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Emerge contact: [REDACTED]

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Emerge Environmental Services Pty Ltd ABN
57144772510 trading as EmERGE ASSOCIATES

Attention: Native Vegetation Clearing Referral
Department of Water and Environmental Regulation
8 Davidson Terrace, Joondalup WA 6027

Delivered by email to: info@dwer.wa.gov.au

Dear Sir/Madam

NATIVE VEGETATION CLEARING REFERRAL TO UNDERTAKE DEVELOPMENT FOR LIGHT INDUSTRIAL PURPOSES ON LOT 1499, 71 STIRLING CRESCENT, HIGH WYCOMBE WA

Hesperia (the proponent) have engaged EmERGE ASSOCIATES (EmERGE) to provide environmental consultancy services to support the proposed development of a portion of Lot 1499, 71 Stirling Crescent, High Wycombe (herein referred to as 'the site'). The development for light industrial purposes includes the construction of two warehouses with attached offices, car parking, dedicated hardstand areas and a rehabilitated drainage area. The total development footprint extends over approximately 3.9 ha and to enable the development of the site, the clearing of 0.88 ha of native vegetation is required across the site herein referred to as 'the clearing referral area'.

The *Environmental Protection Regulations 2004 – Prescribed Clearing Regulations* provide for a clearing permit exemption for the lawful construction of a building or structure as long as other relevant approvals have been obtained including planning approvals and building licence. It is envisaged that once building approvals are secured, the above exemption will apply to the clearing of native vegetation within portions of the site for the construction of two warehouses. Notwithstanding this, any exemptions are unlikely to be granted in time to facilitate the required forward bulk earthworks within the site.

On this basis the proponent refers the proposed native vegetation clearing to the Department of Water and Environmental Regulation (DWER) pursuant to Section 51DA of the amended *Environmental Protection Act 1986* (EP Act) to determine whether a clearing permit is required. This letter provides information on existing environmental conditions and relevant environmental considerations within the site and provides an assessment of the proposed clearing against all clearing referral criteria listed in Section 51DA(4) of the EP Act, in addition to the ten clearing principles contained in Schedule 5 of the EP Act, as far as they are relevant to the matter under consideration. Based on an assessment undertaken by EmERGE against these criteria and clearing principles, it would appear that there are reasonable grounds to suggest that the clearing within the clearing referral area would result in very low environmental impacts.

1 INTRODUCTION AND BACKGROUND

The site encompassing the clearing referral area is located approximately 14 km east of the Perth Central Business District within the City of Kalamunda, as shown in **Figure 1**. The site is bounded by Adelaide Street and light industrial land uses to the north and west, multiple zoned 'Light industry'

lots under the City of Kalamunda Local Planning Scheme No. 3 presently encompassing rural residential dwellings to the south and a residential area to the east.

Based on a review of publicly available historical aerial photography, the eastern portion of the site has been predominantly cleared prior to 1953, whilst almost all native vegetation was cleared by 1965 with a small patch of vegetation remaining in the south-west and north-west corner of the site (Landgate 2022). Since 1965 until present, successive episodes of regrowth and re-clearing appears to have occurred predominantly in the western portion of the site, whilst the eastern portion has remained largely devoid of native vegetation, with only a few single scattered trees remaining. Historical aerial imagery of the site is shown in **Figure 2** attached. Presently the site comprises predominantly non-native vegetation and native vegetation regrowth, whilst a number of remnant native trees appear to remain along the south western boundary of the site.

The development of the site will enable the construction of two light industrial warehouses and associated hardstand, which will include the following features:

- Two warehouses with attached main offices, awning areas, pump house, loading docks, workshops and amenities
- Various carparking locations
- Dedicated hardstand areas for truck access and egress and fire truck driveways
- Sprinkler water tank
- Multiple landscape and drainage areas
- Rehabilitated drainage area.

2 ENVIRONMENTAL CONTEXT

An ecologist from Emerge visited the site on 31 August 2022 and undertook a flora and vegetation survey in accordance with the Environmental Protection Authority's *Technical Guidance – Flora and Vegetation Surveys for Environmental Impact Assessment*, in addition to a fauna survey. The flora, vegetation and fauna assessment is provided as **Attachment 3**. It is noted that the flora, vegetation and fauna assessment undertaken by Emerge included the entirety of Lot 1499, whilst only a portion of the lot (the clearing referral area within the bounds of the site) is applicable to this clearing referral. No other environmental assessments are known to have previously been undertaken for the site.

The site has historically largely been cleared of native vegetation prior to 1953 with regrowth occurring since in the western portion and is currently used for rural residential purposes (a single dwelling), truck and trailer storage. The site primarily supports 'Non-native' vegetation areas (3 ha) comprising 'low open to closed grassland and forbland of predominantly non-native species or tall shrubland of *Leptospermum laevigatum* (Victorian tea-tree) and *Cytisus proliferus* (tree lucerne) over low open grassland and forbland of predominantly non-native species' in 'Completely Degraded' condition. Native vegetation values within the site are restricted to individual scattered trees and patches of native vegetation in 'Degraded' and 'Degraded - Completely Degraded' condition. The key environmental features within the site include the following:

- Native vegetation within the site is limited to small patches and individual trees such as *Eucalyptus marginata* (jarrah), *Eucalyptus todtiana* (coastal blackbutt), *Banksia attenuata*, *Banksia illicifolia* and *Banksia menziesii*. The native vegetation identified within the clearing referral area appears to have largely naturally regenerated following clearing.
- Native vegetation including *banksia* species, eucalypt trees and non-native species within the clearing referral area potentially provide black cockatoo foraging habitat.

- No black cockatoo breeding or roosting habitat was recorded within the site, with trees identified as being relatively low in height (approximately 5-10 m) and unlikely to form suitable nesting hollows due to the trees bifurcated and/or low branching structure.
- A review of the *Geomorphic Wetlands of the Swan Coastal Plain* dataset indicates that one small (0.52 ha) resource enhancement wetland (REW) unique feature identifier (UFI) #15940 abuts and slightly extends (3.6 m) into the south eastern portion of the site. Notwithstanding this, no wetland vegetation or other indicators that a wetland occurs within the site was recorded during site investigations and the dataset of the mapped wetland boundary is likely to be incorrect. Notwithstanding this, a wetland buffer will be accommodated within the site, which will form a rehabilitated drainage area. The appropriate separation/buffer distance between UFI #15940 and the future development will be confirmed through a wetland buffer assessment undertaken by PGV Environmental. The individual native trees identified within this wetland buffer do not form part of the clearing referral area.

3 APPROVALS CONTEXT

The proponent is currently seeking development/building approval with the relevant authorities. Once the relevant approvals have been granted, it is envisaged that an exemption for the clearing of native vegetation within a portion of the clearing referral area will apply. The proponent intends to progress with the bulk earthworks prior to gaining building approval and hence this clearing permit referral is being progressed.

4 CLEARING REFERRAL

Attachment 1 contains the signed application for 'New Permit of Referral to Clear Native Vegetation Form' for processing by DWER.

Attachment 2 contains the Certificate of Title for the site (Lot 1499 Stirling Crescent, High Wycombe).

Attachment 3 contains a copy of the assessment report for the flora, vegetation and fauna survey undertaken by Emerge.

