



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: 3726/1  
File Number: 2010/002799  
Duration of Permit: From 10 January 2011 to 10 January 2013

### PERMIT HOLDER

Nicolas Trandos  
Stavros Trandos

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 202 on Deposited Plan 61865 (GRANVILLE 6503)

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 70 hectares of native vegetation within the area hatched yellow on attached Plan 3726/1.

### CONDITIONS

#### 1. 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) shall only move soils in *dry conditions*;
- (c) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

### Definitions

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

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

*dry conditions* means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

*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 a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.



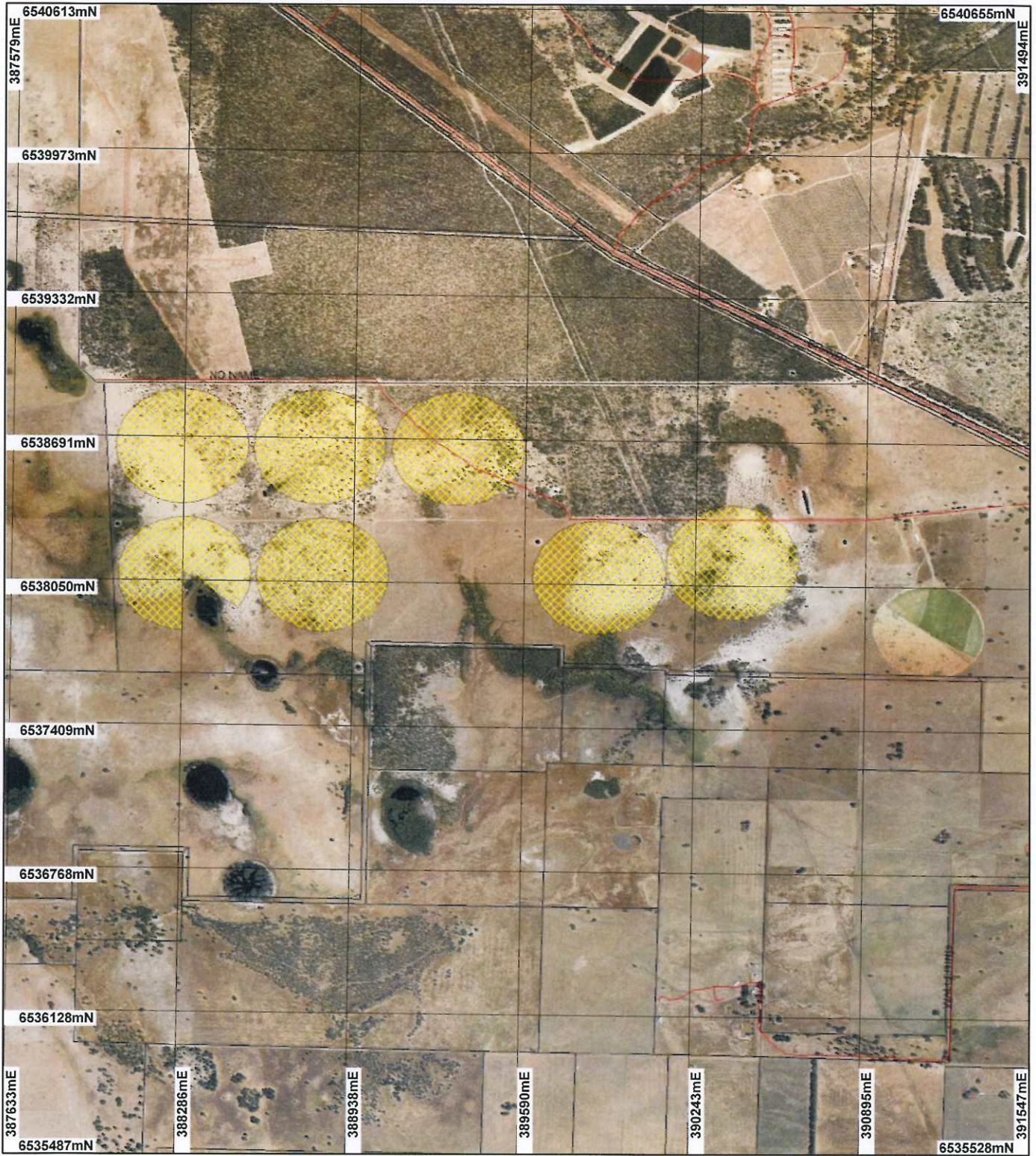
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Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

