

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number: CPS 8345/1

Permit Holder: Southern Forests Irrigation Co-operative Limited

Duration of Permit: 21 September 2019 to 21 September 2024

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purposes of geotechnical investigations.

2. Land on which clearing is to be done

Record Road Reserve (PINs 11326588, 11596620, 11531264), Glenoran

Road Reserve (PIN 11326599), Glenoran

State Forest 36, Glenoran

Lot 5643 on Plan 225699, Glenoran

Lot 5966 on Plan 225699, Glenoran

Lot 6290 on Plan 225724, Glenoran

Lot 6291 on Plan 225724, Glenoran

Lot 6297 on Plan 225724, Glenoran

Lot 6299 on Plan 225724, Glenoran

3. Authorised Activity

The Permit Holder must not clear more than 3 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8345/1.

4. Clearing not authorised

This Permit does not authorise the Permit Holder to clear trees that have a diameter at breast height of 50 centimetres or greater.

5. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

6. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II - MANAGEMENT CONDITIONS

7. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- (a) avoid the clearing of native vegetation;
- (b) minimise the amount of native vegetation to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

8. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

9. Vegetation management - watercourse

The Permit Holder shall not clear *riparian vegetation* within 5 metres of any *watercourse* or *wetland* within the area cross-hatched yellow on attached Plan 8345/1, with the exception of access tracks.

10. Fauna Management

- (a) The Permit Holder must engage a *fauna specialist* to inspect the area immediately prior to, and for the duration of clearing, for the presence of (*Pseudocheirus occidentalis*) western ringtail possum(s), (*Myrmecobius fasciatus*) numbat(s), and (*Setonix brachyurus*) quokka(s);
- (b) Clearing must cease in any area where fauna referred to in condition 10(a) above are identified until either:
 - (i) the western ringtail possum(s), numbat(s) and quokka(s) individual has been removed by a fauna specialist; or
 - (ii) the western ringtail possum(s), numbat(s) and quokka(s) individual has moved on from that area to adjoining suitable habitat.
- (c) Any western ringtail possum(s), numbat(s) and quokka(s) individuals removed in accordance with condition 10(b)(i) of this Permit must be relocated by a *fauna specialist* to suitable habitat.
- (d) Where fauna is identified under condition 10(a) of this Permit, the Permit Holder must provide the following records to the CEO as soon as practicable:
 - (iii) the number of individuals identified;
 - (iv) the date each individual was identified;
 - (v) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (vi) the number of individuals removed and relocated;
 - (vii) the date each individual was removed;
 - (viii) the date each individual was relocated;
 - (ix) the location where each individual was relocated to, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (x) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

11. Fauna management

(a) Clearing shall be conducted in a slow, progressive manner to allow fauna to move out of the clearing area.

12. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) at an optimal time within 12 months following completion of geotechnical investigations, *revegetate* and *rehabilitate* areas not required for future scheduled and approved development, by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land;
 - (ii) ripping the ground on the contour to remove soil compaction;
 - (iii) backfill test pits with excavated material; and
 - (iv) laying the vegetative material and topsoil retained under condition 12(a) on the cleared area(s).

PART III - RECORD KEEPING AND REPORTING

13. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iii) the date that the area was cleared;
 - (iv) the size of the area cleared (in hectares);
 - (v) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 7 of the Permit; and
 - (vi) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 8 of this Permit.
- (b) In relation to the revegetation and rehabilitation of areas pursuant to condition 12 of this Permit:
 - (i) the location of any areas revegetated and rehabilitated, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (ii) a description of the revegetation and rehabilitation activities undertaken; and
 - (iii) the size of the area revegetated and rehabilitated (in hectares).

14. Reporting

- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 13 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.
- (c) Prior to 21 June 2024, the Permit Holder must provide to the CEO a written report of records required under condition 13 of this Permit where these records have not already been provided under condition 14(a) of this Permit.

