



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 8982/1

File Number: DWERT6176

Duration of Permit: From 11 November 2020 to 11 November 2022

### PERMIT HOLDER

City of Bunbury

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 236 on Plan 2642, South Bunbury

Lot 240 on Plan 2642, South Bunbury

Lot 244 on Plan 2642, South Bunbury

Lot 247 on Plan 2642, South Bunbury

Lot 248 on Plan 2642, South Bunbury

Lot 249 on Plan 2642, South Bunbury

Lot 1 on Diagram 42436, South Bunbury

Lot 5354 on Deposited Plan 215092, South Bunbury

Lot 5355 on Deposited Plan 215092, South Bunbury

Lot 75 on Plan 2642, South Bunbury

Lot 28 on Diagram 25102, South Bunbury.

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.71 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8982/1.

### 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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Mathew Gannaway  
MANAGER  
NATIVE VEGETATION REGULATION

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

19 October 2020



# Plan 8982/1

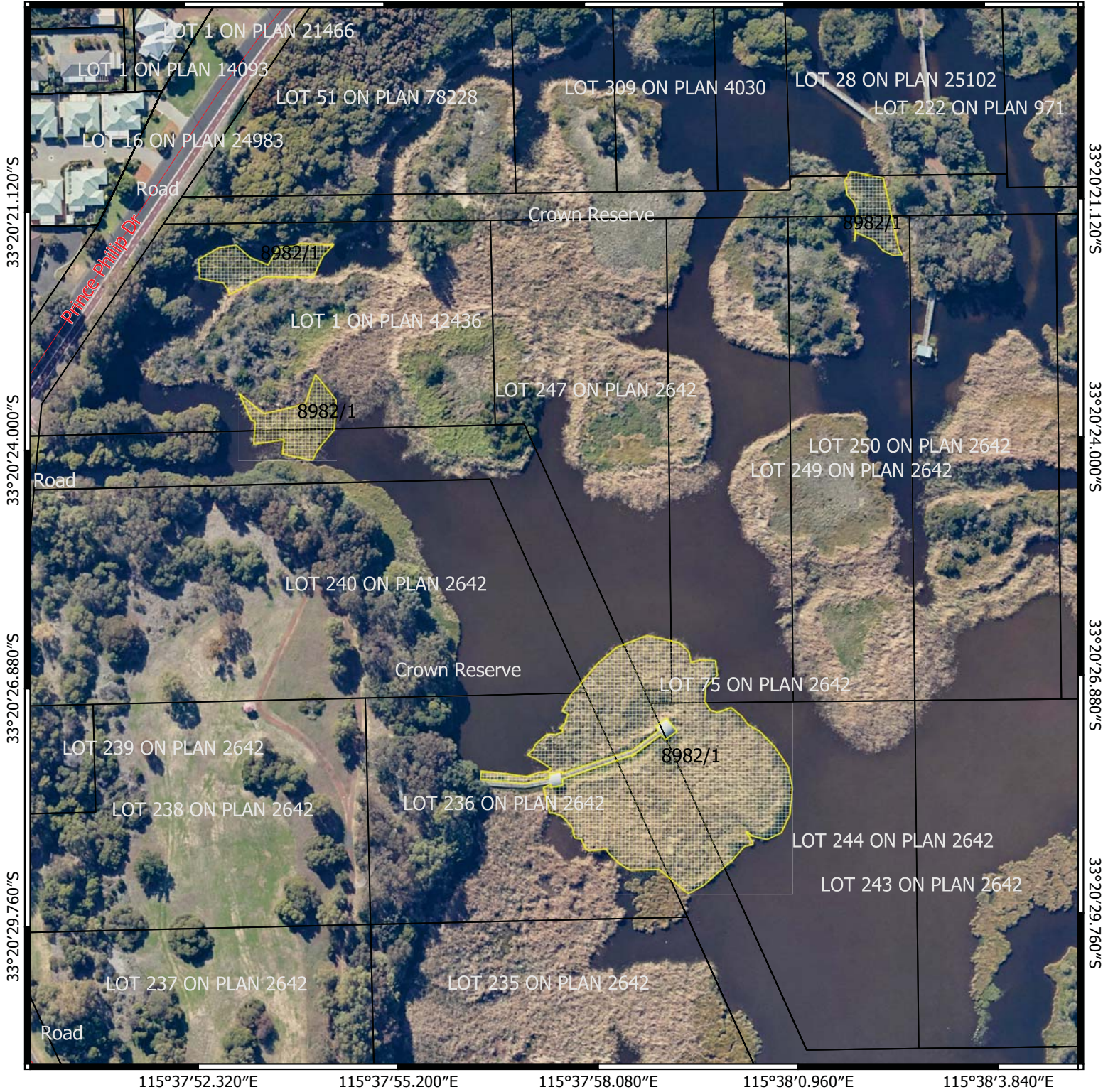
115°37'52.320"E

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## CPS layers

 CPS areas approved to clear

## base layers

 Road Centrelines

## Map Layers

 Land TenureLGATE - 226



0 25 50 m



1:2000

MGA Zone 50  
 Geocentric Datum of Australia 1994



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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.: 8982/1  
Permit type: Area Permit

### 1.2. Applicant details

Applicant's name: City of Bunbury  
Application received date: 27 July 2020

### 1.3. Property details

Property:  
Lot 236 on Plan 2642, South Bunbury  
Lot 240 on Plan 2642, South Bunbury  
Lot 244 on Plan 2642, South Bunbury  
Lot 247 on Plan 2642, South Bunbury  
Lot 248 on Plan 2642, South Bunbury  
Lot 249 on Plan 2642, South Bunbury  
Lot 1 on Diagram 42436, South Bunbury  
Lot 5354 on Deposited Plan 215092, South Bunbury  
Lot 5355 on Deposited Plan 215092, South Bunbury  
Lot 75 on Plan 2642, South Bunbury  
Lot 28 on Diagram 25102, South Bunbury