15 December 2010

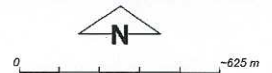
# Plan 3726/1



## LEGEND

### Clearing Instruments

-  Areas Approved to Clear
  -  Road Centrelines
  -  Cadastre
- Gingin 50cm Orthomosaic -  
Landgate 2006




Scale 1:22805

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

 Date 15/12/10

K. Faulkner  
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of  
Environment and Conservation

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 3726/1  
Permit type: Area Permit

### 1.2. Proponent details

Proponent's name: Nicolas and Stavros Trandos

### 1.3. Property details

Property: LOT 202 ON PLAN 61865 ( GRANVILLE 6503)  
Local Government Area: Shire of Gingin  
Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
70		Mechanical Removal	Horticulture

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 15 December 2010

## 2. Site Information

### 2.1. Existing environment and information

#### 2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Mapped vegetation association 949 is described as Low woodland; banksia (Shepherd, 2009).	The proposal is to clear 70 hectares of native vegetation. The majority of the property is cleared grassland containing scattered Xanthorrhoea preissii.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The condition of the vegetation under application was determined by a site visit conducted by Department of Environment and Conservation (DEC, 2010a) and from digital imagery (Gingin 50cm Orthomosaic - Landgate 2006).
As above.	Approximately 4 hectares of one of the seven pivots protrudes into Banksia woodland which is in a good (Keighery, 1994) condition. Recorded species include Banksia attenuata, Banksia menziesii, Jacksonia furcellata, Kunzea sp. and Xanthorrhoea preissii.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	As above.

## 3. Assessment of application against clearing principles

### (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

#### Comments Proposal is not likely to be at variance to this Principle

The proposal is to clear 70 hectares of native vegetation for the purpose of cropping sweet corn and beans. Clearing is proposed to take place over seven circular pivots, each measuring 20ha. The area under application has been subjected to historical and current grazing.

The clearing proposed under the initial application included 15 hectares of Banksia woodland which was in a very good (Keighery, 1994) condition and areas of wetland dependant vegetation. The assessment of this proposal concluded that the proposed clearing was at variance to principles (a), (b) and (f), may be at variance to principle (i) and is not likely to be at variance to principles (c), (d), (e), (g), (h) and (j). The applicant was notified of these issues and was asked to modify the application. In response the applicant has removed the more environmentally significant areas from the application.

The following assessment is for the amended area in which the applicant has moved the proposed pivot from the Banksia woodland and has avoided areas of riparian vegetation.

A site visit conducted by Department of Environment and Conservation (2010a) identified that the majority of the area under application is cleared grassland. Xanthorrhoeas and Kunzea sp. are the dominant species within the applied area.

Six priority flora species were recorded on the same vegetation and soil type; *Banksia kippistiana* (P3), *Verticordia lindleyi* (P4), *Drosera occidentalis* (P4), *Grevillea saccata* (P4), *Hibbertia glomerata* (P1) and *Synaphea grandis* (P2). As the amended application avoids the areas of banksia woodland (preferred habitat for *Banksia kippistiana*) and winter wet depressions (preferred habitat for *Verticordia lindleyi*) it is not likely that these species will occur within the area under application.

Lot 202 contains two Resource Enhanced Category wetlands (one of which is also mapped as Environmental Protection (Swan Coastal Plain Lakes) Policy 1992 (EPP) wetland) and Multiple Use wetlands which both contain patches of riparian vegetation. The applicant has modified the original application to avoid these areas of riparian vegetation.

The area under application is within a dieback risk area and is located adjacent to a large intact remnant of native vegetation. Therefore there is a risk of the phytophthora disease spreading. Additionally, there is a risk of weeds spreading into the adjacent property via clearing disturbance. A dieback and weed condition will assist in mitigating these potential impacts.

As the majority of the area under application is cleared grassland it is not likely to contain a high level of biological diversity.

Therefore, this application is not likely to be variance to this principle.

**Methodology** References:  
DEC (2010a)  
Keighery (1994)

GIS Database:

- Clearing Regulations - Environmentally Sensitive Areas - 30 May 2005
- Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
- Gingin 50cm Orthomosaic - Landgate 2006
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 19 May 2010

**(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.**

**Comments** **Proposal is not likely to be at variance to this Principle**

Recorded within the local area (10km radius) were; Black-striped Snake (*Neelaps calonotos*), Carnaby's black cockatoo (*Calyptorhynchus latirostris*), Quenda (*Isoodon obesulus fusciventer*), Western Ringtail possum (*Pseudocheirus occidentalis*), Chuditch (*Dasyurus geoffroi*), Heath Mouse (*Pseudomys shortridgei*) and Western Brush Wallaby (*Macropus irma*)

Given the degraded nature of the vegetation under application and the presence of the large intact remnant just north of the application area is not likely that native vegetation that is proposed to be cleared would represent significant habitat for fauna. In addition, it is not likely that the proposed clearing will sever any ecological corridors which would otherwise inhibit the dispersal of local fauna populations.

