



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10099/1
Permit type:	Purpose permit
Applicant name:	ProTen Western Australia Pty Ltd (ProTen)
Application received:	2 March 2023
Application area:	0.47 hectares of native vegetation
Purpose of clearing:	Road upgrades and drainage
Method of clearing:	Mechanical
Property:	Hunter Road Reserve (PIN 1226185) Brand Highway Road Reserve (PIN 1226171)
Location (LGA area/s):	Shire of Dandaragan
Localities (suburb/s):	Regans Ford

1.2. Description of clearing activities

The vegetation proposed to be cleared is located at the intersection of Hunter Road and Brand Highway (see Figure 1, Section 1.5). The application is to clear vegetation to undertake the following works (WSP, 2023):

- widening of Hunter Road and Brand Highway intersection to provide safer access;
- improving the turning and intersection lanes; and
- improve drainage.

1.3. Decision on application

Decision:	Granted
Decision date:	11 April 2025
Decision area:	0.47 ha of native vegetation as depicted in Section 1.5 below

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (department) advertised the application for 21 days and no submissions were received. During the assessment of the application, the application was readvertised for an additional seven days because:

- the proposed clearing has increased from 0.4 hectares to 0.47 hectares; and
- the purpose of the clearing has changed from road upgrades to road upgrades and drainage

No submissions were received during the additional seven day advertisement period.

In making this decision, the Delegated Officer had regard for:

- avoidance and minimisation actions implemented by the applicant;
- site characteristics and analysis of flora, fauna and ecological communities recorded/mapped within the local area (a 10 kilometres radius buffer from the application area);
- the 10 Clearing Principles set out in Schedule 5 of the EP Act (see Appendix C);
- a detailed assessment of the clearing impacts on environmental values (see Section 3.2);
- available datasets at the time of the assessment (see Appendix G); and
- additional information obtained during the assessment, including the findings of:
 - Flora and Fauna survey (WSP, 2024);
 - Environmental characteristics information document (WSP, 2023);
 - Photographs of the application area (ProTen, 2023b);
 - Desktop Heritage Assessment (Archea-aus, 2022);
 - Transport Impact Assessment (Cardno, 2021); and
 - Offset area biological survey report (SLR, 2025).

In addition to the above, the Delegated Officer also took into consideration the following when making the decision to grant the clearing permit application:

- The approved road works at the intersection of Hunter Road and Brand Highway are required to provide safer access for vehicles and trucks accessing the Kiri Parks Poultry Broiler Farm. The Kiri Parks Broiler farm has obtained development approval from the Joint Development Assessment Panel.
- The two roads will be widened, and a dedicated turning lane will be installed to improve turning and intersection lanes and to achieve the required minimum pavement widths (SLR Consulting, 2024).
- Additional works will also be required to improve drainage at the intersection to the existing drainage network within the road reserve. A Transport impact assessment was undertaken to support the proposed development (Cardno, 2021).
- The intersection design has been submitted and accepted by Main Roads WA. The design includes the requirement for clearing in the northwestern spur to accommodate a culvert crossing at Hunter Road discharging to the north. This proposed drainage was the preference of Main Roads WA following their design review (SLR Consulting, 2024).

After consideration of the above information, as well as the avoidance, minimisation and mitigation actions taken by the applicant, the Delegated Officer determined that the clearing would result in the following significant residual impacts:

- loss of 0.38 hectares of native vegetation that provides suitable high quality foraging habitat for Carnaby's black cockatoos; and
- loss of 0.38 hectares of native vegetation that forms part of a larger patch of the Banksia Woodlands of the Swan Coastal Plain EPBC Act listed Threatened Ecological Community (TEC) and state listed Priority Ecological Community (PEC).

To address the above significant residual impacts and applying the WA environmental offsets metric (the offsets metric) along with the environmental offsets metric guideline, and consistent with the WA Environmental Offsets Policy (2011) (the Offsets Policy) and Western Australia's Environmental Offsets Guidelines (2014) (the Offsets Guidelines), the Delegated Officer determined that the following offset would address 100 per cent of the significant residual impacts of the clearing:

- conservation in perpetuity of 3.89 hectares of Carnaby's cockatoo foraging habitat in excellent (Keighery, 1994) condition located within Lot 1254 On Diagram 5564; and
- conservation in perpetuity of 3.89 hectares of native vegetation that is representative of the Banksia woodland TEC located within Lot 1254 On Diagram 5564.

The Delegated Officer determined that the above offset was sufficient to counterbalance the significant residual impacts associated with this project. Further information on the suitability of the offset provided is summarised in Section 4 of this decision report.

In addition to the above, the Delegated Officer also determined that the proposed clearing will result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact the quality of the adjacent vegetation and its habitat values;
- increased likelihood of mortality of fauna that may be utilising the application area at the time of clearing; and
- direct impacts to conservation significant flora species.

The Delegated Officer determined that the proposed clearing is unlikely to have any long-term adverse impacts on the environment, subject to management, mitigation and offset measures being conditioned on the permit to mitigate and offset the potential impacts identified above. The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake slow, progressive one directional clearing to allow fauna to move into adjacent habitat ahead of the clearing activity;
- demarcate the boundaries of the area to be cleared and ensure that locations of the recorded *priority flora*, *Hibbertia subvillosa* (P3), are identified; and
- conservation of 3.89 hectares of native vegetation that provides high quality foraging habitat for the Carnaby's cockatoo and is representative of the Banksia woodland TEC.

Given the above and noting that the offset provided (see Section 4) counterbalances the significant residual impacts, the Delegated Officer determined that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

