



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8702/1
Permit Holder:	Water Resources Ministerial Body
Duration of Permit:	21 February 2020 to 21 February 2025

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 is for the purpose of a groundwater drain for dewatering Reserve R10407.

2. Land on which clearing is to be done

Lot 11860 on Deposited Plan 145020, Cancanning (Reserve R10407).

3. Area of Clearing

The Permit Holder must not clear more than 0.16 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8702/1.

4. 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.

5. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the right to access land under the *Land Administration Act 1997* or any other written law.

PART II – MANAGEMENT CONDITIONS

6. 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:

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

7. 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*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;

- (b) ensure that no known *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.

PART III – RECORD KEEPING AND REPORTING

8. Record keeping

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (a) 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 or decimal degrees;
- (b) the date(s) that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 6 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 7 of this Permit.

9. Reporting

The Permit Holder must produce the records required under condition 8 of this Permit when required by the *CEO*.

DEFINITIONS

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

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

dieback means the effect of *Phytophthora* species on native vegetation;

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;

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 Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

22 January 2020

Plan 8702/1

117°37'21.000"E

117°37'30.000"E

33°6'45.000"S

33°6'45.000"S

33°6'54.000"S





33°6'54.000"S



117°37'21.000"E

117°37'30.000"E

Legend

-  CPS areas approved to clear
-  Cadastre - LGATE 218
-  Local Government Authorities
-  Road Centrelines



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Gannaway

2020.01.22

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Officer delegated under section 20 of the
Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA



1. Application details

1.1. Permit application details

Permit application No.: 8702/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Water Resources Ministerial Body
Application received date: 16 October 2019

1.3. Property details

Property: Lot 11860 on Deposited Plan 145020, Cancanning.
Local Government Authority: Shire of Wagin

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.16	NA	Mechanical removal	Groundwater drain for dewatering reserve

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 22 January 2020

Reasons for Decision:

The clearing permit application received on 16 October 2019 has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. The proposed clearing of up to 0.16 hectares within Lot 11860 is vested in the Water Resources Ministerial Body for the purpose of Water Supply and is becoming degraded due to dryland salinity. This has contributed to an appreciable decline in vegetation condition over the past ten years. The intent of the proposed construction of a drain through Lot 11860 is to facilitate de-watering of saline groundwater to improve the vegetation condition.

It has been concluded that the proposed clearing may be at variance with Principles (a) and (e), and is not likely to be at variance with the remaining Principles.

Almost the entire application area is located within the mapped Priority Ecological Community (PEC) (Priority 3); Eucalypt woodlands of the Western Australian Wheatbelt and is considered significant as a remnant of native vegetation in an area that has been extensively cleared. Given the degraded state of the vegetation within the application area, the relatively small size of clearing and the purpose of clearing to improve vegetation condition, key attributes of the PEC are unlikely to be impacted and the values of the remnant vegetation unlikely to be compromised.

The proposed groundwater drain will incorporate a minor tributary of the upper Buchanan River that drains Lot 11860 to the north. Drainage will be controlled and managed utilising a detention basin located approximately 100 metres downstream of the Lot, and no impacts to the watercourse downstream of this point are anticipated.

In order to minimise the impact of the clearing for drain construction, the Delegated Officer has imposed weed and dieback management condition. The Delegated Officer determined that, given the relatively small extent and purpose of the proposed clearing, the clearing is not likely to lead to an unacceptable risk to the environment.

2. Site Information

Clearing Description: The Water Resources Ministerial Body have applied for a Purpose Permit to clear up to 0.16 hectares of native vegetation within Lot 11860. Construction of a groundwater drain is required to de-water the reserve to allow recovery of trees and the re-establishment and promotion of native vegetation. Discharge will be managed, with the proposed drain discharging to the north of Lot 11860. The drain will flow north to a purpose-built detention basin and diversion weir located well outside of the Lot. The detention basin downstream of the reserve will temporarily store saline discharge to prevent saline flow through the downstream environment. Clearing for the drain through Lot 11860 will be approximately 195 metres long and 8.5 metres wide, and at a depth of between 1.5 and 2.0 metres.

Vegetation Description: The vegetation mapped within the application area consists of Beard association 1023, which is described as a medium woodland; York gum, wandoo and salmon gum (*Eucalyptus salmonophloia*) (Shepherd, et al. 2001) (Figure 1).



Figure 1: Vegetation present within the application area (Department of Water and Environmental Regulation (DWER), 2019).



