City of Wanneroo

Proposed Access Track at Kahana Park, Butler

Native Vegetation Clearing Permit Application
Supporting Documentation

June 2021

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1. Introduction

The City of Wanneroo is proposing to undertake the clearing of vegetation within a degraded area of Kahana Park, Butler. The proposed clearing will facilitate the construction of an access track in order to provide access to the larger portion of the park for maintenance and fire mitigation and fire-fighting activities. Detailed land parcel information for the affected land parcel by the proposed clearing works is shown in Table 1 below.

Table 1: Land ownership and zoning within clearing areas.

Lot Number	Address	Land Owner	MRS Zoning	Reserve Purpose
Lot 418 on Deposited Plan 52130	21 Kahana Parkway, Butler	Crown Land – City of Wanneroo	Urban	Public Recreation

2. Background

The construction of the access track has been prioritised by the City of Wanneroo as part of the City's Capital Works Program. In March 2020, an arson fire occurred within Kahana Park, burning a large portion of the western side of the Park (Figure 1). Due to the lack of an access track within this section of the park, Emergency Services were unable effectively access the area to contain and control the fire, resulting in the burning of a large portion of vegetation within the park. The aim of this project is to provide for an access track within the larger western portion of Kahana Park, to allow effective access for park maintenance, and fire mitigation, prevention and fighting activities.

Figure 1: Map of arson fire within Kahana Park, occurring 3 March 2020 (red line – boundary of park; orange shading – arson burn area).

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 proposed access track will be three metres wide, running from the southern side of the park with an existing gate, through the degraded area to the northern side of the park (Figure 2). The design of the track has taken into consideration the significant trees and *Xanthorrhoea preissii* shrubs that are present within the alignment. The track has been designed to avoid the clearing of these shrubs.

Vegetation clearing will take place one week prior to track construction commencing. Clearing will be undertaken with chainsaws and brushcutters, with all major trunks to be stump ground. The track alignment has accumulated sand from the slope above. Some sand will be removed to provide a box to lay the limestone track, however, the amount of sand removed will be kept to a minimum.

The construction of the track is currently scheduled for the April 2022 school holidays. It is anticipated the clearing and construction will take two to three weeks to complete.

The clearing of vegetation is proposed within a degraded area of Kahana Park, totalling 0.1165 hectares (Figure 2 (below), Attachment A – Clearing Plan and Attachment B – Shapefiles).

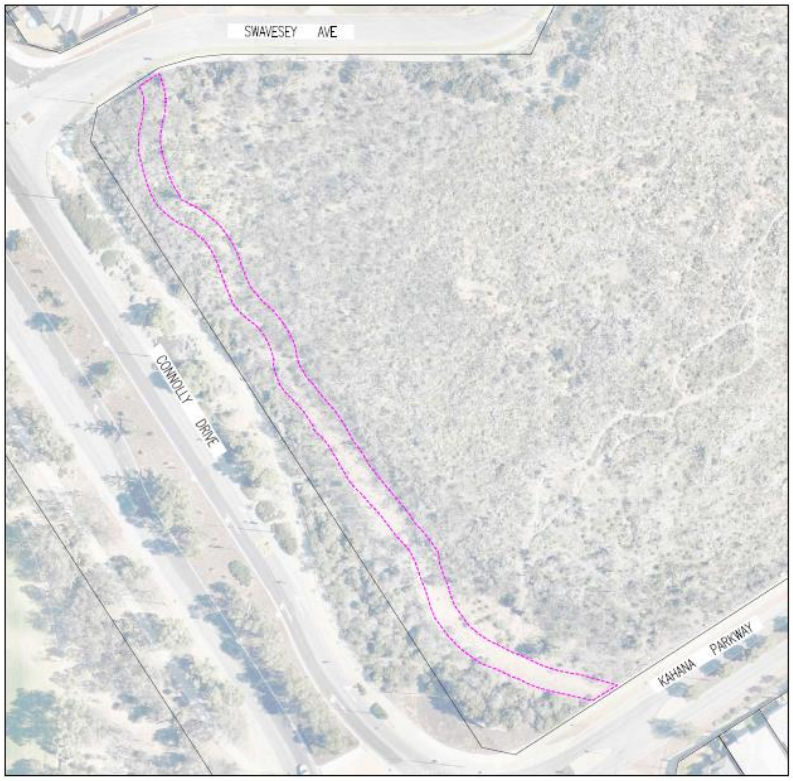

Figure 2: Proposed clearing of 1165m^2 for the construction of a fire access track on the western side of Kahana Park, Butler.

