REPORT

Supporting Document – NVCP Application (Purpose Permit)

ProTen Western Australia Pty Ltd – Lot 1254 Hunter Road, Orange Springs

Submitted to:

ProTen Western Australia Pty Ltd - Lot 1254 Hunter Road, Orange Springs
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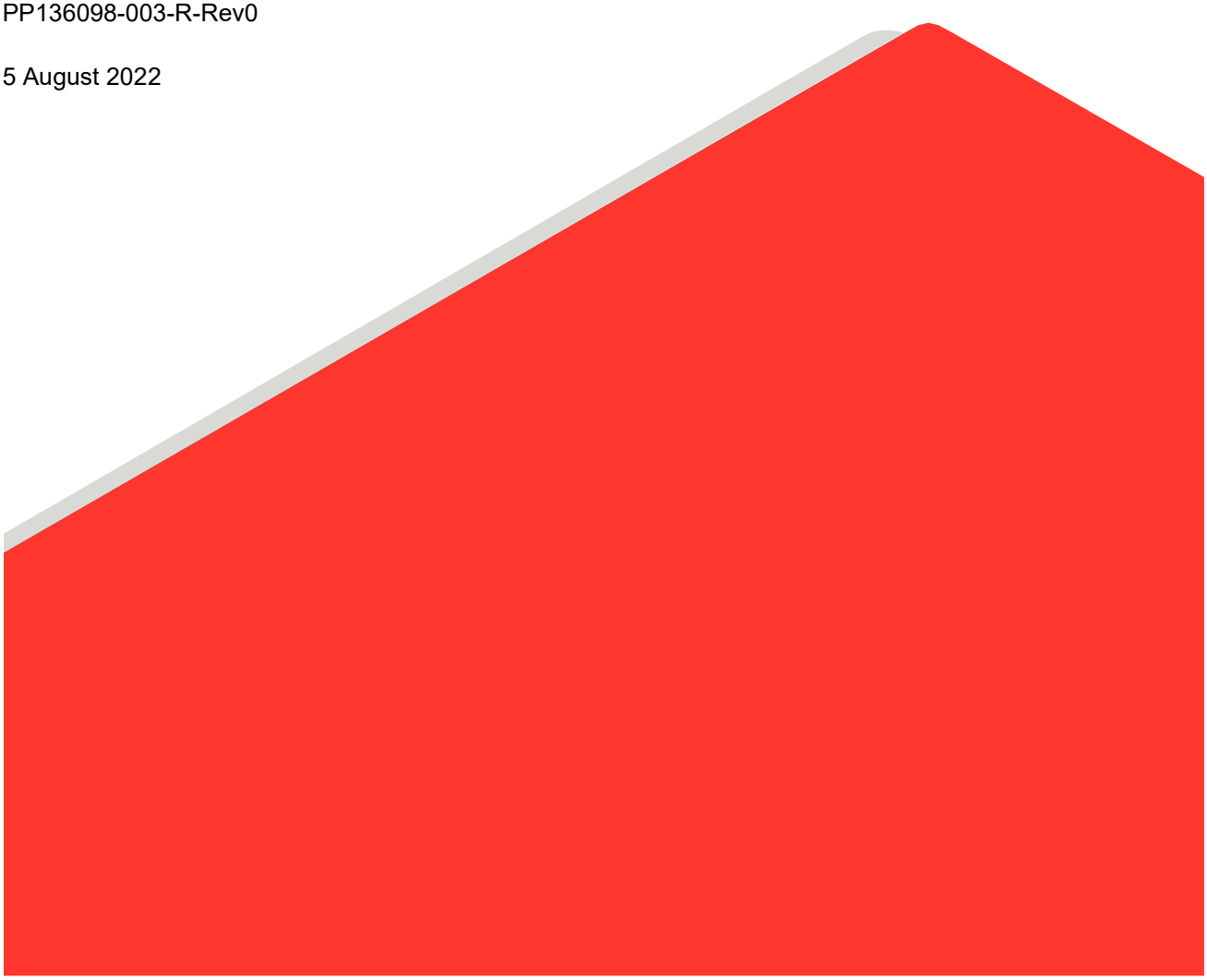
PP136098-003-R-Rev0

5 August 2022



Distribution List

Dern Pease: dernp@proten.com.au

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APPENDICES

1.0 INTRODUCTION

1.1 Project Background and Scope

ProTen Western Australia Pty Ltd (ProTen) is proposing to construct approximately 4.6 km of high voltage (HV) powerlines, poles, and Western Power interconnections to supply power to ProTen's poultry farm which is currently being developed on Lot 1254 Hunter Road, Orange Springs (the Project). The Project is located approximately 1.5 km west of the Brand Highway in the Shire of Gingin, approximately 100 km north of Perth, Western Australia (WA) (Figure 1). The existing electricity network supply to the property is inadequate to support the poultry farm operation, therefore ProTen is currently working with Western Power to bring in power from the nearest suitable location, hence the requirement of the proposed 4.6 km HV powerlines, poles, and interconnections. ProTen (the customer) is paying for the construction of the infrastructure, but Western Power (the provider) will own the asset.

ProTen engaged Santrev Farm Mark (Santrev), who subsequently engaged Electrical Consultancy WA (ECWA), to construct the HV powerlines and Western Power interconnections. The poultry farm (currently under development) is not part of this application, and this supporting document pertains to the proposed HV powerlines, poles, and Western Power interconnections only.

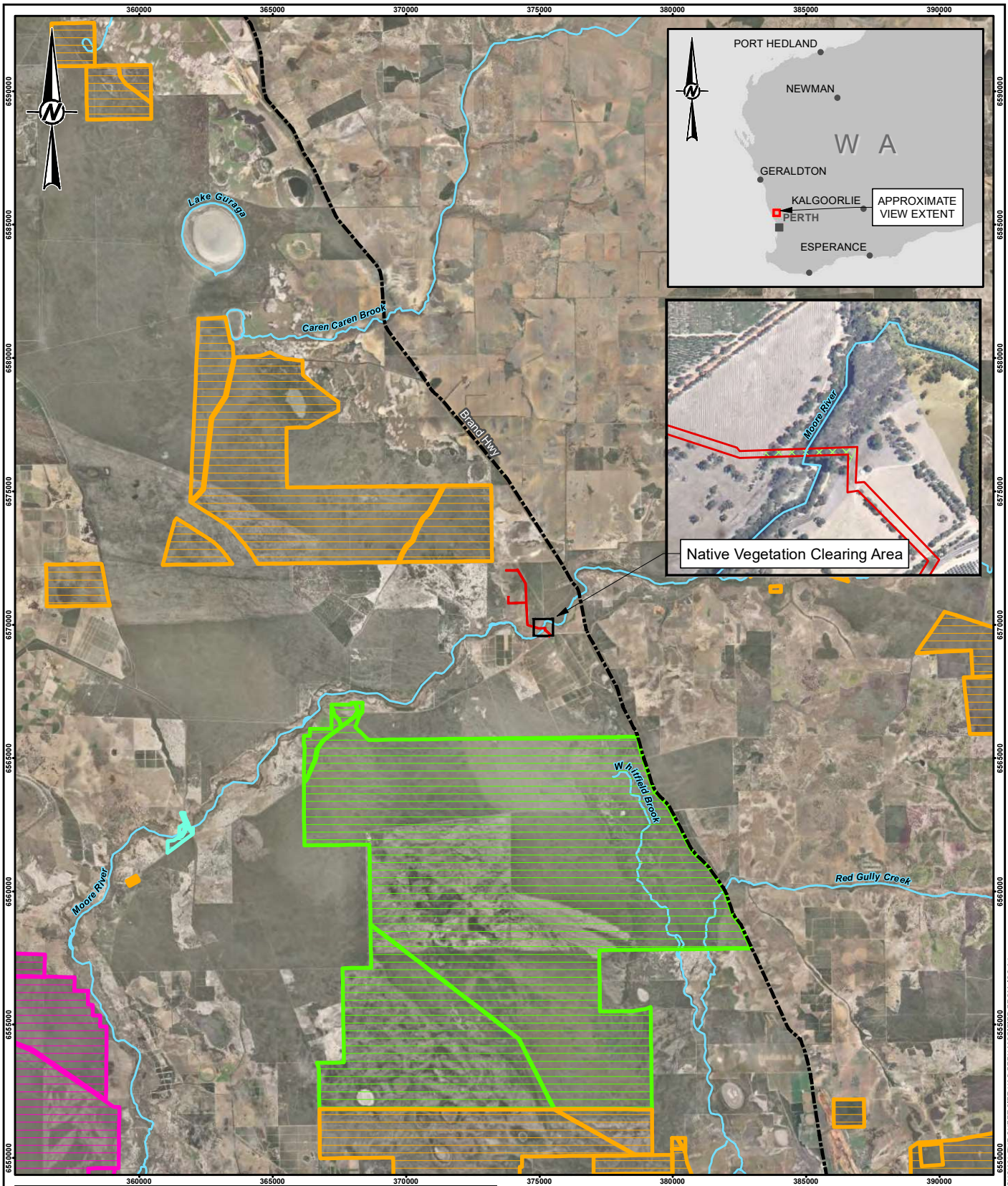
The HV powerline alignment (Project Footprint) is approximately 3.6 km in length by 20 m wide (nine hectares total), however most of the area is non-native vegetation and consists of agricultural grassland. Therefore, the non-native grassland is excluded as part of this Native Vegetation Clearing Permit (NVCP) (Purpose Permit) application and assessment.