Figure 2: Spiny Rush (*Juncus acutus*) and native vegetation in decline within the application area (DWER, 2019).

Vegetation Condition:

The vegetation condition within the application area was determined by a site inspection from DWER (2019). Most of the vegetation along the proposed drain alignment is dead, or are weeds (DWER, 2019). Photographs of the application area show vegetation in a degraded to good state based on the condition scale of Keighery (1994) (**Figure 1** and **Figure 2**). The introduced Spiny Rush (*Juncus acutus*) has colonised the wetter and more waterlogged areas (**Figure 2**). An assessment of aerial imagery by DWER (2019) showed successive degradation of the Lot since 2006, with bare areas becoming more extensive.

Soil Description:

A site inspection undertaken by officers from the Commissioner of Soil and Land Conservation (CSLC) identified the soils mapped within the application area as the Doglocking 2 Subsystem (CSLC, 2019). This subsystem is described as having with grey, deep and shallow, sandy duplex soils (often with alkaline subsoils). DWER (2019) discuss a perched water table on very firm clay base and a clay/sand interface with a sand seam intruding from the south.

Comments:

Assessment of the environmental values of the application area was considered at a local scale given the minimal extent of proposed clearing. That is, within a 10 metre radius of the application area.

3. Minimisation and mitigation measures

Clearing of native vegetation for a groundwater drain is required. To intercept saline groundwater a drain of up to two metres depth is required. Various alternatives were considered prior to the decision to install a groundwater drain. To de-water the topsoil only, a shallower drain of 0.5 metres depth could be installed. However, this strategy would not provide a sufficient de-watered profile to allow trees to recover and, secondly, recovery would be limited in area (DWER, 2019). Another alternative explored was the re-furbishment of an original well, and the installation of pumping equipment to pump saline water from that location. However, that strategy would not intercept the more extensive shallow discharge (as well as requiring ongoing maintenance) (DWER, 2019).

The proposed groundwater drain parallel to Lot 11860 western boundary will be located outside of the reserve cadastral boundary to reduce impacts to the reserve.

Once the groundwater drain is operable and the soil profile is no longer saturated, vegetation is likely to re-establish as there appears to be sufficient existing understorey vegetation in surrounding areas. Natural leaf fall and accumulation of organic matter should facilitate re-establishment in degraded areas. Available topsoil will be spread over spoil banks of the drain to encourage vegetative growth, and to reduce erosion (DWER, 2019).

4. Assessment of application against clearing principles

The clearing application is located in the Shire of Wagin, within the Avon Wheatbelt Bioregion and the Katanning sub-region of Thackway and Cresswell (1995) within the intensive land-use zone. The 0.16 hectare application area dissects the 7.8 hectare Lot 11860. Lot 11860 is also identified as Crown Reserve R10407 and vested in the Water Resources Ministerial Body for the purpose of Water Supply. The reserve originally had a well to supply water for horses along the Dongolocking Road. Remaining infrastructure comprises a shallow soak and tank stand.

According to available databases, no Threatened or Priority flora taxa have been recorded within the application area. Two Threatened flora species and 12 Priority flora species have been recorded within the local area. The closest of these, *Daviesia crassa* (P4) was located approximately 3.8 kilometres east of the application area, with *Pultenaea indira* subsp. *pudoides* (P2) and *Polianthion biloculare* (P4) located approximately 3.9 kilometres west of the application area. *Melaleuca genialis* (P2) is a local endemic and has been recorded approximately 7.8 kilometres north-east of the application area. The two threatened flora species recorded within the local area were *Hibbertia priceana* (listed as Endangered under the *Biodiversity Conservation Act 2016* (BC Act) and *Environment Protection and Biodiversity Conservation Act 1999* EPBC Act)) and *Calectasia pignattiana* (listed as Vulnerable under the BC Act and EPBC Act), and were recorded approximately 3.6 kilometres to the north.

No Threatened, Priority, or Specially Protected fauna species have been recorded from within the application area. One Threatened species, one Priority 3, four Priority 4, and two Specially Protected fauna species have been recorded within the local area. The closest of these was the Specially Protected ('conservation-dependant') Red-tailed Phascogale (*Phascogale calura*), located one kilometre north-west from the application area, with the Western Brush Wallaby (P4) recorded 1.5 kilometres to the south.

