



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7526/1
Permit Holder:	Forrest and Forrest Pty Ltd
Duration of Permit:	23 December 2017 to 23 December 2022

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 purpose of horticulture.

2. Land on which clearing is to be done

Lot 415 on Deposited Plan 220782, Inggarda

3. Area of Clearing

The Permit Holder must not clear more than 138.9 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7526/1.

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.

PART II – MANAGEMENT CONDITIONS

5. Period in which clearing is authorised

The Permit Holder shall not clear any native vegetation:

- (a) between 1 November and 30 March of any given year; and
- (b) unless planting crop species within three months of the authorised clearing being undertaken.

6. Avoid, minimise etc 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.

7. 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*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared; and
- (b) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III - RECORD KEEPING AND REPORTING

8. 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; and
 - (iv) the size of the area cleared (in hectares).

9. Reporting

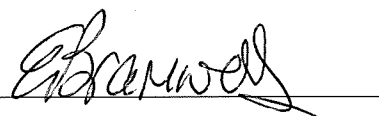
- (a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
 - (i) of records required under condition 8 of this Permit; and
 - (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.
- (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 23 September 2022, the Permit Holder must provide to the CEO a written report of records required under condition 8 of this Permit where these records have not already been provided under condition 9(a) of this Permit.

DEFINITIONS

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

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.