ProTen is seeking approval to clear up to 0.47 hectares (ha) of riparian native vegetation within the Native Vegetation Clearing Area (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the Native Vegetation Clearing Area (NVCA) is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed).

Native vegetation clearing is not required for construction activities. The native vegetation clearing will be within a reduced 16 m wide easement, crossing the Moore River in the Native Vegetation Clearing Area shown on Figure 2.

1.2 Purpose

The purpose of this NVCP application is to seek a purpose permit to allow safe access, and provide suitable clearing for ongoing maintenance of the HV powerlines and poles, and Western Power interconnections during operations, to occur within the Native Vegetation Clearing Area, as shown on Figure 2.



LEGEND

- Project Footprint
- Inland Waters
- Major Roads
- Native Vegetation Clearing Area

DBCA Legislated Lands and Waters

- National Park
- Nature Reserve
- Section 5(1)(g) Reserve
- State Forest

0 5 10

1:202,966 Kilometers

NOTE:

1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

REFERENCES:

SERVICE LAYER CREDITS: SOURCE: ESRI, MAXAR, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEROGRID, IGN, AND THE GIS USER COMMUNITY

CLIENT
PROTEN

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-06-10
DESIGNED	JF
PREPARED	MR
REVIEWED	SP
APPROVED	-

PROJECT
PROTEN - NATIVE VEGETATION CLEARING PERMIT APPLICATION

TITLE
REGIONAL PROJECT LOCATION

PROJECT NO.	CONTROL	REV.	FIGURE
PS136098	003	0	001

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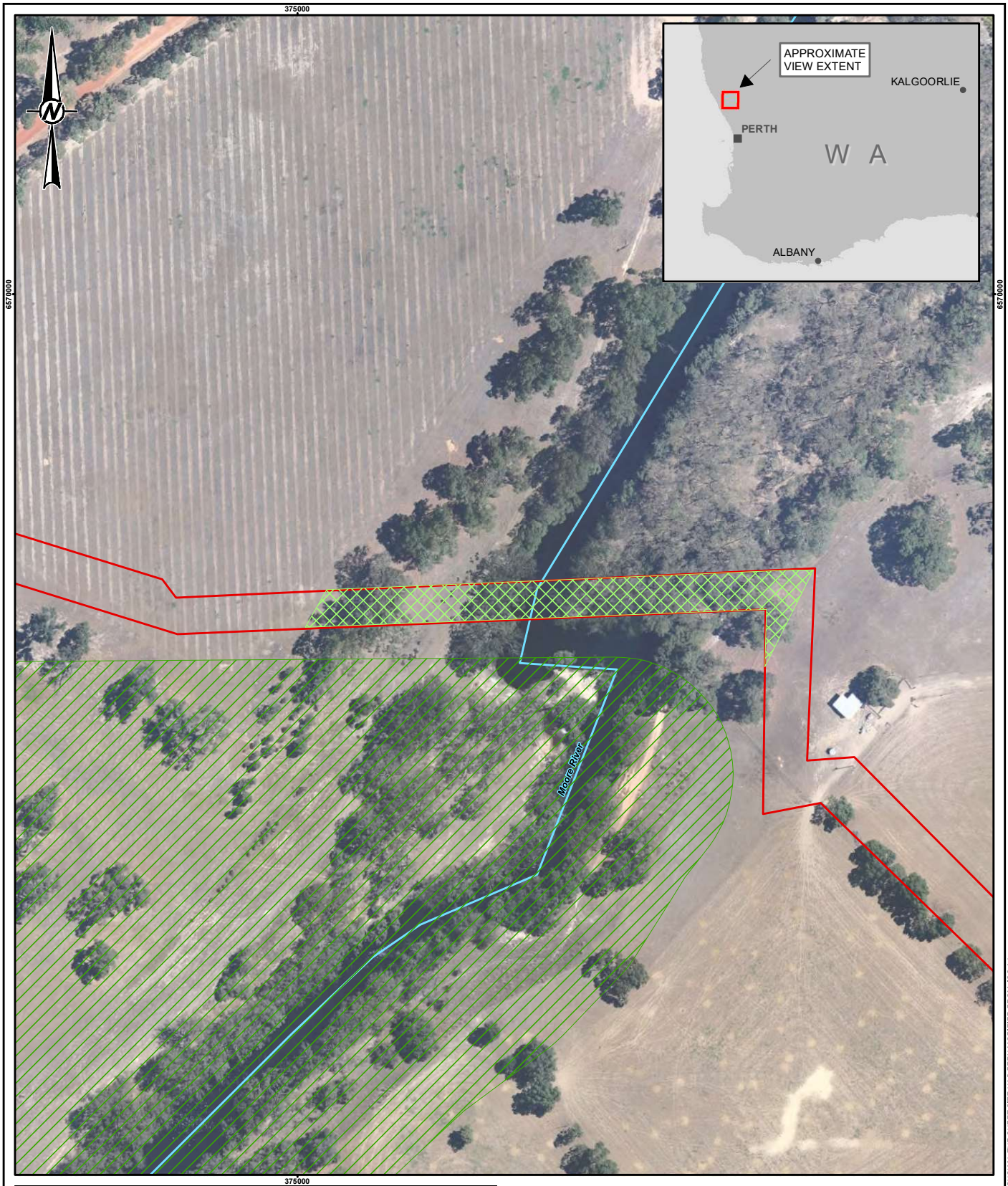


LEGEND

- Environmentally Sensitive Areas
- Native Vegetation Clearing Area
- Project Footprint
- Inland Waters

0 50 100

1:15,000,000 METRES

NOTE:
1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

REFERENCES:
1. NEARMAP, APRIL 2014
2. ENVIRONMENTAL DATA PROVIDED BY CLIENT

CLIENT
PROTEN

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-06-10
DESIGNED	JF
PREPARED	MR
REVIEWED	SP
APPROVED	-

PROJECT
PROTEN - NATIVE VEGETATION CLEARING PERMIT APPLICATION

TITLE
NATIVE VEGETATION CLEARING AREA AND ENVIRONMENTALLY SENSITIVE AREAS

PROJECT NO.	CONTROL	REV.	FIGURE
PS136098	003	0	002

2.0 PROJECT AREAS

2.1 Project Footprint

The Project Footprint is approximately 3.6 km long by 20 m wide (approximately 9 ha) and is shown in Red on Figure 3. The Project Footprint is the alignment and area within which the powerlines, poles, and Western Power interconnections will be constructed and operated within.

Shapefiles for the Project Footprint is provided in Appendix A.

2.2 Native Vegetation Clearing Area

The NVCA is approximately 220 m long by 16 m wide (0.47 ha) and is shown in green on Figure 2. The NVCA is the boundary within which the proposed native vegetation clearing will occur.

Shapefiles for the NVCA are provided in Appendix A.