5 CLEARING REFERRAL AREA

The clearing referral area only refers to vegetation determined to be remnant native vegetation including mature trees that have been identified as native remnants and have likely not been cleared prior to 1953, according to historical aerial imagery (Landgate 2022), in addition to any potential naturally regenerated native vegetation. For the purposes of this clearing referral, the clearing referral area excludes any non-native or planted vegetation that occurs within the broader site. Notwithstanding this, the clearing referral area includes small areas of non-native vegetation (non-native grasses) where patches of native vegetation were mapped encompassing non-native vegetation, which could not be separated. Pursuant to Division 2 Section 51A (a) of the EP Act, native vegetation does not include vegetation that was intentionally sown, planted or propagated and hence all planted or non-native vegetation, potentially required to be cleared within the site, is not subject to this referral.

The clearing referral area comprises one parcel that spreads across the western portion of the site of which 0.88 ha is native vegetation (based on native vegetation canopy cover) proposed to be cleared, as shown in the attached **Figure 3**. The native tree species within the site appear to have predominantly either naturally regenerated following clearing or have been planted. Where trees occur as scattered paddock trees and in small patches it is difficult to determine whether they have naturally regrown or were planted; therefore, as a conservative approach all native trees were assumed to be remnant native vegetation.

5.1 Flora and vegetation values

A flora and vegetation survey was undertaken by Emerge on 31 August 2022, which assessed the vegetation within the clearing referral area and the broader site. A total of three (3) plant communities were identified within the site ranging from 'Degraded' to 'Completely Degraded' condition, as shown in **Figure 4** and **Figure 5**. The majority of the site (3 ha) including small portions of the clearing referral area was identified as being '**Non-native**' in 'Completely Degraded' condition comprising 'Low open to closed grassland and forbland of predominantly non-native species or tall shrubland of *Leptospermum laevigatum* (Victorian tea-tree) and *Cytisus proliferus* (tree lucerne) over low open grassland and forbland of predominantly non-native species'.

Native plant community **EB** was identified as part of the clearing referral area in 'Degraded' condition comprising 0.88 ha of 'Open woodland of *Eucalyptus marginata*, *Eucalyptus todtiana* over *Banksia attenuata*, *B. illicifolia* and *B. menziesii* or *Leptospermum laevigatum* (non-native) and *Schinus terebinthifolius* (non-native) over low open shrubland of *Scholtzia involucrata* over sedgeland *Lyginia barbata* or (most commonly) low open to closed grassland and forbland of predominantly non-native species'.

Plant community **As** (0.02 ha) was identified in 'Degraded - Completely Degraded' condition comprising 'Very open tall shrubland of *Acacia saligna* over low closed grassland and forbland of non-native species'.

Photographic representation of plant communities '**EB**' '**As**' and '**Non-native**' is provided in **Plate 1** to **Plate 3** below respectively.



Plate 1: Plant community **EB** in 'Degraded' condition.



Plate 2: Plant community **As** in 'Degraded-Completely Degraded' condition



Plate 3: **Non-native** vegetation in 'Completely Degraded' condition comprising the majority of the site including portions of the clearing referral area.

Due to the degraded vegetation condition within the site, a floristic analysis was not undertaken to classify the vegetation to a local floristic community type (FCT). However, the **EB** plant community is inferred to most likely be a remnant of FCT 23a (Gibson *et al.* 1994). No vegetation within the site and clearing referral area was identified as being representative of a threatened or priority ecological community. In addition, no threatened or priority flora species were identified within the site including the clearing referral area.

Vegetation complex mapping for the Swan Coastal Plain undertaken by Heddle et al. (1980) indicates that the site occurs within an area mapped as the 'Southern River' complex, which is described as 'open woodland of *Corymbia calophylla* – *Eucalyptus marginata* – *Banksia* spp. with fringing woodland of *Eucalyptus rudis* – *Melaleuca raphiophylla* along creek beds'. It was determined that the vegetation within the site shares some characteristics and may be considered a remnant of the 'Southern River Complex'; however, it is important to note that due to the 'Degraded' native vegetation condition within the site, it is not representative of the 'Southern River' complex in 'Good' or better condition.

5.2 Fauna values

A fauna assessment was undertaken by Emerge in August 2022. The site is located within the modelled distribution range of three threatened species of black cockatoo: *Zanda latirostris* (Carnaby's Black Cockatoo (CBC)) and *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo (FRTBC) and *Zanda baudinii* (Baudin's Black Cockatoo (BBC)). The site is located just outside of the modelled distribution range of BBC and so this species is less likely to occur; however, may use the area for foraging.

The clearing referral area contains a number of *Eucalyptus todtiana* that have a diameter at breast height greater than 500 mm; however, these trees tend to be relatively low in height (approximately 5-10 m) and typically have a bifurcated and/or low branching structure. Due to the structure these trees are considered unlikely to ever support a suitable nesting hollow and so they were not recorded as 'potential nesting' trees. As such the clearing referral area does not currently provide suitable breeding habitat for any species of black cockatoo.

Native and non-native vegetation within the clearing referral area and the broader site provide suitable foraging resources for black cockatoos. Native foraging habitat predominantly comprises *banksia* species and eucalypt trees, whilst non-native foraging habitat predominantly comprises *Melia azedarach* and *Pinus* species trees. It was determined that approximately 0.82 ha of native foraging habitat occurs within the clearing referral area, as shown in **Figure 6**. No evidence of foraging by black cockatoos was detected within the clearing referral area and broader site. The site has not been identified as a known roosting site for black cockatoos and no evidence of black cockatoo roosting was identified during the site survey.

5.3 Proposed clearing of native vegetation

Clearing of native vegetation within the clearing referral area is proposed to allow earthworks to occur in preparation for the development of the site for light industrial purposes. The proposed clearing would consist of the removal of 0.88 ha of native vegetation comprising the clearing referral area, as shown in **Figure 3**. The remainder of vegetation within the broader site predominantly comprises non-native vegetation determined to be in 'Completely Degraded' condition, which will be cleared to enable works required for the development of the site and is not accounted for as part of the scope of this clearing referral. Additionally, a total of 0.02 ha of native vegetation (plant community **As**) in the south eastern portion of the site is accommodated in the proposed rehabilitated drainage area and does not form part of this clearing referral.

5.4 Proposed revegetation

As part of the future development of the site for light industrial purposes, appropriate passive landscape treatments will be implemented utilising local native vegetation within and surrounding the site. The proponent also proposes a rehabilitation drainage area within the south eastern portion of the site, which will serve as a wetland buffer between the future development of the site and the existing REW to the south of the site. There are also opportunities outlined in the proposed Development Plan and draft Landscape Plan that would allow for the retention of trees within the site; however, for the purposes of this clearing referral all native vegetation within the clearing referral area is assumed to be removed.

6 RESPONSE TO THE CLEARING REFERRAL CRITERIA

Under Section 51C of the EP Act, clearing of native vegetation is an offence unless a clearing permit has been obtained, or unless:

- An exemption applies
- The proposed clearing was referred to DWER who determined that a permit is not required because the clearing is exempt, or the clearing satisfies all the referral criteria.

DWER's referrals process supports a risk-based approach to assessing native vegetation clearing proposals by establishing a pathway to assess very low impact clearing activities that are deemed not to require a permit. When assessing the clearing referral, DWER have regard to the referral criteria listed in Section 51DA(4) of the EP Act. A clearing permit is required if the referral does not meet all of the criteria.

