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NATIVE VEGETATION CLEARING PERMIT APPLICATION SUPPORTING DOCUMENTATION



Lot 521 Corio Road, Ravenswood



Urban Resources Pty Ltd

ABN: 47 121 043 034

VERSION NUMBER 1 – MARCH 2025

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1 BACKGROUND

Urban Resources Pty Ltd (Urban Resources) has an Extractive Industry License and Development approval to mine sand on Lot 521 Corio Road, Ravenwood from the Shire of Murray. The sand mining is being carried out over five Stages with Stage 5 falling within the proposed clearing area.

The site is located on private land and is farmland that will be returned to pasture with groves of trees planted to provide shelter for livestock. In addition, there is a manmade lake in the middle of the site, which is not part of the sand mining operations. An area of 2.1 hectares was excavated in 2024 and it is proposed that an area of approximately 10 hectares will be excavated in 2025.

The location of the site is shown in **Plate 1** and the co-ordinates for the proposed clearing area, which is about 3.9 hectares in size are provided below (centre of area):

115 degrees, 88 minutes, 26.32 seconds EAST 32 degrees, 56 minutes, 51.36 seconds SOUTH





Historical aerial photography found that the vegetation on the site had been mostly cleared prior to 2000 when earthworks occurred and photos in 2002 showed signs of revegetation in the proposed clearing area.

An assessment carried out on the proposed clearing area by PGV Environmental in October 2024 to assess the condition, vegetation types and plant species found that three types of native vegetation occurred on the site and that the revegetation from

2002 remained including a stand of pine trees in the southeast corner of the clearing area.

PGV also found that the condition of the vegetation on site was all rated as either Degraded or Completely Degraded. The report documenting the assessment by PGV Environmental personnel is included in **Appendix A**.

The native vegetation on the site is too degraded to be classified accurately into a Floristic Community Type and the few *Banksia attenuata* trees occurring on site do not form a prominent upper tree layer and the *Banksia prionotes* trees are not native to the site and therefore the vegetation containing the Banksia trees was not representative of the Banksia woodlands of the Swan Coastal Plain Threatened Ecological Community (TEC).

This clearing permit application has been prepared to ensure Urban Resources sand mining operation on Lot 521 Corio Road in Ravenwood remains compliant with the native vegetation clearing provisions of the *Environmental Protection Act* 1986 and associated Regulations.

2 PROPOSED NATIVE VEGETATION CLEARING

Historical aerial photography found that the vegetation on the site had been mostly cleared prior to 2000 when earthworks occurred and photos in 2002 showed signs of revegetation in the proposed clearing area.

This clearing permit application seeks authorisation to clear an area of approximately 3.9 hectares and the proposed clearing area is shown below in the aerial photo, which also includes the dimensions of the area and an arrow showing due north.



Plate 2: Location of Proposed Clearing Area (in blue)

The application area is partially in Stage 5 of the proposed sand mining operations and a clearing permit is required prior to Urban Resources extending the sand mine into Stage 5. Spatial data in Esri Shapefile format will accompany this clearing application.

2.1 ASSESSMENT OF VEGETATION

PGV Environmental carried out an assessment of the vegetation on the site in October 2024 and stated that the subject area was Degraded or Completely Degraded and concluded that the vegetation on the site should not pose any constraint to clearing to enable further sand quarrying. They gave the following reasons for their conclusion:

- Half of the vegetation is poor quality around 22 years old.
- The areas of native vegetation including remnant Jarrah Woodland and regrowth Woolly Bush were both in Degraded condition.
- No threatened or Priority Ecological Communities occur on the site.
- The flora assemblage has been significantly impacted by past clearing and an abundance of weeds.
- No Threatened or Priority plant species are likely to occur on the site.
- The vegetation does not provide significant fauna habitat for conservation significant fauna species.

2.2 AVOIDANCE AND MITIGATION MEASURES

The stages of the mining area were purposely designed to disturb only the areas already cleared or in areas where the vegetation is Completely Degraded. The proposed clearing area is about 3.9 hectares and was previously revegetated about 22 years ago following clearing. Urban Resources are not disturbing the man-made lake or the vegetation surrounding the lake. In addition, Urban Resources are rehabilitating the man-made lake to create a permanent wetland with 4,300 plants scheduled to be planted in May 2025 and in addition have already planted over 1800 trees on the front and back boundaries of the site. Monitoring of groundwater bores and the man-made lake is being carried out, which shows that the sand mining operations are not causing any environmental harm. The proposed clearing area continues to meet Urban Resources commitments to protect the surrounding environmental values.