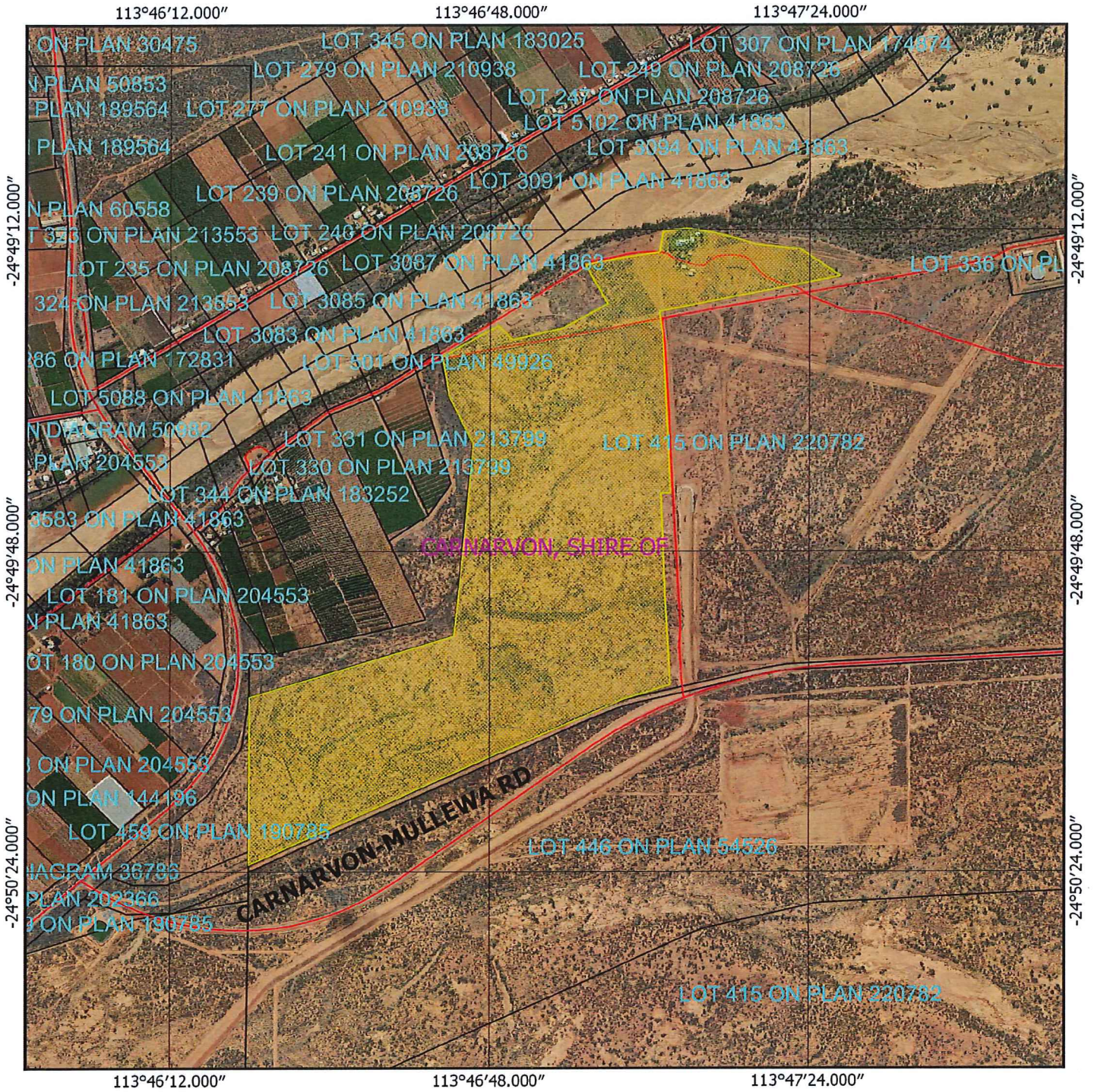


Emma Bramwell
A/MANAGER
CLEARING REGULATION

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

27 November 2017

Plan 7526/1



Legend

-  Areas approved to clear
-  Roads
-  LGA
-  Cadastre
- Virtual Mosaic



1:13,791

MGA 94
Geocentric Datum of Australia 1994

E Bramwell Date 27/11/17
E Bramwell

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



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1. Application details

1.1. Permit application details

Permit application No.: 7526/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Forrest and Forrest Pty Ltd

1.3. Property details

Property: LOT 415 ON PLAN 220782, INGGARDA
Local Government Authority: CARNARVON, SHIRE OF
DWER Region: Midwest
DBCA District: GERALDTON
Localities: INGGARDA

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 27 November 2017

Reasons for Decision: The application for a clearing permit was received on 20 March 2017, 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 (g), (i) and (j), and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined that the proposed clearing may result in appreciable land degradation in the form of soil erosion during periods of flooding and thereby cause deterioration to the quality of surface water. To address the potential impacts in relation to surface water quality and flooding, a condition has been placed on the permit that requires the applicant to plant the intended crops within three months of clearing. The applicant will also be required not to clear during the wet season (November to March).

The Delegated Officer also determined that the proposed clearing may cause the spread of weeds into adjacent areas of remnant vegetation. To mitigate potential impacts to adjacent remnant vegetation, a weed management condition has been placed on the permit. The weed management condition requires earth-moving machinery to be clean of weeds when entering and exiting the clearing area and restrict the movement of machines and other vehicles to the limits of the area to be cleared.

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

Vegetation Description	The application area is mapped as: Beard vegetation association 308: Mosaic: Shrublands; <i>Acacia sclerosperma</i> sparse scrub / Succulent steppe; saltbush & bluebush (Shepherd et al., 2001).
Clearing Description	The application is for the clearing of 138.9 hectares of native vegetation within Lot 415 on Deposited Plan 220782, Inggarda, for the purpose of horticulture.
Vegetation Condition	Very Good; vegetation structure altered; obvious signs of disturbance (Keighery, 1994). To Completely Degraded; no longer intact, completely/almost completely without native species (Keighery, 1994).
Comment	The condition and description of the application area was determined via a Level 2 flora and vegetation survey conducted by Strategen Environmental Consultants Pty Ltd (2017). The flora and vegetation survey identified two vegetation types within the application area, being: <ul style="list-style-type: none"> low woodland of <i>Eucalyptus victrix</i> with a sparse tall shrubland of <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> and <i>Rhagodia eremaea</i> and an open tussock grassland of <i>Cenchrus ciliaris</i> (approximately 80 per cent of the application area); and

- tall sparse to open shrubland of *Acacia sclerosperma* subsp. *sclerosperma* and/or *Acacia synchronicia* with a sparse chenopod shrubland of *Rhagodia eremaea* and *Alectryon oleifolius* subsp. *oleifolius* and an open tussock grassland of *Cenchrus ciliaris* and/or *Chloris pumilio* (approximately 20 per cent of the application area, being the western portion adjacent to Lot 459 on Plan 190785, Inggarda) (Strategen Environmental, 2017).

