



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3121/1
Permit Holder:	Michael Graham Shields
Duration of Permit:	17 January 2010 – 17 January 2015

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

Mechanical clearing for the purpose of cropping.

2. Land on which clearing is to be done

LOT 4113 ON PLAN 123395 (BOSCABEL 6394)

LOT 4112 ON PLAN 123394 (BOSCABEL 6394)

3. Area of Clearing

The Permit Holder must not clear more than 292 native trees marked yellow on attached Plan 3121/1a, 3121/1b, 3121/1c, 3121/1d, 3121/1e, 3121/1f, 3121/1g, 3121/1h, 3121/1i, 3121/1j, 3121/1k & 3121/1l.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Limitation

Native vegetation permitted to be cleared under this permit is expressly restricted to those mature, dead trees that have already been fallen prior to the commencement of this permit, as depicted in the plans set out in condition 3 of this permit.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 3 and 4 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7 Vegetation management

(a) Prior to commencing clearing, the Permit Holder shall construct a fence enclosing the area cross hatched red on attached Plan 3121/1m so as to exclude all classes of livestock from the area cross hatched red on attached Plan 3121/m.

(b) Within one month of installing the fence the Permit Holder shall notify the CEO in writing that the fence has been completed.

8. Revegetation and rehabilitation

- (a) The Permit Holder must begin to *revegetate* and *rehabilitate* the area cross-hatched red on attached Plan 3121/1m prior to 30 June 2010 by:
 - (i) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
 - (ii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (b) Within twelve months of undertaking *revegetation* and *rehabilitation* in accordance with condition 8(a) of this Permit, the Permit Holder must:
 - (i) determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 8(b)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 8(a)(i) and (ii) of this Permit.

PART III - RECORD KEEPING AND REPORTING

9. Records must be kept

The Permit Holder must maintain the following records for activities done in relation to the clearing of native vegetation authorised under 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).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 8 of this Permit:
 - (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares); and
 - (iv) the species composition, structure and density of *revegetation* and *rehabilitation*.

10. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 9 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 17 October 2014, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(a) of this Permit.

Definitions

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

local provenance means native vegetation seeds and propagating material from natural sources within 10 kilometres of the area cleared;

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

regenerate/ed/ion means *revegetation* that can be established from in situ seed banks contained either within the topsoil or seed-bearing *mulch*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

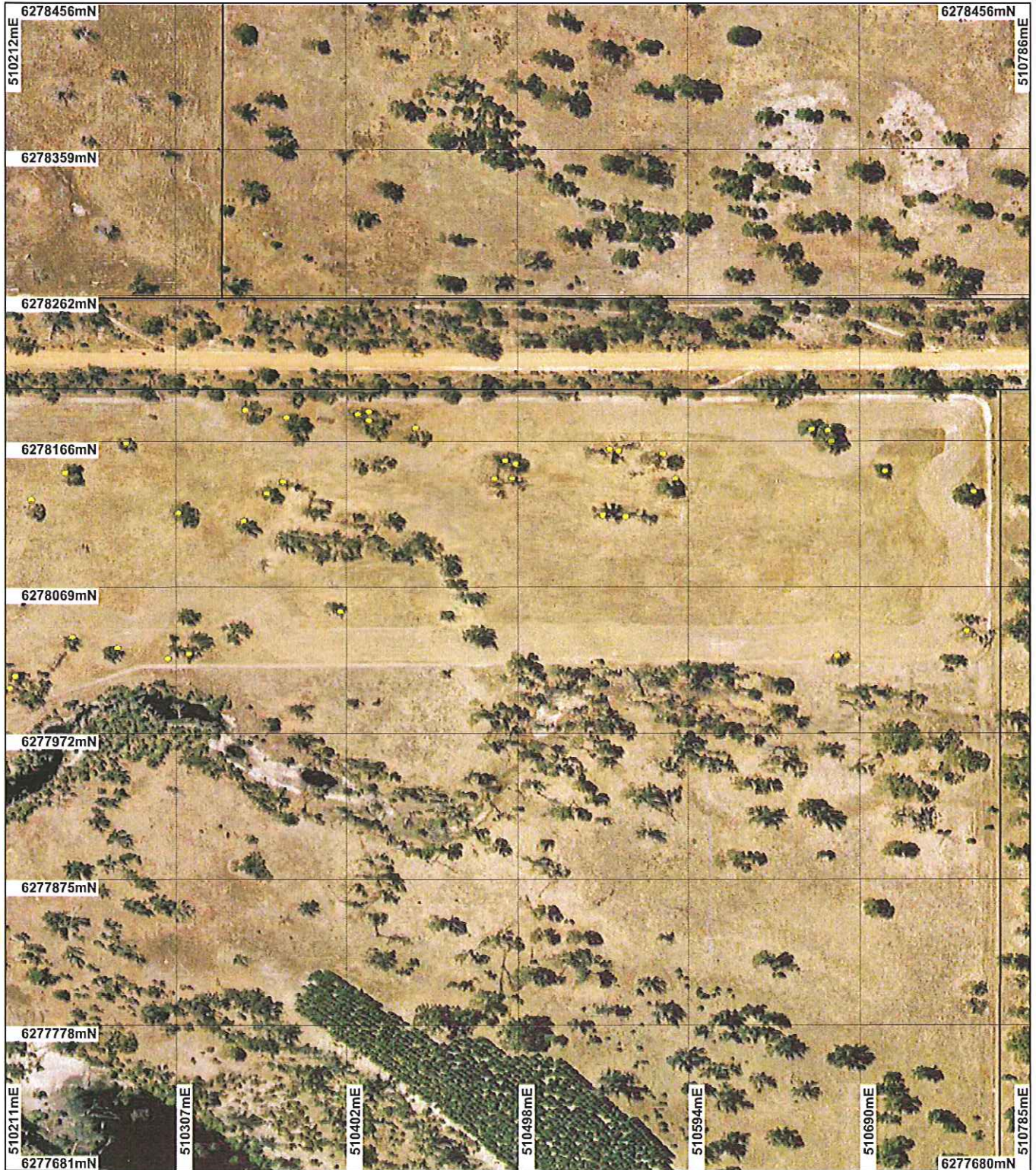


Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

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

17 December 2009

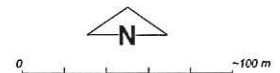
Plan 3121/1a



LEGEND

Clearing Instruments

- ☒ Areas Approved to Clear
- ☐ Cadastre
- ☐ Kojonup 50cm Orthomosaic - Landgate 2006



Scale 1:3407

(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.

