Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8425/1
Permit type: PurposePermit

1.2. Applicant details

Applicant's name: Crushing Services International Pty Ltd
Application received date: 19 March 2019

1.3. Property details

Property: Lot 329 on Deposited Plan 218632 (Crown Reserve 43754)
Lot 2580 on Plan 12662 (Crown Reserve 36149)
Mandurah Road Reserve (PIN 11959184)
Patterson Road Reserve (PIN 1193212)
Local Government Authority: City of Kwinana
Localities: Kwinana Beach

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
1.77		Mechanical Removal	Hardstand

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 11 June 2019
Reasons for Decision:

The clearing permit application was received on 19 March 2019 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing may be at variance to principle (g) and is not likely to be at variance to any of the remaining clearing principles.

To mitigate the risk of wind erosion, the hard stand is required to be constructed within two months of the cessation of clearing.

In determining to grant a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is not likely to lead to any unacceptable impacts on the environment.

2. Site Information

Clearing Description:

The application is for the proposed clearing of 1.77 hectares of native vegetation within Lot 329 on Deposited Plan 218632 (Crown Reserve 43754), Lot 2580 on Plan 12662 (Crown Reserve 36149), Mandurah Road Reserve (PIN 11959184) and Patterson Road Reserve (PIN 1193212), Kwinana Beach, for the purpose of building a hard stand area for storage of mining materials and machinery (Figure 1).

Vegetation Description:

The vegetation within the application area is mapped within the Quindalup Coastal Dune Complex, described as; a coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of *Melaleuca lanceolata* (Rottnest Teatree) - *Callitris preissii* (Rottnest Island Pine), the closed scrub of *Acacia rostellifera* (Summer-scented Wattle) and the low closed *Agonis flexuosa* (Peppermint) forest of Geographe Bay (Heddle et al., 1980).

A site inspection completed by Aurora Environmental described the vegetation within the application area as *Acacia rostellifera* closed shrubland and noted the following taxa; *Acacia rostellifera* (summer-scented wattle), *Acacia saligna* (orange wattle), *Allocasuarina fraseriana* (sheoak), **Avena fatua* (wild oats), **Ehrharta calycina* (veldt grass), **Eragrostis curvula* (African lovegrass), **Gomphocarpus fruticosus* (narrow-leaf cotton bush), **Ricinus communis* (castor oil plant), **Schinus terebinthifolius* (Brazilian pepper tree), *Templetonia retusa* (cockies tongues), *Xanthorrhoea preissii* (grass tree), where * indicates exotic species (Aurora Environmental, 2019).

Vegetation Condition: The condition of the vegetation within the application area was determined from photographs and description provided by the applicant (Aurora Environmental, 2019). The vegetation within the application area is considered to be in degraded (Keighery, 1994) condition, described as; structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

Soil Type: The application area has been mapped by the Department of Primary Industries and Regional Development (DPRID) as the EnvGeol S13 Phase subsystem which is described as calcareous sand- white, medium-grained, rounded quartz and shell debris, well sorted, of eolian origin (Schoknecht et al., 2004).

Comments: The local area referred to in the assessment of this application is defined as a 10 kilometre radius measured from the perimeter of the application area. The local area retains approximately 31 per cent native vegetation cover.

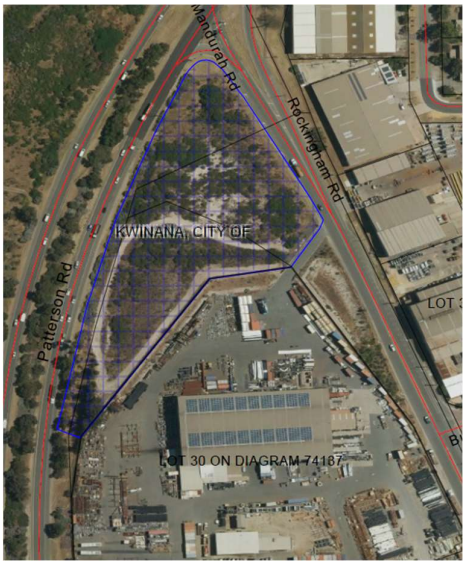

Figure 1: Application Area (hatched blue)

Figure 2: Aerial photograph from 2000 showing the application area has been historically cleared (Landgate, 2019).