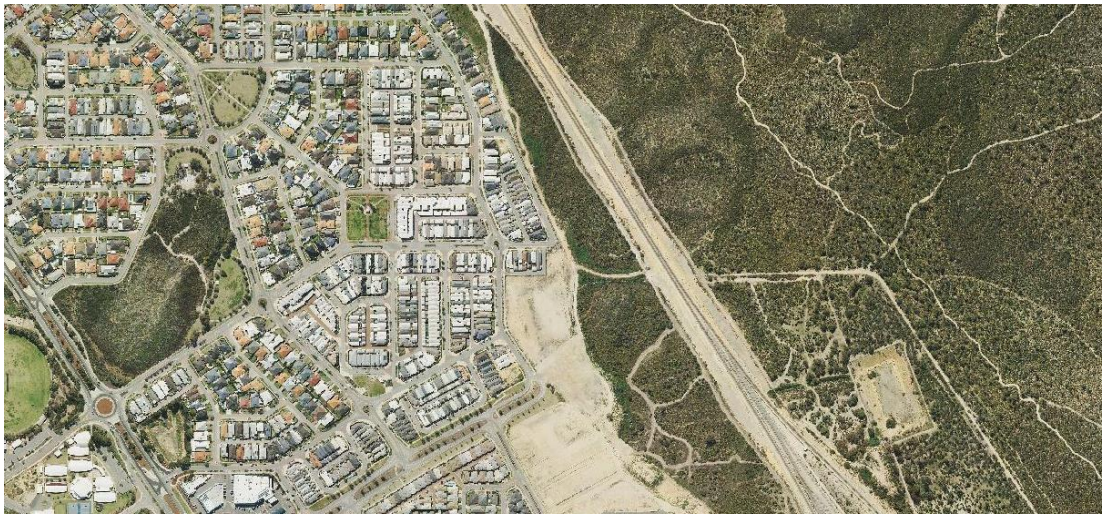

Figure 2: Proximity of proposed clearing in relation to surrounding bushland, with Neerabup National Park to the east.

4. Flora and Vegetation

On 15 September 2020, City Environmental Officers conducted a vegetation assessment of the proposed clearing area. Only one vegetation complex was identified, dominated by *Banksia sessilis, Hibbertia hypericoides* and juvenile *Acacia saligna*. One 10mx10m quadrat was installed within an area identified as having a high species diversity (Figure 3). The quadrat was surveyed and species were identified (Attachment C1 and C2 – Quadrat Location and Photographs and Flora List). The proposed clearing area was also traversed on 15 September and 21 October 2020 and species were identified and recorded (Attachment C2 – Flora List; Attachment C3 – Vegetation Photographs Traverse and Quadrat 15 September 2020 and Attachment C4 Vegetation Photographs Traverse 21 October 2021).