1.5. Site map

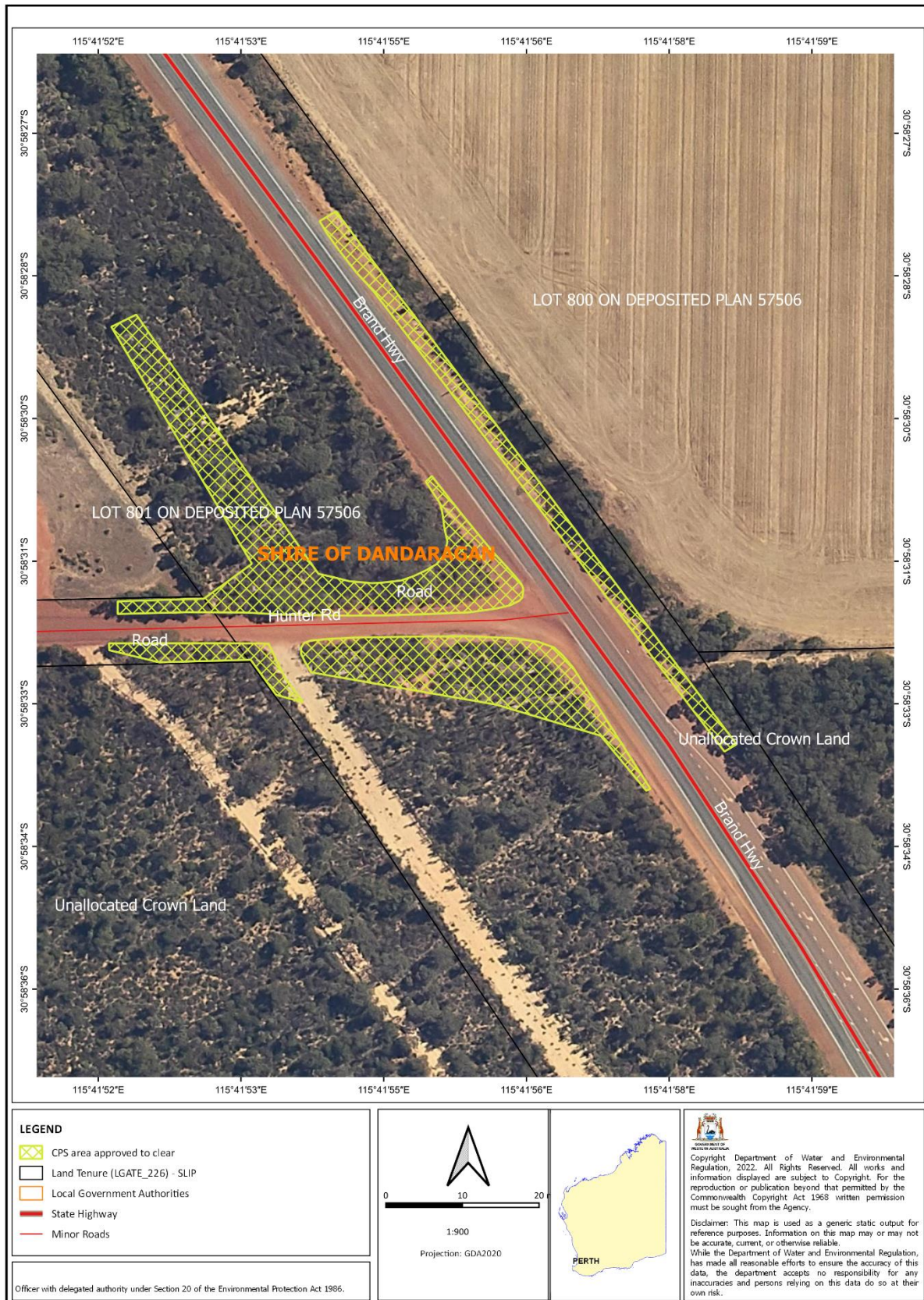


Figure 1. Map of the application area. The area crosshatched yellow indicate the area authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the polluter pays principle
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has advised the department that the following avoidance and mitigation measures were considered and will be implemented during the clearing and the construction phases (SLR Consulting, 2024):

- The clearing area has been minimised, where practicable, to ensure that the proposed construction of the intersection satisfies the road, drainage and safety requirements as determined by Main Roads WA and approval.
- Prior to the commencement of clearing, clearing areas and areas of native vegetation to be retained will be demarcated by a qualified person. The area will be clearly defined (using barrier tape or star pickets) to ensure no over clearing occurs beyond the permitted area.
- Appropriate site speed limits will be set and signage will be installed to minimise risk to fauna.

The applicant has further advised the department of the alternative routes that were considered during the planning phase and provided an explanation as to why these options were not viable.

Alternative routes considered (SLR Consulting, 2024)

1. Harris Street intersection with Brand Highway – The Shire of Dandaragan (the Shire) did not support this option as the increased level of traffic from this intersection would have a direct impact on the sensitive receptors at the existing roadhouse and caravan park.

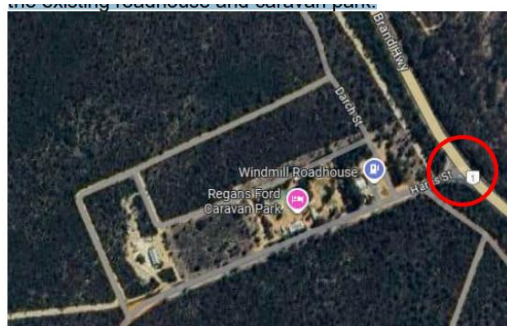


Image 1: Alternative route one

2. Intersection directly from Brand Highway to the site through existing nature reserve. The Shire did not support this option as it would result in a greater area of native vegetation being cleared.

**Image 2: Alternative route two**

3. Accessing the site from Orange Springs Road – The Shire did not support this option as this would result in the construction of a crossing over at Moore River to access the site. Moore River has environmental and cultural significance. This option would impact on these significance values as well as result in an increased impact than the proposed clearing at Hunter Road.

**Image 3: Alternative route three**

The Delegated officer determined that that the applicant has appropriately demonstrated avoidance and mitigation measures, however, an offset to counterbalance the significant residual impacts to Carnaby's black cockatoos and Banksia Woodland TEC was necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B) and the extent to which the impacts of the proposed clearing present a risk to biological values.

The assessment against the clearing principles (see Appendix C) identified that the impacts of the proposed clearing present a risk to biological values, including conservation significant ecological communities, flora and fauna. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (flora and ecological communities) - Clearing Principles (a)

Assessment

The application area is located within the Swan Coastal Plain IBRA region of Western Australia. A flora and vegetation survey conducted for the application area indicate the vegetation consist of *Banksia prionotes* and *Nuytsia floribunda* open woodland over *Allocasuarina humilis* and *Calothamnus sanguineus* open shrubland over *Hibbertia hypericoides* subsp. *hypericoides* and *Hakea ruscifolia* sparse shrubland (WSP, 2024). The vegetation condition of the application area ranges from degraded to excellent (Keighery, 1994) condition (WSP, 2024).

Conservation significant flora

According to available databases, 29 conservation significant flora species have been recorded within the local area (10-kilometre radius of the application area). A likelihood of occurrence assessment of conservation significant flora within the local area was undertaken for the application area. Noting the distribution and preferred habitat types, including soil and vegetation types mapped within the application area, the likelihood analysis concluded that the application area may provide suitable habitat for 11 conservation significant flora species.

A detailed flora and vegetation survey was conducted on 06 September 2023 (WSP, 2024) in accordance with the recommended timing for surveys within the south-west botanical province (EPA, 2016). No Threatened flora species were recorded during the survey. One Priority 3 species, *Hibbertia subvillosa* that is listed by Department of Biodiversity, Conservation and Attractions (DBCA) was recorded at two locations within the survey area. This flora species was not identified within the local area during the desktop assessment as the closest known record is 25 kilometres from the application area.