3 ASSESSMENTS OF CLEARING PRINCIPLES AND OTHER MATTERS

An assessment of the Clearing Principles and other matters is provided below in **Table 3.1**. The assessment was able to be undertaken following the review of the vegetation assessment undertaken by PGV Environmental in October 2024.

Table	3.1. Assessment of Clearing Principles and other I	Matters
Clearing Principle	Assessment	Level of Variance
a) Native vegetation should not be cleared if it comprises a high level of biodiversity	The proposed clearing area is not comprised of a high level of biological diversity. Most of the original native vegetation was cleared in 2000 and some of the areas of clearing were revegetated in about 2002. An assessment of the subject area by PGV Environmental found that there were only three vegetation types and they were so degraded that they could not be classified accurately into a Floristic Community Type. The areas of native vegetation included remnant Jarrah Woodland and regrowth Woolly Bush, which were all in Degraded condition and none of the native species present were of conservation significance.	Not likely to be at variance to this principle.

Table 3.1. A	Assessment of Clearing Principles and other Matters – cont	linued:
Clearing Principle	Assessment	Level of Variance
	The vegetation on the site is assessed as highly Degraded Fauna Habitat due to the isolated nature of the vegetation, the small size and abundance of weeds. The Jarrah and Banksia trees may provide some foraging habitat for Black Cockatoos, but the amount of foraging habitat is less than 0.5 hectares. PGV found no evidence of Black Cockatoo foraging during the vegetation assessment.	
	Priority Ecological Community (PEC) or Threatened Ecological Community (PEC) (PGV Environmental, 2024).	
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.	The vegetation on the site is assessed as highly Degraded Fauna Habitat due to the isolated nature of the vegetation, the small size and abundance of weeds. The Jarrah and Banksia trees may provide some foraging habitat for Black Cockatoos, but the amount of foraging habitat is less than 0.5 hectares. PGV found no evidence of Black Cockatoo foraging during the vegetation assessment.	Not likely to be at variance to this principle.
	Urban Resources are rehabilitating the man-made lake to create a permanent wetland and hence with time some fauna habitat may be available.	
c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.	PGV Environmental stated that there were no species of conservation significance within the proposed clearing area. And that it was highly unlikely that any conservation significant species would be recorded in a detailed spring survey. This is based on the limited native species found and the degraded and completely degraded condition of the understory. In addition, none of the species were a Threatened or Priority species.	Not likely to be at variance to this principle.
	The native vegetation was mostly removed in 2000 and only a small part of the area was revegetated, which was found to be Completely Degraded in the 2024 assessment by PGV Environmental.	
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.	No Threatened or Priority Ecological Communities occur on the site. Most of the vegetation at the site was cleared in 2000 and the vegetation remaining or replanted in 2002 was found to be either Degraded or Completely Degraded. PGV Environmental stated that the native vegetation on the site was too degraded to be classified accurately into a Floristic Community Type.	Not at variance to this Principle.
	trees do not form a prominent upper tree layer, therefore the vegetation containing the <i>B. attenuata</i> trees is not representative of the Banksia Woodlands of the Swan Coastal Plain Threatened Ecological Community (TEC). In addition, the <i>Banksia prionotes</i> trees are not native to the site. Therefore, the <i>B. prionotes</i> Low Open Woodland is also not considered part of the Banksia Woodland TEC.	
	The vegetation was not representative of the Banksia Woodlands of the Swan Coastal Plain Ecological Community or any other TEC.	

