



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3305/2
Permit Holder:	Telstra Corporation Ltd
Duration of Permit:	8 November 2009 – 10 May 2013

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 installation of a telecommunications fibre optic cable.

2. Land on which clearing is to be done

Lot 1 on Diagram 55677 (SHANNON 6262);
Lot 12074 on Plan 203146 (SHANNON 6262);
Middleton Road reserve;
Deeside Coast Road reserve;
Chesapeake Road reserve;
Broke Inlet Road reserve;
South Western Highway reserve;
un-named road reserve (between Lots 8713 and 8714 on Plan 201649);
Plain Road reserve;
State Forest 41 (Shannon State Forest);
State Forest 48 (Keystone State Forest);
Nelson Location 13037 (Crown Reserve 31621, un-named Nature Reserve);
Lot 13076 on Plan 219920 (Crown Reserve 31501)
Lot 320 on Plan 36426 (Crown Reserve 47666, Jane National Park);
Lot 321 on Plan 36426 (Crown Reserve 47666, Jane National Park);
Lot 333 on Plan 36448 (Crown Reserve 47889, Mt Frankland South National Park);
Lot 13316 on Plan 240298 (Crown Reserve 40836, Shannon National Park);
Lot 13370 on Plan 240359 (Crown Reserve 36996, D'Entrecasteaux National Park);
Lot 13408 on Plan 240359 (Crown Reserve 36996, D'Entrecasteaux National Park);
Lot 13409 on Plan 240359 (Crown Reserve 36996, D'Entrecasteaux National Park);
Lot 13463 on Plan 240359 (Crown Reserve 36996, D'Entrecasteaux National Park); and
Crown Reserve 31362 (Walpole-Nornalup National Park).

3. Area of Clearing

The Permit Holder must not clear more than 63.5 hectares of native vegetation within the area hatched yellow on attached Plans 3305/1a, 3305/1b, 3305/1c, 3305/1d, 3305/1e, 3305/1f, 3305/1g, 3305/1h, 3305/1i, 3305/1j, 3305/1k, 3305/1l, 3305/1m, 3305/1n, 3305/1o, 3305/1p, 3305/1q, 3305/1r, 3305/1s, 3305/1t, 3305/1u, 3305/1v, 3305/1w, 3305/1x, 3305/1y, 3305/1z, 3305/1aa, 3305/1bb, 3305/1cc, 3305/1dd, 3305/1ee, 3305/1ff.

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. Type of clearing authorised

This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2 and 3 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. 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.

8. Dieback and weed control

(a) When undertaking any clearing, *revegetation* and *rehabilitation* or other activity pursuant to this Permit the Permit Holder must take the following steps to minimise the risk of introduction and spread of *dieback*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) avoid the movement of soil in wet conditions;
- (iii) ensure that no *dieback*-affected materials are brought into an area that is not affected by *dieback*; and
- (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) When undertaking any clearing, *revegetation* and *rehabilitation* or other activity pursuant to this Permit the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) ensure that no *weed*-affected materials are brought into the area to be cleared; and
- (iii) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(c) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Flora Management

(a) Prior to undertaking any clearing within the areas described in conditions 1 and 2, the areas shall be inspected by a *flora specialist* who shall identify habitat suitable for rare flora and *priority flora taxa*;

(b) Prior to clearing, any habitat identified by condition 9(a) shall be inspected by a *flora specialist* for the presence of rare flora and *priority flora taxa*;

(c) Where rare flora or *priority flora taxa* are identified in relation to condition 9(b) the Permit Holder shall ensure that:

- (i) all records of rare flora and *priority flora taxa* are submitted to the CEO;
- (ii) no clearing occurs within 50m of identified rare flora, unless approved by the CEO; and
- (iii) no clearing occurs with 10m of identified *priority flora taxa*, unless approved by the CEO.

10. Revegetation and rehabilitation

- (a) The Permit Holder shall retain the vegetative material and topsoil removed by clearing in accordance with this Permit:
 - (i) vegetative material and topsoil must be stockpiled in an area that has already been cleared; and
 - (ii) at an *optimal time* during the first winter following clearing authorised under this Permit, the Permit Holder shall lay the vegetative material and topsoil on the cleared area.
- (b) At an *optimal time* during the first winter following clearing authorised under this Permit, the Permit Holder must *revegetate* and *rehabilitate* any areas no longer required for the purpose for which they were cleared under this Permit.
- (c) The *revegetation* and *rehabilitation* of an area pursuant to this condition 10(a) of this Permit must utilise indigenous flora species found within 20 kilometres of the areas cleared under this Permit.

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, as relevant:

- (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 Geocentric Datum Australia 1994;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to Flora Management pursuant to condition 9:
 - (i) the location of each rare flora and *priority flora taxa* recorded using Geocentric Datum Australia 1994; and
 - (ii) the species of each rare flora or *priority flora taxa* identified.
- (c) in relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10:
 - (i) a map showing the location of any area *revegetated* and *rehabilitated* in accordance with condition 10, recorded in an *ESRI Shapefile*;
 - (ii) a description of the *revegetation* and *rehabilitation* activities undertaken pursuant to condition 10; and
 - (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);

12. 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 11 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 10 February 2013, the Permit Holder must provide to the CEO a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

Definitions

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

Department means the Department of Environment and Conservation (Western Australia);

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

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;

flora specialist means a person with specific training and/or experience in the ecology and

good or better condition means that the vegetation is in either pristine, excellent, very good or good condition according to *Keighery scale*;

Keighery scale means the vegetation condition scale described in *Bushland Plant Survey: A Guide to Plant Community Survey for the Community (1994)* as developed by B.J. Keighery and published by the Wildflower Society of WA (Inc). Nedlands, Western Australia;

optimal time means the optimal time for undertaking *direct seeding* and *planting* as set out in the table in Schedule 1 of this Permit;

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

priority flora taxa means those plant taxa that described as priority flora classes 1, 2, 3 or 4 in the *Declared Rare and Priority Flora List for Western Australia*, Department of Conservation and Land Management, as amended;

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 native vegetation in an area such that the species composition, structure and density is similar to pre-clearing vegetation types in that area, and can involve *regeneration*, *direct seeding* and/or *planting*;

site preparation means management of existing site topsoil and preparation of the finished soil surface, for example by ripping or tilling the soil surface and resspreading site topsoil and chipped native vegetation;

term means the duration of this Permit, including as amended or renewed;

vegetation establishment period means a period of at least two summers after the *revegetation* during which time replacement and infill *revegetation* works may be required for areas in which *revegetation* has been unsuccessful, and involves regular inspections of *revegetation* sites to monitor the success of *revegetation*;

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;

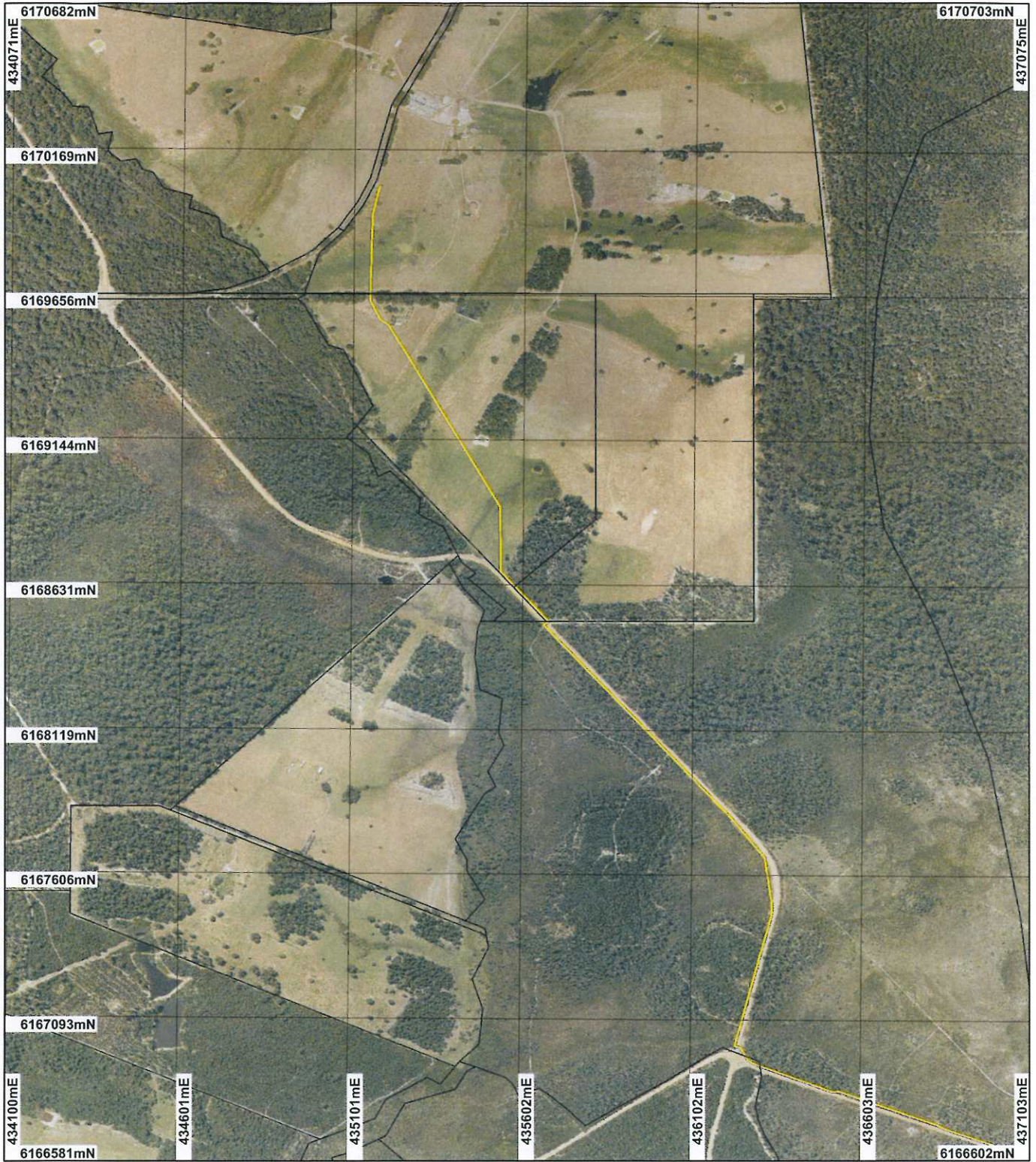


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

21 April 2010

Plan 3305/2a



LEGEND

Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Deep River 1.4m Orthomosaic - Landgate 2000

Deep River 50cm Orthomosaic - Landgate 2004

NorthCliffe 50cm Orthomosaic - Landgate 2004



Scale 1:17946
(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.

[Signature] Date 21/4/10
R. Faulkner

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

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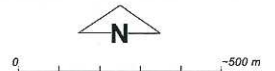
LEGEND

Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Deep River 1.4m Orthomosaic - Landgate 2000

Deep River 50cm Orthomosaic - Landgate 2004

Northcliffe 50cm Orthomosaic - Landgate 2004



Scale 1:17944

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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[Signature] Date 21/4/00

K. Faulkner

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

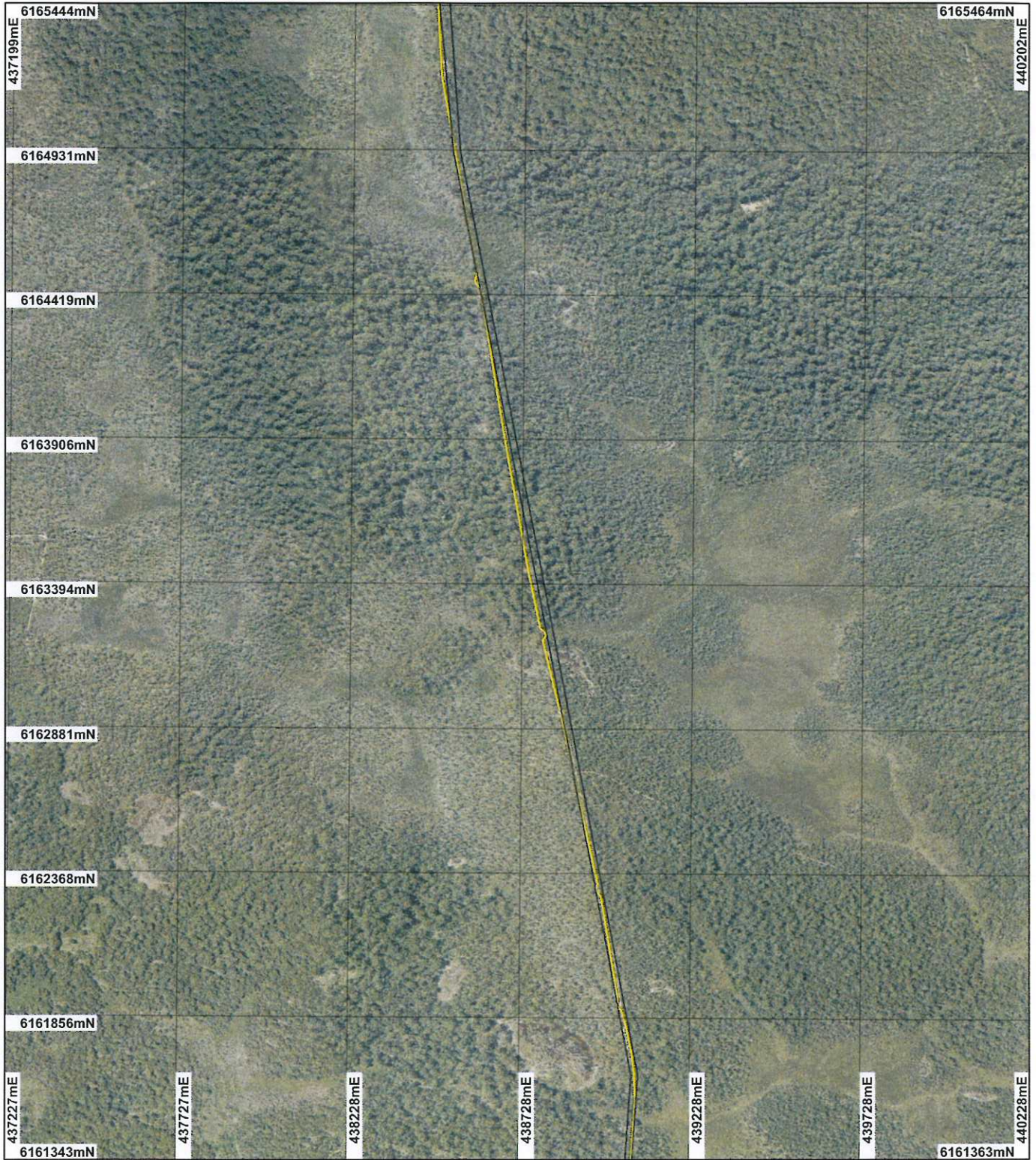
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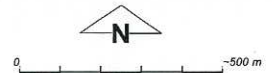
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre Deep River 1.4m Orthomosaic - Landgate 2000 | <p>Deep River 50cm Orthomosaic - Landgate 2004</p> <p>NorthCliffe 50cm Orthomosaic - Landgate 2004</p> |
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Scale 1:17942
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Deep River 1.4m Orthomosaic - Landgate 2000