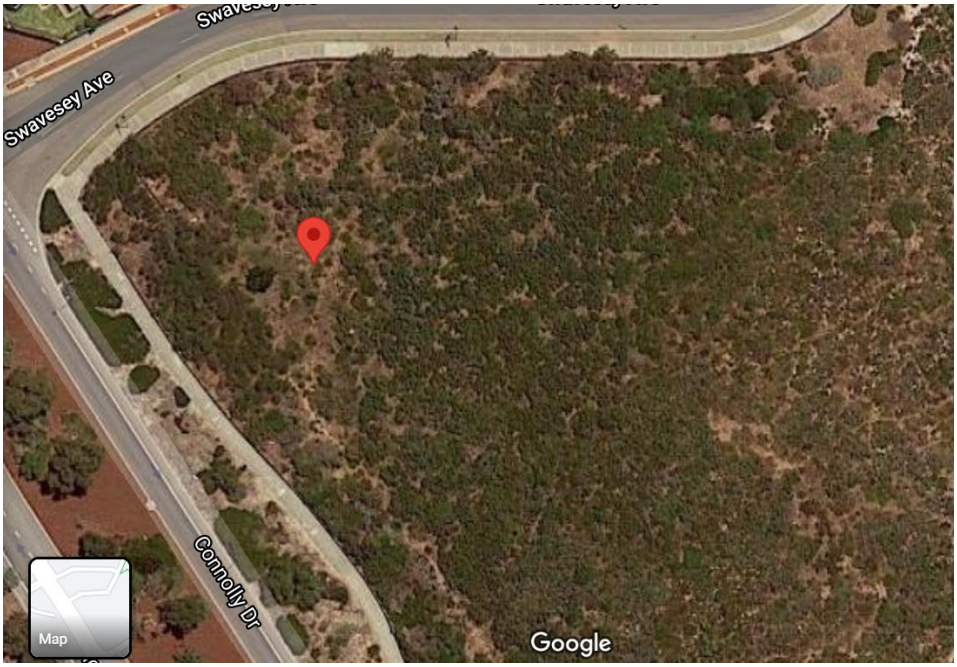

Figure 3: Location of quadrat within the proposed clearing area (location in the south-west corner of the quadrat).

The vegetation condition within the proposed clearing area ranges from Good to Completely Degraded, with the majority of the vegetation in a degraded condition (approximately 70%). The vegetation present has been affected by fire and as a result of the fire, a large amount of weeds have emerged. The vegetation is dominated by both native species and weeds, mainly understorey species (Attachment C1– Quadrat Location and Photographs; C2 – Flora List, Table 1). The vegetation is approximately 0.1165ha (Attachment A – Clearing Plan and Attachment B – Shapefiles). A total of 71 flora species were identified during the surveys, including 43 native flora and 28 weed species.

Table 1: Species identified during the vegetation assessment on 15/09/2020 and 21/10/2020. * denotes weed species.

	Genus	Species
	Acacia	*cyclops*
	Acacia	*pullchella*
	Acacia	*rostelifera*
	Acacia	*saligna*
	Adnenanthos	*cygornum*
	Alexgeorga	*nitens*
	Allocasaurina	*hugelii*
*	*Arctotheca*	*calendula*
*	*Asparagus*	*asparagoides*
*	*Asteraceae*	*sp.*
	Atriplex	*isatidea*
	Banksia	*menziesii*
	Banksia	*sessilis*
	Burchardia	*congesta*
	Calothamnus	*quadrifidus*
*	*Cenchrus*	*clandestinus*
	Conostylis	*aculeata*
*	*Crassula*	*alata*
*	*Crassula*	*exserta*
*	*Crassula*	*glomerata*
	Davesia	*divaricata*
	Davesia	*nudiflora*
	Desmocladus	*asper*
	Desmocladus	*flexuosus*
	Dianella	*revoluta*
*	*Ehrharta*	*calycina*
*	*Erharta*	*longiflora*
*	*Euphorbia*	*peplus*
*	*Euphorbia*	*terracina*
*	*Gladiolus*	*caryophyllaceus*