In support of this clearing referral, the four referral criteria highlighted in the EP Act have been considered and responded to, which are detailed further in **Table 1** below.

Table 1: EP Act clearing referral criteria

EP Act Section 51DA(4) Criteria	Response to the EP Act Clearing Referral Criteria
<p><i>Criterion 1: The area proposed to be cleared is small relative to the total remaining vegetation</i></p> <ul style="list-style-type: none"> • Relative to the total remaining vegetation in the region where the proposed clearing is located, and • Relative to the total remaining vegetation of the ecological community that the vegetation proposed to be cleared forms a part of 	<p>The site is located within the Metropolitan Perth Region Scheme constrained area. The 'constrained area' of Metropolitan Perth is the Swan Coastal Plain IBRA portion of the Perth Region Scheme. The Native Vegetation Clearing Referrals Guideline ('the Guideline') (DWER 2021) states that if the extent of the proposed clearing is more than 1 ha, a clearing permit is required. The proposed clearing would involve the removal of 0.88 ha of native vegetation, which is anticipated to result in a very low environmental impact.</p> <p>Vegetation complex mapping for the Swan Coastal Plain undertaken by Heddle et al. (1980) indicates that the site occurs within an area mapped as the 'Southern River' complex, which is described as 'open woodland of <i>Corymbia calophylla</i> – <i>Eucalyptus marginata</i> – <i>Banksia</i> spp. with fringing woodland of <i>Eucalyptus rudis</i> – <i>Melaleuca rhapsiophylla</i> along creek beds'. It was determined that the vegetation within the site shares some characteristics and may be considered a remnant of the 'Southern River Complex'; however, it is important to note that due to the 'Degraded' native vegetation condition within the site, it is not representative of the 'Southern River' complex in 'Good' or better condition.</p> <p>The 'Southern River' complex has approximately 18.43% of its pre-European extent remaining on the Swan Coastal Plain, which is above the 10% threshold for remaining extent of native vegetation in the Swan Coastal Plain region as highlighted in the Guideline.</p> <p>A review of the current native vegetation extent dataset (DPIRD-005), within a 5 km buffer of the site, indicates that the threshold for remaining native vegetation surrounding the boundary of the site is above the 10% as highlighted in the Guidelines. The pre-European native vegetation extent within 5 km of the site was 8256 ha, whilst presently there is an estimated total of 1827 ha of native vegetation remaining (approximately 22%) within a 5 km radius of the clearing area, as shown in Figure 7.</p> <p>Due to the degree of historical disturbance and the present condition of the site, native vegetation was not identified to be considered part of any threatened ecological and/or priority ecological community. Due to the degraded vegetation condition within the site, a floristic analysis was not undertaken to classify the vegetation to a local floristic community type (FCT). However, the EB plant community is inferred to most likely be a remnant of FCT 23a.</p>

EP Act Section 51DA(4) Criteria	Response to the EP Act Clearing Referral Criteria
	Overall, the proposed clearing is not considered to be at variance with this criterion and ultimately would result in very low environmental impacts as required by the Guidelines and the EP Act.
<p><i>Criterion 2: There are no known or likely significant environmental values within the area</i></p> <ul style="list-style-type: none"> • Biological values (e.g. flora, fauna, ecological communities) • Conservation values (e.g. impact to ecological linkages, conservation areas and heritage values) • Land and water resource values (e.g. wetlands and watercourses, water resources, land and soil quality) 	<p>The existing vegetation within the site was determined to be in predominantly 'Completely Degraded' condition (3 ha) dominated by non-native flora species. Plant community EB (0.88 ha) identified within the clearing referral area is described as 'Open woodland of <i>Eucalyptus marginata</i>, <i>E. todtiana</i> over <i>Banksia attenuata</i>, <i>B. illicifolia</i> and <i>B. menziesii</i> or <i>Leptospermum laevigatum</i> (non-native) and <i>Schinus terebinthifolius</i> (non-native) over low open shrubland of <i>Scholtzia involucreata</i> over sedgeland <i>Lyginia barbata</i> or (most commonly) low open to closed grassland and forbland of predominantly non-native species', identified in 'Degraded' condition. Plant community As comprising just 0.02 ha of the site in 'Degraded-Completely Degraded' condition is described as 'Very open tall shrubland of <i>Acacia saligna</i> over low closed grassland and forbland of non-native species'. No threatened or priority flora species were identified within the clearing referral area, nor anywhere else within the site. Furthermore, no threatened or priority ecological communities were identified within the site including the clearing referral area, likely due to the degraded condition and severe historical disturbance. Overall, vegetation within the site and clearing referral area is of low biological diversity with native vegetation comprising 15 species and non-native vegetation comprising 30 identified species (species list provided in Attachment 3).</p> <p>Due to the historical disturbance of the site and the relatively small size of the clearing referral area, the fauna habitat values within the site and clearing referral area are considered to be significantly reduced and likely only provide habitat for a range of common and widespread species (predominantly avian species).</p> <p>Native vegetation within the clearing referral area potentially provides foraging habitat for black cockatoo, albeit highly limited (0.82 ha). No known roosting sites are known to occur within the site and no evidence of black cockatoo roosting was identified during site-specific investigations. No suitable black cockatoo breeding habitat was identified within the site due to the structure of native trees within the site. Additionally, the site is situated within an increasingly dense urban and industrial development area with further urban and industrial development occurring within the vicinity of the site, which would likely increase the noise level within the site's immediate vicinity from construction works and increasing traffic flow resulting in any black cockatoo likely to utilise quieter and more suitable habitat. There are large amounts of likely much higher quality and more suitable black cockatoo foraging, roosting and breeding habitat within local and regional proximity to the clearing referral area. Bush Forever site 213 (Bushmead Bushland, Swan) is approximately 1.5 km to the east of the site comprising an estimated 243 ha of likely suitable black cockatoo habitat, whilst several larger National Parks are situated approximately 4 km to the east of the site including Kalamunda National Park, Greenmount State Forest and Beelu National Park further bordering Mundaring State Forest and Helena National Park.</p> <p>As per the Referral Guidelines for Three Threatened Black Cockatoo Species (DAWE 2022), high risks of significant impacts on black cockatoo are only likely to occur if clearing of more than 1 ha of quality foraging habitat would occur, the clearing would result in the loss of suitable or potential nesting trees and the removal of any part of a known night roosting site. It is highly unlikely that the removal of 0.82 ha of potential foraging habitat would result in a significant loss of an existing foraging source, nor represent a key local or regional resource for the species. In total 1188 ha of Carnaby's black cockatoo and forest red-tailed black cockatoo potential habitat and 1167 ha of Baudin's black cockatoo potential habitat occurs within 6 km of the site and the</p>