Deep River 50cm Orthomosaic - Landgate 2004

Northcliffe 50cm Orthomosaic - Landgate 2004



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Scale 1:17939

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K. Faulkner Date *21/4/12*

K. Faulkner

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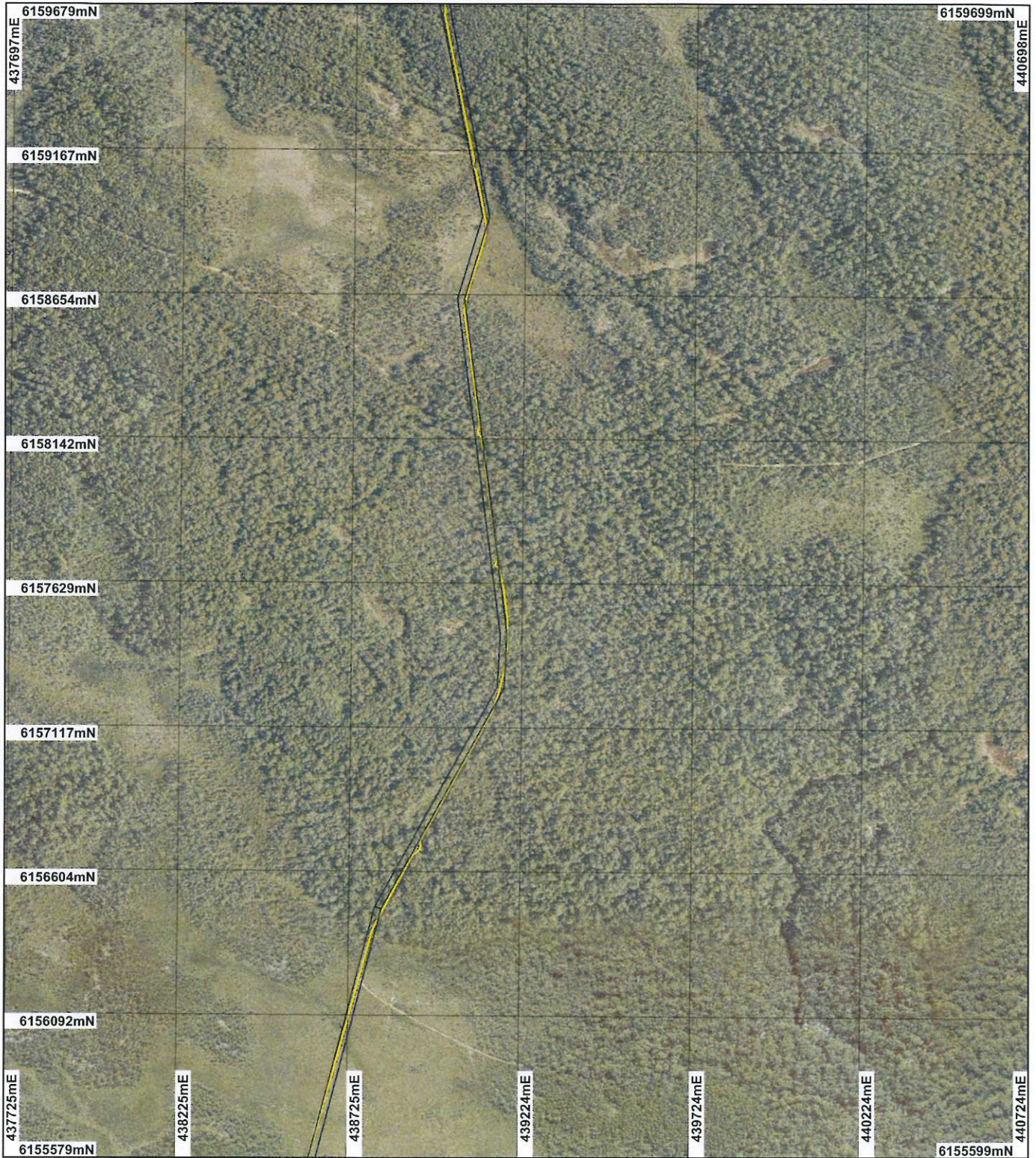
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Deep River 1.4m Orthomosaic - Landgate 2000</p> | <p>Deep River 50cm Orthomosaic - Landgate 2004</p> <p>NorthCliffe 50cm Orthomosaic - Landgate 2004</p> |
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Scale 1:17937
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K. Faulkner

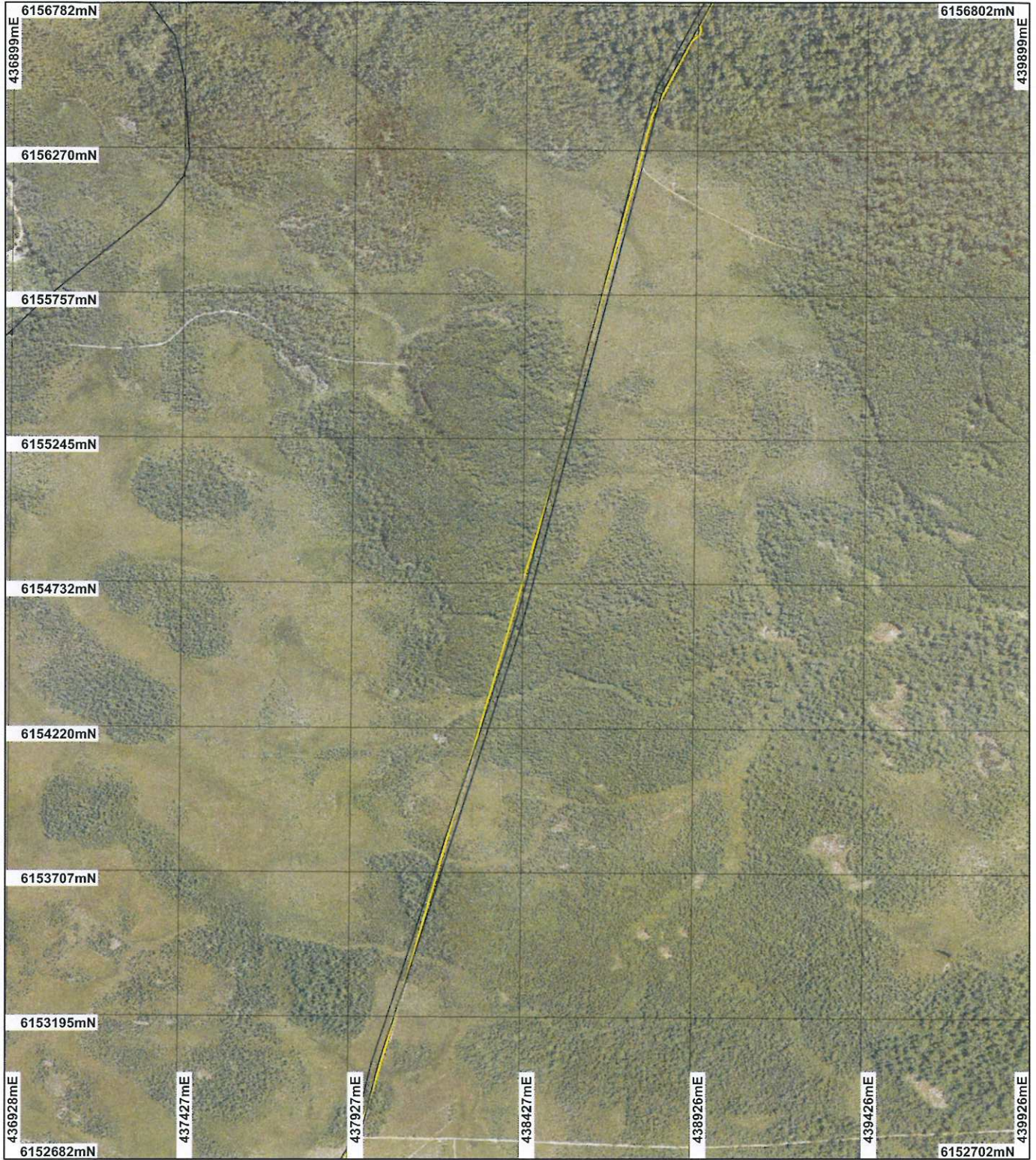
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Clearing Instruments

- Areas Approved to Clear
- Cadastre
- Deep River 1.4m Orthomosaic - Landgate 2000

Deep River 50cm Orthomosaic - Landgate 2004

Northcliffe 50cm Orthomosaic - Landgate 2004



Scale 1:17934

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K. Faulkner Date 20/4/10

K. Faulkner

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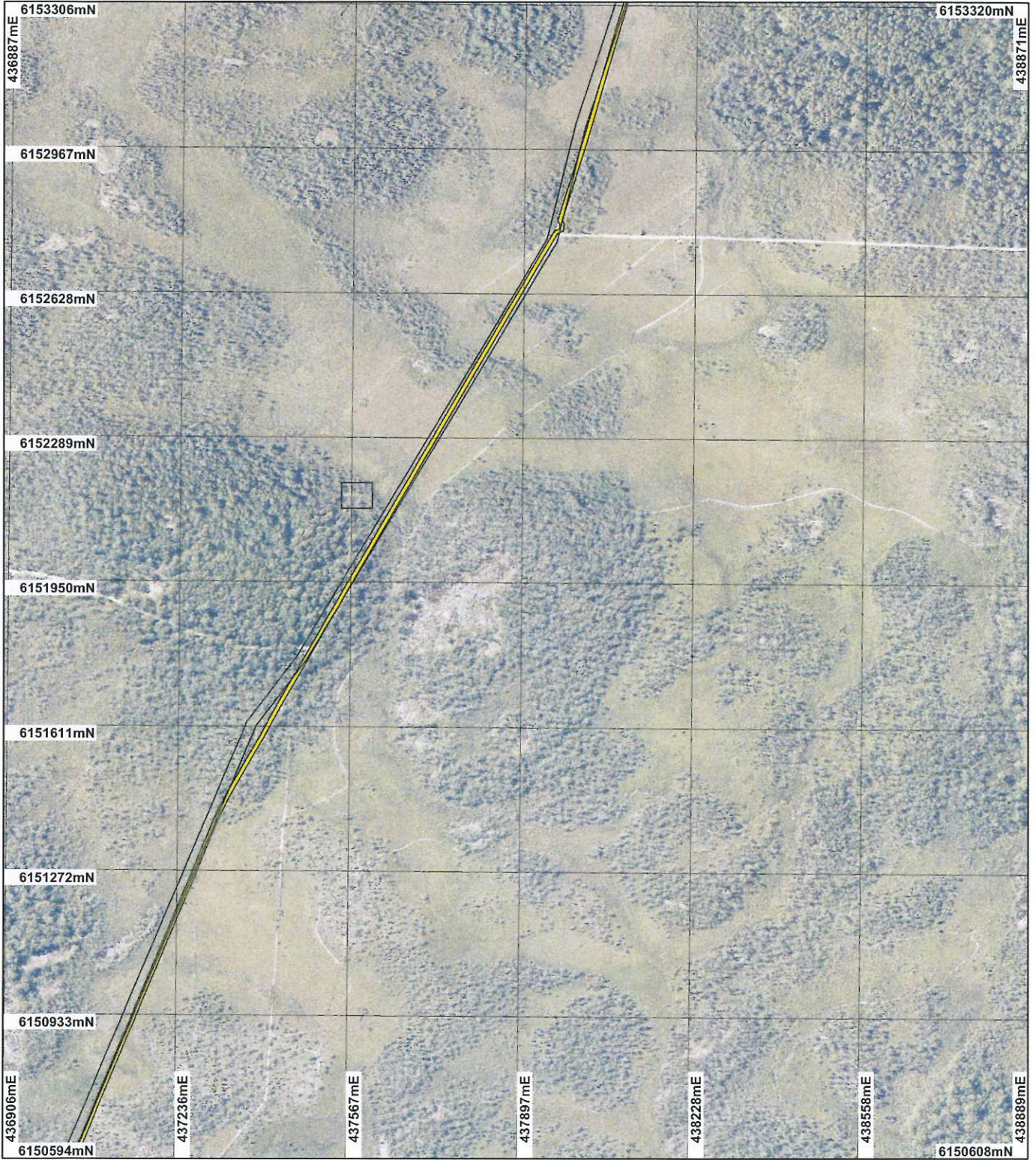
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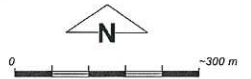
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- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11861
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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[Signature] Date 2/4/10
Faulkner