Hibbertia subvillosa is described by DBCA (2025) as an erect shrub that grows up to approximately 0.5 metres and produce yellow 'buttercup' flowers between August to September. This species is restricted to southwest WA, from Mingenew south to near Beverly, mostly along the western edge of the Avon Wheatbelt and the far eastern edge of the Geraldton Sandplains and Swan Coastal Plain IBRA regions. The species is known to occur in *Eucalyptus*, *Acacia* and *Melaleuca* woodlands and shrub lands, on slightly heavy soils. This species occurs in number of nature reserves. Field works has indicated that many species found are relatively small and weed-invaded (Thiele & Hammer, 2022).

The Department requested the applicant to avoid the clearing of *Hibbertia subvillosa* species found within the application area. The applicant responded that the proposed construction of the intersection needs to satisfy the road, drainage and safety requirements as determined by Main Roads WA and approval. Hence, avoidance of the of the *Hibbertia subvillosa* individuals are not feasible (SLR Consulting, 2024).

The department requested advice from DBCA regarding the extent of impact the clearing will have on this species. DBCA (2025) advised that *Hibbertia subvillosa* is noted to be a disturbance opportunist with 65 herbarium specimens within a distribution of 27,000 square kilometres. DBCA (2025) also advised that the location of this species identified within the application area is at the western extent of the known range and because it is identified 25 kilometres from the nearest known location, the removal of the two individuals of *Hibbertia subvillosa* may be locally and regionally significant. However, DBCA (2025) note that given the number and distribution of subpopulations, the clearing is unlikely to represent a significant impact to the conservation of this species.

Three additional *Hibbertia subvillosa* individuals were identified in vegetation adjacent to the application area (WSP, 2024). To ensure that only the two *Hibbertia subvillosa* individuals within the application area will be removed, and in accordance with advice from DBCA (2025), the department has implemented a flora management condition on the clearing permit.

Ecological communities

Vegetation community BpNfHvAh recorded within the application area is considered analogous to 'North-eastern *Banksia attenuata* – *Banksia menziesii* woodland' Floristic Community Type 23c (FCT 23c), which is a common among the bioregion (WSP, 2024). This FCT type is considered to be encompassed within the Banksia Woodlands of the Swan Coastal Plain ecological community, which is listed as Threatened under the EPBC Act (hereafter referred to as Banksia Woodlands TEC) (Department of the Environment and Energy, 2016). The species composition and structure of vegetation recorded in the application area are also consistent with the diagnostic characteristics of the Banksia Woodlands TEC (Department of the Environment and Energy, 2016).

To be considered as the Banksia Woodlands TEC, patches of suitable vegetation need to be in at least Good condition (Keighery, 1994) on average. To be considered as the Banksia Woodlands TEC, Good condition patches are required to be more than two hectares and Very Good condition patches are required to be more than one hectare (Department of the Environment and Energy, 2016). While the application area is smaller than these thresholds, vegetation within the application area is considered to be part of a larger patch of Banksia Woodland TEC which extends outside the application area (Ecologia, 2018), as also advised by the DBCA (2025). Noting that 0.09 hectares within the application area is cleared (some of which under overlapping application CPS 7533/1), it is considered that 0.38 hectares of native vegetation within the application area is part of a patch of Banksia Woodlands TEC, and also the corresponding state listed Priority ecological community (PEC). The clearing of 0.38 hectares of Banksia

Woodlands TEC/PEC is considered a significant residual impact and therefore an offset has been required to mitigate impacts to this community.

Weeds and dieback have the potential to out-compete native flora and reduce the biodiversity of an area. The survey identified eight weed species across the survey area. However, none of the weed species recorded are listed as Weeds of National Significance or declared pest plants in WA (ESP, 2025). It is considered that the proposed clearing may have impacts to surrounding areas of Banksia Woodlands TEC/PEC. These impacts will be minimised through the implementation of a weed and dieback management condition.

Conclusion

Based on the above assessment, the proposed clearing will result in the removal of two individuals of *Hibbertia subvillosa*. However, the clearing is unlikely to have significant impact on the conservation status of the species, noting that conditions of the permit will allow no more than two individuals to be cleared.

The proposed clearing will result in the loss of 0.38 hectares of Banksia Woodlands TEC/PEC. It is considered that this constitutes a significant residual impact requiring an offset in accordance with the WA Offset Policy. In addition, the proposed clearing may cause degradation of the native vegetation by facilitating the spread of weeds and dieback.

Conditions

To address the above impacts, the following will be required as conditions on the clearing permit:

- Weed and dieback management conditions;
- Flora management conditions;
- Provision of an offset to counterbalance the significant residual impacts to the loss of vegetation representative of Banksia Woodlands TEC/PEC (see section 4).

3.2.2. Biological values (fauna) - Clearing Principles (b)

Assessment

The application area is located within the Swan Coastal Plain IBRA region of WA. According to available databases, 12 conservation significant fauna species have been recorded within the local area (10-kilometre radius of the application area). In determining the likelihood of conservation significant fauna occurring within the application area, consideration was given to the date of each record, results of the preferred habitat types, proximity of records to the application area, and the type and condition of the vegetation within the application area. From the likelihood assessment, the application area is considered to comprise suitable habitat for four conservation significant fauna species:

- Carnaby's black cockatoo (*Zanda latirostris*, EN)
- Chuditch (*Dasyurus geoffroii*, VU)
- Western brush wallaby (*Notamacropus irma*, P4)
- a short-tongued bee (*Leioproctus contrarius*, P3)

According to the findings of the survey results, one fauna habitat was recorded across the survey area which is the same vegetation type described under section 3.2.1. No watercourses or wetlands are present within the application area to provide habitat for species associated with waterbodies or wetland habitats. No fauna of conservation significance or evidence of such fauna utilising the application area was identified during the fauna survey (WSP, 2024).

Based on the habitat identified throughout the survey area, the department further considered the four conservation significant fauna species listed above.

Carnaby's black cockatoo

The Swan Coastal Plain is used by black cockatoos primarily for foraging resources, with some small patches of breeding habitat (DAWE, 2022). The application area occurs within the mapped distribution of the threatened Carnaby's black cockatoo. Available databases indicate Carnaby's cockatoos are locally common with approximately 33 records across the local area, with the closest record 0.2 kilometres from the application area. Black cockatoo habitat can be considered in terms of breeding habitat, night-roosting habitat, and foraging habitat (DAWE, 2022).