The Red-tailed Phascogale's preferred habitat is dense *Allocasuarina* woodlands, with population numbers greatest in habitat that has been unburnt for 20 years or more (Kitchener 1981; Maxwell *et al* 1996). Preferred habitat is not present over the application area. The one threatened fauna species recorded within the local area was the Malleefowl (*Leipoa ocellata*); recorded on 12 occasions. The closest of these records was located approximately 6.9 kilometres to the north-east within the Dongolocking Nature Reserve where the majority of Malleefowl records in the local area were located. The Malleefowl is a ground-dwelling bird that builds large and distinctive mounds of soil and leaf litter within which its eggs are incubated. It requires long unburnt and dense vegetation that is not present within the application area.

There are no recognised ecological linkages within close proximity to the application area. However, roadside vegetation along Dongolocking Road provides a vegetated corridor from Crown Reserve R10407, within which the application area is located, to other remnant vegetation to the east and west including an un-named reserve vested in the Conservation Commission of WA.

The majority of the application area is located within the mapped Eucalypt woodlands of the Western Australian Wheatbelt, a Priority Ecological Community (PEC) (Priority 3). The Eucalypt woodlands of the Western Australian Wheatbelt is also a Threatened Ecological Community (TEC) listed as Critically Endangered under the EPBC Act. Given the degraded state and vegetation type present, it is unlikely that the key attributes of the PEC or Commonwealth listed TEC will be impacted. No state listed TEC's are recorded within the application area.

The application is unlikely to support high levels of species diversity, ecosystem diversity or genetic diversity due to its degraded condition, lack of priority species recorded, and significant areas of analogous vegetation in good or better condition elsewhere in the local area. However, noting the presence of a degraded portion of a PEC and Commonwealth listed TEC, the proposed clearing may be at variance with Principle (a).

Given the small scale of the clearing, the degraded nature of the vegetation, and lack of threatened or priority species recorded the area proposed to be cleared is unlikely to comprise significant habitat for fauna, or be necessary for the continued existence of threatened flora, and is therefore not likely to be at variance with Principles (b) and (c).

The National Objectives and Targets for Biodiversity Conservation (2001-2005) include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre 1750 (Commonwealth of Australia 2001). The application area is located within the intensive landuse zone of the Avon Wheatbelt Bioregion that has been extensively cleared, with 18.5 per cent remaining and just 1.4 per cent represented in DBCA managed lands (Government of Western Australia 2018). The represented vegetation association over the application area has 10.79 per cent remaining, and just 0.78 per cent represented in DBCA managed lands (Government of Western Australia 2018). Within the local area of 10 kilometre radius 18.4 per cent remnant vegetation remains. The Avon Wheatbelt is extensively cleared and the application area is located within a 7.8 hectare Crown reserve that is considered a significant remnant within an area that has been extensively cleared. However, noting the proposed clearing contains 0.16 hectares of degraded vegetation within a broader 7.8 hectare reserve, and the purpose of the clearing is likely to improve the quality of native vegetation, the proposed clearing may be at variance to Principle (e).

Although the proposed clearing is located within a bioregion that has been extensively cleared, there are 24 individual reserves managed by DBCA for conservation within the local area. These include 10 individual parcels comprising the Dongolocking Nature Reserve, as well as Concaring Nature Reserve, East Collanilling Nature Reserve, Buchanan Nature Reserve, Hurdle Creek Nature Reserve, and Cronin Nature Reserve. The nearest conservation reserve to the application area is Vagg Nature Reserve approximately one kilometre to the south, and the proposed clearing is therefore not likely to be at variance with Principle (h).

The application area is located outside of any *Country Areas Water Supply Act 1947* reserves or Public Drinking Water Source Areas proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). Crown Reserve R10407 is vested in the Water Resources Ministerial Body for the purpose of Water Supply. Current infrastructure comprises a shallow soak and old tank stand. The application area is situated within the Hardy Estuary / Blackwood River Catchment. Three Geomorphic Wetlands (Wheatbelt) (Blackwood EA006) have been mapped within one kilometre of the application area, with numerous Geomorphic Wetlands (Wheatbelt) mapped over the local area. No wetlands have been mapped within the application area, however, a minor ephemeral watercourse has been mapped within the application area, exiting to the north for approximately 55 metres. This comprises a minor tributary of the upper Buchanan River and will comprise the groundwater drain. Noting the proposed clearing does not include riparian vegetation, the proposed clearing is not likely to be at variance with Principle (f).