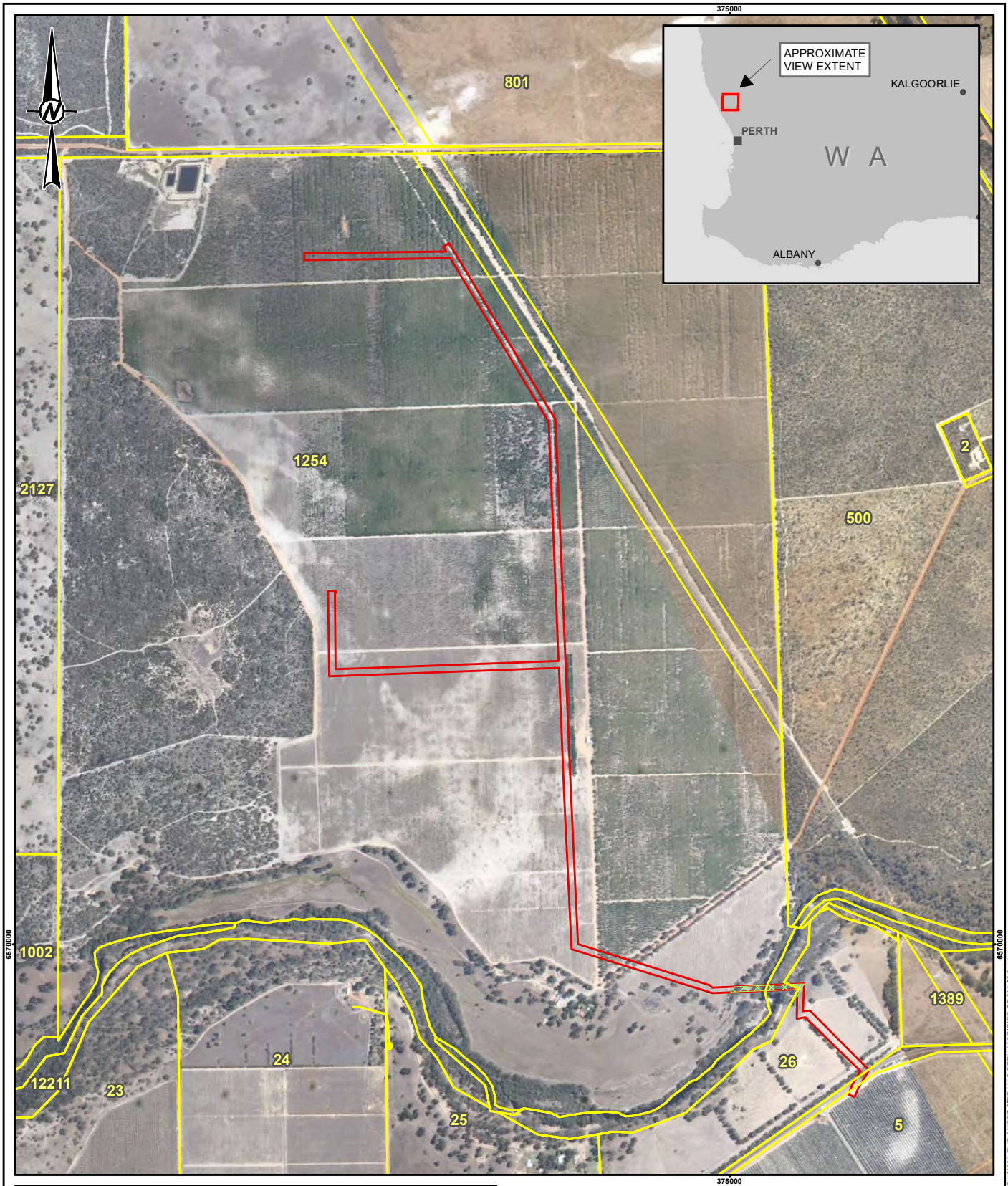
2.3 Land Tenure and Access

All proposed native vegetation clearing addressed in this NVCP application will occur within the NVCA on the following three properties (Figure 3):

- Lot 26 on Plan 17657 – ProTen has obtained a Letter of Authority (LOA) from Lismore Capital Pty Ltd which is provided in Appendix B.
- Lot 1254 on Plan 5564 (ProTen Western Australia Pty Ltd) – The Proof of Ownership (Record of Certificate of Title under the *Transfer of Land Act 1893* – Register Number M 1254/D5564) is provided in Appendix C.
- Lot 12211 on Plan 17657 – DPLH ProTen has been corresponding with DPLH regarding a formal LOA for accessing Lot 12211 on Plan 17657. It is our understanding that DPLH's position on this matter is currently unclear, therefore the DPLH waits on advice from DWER prior to issuing a LOA.

  ProTen has obtained an LOA from the Shire of Gingin which is provided in Appendix B, as future maintenance of Lot 12211 on Plan 17657 will be the responsibility of the Shire of Gingin (as advised by the DPLH).

The NVCA intersects the Moore River (Lot 12211 on Plan 17657), as shown on Figure 3.



LEGEND

- Land Tenure
- Project Footprint
- Native Vegetation Clearing Area

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1:15,000,000 METRES

NOTE:
1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

REFERENCES:
SERVICE LAYER CREDITS:

CLIENT
PROTEN

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-06-13
DESIGNED	JF
PREPARED	MR
REVIEWED	SP
APPROVED	-

PROJECT
PROTEN - NATIVE VEGETATION CLEARING PERMIT APPLICATION

TITLE
LAND TENURE

PROJECT NO.	CONTROL	REV.	FIGURE
PS136098	003	0	003

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3.0 PROPOSED ACTIVITIES

3.1 Description of Proposed Activities

ProTen is proposing to construct approximately 4.6 km of HV powerlines, poles, and Western Power interconnections to supply power to ProTen's poultry farm (the poultry farm is not part of this application) which is currently being developed on Lot 1254 Hunter Road, Orange Springs.

The existing electricity network supply to the property is inadequate to support the poultry farm operation, therefore ProTen is currently working with Western Power to bring in power from the nearest suitable location, hence the requirement of the proposed 4.6 km HV powerlines, poles, and interconnections.

The HV powerline alignment (Project Footprint) is approximately 3.6 km in length by 20 m wide (nine hectares total), but most of the area is non-native vegetation and consists of agricultural grassland. Therefore, the non-native grassland is excluded as part of this NVCP (Purpose Permit) application and assessment.

ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed).

Native vegetation clearing is not required for construction activities. The native vegetation clearing will be within a reduced 16 m wide easement, crossing the Moore River in the Native Vegetation Clearing Area shown on Figure 2.

3.2 Proposed Vegetation Disturbance

ProTen proposes to clear up to 0.47 ha of native riparian vegetation within the NVCA as shown on Figure 3, of which intersects the Moore River.

3.3 Method of Vegetation Clearing

The native vegetation is proposed to be selectively removed by manual falling and trimming, and ground cover slashed for safe access. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain in-situ. However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed).

3.4 Timeline

Once a NVCP is obtained, the native vegetation clearing is scheduled to commence on 5 September 2022 and is expected to be completed by 5 October 2022.

4.0 RELEVANT ENVIRONMENTAL CHARACTERISTICS

This section contains information about the environmental characteristics of the NVCA that may be relevant to this NVCP application. Desktop environmental information outlined in this section has been obtained from publicly available online sources.

4.1 Current Land Use

The NVCA transects the Moore River and occurs almost at the northern boundary of the Swan Coastal Plain (SCP), which is bounded by the Darling Scarp to the east, Indian Ocean to the west, and Dunsborough to the south.

The Project Footprint NVCA is surrounded by and intersects areas of land used primarily for dryland agriculture and plantations. The NVCA is located within a natural conservation area (Moore River).

4.2 Biogeographic Regions

The Interim Biogeographic Regionalisation for Australia (IBRA) classifies the Australian continent into regions or bioregions on the basis of similar geology, landform, vegetation, fauna, and climate characteristics. The NVCA is located within the Swan Coastal Plain IBRA region. The Swan Coastal Plain region is further divided into two subregions (Australian Government 2022):

- Dandaragan Plateau (SWA01)
- Swan Coastal Plain (SWA02).

The NVCA is located entirely within the Swan Coastal Plain (SWA02) IBRA subregion.

4.3 Land Systems

The NVCA is located entirely within a single soil-landscape system, the Moore River System (212Mo). This soil-landscape system consists of (Australian Government 2022):

- Alluvial flats; Swan Coastal Plain west of Gingin; wet soil, semi-wet soil, pale and yellow deep sands; Woodlands and heaths.

4.4 Surface Geology

The NVCA is located entirely within a single surface geological unit, Guilford Formation 45360 (Qa). This unit is described as (Australian Government 2022):

- Alluvial sand and clay with shallow-marine and estuarine lenses and local basal conglomerate.

4.5 Soils

The NVCA is located within the following Soil-landscape Map Units (DPIRD 2022a):

- 212Mo – Alluvial flats; Swan Coastal Plain west of Gingin; wet soil, semi-wet soil, pale and yellow deep sands; Woodlands and heaths (DPIRD 2022a). Soil-landscape Map Unit 212Mo covers an area up to 10,720 ha.
- 212Mo_1 – River channel, water, sandy and loamy earths and duplexes. Soil-landscape Map Unit 212Mo_1 covers an area up to 102 ha

The NVCA is located within the following Soil Landscape Mapping Zones:

- 212 (Bassendean Zone) – Mid Pleistocene Bassendean sand. Fixed dunes inland from coastal dune zone. Non-calcareous sands, podsolised soils with low-lying wet areas. The Bassendean Zone covers an area up to 259,984 ha.