EP Act Section 51DA(4) Criteria	Response to the EP Act Clearing Referral Criteria
	<p>proposed clearing referral area (refer to Figure 8), whilst the loss of potential foraging habitat for black cockatoo within the clearing referral area would equate to approximately 0.06% of habitat for black cockatoos.</p> <p>Based on the above it was determined that the clearing referral area does not provide critical habitat for fauna species including significant fauna such as black cockatoos. The clearing of native vegetation within the clearing referral area would not result in any significant impacts on fauna species.</p> <p>A review of the <i>Geomorphic Wetlands of the Swan Coastal Plain</i> dataset indicates that one small (0.52 ha) mapped resource enhancement wetland (REW) unique feature identifier (UFI) #15940 abuts and slightly extends (3.6 m) into the south eastern portion of the site (refer to Figure 3). Notwithstanding this, no wetland vegetation or other indicators that a wetland occurs within the site was recorded during site investigations and the dataset of the mapped wetland boundary is likely to be incorrect, with the wetland feature unlikely to extent into the site. Notwithstanding this, a wetland buffer will be accommodated within the site, which will form a rehabilitated drainage area. The appropriate separation distance between UFI #15940 and the future development will be confirmed through a wetland buffer assessment undertaken by PGV Environmental. The individual native trees identified within the wetland buffer do not form part of the clearing referral area.</p> <p>Acid sulfate soil (ASS) mapping prepared by DWER indicates that a small area in the south eastern corner of the site has been classified as 'high to moderate risk' of ASS occurring within 3 m of the natural soil surface, whilst the remainder of the site has a 'moderate to low risk' of ASS occurring within 3 m of natural soil but 'high to moderate risk' of ASS occurring beyond 3 m of the natural soil surface. Earthworks and clearing of vegetation required is unlikely to disturb ASS and any potential risks will be appropriately managed during future development stages of the site and the clearing referral area. The DWER Contaminated Sites Database does not indicate any contamination within the site and the site's broader surrounds.</p> <p>The site is not associated with a Bush Forever site, environmentally sensitive area or a significant ecological linkage. Bush Forever Sites 122, 418 and 213 are located within 1-1.5 km east of the site, with these areas also mapped as environmentally sensitive.</p> <p>The site is not situated within or in near proximity to a registered Aboriginal Heritage site. There is a minor incursion (2.8 m) into the northern site boundary of a mapped Other Heritage Place (ID 17506 Adelaide Street) with the status 'Lodged' indicating that information has been received in relation to the place, but an assessment has not been completed to determine if it meets Section 5 of the <i>Aboriginal Heritage Act 1972</i>. Site ID 17506 is associated with artefacts/scatter, with the mapped area approximately 3 ha in size, which has largely been developed for light industrial purposes. Due to the historical disturbance within the site and surrounding area, any potential artefacts are highly unlikely to remain within the site.</p> <p>Overall, the proposed clearing is not considered to be at variance with this criterion and ultimately is anticipated to result in very low environmental impacts as required by the Guidelines and the EP Act. Although the clearing referral area comprises potential black cockatoo foraging habitat, this is highly limited and predominantly in 'Degraded' condition and not critical habitat for black cockatoo and any other significant fauna species.</p>

EP Act Section 51DA(4) Criteria	Response to the EP Act Clearing Referral Criteria
<p><i>Criterion 3: The state of scientific knowledge of native vegetation within the region is adequate</i></p>	<p>The site is located within the Swan Coastal Plain. Various databases, spatial datasets and other relevant readily available information is available for the site and the broader region. Additionally, Emerge has undertaken a site-specific flora, vegetation and fauna investigation for the proposed development of the site.</p> <p>The proposed clearing would be undertaken in an area that is included and covered by various environmental databases, spatial datasets and other relevant readily available information and is therefore not considered to be at variance with this criterion.</p>
<p><i>Criterion 4: Conditions will not be required to environmental impacts</i></p>	<p>As outlined above, the clearing referral area comprises native vegetation in 'Degraded' condition and the clearing of native vegetation would not result in critical habitat loss or significant impacts on threatened or priority fauna and flora species or any threatened or priority ecological communities. Additionally, it is anticipated that the impact on significant species such as black cockatoo will be minimal, and the development of the site and associated clearing of vegetation will not trigger a referral under the <i>Environment Protection Act 1999</i> in relation to matters of national environmental significance.</p> <p>Due to the overall condition of native vegetation within the clearing referral area and the anticipated very low environmental impact resulting from the proposed clearing on flora and fauna species it is not anticipated that any conditions would be required to minimise, mitigate, offset or otherwise manage effects on the environment; therefore, the proposed clearing is not at variance with this criterion.</p>

7 RESPONSE TO THE ENVIRONMENTAL PROTECTION ACT 1986 CLEARING PRINCIPLES

As a conservative measure, Emerge have considered and responded to the ten clearing principles contained in Schedule 5 of the EP Act, so far as they are relevant to the matter under consideration. Additionally, in accordance with *A Guide to the assessment of applications to clear native vegetation* (DER 2014), the impact mitigation sequence has been considered, where applicable, in order to ensure the environmental impact from the proposed clearing of native vegetation is kept to a minimum and/or would not result in significant environmental impacts.

There are limited opportunities to avoid the potential direct impacts on native vegetation within the clearing referral area, due to engineering and construction requirements associated with the future development of the site for light industrial purposes. Notwithstanding this, the clearing of native vegetation is to be avoided within the western portion of Lot 1499 as it is not included within the site's boundary and future development footprint. Additionally, all native vegetation within the rehabilitated drainage area does not form part of the clearing referral area. Measures to mitigate any potential impacts on the limited native vegetation within the clearing referral area are considered unnecessary, largely due to the significant historical disturbance within the site and the predominantly 'Degraded' condition of any native vegetation providing no material and/or critical environmental values including habitat for significant fauna such as black cockatoo.

EP Act Schedule 5 Clearing Principles	Response to the EP Act Clearing Principles
<p><i>Principle (a): Native vegetation should not be cleared if it comprises a high level of biological diversity.</i></p>	<p>Based on the results of the flora, vegetation and fauna survey undertaken by Emerge (2022) (Attachment 3) and the review of historical aerial imagery (Landgate 2022), the site including the referral area has been subject to significant disturbance through the clearing of native vegetation prior to 1953 and on multiple occasions since.</p> <p>The existing vegetation within the site was determined to be in predominantly 'Completely Degraded' condition (3 ha) comprising non-native flora species. Plant community EB (0.88 ha) identified within the clearing referral area is described as 'Open woodland of <i>Eucalyptus marginata</i>, <i>E. todtiana</i> over <i>Banksia attenuata</i>, <i>B. illicifolia</i> and <i>B. menziesii</i> or <i>Leptospermum laevigatum</i> (non-native) and <i>Schinus</i></p>