Kim Dymally Date *17/12/09*

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

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Plan 3121/1b



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2006



0 38 m

Scale 1:1546

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Karl Claymore 12/12/07
K Claymore

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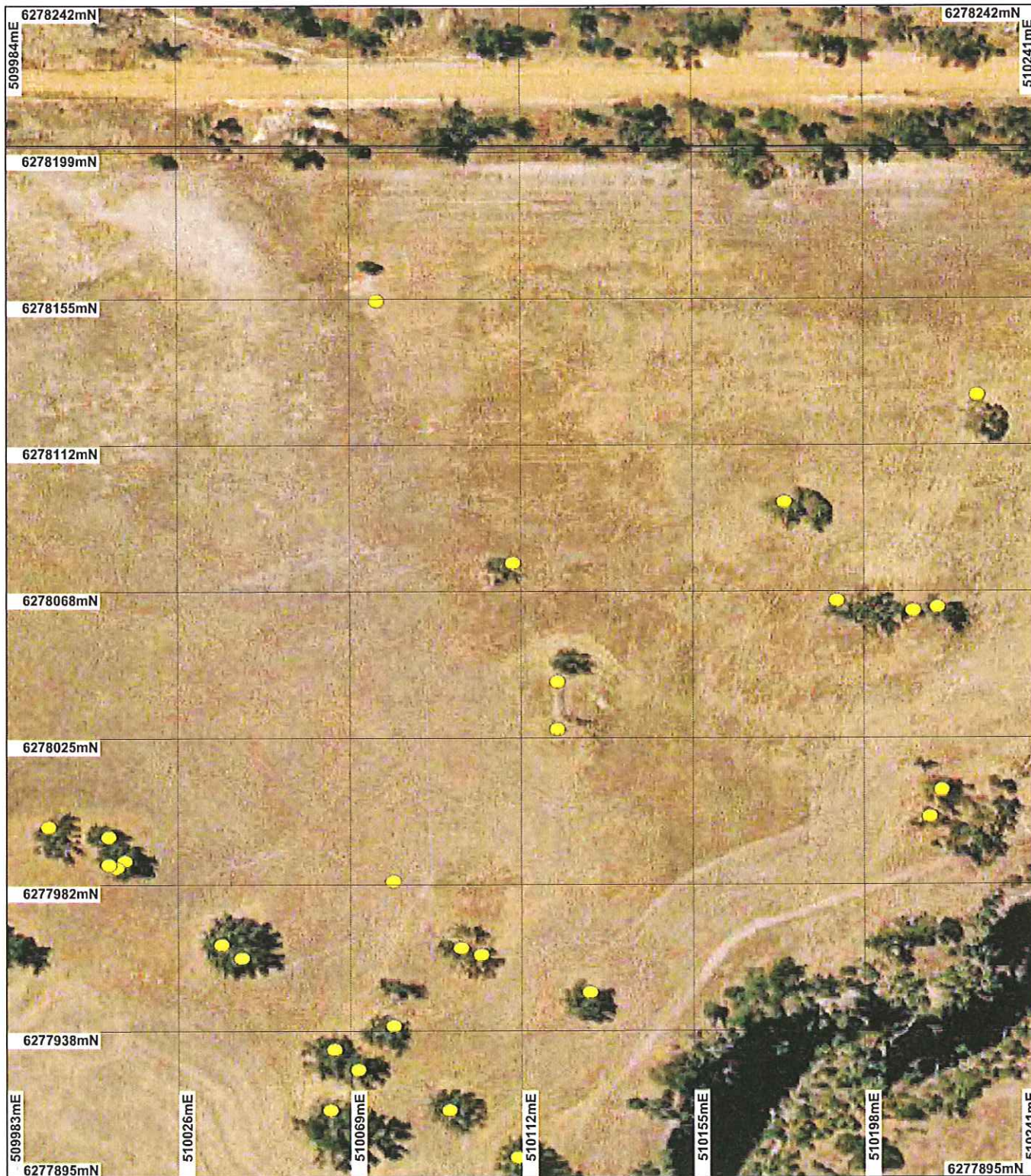
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Plan 3121/1c



LEGEND

Clearing Instruments

- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2006



0 38 m

Scale 1:1525

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Geocentric Datum Australia 1994

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Kirshmore Date *12/12/09*

K Claymore

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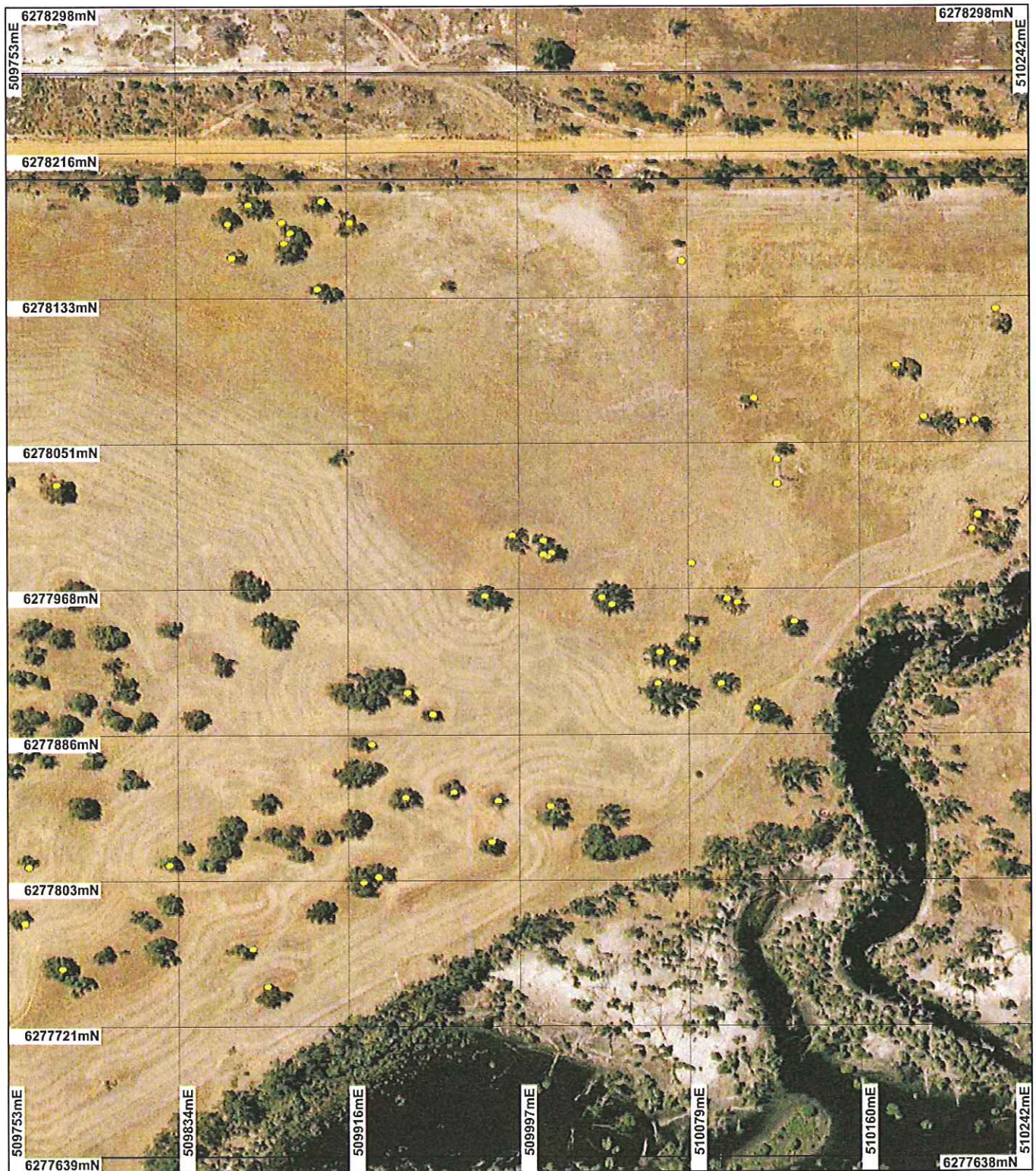
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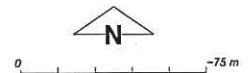
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Plan 3121/1d



LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic • Landgate 2006



Scale 1:2899

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K. Claymore Date 17/12/09

K Claymore

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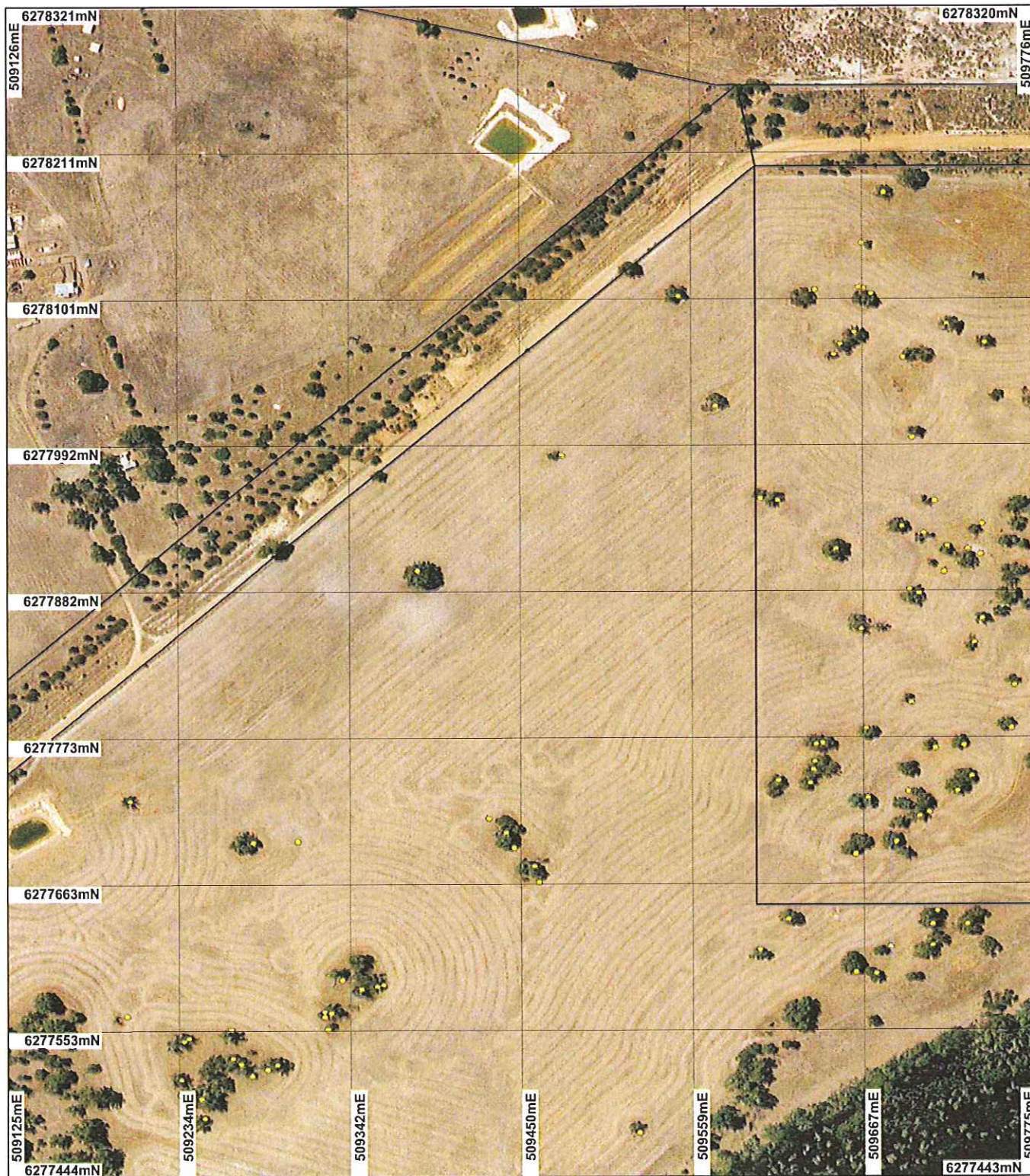
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Plan 3121/1e



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2008



Scale 1:3855

(Approximate when reproduced at A4)

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Keith Claymore Date *12/12/09*
K Claymore

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

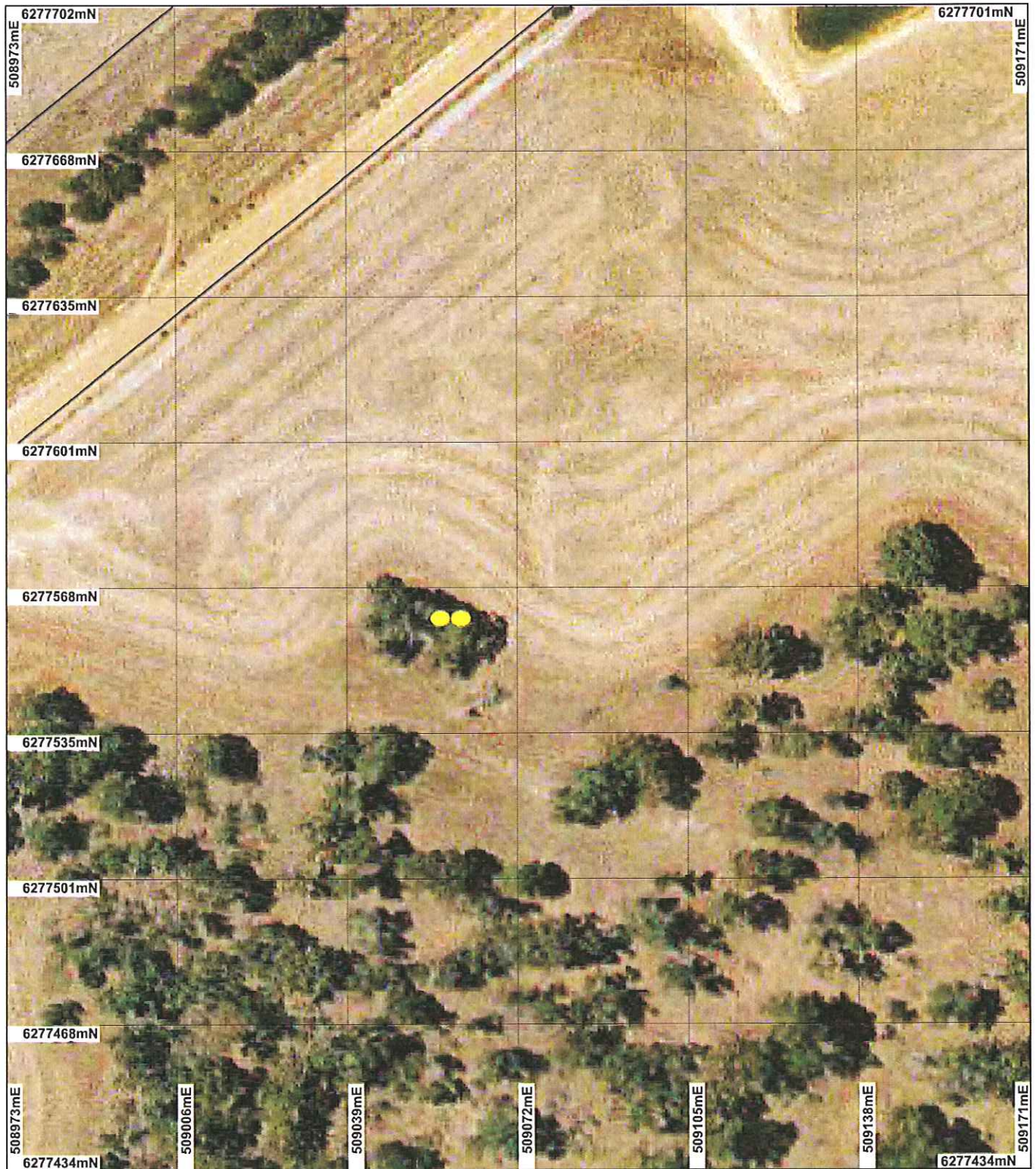
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Plan 3121/1f



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2006



Scale 1:1175

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Kirk Claymore 12/12/09
K Claymore

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Plan 3121/1g



LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic -
Landgate 2008



Scale 1:3683
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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distortion or measurement inaccuracies.

