



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: 8692/1

File Number: DWERVT3553

Duration of Permit: From 17 January 2020 to 17 January 2025

### PERMIT HOLDER

City of Mandurah

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 1975 on Plan 18106, Erskine

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.082 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8692/1.

### CONDITIONS

#### 1. 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.

#### 2. 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 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.

#### 3. 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.

#### 4. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, 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 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 1 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 2 of this Permit.

#### 5. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 4 of this Permit, when requested 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 Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



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Samara Rogers  
MANAGER  
NATIVE VEGETATION REGULATION

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

20 December 2019



# Plan 8692/1

115°42'19.800"E

115°42'25.200"E

115°42'30.600"E

32°33'5.400"S

32°33'10.800"S

32°33'16.200"S

32°33'5.400"S

32°33'10.800"S

32°33'16.200"S






115°42'19.800"E

115°42'25.200"E

115°42'30.600"E

## Legend

-  CPS areas approved to clear
-  Local Government Authorities
-  Road Centrelines



0 25 50 75 100 m



*Samara Rogers*

Samara Rogers

2019.12.20 09:22:35

+08'00'

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.: 8692/1  
Permit type: Area Permit

### 1.2. Applicant details

Applicant's name: City of Mandurah  
Application received date: 8 October 2019

### 1.3. Property details

Property: Lot 1975 on Plan 18106, Erskine  
Local Government Authority: City of Mandurah  
Localities: Mandurah

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
0.082		Mechanical	Miscellaneous

### 1.5. Decision on application

Decision on Permit Application: Granted  
Decision Date: 20 December 2019

Reasons for Decision: The clearing permit application 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 with principle (f) and is not likely to be at variance with the remaining clearing principles.

Through the assessment, it was determined that the application area may increase the risk of weeds and dieback. A weed and dieback management condition has been placed on the clearing permit to minimise the risk of weeds and dieback spreading.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

## 2. Site Information

**Clearing Description:** The application is for the proposed clearing of 0.082 hectares of native vegetation within Lot 1975 on Plan 18106, Erskine, for the purpose of Typha (*Typha orientalis*) control to improve water quality.

**Vegetation Description** The vegetation within the application area is mapped within the Swan Coastal Plain vegetation complex Cottesloe Complex – Central and South, described as a mosaic of woodland of *Eucalyptus gomphocephala* (Tuart) and open forest of *Eucalyptus gomphocephala* (Tuart) – *Eucalyptus marginata* (Jarrah) – *Corymbia calophylla* (Marri); closed heath on the Limestone outcrops (Hedde et al., 1980).

Photographs supplied by the applicant indicate the vegetation within the application area consists almost entirely of Typha along with some native understorey grass and weed species.

**Vegetation Condition** The condition of the vegetation within the application area is considered to be 'Degraded' (Keighery, 1994), defined as: Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management (Keighery, 1994).

The vegetation condition was based on a review of available aerial imagery and photographs supplied by the applicant.

**Soil Type** The soil type within the application area is mapped as Spearwood wet, swamp Phase: Swamp (DPIRD, 2017).

**Local Area** The local area referred to in the assessment of this application is defined as a 10 kilometre (km) radius from the application area.



Figure 1. Application area (outlined in blue).



Figure 2. Photographs of the application area provided by the applicant (City of Mandurah, 2019).

### 3. Assessment of application against clearing principles and planning instruments and other matters

*Typha orientalis* (*Typha*) is a type of sedge that is native to Western Australia. However, this species is capable of aggressive invasions that can transform ecosystems unless it is actively managed (Western Australian Herbarium, 2019). Without management, *Typha* can develop quickly into a monoculture and cover an entire waterbody. Given the application area comprises predominantly of *Typha* and its tendency to colonise ecosystems, in this case Southmead Green Lake, it is not anticipated that the application area comprises suitable habitat for any conservation significant flora species. While *Typha* is problematic and invasive, it may also provide habitat for fauna such as native frogs and waterbirds. However, previous advice from Department of Biodiversity, Conservation and Attractions (DBCA) in relation to similar applications advised that *Typha* can choke up waterways and reduce the open mud flat habitat that is vital for wader and waterbird species. Additionally, while *Typha* may provide habitat for native fauna, this species can also provide habitat for non-native and feral animals which can predate on native fauna (DBCA, 2019). Considering this, while the proposed clearing may result in the loss of suitable habitat for some fauna species, the proposed clearing is not likely to result in the loss of significant habitat for fauna species and the application area is not likely to comprise a high level of biodiversity. The application area is not adjacent to any conservation reserves and is not included in any ecological linkages between areas of conservation value.

A total of 50 threatened fauna species have been recorded in the local area, comprising 41 fauna species protected under international agreement, eight Priority fauna and one specially protected fauna species (DBCA, 2007-). No occurrences of the above species have been recorded within the application area, however two species protected under international agreement and one specially protected species have been recorded within Lot 1975 on Plan 18106, Mandurah. As mentioned above, given the application area comprises of *Typha* which has a tendency to colonise ecosystems and reduce suitable fauna habitat, the proposed clearing is not anticipated to result in the loss of significant habitat for fauna species.

A review of available databases determined that 22 flora species of conservation significance have been recorded in the local area, comprising three Priority 2 flora species, nine Priority 3 flora species, seven Priority 4 flora species, and three Threatened flora species (Western Australian Herbarium, 1998-). No occurrences of the above species have been recorded within the application area or adjacent vegetation. As discussed above, it is not anticipated that the application area comprises suitable habitat for any conservation significant flora species, as *Typha* develops into a monoculture when left uncontrolled.