DEFINITIONS

The following meanings are given to terms used in this Permit:

dieback means the effect of Phytophthora species on native vegetation;

fauna specialist: means a person who holds a tertiary qualification specialising in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, and who holds a valid fauna licence or Ministerial Authorisation issued under the *Biodiversity Conservation Act 2016*;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

riparian vegetation has the meaning given to it in Regulation 3 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004;

watercourse has the meaning given to it in section 3 of the Rights in Water and Irrigation Act 1914; wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act* 2007; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned; and

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary.

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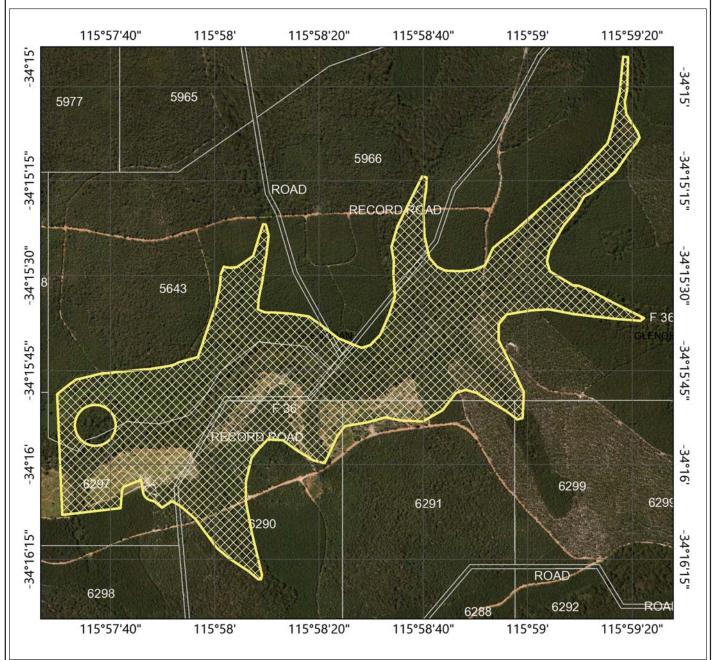
NATIVE VEGETATION REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

22 August 2019

Plan 8345/1





Legend CPS areas approved to clear Localities - DLI Roads - Minor Roads Cadastre (LGATE_218) - SLIP 0.5 0.26 0.5 Kilometers WGS_1984_Web_Mercator_Auxiliary_Sphere







Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 8345/1

Permit type: Purpose Permit

1.2. Applicant details

Applicant's name:

Southern Forests Irrigation Co-operative Limited

Application received date: 25 January 2019

1.3. Property details

Property:

Record Road Reserve (PINs 11326588, 11596620, 11531264)

Un-named Road Reserve (PIN 11326599)

State Forest 36

Lot 5643 on Plan 225699 Lot 5966 on Plan 225699 Lot 6290 on Plan 225724 Lot 6291 on Plan 225724 Lot 6297 on Plan 225724 Lot 6299 on Plan 225724

Local Government Authority:

Localities:

Shire of Manjimup

Glenoran

1.4. Application

Clearing Area (ha)

No. Trees

Method of Clearing Mechanical Removal Purpose category:

Geotechnical Investigations

1.5. Decision on application

Decision on Permit Application:

Decision Date:

22 August 2019

Granted

Reasons for Decision:

The clearing permit application was received on 25 January 2019 and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at variance to principle (f), may be at variance to principles (b) and (h), and is not likely to be at variance to any of the remaining clearing principles.

The Delegated Officer determined that the proposed clearing may increase the spread of weeds and dieback within the Donnelly State Forest. To minimise this impact, a condition has been placed on the permit requiring the implementation of weed and dieback management measures.

The Delegated Officer determined that the application area contains suitable habitat for priority and threatened fauna species. To address this matter, the clearing permit contains conditions requiring the Permit Holder to retain all trees with a diamater at breast height (DBH) of 500 millimetres or greater. The clearing permit also contain conditions requiring the Permit Holder to engage a fauna specialist to inspect the area and relocate any animals encountered during the activity of clearing. The permit requires that all clearing activities be undertaken in a slow, progressive manner.