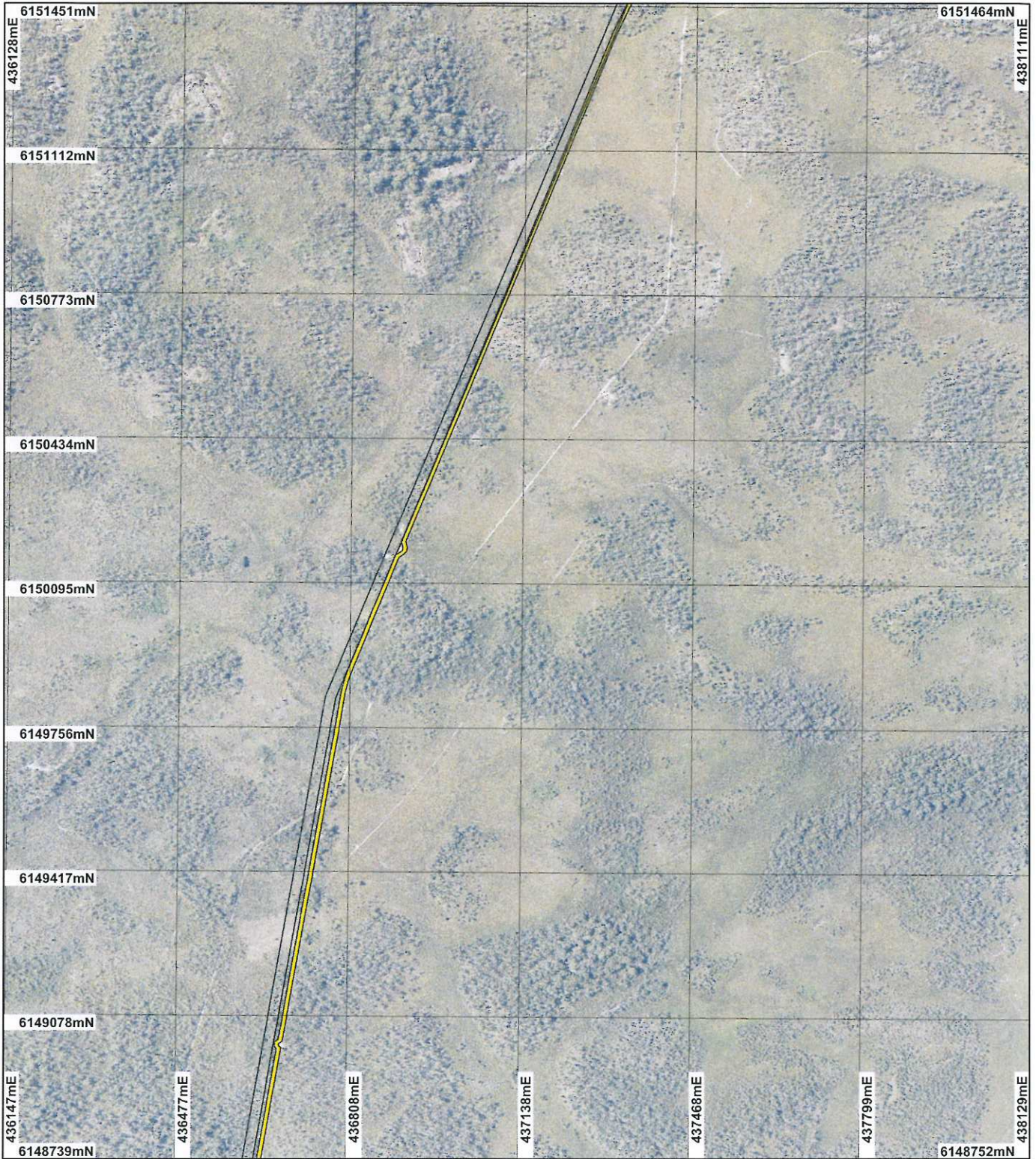
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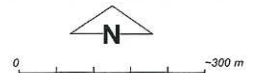
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- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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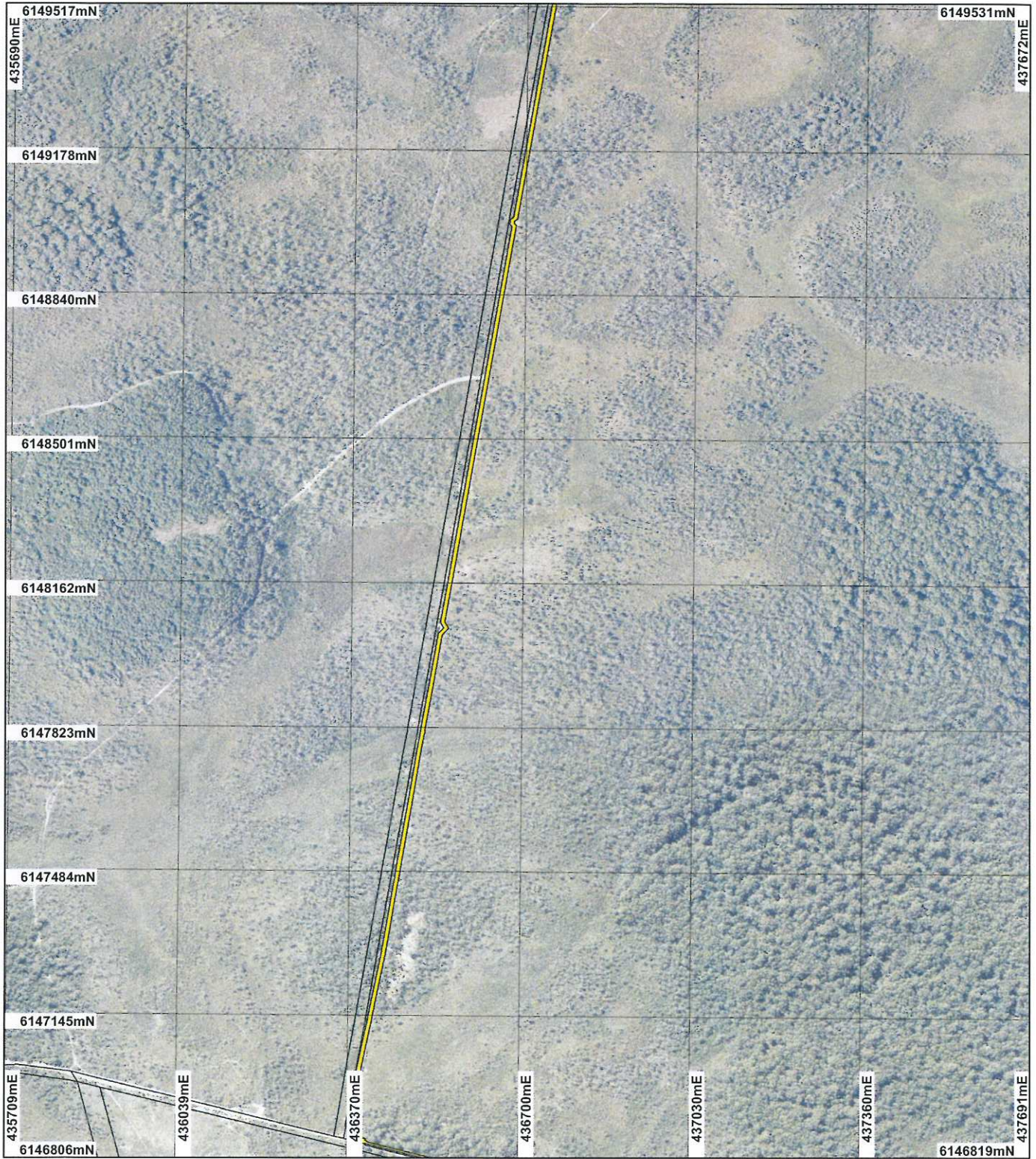
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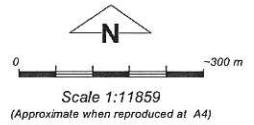
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- Clearing Instruments**
- Areas Approved to Clear
 - Cadastre
- Deep River 1.4m Orthomosaic - Landgate 2000**
- Northcliffe 50cm Orthomosaic - Landgate 2007**



Geocentric Datum Australia 1994

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

K. Faulkner Date *21/4/10*

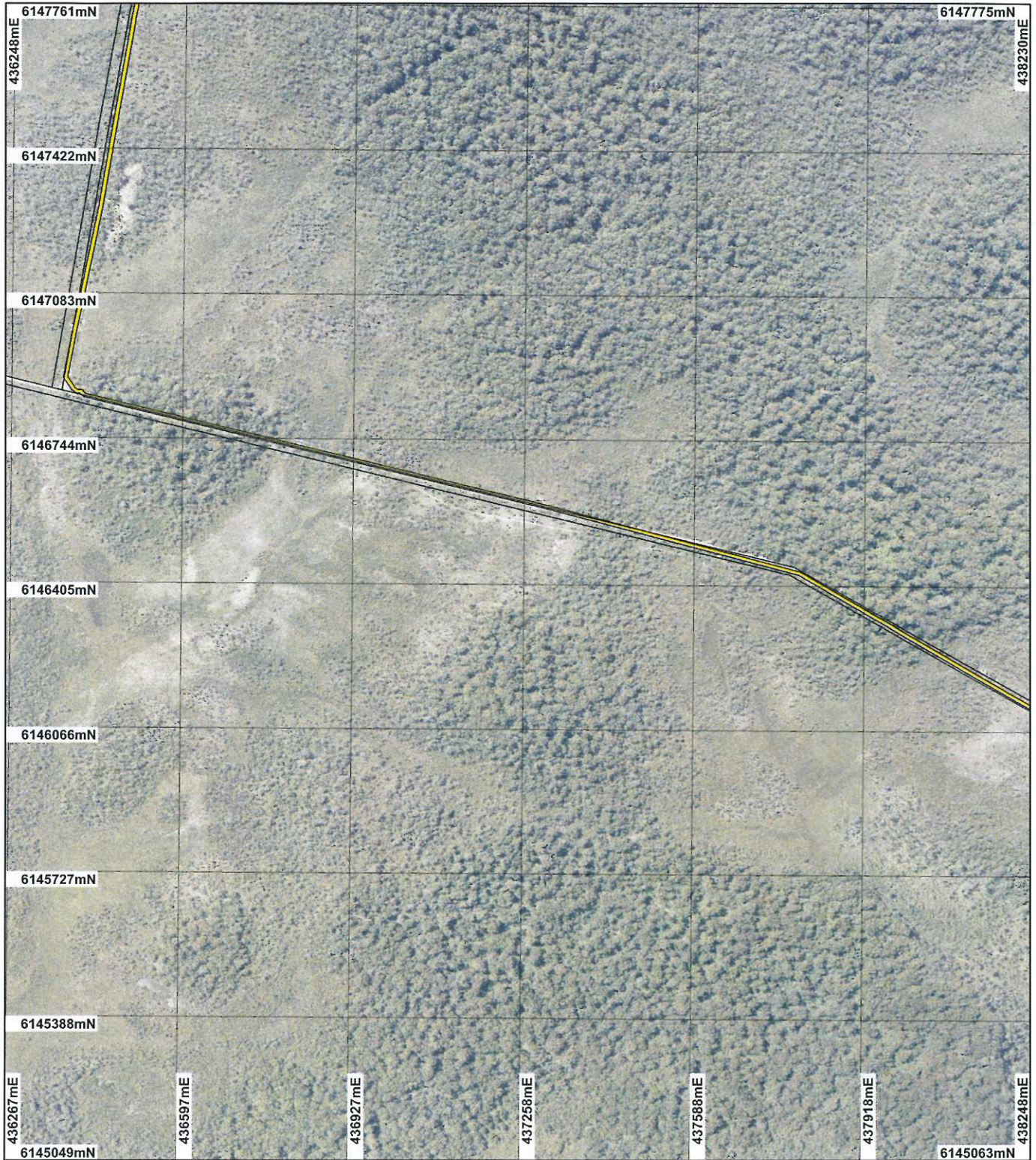
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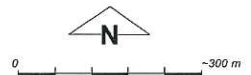
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- Clearing Instruments**
- Areas Approved to Clear
 - Cadastral
- Deep River 1.4m Orthomosaic - Landgate 2000**
- Northcliffe 50cm Orthomosaic - Landgate 2007**



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K. Faulkner Date 21/6/10

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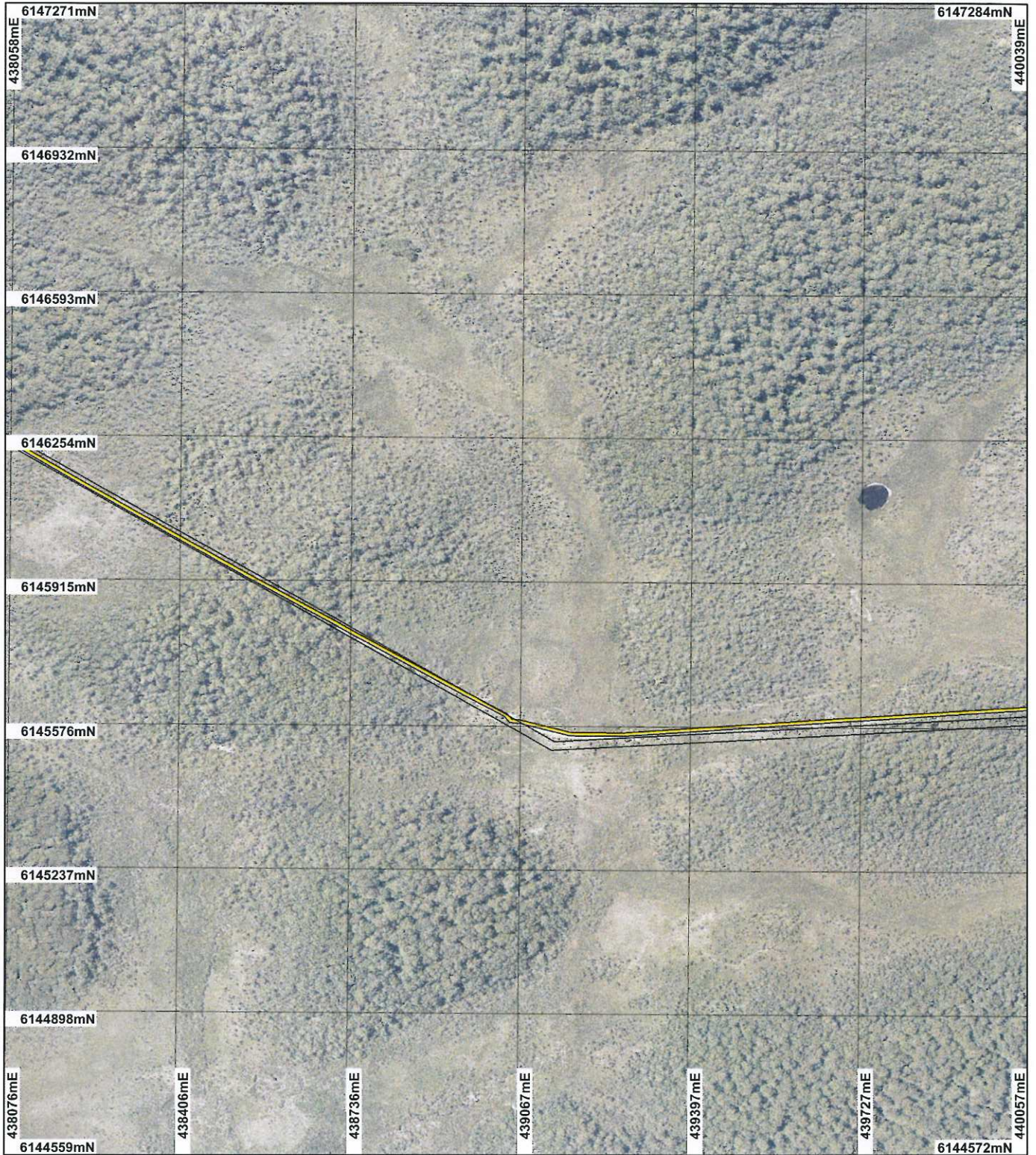
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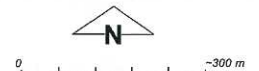
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- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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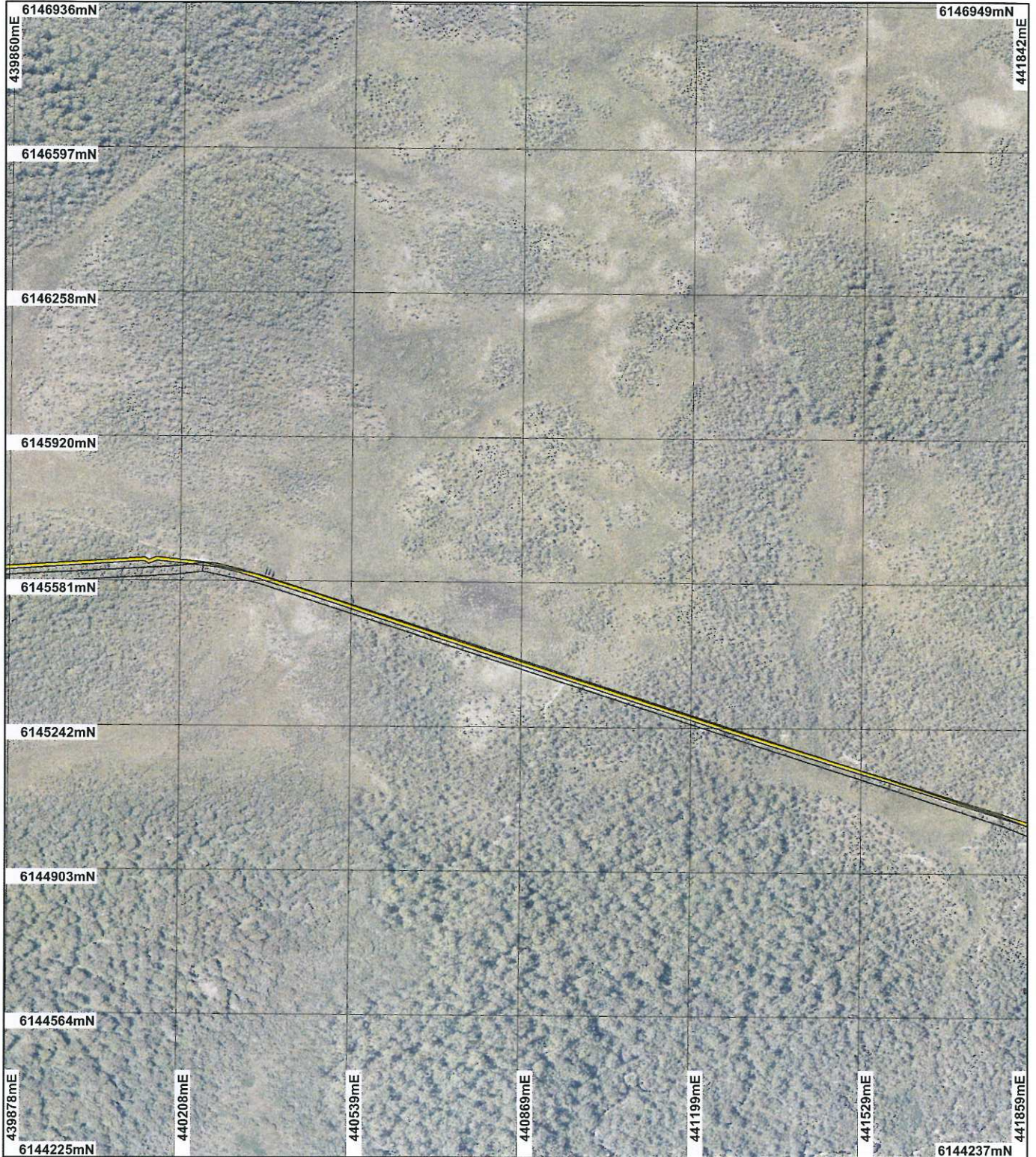
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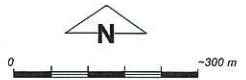
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| <ul style="list-style-type: none"> Clearing Instruments Areas Approved to Clear Cadastre Northcliffe 50cm Orthomosaic - Landgate 2007 | <ul style="list-style-type: none"> Deep River 1.4m Orthomosaic - Landgate 2000 |
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Scale 1:11857
(Approximate when reproduced at A4)