3. Assessment of application against clearing principles

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

Proposed clearing is not likely to be at variance to this Principle

The applicant proposes to clear 138.9 hectares of native vegetation within Lot 415 on Deposited Plan 220782, Inggarda, for the purpose of horticulture development.

The application area is located just outside of the Carnarvon township within the Brick House pastoral lease. The application area is adjacent to a major perennial watercourse known as the Gascoyne River and is between horticultural plantations to the west and uncleared land to the east of the application area. Several flow lines occur through the application area.

A Level 2 flora and vegetation survey, undertaken in October 2016 by Strategen Environmental Consultants Pty Ltd, identified that the majority of the application area is in a very good (Keighery, 1994) condition, with a small area of approximately seven per cent in a completely degraded (Keighery, 1994) condition (Strategen Environmental, 2017). The survey noted that there was evidence of ongoing disturbance within the application area from feral animals and rubbish dumping (Strategen Environmental, 2017).

The local area considered in the assessment of this application is defined as a 20 kilometre radius from the perimeter of the application area. The local area retains approximately 92 per cent native vegetation cover.

According to available databases, no threatened ecological communities or (TECs), priority ecological communities or rare flora declared under the *Wildlife Conservation Act 1950* have been recorded within the local area.

According to available databases, nine priority (P) flora taxa have been recorded within the local area. The former Department of Parks and Wildlife (Parks and Wildlife) advised that three of these species, namely *Schoenia filifolia* subsp. *arenicola* (P1), *Atriplex spinulosa* (P1) and *Rumex crystallinus* (P2), have a medium likelihood of occurring within the application area given the soil types present (Parks and Wildlife, 2017). Parks and Wildlife advised that given these are all annual species it is likely they have been under-collected, and given their widespread distribution they are likely to occur in similar habitats across their range (Parks and Wildlife, 2017). The Level 2 flora and vegetation survey is considered to be of adequate timing and intensity to identify conservation significant flora within the application area (Parks and Wildlife, 2017). Therefore, the proposed clearing is unlikely to impact upon conservation significant flora taxa that have been recorded in the local area.

Noting the unlikely presence of threatened or priority flora, fauna or ecological communities, the application area is not likely to comprise a high level of biological diversity.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

References:

Strategen Environmental (2017)
Parks and Wildlife (2017)

GIS Databases:

SAC Bio Datasets (Accessed November 2017)
Hydrography, Hierarchy
Hydrography, Linear

(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.

Proposed clearing is not likely to be at variance to this Principle

According to available databases, 52 records of conservation significant fauna occur within the local area (20 kilometre radius) (DBCA, 2007-). The majority of these species recorded are migratory sea or wader bird species that inhabit littoral, estuarine and wetland habitats, which are not present within the application area.

Noting the highly mobile nature of migratory avian species, the extent of vegetation remaining within the local area, and the presence of adjacent remnant vegetation, the application area is not likely to comprise significant habitat for migratory avian fauna.

Given the above, the proposed clearing is not likely to be at variance to this Principle.

References:

DBCA (2007-)

GIS Databases:

SAC Bio Datasets (Accessed November 2017)

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

Proposed clearing is not likely to be at variance to this Principle

According to the Department of Biodiversity, Conservation and Attractions' rare flora database, there are no records of rare flora within the local area (20 kilometre radius).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

GIS Databases:
SAC Bio Datasets (Accessed November 2017)

(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.

Proposed clearing is not likely to be at variance to this Principle

According to available databases, there are no threatened ecological communities (TEC) mapped within the local area (20 kilometre radius), therefore the application area is not likely to comprise the whole or part of, or be necessary for the maintenance of a TEC. This was also confirmed during the Level 2 flora and vegetation survey (Strategen Environmental, 2017).