The Delegated Officer noted that the application area includes Record Brook, and therefore the proposed clearing will involve the clearing of riparian vegetation. To minimise this impact, a watercourse management condition has been placed on the permit.

The Delegated Officer determined that given the investigative purpose of the clearing, areas not required for future scheduled and approved development will be required to be rehabilitated.

In determining to grant a clearing permit subject to conditions, the Delegated Officer considered that the proposed clearing is not likely to lead to an unacceptable risk to the environment.

2. Site Information

Clearing Description:

The application is for the proposed clearing of 3 hectares of native vegetation within a permit boundary of 183 hectares in the Donnelly State Forest, Glenoran, for the purpose

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of geotechnical investigations (Figure 1). The extent of clearing will be limited to access tracks, test pits and drill pads.

Vegetation Description

The vegetation within the application area is mapped as;

- Bevan 1 (BE1); consisting of tall open forest of Corymbia calophylla-Eucalyptus marginata subsp. marginata on uplands in perhumid and humid zones (Mattiske and Havel, 1998);
- Wheatley (WH1); consisting of tall open forest of Eucalyptus diversicolor-Corymbia calophylla on slopes and tall open forest of Eucalyptus patens on valley floor in perhumid and humid zones; and
- Yanmah (YN1); consisting of a mixture of tall open forest of Eucalyptus diversicolor and tall open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata over Agonis flexuosa and Agonis juniperina on valleys in perhumid and humid zones.

The detailed flora and vegetation survey over the application area identified the following vegetation associations (Strategen, 2019b);

- VT1 Eucalyptus diversicolor tall forest over Allocasuarina decussata, Bossiaea aquifolium and Trymalium odoratissimum thicket to scrub over an open native herbland and forbland including Tetrarrhena laevis and Pyrorchis nigricans on brown loam soils;
- VT2 Eucalyptus marginata and Corymbia calophylla forest with occasional Eucalyptus patens, Eucalyptus diversicolor and Banksia grandis over Allocasuarina decussata and Trymalium odoratissimum thicket to scrub over Thomasia foliosa, Pteridium esculentum and Bossiaea spp. low shrubland over an open native herbland and forbland including Hovea elliptica, Tetrarrhena laevis and Tetraria capillaris on brown loam soils;
- VT3 Eucalyptus diversicolor tall forest over Taxandria linearifolia thicket over Tremandra stelligera and Pteridium esculentum, Lepidosperma spp. and Juncus sp. low shrubland to sedgeland on brown loam soils along major creeklines;
- Regrowth (R) Previously cleared areas containing emergent Eucalyptus diversicolor over regrowth of Eucalyptus marginata and Corymbia calophylla; and
- Rehabilitated (RH) Potentially rehabilitated area containing Corymbia calophylla, Eucalyptus diversicolor and Eucalyptus marginata woodland over Bossiaea linophylla, Trymalium odoratissimum and Lasiopetalum floribundum scrub over an open low native herbland and forbland including Tetraria octandra and Drosera macrantha on brown loam soils.

Vegetation Condition

Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species (Keighery, 1994).

То

Excellent: Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species (Keighery, 1994).

Soil/Landform Type

The clearing area is mapped within the following land subsystem (Schoknecht et al., 2004):

- Wheatley Subsystem (Dwalganup): Shallow (20-40 metres) minor valleys with low sideslopes (5-20 per cent) and narrow swampy floors with a slightly incised stream channel. Soils are loamy gravels, sandy gravels and loamy earths;
- Bevan Subsystem (Dwalganup): Broad, gently sloping (3-15 per cent) divides on laterite, soils are sandy gravels and loamy gravels; and
- Yanmah Subsystem (Dwalganup): Shallow (5-20 metres) minor valleys, usually
 U-shaped with gentle sideslopes (3-10 per cent) and broad swampy floors. Soils
 are loamy gravels, sandy gravels and deep sands with non-saline wet soils on
 the valley floors.