Therefore, this proposal is not likely to be at variance to this principle.

**Methodology** GIS Database:  
- Gingin 50cm Orthomosaic - Landgate 2006  
- SAC Biodatasets - accessed 19 May 2010

**(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.**

**Comments** **Proposal is not likely to be at variance to this Principle**

No Declared Rare Flora (DRF) was recorded within the local area (10km radius).

A flora survey has not been conducted over the area under application so it is not possible to determine whether DRF is located within this area. However, given the degraded nature of the native vegetation under application it is not likely that it would support DRF.

Therefore, this proposal is not likely to be at variance to this principle.

**Methodology** GIS Database:  
- Gingin 50cm Orthomosaic - Landgate 2006  
- Pre European Vegetation - DA 01/01  
- SAC Biodatasets - accessed 19 May 2010

**(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.**

**Comments Proposal is not likely to be at variance to this Principle**

Threatened Ecological Communities (TEC's) (1 occurrence of herb rich saline shrublands in clay pans and 5 occurrences of shrublands and woodlands on Muchea Limestone) were recorded within the local area (10km radius) however the closest was recorded 8km away. The native vegetation community under application is not consistent with the description of the recorded TEC's in the local area.

Given the distance between the clearing area and the closest TEC the proposed clearing is not considered likely to impact this TEC.

Therefore, the clearing as proposed is not likely to be at variance to this Principle.

**Methodology** GIS Database:  
- SAC Biodatasets - accessed 19 May 2010

**(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.**

**Comments Proposal is not likely to be at variance to this Principle**

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions*			
Swan Coastal Plain	1 501 209.19	587 889.09	39.16
Shire*			
Gingin	319 670.72	176 644.80	55.26
Beard Vegetation Association*			
949	218 193.94	125 008.96	57.29
Beard Vegetation Association with Bioregion*			
949	209 983.26	122 087.03	58.14

\* (Shepherd, 2009)

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).

Digital imagery of the local area (10km radius) indicates that this area has been extensively cleared with approximately 30% vegetation remaining.

Given the degraded condition of the area under application it is no longer considered to be a representative of vegetation association 949 which Shepherd (2009) describes as low Banksia woodland.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

**Methodology** References:  
Commonwealth of Australia (2001)  
Shepherd (2009)

GIS Database:  
- Gingin 50cm Orthomosaic - Landgate 2006  
- Local Government Authorities - DLI 8/07/04  
- Pre European Vegetation - DA 01/01  
- SAC Biodatasets - accessed 19 May 2010

**(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.**

**Comments Proposal is not likely to be at variance to this Principle**

Within 2km of the application area there are 17 records of Environmental Protection Policy (EPP) lakes. Two EPP lakes (also Resource Enhancement category lake) were recorded within Lot 202. These areas are seasonally inundated and are surrounded by wetland vegetation including Melaleuca sp. (including Melaleuca raphiophylla), Kunzea sp. and Juncus pallidus.

A Resource Enhanced wetland (sumpland) is located in the southern portion of the property. The majority of this wetland has historically been cleared and if it were re-evaluated may be determined more consistent with a Multiple Use management category. DEC site visit (DEC, 2010a) identified one remaining vegetated area within this wetland which includes *Melaleuca preissiana* and *Melaleuca raphiophylla* over mixed shrubs including *Kunzea* sp. (including *Kunzea glabrescens*) and sedges (mainly *Juncus pallidus*). Other areas mapped as part of the Resource Enhanced wetland comprised herbs such as *Desmodium flexuosus* and shrubs including *Regelia inops* (DEC, 2010a). It should be noted that only vegetated portions of these wetlands are likely to support ecological values.

Resource Enhanced category wetlands are considered priority wetlands which may have been partially modified but still retain substantial ecological attributes and functions (Water and Rivers Commission, 2001).

The vegetated portions of the Resource Enhanced wetland are representative of wetlands in the Mungala Consanguineous Suite. Currently, approximately 10% of wetlands in this suite are of Conservation category, making areas of vegetation in very good condition significant. Furthermore, of the 10% Conservation wetlands in the Mungala Suite, less than 30% are Sumpland types, making vegetation within this area significant.

Area of Multiple Use wetlands were recorded within the application area. Multiple Use wetlands are said to have few important ecological attributes and functions remaining (Water and Rivers Commission, 2001).