Local Government Authority: City of Bunbury  
Localities: South Bunbury

### 1.4. Application

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

### 1.5. Decision on application

Decision on Permit Application: Granted  
Decision Date: 19 October 2020

Reasons for Decision: The clearing permit application was received on 27 July 2020 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 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. The Delegated Officer also noted that the proposed clearing is to improve the wetland function of Big Swamp.

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 0.71 hectares of native vegetation within the abovementioned Lots, within Big Swamp, South Bunbury, for the purpose of *Typha orientalis* control to improve wetland function and maintain a view from the bird hide.

**Vegetation Description** The vegetation within the application area is mapped within the Swan Coastal Plain vegetation complex, and includes:

- Quindalup Complex (55), described as a coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of *Melaleuca lanceolata* (Rottnest Teatree) - *Callitris preissii* (Rottnest Island Pine), (Heddlie et al., 1980).
- Yoongarillup Complex (56), described as a woodland to tall woodland of *Eucalyptus gomphocephala* (Tuart) with *Agonis flexuosa* in the second storey. Less consistently an open forest of *Eucalyptus gomphocephala* (Tuart) - *Eucalyptus marginata* (Jarrah) - *Corymbia calophylla* (Marri). South of Bunbury is characterised by *Eucalyptus rudis* (Flooded Gum) - *Melaleuca* species open forests.

Photographs supplied by the applicant indicate the vegetation within the application area (Figure1), consists almost entirely of Typha along with some understorey grass and weed species.

**Vegetation Condition**

The condition of the vegetation within the application area is considered to be 'Very Good' (Keighery, 1994), defined as: Vegetation structure altered, obvious signs of disturbance.

**Soil Type**

The soil type within the application area is mapped as Spearwood wet, swamp phase (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.