Kim Claymore Date *17/2/08*

K Claymore

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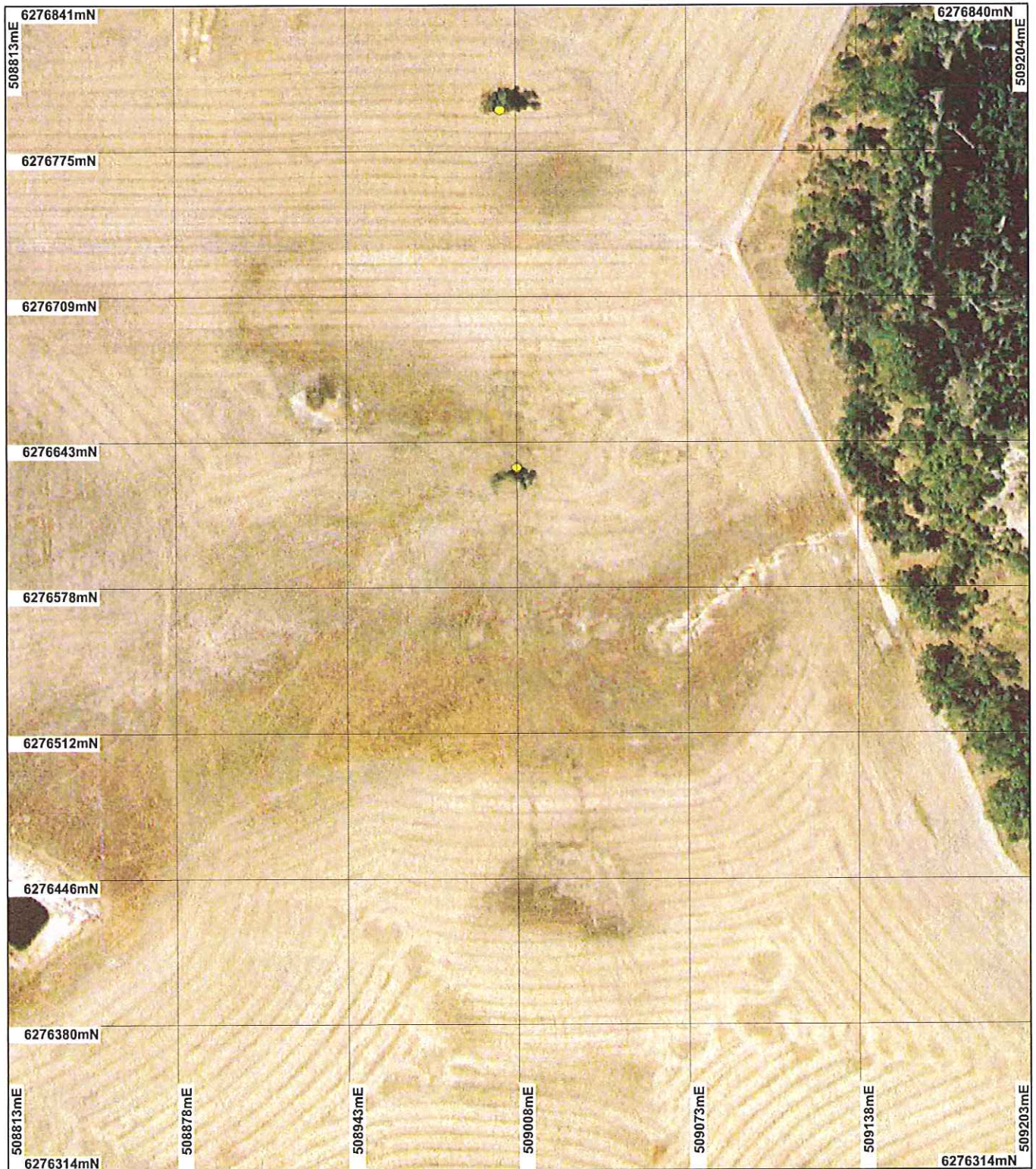
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Plan 3121/1h



LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2006



Scale 1:2314

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K. Claymore 12/12/07
K Claymore

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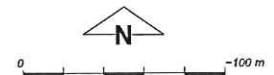
Plan 3121/1i



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2008



Scale 1:3570

(Approximate when reproduced at A4)

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Kith Claymore Date *12/2/07*

K Claymore

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

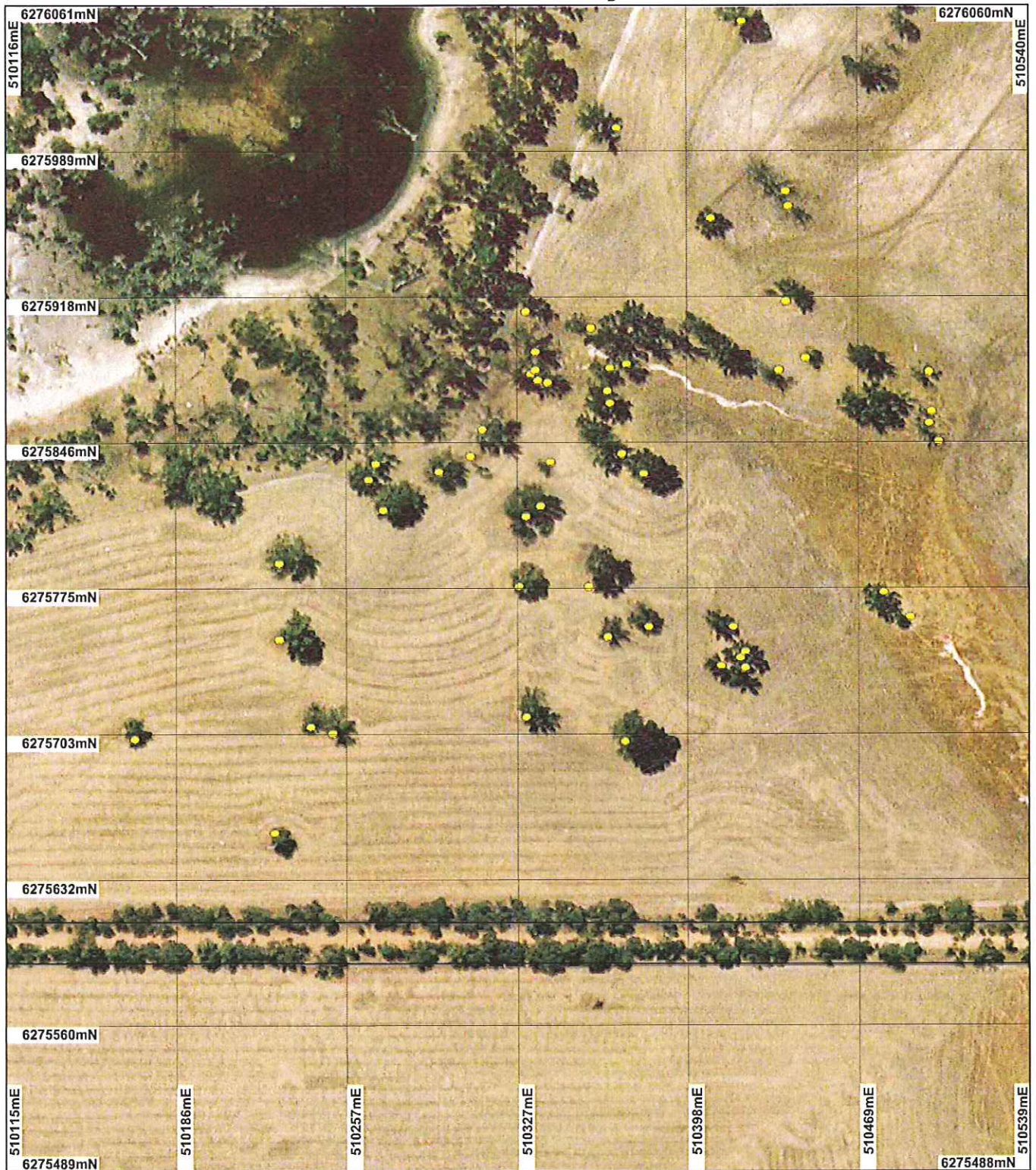
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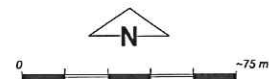
Plan 3121/1 j