3. Assessment of application against clearing principles, planning instruments and other relevant matters

(a) Native vegetation should not be cleared if it comprises a high level of biodiversity.

Proposed clearing is not likely to be variance to this Principle

As discussed in Section 2 above, the application area consists of one vegetation type which has regenerated after the area was completely cleared in the year 2000 (Figure 2 above) and contains some planted vegetation (Aurora Environmental, 2019).The regenerated vegetation, in addition to the planted vegetation does not appear to contain a high level of floristic diversity and has been described as *Acacia rostellifera* closed shrubland.

According to available datasets, 14 priority (P) flora species (listed by the Department of Biodiversity, Conservation and Attractions (DBCA)) have been recorded within the local area (DBCA, 2007-). Although no flora surveys have been conducted

within the application area, a site inspection by Aurora Environmental identified a small number of flora taxa (listed in Section 2 above), none of which are of conservation significance (Aurora Environmental, 2019). Based on the mapped soil and vegetation types, the application area may provide suitable habitat for four priority flora species (DBCA, 2019), namely;

- *Austrostipa mundula (P3)*
- *Pimelea calcicola (P3)*
- *Dodonaea hackettiana (P4)*
- *Jacksonia sericea (P4)*

Advice received from DBCA in regard to the proposed clearing indicated that while the Priority species listed above have the potential to occur within the application area, it is not likely that the proposed clearing will have a significant impact on the conservation status of these Priority species (DBCA, 2019).

As discussed under Principle (c), the application area is not likely to support suitable habitat for three species of threatened flora known to occur within the local area, namely *Caladenia huegelii*, *Diuris micrantha* and *Drakaea elastica*. The habitat preferences of these flora species is not met by the soil and vegetation type and condition within the application area. Given the above, the proposed clearing is not likely to impact upon threatened flora known to occur within the local area.

As discussed under Principle (b), the application area does not contain significant habitat for the conservation significant fauna species. The clearing of 1.77 hectares of native vegetation in degraded condition in not likely to have an impact on significant habitat for conservation significant fauna.

As discussed under Principle (d), the vegetation within the application area is not considered to be representative of any Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) that have been recorded within the local area. Although there are multiple mapped occurrences of the 'Banksia Woodlands of the Swan Coastal Plain ecological community' and 'Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain' mapped within the local area, the vegetation within the application area does not meet the key diagnostic requirements to be considered representative of these TEC's.

As discussed under Principles (f) and (i), the application area is not located within any wetlands or waterways and does not contain riparian vegetation. The closest wetland is a 'Resource Enhancement' wetland located around 750 meters from the application area. The proposed clearing is not likely to impact on this wetland or any other wetlands or waterways.

The vegetation within the application area is considered to be in degraded condition, does not contain significant habitat for fauna, is not necessary for the continued existence of threatened flora, does not contain riparian vegetation and is not representative of a TEC or PEC. Given the above, the proposed clearing is not likely to comprise an area of high biodiversity and is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

According to available DBCA datasets, 56 records of conservation significant fauna taxa have been recorded within a 10 kilometre radius of the application area including 18 threatened fauna species, 25 species protected under international agreement, two specially protected fauna species and 14 priority fauna species (DBCA, 2007-). The majority of the conservation significant fauna species are waterbird species that are likely to utilise the suite of wetlands which occur in the local area. These waterbird species are not likely to utilise the application area given; it lies between two major roads, does not contain any wetlands and is not linked to any suitable waterbird habitat.

Three threatened black cockatoo species have been recorded in the local area (collectively referred to herein as black cockatoos):

- *Calyptorhynchus latirostris* (Carnaby's cockatoo) (Endangered under *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act) and the *Biodiversity Conservation Act 2016* (BC Act));
- *Calyptorhynchus baudinii (*Baudin's cockatoo) (Endangered under EPBC Act and the BC Act); and
- *Calyptorhynchus banksii* subsp*. naso* (forest red-tailed black cockatoo) (Vulnerable under EPBC Act and the BC Act).

Black cockatoos forage on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (*Banksia*, *Hakea*, *Grevillea*), *Eucalyptus*, *Corymbia* species and a range of introduced species (Valentine and Stock, 2008). Black cockatoo's breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). Given the application area does not contain any large tree species or contain Proteaceous species, it is considered that the application area does not contain breeding or foraging habitat for black cockatoos. Given the above, the application area is not likely to provide significant habitat for these species.