Preferred foraging habitat for Carnaby's cockatoo includes jarrah and marri woodlands and forests, and proteaceous woodlands and heath dominated by plant species such as *Banksia* spp., *Hakea* spp. and *Grevillea* spp. (DAWE,

2022). Vegetation within the application area (Banksia woodland) provides high quality foraging habitat for Carnaby's cockatoo due to the presence of Proteaceous species, *Banksia prionotes*, *Banksia attenuata*, *Banksia menziesii* and *Hakea varia*.

Food resources within the range of breeding sites and roost sites are important to sustain populations of black cockatoos. Black cockatoos will generally forage up to 12 kilometres from an active breeding site. Following breeding, they will flock in search of food, usually within six kilometres of a night roost (DAWE, 2022), but may range up to 20 kilometres. According to available databases, one roost record (1.5 kilometres from the application area) and 22 breeding records (7.2 kilometres from the application area) occur within the local area. A further six breeding records occur within 20 kilometres of the application area.

Noting the survey results and that the application area is within the foraging distance of a known roost and several breeding sites, the application area is considered to provide important foraging resources for Carnaby's cockatoo within the local area. Noting that 0.09 hectares within the application area is cleared (some of which under overlapping application CPS 7533/1), it is considered that 0.38 hectares of native vegetation within the application area provides foraging habitat for Carnaby's cockatoo. Clearing of this vegetation would result in a significant residual impact on the availability of Carnaby's cockatoo foraging habitat and therefore, an offset is required to counterbalance this impact.

Roosting habitat for black cockatoos is usually located in the tallest trees within an area, and preferably in close proximity to both food supply and surface water (DAWE, 2022). Noting the vegetation type identified through the flora survey (WSP, 2024), no suitable roosting habitat for Carnaby's cockatoo is recorded across the application area.

Breeding habitat for species of black cockatoos is described within the 'EPBC Act referral guidelines for three threatened black cockatoo species' (DAWE, 2022) which includes a list of tree species known to support breeding which either, have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 millimetres. According to the fauna survey (WSP, 2024), no habitat trees for Carnaby's cockatoo were identified within the survey area.

Ground dwelling fauna

The Banksia Woodland habitat within the application area has a dense understorey of *Jacksonia* sp., *Calothamnus* sp. and *Hakea* sp., which is considered to provide suitable foraging and nesting opportunities to small reptiles and mammals.

One record of Chuditch occurs within the local area, 1.09 kilometres from the application area. The western brush wallaby was recorded three times within the local area, with the closest record 1.24 kilometres from the application area. Western brush wallaby inhabits open forest or woodland, particularly favouring open, seasonally wet flats with low grasses and open scrubby thickets (DBCA, 2012). Chuditch prefer range of habitats including jarrah forests, eucalypt woodlands, mallee shrublands and heathland; riparian vegetation may hold higher densities and require den resources (e.g. tree hollows, hollow logs, burrows or rock crevices) (DEC, 2012). Based on the habitat preferences by these species and the extent of clearing in the context of the extensive intact native vegetation surrounding of the application area, the application area is not considered to consist of significant habitat for these species.

It is likely that ground dwelling fauna will utilise the application area to traverse through the landscape. Based on this, a directional clearing condition is implemented on the clearing permit to ensure that fauna individuals utilising the application area is impacted from the proposed clearing.

Short-tongued bee (*Leioproctus contrarius*) - Priority 3

A short-tongued bee is a poorly known invertebrate with a limited range along the Swan Coastal Plain. This species is known to be associated with *Scaevola* sp, *repens* var. *repens* and *Lechenaultia* spp (Atlas of living Australia, n.d). According to the flora data from the flora survey, *Lechenaultia* spp. was identified from the survey area. Noting the extent of the clearing and that habitat protected in the surrounding areas is also likely to consist of similar habitat types to the application area, the proposed clearing would be unlikely to result in significant impact to this species.

Ecological linkage

Considering the already existing roads throughout the application area, it is unlikely that species will be further restricted in their movements by the proposed clearing.

The clearing activities have the potential to cause the increase and/or introduction of weeds and disease into the adjacent vegetation, impacting the quality of surrounding fauna habitat. Implementation of the weed and dieback management condition will mitigate any impacts on the adjacent vegetation.

Conclusion

Based on the above assessment, the proposed clearing will result in 0.38 hectares of moderate to high quality Carnaby's black cockatoo foraging habitat. It is considered that this constitutes a significant residual impact requiring an offset in accordance with the WA Offset Policy and an offset, in accordance with the WA Offset Policy, is required.

While suitable habitat occurs within the application area for chuditch, western brush wallaby and short-tongued bee, the application area is not considered to constitute significant habitat for these species.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals; and
- provision of an offset to counterbalance the significant residual impacts to the loss of Carnaby's black cockatoo foraging habitat (see section 4).
- weed and dieback management conditions.

3.3. Relevant planning instruments and other matters

The purpose of the proposed clearing is for the upgrade of Hunter Road and the intersection with Brand Highway to enable access to the Lot M1254 Hunter Road, Orange Springs that proposes a chicken farm.

On 21 June 2023, the department requested for the applicant to provide evidence of approval that a development approval is granted for the Poultry Broiler Farm and associated development that the proposed road upgrade works are related to. The applicant has submitted a copy of the development approval issued by the Joint Development Assessment Panel to the department.

The department requested advice from the Shire of Dandaragan on 11 April 2023. No comments were received.

The department notes that 0.0647 hectares of the application area falls within an area cleared under clearing permit CPS 7533/2, which has been subject to an environmental offset under this permit.

One Aboriginal site of significance (Gingin Brook Waggy Site) has been mapped within the application area. A heritage survey was undertaken by Archae-aus on 6 December 2023. No heritage sites or isolated artefacts were identified. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- loss of 0.38 hectares of native vegetation that provides suitable high quality foraging habitat for Carnaby's black cockatoos; and
- loss of 0.38 hectares of native vegetation that forms part of a larger patch of Banksia Woodlands TEC/PEC.

In determining the appropriateness of an offset, the Delegated Officer took into consideration the applicant's implementation of the mitigation hierarchy and the necessity of the proposed clearing (see Section 3.1). In considering these matters, the Delegated Officer determined that it was appropriate to grant the clearing permit in relation to the significant residual impacts, on the basis that a suitable environmental offset was implemented to counterbalance the impacts.

Offset

Background information on the ProTen's proposed offset area.

ProTen has proposed a land acquisition offset to counterbalance the significant residual impacts of the proposed clearing. The offset site is located at Lot 1254 On Diagram 5564, which is freehold land owned by ProTen, situated approximately 2.4 kilometres west of the application area. A survey was conducted over an area of 5.97 hectares to determine whether this site contained environmental values that is similar to the application area (SLR Consulting, 2025). ProTen propose to place the proposed offset area under a conservation covenant under a *Soil and Lands Conservation Act 1945*.