	Haemodorum	*spicatum*
	Hakea	*trifurcata*
	Hardenbergia	*comptoniana*
	Hibbertia	*hypercoides*
*	*Hypochaeris*	*glabra*
	Isolepsis	*ceruna var. setiformis*
	Jacksonia	*calcicola*
	Jacksonia	*sternbergiana*
*	*Lactua*	*serriola*
*	*Lagarus*	*ovatus*
	Lechenaultia	*linaroides*
	Leucopogon	*propinquus*
	Lomandra	*maritama*
*	*Lupinus*	*angustifolius*
*	*Lupinus*	*consentinii*
*	*Lysimachia*	*arvensis*
	Melaleuca	*lanceolata*
	Mesomelaena	*tetragona*
	Microtis	*media*
*	*Moraea*	*flaccida*
*	*Oenothera*	*drummondii*
	Olearia	*axillaris*
*	*Pelargonium*	*capitatum*
	Phyllathus	*calycinus*
	Podotheca	*gnaphaloides*
	Ptilotis	*manglesii*
	Ptilotis	*sericostachyus*
*	*Raphanus*	*raphanistrum*
	Rhagodia	*baccata*
*	*Romulea*	*rosea*
	Scaevola	*canescens*
*	*Solanum*	*nigrum*
*	*Sonchus*	*olearaceus*
	Sowerbaea	*lexiflora*
	Spyridium	*globulosum*
*	*Tagetes*	*minuta*
	Templetonia	*retusa*
	Trifolium	*arvense*
*	*Trifolium*	*cernuum*
*	*Ursinia*	*anthemoides*
	Xanthorrhoea	*preissii*

5. Fauna

During the aforementioned vegetation survey, no fauna were documented within the extent of the proposed clearing areas.

WALGA's Environmental Planning Considerations Report (EPCR) did not identify any instances of threatened or priority fauna species within the selected footprint (Attachment E). Protected fauna species were however identified within a 5km radius of the selected area (Attachment E 5).

WALGA's EPCR did identify the selected area as being located within a Carnaby's cockatoo (*Calyptorhynchus latorostris*) 'Possible' breeding area buffer and "Unconfirmed" roosting area buffer. The EPCR also identified that 0.02 hectares of the selected area contained remnant vegetation requiring investigation for Carnaby's Cockatoo feeding habitat. In addition, the EPCR identified the proposed clearing area was within or adjacent to a Key Biodiversity Area for birds.

The EPCR also identified the selected area contains 0.04 hectares of vegetation mapped as potential Quenda habitat.

6. Clearing Principles

The City of Wanneroo generated a 'Desktop Assessment Report for Native Vegetation Clearing Application' using the WALGA Environmental Planning Tool (WALGA EPT) (Attachment D), the impacts listed in the report are categorised in Table 3, below.

A WALGA EPT 'Environmental Planning Considerations Report' (Attachment E) was also generated by the City as supporting documentation for the below clearing principle assessment.

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

Table 2: Identified Impacts against Clearing Principles

Principle (a) – Native vegetation should not be cleared if it comprises a high level of biological diversity	**Red**	City Environmental Officers set up one 10mx10m quadrat within the one vegetation type present on 15/09/2020 and undertook opportunistic searches on 15/09/2020 and 21/10/2020. These surveys identified the vegetation within the application area has been significantly impacted by arson fire. The clearing area is also degraded, as it has been used as an informal walking track. Significant trees and *Xanthorrohoea preissii* shrubs has also been taken into consideration when design of the track alignment was determined. Construction of the track will also allow for more effective maintenance of the western portion of Kahana Park, which may result in an increased quality of vegetation. Given the damaged and degraded nature of the proposed clearing area, and the potential of increased quality of bushland due to more effective access, it is not

		likely for the area to comprise of high biodiversity. The proposed clearing is not likely to be at variance to principle (a).
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	**Red**	The desktop assessment identified the site is within an important birding area (Northern Swan Coastal Plain IBA), a possible breeding and unconfirmed roosting Carnaby's cockatoo habitat buffer. The desktop assessment also notes the area contains remnant vegetation requiring investigation for Carnaby's Cockatoo feeding habitat. This habitat has been significantly impacted by fire, and the majority of the proposed clearing area is degraded. In addition, there is a large amount of high quality bushland located to the east of Kahana Park. During the site inspection no avian species were observed within the proposed clearing areas. Considering the vegetation does not contain habitat trees for significant fauna and the vegetation is mostly in a degraded condition, the application area is unlikely to 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.	**Orange**	A desktop study identified there are rare flora species within 5km of the application area, however no rare flora species were identified within the application area. In the site assessment, no rare flora species or habitat containing tree hollows were identified. Therefore, as the area does not comprise habitat supportive of rare flora, it is not at variance to 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 Threatened Ecological Community.	**Orange**	A desktop study identified TECs within 5 kilometres, however none were mapped within the application area. Due to the degraded nature of the clearing area, the vegetation it is not considered to represent a TEC. The proposed clearing is not likely to be at variance to 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.	**Red**	The proposed clearing area is located within a degraded track with vegetation significantly impacted by an arson fire which occurred in March 2020. The clearing of vegetation will be small and will not have an impact on the surrounding bushland. Within the existing degraded track there are mainly weeds and small emerging understory native species, with some remnant vegetation either side of the track. Due to the degraded nature of the vegetation and the insignificant amount of remnant vegetation within the site, it is not likely to be at variance to 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	**Green**	The proposed clearing area is located within 5km of three wetlands: Nowergup Lake (2365m), Carabooda Lake (3208m) and Neerabup lake (3373m). Due to the proximity of the wetlands to the proposed clearing area, the proposed clearing is not likely to be at variance to principle (f).

