – Not likely to be or not at variance

9. Conclusion

The City of Wanneroo has assessed the proposed clearing area of 0.037 ha of native vegetation (permanently clear) within road reserve PIN 12186401 and 0.132 ha of native vegetation (temporarily clear) within the project area against the ten clearing principles and has found that the clearing is likely to be at variance to clearing **principle (a)**; and clearing **principle (c)**.

10. References

City of Wanneroo (2024a). Intramaps. Environmental Planning Considerations (EPC) Report. (Accessed 20/11/2024).

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Terrestrial Ecosystems. (2020). *Flora, Vegetation and Vertebrate Fauna: Environmental Impact Assessment Yanchep Lagoon Yanchep.* Prepared for the City of Wanneroo