Site characteristics of the proposed offset site:

A biological survey of the offset site was undertaken by SLR Consulting on behalf of ProTen. The survey was conducted on 30 October 2024 and identified three vegetation types (SLR Consulting, 2025):

- Banksia woodland (BaBm) – 4.79 hectares
- Native regrowth – 0.63 hectares
- Cleared area – 0.55 hectares

Vegetation type and description*	Local landform	Total area, percentage of Survey Area	Sites	Vegetation condition	Representative photograph
BaBm: <i>Eucalyptus tottiana</i> low open woodland over <i>Banksia attenuata</i> and <i>Banksia menziesii</i> low open woodland over <i>Eremaea pauciflora</i> , <i>Melaleuca seriata</i> and <i>Stirlingia latifolia</i> low shrubland	Undulating plain	4.79 ha, 80.18%	KPQ1, KPQ2, KPQ3	Excellent	

Figure 2: A description of the vegetation typw identified within the proposed offset site.

Vegetation condition within the proposed offset site ranged from Excellent to Good condition (Keighery, 1994) with the majority being in Excellent condition. The main disturbances noted were tracks, weeds and historical clearing. The vegetation described above was determined to have an affiliation with FCT 23b - Northern *Banksia attenuata* - *Banksia menziesii* woodlands (Gibson et al., 1994) (SLR Consulting, 2025). FCT 23b vegetation is listed as a FCT encompassed in the Banksia Woodlands of the Swan Coastal Plan TEC (Department of the Environment and Energy, 2016).

As part of the offset area survey, a black cockatoo habitat assessment was also undertaken to assess the breeding, roosting and foraging habitat for the three threatened black cockatoo species. The entire offset area was mapped as having high quality foraging habitat for the Carnaby's black cockatoos with evidence of foraging present in the form of chewed foraging materials (SLR Consulting, 2025).



Image 4: Evidence of foraging material

Additional maps of the survey findings are available in Appendix F of this report.

According to the available DBCA databses, one roost site and 32 breeding sites were recorded within a 12 kilometre radius of the offset site. Protection of the high quality foraging material available within the proposed offset site is therefore considered important for the Carnaby's cockatoo individuals that are breeding within the 12 kilometre buffer zone of the offset area. The department determined that based on the survey findings, the proposed offset area is a suitable site, containing values that are lost through the proposed clearing within the application area.

Offset calculations

Offset calculations using the WA offset metric 'calculator' were undertaken by the department (see Appendix E) and identified that:

- The conservation in perpetuity, under a conservation covenant, of 3.89 hectares is sufficient to adequately address the significant residual impact of the proposed clearing to Banksia Woodlands TEC/PEC; and
- The conservation in perpetuity, under a conservation covenant, of 3.89 hectares is sufficient to adequately address the significant residual impact of the proposed clearing to high quality Carnaby's black cockatoo foraging habitat.

Conclusion

The Delegated Officer considers the proposed offset is consistent with the WA Environmental Offsets Policy (2011) and the WA Environmental Offsets Guidelines (2014), and that it adequately counterbalances the significant residual impacts to native vegetation that is representative of foraging habitat for black cockatoo species and loss of vegetation that is representative of the Banksia Woodlands TEC/PEC. The justification for the values used in the offset calculation is provided in Appendix E.

End

Appendix A. Additional information provided by applicant

Information	Description
Flora and Fauna survey (WSP, 2024)	ProTen engaged WSP to undertake a flora, vegetation, and fauna survey within the application area. The survey extended beyond the application area into surrounding vegetation. The survey was conducted on 06 September 2023 with three quadrats and one releve.
Environmental characteristics information document submitted by WSP (2023)	A document was prepared by WSP (2023) outlining the project details and an assessment against the 10 clearing principles.
Photographs of the application area	As part of the application form, as supporting information, the ProTen has submitted photographs of the application area. These photos are available under Appendix F of this report.
Desktop Heritage Assessment (Archea-us, 2022)	Archea-us was engaged by ProTen to undertake an archaeological and ethnographic site identification assessment for the proposed upgrade to the intersection of Brand Highway and Hunter Road. The fieldwork was conducted on 6 December 2023, inclusive of travel. Yued Traditional Owners and Knowledge Holders (Aboriginal Heritage Consultants) participated in all aspects of the archaeological and ethnographic survey. The surveys were conducted to a Site Identification level, sufficient for ProTen to apply for consent under section 18 of the <i>Aboriginal Heritage Act (1972)</i> if required.
Transport Impact Assessment (Cardno, 2021)	Cardno has been commissioned by Proten Western Australia Pty Ltd to prepare a Transport Impact Statement for a proposed chicken farm at Lot M1254 Hunter Road, Orange Springs in the Shire of Gingin. This report specifically focused on traffic generation, access arrangement, and required upgrades to support the proposed development.
Offset area biological survey report (SLR Consulting, 2025)	ProTen commissioned SLR Consulting Australia Pty Ltd to undertake a detailed flora and vegetation, targeted significant flora, basic terrestrial vertebrate fauna survey and black cockatoo habitat assessment for the proposed Kiri Park Offset Area. The survey was conducted on 30 October 2024 over an area of 5.97 hectares.

Appendix B. Site characteristics

B.1 Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to the department at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix C.

Characteristic	Details
Local context	The area proposed to be cleared is part of multiple linear strips of native vegetation at the intersection of two roads. The application area is in the intensive land use zone of Western Australia and is surrounded by areas cleared for rural use. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 44 per cent of the original native vegetation cover.
Ecological linkage	The application area does not occur within a mapped ecological linkage.