- 212Mo_2 (Moore River 2 Subsystem) – Relict floodplain. Yellow deep sand. The Moore River 2 Subsystem covers an area up to 445 ha.

The NVCA is located within a single Atlas of Australian Soil unit, Cb39. This unit is described as (ASRIS 2022):

- Subdued dune-swale terrain: chief soils are leached sands (Uc2.33) with (Uc2.22) and (Uc2.21) on the low dunes
- Associated are small areas of other sand soils (Uc).

4.6 Hydrology

The NVCA intersects the Moore River which is a major perennial watercourse (Australian Government 2022). The Moore River is also a Proclaimed Surface Water Area under the *Rights in Water and Irrigation Act 1914* (RIWI Act).

4.7 Environmentally Sensitive Areas

Environmentally Sensitive Areas (ESAs) are protected under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations) and are selected for their environmental values at state or national levels. ESAs are classes or areas of native vegetation where the exemptions for clearing vegetation under the Clearing Regulations do not apply. They include:

- Defined wetlands and riparian vegetation within 50 m
- Areas covered by Threatened Ecological Communities
- Area of vegetation within 50 m of Threatened flora
- Bush Forever sites
- Declared World Heritage property sites.

No Environmentally Sensitive Areas (ESAs) are located in the NVCA (Figure 2) (Australian Government 2022). The nearest ESA is a Conservation category wetland associated with the Moore River approximately 15.5 m south of the NVCA.

4.8 Aboriginal Heritage

Golder Associates Pty Ltd (WSP Golder) engaged Archae-aus to undertake a desktop Aboriginal Heritage desktop assessment which is provided in Appendix F.

The NVCA is located within two Registered Aboriginal Sites (20008 – Gingin Brook Waggyl Site, and 20749 – Moore River Waugal) (Archae-aus 2022a). These Sites are mythological sites relating to the Moore River and its banks. The river is part of a highly significant mythological site relating to the Waarkal creation being. The NVCA is also located within one Other Heritage Place (19183 – Red Gully Creek).

The Archae-aus (2022a) desktop assessment identified a high risk for impacting Aboriginal Sites within the NVCA. Based on the assessment, WSP Golder also engaged Archae-aus to undertake an Aboriginal archaeological and ethnographic survey of the NVCA with Yued Traditional Owners, which is scheduled for Q3 2022.

WSP Golder also engaged Archae-aus (2022b) to undertake an Archaeological and Ethnographic Heritage Survey for the Project. The fieldwork portion of the survey was conducted on 6 July 2022. Yued representatives participated in all aspects of the archaeological and ethnographic survey. The survey did not identify any previously unrecorded Aboriginal heritage sites. It did however reinforce the range of values associated with Moore River and GinGin Brook. The presence of the mythological sites is of high significance to the Yued representatives and their culturally appropriate protection underpinned the Traditional Owners decision-making process for the Project.

No new archaeological or ethnographic Aboriginal sites were located within the Project Area (Archae-aus 2022b). The Archae-aus (2022b) Project area intersects the registered boundary of Gingin Brook Waggyl Site ID 20008 and Moore River Waugul Site ID 20749, and accordingly, ProTen is currently consulting with the Department of Planning, Lands and Heritage (DPLH) to seek clarification as to whether a Section 18 Application under the *Aboriginal Heritage Act 1972* will be required for the Project.

The Traditional Owners consent to the proposed overhead high voltage line relocation project going ahead, and have provided recommendations for ProTen, which are outlined in Arechae-aus (2022b), ProTen, commit to implementing these recommendations for the Project. The Archae-aus (2022b) survey report is currently being finalised and can be proved to the Department of Water and Environmental Regulation (DWER) upon request.

4.9 Flora and Vegetation

Site photos of the vegetation proposed to be cleared are provided in Appendix D.

4.9.1 Conservation Significant Flora

For the purposes of this NVCP application, conservation significant flora species are those that are listed by the Department Biodiversity, Conservation and Attractions (DBCA), as Threatened (T) or Priority (P) flora. Flora species are classified as Threatened Flora or listed as Priority Flora where populations are geographically restricted or threatened by local processes.

Threatened Flora species are listed by DBCA and are protected under the *Biodiversity Conservation Act 2016* (BC Act), whereby making it an offence to remove or damage rare flora without Ministerial approval.

Some Threatened Flora species have additional legislative protection by being listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

EPBC Act Listed Species

A Commonwealth Department of Agriculture, Water and the Environment (DAWE) (2022b) online database search of the Protected Matters Search Tool (PMST) (PMST Report provided in Appendix E) was conducted, and Commonwealth Species Profile and Threats Database (DAWE 2022c) lists were reviewed to identify threatened flora with Commonwealth protection under the *Environmental Protection Biodiversity Conservation Act 1999* (EPBC Act).

The PMST search of the NVCA using a 1 km radius identified no species or species habitat that are known to occur within the search area. The PMST search identified the following species or species habitat that are likely to occur within the search area:

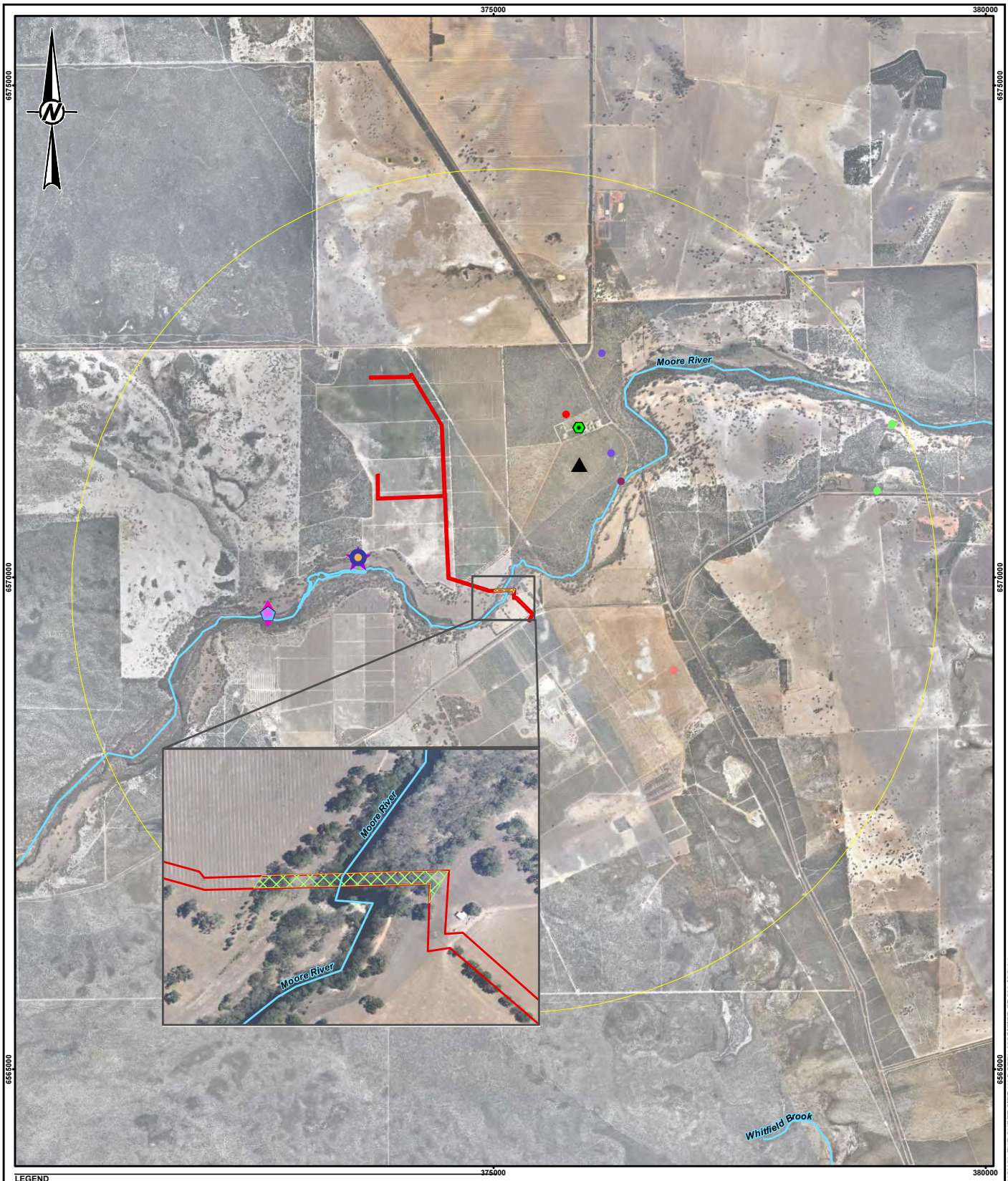
- Slender Andersonia (*Andersonia gracilis*) – Endangered
- Dwarf Green Kangaroo Paw (*Anigozanthos viridis* subsp. *Terraspectans*) – Vulnerable
- Sandplain Duck Orchid (*Paracaleana dixonii*) – Endangered.