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K. Faulkner Date *2/14/10*
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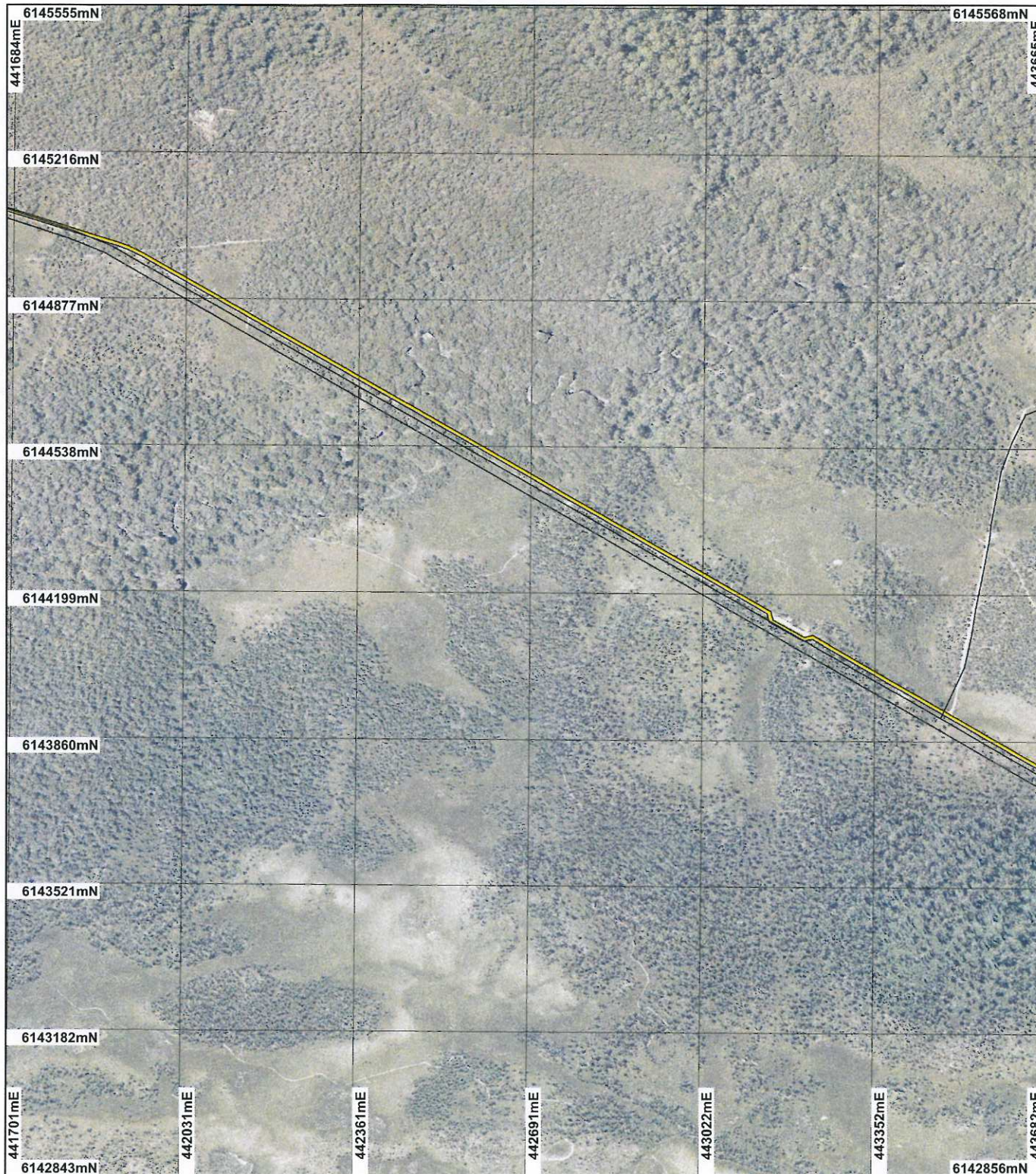
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11856
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K. Faulkner Date *24/6/10*
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| <ul style="list-style-type: none"> Clearing Instruments Areas Approved to Clear Cadastre Northcliffe 50cm Orthomosaic
- Landgate 2007 | <ul style="list-style-type: none"> Deep River 1.4m Orthomosaic
- Landgate 2000 |
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Scale 1:11856
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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K. Faulkner Date *2/4/10*
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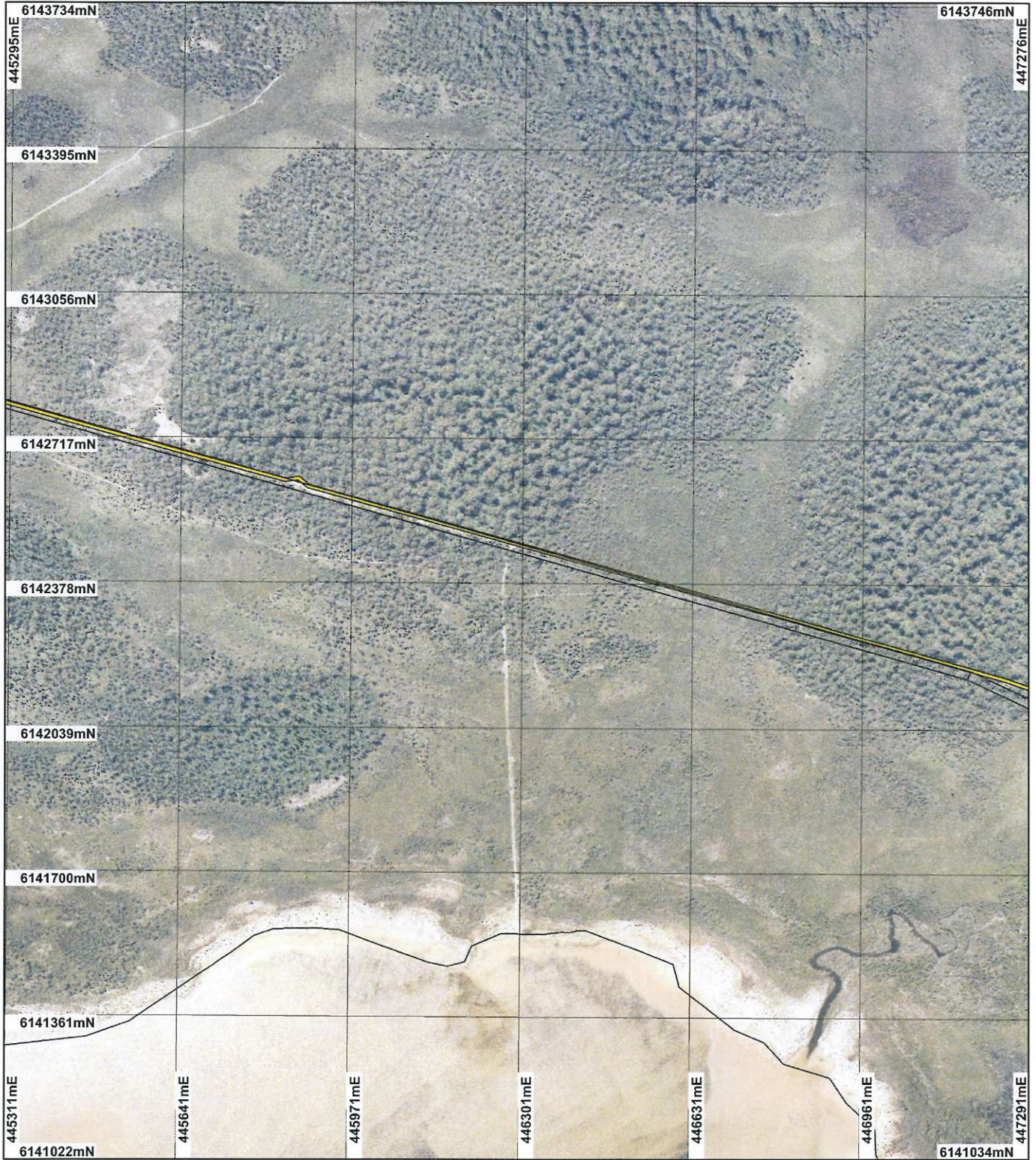
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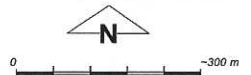
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11855
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K. Faulkner Date 21/6/10

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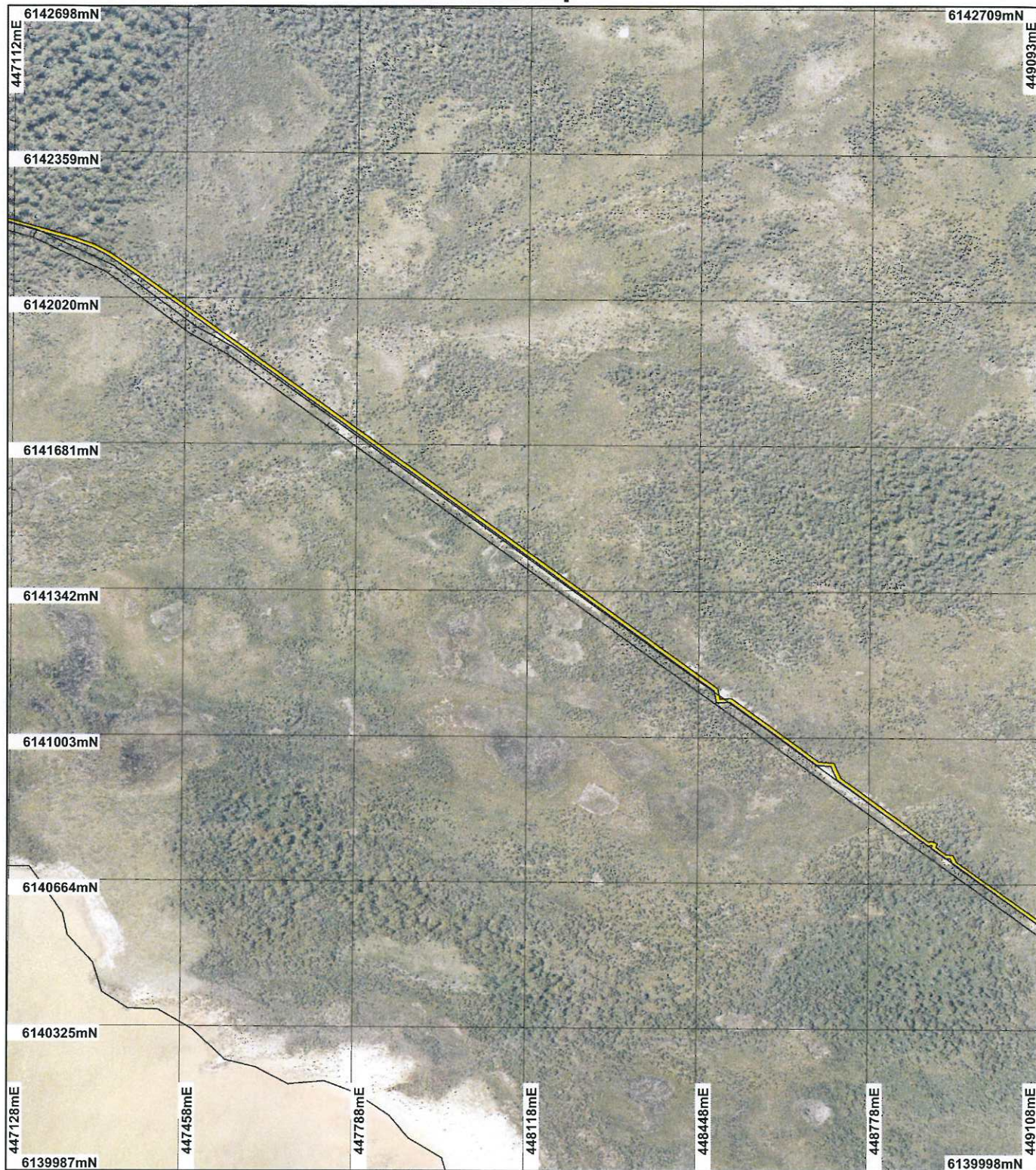
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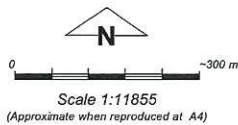
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LEGEND