EP Act Schedule 5 Clearing Principles	Response to the EP Act Clearing Principles
	<p><i>terebinthifolius</i> (non-native) over low open shrubland of <i>Scholtzia involucrata</i> over sedgeland <i>Lyginia barbata</i> or (most commonly) low open to closed grassland and forbland of predominantly non-native species', identified in 'Degraded' condition. Plant community As comprising just 0.02 ha of the site in 'Degraded-Completely Degraded' condition is described as 'Very open tall shrubland of <i>Acacia saligna</i> over low closed grassland and forbland of non-native species'. The plant communities and vegetation conditions are shown in Figure 4 and Figure 5. No threatened or priority flora species were identified within the clearing referral area, nor anywhere else within the site. Furthermore, no threatened or priority ecological communities were identified within the site including the clearing referral area, likely due to the degraded condition and severe historical disturbance. Overall, vegetation within the site and clearing referral area is of low biological diversity with native vegetation comprising 15 species and non-native vegetation comprising 30 identified species (species list provided in Attachment 3).</p> <p>Based on the above the site including the clearing referral area does not comprise a high level of biological diversity as native vegetation is highly limited compared to the majority of non-native vegetation (exotic grasses, shrubs and trees) within the site. Since the clearing referral area and the broader site does not provide an area of high biological diversity, no avoidance or mitigation measures were considered and the proposed clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (a).</p>
<p><i>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</i></p>	<p>The fauna investigations within the site concluded that fauna habitat values are highly limited, likely to be utilised by common and widespread species (predominantly avian species) without specific habitat requirements. Notwithstanding this, the site provides 0.82 ha of suitable foraging habitat for black cockatoo species namely Carnaby's black cockatoo, forest red-tailed black cockatoo and Baudin's black cockatoo, albeit less likely. No evidence of black cockatoo foraging was identified within the site. No suitable breeding habitat was identified within the site and there is no known black cockatoo roost within the site and no evidence was found that suggested black cockatoo utilise the site for roosting.</p> <p>There are large amounts of likely much higher quality and more suitable black cockatoo foraging, roosting and breeding habitat within local and regional proximity to the clearing referral area. Bush Forever site 213 (Bushmead Bushland, Swan) is approximately 1.5 km to the east of the site comprising an estimated 243 ha of likely suitable black cockatoo habitat, whilst several larger National Parks are situated approximately 4 km to the east of the site including Kalamunda National Park, Greenmount State Forest and Beelu National Park further bordering Mundaring State Forest and Helena National Park. Due to the predominantly low quantity of black cockatoo habitat within the site, it is highly unlikely the site is frequently utilised by black cockatoo and the species is more likely to utilise the much larger areas of suitable black cockatoo habitat in the broader surroundings of the site.</p> <p>Based on the above, it was determined that the native vegetation within the clearing referral area does not comprise significant or critical habitat for fauna indigenous to Western Australia in particular black cockatoo. Therefore, no avoidance or mitigation measures were considered and the proposed clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (b).</p>
<p><i>Principle (c): Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.</i></p>	<p>No priority or threatened flora species were observed during the site-specific investigations. It was determined that it is highly unlikely that any potentially occurring rare species would occur within the site and the clearing referral area due to the site lacking suitable habitat and</p>

EP Act Schedule 5 Clearing Principles	Response to the EP Act Clearing Principles
	<p>severe historical disturbance.</p> <p>Based on the above, the proposed clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (c).</p>
<p><i>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</i></p>	<p>Due to the degraded vegetation condition and small extent within the site, the native vegetation was not identified as being representative of a threatened or priority ecological community.</p> <p>Based on the above, the proposed clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (d).</p>
<p><i>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.</i></p>	<p>Vegetation complex mapping for the Swan Coastal Plain undertaken by Heddle et al. (1980) indicates that the site occurs within an area mapped as the 'Southern River' complex, which is described as 'open woodland of <i>Corymbia calophylla</i> – <i>Eucalyptus marginata</i> – <i>Banksia</i> spp. with fringing woodland of <i>Eucalyptus rudis</i> – <i>Melaleuca raphiophylla</i> along creek beds'. It was determined that the vegetation within the site shares some characteristics and may be considered a remnant of the 'Southern River Complex'; however, it is important to note that due to the 'Degraded' native vegetation condition within the site, it is not representative of the 'Southern River' complex in 'Good' or better condition.</p> <p>The Southern River complex has 18.43% of its pre-European extent remaining on the Swan Coastal Plain, which is above the 10% threshold for remaining extent of native vegetation in the Swan Coastal Plain region as highlighted in the Guideline.</p> <p>Additionally, the vegetation complex is likely well reserved within nearby conservation reserves such as Bush Forever Sites 122, 418 and 213 located within 1-1.5 km to the east of the site.</p> <p>Based on the above, the proposed clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (e).</p>
<p><i>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.</i></p>	<p>A review of the <i>Geomorphic Wetlands of the Swan Coastal Plain</i> dataset indicates that one small (0.52 ha) mapped resource enhancement wetland (REW) unique feature identifier (UFI) #15940 abuts and slightly extends (3.6 m) into the south eastern portion of the site (Figure 3). Notwithstanding this, no wetland vegetation or other indicators that a wetland occurs within the site was recorded during site investigations and the dataset of the mapped wetland boundary is likely to be incorrect, with the mapped REW unlikely to extent into the site. Notwithstanding this, a wetland buffer will be accommodated within the site, which will form a rehabilitated drainage area (Figure 3). The appropriate separation distance between UFI #15940 and the future development will be confirmed through a wetland buffer assessment undertaken by PGV Environmental. The individual native trees identified within the wetland buffer do not form part of the clearing referral area.</p> <p>Based on the above, clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (f).</p>
<p><i>Principle (g): Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.</i></p>	<p>No land degradation is anticipated to result from the clearing of vegetation within the clearing referral area. The future development of the site will ultimately result in the site to be covered by paving, buildings and landscaped areas, hence the proposed clearing is unlikely to increase the risk of land degradation. Despite this, any risk of land degradation will also be mitigated through controls and surface stabilisation applied during vegetation clearing where required, albeit unlikely.</p> <p>The clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (g).</p>

EP Act Schedule 5 Clearing Principles	Response to the EP Act Clearing Principles
<p><i>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.</i></p>	<p>Due to the sites locality within a largely developed industrial and residential area, significant environmental values and/or conservation areas are highly limited within the site's proximity.</p> <p>Any potentially intact native vegetation present in close proximity to the clearing referral area is likely to be associated with REW UFI #15940 to the south of the site, which will not be impacted by the proposed clearing and development of the site. It is noted that any vegetation associated with this wetland feature is not part of a conservation area. Other conservation reserves within the sites broader locality are separated from the site through existing roads, housing and light industrial purpose areas and will not be impacted by the clearing of vegetation within the clearing referral area nor the future development of the site.</p> <p>The clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (h).</p>
<p><i>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.</i></p>	<p>Deterioration in quality of surface or groundwater can occur as a result of activities that result in sedimentation, increased nutrient levels, changes to pH (through acid sulphate soils), salinity or changes in water regimes of groundwater dependent ecosystems.</p> <p>ASS risk mapping prepared by DWER indicates that a small area in the south eastern corner of the site has been classified as 'high to moderate risk' of ASS occurring within 3 m of the natural soil surface, whilst the remainder of the site has a 'moderate to low risk' of ASS occurring within 3 m of natural soil but 'high to moderate risk' of ASS occurring beyond 3 m of the natural soil surface. Earthworks and clearing of vegetation required is unlikely to disturb ASS and any potential risks will be appropriately managed during future development stages of the site and the clearing referral area. The DWER Contaminated Sites Database does not indicate any contamination within the site and the site's broader surrounds.</p> <p>Based on information provided by the Perth Groundwater Atlas (2022), depth to groundwater within the site ranges from 8 m to 10 m from the ground surface. As no potential contaminants are expected to be brought into the site from the proposed clearing, the clearing of native vegetation is highly unlikely to have an effect on the quality of surface or groundwater. Post clearing, the site will be covered in hardstand, which is not likely to cause deterioration in water quality.</p> <p>The clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (i).</p>
<p><i>Principle (j): Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.</i></p>	<p>A review of publicly available data did not identify any environmental factors that would increase the incidence of flooding within the site. Additionally, the site and the clearing referral area is not mapped as occurring within a floodplain area (DWER 2020) and the future development of the site will ultimately result in the site predominantly covered with hardstand.</p> <p>The proposed clearing of native vegetation within the clearing referral area is not considered to be at variance with principle (j).</p>

Summary and closing

The proposed clearing referral area covers 0.88 ha of native vegetation in 'Degraded' and 'Degraded – Completely Degraded' condition, whilst the broader site comprises non-native and cleared areas in 'Completely Degraded' condition.