Comments

The vegetation condition is derived from the detailed flora and vegetation assessment conducted over the application area by Strategen during 14 to 16 November 2016 and 4 to 6 October 2017 (Strategen, 2019b).

The local area referred to in the assessment of this application is defined as a 10 kilometre radius measured from the perimeter of the application area.

The local area retains approximately 72 per cent of native vegetation.

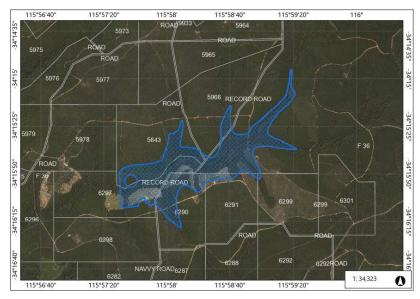


Figure 1: Application area (cross-hatched blue)



Figure 2. Representative photos of the application area, provided by Strategen (2019b).

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3. Minimisation and mitigation measures

The applicant has determined that 3 hectares of clearing is the maximum amount required to conduct geotechnical investigations. The proposed clearing for the geotechnical investigations will be low impact, and only involve clearing for access tracks (4.5 metres wide) and drill pads (20 by 25 metres) for drilling bores and digging test pits.

To minimise the impact to native vegetation, the applicant has provided the following management measures:

- Drill pads will not be cleared within 5 metres of Record Brook, to reduce the clearing of riparian vegetation;
- All potential habitat trees (diameter at breast height >500 millimetres) will be retained;
- The Stewart Tree and vegetation within a 100 metre buffer of this tree has been excluded from the application area;
- An area identified as old growth forest has been excluded from the application area.

4. Assessment of application against clearing principles

This application to clear up to 3 hectares of native vegetation within a permit boundary of 183 hectares, for the purpose of undertaking geotechnical investigations.

A review of available databases determined that five flora species of conservation significance have been recorded in the local area, including one Priority 1, one Priority 2, one Priority 3, one Priority 4 and one Threatened flora species. The record of the Priority 1 flora species, *Deyeuxia inaequalis*, is from within the application area (Western Australian Herbarium 1998-). The flora survey recorded a total of 103 native vascular taxa from 65 genera and 36 families (Strategen, 2019b). The survey also identified suitable habitat for two threatened flora species, *Caladenia harringtoniae* and *Caladenia winfieldii*; and two Priority 3 flora species, *Conospermum paniculatum* and *Pultenaea pinifolia* (Strategen, 2019b). However, no flora species of conservation significance were recorded during the survey (Strategen, 2019b). The survey also included a search of *Deyeuxia inaequalis* from the recorded location, and no evidence of this species could be found. It is noted that this species has previously been recorded on ridges and crests associated with granite, which is not a habitat type located within the application area. Given this, the record location of this species may be erroneous (Strategen, 2019b). The survey recorded numerous weed species from within the application area, including *Zantedeschia aethiopica* (Arum Lily) which is a Declared Pest in Western Australia pursuant to Section 22 of the *Biosecurity and Agriculture Management Act 2007*. Given that the application area is located entirely within the Donnelly State Forest, strict hygiene measures are required to minimise the impacts of the proposed clearing and limit the risk of weeds spreading.

As outlined in section 2, the survey identified three vegetation types (VTs) occurring within the application area, with two additional areas classified as 'Rehabilitated' and 'Regrowth'. The vegetation within the application area ranges from a completely degraded (Keighery, 1994) to excellent (Keighery, 1994) condition, with the majority in excellent (Keighery, 1994) condition. The areas in a completely degraded (Keighery, 1994) condition are limited to previously cleared roads. Vegetation within VT3 was identified as growing in association with Record Brook, and therefore is considered to be riparian. VT3 was recorded to be in an excellent (Keighery, 1994) condition and showed little sign of disturbance (Strategen, 2019b). To minimise the impacts to riparian vegetation, a condition will be placed on the permit which will only allow for the clearing of access tracks within 5 metres of Record Brook.