- | | |
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| Clearing Instruments | |
| Areas Approved to Clear | Deep River 1.4m Orthomosaic - Landgate 2000 |
| Cadastral | Northcliffe 50cm Orthomosaic - Landgate 2007 |



Geocentric Datum Australia 1994
 Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

K. Faulkner Date *21/6/10*
 K. Faulkner

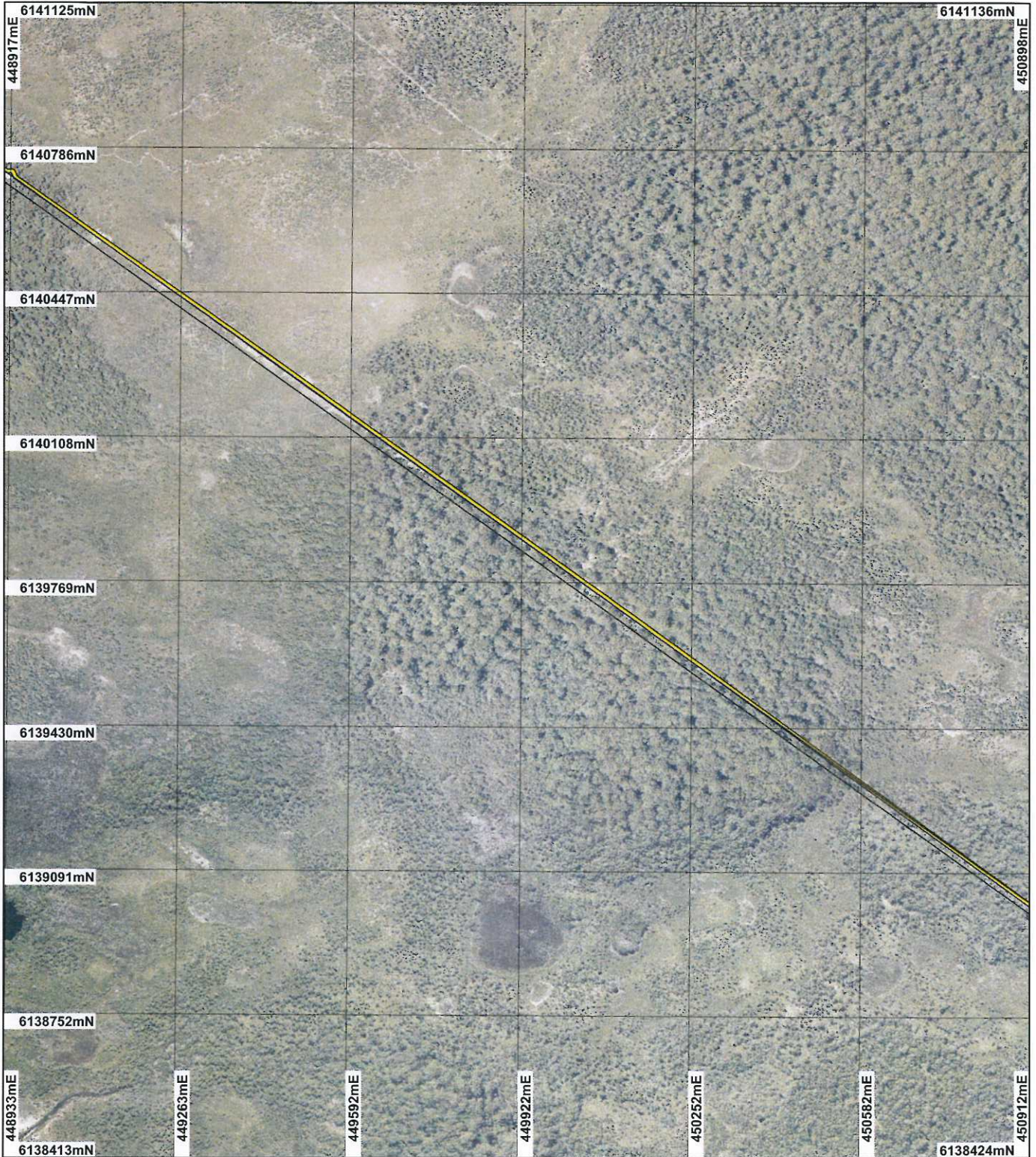
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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



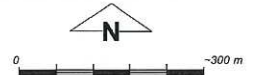
Department of Environment and Conservation
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11854
(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.

K. Faulkner Date 20/6/08
K. Faulkner

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

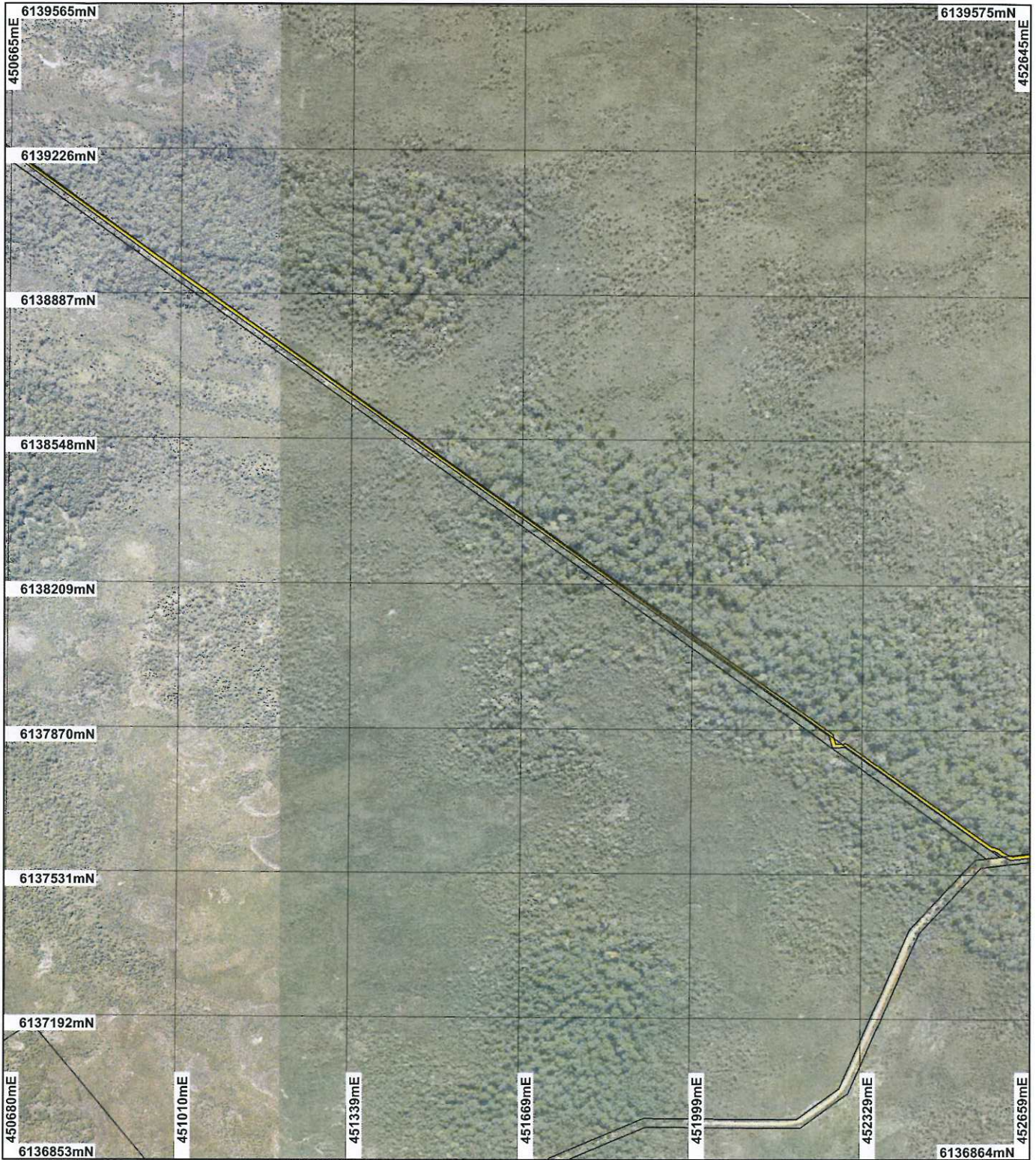
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastral <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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 0 - 300 m
 Scale 1:11853
 (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 21/4/10
 K. Faulkner

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

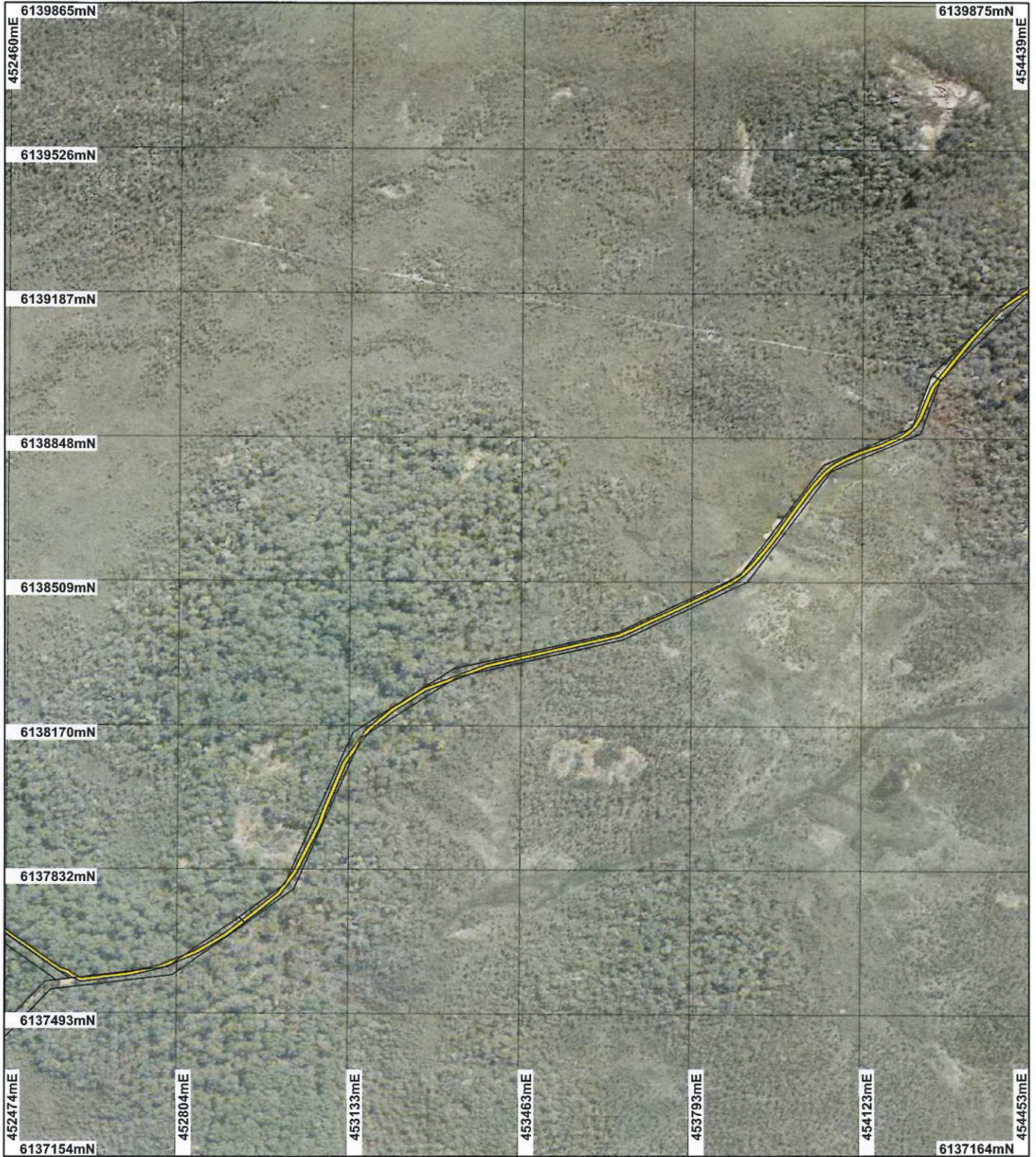
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11853
(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.