Table 3.1. Assessment of Clearing Principles and other Matters – continued:					
Clearing Principle	Assessment	Level of Variance			
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.	The vegetation on the site was mostly cleared in 2000 and the remaining native vegetation and regrowth is too degraded to be classified accurately into a Floristic Community Type. The condition of the vegetation on the site was all rated as either Degraded or Completely Degraded. The vegetation was not representative of the Banksia Woodlands of the Swan Coastal Plain Ecological Community or any other TEC.	Not at Variance to this Principle.			
f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.	The site contains a man-made lake that will be rehabilitated to create a permanent wetland, but currently it is just a man-made water feature and cannot be classed as a wetland. The proposed clearing area does not disturb the man-made lake.	Not 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.	It is noted that the application area was cleared of most of its original native vegetation in 2000 and the sand mining operations have already commenced. Prior to progressive sand mining, Urban Resources will push up and stockpile the minimal native vegetation regrowth, strip and then either stockpile or respread the underlying topsoil. The proposed clearing activities are very minimal and are unlikely to result in appreciable land degradation of soils that have already been highly disturbed by past land use practices. The site is approximately 108.94 hectares and Urban Resources are applying to clear only 3.9 hectares.	Not likely to 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.	The application area is vegetation regrowth from previous clearing and Completely Degraded. The proposed clearing area is not likely to provide a significant ecological linkage and the proposal is not likely to impact the environmental values of the area.	Not likely to be at a 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.	The sand mining operations have already commenced at the site and part of the condition of the Extractive license is to monitor the groundwater levels and quality in the installed monitoring bores and water quality in the man-made lake. The ongoing groundwater monitoring has shown that the sand mining operations are not causing any environmental harm to the quality of the groundwater and/or within the man-made lake.	Not likely to be at a variance to this 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 native vegetation/regrowth is not growing in a low-lying area, which may be prone to seasonal inundation. The application area is predominantly comprised of Bassendean sands, which have high infiltration rates and therefore a low risk of water logging.	Not likely to be at variance to this Principle.			

Clearing Principle	Assessment	Level of Variance
Planning instrument, Native Title, previous EPA decision or other matters.	The proposed clearing area is highly disturbed with very Degraded vegetation and was first cleared of most of its original native vegetation in 2000.	Not applicable
	No aboriginal heritage sites are known in the area and it is very unlikely that there are any present given the extensive history of site disturbance.	
	The clearing permit application area is the source of an important basic raw material for the Perth Metropolitan Area.	

4 CONCLUSIONS AND RECOMMENDATIONS

This clearing permit application has been submitted to ensure sand mining operations remain compliant with the native vegetation clearing provisions of the Environmental Protection Act 1986 and associated Environmental Protection (Clearing of Native Vegetation) Regulations, 2004.

Most of the original native vegetation in the proposed clearing area was removed in 2000 and now the area has mainly regrowth of native vegetation, which is either Degraded or Completely Degraded. The small area (3.9 hectares only) of native vegetation will require removal to facilitate future sand mining. Observations made by PGV Environmental during their site walkover and assessment was that the vegetation does not resemble a vegetation community and there was very limited native vegetation. Similarly, the vegetation provides negligible habitat values for fauna.

There are no other values or sensitivities associated with the subject area that would prevent the issuing of a native vegetation clearing permit.

5 REFERENCES

Keighery, B. (1994). Bushland plant survey. A guide to plant community survey for the community. Nedlands: Wildflower Society of Western Australia (Inc.).

PGV Environmental (2024). Lot 521 Corio Road, Ravenswood - Vegetation Assessment. Prepared for Urban Resources.

FIGURES



0	20	40	60	80	100	150	200
				1:20	00 Scale	Bar	metres



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521 Corio Road Proposed Clearing 2025 Figure 1



521 Corio Road Proposed Clearing 2025 Figure 2

APPENDIX A



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Urban Resources Pty Ltd

2 December 2024

Dear

RE: Lot 521 Corio Road, Ravenswood – Vegetation Assessment

Following is our assessment of the vegetation on Lot 521 Corio Road, Ravenswood project.

1 Background

Urban Resources is planning to quarry sand from Lot 521 Corio Road, Ravenswood. A portion of the area to be quarried contains vegetation. PGV Environmental was commissioned by Urban Resources to assess the vegetation in the proposed quarry area.

The area containing vegetation to be assessed is shown in Plate 1and is around 3ha in size.



Plate 1: Survey Area (2024)



2 Site History

Examination of historical aerial photographs show that most of the vegetation on the site was cleared prior to 2000 and earthworked (Plate 2). Some vegetation remains in the centre of the site. The 2002 aerial photograph shows lines characteristic of revegetation after quarrying (Plate 3).