Some of the conservation significant fauna recorded in the local area are ground dwelling species, including:

- *Dasyurus geoffroii* (Chuditch, Western Quoll) (Vulnerable under EPBC Act and the BC Act);
- *Notoscincus butleri* (lined soil-crevice skink (Dampier)) (P4);
- *Isoodon fusciventer* (Quenda) (P4)
- *Notamacropus eugenii* subsp. *derbianus* (Tammar Wallaby) (P4);
- *Notamacropus irma* (Western Brush Wallaby) (P4);
- *Pletholax gracilis* subsp. *edelensis* (Keeled Legless Lizard (Shark Bay)) (P3)
- *Lerista lineata* (Perth Slider) (P3); and
- *Idiosoma sigillatum* (Swan Coastal Plain shield-backed trapdoor spider) (P3).

While the vegetation within the application area has regenerated since being completely cleared in 2000, it is unlikely that the vegetation within the application area would contain significant habitat for these ground dwelling species due to the historical disturbance, the positioning of the area between major roads and noting the other remnant vegetation types located in close proximity to the application area that are likely to be in better condition.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

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

Proposed clearing is not likely to be at variance to this Principle

Three threatened flora species have been recorded in the local area (Western Australian Herbarium, 1998-), including:

- *Caladenia huegelii* (listed as Critically endangered under the BC Act, Endangered under the EPBC Act);
- *Diuris micrantha (*listed as Vulnerable under the BC Act and the EPBC Act); and
- *Drakaea elastica (*listed as Critically endangered the BC Act, Endangered under the EPBC Act)

An assessment of the habitat requirements of the threatened flora species recorded in the local area has indicated that the vegetation and soil types present in the application area are not likely to provide habitat for the threatened flora species listed above.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

According to available datasets, two mapped occurrences of Commonwealth listed TEC's occur within the local area; 'Banksia Woodlands of the Swan Coastal Plain ecological community' and 'Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain'. These TECs are listed as 'Endangered' under the EPBC Act. The Banksia Woodland is also listed as 'Priority 3' by DBCA and Woodlands over sedgelands in Holocene dune swales of the southern Swan Coastal Plain is listed as 'Critically Endangered' under the BC Act.

As discussed under Section 2 'Site Information', one vegetation type was identified within the application area, described as *Acacia rostellifera* closed shrubland (Aurora Environmental, 2019). Based on the description and images provided (Aurora Environmental, 2019), the vegetation within the application area is not representative of either of the TECs found within the local area.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). In the Perth Metropolitan and Bunbury regions, the Environmental Protection Authority (EPA) has a modified objective to retain at least 10 per cent of the pre-clearing extent of vegetation complexes for defined constrained areas (intensely developed) (EPA, 2008). Noting that the application area is located within the mapped extent of the Perth Metropolitan Region Scheme, the 10 per cent threshold applies in this instance.

As indicated in Table 1, the remaining extents of native vegetation within the bioregion and mapped vegetation complexes are above the minimum 10 per cent representation threshold for a constrained area.

The application area does not contain significant habitat for fauna, is not considered to contain a high level of biodiversity, is not representative of a TEC, does not include, or is necessary for the continued existence of threatened flora. On this basis, the application is not considered to be significant as a remnant of native vegetation.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Table 1: Vegetation extents

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
IBRA Bioregion*					
Swan Coastal Plain	1,501,221.9	578,997.4	38.62	222,916.97.5	14.85
Swan Coastal Plain Complex**					
Quindalup Complex	54,573.87	33,011.64	60.49	5,994.64	10.98

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Proposed clearing is not likely to be at variance to this Principle

According to available databases, the application area is not mapped within any wetlands or watercourses. The closest wetland to the application area is approximately 750 meters to the east and is categorised as a Resource Enhancement wetland. The nearest mapped watercourse to the application area is a drain which is located approximately 521 meters to the south of the application area. Noting the descriptions and photographs of the vegetation within the application area and the distance from any known watercourses or wetlands, it is considered that the vegetation within the application area is not growing in association with a watercourse or wetland.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

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

Proposed clearing may be at variance to this Principle

As described under section 2, the application area is situated within a single mapped soil type, being the *EnvGeol S13 Phase* subsystem.