LEGEND

Clearing Instruments

- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic -
Landgate 2006



Scale 1:2514

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K Claymore

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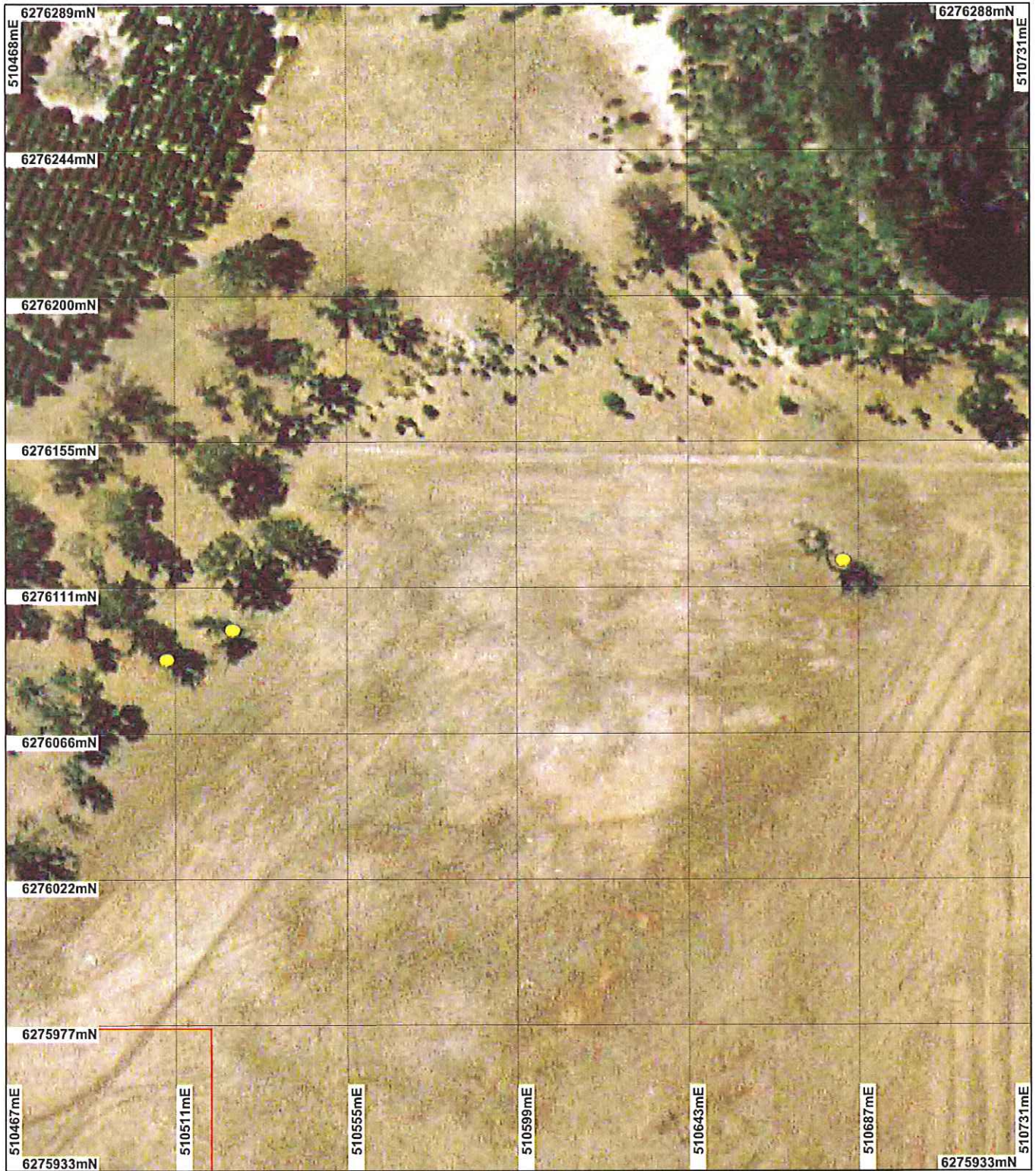
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Plan 3121/1 k



LEGEND

Clearing Instruments

- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic - Landgate 2006



0 39 m

Scale 1:1564

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K Claymore

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

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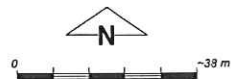
Plan 3121/1 I



LEGEND

Clearing Instruments

- Areas Approved to Clear
 - Cadastre
- Kojonup 50cm Orthomosaic -
Landgate 2006



Scale 1:1508

(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.