The March 2015 aerial photograph shows good growth in most of the revegetated area with some bare patches. The retained vegetation evident in the 2000 photograph has grown since that time (Plate 4). The September 2002 aerial photograph indicates most of the revegetation area has either been cleared or has declined significantly in health apart from a stand of pine in the south-east corner (Plate 5). The current aerial photograph (Plate 1) shows further growth of the retained area of vegetation and some growth of the remaining plants in the revegetation area.

Plate 4: March 2015 Aerial Photograph





3 Survey Methodology

of PGV Environmental undertook a flora and vegetation survey of the site on 30 October 2024. The survey included walking through the areas of native vegetation and recording all plant species, vegetation types and condition. The track log of the survey is shown in Plate 6. Areas containing revegetation were not sampled intensively.



Three 10m x 10m quadrats were sampled for plant species presence, height and cover.



Plate 6: Track Log 30 October 2024

4 Vegetation

4.1 Vegetation Types

Three native vegetation types were identified on the site (Attachment 1, Figure 1). Descriptions of the vegetation types are provided in Table 1.

Quadrat data are provided in Attachment 2.

In addition to the native vegetation types some revegetation from 2002 remains including the stand of pine trees in the south-east corner.



Table 1: Vegetation Type on the Sites

Vegetation Type		Description	Photograph	
Ac	<i>Adenanthos cygnorum</i> Tall Open Scrub	<i>Adenanthos cygnorum</i> (Woolly Bush) is a native shrub that readily invades cleared, sandy soils on the Swan Coastal Plain. The species is common in the area of vegetation not completely cleared prior to 2000. Common native smaller species in this vegetation type include <i>Adenanthos meisneri</i> , <i>Laxmannia squarrosa</i> and <i>Lyginia barbata</i> .		
Вр	<i>Banksia prionotes</i> Low Open Woodland over weeds	A stand of <i>Banksia prionotes</i> trees to 4m high occurs in the centre of the site. The trees appear natural but are highly likely to have been planted as <i>B. prionotes</i> does not occur naturally on the Swan Coastal Plain south of the Swan River. Native shrubs occur in the understorey including <i>Bossiaea</i> <i>eriocarpa, Lyginia barbata, Dampiera linearis</i> and several ephemeral species including <i>Levenhookia stipitata, Drosera</i> <i>glanduligera, Poranthera microphylla</i> and <i>Stylidium piliferum</i> .		



Vegetation Type		Description	Photograph	
Em	<i>Eucalyptus marginata</i> Woodland over <i>Adenanthos</i> <i>cygnorum</i> Tall Shrubland	<i>Eucalyptus marginata</i> (Jarrah) Woodland represents the remnant vegetation apparent on the site in early aerial photographs. The trees are nearly all coppiced from the base. Woolly Bush occurs up to 2m in the understorey. The ground cover is mostly weeds, particularly Perennial Veltdgrass (<i>Ehrharta calycina</i>)		
Pines		A small stand of healthy <i>Pinus radiata</i> trees occurs at the southeastern end of the site		



Vegetation Type	Description	Photograph
Revegetation	Most of the 2002 revegetation works have not survived in the 22 years since planting. The species planted appear to have been mostly Jarrah. Some poor quality Jarrah trees remain.	



4.2 Vegetation Condition

The condition of the vegetation on the site was all rated as either Degraded or Completely Degraded. No areas in Good condition or better were recorded (Attachment 1, Figure 2).

4.3 Conservation Significance

The native vegetation on the site is too degraded to be classified accurately into a Floristic Community Type.

A few *Banksia attenuata* trees occur on the site. The Banksia trees do not form a prominent upper tree layer, therefore the vegetation containing the *B. attenuata* trees is not representative of the Banksia Woodlands of the Swan Coastal Plain Threatened Ecological Community (TEC).

The *Banksia prionotes* trees are not native to the site. Therefore, the *B. prionotes* Low Open Woodland is also not considered part of the Banksia Woodland TEC.

5 Flora

A total of 57 plant species were recorded during the survey, including 48 native and 9 introduced species (Attachment 3). Not all introduced species in the cleared paddocks or revegetation area were recorded.

A few more ephemeral may be recorded in a peak spring survey, however given the degraded and completely degraded condition of the understorey it is considered highly unlikely that any conservation significant species would occur on the site.

None of the species is a Threatened or Priority species.