Given the above, the proposed clearing is not likely to be at variance to this Principle.

References:
Strategen (2017)

GIS Databases:
SAC Bio Datasets (Accessed November 2017)

(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.

Proposed clearing is not likely to be at variance to this Principle

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

As indicated in Table 1, the current extents of native vegetation within the local government authority, the IBRA bioregion and the mapped vegetation association are above the minimum 30 per cent representation threshold.

The local area (20 kilometre radius) retains approximately 92 per cent (approximately 35,314 hectares) vegetation cover. The application area represents approximately 0.39 per cent of this extent, and the proposed clearing would reduce this extent to approximately 91.6 per cent (approximately 35,175.1 hectares) if undertaken.

On this basis, the application area is unlikely to be significant as a remnant within an extensively cleared area.

Given the above, the proposed clearing is not at variance to this Principle.

Table 1: Vegetation extents

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Current Extent in DBCA-Managed Lands	
				(ha)	(%)
IBRA Bioregion*					
Carnarvon	8,382,890	8,360,801	99.7	1,020,564	12.2
Local Government Authority*					
Shire of Carnarvon	4,637,447	4,613,554	99.5	357,087	7.7
Beard Vegetation Association in Bioregion*					
129	8,474	8,028	94.7	77	1
308	446,977	443,484	99.2	3,874	1

References:
Commonwealth of Australia (2001)
*Government of Western Australia (2016)

GIS Databases:
Pre-European Vegetation

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

Proposed clearing is at variance to this Principle

The Commissioner of Soil and Land Conservation (CSLC) advised that the application area is located on the active delta of the Gascoyne River behind a deflection levee and is likely to be regularly inundated (CSLC, 2017).

According to available databases, several flow lines traverse the application area. The closest mapped wetland system, known as the 'McNeill Claypan System' is located approximately 2.5 kilometres south of the application area. The proposed clearing is likely to impact on riparian vegetation growing in association with these hydrological features.

The applicant has established a 50 metre vegetated foreshore buffer in accordance with *Operational Policy 4.3 Identifying and establishing waterways foreshore areas* (DoW, 2012), in order to minimise the impacts of the proposed clearing on riparian vegetation associated with the Gascoyne River.

Given the above, the proposed clearing is at variance to this Principle.

References:
CSLC (2017)
DoW (2012)

GIS Databases:
Hydrography, linear
Hydrography, hierarchy

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

Proposed clearing may be at variance to this Principle

As discussed under Principle (f), the application area is located on an active delta associated to the Gascoyne River. The soils within the application area comprise of a mix of alluvial soils and salinity, as indicated by the EM38 survey map in Figure 1 (CSLC, 2017).

The CSLC advised that the most significant land degradation risk as a result of the proposed clearing is soil erosion associated with flooding (CSLC, 2017). Flood studies undertaken by the former Department of Water (DoW) predicted that the vicinity of the application area will be subject to flooding at 100 to 500 millimetre depth at a frequency of 1:10 Average Recurrence Interval (ARI) flood events (CSLC, 2017). The 1:100 millimetre flood depths are likely to be in the 500 to 2000 millimetre range within the application area (CSLC, 2017).

The CSLC noted that the application area is behind a deflection levee and is likely to be regularly inundated, and that the likelihood and extent of severe soil erosion is dependent on proximity to flood channels, land use (annual vs perennial crops) and its associated cultivation, and depth and duration of flooding (CSLC, 2017).

Noting the soil type present within the application area, that several flow lines occur within the application area, that the application area is located on a flood channel and in an area that is susceptible to major river events, the proposed clearing may increase the risk of land degradation in the form of soil erosion. The risk of land degradation in the form of soil erosion can be managed with the requirement to clear outside of the wet season (November to March) and plant crop species within three months of clearing to help stabilise soils and minimise soil erosion.

Given the above, the proposed clearing may be at variance to this Principle.