It is Emerges' opinion that the proposed clearing will only result in a very low environmental impact and is not at variance with the four referral criteria as outlined in the EP Act and the Guideline, which have been addressed in detail within this letter. In summary:

- The native vegetation within the clearing referral area was identified as 'Degraded' and 'Degraded – Completely Degraded' condition due to the severe historical disturbance of the site.
- Although there is potentially suitable foraging habitat for black cockatoo within the clearing referral area, albeit highly limited, this was identified as immaterial and/or not critical habitat for fauna species of environmental significance such as black cockatoo.
- There are no threatened or priority ecological communities, priority and/or threatened flora species likely to occur within the clearing referral area and broader site, whilst native vegetation in the clearing referral area provides some potential foraging habitat for black cockatoo species, albeit highly limited and not considered critical habitat for the species.
- One REW was identified to the south of the site, with the mapped boundary slightly intersecting the site. A wetland buffer in form of a rehabilitated drainage area will be accommodated within the site to separate the wetland feature with the future light industrial development, whilst existing native vegetation within this area does not form part of the clearing referral area and this clearing referral.
- The proposed clearing would result in the removal of 0.88 ha of native vegetation in 'Degraded' condition and is therefore relatively small compared to the remaining vegetation in the broader region (Swan Coastal Plain).
- The state of scientific knowledge of native vegetation within the region in which the proposed clearing is to take place (Swan Coastal Plain) is adequate.
- Emerge does not anticipate that any conditions would be required to manage environmental impacts in relation to the proposed clearing, as the proposed clearing is anticipated to only result in very low environmental impacts.

Should you have any questions regarding the content of this letter please do not hesitate to contact the undersigned.

Yours sincerely
Emerge Associates




PRINCIPAL ENVIRONMENTAL CONSULTANT

cc:

Encl: Figure 1: Site Location and Clearing Area
Figure 2: Historical Aerial Imagery
Figure 3: Proposed Remnant Native Vegetation Clearing Extent
Figure 4: Plant Communities
Figure 5: Vegetation Condition
Figure 6: Black Cockatoo Foraging Habitat
Figure 7: Local Native Vegetation Extent
Figure 8: Black Cockatoo Habitat Extent

General References

Department of Agriculture Water and the Environment (DAWE) 2022, *Referral guideline for 3 WA threatened black cockatoo species Carnaby's Cockatoo (Zanda latirostris), Baudin's Cockatoo (Zanda baudinii) and the Forest Red-tailed Black-cockatoo (Calyptorhynchus banksii naso)*, Canberra

Department of Environment Regulation (DER) 2014, *A guide to the assessment of applications to clear native vegetation under Part V Division 2 of the Environmental Protection Act 1986*, Perth.

DWER 2021, *Guideline Native Vegetation Clearing Referrals*

Gibson, N., Keighery, B., Keighery, G., Burbidge, A. and Lyons, M. 1994, *A Floristic survey of the southern Swan Coastal Plain*, Department of Conservation and Land Management and the Conservation Council of Western Australia, Perth.

Hedde, E. M., Loneragan, O. W. and Havel, J. J. 1980, 'Vegetation Complexes of the Darling System Western Australia', in Department of Conservation and Environment (ed.), *Atlas of Natural Resources Darling System Western Australia*, Perth.

Online References

Landgate 2022, *Landgate Map Viewer*, viewed 19 October 2022, < <https://map-viewer-plus.app.landgate.wa.gov.au/index.html> >

Figures

Figure 1: Site Location and Clearing Area

Figure 2: Historical Aerial Imagery

Figure 3: Proposed Remnant Native Vegetation Clearing Extent

Figure 4: Plant Communities

Figure 5: Vegetation Condition

Figure 6: Black Cockatoo Foraging Habitat

Figure 7: Local Native Vegetation Extent

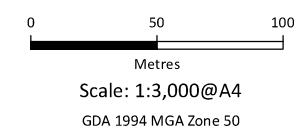
Figure 8: Black Cockatoo Habitat Extent



Figure 1: Site Location and Clearing Area

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

Plan Number:
 EP22-108(01)-F01a
Drawn: GAR
Date: 26/10/2022
Checked: PPS
Approved: JDH
Date: 26/10/2022




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Figure 2: Historical Aerial Imagery

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support

Client: Hesperia

 Site boundary

Plan Number:
 EP22-108(01)-F02a

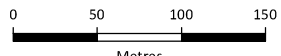
Drawn: GAR

Date: 26/10/2022

Checked: PPS

Approved: JDH

Date: 26/10/2022



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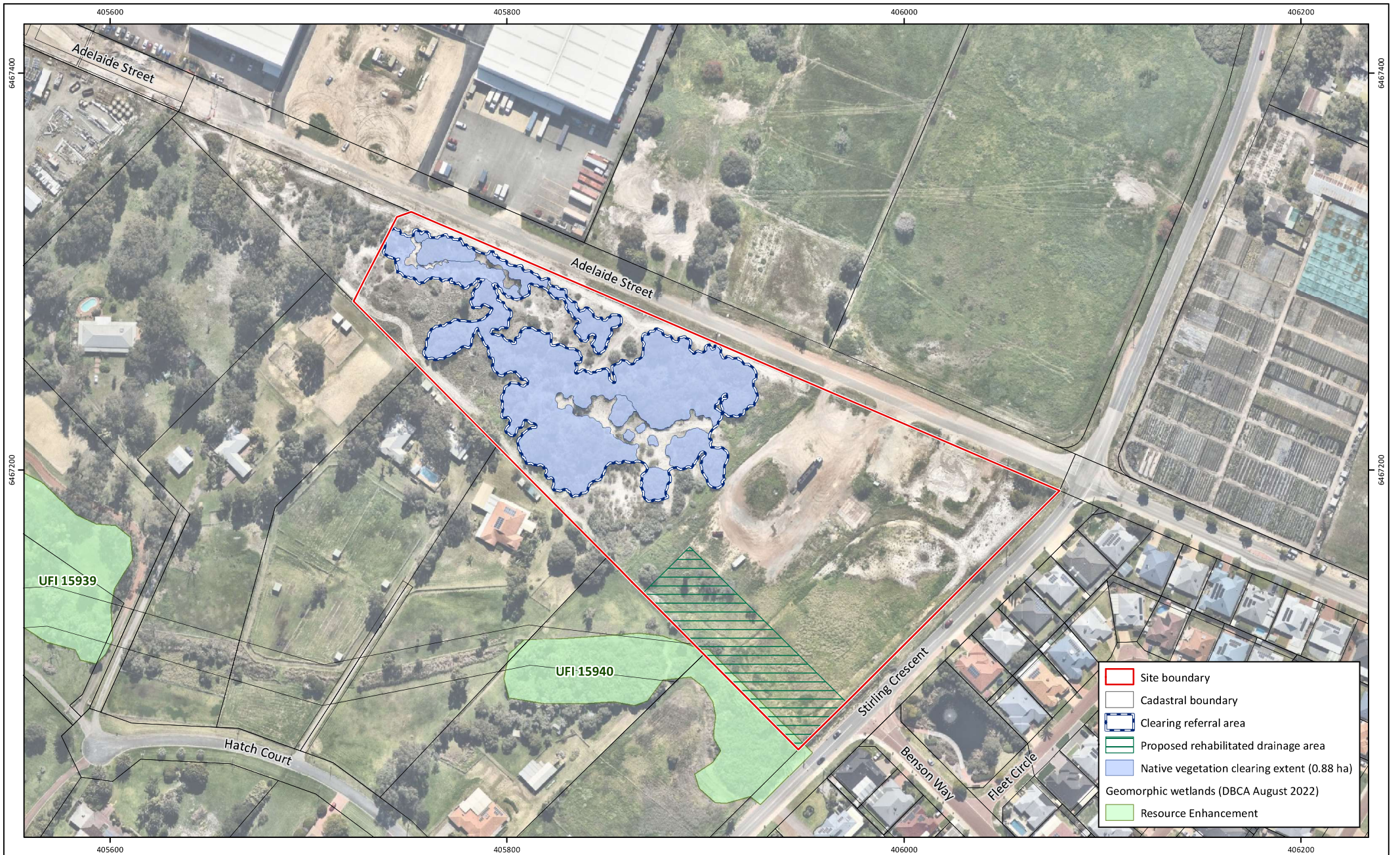