Characteristic	Details
Conservation areas	The application area is not within a mapped conservation area. The closest mapped conservation area is an agreement to reserve under the <i>Soil and Land Conservation Act 1945</i>, approximately two kilometres away. Two other conservation areas occur within the local area: - Moore River National Park is located 6.5 kilometres south - Unnamed Nature Reserve is located 7 kilometre east.
Vegetation description	Photographs and the flora survey supplied by the applicant indicate the vegetation within the application area is described as <i>Banksia prionotes</i> and <i>Nuytsia floribunda</i> open woodland over <i>Allocasuarina humilis</i> and <i>Calothamnus sanguineus</i> open shrubland over <i>Hibbertia hypericoides</i> subsp. <i>hypericoides</i> and <i>Hakea ruscifolia</i> sparse shrubland (WSP, 2024). Representative photos and survey mapping are available in Appendix F. The mapped beard vegetation type within the application area is the Bassendean system vegetation association 1030, which is described as Low woodland or open low woodland - Other acacia, banksia, peppermint, cypress pine, casuarina, York gum <i>Acacia</i> spp., <i>Banksia</i> spp., <i>Agonis flexuosa</i>, <i>Callitris</i> spp., <i>Allocasuarina</i> spp., <i>Eucalyptus loxophleba</i> (Shepherd et al, 2001) The mapped vegetation type retains approximately 63.81 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant and the flora survey (WSP, 2024) indicate the vegetation within the application area ranges from degraded to excellent (Keighery, 199) condition. The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos and survey mapping are available in 0.
Climate and landform	The climate experienced in the area is Mediterranean, with dry, hot summers and cool, wet winters. The average rainfall is 400-600 millimetres per annum, with the majority falling between June and August (BOM 2023). The soil system mapped over the application area is the Moore River System - 212Mo - Alluvial flats.
Soil description	The soil of the Moore River 2 subsystem is described as yellow deep sand.
Land degradation risk	The application area has a medium risk of land degradation due to wind erosion, a medium to high risk of phosphorus export and a high risk of substrate acidification.
Waterbodies	The application area occurs within the Moore River catchment. No waterbodies or waterlines intersect the application area.
Hydrogeography	The application area is located within the Moore River and certain Tributaries surface water area proclaimed under the RIWI Act and the Gingin groundwater area proclaimed under the RIWI Act.
Flora	According to available databases, 29 conservation significant flora species have been recorded within the local area. Closest flora record is <i>Haemodorum loratum</i> 300 metres from the application area, recorded in 1988.
Ecological communities	The application area intersects a mapped occurrence of the EPBC listed TEC and associated state PEC Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (Banksia Woodlands TEC/PEC). Several more occurrences of the Banksia Woodlands TEC/PEC occur within the local area.

Characteristic	Details
Fauna	There are records of 12 fauna of conservation significance within the local area, of which six are bird species, two invertebrate species and three mammal species. A known black cockatoo roost site is recorded 1.5 kilometres from the application area and several breeding records are present within the local area. The application area is mapped within the distribution zone of the Carnaby's black cockatoo 'breeding likely to occur' area.

B.1. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Bassendean system (vegetation association 1030)**	134,788.56	86,013.90	63.81	14,981.00	11.11
Local area					
10km radius	31 745.47	14,043.72	44.24	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.2. Flora analysis table

Species name	Conservation status	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Haemodorum loratum</i>	P3	Y	Y	0.39	5	Y
<i>Dampiera tephrea</i>	P3	Y	Y	0.65	1	Y
<i>Rumex drummondii</i>	P4	Y	Y	0.78	3	Y
<i>Babingtonia urbana</i>	P3	Y	Y	1.11	1	Y
<i>Eucalyptus macrocarpa</i> subsp. <i>elachantha</i>	P4	N	Y	1.40	1	Y
<i>Isotropis cuneifolia</i> subsp. <i>glabra</i>	P3	N	Y	1.92	1	Y
<i>Petrophile biternata</i>	P3	N	Y	1.92	1	Y
<i>Stylidium</i> sp. Moora (J.A. Wege 713)	P2	N	Y	1.92	1	Y
<i>Chordifex reseminans</i>	P2	Y	Y	2.13	1	Y
<i>Verticordia lindleyi</i> subsp. <i>lindleyi</i>	P4	Y	Y	2.22	1	Y
<i>Andersonia gracilis</i>	T	Y	Y	2.23	2	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

B.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Number of known records (total)	Distance of closest record to application area (km)	Did survey identify [Y, N, N/A]
Carnaby's Cockatoo (<i>Calyptorhynchus latirostris</i>)	EN	Y	Y	33	0.2	N
Chuditch (<i>Dasyurus geoffroii</i>)	VU	Y	Y	1	1.1	N
Western brush wallaby (<i>Notamacropus irma</i>)	P4	Y	Y	3	1.3	N
a short-tongued bee (<i>Leioproctus contrarius</i>)	P3	Y	Y	-	9.83	N

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity." <u>Assessment:</u> The vegetation type within the application area forms part of a much larger contiguous patch of the Banksia Woodlands of the Swan Coastal Plain PEC/TEC. The proposed clearing will result in the removal of two individuals of Priority 3 flora species <i>Hibbertia subvillosa</i> and vegetation that provides foraging habitat for Carnaby's black cockatoo.	At variance	Yes <i>Refer to Section 3.2.1 and 3.2.2, above.</i>
<u>Principle (b):</u> "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." <u>Assessment:</u> The application area contains 0.38 hectares of high-quality foraging habitat for Carnaby's black cockatoos. Ground dwelling fauna may utilise the application area for dispersal.	At variance	Yes <i>Refer to Section 3.2.2, above.</i>
<u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora." <u>Assessment:</u> The application area is unlikely to contain flora species listed under the BC Act. The survey (WSP, 2024) did not identify any threatened flora species within the survey area.	Not likely to be at variance	No
<u>Principle (d):</u> "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." <u>Assessment:</u> The application area contain species that indicate the presence of Banksia woodland TEC based on the key diagnostic criteria outlined in the conservation advice (Commonwealth of Australia, 2016). This community is listed as Priority	At variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
3 PEC by DBCA and Endangered under the EPBC Act. The flora and vegetation survey identified the Banksia Woodland TEC to occur within the application area (WSP, 2024).		
Environmental value: significant remnant vegetation and conservation areas		
<u>Principle (e):</u> <i>"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> <u>Assessment:</u> 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). The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The mapped Swan Coastal Plain vegetation association retains approximately 63.81 per cent of its pre-European vegetation extent within the bioregion (Government of Western Australia, 2019b). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No
<u>Principle (h):</u> <i>"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> <u>Assessment:</u> Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of the nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
<u>Principle (f):</u> <i>"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."</i> <u>Assessment:</u> Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	Not likely to be at variance	No
<u>Principle (g):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."</i> <u>Assessment:</u> The mapped soils are moderately susceptible to wind erosion and eutrophication (phosphorus export), and highly susceptible to substrate acidification. Eutrophication is not likely to be a risk in consideration of the final land use as a public road. Cleared areas will be replaced with a hard road surface negating any potential for wind erosion. Soils will not be excavated at depth, and groundwater will not be intersected, reducing the risk of exposing any acid sulphate soils. Given this, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<u>Principle (i):</u> “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.” <u>Assessment:</u> Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
<u>Principle (j):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.” <u>Assessment:</u> The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.	Not likely to be at variance	No

Appendix D. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. 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/or grazing.
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, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix E. Offset calculator value justification

Offset – Conservation offset for Carnaby's black cockatoos (EN).