According to available databases, 246 fauna species have been recorded within the local area (Department of Biodiversity, Conservation and Attractions, 2007-). Of these, fourteen species are of conservation significance, including eight threatened fauna species; Forest Red-tailed Black Cockatoo (*Calyptorhynchus banksia* subsp. *naso*), Baudin's Cockatoo (*Calyptorhynchus baudinii*), Carnaby's Cockatoo (*Calyptorhynchus latirostris*), Mud Minnow (*Galaxiella munda*), Black-stripe Minnow (*Galexiella nigrostriata*), Numbat (*Myrmecobius fasciatus*), Western Ringtail Possum (*Pseudocheirus occidentalis*) and Quokka (*Setonix brachyurus*); one Priority 3 fauna species, Pouched Lamprey (*Geotria australis*); four Priority 4 fauna species, Quenda (*Isoodon fusciventer*), Water-rat (*Hydromys chrysogaster*), Western False Pipistrelle (*Falsistrellus mackenziei*) and Walpole Frog (*Geocrinia lutea*); and one fauna species listed as specially protected, Brush-tailed Phascogale (*Phascogale tapoatafa subsp. wambenger*) (Department of Biodiversity, Conservation and Attractions, 2007-). Based on the vegetation types recorded during the survey, three broad fauna habitat types have been identified from within the application area including:

- Karri Forest (VT1);
- Jarrah-Marri Woodland (VT2); and
- Riparian (VT3) (Strategen, 2019b).

Two additional areas, 'Emergent Jarrah and Marri with occasional Karri' and 'Structured regeneration of Jarrah, Marri and Karri with developed herbaceous understory', were also identified (Strategen, 2019b). These areas have been previously cleared and show signs of good regrowth from natural revegetation and/or deliberate rehabilitation efforts. A level 2 fauna survey has recently been conducted for the wider Southern Forest Irrigation Scheme area during February and March 2019. The report is still in draft and has not been finalised, however it is noted that two conservation significant fauna species, the Forest Red-tailed Black Cockatoo and the Western Ringtail Possum (dreys only) were recorded from within the application area (360 Environmental, 2019).

An area of old growth forest, and one large karri tree known as the Stewart Tree were recorded during the survey. The area of old growth forest and the Stewart Tree, including the vegetation within a 100 metre radius of this tree, has been excluded from the application area and will not directly be impacted by the proposed clearing (DPIRD, 2019; Strategen 2019a).

Based on the above, the proposed clearing is not likely to comprise a high level of biological diversity. However, given the application area is located within the Donnelly State Forest, near a minor perennial watercourse, and the majority of the application area is in an excellent (Keighery, 1994) condition, it is likely to comprise areas of significant habitat for fauna. Based on the local records of conservation significant fauna species, the application area may be utilised for dispersal, foraging, breeding and/or refuge. Significant fauna habitat features within the application area includes tree hollows, fallen hollow logs and riparian vegetation along Record Brook. Given the flexible and low impact nature of the proposed clearing for the purpose of geotechnical

investigations, potential impacts to threatened fauna species may be minimised by the implementation of fauna management conditions including the avoidance of habitat trees (DBH >500 millimetres), and limiting clearing within riparian vegetation.

The application area is not likely to comprise the whole or part of, or is necessary for the maintenance of a TEC. There are no Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) within the application area, or in the local area. The nearest ecological community is the Scott River Ironstone Association TEC, which is located over 35 kilometres from the application area. The survey did not identify the vegetation types within the application area to represent any PECs or TECs (Strategen, 2019b).

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 Warren IBRA bioregion retains approximately 79 per cent of the pre-European extent, and the mapped vegetation complexes Bevan 1 (BE1), Wheatley (WH1) and Yanmah (YN1) vegetation complexes retain approximately 80 to 81 percent of their pre-European extents (Government of Western Australia, 2018a; Government of Western Australia, 2018b). Given the mapped vegetation complexes retain over 30 per cent of native vegetation, the application area is not considered to be significant as a remnant of native vegetation in an extensively cleared landscape.