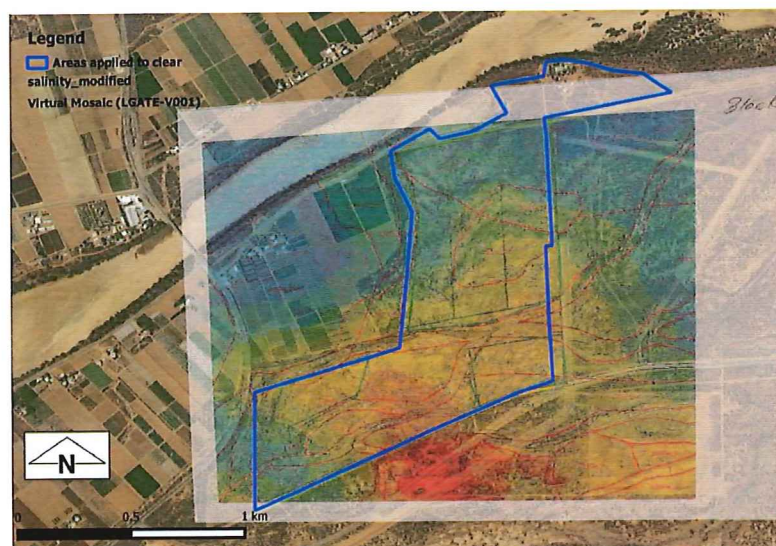


Figure 1 – EM38 survey map of soil types and salinities within application area (CSLC, 2017)

References:
CSLC (2017)

GIS Databases:
Landsystem Rangelands
Hydrography, Hierarchy
Hydrography, Linear

(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.

Proposed clearing is not likely to be at variance to this Principle

According to available databases, the closest conservation area is Chinamans Pool Nature Reserve (Class A), located approximately 10.6 kilometres south west of the application area.

Given the distance to this conservation area and the horticultural land use that occurs between the application area and the reserve, it is unlikely that the proposed clearing will impact upon the environmental values of the conservation area.

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

GIS Databases:
DBCA, Tenure

(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.

Proposed clearing may be at variance to this Principle

As discussed under Principle (f), the application area is located on an active delta associated to the Gascoyne River, and the applicant has modified the application area to include a 50 metre vegetated foreshore buffer to minimise the impacts to water surface water quality of the Gascoyne River.

As discussed under Principle (g), the proposed clearing may result in soil erosion via flooding. This has the potential to transport sediment from the application area into flow lines within the application area and the adjacent Gascoyne River, resulting in the deterioration of water quality within these watercourses. Noting that the application area is on a flood channel and is traversed by several flow lines, it is likely that the proposed clearing will exacerbate soil erosion via flooding in these erosion prone areas, and thereby cause deterioration in the quality of surface water. The requirement to clear outside of the wet season (November to March) and plant crop species within three months of clearing will help to minimise soil erosion and associated sedimentation, therefore reducing the risk of deteriorating water quality as a result of the proposed clearing.

Mapped groundwater salinity within the application area is marginal (less than 500 - 1000 milligrams per litre total dissolved solids). As discussed under Principle (g), the CSLC advised that a portion of the application area has a soil salinity range that is not recommended for horticultural production. Noting this, the proposed clearing may cause deterioration in the quality of surface and/or underground water via salinity.

Given the above, the proposed clearing may be at variance to this Principle.

References:
CSLC (2017)

GIS Databases:
Groundwater Salinity, Statewide
Hydrography, Hierarchy
Hydrography, Linear

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

Proposed clearing may be at variance to this Principle

As discussed under Principle (g), the CSLC noted the frequency and flood events predicted by DoW flood studies, and advised that the likelihood and severity of soil erosion occurring as a result of flooding is dependent upon proximity to flood channels, the land-use and its associated cultivation, the depth of flooding and the duration of flooding (CSLC, 2017).

Noting that the application area is located on a floodplain, the close proximity of the Gascoyne River and advice from the CSLC, it is considered that the proposed clearing may increase the risk of localised flooding following periods of heavy rainfall, which is commonly experienced by the region. Therefore, the proposed clearing may be at variance to this Principle.