A review of available databases determined that the nearest State listed threatened ecological community (TEC), 'Herb rich saline shrublands in clay pans', occurs approximately 8.5 kilometres south-east of the application area. A further two priority ecological communities (PECs) and one TEC occur in the local area. Due to the distance to the TECs and PECs, the proposed clearing is not likely to have a significant impact on these communities. Further, the application area is not likely to comprise the whole or part of, or be necessary for the maintenance of, a TEC.

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 Environmental Protection Authority (EPA) recognises the Perth Metropolitan Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2008). The application area is located within the mapped extent of the Perth Metropolitan Region Scheme and is situated within the Swan Coastal Plain vegetation complex Cottesloe Complex – Central and South. This vegetation complex retains approximately 32.16% of pre-European clearing extent (Government of Western Australia, 2018). Noting that the vegetation complex retains greater than the EPA's recommended threshold for constrained areas, and considering the nature of the proposed clearing, the application area is not considered as a significant remnant of native vegetation in an area that has been extensively cleared.

The application area lies within two wetlands: the Peel Harvey Estuary system and an unnamed multiple use wetland within the Geomorphic Wetlands of the Swan Coastal Plain system. Additionally, *Typha* within the application area comprises part of the riparian community growing in Southmead Green Lake in association with two stormwater inlets. Therefore, the vegetation proposed to be cleared is growing in, or in association with, an environment associated with a watercourse or wetland and the proposed clearing is at variance to principle (f). As discussed above, the proposed clearing is for the purpose of controlling *Typha* due to its invasive nature and adverse impacts on waterways. Further, the applicant proposes to retain 20% *Typha* coverage and maintain this every two to three years (City of Mandurah, 2019). Given the application area comprises monocultures of *Typha*, which are anticipated to regrow and require long-term management to control, the proposed clearing is not anticipated to result in any long-term impact to ecological values provided by the riparian vegetation communities associated with the wetlands or Southmead Green Lake.

Based on the mapped land degradation risk, the application area has a relatively low likelihood of water erosion, flooding, wind erosion and salinity. The application area is mapped at upwards of 50 per cent, moderate to very high risk, for waterlogging and subsurface acidification that may lead to land degradation. However, *Typha* will only be reduced to 20% coverage, which will be maintained every two to three years following *Typha* regrowth (City of Mandurah, 2019). Further, revegetation of the littoral zone will be conducted following *Typha* reduction and weed control (City of Mandurah, 2019), which would be expected to aid in stabilising the embankments, preventing flooding and reducing waterlogging, in conjunction with *Typha* regrowth. Advice received from the DBCA (2019) advised that the biomass from crushed or slashed *Typha* has also been found to assist in neutralising acidity on re-wetting in areas that are prone to acid sulphate soils (DBCA, 2019). Given the above, that the vegetation is in 'Degraded' (Keighery, 1994) condition, and that the extent of the proposed clearing is small, the proposed clearing is not likely to cause appreciable land degradation or to cause, or exacerbate, the incidence or intensity of flooding.



The application area is within the South West Coastal Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (the RIWI Act). The removal of Typha has the potential to increase sedimentation and turbidity in Southmead Green Lake, thereby possibly impacting surface water quality. However, the purpose of the proposed clearing is to improve water quality through reducing Typha cover. Further, quarterly water monitoring programs will be implemented under the Southmead Green Lake Management Plan, with the purpose of improving water quality (City of Mandurah, 2019). Noting this and that the clearing does not intersect with any sources of natural surface water, it is not likely that the proposed clearing will cause deterioration in the quality of surface or underground water.

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

#### **Planning instruments and other relevant matters.**

The clearing permit application was advertised on the Department of Water and Environmental Regulation's website on 3 December 2019, with a 7 day submission period. No submissions were received in relation to this application.

#### **4. References**

- City of Mandurah (2019). Clearing permit application and supporting documents for CPS 8692/1. DWER Ref: DWERTDT209133.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- Department of Biodiversity, Conservation and Attractions (2007-). NatureMap: Mapping Western Australia's Biodiversity.
- Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>.
- Department of Biodiversity, Conservation and Attractions (2019) DBCA Wetlands advice in relation to CPS 8394/1. DWER ref: A1808046.
- Department of Primary Industries and Regional Development (DPIRD) (2017). NRInfo Digital Mapping. Accessed at <https://maps.agric.wa.gov.au/nrm-info/> Accessed July 2019. Department of Primary Industries and Regional Development. Government of Western Australia.
- Government of Western Australia (2018) 2018 South West Vegetation Complex Statistics Report – Full Report. Current as of March 2019. Remote Sensing and Spatial Analysis Section. Geographic Information Services and Corporate Records Branch. Department of Biodiversity, Conservation and Attractions.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Western Australian Herbarium (1998-) FloraBase - The Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <http://florabase.dpaw.wa.gov.au/> (accessed November 2019).
- Western Australian Herbarium (2019) Florabase – The Western Australian Flora. Typha orientalis, Bulrush. Available from: <https://florabase.dpaw.wa.gov.au/browse/profile/99>.

#### GIS Databases:

- Aboriginal Sites of Significance
- DBCA Managed Estate
- Directory of Important Wetlands
- Geomorphic Wetlands Swan Coastal Plain
- Hydrography, hierarchy
- Hydrography, linear
- Land Degradation datasets
- NatureMap
- Perth Groundwater Mapping (DWER)
- SAC Bio Datasets
- Soils, Statewide
- TPFL Data
- Vegetation Complexes Swan Coastal Plain
- WA Herbarium Data
- WA TEC/PEC Boundaries