Field Name	Description	Justification for value used
Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted, or number of features/individuals impacted	0.38 hectares of native vegetation representing high quality foraging habitat for the Carnaby's black cockatoo species. Based on the findings of biological surveys (WSP, 2024).
Quality of impacted area (habitat/community)	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	8 – The application area provides preferred foraging habitat for Carnaby's cockatoo in good to excellent condition. There is a recorded roost site 1.5 km from the application area. The application area is approximately 7.2 km from 22 black cockatoo breeding sites and likely supports foraging by breeding cockatoos in a heavily fragmented landscape. Given the habitat attributes and site context of the application area, the vegetation under application is considered to provide high-quality foraging habitat for Carnaby's cockatoo.
Time over which loss is averted (habitat/community)	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 - the offset site will be conserved in perpetuity under a conservation covenant. 20 years is the maximum value associated with this field.
Time until ecological benefit (habitat/community) or Time horizon (features/individuals)	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	1– given it is a land acquisition offset, the ecological benefit exists already on site.
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to offset the impacts	3.8 - An area of 3.8 is required to be protected to counterbalance 100% of significant residual impact of the proposed clearing.
Start quality (habitat/community)	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	8 – an offset site survey of the site was undertaken. The entire offset area was mapped as Banksia woodland and as high-quality foraging habitat for the black cockatoo birds. Evidence of Carnaby's cockatoos were also seen on the offset site during the survey.
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	8 – no change in value is expected
Future quality with offset (habitat/community) or Future value with offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site with the offset	8 – no significant change expected.
Risk of loss (%) without offset (habitat/community)	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	15% - the offset area is located within a general rural zoning.

Risk of loss (%) with offset (habitat/community)	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	5% - placing a conservation covenant over the proposed offset area will reduce the risk of loss of native vegetation on this property. The risk of catastrophic events (fire, dieback etc.) remain.
Confidence in result (%)	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - there is a very high confidence in the offset.
% of impact offset	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	100% - obtained through the input of variables explained above.

Offset – Banksia Woodland TEC

Field Name	Description	Justification for value used
Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted, or number of features/individuals impacted	0.38 hectares of the application area is considered part of a representative patch of Banksia Woodland TEC, based on the findings of biological surveys (WSP, 2024 and Ecologia, 2018).
Quality of impacted area (habitat/community)	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	8 – The uncleared areas of Banksia Woodland TEC in the application area are largely in Good to Excellent (Keighery, 1994) condition. The application area is considered to be part of a larger patch of mapped Banksia Woodland TEC which extends outside the application area. The application area is in the Swan Coastal Plain IBRA bioregion and is within a highly fragmented landscape.
Time over which loss is averted (habitat/community)	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 - the offset site will be conserved in perpetuity under a conservation covenant. 20 years is the maximum value associated with this field.
Time until ecological benefit (habitat/community) or Time horizon (features/individuals)	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	1– given it is a land acquisition offset, the ecological benefit exists already on site.
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to offset the impacts	3.8 - An area of 3.8 ha is required to be protected to counterbalance 100% of significant residual impact of the proposed clearing.
Start quality (habitat/community)	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	8 – The offset survey has identified vegetation representative of banksia woodland in good-excellent condition, with the majority of the vegetation in Excellent condition.
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	8 – no change in value is expected
Future quality with offset (habitat/community) or	The predicted future quality score (habitat/community) or value	8 – no significant change expected.

Future value with offset (features/individuals)	(features/individuals) of the proposed offset site with the offset	
Risk of loss (%) without offset (habitat/community)	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	15% - the offset area is located within a general rural zoning.
Risk of loss (%) with offset (habitat/community)	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	5% - placing a conservation covenant over the proposed offset area will reduce the risk of loss of native vegetation on this property. The risk of catastrophic events (fire, dieback etc.) still remain.
Confidence in result (%)	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - there is a very high confidence in the offset.
% of impact offset	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	100% - obtained through the input of variables explained above.

**Appendix F. Photographs of the vegetation and Flora and Fauna survey excerpts
(ProTen, 2024), (SLR Consulting, 2025)**

Photos of the application area.



Photo A1 Hunter Road - Facing East toward Brand Highway



Photo A2 Hunter Road - Facing East toward Brand Highway - East Lane



Photo A3 Hunter Road - Facing West off Brand Highway - West Lane Hunter Road



Photo A4 Hunter Road - Facing West off Brand Highway - East Lane Hunter Road



Photo A5 Brand Highway - South Lane Facing South



Photo A6 Brand Highway - South Lane Facing North



Photo A7 Brand Highway - North Lane Facing South



Photo A8 Brand Highway - North Lane Facing North



Figure 3: A map representing the vegetation condition of the application area.



Figure 4: An image of the fauna habitat within the application area.