The applicant has amended the original application to avoid clearing wetland dependant vegetation. One pivot has been removed from the application and another one has been altered to avoid vegetation that is growing in association with the wetlands outlined above.

Boonanarring Brook is mapped within the area under application however, this area was inspected by DEC (2010b) officers who found no evidence of this Brook on the ground as evidenced by vegetation or topographic characteristics.

Therefore, this application is not likely to be at variance to this principle.

#### Methodology

##### References:

DEC (2010a)  
DEC (2010b)  
Keighery (1994)  
Water and Rivers Commission (2001)

##### GIS Database:

- Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC 07/08/06
- EPP Lakes - dep 14/05/97
- Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
- Hydrogeology, Linear - DOC13/07/06
- Hydrogeology, Statewide - DOC13/07/06
- SAC Biodatasets - accessed 19 May 2010

#### **(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.**

#### Comments

##### **Proposal is not likely to be at variance to this Principle**

Northcote et al. (1968) describes mapped soil type Cb39 as undulating to gently undulating plains with prominent shallow drainage depressions: dominant soils are deep mottled bleached sands (Uc2.22), with other deep sands (Uc2.21), (Uc5.22), and (Uc4.21) also occurring. Associated are deep sandy yellow earths (Gn2.74), (Gn2.34), and (Gn2.24). Sandy or loamy bleached grey earths (Gn2.95, Gn2.94), and loamy mottled duplex soils (Dy3.43, Dy3.42) occur in the shallow drainage depressions.

As the majority of the property is already cleared and the proposal is to remove isolated remnant patches and isolated trees the risk of increased wind and water erosion is minimal (Commissioner of Soil and Land Conservation, 2010). To minimize the risk of wind erosion the applicant proposes to retain vegetation between the proposed pivot points.

The application area falls within an area mapped as having a moderate Acid Sulphate Soil risk. The disturbance of these potential Acid Sulphate Soils is more likely to result from the intended land use rather than the proposed clearing.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

#### Methodology

##### References:

Commissioner of Soil and Land Conservation (2010)  
Northcote et al. (1968)

- GIS Database:
- Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC 07/08/06
  - Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
  - Hydrogeology, Linear - DOC13/07/06
  - Hydrogeology, Statewide - DOC13/07/06
  - SAC Biodatasets - accessed 19 May 2010

**(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.**

**Comments Proposal is not likely to be at variance to this Principle**

Boonanarring Nature Reserve is located 2.7km to the north east of the application area and Yurine Swamp Nature Reserve is located 4.6km to the north east.

Given the distance between the application area and the nearest conservation reserve the proposed clearing is not likely to impact on the environmental values of these reserves.

The land under application is not likely to constitute to an ecological linkage between conservation reserves. Vegetation between the proposed pivot points is to remain to allow fauna movement.

Therefore, it is not likely that this application will be at variance to the principle.

- Methodology** GIS Database:
- Gingen 50cm Orthomosaic - Landgate 2006
  - CALM Managed Lands and Waters - CALM 01/06/05

**(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.**

**Comments Proposal is not likely to be at variance to this Principle**

The property under application contains both Resource Enhanced category wetlands (also mapped as Environmental Protection Policy wetland) and Multiple Use wetlands however the applicant has amended the original application so that no native vegetation will be removed within these wetlands.

The retention of this native vegetation will aid in protecting water quality from impacts related to the adjacent clearing however, deterioration in the quality of surface and underground water may occur through the planned horticultural practices.

Therefore, this application is not likely to be at variance to this clearing principle.

- Methodology** GIS Database:
- EPP Lakes - dep 14/05/97-
  - Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
  - Hydrogeology, Linear - DOC13/07/06
  - Hydrogeology, Statewide - DOC13/07/06
  - SAC Biodatasets - accessed 19 May 2010

**(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.**

**Comments Proposal is not likely to be at variance to this Principle**

This proposal is in close proximity to ephemeral and permanent wetlands on the Swan Coastal Plain (Commissioner of Soil and Land Conservation, 2010). The removal of the vegetation under application may contribute to raising watertables thus increasing waterlogging however, it is not likely that it will increase the incidence or intensity of flooding.

Therefore, the proposed clearing is not likely to be at variance to this principle.