K. Faulkner Date 2/1/10
K. Faulkner

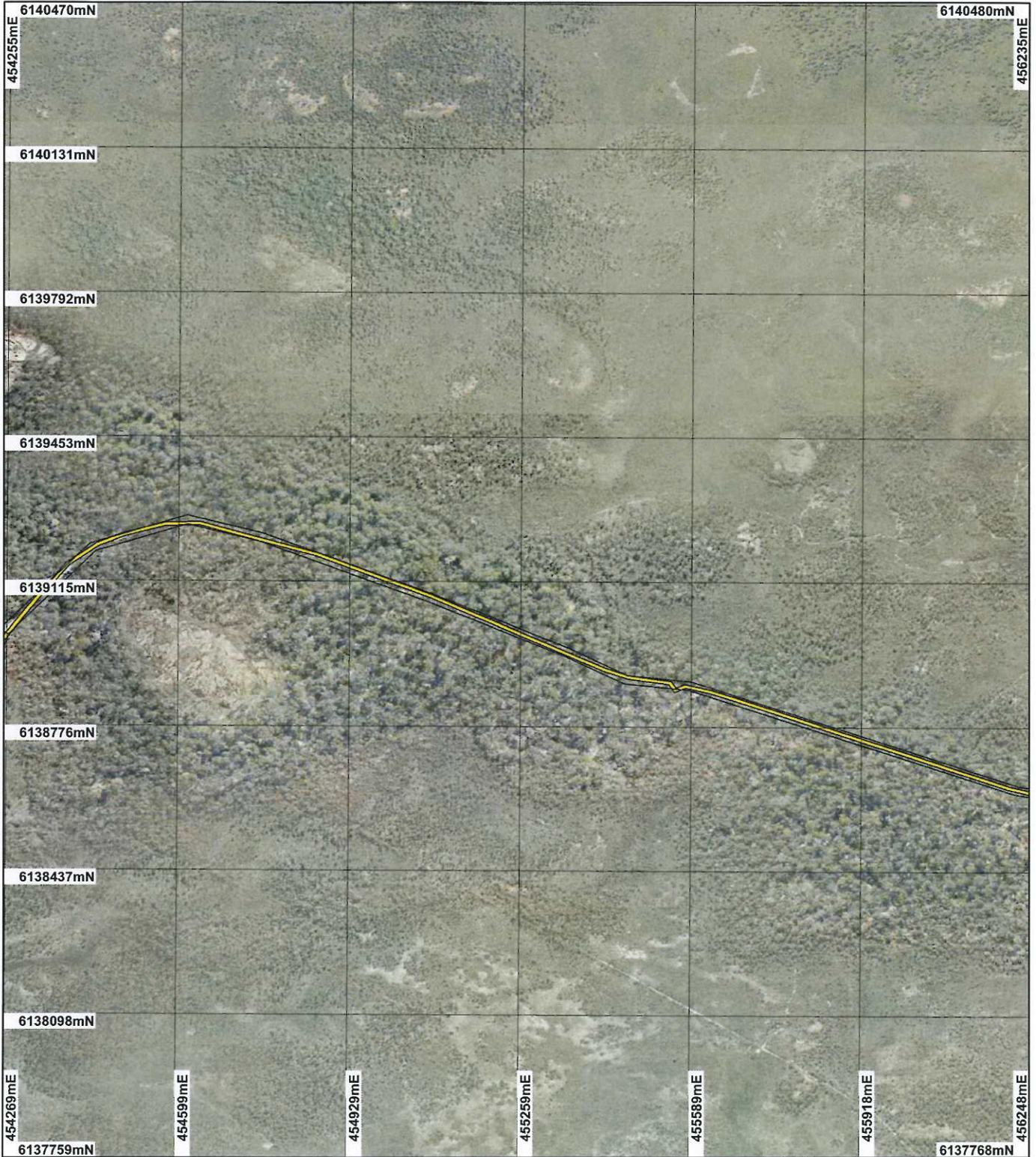
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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



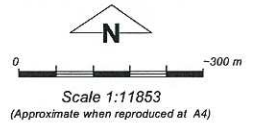
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Geocentric Datum Australia 1994

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

K. Faulkner Date 21/4/10
K. Faulkner

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

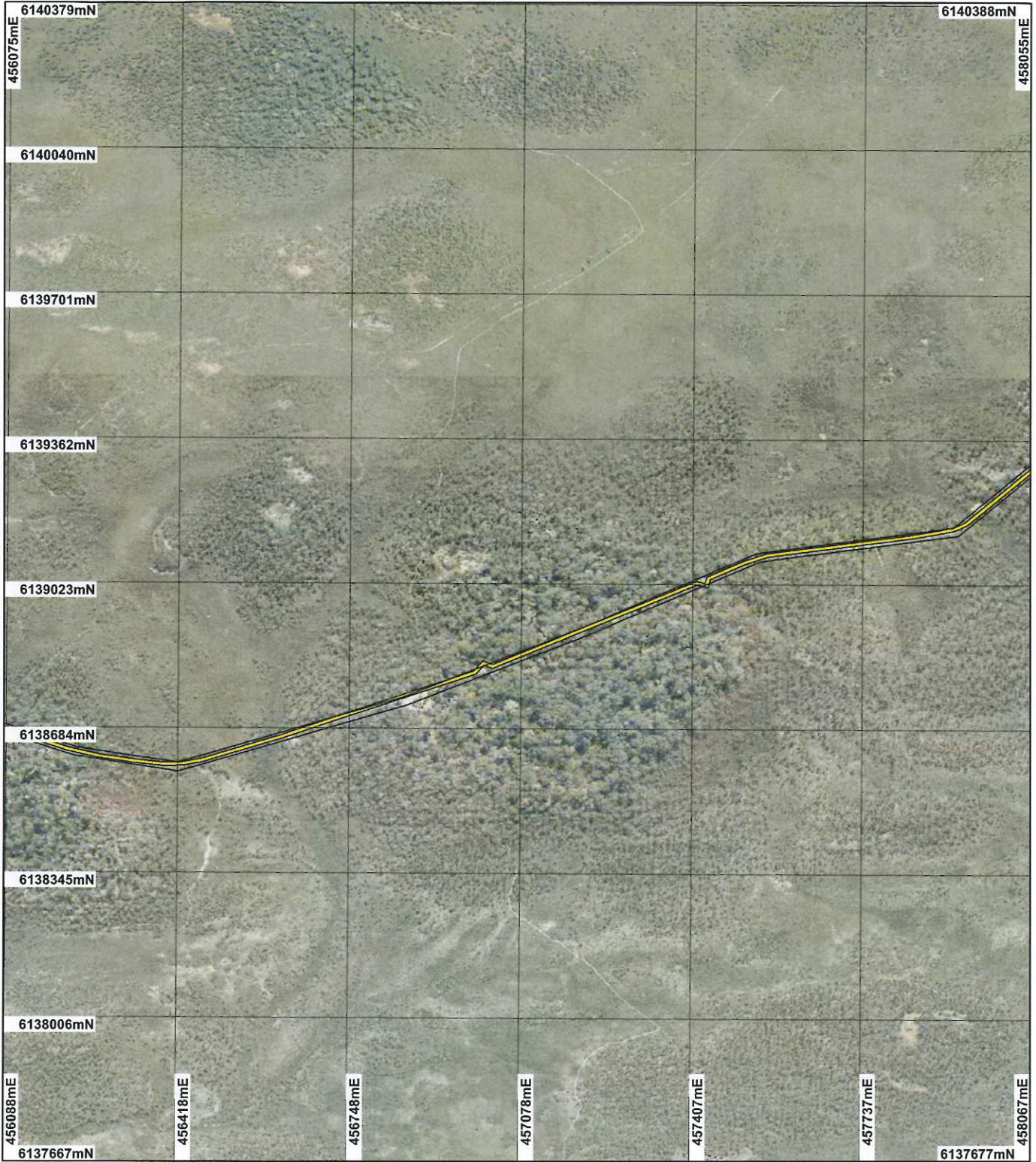
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LEGEND

- Clearing Instruments
- Deep River 1.4m Orthomosaic - Landgate 2000
 - Northcliffe 50cm Orthomosaic - Landgate 2007
- Areas Approved to Clear
 Cadastre



Geocentric Datum Australia 1994

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

K. Faulkner Date *2/4/10*
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.



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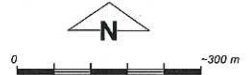
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastral <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Geocentric Datum Australia 1994

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

K. Faulkner Date 22/1/10
K. Faulkner

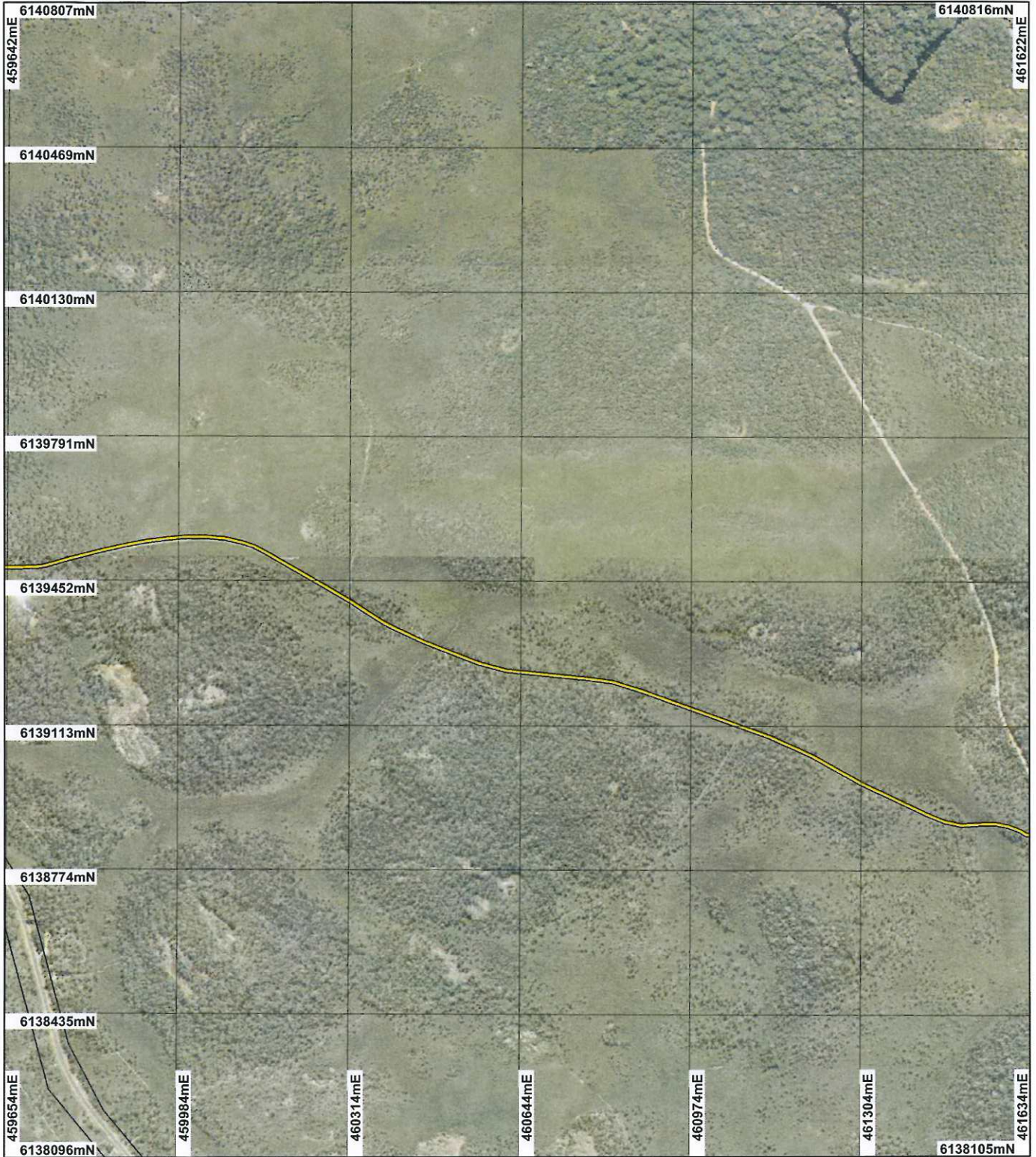
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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



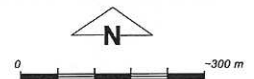
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11853
(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.

K. Faulkner Date 21/4/10
K. Faulkner

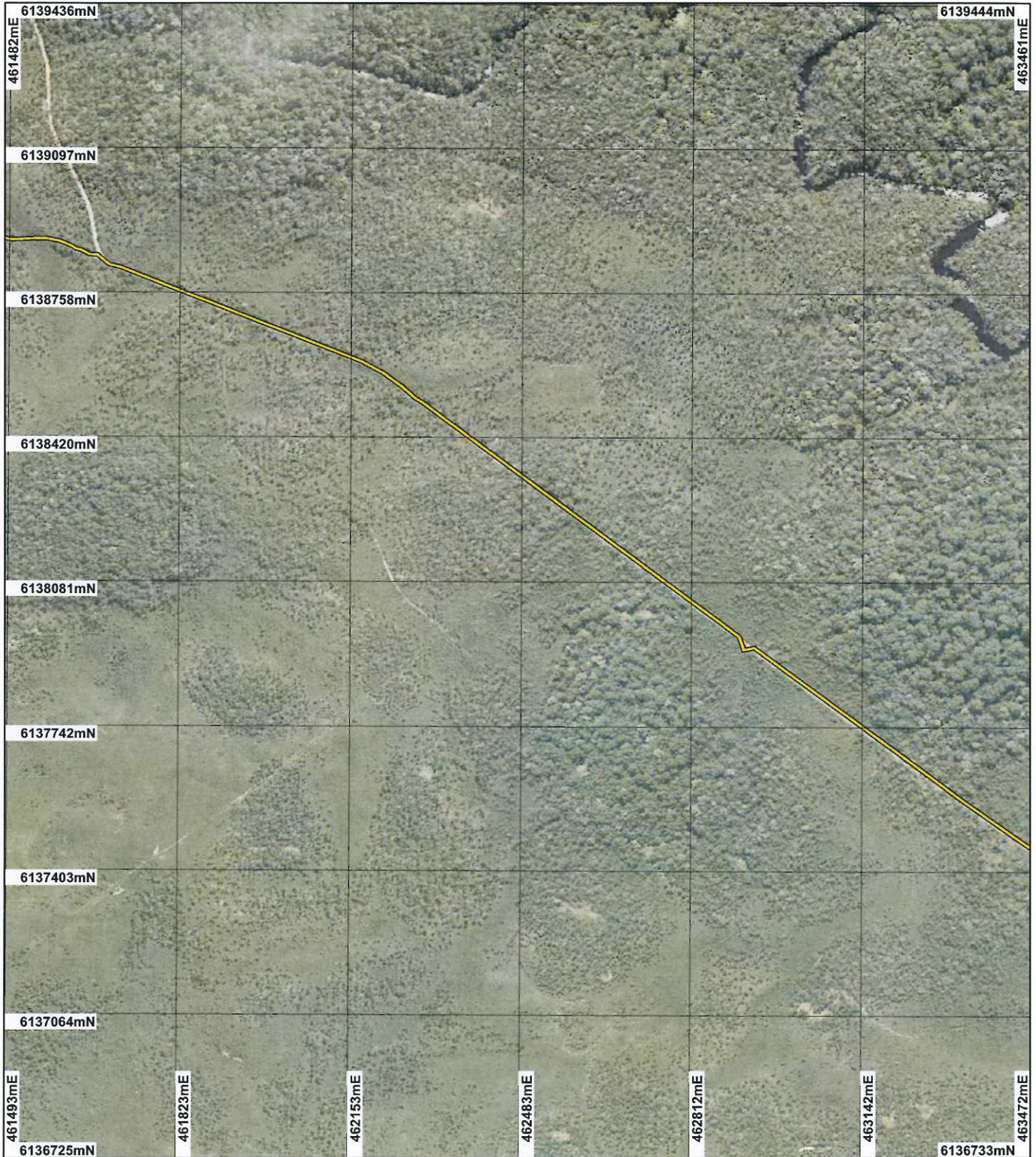
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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