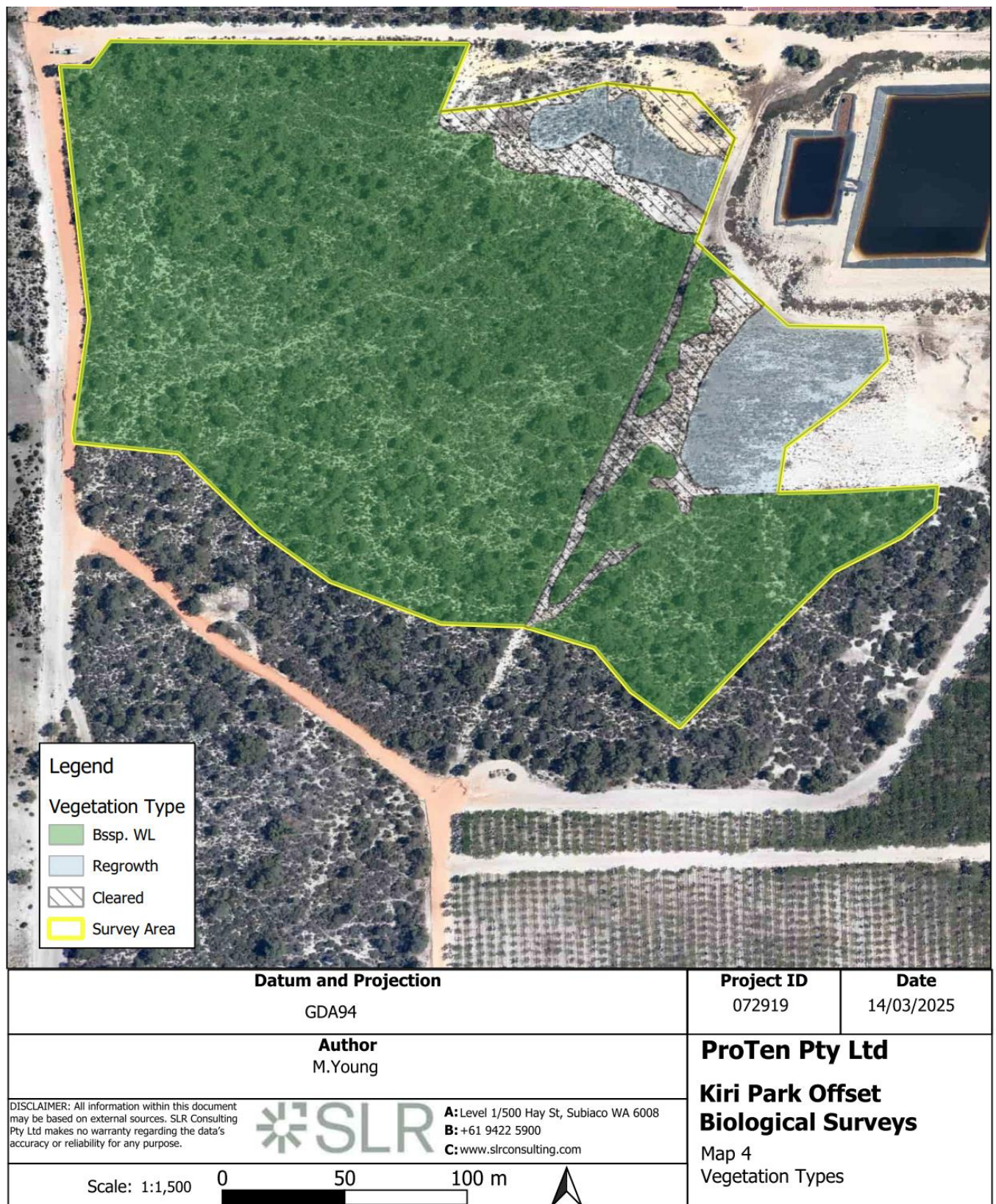
Offset area

Figure 4: A map representing the vegetation type of the Kiri Park offset site.



Figure 5: A map representing the vegetation condition of the Kiri Park offset site.



Figure 6: A map representing the locations of evidence of Carnaby's cockatoo at the Kiri Park offset site.



Figure 7: A map representing the black cockatoo foraging habitat quality of the Kiri Park offset site.

Appendix G. Sources of information

G.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

G.2. References

Archae-aus (2022). *Report on an Archaeological and Ethnographic Assessment for the Intersection Upgrade on Hunter Road and Brand Highway, Regans Ford, Western Australia*; Prepared for ProTen by Archae-aus Pty Ltd, North Fremantle, March 2024.

Atlas of Living Australia (n.d). *Leioproctus (Colletopsis) contrarius Michener, 1965*. Available at *Leioproctus (Colletopsis) contrarius : A Short-Tongued Bee | Atlas of Living Australia*

- Cardno (2021). *Transport Impact Assessment Lot M1254 Proposed Chicken Farm prepared for ProTen WA Pty Ltd* Received 04 October 2024 (DWER Ref: DWERDT1016758)
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Department of Agriculture, Water and the Environment (DAWE) (2022). *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's cockatoo, Baudin's cockatoo and the Forest Red-tailed Black-cockatoo*, Department of Agriculture, Water and the Environment, Canberra, February
- Department of Biodiversity, Conservation and Attractions (DBCA). (2012). *Western Brush Wallaby Macropus irma (Jourdan, 1837)*. Retrieved from <https://library.dbca.wa.gov.au/static/FullTextFiles/071535.pdf>
- Department of Biodiversity Conservation and Attractions (DBCA) (2025) *Species and Communities Branch flora advice for clearing permit application CPS 10099/1*, received 20 February 2025, Department of Biodiversity, Conservation and Attractions, Western Australia (DWER Ref: DWERDT1080440)
- Department of Environment and Conservation (DEC) (2012). *Chuditch (Dasyurus geoffroii) Recovery Plan*. Wildlife Management Program No. 54. Department of Environment and Conservation, Perth, Western Australia
- Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.
- Department of Parks and Wildlife (DPAW) (2013). *Carnaby's Cockatoo (Calyptorhynchus latirostris; now Zanda latirostris) Recovery Plan*. Western Australian Department of Parks and Wildlife (Now the Department of Biodiversity, Conservation and Attractions). Perth. Western Australia
- Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development*. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed 05 March 2025).
- Department of the Environment and Energy (2016). *Approved Conservation Advice (incorporating listing advice) for the Banksia Woodlands of the Swan Coastal Plain ecological community*. Canberra: Department of the Environment and Energy. Available from: <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/131-conservation-advice.pdf>.
- Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.
- Ecologia (2018). *Main Roads Western Australia, Brand Highway Passing Lanes, Banksia Woodlands TEC Assessment*. Retrieved from <https://ftp.dwer.wa.gov.au/permit/7533/superseeded/Brand%20Highway%20TEC%20Assessment-Ecologia%202018.PDF>
- Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf.
- Environmental Protection Authority (EPA) (2016). *Technical Guidance – Terrestrial Fauna Surveys*. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf
- Government of Western Australia (2019). *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>

- 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. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- 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, 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.
- Mattiske, E.M. and Havel, J.J. (1998.) *Vegetation Complexes of the South-west Forest Region of Western Australia*. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68). *Atlas of Australian Soils*, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.
- ProTen Western Australia Pty Ltd (2023a). *Clearing permit application CPS 10099/1*, received 02 March 2023 (DWER Ref: DWERDT744451).
- ProTen Western Australia Pty Ltd (2023b). *Clearing permit application CPS 10099/1 – supporting information - photographs*, received 02 March 2023 (DWER Ref: DWERDT744451).
- 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.
- Shah, B. (2006). *Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia*. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001). *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- SLR Consulting (2025). *ProTen Kiri Park Offset Biological surveys for clearing permit application CPS 10099/1* Received 20 March 2025 (DWER Ref: DWERDT1092962)
- SLR Consulting (2024). *Response to request for further information letter dated 10 July 2024 for clearing permit application CPS 10099/1*. Received 04 October 2024 (DWER Ref: DWERDT1016758)
- Thiele, K.R. & Hammer, T.A. (2022). *Hibbertia subvillosa (Dilleniaceae)*, a new Western Australian species segregated from *H. Striata*. *Australian journal of taxonomy* 8: 1-5. doi: <http://doi.org/10.54102/ajt.945nm>
- Valentine, L.E. and Stock, W. (2008) *Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnarup Sustainability Strategy Study Area*. Edith Cowan University and Department of Environment and Conservation. December 2008.
- Western Australian Herbarium (1998-). *FloraBase - the Western Australian Flora*. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 05 March 2025)
- WSP (2023). *Supporting Document – Native Vegetation Clearing Permit Application Road Works at Intersection of Hunter Road and Brand Highway*, received 02 March 2023 (DWER Ref: DWERDT744451)
- WSP (2024). *Flora and Fauna Survey Hunter Road and Brand Highway Intersection for Clearing Permit Application CPS 10099/1*, received 09 April 2024 (DWER Ref: DWERDT931139)