- Methodology** References:
- Commissioner of Soil and Land Conservation (2010)
- GIS Database:
- Geomorphic Wetlands (Mt Categories), Swan Coastal Plain - 11/04/07
  - Hydrogeology, Linear - DOC13/07/06
  - Hydrogeology, Statewide - DOC13/07/06
  - SAC Biodatasets - accessed 19 May 2010



## Planning instrument, Native Title, Previous EPA decision or other matter.

### Comments

- The application area falls within an area proclaimed under the Rights in Water and Irrigation Act 1914. Department of Water have advised that they do not support horticulture in close proximity to waterways (DoW, 2010). In this particular case DoW would not support the clearing in and around Boonanaring Brook but does not object to clearing away from this Brook (DoW, 2010). DoW (2010) request that a biophysical assessment be undertaken to determine an appropriate buffer.
- A license from the Department of Water will be required to increase the amount of water to be taken to irrigate crops. The applicant has applied for this license and its current status is an undertaking.
- Planning Approval for pivots 1, 2, 3 and 4 was granted on 18 October 2010 and Planning Approval for pivots 5, 6 and 8 was granted on 14 December 2010. Pivot 7 was not approved as it is located on a seasonal tributary (Boonanaring Brook). Pivot 7 has consequently been removed from the clearing application.
- A submission has been received which has raised concerns related to the adjacent wetlands. It has been suggested that the proposal will cause waterlogging and flooding, which in turn will cause the remnant vegetation to the north of the proposal to suffer degradation. These concerns have been addressed under Principle (f) and further below.
- This application was referred to the Department of Agriculture and Food Western Australia (DAFWA). The Commissioner of Soil and Land Conservation (2010) identified that there is potential for land degradation in the form of waterlogging, salinity and eutrophication (nutrient export) if this proposal is implemented. Commissioner of Soil and Land Conservation (2010) states that on this property the watertable is near the ground surface and so the excess irrigation water has the potential to raise the watertable. The subsequent overland flow may contain elevated levels of salt and nutrients with the potential to adversely affect adjoining land, wetlands and rivers (Commissioner of Soil and Land Conservation, 2010). However, this risk of eutrophication and salinity will be caused by the irrigation of crops not by the proposed clearing of native vegetation.

Unless very careful water management is practiced on the areas under irrigation, waterlogging and development of irrigation salinity may arise due to the shallow nature of the superficial aquifer under the property (Commissioner of Soil and Land Conservation, 2010).

- Supporting information (Hydrological Assessment, Groundwater Consulting Services Pty Ltd, 2010) indicates that the potential impacts on water quality from the project area include, nutrient enrichment through leaching of fertilisers and higher concentration of salts through over irrigation. Groundwater Consulting Services (2010) states that the migration of nutrient-rich groundwater from the production areas to the on-site wetlands is recognised and is the target for nutrient management. It is recommended that a Nutrient and Irrigation Management Plan be prepared addressing the land degradation impacts.
- As requested by DEC the applicant has prepared a Nutrient Irrigation Management Plan (NIMP). This NIMP was referred to the Department of Agriculture and Food (DAFWA) for comment. DAFWA has advised that this NIMP is lacking technical data and does not adequately address issues relating to eutrophication.
- DEC officers inspected Lot 202 on 12 August 2010 and found that approximately 20 hectares of native vegetation have been cleared, pushed into piles and burnt. This incident has been reported and is now subject of an investigation (ICMS 19363).

### Methodology

#### References:

- Commissioner of Soil and Land Conservation (2010)
- DoW (2010)
- Groundwater Consulting Services (2010)
- Submission (2010)
- GIS Database:
  - RiWI Act, Groundwater Areas - DoW
  - RiWI Act, Irrigation Districts - DoW

#### 4. References

- Commissioner of Soil and Land Conservation (2010); Land Degradation Advice and Assessment Report for clearing permit application CPS 3726/1 received 22/06/2010; Department of Agriculture and Food Western Australia (DEC Ref. A312149).
- DEC (2010a) Site Inspection Report for Clearing Permit Application CPS 3726/1, Lot 202 on Plan 61865, Granville. Site inspection undertaken 27/05/2010. Department of Environment and Conservation, Western Australia (DEC Ref. A308406).
- DEC (2010b) Site Inspection Report for Clearing Permit Application CPS 3726/1, Lot 202 on Plan 61865, Granville. Site inspection undertaken 12/08/2010. Department of Environment and Conservation, Western Australia (DEC Ref. A325679).
- DoW (2010) Water Advice for Clearing Permit Application CPS 3726/1. Department of Water, Swan Avon Region, Western Australia (DEC Ref: A309455).
- Groundwater Consulting Services (2010); Hydrogeological Assessment (H3) Superficial Aquifer (DEC Ref: A310694).
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.
- Submission (2010) Application to Clear Native Vegetation - CPS 3726/1 (DEC Ref. A309882).
- Water and Rivers Commission (2001) Position Statement: Wetlands, Water and Rivers Commission, Perth.

#### 5. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DEC)