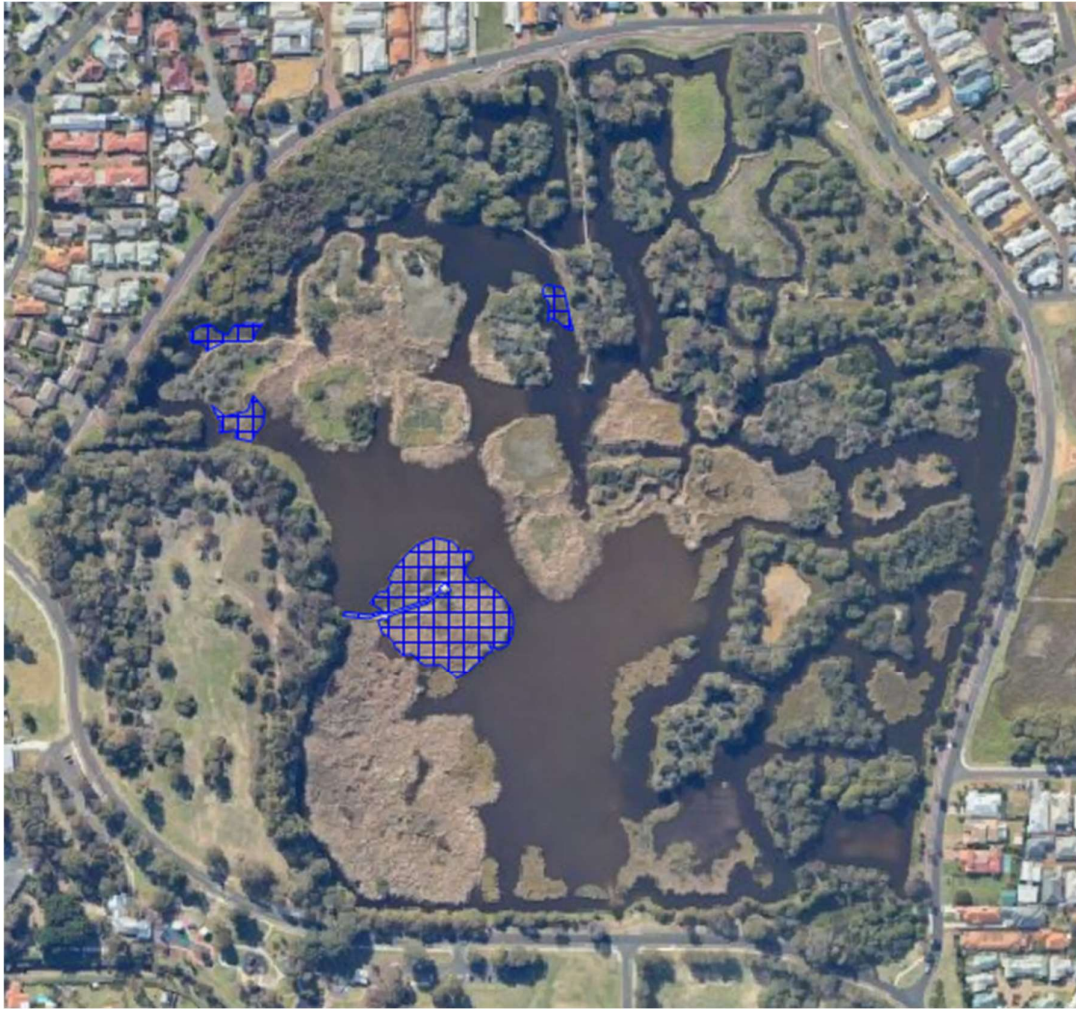


Figure 1. Application area (blue cross hatch).







Figure 2. Photographs of the application area provided by the applicant (City of Bunbury, 2020).