Principle (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	**Green**	There is no risk of acid sulphate soils within the proposed clearing area. The Groundwater Salinity (Total Dissolved Solids) at the proposed clearing site is between 500 to 1000mg. The hydrology of the proposed clearing site contains surficial sediments – shallow aquifers, limestone and calcrete. The soil within the proposed clearing site consists of Karrakatta sand yellow phase (211Sp_Ky), with low hilly to gently undulating terrain. It also consists of yellow sand over limestone at 1-2m. The soil also consists of Karrakatta shallow soils Phase (211Sp_Kls) with low hills and ridges and bare limestone or shallow siliceous or calcareous sand over limestone. Clearing of vegetation will occur one week prior to the commencement of construction of the track. This will reduce the likelihood of wind erosion and any other land degrading processes. Given the risk of erosion after clearing of vegetation, the clearing may cause some land degradation and may be at variance to principle (g). However, as construction will occur immediately after clearing has been undertaken, the risk of erosion and land degradation will be reduced and managed. Therefore, the proposed clearing is unlikely to cause appreciable land degradation and 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.	**Green**	The proposed clearing area is nearby seven Bush Forever sites – the five closest are BF383 (734m), BF397 (1796m), BF384 (3315m), BF130 (4173m) and BF293 (4605m). The clearing of this area will not impact any environmental values of conservation areas due to its insignificant scale. The proposed clearing is 780m from Neerabup National Park and therefore will not impact on this reserve. The proposed clearing is not likely to be at variance to 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.	**Green**	There is no surface water present within the proposed clearing areas and there are no wetlands of importance within 5km of the area. The proposed clearing area is within the Perth Coastal and Gwelup Underground Public Drinking Water Pollution Control Area. The proposed clearing area is within the Perth Groundwater Area RIWI Act area. The proposed clearing is not likely to cause deterioration in surface water quality through sedimentation or eutrophication. Given the small size of the clearing, it is not considered the proposed clearing will increase groundwater salinity.

		Given the size of the clearing, it is not considered that the proposed clearing will cause deterioration in water quality. The proposed clearing is therefore not likely to be at variance to 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.		The proposed clearing area is a DAFWA Land Quality flood risk category – Category 0. The clearing is not likely to cause, or exacerbate the incidence, or intensity of flooding. The proposed clearing is not likely to be at variance to principle (j).

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

7. Conclusion

The City of Wanneroo has assessed the proposed clearing against the 10 clearing principles and has found that the clearing of 0.1165 hectares within Kahana Park, Butler, may be at variance with principle (g) but is not likely to be at variance with the clearing principles. Given construction of the track will occur within the week after clearing, thus reducing the likelihood of erosion and land degradation, the clearing is not likely to be at variance to principle (g).

8. References

Department of Biodiversity, Conservation and Attractions. (2021). Florabase – the Western Australian Flora. Available at https://florabase.dpaw.wa.gov.au/

WALGA. (2021). Environmental Planning Tool. Desktop Assessment Report for Native Vegetation Clearing Application Report.

WALGA. (2021). Environmental Planning Tool. Environmental Considerations Report.