Kate Claymore 12/12/09
K Claymore

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

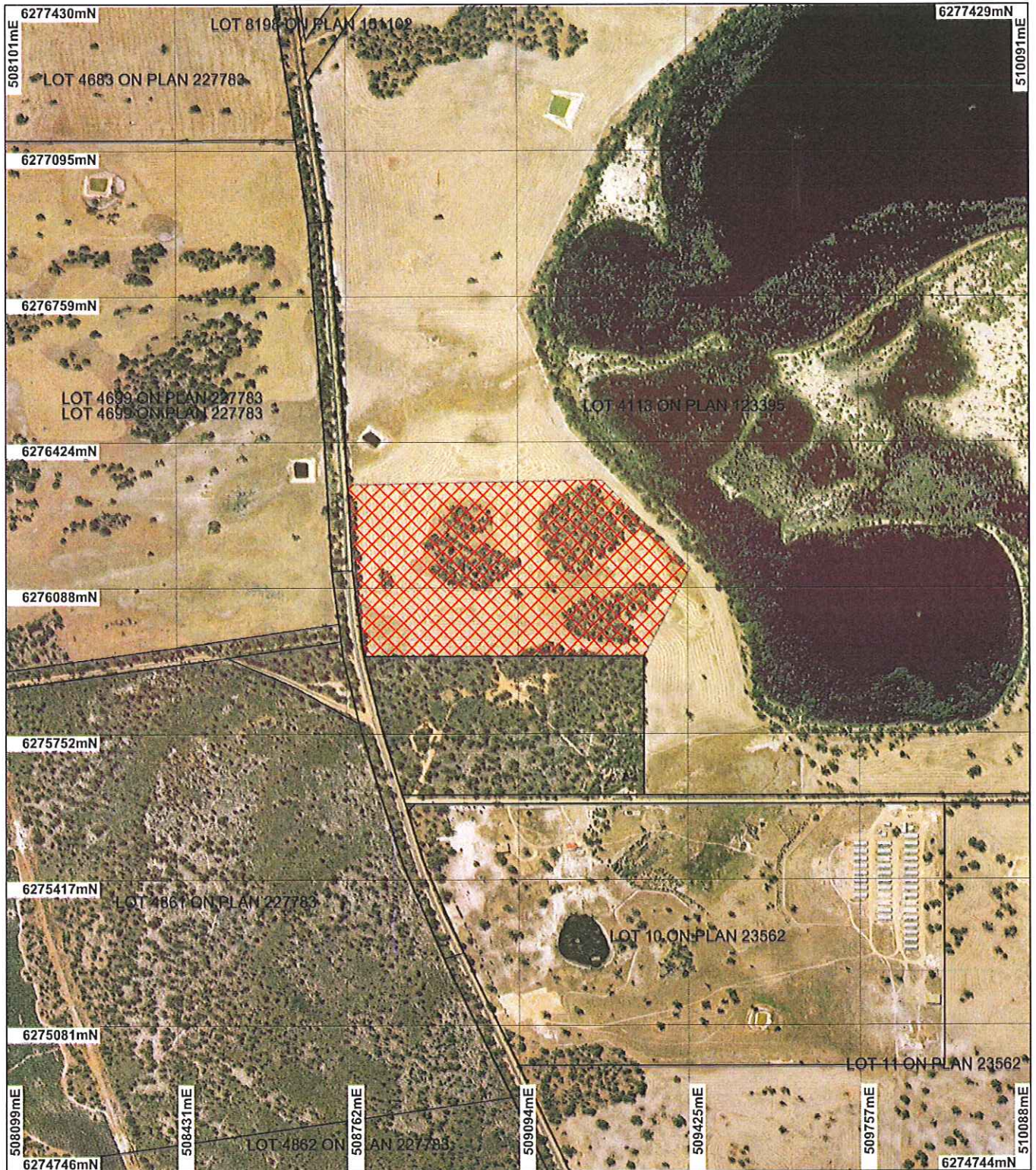
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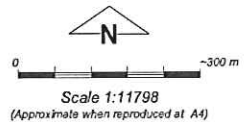
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Plan 3121/1m



LEGEND

- Clearing Instruments
- Areas Subject to Conditions
- Cadastral
- Kolonup 50cm Orthomosaic - Landgate 2006



Geocentric Datum Australia 1994

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Kate Claymore Date *12/12/07*
K Claymore

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.: 3121/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Michael Graham Shields

1.3. Property details

Property: LOT 4113 ON PLAN 123395 (BOSCABEL 6394)
LOT 4113 ON PLAN 123395 (BOSCABEL 6394)
LOT 4112 ON PLAN 123394 (BOSCABEL 6394)
LOT 4112 ON PLAN 123394 (BOSCABEL 6394)
LOT 7411 ON PLAN 145593 (BOSCABEL 6394)
LOT 7411 ON PLAN 145593 (BOSCABEL 6394)
LOT 7066 ON PLAN 201813 (BOSCABEL 6394)
LOT 7066 ON PLAN 201813 (BOSCABEL 6394)
LOT 11 ON PLAN 23562 (BOSCABEL 6394)
LOT 11 ON PLAN 23562 (BOSCABEL 6394)
LOT 11 ON PLAN 23562 (BOSCABEL 6394)
LOT 11 ON PLAN 23562 (BOSCABEL 6394)
LOT 7417 ON PLAN 141895 (BOSCABEL 6394)
LOT 7417 ON PLAN 141895 (BOSCABEL 6394)
LOT 6853 ON PLAN 79867 (CHERRY TREE POOL 6395)
LOT 6853 ON PLAN 79867 (CHERRY TREE POOL 6395)
Local Government Area: Shire Of Kojonup & Shire Of Woodanilling
Colloquial name:

1.4. Application

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

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
<p>The vegetation under application is mapped as consisting of five Beard vegetation associations:</p> <ul style="list-style-type: none"> - Beard 125 - Bare areas; salt lakes - Beard 987 - Medium woodland; jarrah & wandoo - Beard 48 - Shrublands; scrub-heath - Beard 931 - Medium woodland; yate - Beard 4 - Medium woodland; marri & wandoo Shepherd (2007) 	<p>The vegetation consists of paddock trees without understorey. The trees consist of jarrah, marri, wandoo and flat top yate and are all large mature trees (DEC, 2009a). It is estimated that more than 1000 trees have been applied to be cleared from the entire application area, however only 292 trees remain where they have been felled in the northwest corner of the application area within Lot 4113 & Lot 4112. While the assessment relates to the entire property, only the 292 trees will be allowed for clearing. The purpose of the clearing is cropping activities.</p>	<p>Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)</p>	<p>The description and condition of the vegetation under application was determined via the use of aerial mappings systems and a DEC conducted compliance inspection (DEC, 2009b).</p>

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 at variance to this Principle

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment will be based on the condition of the vegetation prior to the clearing and although this assessment is related to the entire area applied for clearing, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113.

The vegetation under application consists of scattered paddock trees without understorey species which is considered to be in a degraded (Keighery, 1994) condition. These trees are comprised of mature jarrah, marri, wandoo and flat top yate (DEC, 2009a).

The local area (10km radius) has been extensively cleared with approximately 15% of vegetation remaining. As the local area and Shire are highly cleared, paddock trees are considered to be significant within the landscape, as they support nearby remnants and conservation areas. The removal of more than 1000 paddock trees is significant in a local context and may reduce the capacity of avian fauna species to persist in the local area, thus impacting on the environmental values offered by the nearby conservation areas by restricting the flow of genetic information and pollinator species.

This being considered, the proposed clearing is considered to be at variance to this principle and in recognition of the significant environmental value that the 292 trees represent, the registered owner for the properties under application will be required to revegetate, and manage to exclude weeds and stock, an area of 17.3 hectares on the land that is subject to the clearing permit. The applicant has identified a site where 17.3 hectares will be revegetated and fenced. This 17.3ha will serve to link existing areas of native vegetation to the swamp in the north west corner of the application area.

Methodology

DEC (2009a)
Keighery (1994)
GIS DataSets:
- CALM Managed Lands and Waters - CALM 01/06/05
- Clearing Regulations, Environmentally Sensitive Areas 30 May 2005
- Kojonup 50cm Orthomosaic (9/10/07)
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 27 May 09

(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 may be at variance to this Principle

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113.

There are numerous fauna species that have been recorded within the local area (10km radius) such the Tamar wallaby (*Macropus eugenii derbianus*), Mallee fowl (*Leipoa ocellata*), the Carpet python (*Morelia spilota imbricata*), the Chuditch (*Dasyurus geoffroyi*) and the Numbat (*Myrmecobius fasciatus*). It is unlikely that ground dwelling fauna species will utilise the application area as potential habitat due to the absence of an understorey (DEC, 2007).

The Western rosella (*Platycercus xanthogenys*), listed as threatened under the Western Australian Wildlife Conservation Act 1950 (WCA) and vulnerable under the Environment Protection and Biodiversity Conservation Act 1999, was recorded 1km west of the western boundary of the applied area. While the Kojonup area and adjacent Shires are known to support nesting and foraging Carnaby's Black Cockatoo's (*Calyptorhynchus latirostris*), who utilize the small amounts of remaining Wandoo remnants to nest and have been found to nest in paddock trees and small pieces of remnant vegetation adjacent to cropping areas (DEC, 2009d), the vegetation under application has limited potential as nesting habitat for Carnaby's due to the limited suitable vegetation as food within the local area (DEC, 2009e).