The application area is located in a moderate to high salinity risk area. Lot 11860 is subject to hillside seepage from two sources; a perched water table to the east and a sand seam to the south (DWER, 2019). Hillside seepage is particularly saline and has caused appreciable decline in vegetation condition over the past ten years. Seepage has been measured at 77m²/cm, with salinity at the soak measured from 7m²/cm to 19m²/cm (DWER 2019). Given the current saline water quality of both seepage and groundwater, and the likely benefits of the proposal, proposed clearing is not likely to be at variance with Principle (i).

Apart from the effects of saline hillside seepage, waterlogging over Lot 11860 is exacerbated by run-off from Dongolocking Road immediately to the south. The proposed groundwater drain will mitigate the risk of flooding by controlling drainage from the Lot. Discharge will be managed, with the drain following the reserve's western boundary to the north located outside of the Lot boundary. The drain will lead to a detention basin and diversion weir also located outside of the Lot. The detention basin downstream of the Lot will temporarily store saline discharge to prevent saline flow through the downstream environment (DWER, 2019). The proposed clearing is therefore not likely to be at variance with Principle (j).

The application area's geology is of granite and gneiss and is located within the Doglocking 2 Subsystem comprising rises and occasional low hills. Soils are mapped as the Doglocking Subsystem with grey, deep and shallow, sandy duplex soils (often with alkaline subsoils), as well as sandy-gravels. DWER (2019) discuss a perched water table on very firm clay base and discuss a clay/sand interface with a sand seam from the south. Drainage works and salinity mitigation for Lot 11860 have been assessed by an officer of the CSLC and the proposed clearing is not likely to lead to appreciable land degradation. The proposed clearing is not likely to be at variance with Principle (g).

Planning instruments and other relevant matters

Lot 11860 (Crown Reserve R10407) is vested in the Water Resources Ministerial Body for the purpose of Water Supply.

The CSLC advised that they had no objections to the proposed clearing (CSLC, 2019). A *Notice of Intent to Drain* has been submitted to the CSLC for assessment with no objections raised (CSLC, 2020).

Works are not within a recognised waterway so a *Beds and Banks Permit* issued under the RIWI Act is not required.

No Aboriginal sites of significance have been identified within the application area, nor within the local area.

The application was advertised on the DWER website for a 14 day public comment period on 03 December 2019. No public submissions were received in relation to this application.

The Shire of Wagin advised they had no objections relating to the proposed clearing (Shire of Wagin, 2019).

5. References

- Commissioner of Soil and Conservation (2019) Land Degradation Assessment Report for Clearing Permit Application CPS 8702/1. Department of Primary Industry and Regional Development (DPIRD) (DWER Ref: A1857709).
- Commissioner of Soil and Conservation (2020) Subsequent advice for Clearing Permit Application CPS 8702/1. Department of Primary Industry and Regional Development (DPIRD) (DWER Ref: A1859880)
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Water and Environmental Regulation (DWER) (2019) R10407 AA DAM 360 Drainage Assessment. 19 September 2019. Wheatbelt Hydrology. Unpublished site assessment report undertaken by DWER and Department of Primary Industries and Regional Development (DPIRD) (DWER Ref: A1845817).
- Government of Western Australia (2018) 2017 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of December 2017. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Kitchener, D.J. (1981) Breeding, diet and habitat preference of *Phascogale calura* (Gould, 1844) (Marsupialia: Dasyuridae) in the southern wheat belt, Western Australia. Records of the Western Australian Museum. 9:173-186.
- Maxwell, S., Burbidge A.A. and Morris, K. (1996). The 1996 Action Plan for Australian Marsupials and Monotremes. Wildlife Australia, Environment Australia.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Shire of Wagin (2019) Advice received for Clearing Permit Application CPS 8702/1. Shire of Wagin (DWER Ref: A1852853).
- Thackway, R and Cresswell, I.D. (eds) (1995) An interim biogeographical regionalisation of Australia. Australian Nature Conservation Agency (now Department of Environment and Energy), Canberra.

GIS Databases:

- Aboriginal Sites of Significance
- Department of Biodiversity, Conservation and Attractions, Managed Tenure
- Geomorphic Wetlands Management Category
- Hydrography Linear – Linear
- Hydrography WA 250K – Surface Water Lines
- IBRA Australia
- Land Degradation Hazards
- SAC bio datasets
- Threatened and Priority Fauna Data November 2019
- TPFL Data November 2019
- WA Herb Data November 2019
- WA TEC-PEC Boundaries