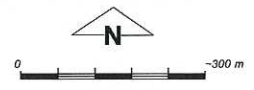
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11853
(Approximate when reproduced at A4)

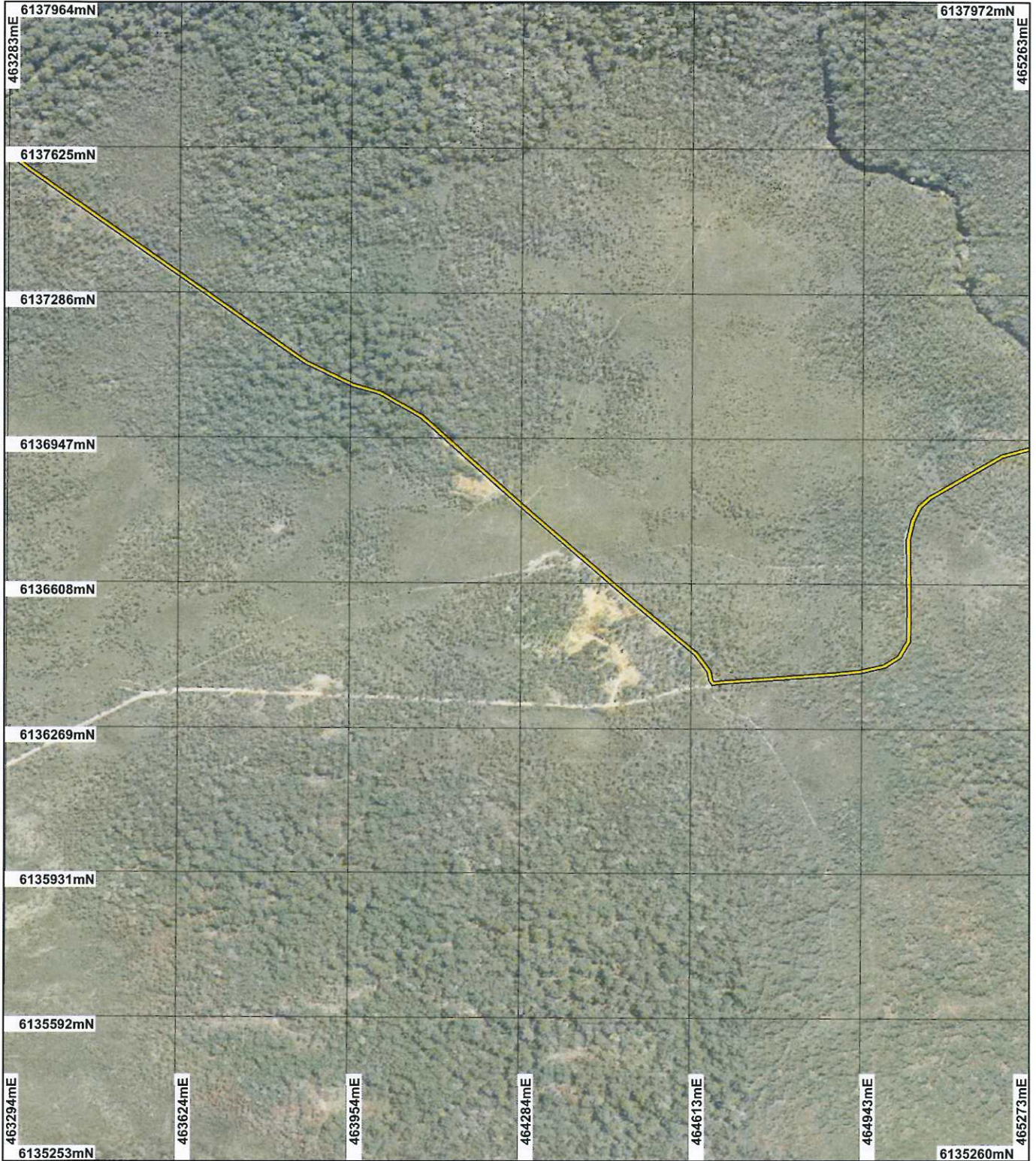
Geocentric Datum Australia 1994
Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

K. Faulkner Date 21/4/10
K. Faulkner

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

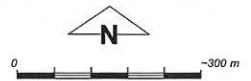
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11852
(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.

[Signature] Date 20/6/10
W Faulkner

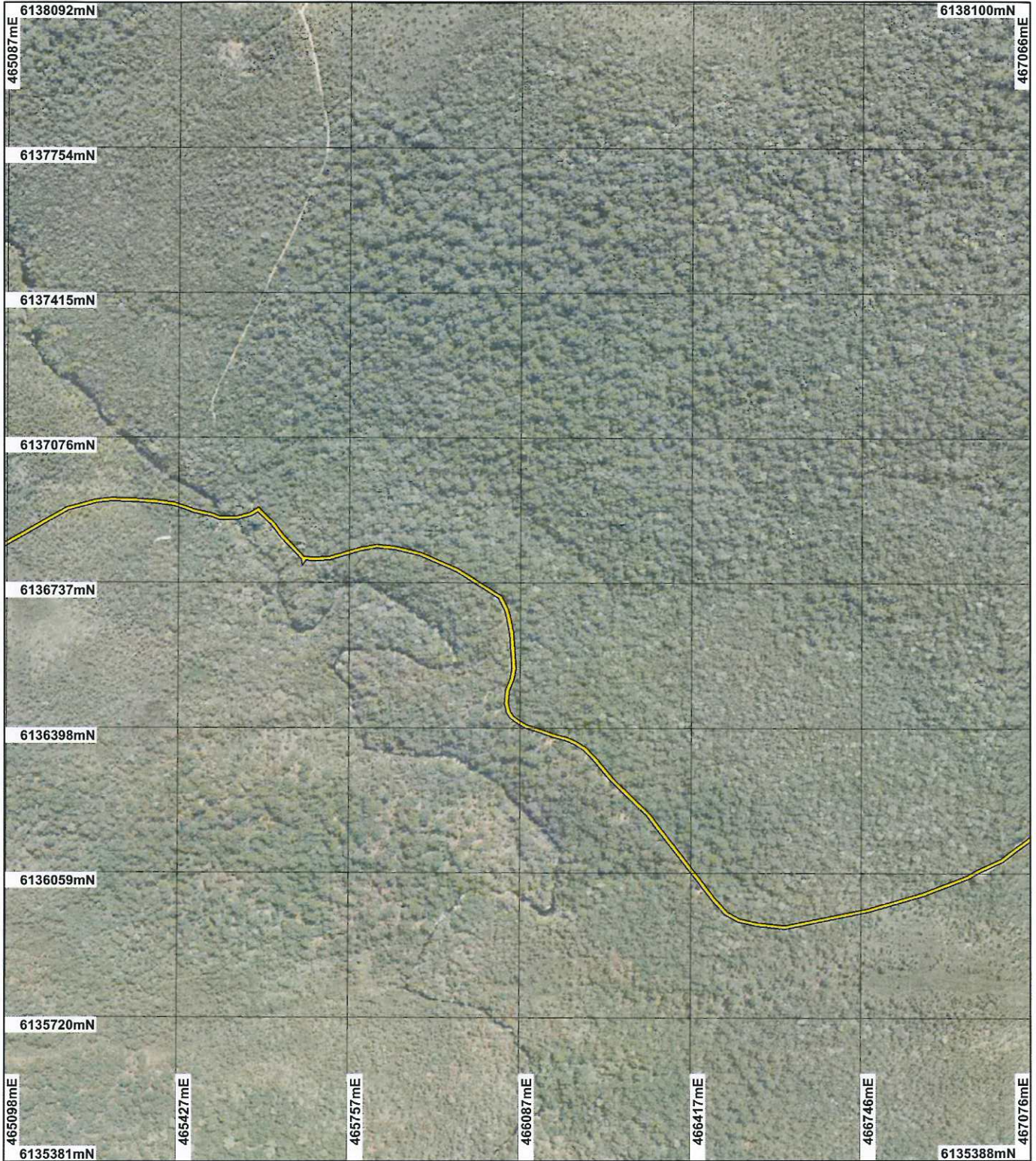
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11852
(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.

KJ Faulkner Date 21/4/10
KJ Faulkner

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

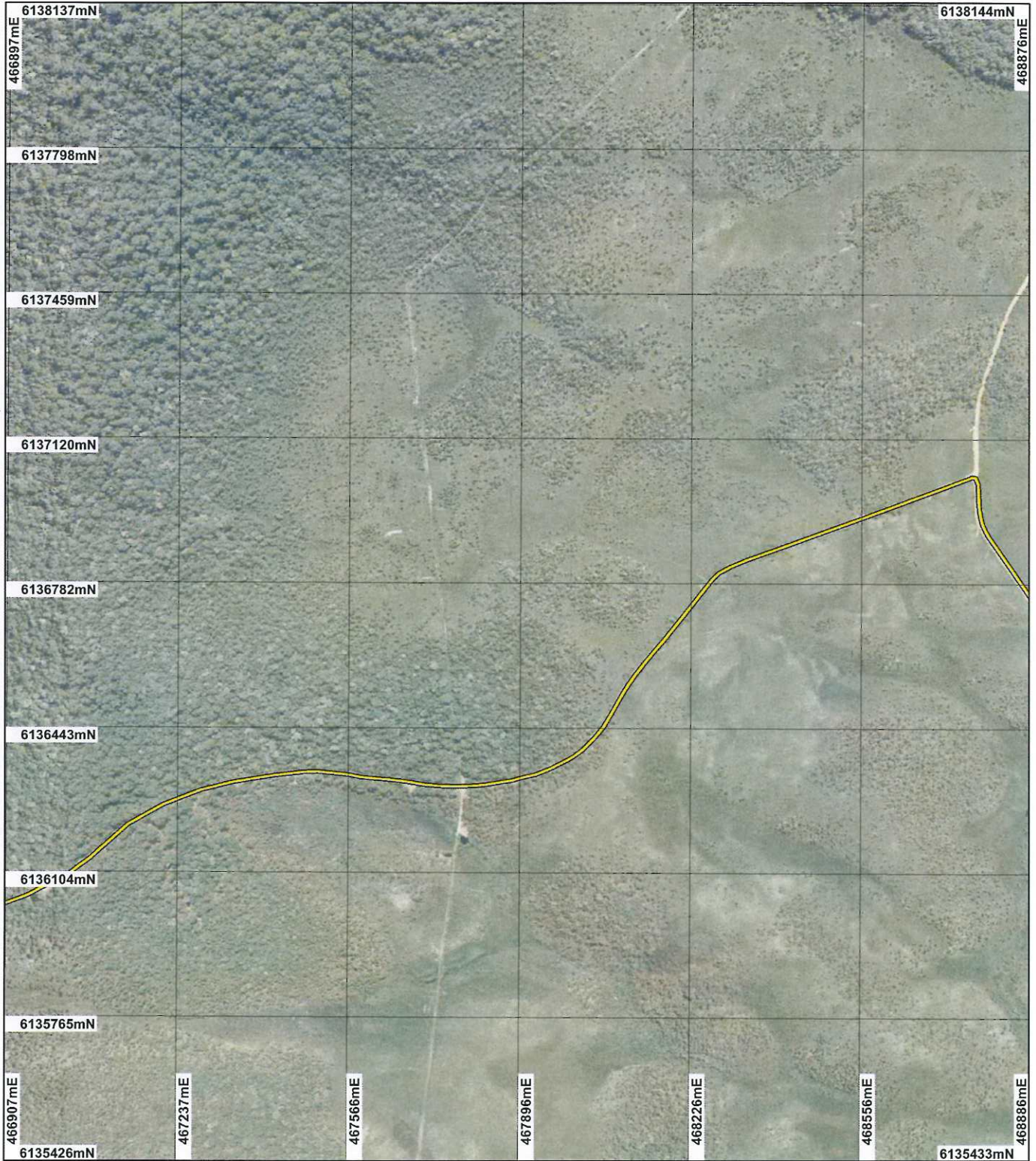
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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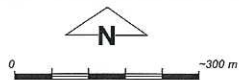
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11852
(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.

[Signature] Date 2/4/10
K. Faulkner

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

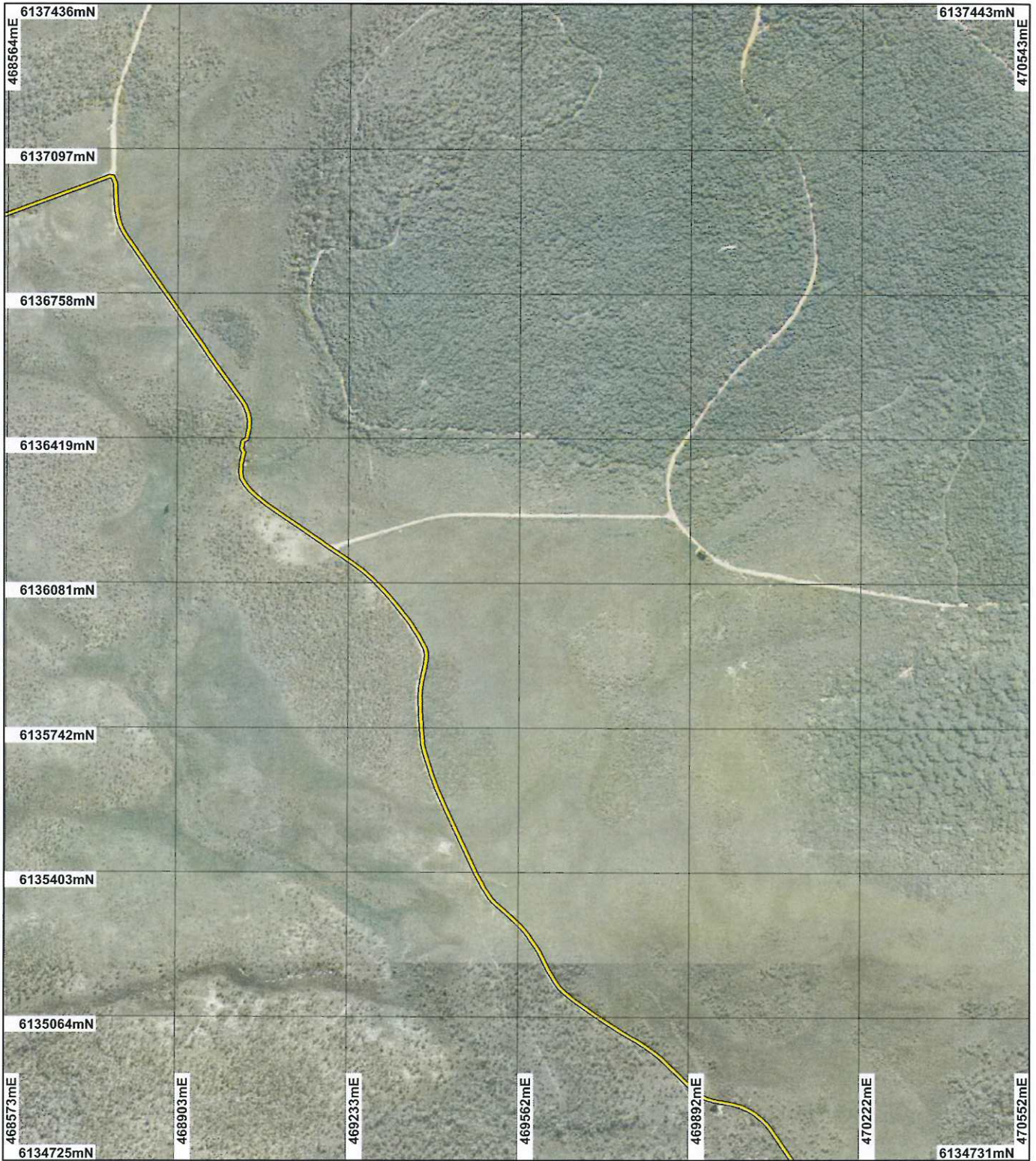
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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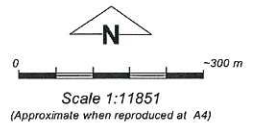
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Geocentric Datum Australia 1994