However, the vegetation under application may be important in aiding the dispersal of other local avian fauna throughout the local area, due to the local area being extensively cleared (DEC, 2009c).

Therefore the proposed clearing may be at variance to this principle

Methodology

DEC (2009a)
DEC (2009c)

DEC (2009d)
 DEC (2009e)
 DEC (2007)
 GIS DataSets:
 - CALM Managed Lands and Waters - CALM 01/06/05
 - EPBC Act (1999)
 - Mattiske Vegetation (01/03/1998)
 - SAC Biodatasets - accessed 27 May 09

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

Comments Proposal may be at variance to this Principle

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113

Two rare flora species have been recorded as occurring within the applied area. Both *Conostylis setigera* subsp. *dasys* and *Conostylis drummondii* are likely to be present along the fence line adjacent to Albany highway (DEC, 2009a). There are also a number of priority flora that have been recorded within or within close proximity to the applied area, these include:

- *Caustis* sp Boyanup (P1) recorded 200 metres west
- *Acacia ataxiphylla* subsp. *ataxiphylla* (P3) recorded within applied area
- *Petrophile longifolia* (P3) recorded 35 metres west
- *Banksia acuminata* (P4) recorded 1km west
- *Templetonia drummondii* (P4) recorded 3km west
- *Banksia porrecta* (P4) recorded 400 metres north
- *Tetratheca exasperata* (P3) recorded 100 metres north east

While it is unlikely that the areas of paddock trees contain rare flora, the vegetation along the fence line adjacent to Albany highway may contain rare flora, and therefore the proposed clearing may be at variance to this principle.

Methodology DEC (2009a)
 GIS DataSets:
 - Pre European Vegetation - DA 01/01
 - SAC Biodatasets - accessed 27 May 09
 - Soils, Statewide DA 11/99

(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

There are no known Threatened Ecological Communities (TECs) within application area or the local area (10km radius).

The proposed clearing is considered not likely to be at variance to this principle.

Methodology GIS DataSets:
 - Pre European Vegetation - DA 01/01
 - SAC Biodatasets - accessed 27 May 09
 - Soils, Statewide DA 11/99

(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 at variance to this Principle

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113

Within the local area (10km radius) approximately 15% of native vegetation remains. Due to the highly cleared surrounding environment, the vegetation under application may be important in aiding in the dispersal of avian fauna throughout the landscape (DEC, 2009c).

As the below table indicates, there are several Beard vegetation associations that occur within the entire area

under application. Beard association 4 and 987 have levels of pre-European vegetation below the 30% threshold recommended for the maintenance of biodiversity (EPA, 2000).

All vegetation complexes and associations which have less than 30% of their pre-European extent remaining are considered to be critical assets by the EPA and are of increased importance to the state (EPA, 2006), however, the majority of vegetation under application consists of scattered paddock trees and are unlikely to represent the full suite of values of the original vegetation complex or association.

	Pre-European Extent (ha)	Current Extent (ha)	Remaining %
Bioregion			
Jarrah forest	4,506,655	2,440,940	54.16
Shire			
Kojonup	293,091	43,004	14.67
Beard Association			
4 within bioregion	1,022,712	247,941	24.24
Beard Association			
125 within bioregion	701.96	225.93	32.19
Beard Association			
48 within bioregion	11,022	3,487	31.65
Beard Association			
931 within bioregion	112.84	41.05	36.38
Beard Association			
987 within bioregion	2,654.62	514.59	19.38

*(Shepherd et al. 2007)

As the local area and Shire are highly cleared (14.67% remaining pre-European extent), paddock trees are considered to be significant within the landscape to support nearby remnants.

The vegetation under application is to be cleared for the purpose of agriculture. The Shire has experienced significant clearing over many years and the application area falls within an area covered by the EPA's position paper No. 2, where the continued clearing of native vegetation for agricultural purposes is not supported (EPA, 2000).

EPA Position Statement No. 2 (EPA, 2000) states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation, and therefore any further reduction in native vegetation through clearing for agriculture cannot be supported. The EPA (2000) recommends that all existing native vegetation be protected from passive clearing through, for example, grazing by stock or clearing by other means.

Given the above, the proposed clearing is considered to be at variance to this principle and in recognition of the significant environmental value that the 292 trees represent, the registered owner for the properties under application will be required to revegetate, and manage to exclude weeds and stock, an area of 17.3 hectares on the land that is subject to the clearing permit. The applicant has identified a site where 17.3 hectares will be revegetated and fenced. This 17.3ha will serve to link existing areas of native vegetation to the swamp in the north west corner of the application area

Methodology DEC (2009c)
EPA (2000)
EPA (2006)
Shepherd et al (2007)
GIS DataSets:
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- Kojonup 50cm Orthomosaic (9/10/07)
- Pre European Vegetation - DA 01/01
- SAC Biodatasets - accessed 27 May 09
- NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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 at variance to this Principle

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113

There are several wetlands that exist within the applied area. The largest is a swamp situated in the north west corner of the application area (within Lot 4112 & Lot 4113). There are a further two non-perennial lakes located within the south west section and one which is located centrally within the application area. There are four minor non-perennial watercourses that dissect the applied area. One runs from the centrally positioned lake to the south west corner of the application area, another runs from north to south within the eastern portion of the application area, while the third dissects the applied area centrally draining into the lake. The fourth runs from the top of the north west section of the application area into the swamp.

Given the soil characteristics, local topography and the highly cleared landscape, the vegetation under application is important as it assists in the control of surface water recharge and the proposed clearing may impact on the hydrology of the lake systems on the property (DEC, 2009a), thereby negatively impacting on the vegetation growing in association with wetland dependant vegetation (DEC, 2009a).

The subcatchment (Upper Blackwood/Arthur River) is highly cleared with evidence of salinity being present in rivers and lakes. The continued clearing of native vegetation will incrementally increase the impact salinity has on wetlands and watercourses, thus effecting riparian vegetation.

As the proposed clearing is considered to be at variance to this principle, in recognition of the significant environmental value that the 292 trees represent, the registered owner for the properties under application will be required to revegetate, and manage to exclude weeds and stock, an area of 17.3 hectares on the land that is subject to the clearing permit. The applicant has identified a site where 17.3 hectares will be revegetated and fenced. This 17.3ha will serve to link existing areas of native vegetation to the swamp in the north west corner of the application area.

Methodology

DEC (2009a)

GIS DataSets:

- CALM Managed Lands and Waters - CALM 01/06/05
- EPP Lakes Policy Area - DEP 14/05/97
- EPP, Wetlands 2004 (DRAFT) - EPA 21/7/04
- Hydrography linear - DOW 13/7/06
- Hydrography linear (hierarchy) - DoW 13/7/06
- Kojonup 50cm Orthomosaic (9/10/07)
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02

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

Comments

Proposal is at variance to this Principle

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113

Given the soil characteristics, local topography and the highly cleared landscape, the vegetation of the application area is necessary in order to reduce surface water recharge and the proposed clearing may impact on the hydrology of the lake systems on the property (DEC, 2009a).

The subcatchment (Upper Blackwood/Arthur River) is highly cleared with evidence of salinity being present in rivers and lakes. The continued clearing of native vegetation will incrementally increase the impact salinity has on an area already showing signs of stress.

Some areas on the property appear to be salt affected (DEC, 2009b).

The proposed clearing is therefore at variance to this principle and in recognition of the significant environmental value that the 292 trees represent, the registered owner for the properties under application will be required to revegetate, and manage to exclude weeds and stock, an area of 17.3 hectares on the land that is subject to the clearing permit. The applicant has identified a site where 17.3 hectares will be revegetated and fenced. This 17.3ha will serve to link existing areas of native vegetation to the swamp in the north west corner of the application area.