Figure 3: Proposed Remnant Native Vegetation Clearing Extent

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

Plan Number:
 EP22-108(01)-F03a
Drawn: GAR
Date: 26/10/2022
Checked: PPS
Approved: JDH
Date: 26/10/2022



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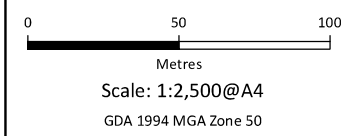


	Site boundary
	Cadastral boundary
	Clearing referral area
	Proposed rehabilitated drainage area
Plant community	
	EB (0.88 ha)
	As (0.02 ha)
	Non-native (3 ha)

Figure 4: Plant Communities

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

Plan Number:
 EP22-108(01)-F04a
Drawn: GAR
Date: 26/10/2022
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Date: 26/10/2022



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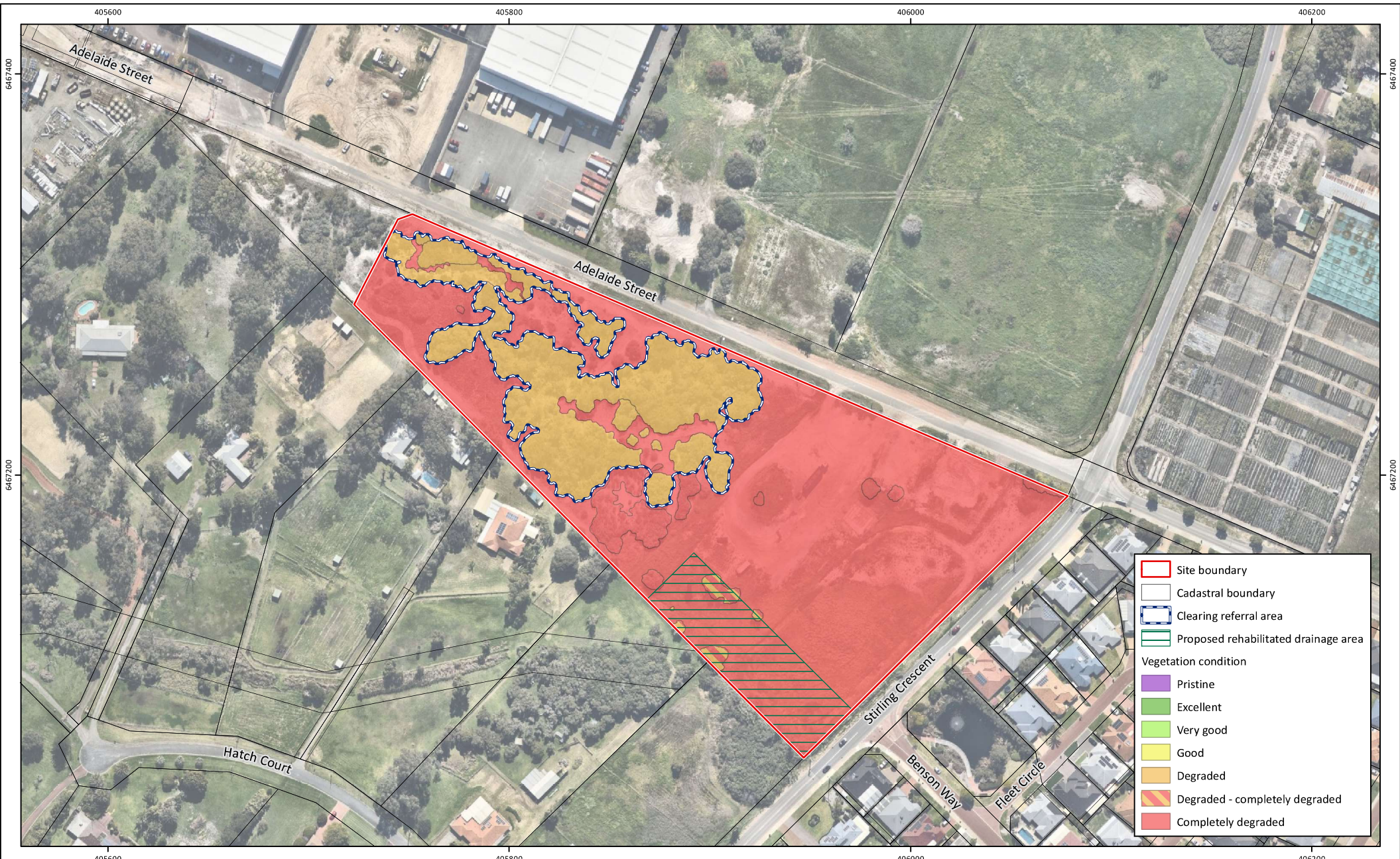
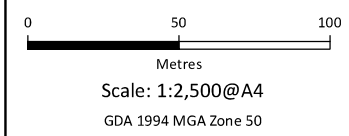


Figure 5: Vegetation Condition

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

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Figure 6: Black Cockatoo Foraging Habitat