Noting the sandy soil types within the application area and the risks detailed in Table 2, below, there is a moderate risk of wind erosion and salinity but a low risk of water erosion, flood risk, water logging, phosphorus export and subsurface acidification. The risk of wind erosion causing land degradation may be increased, should the surface soils within the application area be exposed for a prolonged period post clearing. To minimise the risk of wind erosion, the applicant will be required to undertake construction activities within two months of the cessation of clearing. This will prevent the prolonged exposure of bare sandy soils.

Table 2: Land Degradation risks for mapped soil units (DPIRD 2018)

Land Degradation Risk Category	EnvGeol S13 Phase
Wind erosion	30-50% of map unit has a high to extreme wind erosion risk
Water erosion	<3% of map unit has a high to extreme water erosion risk
Salinity	30-50% of map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	<3% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	<3% of the map unit has a moderate to high flood risk
Water logging	<3% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	<3% of map unit has a high to extreme phosphorus export risk

Given the above, the proposed clearing may be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

A number of Bush Forever sites and DBCA managed lands are located within the local area, with the closest conservation area being Bush Forever Site No. 349 located approximately 840 metres east of the application area at its closest point.

While the application area is close to Bush Forever Site No. 349, noting that the application area is separated from this conservation area by numerous industrial lots, it is not likely the proposed clearing will impact upon the environmental values of this conservation area.

Given the above, the proposed clearing is not likely to be at variance to this 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.

Proposed clearing is not likely to be at variance to this Principle

As discussed under Principle (f), the application area is not located within any known wetlands of waterways. The closest waterway is a drain located over 500 meters away and the closest wetland is over 700 meters away.

Mapped groundwater salinity within the application area is marginal (500 to 1000 milligrams per litre total dissolved solids). This level of groundwater salinity is classified as 'fresh'. Given this, the proposed clearing is not likely to cause deterioration in the quality of surface and/or underground water via increased salinity.

The proposed clearing is located within an industrial area with recordings of suspected or known contamination as reported under the *Contaminated Sites Act 2003*, some of which have previously deteriorated groundwater quality. It is unlikely that the proposed removal of 1.77 hectares of native vegetation in a degraded (Keighery, 1994) condition would contribute to surface or groundwater deterioration.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

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

Proposed clearing is not likely to be at variance to this Principle

Noting the moderate rainfall experienced by the region (800 millimetres per annum), the size of the proposed clearing and the well-drained sandy soils of the application area, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

Planning instruments and other relevant matters.

No Aboriginal sites of significance have been mapped within the application area.

The clearing permit application was advertised on the DWER website on 11 April 2019 with a 21 day submission period. No public submissions have been received in relation to this application.

The application for Planning Approval was granted by the City of Kwinana on 22 May 2019 (City of Kwinana, 2019)

4. References

Aurora Environmental (2019) Desktop Environmental Assessment-Portion of Road Reserve and Lot 329 Mandurah Road, Kwinana Beach, Western Australia

Crushing Services International Pty Ltd (2019) Clearing Permit Application CPS 8425/1. Received 19 March 2019. DWER reference: A1776653

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

City of Kwinana (2019) Decision for application for Planning Approval – Application 9380. DWER reference: A1791348

Department of Biodiversity Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed April 2019.

Department of Biodiversity Conservation and Attractions (DBCA) (2019) Advice received in relation to clearing permit application CPS 8425/1, received 26/04/2019. DWER ref: A1783790

Government of Western Australia (2019). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth.

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture

Valentine L. E. & Stock W. (2008) Food Resources of Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy study area. Unpublished report to the Forests Products Commission.

Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Parks and Wildlife. http://florabase.dpaw.wa.gov.au/ (Accessed April 2019).

Western Australian Land Information Authority, Landgate (2019), Aerial imagery. https://maps.landgate.wa.gov.au/mapslandgate/registered/ (accessed April 2019)

GIS Databases:

- Aboriginal Sites of Significance
- DBCA Managed Estate
- Directory of Important Wetlands
- Geomorphic Wetlands
- Groundwater salinity
- Hydrography, hierarchy
- Hydrography, linear
- Land Degradation datasets
- SAC Bio Datasets (accessed March 2019)
- Soils, Statewide
- Topographic contours
- TPFL March 2019
- WAHerb Data March 2019
- WA TEC PEC Boundaries