BC Act Listed Species

In the absence of DBCA's NatureMap Database (WA) to determine the flora species protected under the Biodiversity Conservation Act 2016 (BC Act) (WA), desktop conservation significant flora data from DBCA was requested by WSP Golder. The desktop data resulted in eleven Priority and two Threatened flora species records within a 5 km search radius of the NVCA, including:

- *Darwinia acerosa* – T
- *Darwinia carnea* – T
- *Dampiera tephrea* – P2
- *Haemodorum loratum* – P3
- *Persoonia rudis* – P3
- *Babingtonia urbana* – P3
- *Eucalyptus macrocarpa subsp. Elachantha* – P4
- *Hensmania stoniella* – P3
- *Isotropis cuneifolia subsp. Glabra* – P3
- *Lepyrodia curvescens* – P2
- *Petrophile biternate* – P3
- *Rumex drummondii* – P4
- *Stylidium sp. Moora* (J.A. Wege 713) – P2.

No conservation significant flora species were recorded to occur within the NVCA, as shown on Figure 4. The nearest records include *Isotropis cuneifolia subsp. Glabra*, *Petrophile biternate*, and *Stylidium sp. Moora* (J.A. Wege 713), approximately 1.4 km north west of the NVCA.



LEGEND

- Native Vegetation Clearing Area
- Project Footprint
- 5km Buffer

Conservation Significant Flora

- *Dampiera tephrea*
- *Haemodorum loratum*
- *Persoonia rudis*
- *Babingtonia urbana*
- *Darwinia acerosa*
- *Darwinia carnea*
- *Eucalyptus macrocarpa subsp. elachantha*
- *Hensmania stoniella*
- *Isotropis cuneifolia subsp. glabra*
- *Lepyrodia curvescens*
- *Petrophile biternata*
- *Rumex drummondii*
- *Stylidium sp. Moora (J.A. Wege 713)*

0 1,900 3,800

1:55,000 METRES

NOTE:
1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

REFERENCES:
1. NEARMAP, APRIL 2014
2. WESTERN AUSTRALIAN LAND INFORMATION AUTHORITY (LANDGATE)

CLIENT
PROTEN

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-06-13
DESIGNED	JF
PREPARED	MR
REVIEWED	SP
APPROVED	-

PROJECT
PROTEN - NATIVE VEGETATION CLEARING PERMIT APPLICATION

TITLE
CONSERVATION SIGNIFICANT FLORA

PROJECT NO.	CONTROL	REV.	FIGURE
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4.9.2 Vegetation Complex

The NVCA is located within one vegetation complex (Data WA 2022):

- Moore River Vegetation Complex – Fringing woodland of *Eucalyptus rudis* (Flooded Gum) – *Melaleuca rhaphiophylla* (Swamp Paperbark).

4.9.3 Pre-European Vegetation Associations

In 2001, the Commonwealth of Australia stated National Targets and Objectives for Biodiversity Conservation, which recognised that the retention of 30%, or more, of the pre-clearing extent of each ecological community was necessary if Australia's biological diversity was to be protected (Environment Australia 2001; Ecoedge 2019).

In its report on the Statewide Vegetation Statistics incorporating the Comprehensive, Adequate and Representative (CAR) Reserve Analysis, the Government of Western Australia provides information on the pre-European and current extent of the ecological communities of Western Australia and reports on the status of the CAR reserve system for WA (Government of Western Australia 2022). This system is also based on the National retention targets of 30% overall. Only reserves managed by DBCA under the *Conservation and Land Management Act 1984* are considered for inclusion in the CAR Reserve Analysis (Ecoedge 2019).

Table 1 lists the percentage remaining of the only vegetation complex identified within the NVCA and indicates whether the Commonwealth 30% retention target is met. The vegetation complex present within the NVCA meets the 30% target.

Approximately 0.47 ha of native vegetation is proposed to be cleared within the Moore River vegetation complex.

Table 1: Vegetation complexes mapped within NVCA with regard to Commonwealth retention target (Government of Western Australia 2022)

Vegetation Complex	Pre-European Extent (ha)	Current Extent (ha)	Pre-European % Remaining	Is the 30% Target Met?
Moore River	8479.2	2913.0	34.36%	Yes

4.9.4 Threatened and Priority Ecological Communities

Threatened Ecological Communities (TECs) are categorised at both Commonwealth (EPBC Act; DAWE 2022a) and State (WA) (DBCA 2022a) level, whilst Priority Ecological Communities (PECs) are categorised at State level (DBCA 2022b).

In the absence of DBCA's NatureMap Database (WA) to determine the TECs and PECs in proximity to the NVCA, desktop data from DBCA was requested by WSP Golder. The desktop data showed that the NVCA is located within the following TEC (Figure 5):

- Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region.

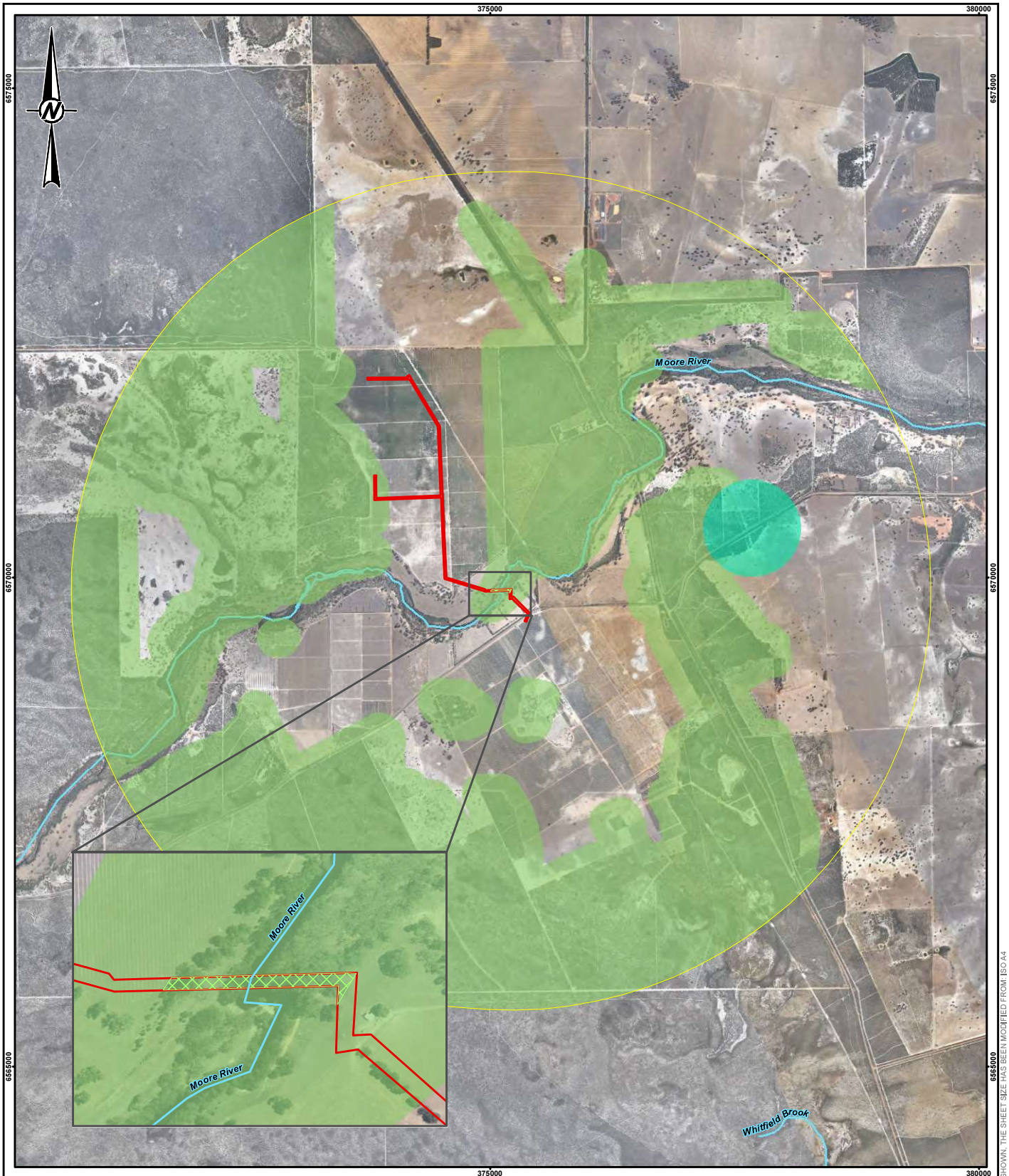
The Banksia woodlands of the Swan Coastal Plain were listed as a TEC (endangered) under the EPBC Act on 16 September 2016. The mapping for the Banksia woodlands ecological community is based on the Commonwealth's 'likely to occur' areas and represents the broad-scale vegetation map units most likely to contain the described ecological community.