Record Brook, a minor perennial watercourse intersects the application area and it is understood that multiple creek crossings are required to facilitate the proposed geotechnical investigations. Given this, vegetation growing in association with this watercourse is proposed to be cleared. Potential impacts to Record Brook may be minimised by the implementation of a watercourse management condition, limiting the clearing to access tracks within 5 metres of Record Brook.

The application area is located within Donnelly River System Surface Water Area, as proclaimed under the *Rights in Water Irrigation Act 1914* (RIWI Act), and within the 'Priority not assigned' Donnelly River Water Reserve Public Drinking Water Source Area (PDWSA). Given the relatively small size of the application area, and the low impact nature of the clearing for access tracks, drill pads and test pits, the proposed clearing is not likely to contribute to or cause land degradation, deteriorate the quality of surface or ground water, and cause or exacerbate flooding.

Given the above, the proposed clearing is considered to be at variance to principle (f), may be at variance to principle (b) and (h), and is not likely to be at variance to the remaining principles.

5. Planning instruments and other relevant matters

The broader Southern Forests Irrigation Scheme is currently under assessment by the Environmental Protection Authority. The level of assessment has been set as a Public Environmental Review. The geotechnical investigations are required to inform the construction of the proposed dam structure.

In accordance with Figure 1 in the Water Quality Protection Note No. 25, the Donnelly River Water Reserve 'Priority not assigned' PDWSA is considered as a Potential P1 area. The purpose of geotechnical investigations is considered to be 'compatible with conditions' within a Priority 1 PDWSA (DWER, 2019).

It is noted that the applicant has applied for a permit to 'obstruct or interfere' bed and banks in accordance with the RIWI Act. It is understood that this application is still under assessment by the Department of Water and Environmental Regulation.

No Aboriginal Sites of Significance are mapped within the application area.

The clearing permit application was advertised on the Department of Water and Environmental Regulation's website on 11 March 2019, inviting submissions from the public within a 21 day period. The clearing permit application was re-advertised on 16 July 2019 following a change in application area. No submissions were received in relation to this application.

6. References

- 360 Environmental (2019). Southern Forest Irrigation Scheme Detailed / Level 2 Terrestrial Vertebrate Fauna Survey. Draft report for Southern Forest Irrigation Cooperative Limited, prepared by 360 Environmental, Perth, July 2019.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2007-). NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. http://naturemap.dpaw.wa.gov.au/. Accessed April 2019.
- Department of Primary Industries and Regional Development (2019). Additional information provided in relation to amending the clearing permit application area CPS 8345/1. Received 12 June 2019 (DWER Ref A1805122).
- Department of Water and Environmental Regulation (DWER) (2019). Internal Advice received from Water Source Protection Section and South West Region Branch.
- Government of Western Australia (2019a). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth, https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics.
- Government of Western Australia (2019b). 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.
- 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.
- 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.

Strategen (2019a). Southern Forests Irrigation Scheme Stage 2 Geotechnical Investigation Native Vegetation Clearing Permit Application Supporting Document. Report for the Department of Primary Industry and Regional Development, prepared by Strategen Environmental Consultants, Perth, January 2019. (DWER Ref: A1759835).

Strategen (2019b). Southern Forests Water Futures Project Detailed flora and vegetation survey. Strategen Environmental Consultants, Perth, May 2019. (DWER Ref: DWERDT171451).

Western Australian Herbarium (1998-). Florabase – The Western Australian Flora. Department of Biodiversity, Conservation and Attractions. http://florabase.dpaw.wa.gov.au/. Accessed April 2019.

7. GIS databases

- Aboriginal Sites of Significance
- DBCA Managed Estate
- Hydrography, hierarchy
- Hydrography, linear
- SAC Bio Datasets

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