### 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 (Figure 2) and cover an entire water body. Given the application area, within Big Swamp, comprises predominantly of Typha and its tendency to colonise ecosystems, 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 water birds. However, previous advice from the 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 water bird 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 27 threatened fauna species have been recorded in the local area, comprising 20 fauna species protected under international agreement, eight Priority 4 fauna and four specially protected fauna species (DBCA, 2007-). There are four records for Blue-billed Duck (*Oxyura australis*), a Priority 4 species, recorded within the application area. Blue-billed Duck breed in secluded, densely vegetated situations with the nest constructed in Typha beds or other vegetation generally over water. Nests are usually constructed from dead *Typha* leaves, and sometimes thinly lined with down (Birdlife Australia 2020). The applicant proposes to remove 0.71 ha of Typha, which is estimated to represent approximately 20 per cent of all Typha present within Big Swamp. Therefore, the proposed clearing is unlikely to significantly impact the amount of suitable breeding habitat for Blue-billed Duck, as a large portion of dense vegetation will be retained.

No other conservation significant species have been recorded with the application area and, given the area comprises 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 any other significant habitat for the fauna species recorded within the local area.

A review of available databases determined that 23 flora species of conservation significance have been recorded in the local area, comprising one Priority 1 flora species, three Priority 2 flora species, seven Priority 3 flora species, nine 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 fringing 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 the state listed Priority 3 ecological community (PEC) Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain, occurs 1.5 kilometres to the south of the application area. The above databases also determined that the state listed Priority 3 ecological community, Banksia dominated woodlands of the Swan Coastal Plain IBRA region, and Commonwealth listed threatened ecological community (TEC) occurs 3 kilometres to the south east. The application area and adjacent fringing vegetation, does not resemble either of the state listed PECs above. Also, due to the distance to the above PECs, the proposed clearing is not likely to have a significant impact on these communities. Therefore, the application area is not likely to comprise the whole or part of, or be necessary for the maintenance of, a TEC or PEC.

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-European settlement, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The Environmental Protection Authority (EPA) recognises the Bunbury 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 Greater Bunbury Region Scheme and is situated within two Swan Coastal Plain vegetation complexes, the Quindalup Complex (55) and the Yoongarillup Complex (56) and retain 60.49 per cent and 35.81 per cent of the pre-European extent respectively (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 is mapped as a consanguineous wetlands suite. Typha within the application area comprises part of the wetland community growing within the Big Swamp wetland, which also functions as a stormwater compensation basin (City of

Bunbury, 2020). The vegetation proposed to be cleared occurs within, or in association with a watercourse or wetland and therefore, the proposed clearing is at variance with principle (f). As discussed above, the proposed clearing is for the purpose of controlling Typha, which has the ability to form monocultures and exclude other native plant species. Therefore, the proposed clearing is not anticipated to result in any long-term impacts to ecological values provided by the riparian vegetation communities associated with the Big Swamp wetland.

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 70 per cent, moderate to very high risk, for waterlogging and subsurface acidification that may lead to land degradation. However, Typha cover will only be reduced by 20 per cent, from targeted areas within Big Swamp and clearing will be followed up over successive years (City of Bunbury, 2020). 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, and that the extent of the proposed clearing will be limited to approximately 20 per cent, the proposed clearing is not likely to result in appreciable land degradation or to cause, or exacerbate, the incidence or intensity of flooding.

The application area is within the Bunbury 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, thereby possibly impacting surface water quality. It is noted that, the application includes the removal of a portion of Typha, crowding stormwater outlets and that Big Swamp functions as a storm water basin. The purpose of the proposed clearing would improve water quality through improving the drainage of water into the stormwater basin and lowering the risk of increased sedimentation and turbidity upstream. Noting this and that the clearing does not intersect with any other 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 5 August 2020, with a 21 day submission period. No submissions were received in relation to this application.

#### **4. References**

- Birdlife Australia (2020) <https://www.birdlife.org.au/bird-profile/blue-billed-duck>, accessed October 2020.
- City of Bunbury (2020). Clearing permit application and supporting documents for CPS 8982/1. DWER Ref: DWERTV6176.
- 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.
- Environmental Protection Authority (EPA) (2008) Environmental Guidance for Planning and Development. Guidance Statement No. 33. Environmental Protection Authority. 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