The Banksia woodlands of the Swan Coastal Plain TEC is a woodland associated with the Swan Coastal Plain (and some adjacent areas) of southwest WA. It typically has a prominent tree layer of Banksia sometimes with scattered eucalypts and other tree species present within or above the Banksia canopy. The understorey is species rich and has many wildflowers, including sclerophyllous shrubs, sedges, and herbs (DEE 2016a).

The ecological community can be identified by the following general features (DEE 2016a):

- It typically occurs on well drained, low nutrient soils in sands of dune landforms, in particular deep Bassendean and Spearwood sands, or occasionally on Quindalup sands. It is also common on sandy colluvium and aeolian (wind-blown) sands of the Ridge Hill Shelf, Whicher Scarp and Dandaragan Plateau.
- Banksia Woodlands vary in their structure (height, cover, density) and species composition across the region where they occur. These variations can occur over small distances, but the woodlands are united by having a generally dominant Banksia component, which includes at least one of four key species – *Banksia attenuata* (candlestick banksia), *B. menziesii* (firewood banksia), *B. prionotes* (acorn banksia) and/or *B. ilicifolia* (holly-leaved banksia).

No PECs are located in close proximity to the NVCA, as shown on Figure 5.



LEGEND

- Native Vegetation Clearing Area
- 5km Buffer
- Project Footprint
- Inland Waters

Threatened and Priority Ecological Communities

- Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region
- Swan Coastal Plain Banksia attenuata - Banksia menziesii woodlands

0 1,900 3,800

1:55,000 METRES

NOTE:
1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

REFERENCES:
1. NEARMAP, APRIL 2014
2. WESTERN AUSTRALIAN LAND INFORMATION AUTHORITY (LANDGATE)

CLIENT
PROTEN

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-06-10
DESIGNED	JF
PREPARED	MR
REVIEWED	SP
APPROVED	-

PROJECT
PROTEN - NATIVE VEGETATION CLEARING PERMIT APPLICATION

TITLE
THREATENED AND PRIORITY ECOLOGICAL COMMUNITIES

PROJECT NO.	CONTROL	REV.	FIGURE
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4.9.5 Introduced Flora Species

The Department of Primary Industries and Regional Development's (DPIRD) Western Australian Organism List (WAOL) details organisms listed as Declared Pests under the *Biosecurity and Agriculture Management Act 2007* (BAM Act) (DPIRD 2022b). Under the BAM Act, Declared Pests are listed as one of three categories:

- C1 (exclusion), that applies to pests not established in WA; control measures are to be taken to prevent their entry and establishment
- C2 (eradication), that applies to pests that are present in WA but in low numbers or in limited areas where eradication is still a possibility
- C3 (management), that applies to established pests where it is not feasible or desirable to manage them in order to limit their damage.

Some of the more invasive introduced species are also included in several other weed lists maintained by maintained by DAWE and Weeds Australia (2022), including Weeds of National Significance (WONS) list, Candidate Weeds for Biological Control, species permitted entry into Australia, National Priority List of Exotic Environmental Pests, National Environmental Alert List, Agricultural Sleeper Weeds List, Species Targeted for Eradication, and State and Territory Noxious Weed Lists.

Introduced species (weeds) are commonly recorded, particularly in disturbed areas such as agricultural lands, and those surrounding the proposed NVCA. Plants are regarded as introduced if they are listed as 'alien' on DBCA's Florabase (DBCA 2022c). Florabase lists 970 introduced species as having been collected within the Swan Coastal Plain IBRA bioregion and 220 within the Shire of Gingin.

4.10 Fauna

4.10.1 Conservation Significant Fauna

For the purposes of this NVCP application, conservation significant fauna species are those that are listed by DBCA, as Threatened (T) or Priority (P) fauna. Fauna species are classified as Threatened or Priority fauna where populations are geographically restricted or threatened by local processes.

Threatened fauna species are listed by DBCA and are protected under the BC Act, whereby making it an offence to take or disturb Threatened and Priority fauna without Ministerial approval.

Some Threatened fauna species have additional legislative protection by being listed under the EPBC Act.

EPBC Act Listed Species

A Commonwealth DAWE (2022b) online database search of the PMST (PMST Report provided in Appendix E) was conducted and Commonwealth Species Profile and Threats Database (DAWE 2022c) lists were reviewed to identify threatened fauna with Commonwealth protection. Listed marine species have been excluded from this desktop assessment.

The PMST search of the NVCA and a 1 km buffer identified the following species or species habitat that are known to occur within the search area:

- Carnaby's Black Cockatoo (*Zanda latirostris* listed as *Calyptorhynchus latirostris*) – Endangered
- Chuditch (*Dasyurus geoffroii*) – Vulnerable.

The PMST search of the NVCA and a 1 km buffer also identified the following species or species habitat that are likely to occur within the search area:

- Malleefowl (*Leipoa ocellata*) – Vulnerable

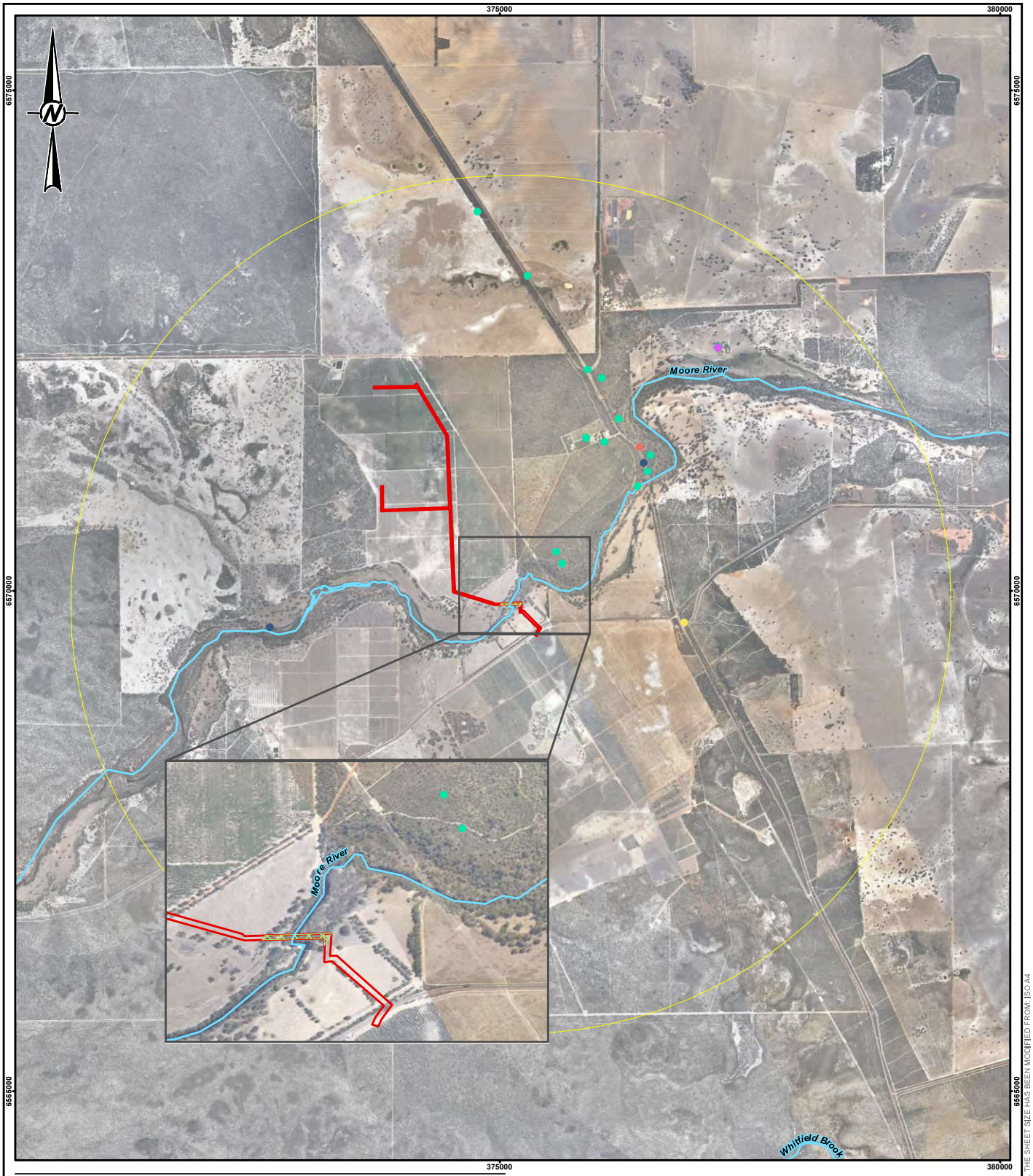
- Australian Painted Snipe (*Rostratula australis*) – Endangered
- Balston's Pygmy Perch (*Nannatherina balstoni*) – Vulnerable.