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

Plan Number:
 EP22-108(01)-F06a
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Date: 26/10/2022
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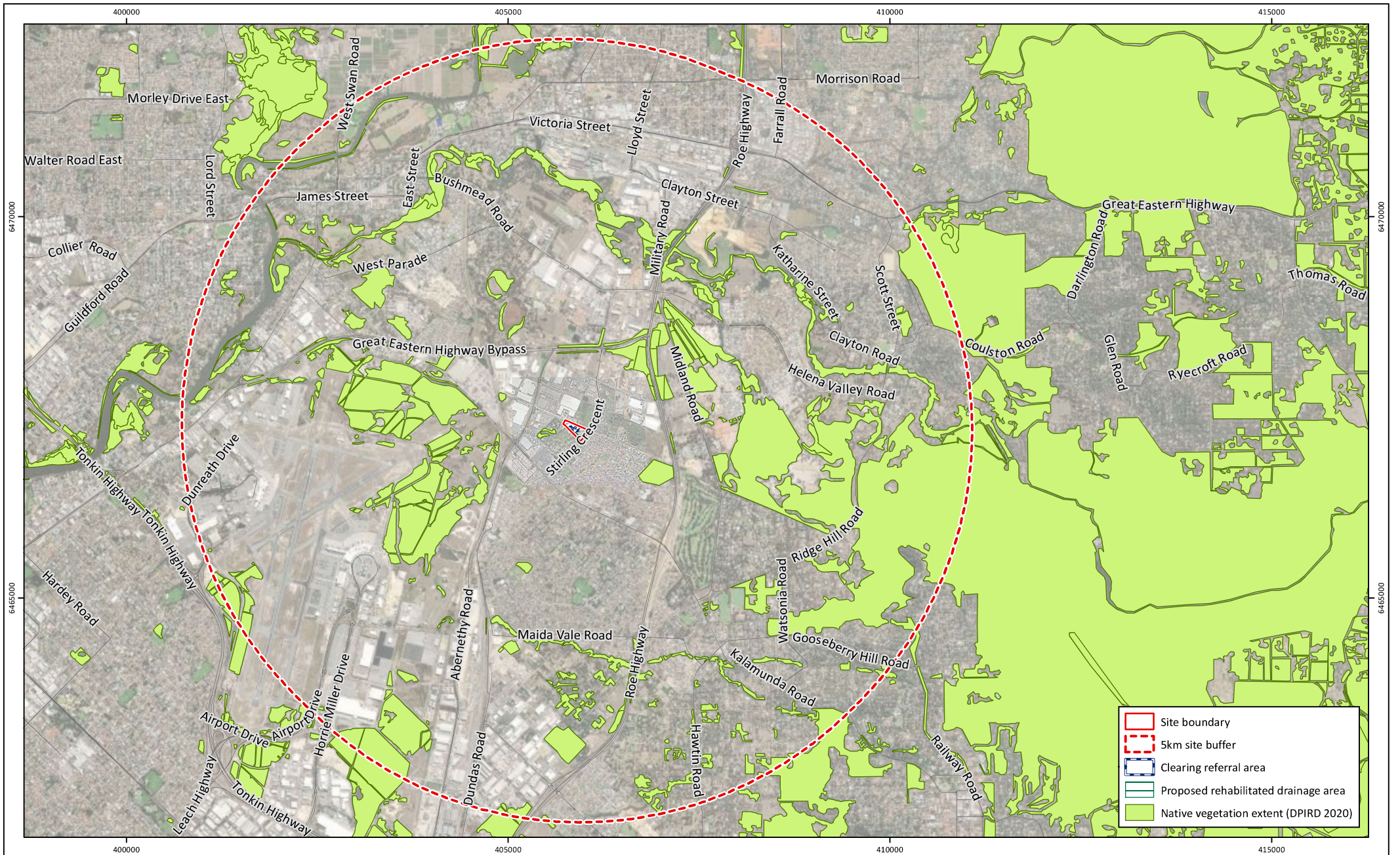


Figure 7: Local Native Vegetation Extent

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

Plan Number:
 EP22-108(01)-F07a
Drawn: GAR
Date: 26/10/2022
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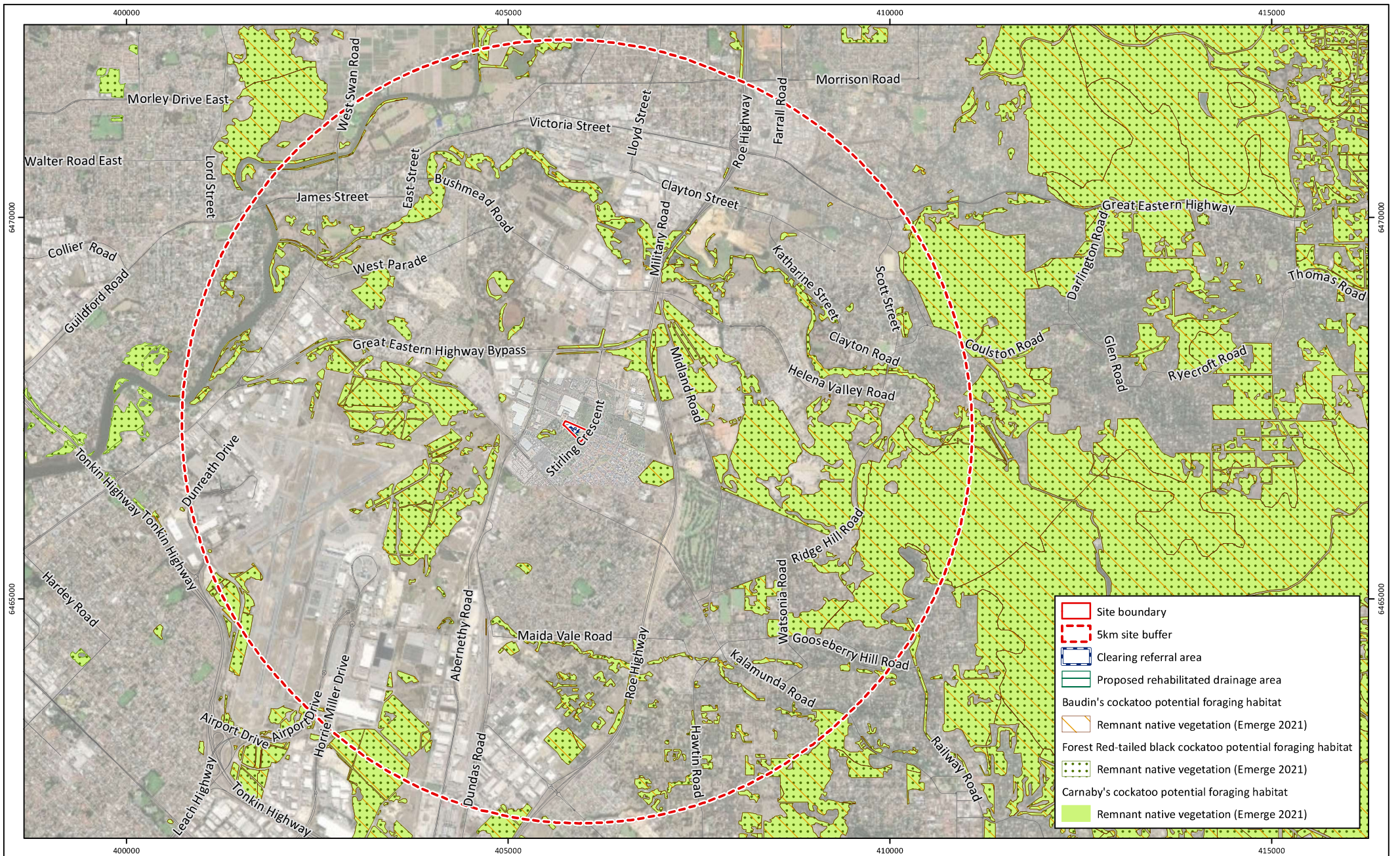


Figure 8: Black Cockatoo Habitat Extent

Project: Clearing Referral
 Lot 1499 Stirling Crescent Development Support
Client: Hesperia

Plan Number:
 EP22-108(01)-F08a
Drawn: GAR
Date: 26/10/2022
Checked: PPS
Approved: JDH
Date: 26/10/2022



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