6 Fauna Habitat Value

The vegetation on the site is assessed as Highly Degraded Fauna Habitat due to the isolated nature of the vegetation, the small size, and abundance of weeds.

The Jarrah and Banksia trees may provide some foraging habitat for Black Cockatoos. The amount of foraging habitat is less than 0.5ha. No evidence of Black Cockatoo foraging was observed during the vegetation assessment.

None of the Jarrah trees contains a hollow suitable for Black Cockatoos to forage in. All trees were coppiced, with stem diameters <50cm and highly unlikely to form large hollows in the future.

7 Conclusion

The flora and vegetation on the site should not pose any constraint to clearing to enable further sand quarrying on the site for the following reasons:

- Half of the vegetation is poor quality revegetation around 22 years old;
- The areas of native vegetation include remnant Jarrah Woodland and regrowth Woolly Bush, both in Degraded condition;
- No Threatened or Priority Ecological Communities occur on the site;



- The flora assemblage has been significantly impacted by past clearing and an abundance of weeds;
- No Threatened or Priority plant species are likely to occur on the site; and
- The vegetation does not provide significant fauna habitat for conservation significant fauna species.

Please contact me if you require any clarification of this assessment.

Yours sincerely



Managing Director

Attachment 1: Figures Attachment 2: Quadrat Data Attachment 3: Species List







Vegetation Condition

(SOURCE: Bush Forever, Govt. of W.A., 2000)

P - Pristine

Pristine or nearly so, no obvious signs of disturbance.

Ex - Excellent

Vegetation structure intact, disturbance affecting individual species and weeds are non aggressive species.

VG - Very Good Vegetation structure altered, obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dleback, logging and grazing

G - Good

G - Good Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.

D - Degraded

D - Degraded Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, disbasek and grazing dleback and grazing.

CD - Completely Degraded The structure of the vegetation is no longer intact and the areas is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora composing weed or crop species with isolated native trees or shrubs.

2

Figure

CI - Cleared

No native vegetation remaining.

CADASTRAL SOURCE: Landgate, November 2024. AERIAL PHOTOGRAPH SOURCE: NearMap, flown October 2024

SPECIES LIST – Corio Road, Ravenswood

GYMNOSPERMS

PINACEAE *Pinus radiata

MONOCOTYLEDONS

ANARTHRIACEAE Lyginia barbata

ASPARAGACEAE Laxmannia squarrosa Thysanotus patersonii

COLCHICACEAE Burchardia congesta

DASYPOGONACEAE Dasypogon bromeliifolius

HAEMODORACEAE Anigozanthos manglesii Conostylis aculeata Conostylis juncea Phlebocarya ciliata

HEMEROCALLIDACEAE Corynotheca micrantha Tricoryne elatior

IRIDACEAE Patersonia occidentalis

ORCHIDACEAE *Disa bracteata Microtis media

POACEAE *Briza maxima *Ehrharta calycina *Eragrostis curvula

RESTIONACEAE Desmocladus fasciculatus Hypolaena exsulca XANTHORRHOEACEAE Xanthorrhoea preissii

DICOTYLEDONS

ASTERACEAE *Arctotheca calendula *Hypochaeris glabra *Taraxacum officinale *Ursinia anthemoides

DILLENIACEAE Hibbertia hypericoides Hibbertia subvaginata

DROSERACEAE Drosera glanduligera Drosera stolonifera

ERICACEAE Conostephium pendulum

EUPHORBIACEAE Euphorbia peplus

FABACEAE Acacia pulchella Acacia stenoptera Bossiaea eriocarpa Daviesia angulata Daviesia divaricata Daviesia triflora Gompholobium tomentosum Jacksonia floribunda Jacksonia furcellata Kennedia prostrata

GOODENIACEAE Dampiera linearis

LORANTHACEAE Nuytsia floribunda MYRTACEAE Eucalyptus marginata Eucalyptus todtiana Kunzea glabrescens

PHYLLANTHACEAE Poranthera microphylla

PROTEACEAE

Adenanthos cygnorum Adenanthos meisneri Banksia attenuata Banksia grandis Banksia prionotes Stirlingia latifolia Xylomelum occidentale

STYLIDIACEAE

Levenhookia stipitata Stylidium brunonianum Stylidium piliferum