BC Act Listed Species

In the absence of DBCA's NatureMap Database (WA) to determine the fauna species protected under the BC Act (WA), desktop conservation significant fauna data from DBCA was requested by WSP Golder. The desktop data resulted in five conservation significant fauna species records within a 5 km search radius of the NVCA, including:

- *Calyptorhynchus latirostris* (Carnaby's cockatoo) – Endangered
- *Calyptorhynchus sp.* (whitetailed black cockatoo) – Endangered
- *Dasyurus geoffroii* (chuditch, western quoll) – Vulnerable
- *Notamacropus irma* (western brush wallaby) – P4
- *Westralunio carteri* (Carter's freshwater mussel) – Vulnerable.

No conservation significant fauna species were recorded to occur within the NVCA, as shown on Figure 6. The nearest record is the Carnaby's cockatoo, approximately 560 m north east of the NVCA. The NVCA is within a 6 km buffer area of Carnaby's Cockatoo Confirmed Breeding Areas and Roosting areas within the Swan Coastal Plan and Jarrah Forest IBRA Regions (Australian Government 2022).



LEGEND

- Inland Waters
- 5km Buffer
- Native Vegetation Clearing Area
- Project Footprint

Conservation Significant Fauna

- *Calyptorhynchus latirostris* (Carnaby's cockatoo)
- *Calyptorhynchus sp.* (white-tailed black cockatoo)
- *Dasyurus geoffroii* (chuditch, western quoll)
- *Notamacropus irma* (western brush wallaby)
- *Westralunio carteri* (Carter's freshwater mussel)

0 1,900 3,800

1:20,000 METRES

NOTE:
1. COORDINATE SYSTEM: GDA 1994 MGA ZONE 50

REFERENCES:
1. NEARMAP, APRIL 2014
2. WESTERN AUSTRALIAN LAND INFORMATION AUTHORITY (LANDGATE)

CLIENT
PROTEN

CONSULTANT
WSP GOLDER

YYYY-MM-DD	2022-06-13
DESIGNED	JF
PREPARED	MR
REVIEWED	SP
APPROVED	-

PROJECT
PROTEN - NATIVE VEGETATION CLEARING PERMIT APPLICATION

TITLE
CONSERVATION SIGNIFICANT FAUNA

PROJECT NO.	CONTROL	REV.	FIGURE
PS136098	003	0	006

PATH: B:\Proten\Orange Springs\9g_PROJECTS\PS136098\02_PRODUCTION\MXD\003\PS136098-003-R-Rev0-F006.mxd PRINTED ON: 2022-06-13 AT: 1:04:41 PM

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25mm

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5.0 STAKEHOLDER CONSULTATION

No formal stakeholder consultation specifically pertaining to the proposed native vegetation clearing activities with the NVCA has been conducted. However, the following stakeholders have been notified of the proposed clearing, and associated NVCP application:

- DWER – On 5 April 2022, ProTen submitted a referral under section 51DA(2) of the Environmental Protection *Act 1986* (the EP Act), which was subsequently "returned without assessment" in the Department of Water and Environmental REgulation (DWER) letter dated 5 May 2022 (REF 9689/1; DWERVT9954). Based on this letter, and a phone conversation and email correspondence held between Sara Pritchard (WSP Golder) and Chelsea Wenden (DWER) on 13 May 2022, it was determined that a NVCP (Purpose Permit) application would be required for the proposed clearing.
- DPLH – ProTen has been corresponding with DPLH regarding a formal LOA for accessing Lot 12211 on Plan 17657. It is our understanding that DPLH's position on this matter is currently unclear, therefore the DPLH waits on advice from DWER prior to issuing a LOA.
- Shire of Gingin – ProTen has obtained an LOA from the Shire of Gingin which is provided in Appendix B, as future maintenance of Lot 12211 on Plan 17657 will be the responsibility of the Shire of Gingin (as advised by the DPLH).
- Lismore Capital Pty Ltd – ProTen has obtained an LOA from Lismore Capital Pty Ltd to access the land and clear native vegetation on Lot 26 on Plan 17657 for the purposed outlined in this NVCP application (provided in Appendix B).

6.0 ASSESSMENT OF CLEARING AGAINST THE TEN CLEARING PRINCIPLES

The proposed native vegetation clearing has been assessed against the ten clearing principles described within *A guide to the assessment of applications to clear native vegetation Under Part V Division 2 of the Environmental Protection Act 1986* (DER 2014). Table 2 assesses the proposed native vegetation clearing against these ten clearing principles.

Table 2: Assessment of clearing against the ten clearing principles

Clearing Principle	Assessment	Methodology	Outcome
a) Native vegetation should not be cleared if it comprises a high level of biological diversity.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). Based on the desktop assessment, site photos (Appendix D), and the relatively small amount of vegetation proposed to be cleared, it is unlikely that that the proposed vegetation to be cleared would constitute a high level of biological diversity. Therefore, it is unlikely that the clearing will be at variance to this principle.	DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022).	The proposed clearing is not likely to be at variance with this Principle.
b) Native vegetation should not be cleared if it comprises the whole, or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to WA.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). Based on the site photos, it is unlikely that the vegetation proposed for clearing would meet the criteria as potential Black Cockatoo breeding habitat trees (diameter at breast height greater than or equal to 50 cm) or for night roosting (DSEWPaC 2012). The vegetation proposed to be cleared within the NVCA is not likely to be considered significant habitat for the Black Cockatoos, as it is less than 1 ha in size and is not known to contain breeding hollows (DSEWPaC 2012). Based on the desktop assessment, site photos (Appendix D), and the relatively small amount of vegetation proposed to be cleared, it is unlikely that the proposed vegetation to be cleared would provide the whole, or part of, or necessary for the maintenance of, a significant habitat for fauna indigenous to WA. Therefore, the proposed clearing is not likely to be at variance with this Principle.	DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022). DSEWPaC 2012.	The proposed clearing is not likely to be at variance with this Principle.

Clearing Principle	Assessment	Methodology	Outcome
c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). No conservation significant flora species were recorded to occur within the NVCA, as shown on Figure 4. The nearest records include *Isotropis cuneifolia subsp. Glabra, Petrophile biternate,* and *Stylidium sp. Moora* (J.A. Wege 713), approximately 1.4 km north west of the NVCA. The environmental desktop assessment showed that no declared rare (Threatened) or Priority flora species occur or are likely to occur within the NVCA. Therefore, the proposed clearing is not likely to be at variance with this Principle.	DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022).	The proposed clearing is not likely to be at variance with this Principle.
d) Native vegetation should not be cleared if it comprises the whole or part of, or is necessary for the maintenance of, a Threatened Ecological Community.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). The environmental desktop assessment showed that the NVCA is located within the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region ecological community. The estimated extent remaining in 2015 of the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region ecological community was up to 337,000 hectares (DEE 2016b). The 0.47 ha proposed to be cleared is less than 0000.1% of the extent remaining, and therefore it is unlikely that the clearing will be at variance to this principle.	DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022).	The proposed clearing is not likely to be at variance with this Principle.