References:
CSLC (2017)

GIS Databases:
Hydrography, Hierarchy
Hydrography, Linear

Planning instruments and other relevant matters.

The application area is associated with the Gascoyne Food Bowl Initiative funded by the former Department of Agriculture and Food Western Australia (DAFWA) and the Shire of Carnarvon (Shire), which involves the introduction of a Special Control Area (SCA) to the Shire of Carnarvon District Zoning Scheme 11 to provide for subdivision and development control within the SCA boundaries and the rezoning of land from 'Rural' to 'Intensive horticulture' (Strategen Environmental, 2017).

The CSLC advised that the most significant land degradation risk associated with horticultural production in the Carnarvon irrigation area is soil erosion associated with flooding, and that soil loss is greatest on land used for annual horticultural crops due to factors including cultivation and lack of protective vegetation cover (CSLC, 2017). The CSLC advised that the identified soil risk is a consequence of the proposed clearing and may be increased or mitigated depending on the intended land use (i.e. perennial vs annual horticultural crops) (CSLC, 2017). The CSLC advised that land under annual crop production is liable to erode during a flood event, especially if located on a flood channel, and the level of risk is similar to many of the existing irrigated production areas in the district (CSLC, 2017).

The CSLC advised that DAFWA has evaluated the application area under the Gascoyne Food Bowl Initiative for its suitability for annual and perennial horticulture production (CSLC, 2017). The CSLC also advised that local experience indicates that areas of light to medium texture soil can be successfully reclaimed by adding gypsum and applying leaching irrigation over a number of years, and that reclamation of heavier textured soils has also been successful where they are located over sandy lenses at depth (CSLC, 2017).

On 4 April 2017, a Delegated Officer wrote to the Gnulli native title claimants and Yamatji Marlpa Aboriginal Corporation (which acts on behalf of the claimants), providing notice of the application as required by section 24GB s9 of the *Native Title Act 1993*.

The Shire advised that development approval would be required for the proposed end land-use (Shire of Carnarvon, 2017). The applicant was granted development approval for the purpose of horticulture by the Shire of Carnarvon on the 16 November 2017.

The application area is located within the Gascoyne Groundwater and Carnarvon Irrigation Areas. DoW advised that there is no current or foreseen requirement for permits to construct bores or to take ground water under the *Rights in Water and Irrigation Act 1914* (DoW, 2017). DoW advised that the applicant intends to acquire irrigation water from the Gascoyne Water Cooperative reticulated scheme supply (DoW, 2017).

The application was advertised in *The West Australian* newspaper on 17 April 2017 for a 21 day public submission period. No public submissions were received.

References:

CSLC (2017)
DoW (2017)
Shire of Carnarvon (2017a)
Strategen Environmental (2017)

4. References

- Commissioner of Soil and Land Conservation (CSLC) (2017) Land Degradation Advice for clearing permit application CPS 7526/1 received 16 January 2017; Department of Agriculture and Food Western Australia (DER Ref: A1424378).
- 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 Biodiversity, Conservation and Attractions. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed 29/06/2017
- Department of Parks and Wildlife (Parks and Wildlife) (2017) Flora advice received in relation to clearing permit application CPS 7526/1, received 8 June 2017. Department of Parks and Wildlife, Western Australia (DER Ref: A1457185).
- Department of Water (DoW) (2012) Operational policy 4.3: Identifying and establishing waterways foreshore areas. September 2012. Government of Western Australia.
- Department of Water (DoW) (2017) Advice received in relation to clearing permit application CPS 7526/1, received 20 June 2017. Department of Water, Western Australia (DER Ref: A1457327).
- Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. WA Department of Parks and Wildlife, Perth.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western 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 Carnarvon (2017) Correspondence from Shire of Carnarvon regarding development approval – Shire of Carnarvon, Western Australia (DER Ref: A1457318).
- Strategen Environmental (2017) Gascoyne Food Bowl Initiative. Level 2 Flora and Vegetation Survey. Prepared for Shire of Carnarvon and Department of Agriculture and Food. March 2017 (DER Ref: A1445949).