Methodology DEC (2009a)
 DEC (2009b)
 GIS DataSets:
 - Hydrogeology, statewide - DOW 13/07/06
 - Hydrographic catchments, catchments - DoW 01/06/07
 - Hydrographic catchments, subcatchments - DoW 01/06/07
 - Hydrography, linear - DOW 13/7/06
 - Salinity Risk LM 25m - DOLA 00
 - Soils, Statewide DA 11/99
 - Topographic contours statewide - DOLA and ARMY 12/09/02

(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 may be at variance to this Principle**

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113

There are three conservation areas within the local area (10km radius). An unnamed nature reserve which is located 4km south, the Birdwood nature reserve located 6.1km east and the Wingedine nature reserve situated 7.6km north east.

Within the local area there is approximately 15% remaining vegetation. Due to the highly cleared nature of the landscape, the vegetation under application may be necessary for the dispersal of avian fauna species throughout the landscape, including to and from conservation areas (DEC, 2009c).

The proposed clearing may reduce the capacity of avian fauna species to persist in the local area, thus impacting on the environmental values offered by the conservation areas by restricting the flow of genetic information and pollinator species and in recognition of the significant environmental value that the 292 trees represent, the registered owner for the properties under application will be required to revegetate, and manage to exclude weeds and stock, an area of 17.3 hectares on the land that is subject to the clearing permit. The applicant has identified a site where 17.3 hectares will be revegetated and fenced. This 17.3ha will serve to link existing areas of native vegetation to the swamp in the north west corner of the application area.

Methodology DEC (2009c)
 GIS DataSets:
 - CALM Managed Lands and Waters - CALM 01/06/05
 - Kojonup 50cm Orthomosaic (9/10/07)
 - Pre European Vegetation - DA 01/01
 - SAC Biodatasets - accessed 27 May 09
 - NLWRA, Current Extent of Native Vegetation 20 Jan 2001

(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 at variance to this Principle**

The application area is currently under investigation for clearing that has occurred on the property. In excess of 1000 trees (within a 7.5 ha area) have either been burnt or felled within the application area. This assessment relates to the entire area applied for clearing, however, any permit can only allow the clearing of the already felled 292 trees that remain unburnt in the north west corner of the application area within Lots 4112 & 4113

Given the soil characteristics, local topography and the highly cleared landscape, the vegetation under application is important as it assists in the control of surface water recharge and the proposed clearing may impact on the hydrology of the lake systems on the property (DEC, 2009a), thereby negatively impacting on the vegetation growing in association with these systems.

The subcatchment (Upper Blackwood/Arthur River) is highly cleared with evidence of salinity being present in rivers and lakes. The continued clearing of native vegetation will incrementally increase the impact salinity has on groundwater in the local area.

The proposed clearing is considered to be at variance to this principle and in recognition of the significant environmental value that the 292 trees represent, the registered owner for the properties under application will be required to revegetate, and manage to exclude weeds and stock, an area of 17.3 hectares on the land that is subject to the clearing permit. The applicant has identified a site where 17.3 hectares will be revegetated and fenced. This 17.3ha will serve to link existing areas of native vegetation to the swamp in the north west corner of the application area.

Methodology DEC (2009a)

GIS DataSets:

- Hydrogeology, statewide - DOW 13/07/06
- Hydrographic catchments, catchments - DoW 01/06/07
- Hydrographic catchments, subcatchments - DoW 01/06/07
- Hydrography, linear - DOW 13/7/06
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02

(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

Given the soil characteristics and local topography of the application area, the proposed clearing is unlikely to increase the risk of flooding. Rainfall is 500mm annually and any excess surface water should make its way into the wetlands that are situated lower in the landscape.

Methodology GIS DataSets:

- Hydrography, linear - DOW 13/7/06
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide DA 11/99
- Topographic contours statewide - DOLA and ARMY 12/09/02

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

Comments

The application area is currently under investigation (ICMS 14506) as clearing has occurred on the property.

An application was submitted by the applicant to cleared already felled trees within various lots within the Shire of Kojonup. The area applied for was 7.5ha. Only 292 trees that remain on Lot 4113 and Lot 4112 (north of Crapella road) which have been felled will be approved for clearing. The trees cleared in the remaining areas under application (south of Crapella road) have been removed from their original positions, formed into piles and have been burnt; these trees will remain the subject of the investigation but will not be considered for a clearing permit.

The vegetation is within the agricultural area defined in EPA Position Statement No. 2 (EPA 2000). EPA Position Statement No. 2 (EPA 2000) states that significant clearing of native vegetation has already occurred on agricultural land, leading to a reduction in biodiversity and increase in land salinisation, and therefore any further reduction in native vegetation through clearing for agriculture cannot be supported. The EPA (2000) recommends that all existing native vegetation be protected from passive clearing through, for example, grazing by stock or clearing by other means.

In exceptional circumstances the EPA would consider supporting clearing for agriculture within this region if:

- (a) There are alternative mechanisms for protecting biodiversity.
- (b) The area to be cleared is relatively small, depending on the scale at which biodiversity changes over the area, including extent of vegetation in the surrounding area and recognising that values will vary for different ecosystems.
- (c) The proponent demonstrates that the elements set out in Section 4.3 of this Position Statement are being met. This will require extensive local and regional biodiversity work.
- (d) Land degradation, including aquatic environments and threatening processes, such as dieback, salinisation or disruption of catchment processes, on-site and off-site would not be exacerbated.

The applicant has advised DEC that 15 hectares of native vegetation will be planted, using native seeds from within the local area (10km radius) in block planting that will be fenced from stock once planted. After further discussions with DEC staff, the applicant has proposed to revegetate a 17.3ha area in the north west corner of the application area. This location was selected as it will serve to link up existing areas of native vegetation to the swamp, thereby increasing the connectivity of the local area as well as reducing waterlogging of seasonally inundated areas.

In addition to this the applicant has advised that 500,000 Eucalyptus trees have been planted, these will be for Carbon. These will not be considered as mitigating the range of environmental impacts identified within the assessment. The applicant will fence all areas of native trees that exceed 3 ha so that stock can no longer access the vegetation.

Methodology EPA (2000)

4. Assessor's comments

Comment

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986 and has found:

- Principles (d) & (j) are not likely to be at variance
- Principles (b), (c) & (h) may be at variance
- Principles (a), (e), (f), (g) & (i) are at variance

5. References

- DEC (2007) DEC Fauna Habitat Notes.xls. February 2007. Department of Environment and Conservation, Western Australia.
- DEC (2009a) Wheatbelt Regional Advice. Department of Environment and Conservation Trim Ref DOC86020
- DEC (2009b) Compliance Report ICMS 14506, Lot 11 on Plan 23562, Lot 7066 on Plan 201813, Lot 7411 on Plan 145593, Lot 4113 on Plan 123395, Crapella Rd Boscabel. inspection undertaken 23/03/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC86609).
- DEC (2009c) Species and Communities Branch Advice. Department of Environment and Conservation Trim Ref DOC86670
- DEC (2009d) Nature Protection Branch Advice. Department of Environment and Conservation Trim Ref: DOC87678
- DEC (2009e) Species and Communities Branch Advice. Department of Environment and Conservation Trim Ref: DOC97015
- EEU (2009) Information & Advice. Environmental Enforcement Unit, Trim Ref: DOC107108
- EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority, Western Australia.
- EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, 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.
- Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

6. 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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)