Clearing Principle	Assessment	Methodology	Outcome
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.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). The NVCA is located within one vegetation complex (Data WA 2022): ■ Moore River Vegetation Complex – Fringing woodland of *Eucalyptus rudis* (Flooded Gum) – *Melaleuca rhaphiophylla* (Swamp Paperbark). The Project proposes to clear up to 0.47 ha of the Moore River Vegetation Complex (which has up to 8479.2 ha vegetation remaining). This equates to the removal of up to 0.005% of the Moore River Vegetation Complex. In 2001, the Commonwealth of Australia stated National Targets and Objectives for Biodiversity Conservation, which recognised that the retention of 30%, or more, of the pre-clearing extent of each ecological community was necessary if Australia's biological diversity was to be protected (Environment Australia 2001; Ecoedge 2019). In its report on the Statewide Vegetation Statistics incorporating the Comprehensive, Adequate and Representative (CAR) Reserve Analysis, the Government of Western Australia provides information on the pre-European and current extent of the ecological communities of Western Australia and reports on the status of the CAR reserve system for WA (Government of Western Australia 2022). This system is also based on the National retention targets of 30% overall. Only reserves managed by DBCA under the *Conservation and Land Management Act 1984* are considered for inclusion in the CAR Reserve Analysis (Ecoedge 2019). The Table below lists the percentage remaining of the only vegetation complex identified within the NVCA and indicates whether the Commonwealth 30% retention target is met. The vegetation complex present within the NVCA meets the 30% target. Therefore, the proposed clearing is not likely to be at variance with this Principle.	DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022). DSEWPaC 2012.	The proposed clearing is not likely to be at variance with this Principle.

<table>
<tr><th>Clearing Principle</th><th>Assessment</th><th>Methodology</th><th>Outcome</th></tr>
<tr><td></td><td>Vegetation complexes mapped within the NVCA with regard to the Commonwealth retention target (Government of Western Australia 2022)
<table>
<tr><th>Vegetation Complex</th><th>Pre-European Extent (ha)</th><th>Current Extent (ha)</th><th>re-European % Remaining of</th><th>Is the 30% Target Met?</th></tr>
<tr><td>Moore River</td><td>8479.2</td><td>2913.0</td><td>34.36%</td><td>Yes</td></tr>
</table></td><td></td><td></td></tr>
<tr><td>f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.</td><td>ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain in-situ. However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed).

Interrogation of DBCA and DWER (Australian Government 2022) hydrological and wetland datasets (using NationalMap Database) determined that the nearest ESA is a Conservation category wetland associated with the Moore River approximately 15.5 m south of the NVCA. The ESA is shown on Figure 2.

In support of this NVCP application, ProTen submitted a Beds and Banks Permit application under Section 11, 17, and 21A of the RIWI Act to DWER on 5 April 2022. This application is currently under assessment by DWER.

The proposed NVCA boundary was originally proposed to intersect the ESA but was subsequently realigned to avoid the Conservation category wetland associated with the Moore River. In addition, the NVCA was reduced in width from 20 m to 16 m wide where it traverses the Moore River as shown on Figure 2 to reduce the direct clearing impacts to the Moore River. Therefore, ProTen has aimed to reduce the impacts of native vegetation clearing within the NVCA as far as reasonably practicable.

The Project proposes to clear up to 0.47 ha of native vegetation along the Moore River (watercourse) and therefore the clearing is at variance with this principle.</td><td>Archae-aus (2022a & 2022b).
DBCA Shapefiles.
DBCA (2022a, 2022b & 2022c).
Australian Government 2022.
Site photos.
Australian Government (2022).
Data WA (2022).
DAWE (2022a, 2022b & 2022c).
DEE (2016a & 2016b).
Ecoedge (2019).
Government of Western Australia (2022).
DSEWPaC 2012.</td><td>The proposed clearing is at variance with this Principle.</td></tr>
</table>

Clearing Principle	Assessment	Methodology	Outcome
g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). This will minimise the risk of erosion on the banks of the Moore River. Erosion poses the greatest risk of land degradation to the NVCA, particularly on the bank of the Moore River. As shown in the site photos of the vegetation proposed to be cleared (Appendix D), the trees have root systems that are located on the banks of the Moore River. Considering the relatively small scale of the proposed clearing (0.47 ha), standard erosion and sedimentation control measures will be implemented during clearing activities, existing understory (smaller shrubs and grasses) will not be removed and root systems and stumps will remain in-situ, clearing is not likely to exacerbate current land degradation or result in additional appreciable land degradation. Therefore, the proposed clearing is not likely to be at variance with this Principle.	ASRIS (2022). DPRIRD (2022a & 2022b). DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022). Weeds Australia (2022). DSEWPaC 2012.	The proposed clearing is not likely to be at variance with this Principle.

Clearing Principle	Assessment	Methodology	Outcome
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.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). A number of conservation areas exist within 15 km of the Project area, including (Australian Government 2022): ■ Namming Nature Reserve ■ Moore River National Park ■ Unnamed (WA47808 Nature Reserve ■ Bundarra Nature Reserve. The NVCA does not overlap any conservation areas, with the nearest being Namming Nature Reserve Located 3 km northwest and Moore River National Park 4 km south of the NVCA. These conservation areas are separated from the NVCA by cleared agricultural properties (Australian Government 2022). Given the minimal amount of clearing proposed, and the separation distances to conservation areas, the clearing of the vegetation is not likely to have an impact on the environmental values of these conservation areas.	DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022). DSEWPaC 2012.	The proposed clearing is not likely to be at variance with this Principle.

	Clearing Principle	Assessment	Methodology	Outcome
i)	Native vegetation should not be cleared if the clearing is likely to cause deterioration in the quality of surface or underground water.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). This will minimise the risk of erosion on the banks of the Moore River. The NVCA intersects the Moore River (Figure 2). The Project will not significantly alter the hydrology of the area. The Project has been designed to minimise impacts to surface water and groundwater through minimising native vegetation clearing across the wider Project and by reducing the width of the NVCA over the Moore River. The small-scale clearing is unlikely to cause deterioration in the quality of surface or underground water quality.	ASRIS (2022). DPRIRD (2022a & 2022b). DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022).	The proposed clearing is not likely to be at variance with this Principle.
j)	Native vegetation should not be cleared if the clearing is likely to cause, or exacerbate, the incidence or intensity of flooding.	ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed). The removal of such a small, localised area of vegetation is unlikely to increase the incidence or intensity of flooding in the local area. The Shared Location Information Platform (SLIP) (Australian Government 2022) identified a moderate to high risk of flooding in the area. However, given the narrow (220 m long by 16 m wide) area over which clearing will be, it is expected that clearing will not exacerbate the incidence or intensity of flooding along the Moore River.	ASRIS (2022). DPRIRD (2022a & 2022b). DBCA Shapefiles. DBCA (2022a, 2022b & 2022c). Australian Government 2022. Site photos. Australian Government (2022). Data WA (2022). DAWE (2022a, 2022b & 2022c). DEE (2016a & 2016b). Ecoedge (2019). Government of Western Australia (2022).	The proposed clearing is not likely to be at variance with this Principle.

7.0 CONCLUSION

ProTen is seeking approval to clear up to 0.47 ha of riparian native vegetation within the NVCA (Figure 2) to support the safe access, and maintenance to the HV powerlines and poles during operations. The native vegetation targeted for removal along the Moore River, within the NVCA is comprised of trees, shrubs, and grasses (unknown species). Site photos of the vegetation proposed to be cleared are provided in Appendix D. The vegetation (trees) proposed to be cleared, will be lopped at their base, and their root systems and stumps will remain *in-situ.* However, where practicable and safe to do so, only the limbs of the trees will be removed to allow a safe clearance for the overhead conductors, rather that removing the entire tree to the base. Existing understory (smaller shrubs and grasses) will not be removed. Larger shrubs, however, may need to be trimmed back (but will not be removed).

Interrogation of DBCA and DWER (Australian Government 2022) datasets (using NationalMap Database) determined that the nearest ESA is a Conservation category wetland associated with the Moore River approximately 15.5 m south of the NVCA. The proposed NVCA boundary was originally proposed to intersect the ESA but was subsequently realigned to avoid the Conservation category wetland associated with the Moore River. In addition, the NVCA was reduced in width from 20 m to 16 m wide where it traverses the Moore River as shown on Figure 2 to reduce the direct clearing impacts to the Moore River. ProTen has aimed to reduce the impacts of native vegetation clearing within the NVCA as far as reasonably practicable.

The proposed native vegetation clearing was assessed against the ten clearing principles described within *A guide to the assessment of applications to clear native vegetation Under Part V Division 2 of the Environmental Protection Act 1986* (DER 2014; Table 2). Based on the desktop environmental investigation, and the assessment against the ten clearing principles, the proposed clearing is not likely to be at variance with nine of the ten clearing Principles. The Project proposes to clear up to 0.47 ha of native riparian vegetation along the Moore River (watercourse) and therefore the clearing is at variance with the following 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.

ProTen will avoid clearing native vegetation where possible. If clearing is unavoidable, it will be kept to a minimum.

Given the findings of the above-mentioned assessment and considering ProTen will avoid clearing native vegetation where possible, no significant environmental impacts are expected as a result of the proposed clearing within the NVCA.

8.0 REFERENCES

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