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

K. Faulkner Date 21/6/19
K. Faulkner

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

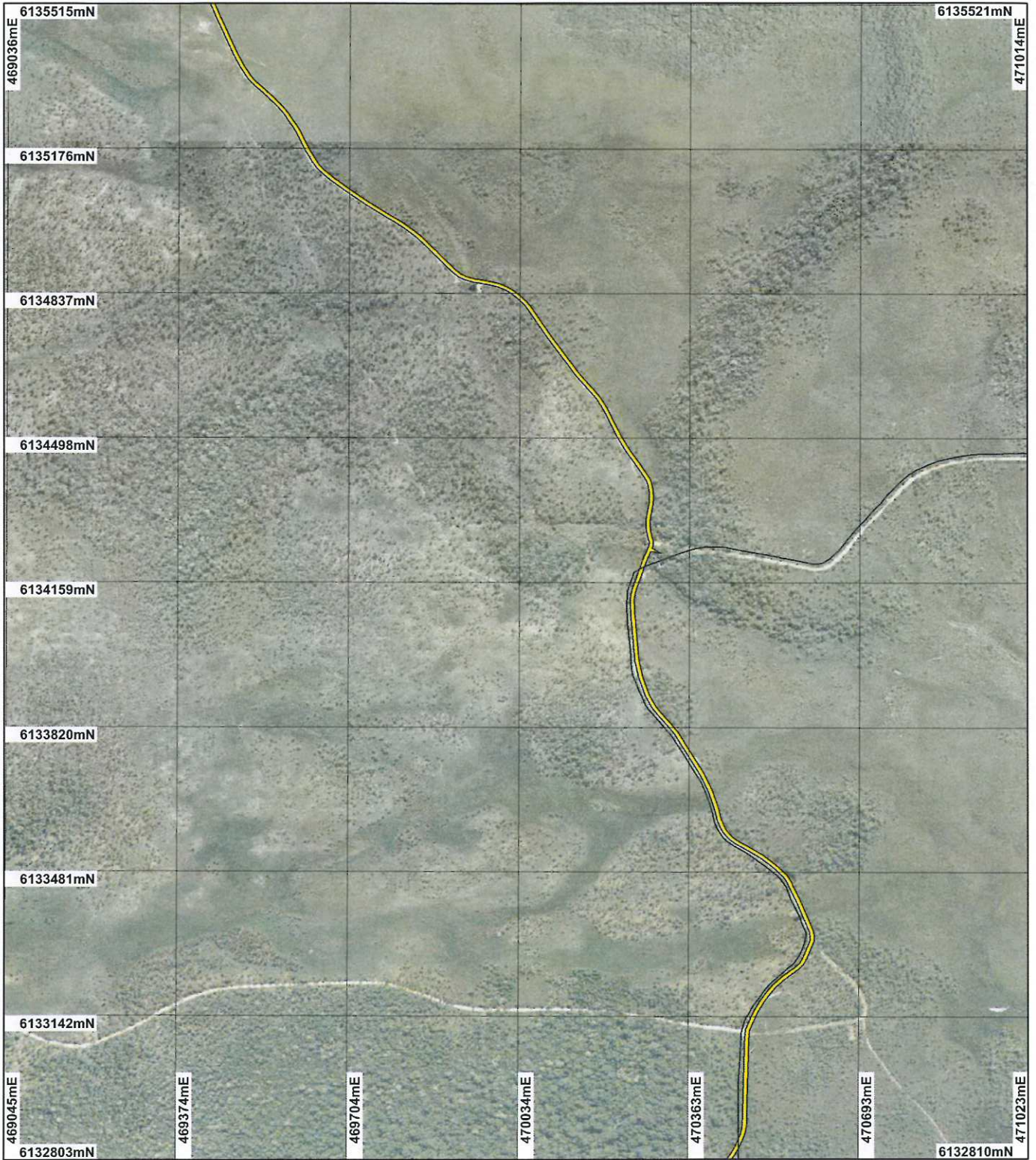
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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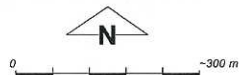
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Geocentric Datum Australia 1994

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

K. Faulkner Date 21/4/10
K. Faulkner

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

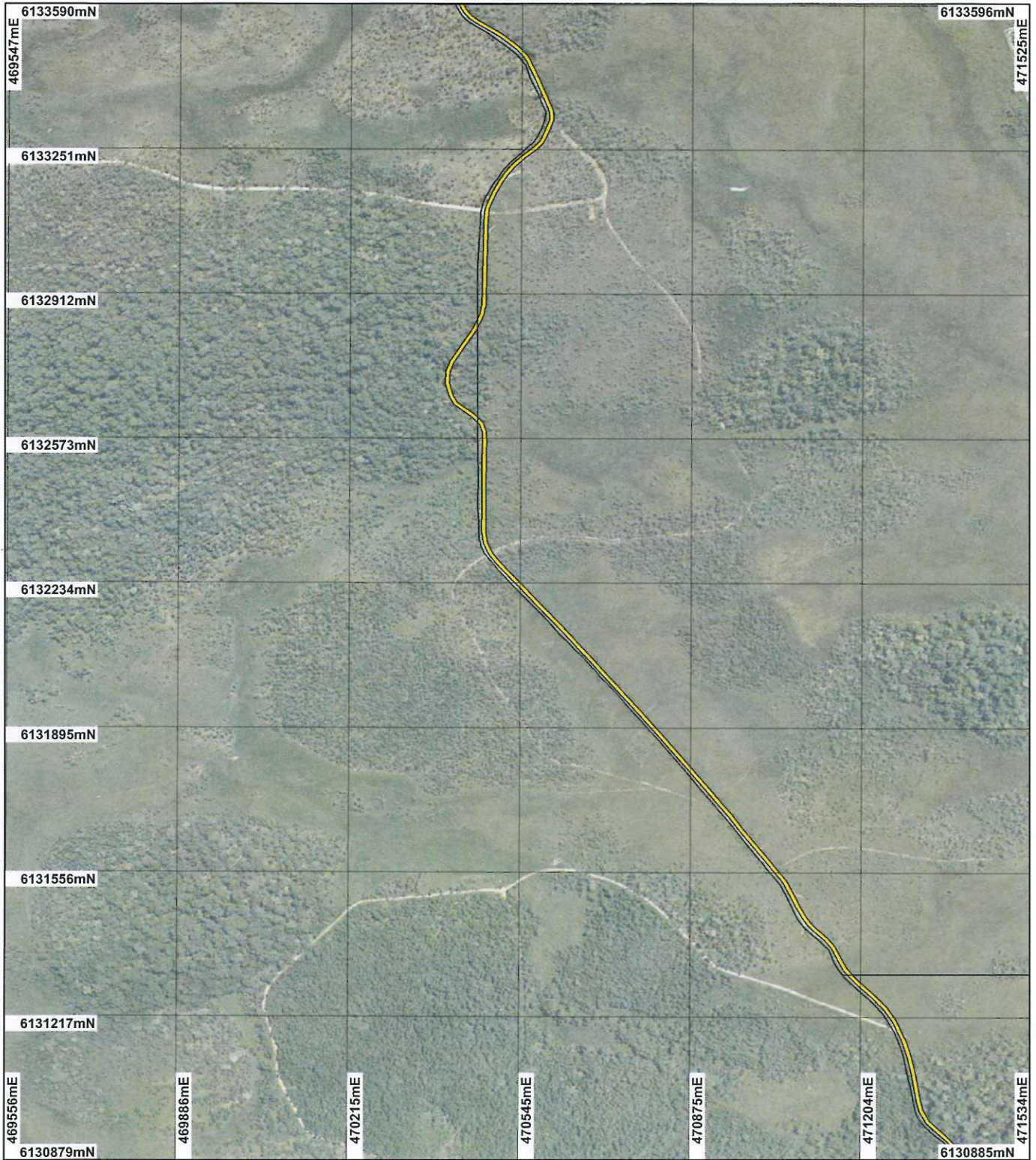
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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11849
(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.

K. Faulkner Date 2/4/10
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.



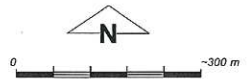
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LEGEND

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| <p>Clearing Instruments</p> <ul style="list-style-type: none"> Areas Approved to Clear Cadastre <p>Northcliffe 50cm Orthomosaic
- Landgate 2007</p> | <p>Deep River 1.4m Orthomosaic
- Landgate 2000</p> |
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Scale 1:11848
(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.

K. Faulkner Date 24/4/10
K. Faulkner

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

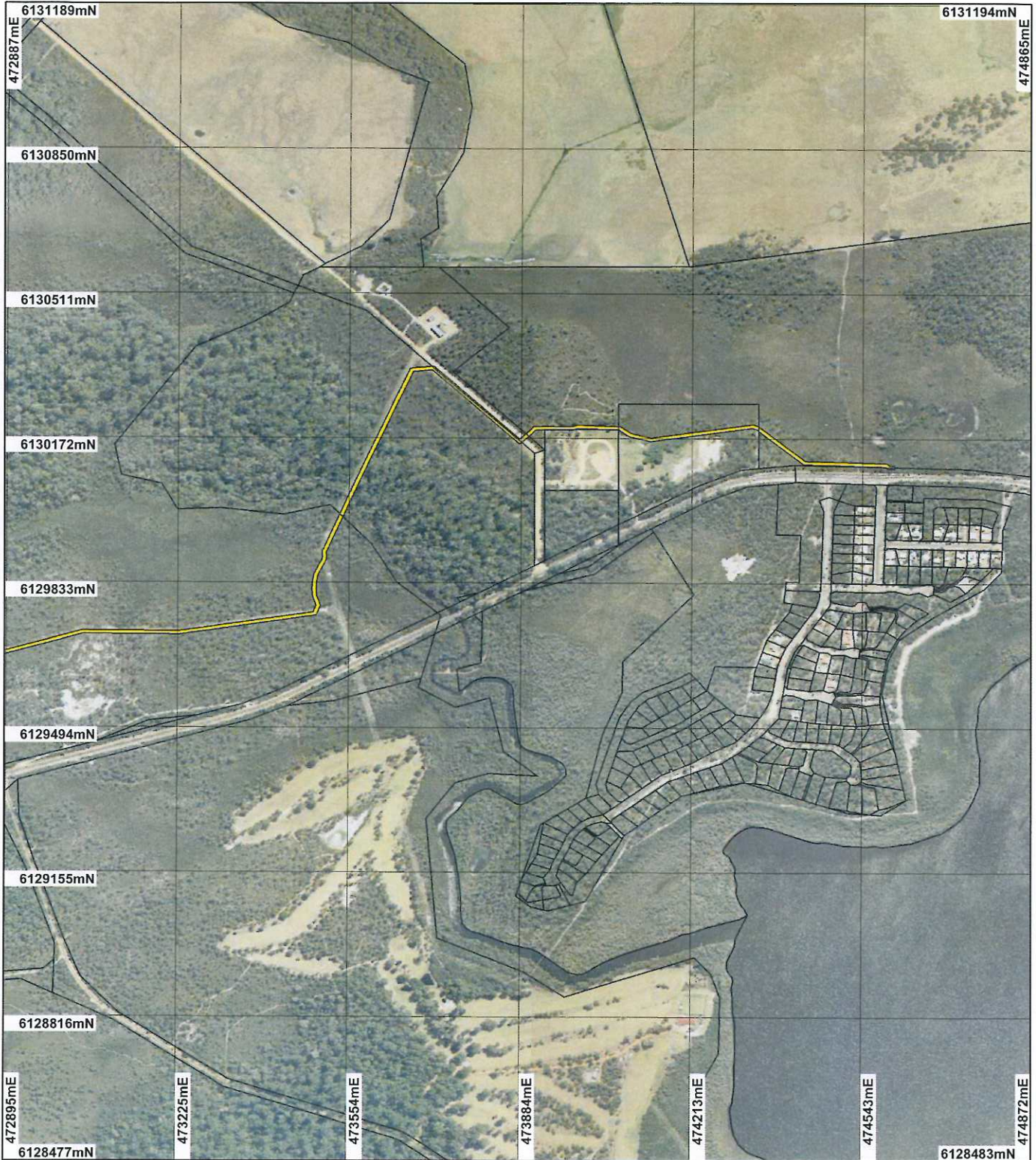
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Cadastre
- Deep River 1.4m Orthomosaic - Landgate 2000
- Northcliffe 50cm Orthomosaic - Landgate 2007



Scale 1:11848

(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.

K. Faulkner Date *21/6/10*
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.



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1. Application details

1.1. Permit application details

Permit application No.: 3305/2
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Telstra Corporation Ltd

1.3. Property details

Property:

LOT 1 ON DIAGRAM 55677 (SHANNON 6262)
PART LOT 13463 ON PLAN 240359 (BROKE 6398)
LOT 320 ON PLAN 36426 (BOORARA BROOK 6262)
LOT 13037 ON PLAN 175503 (SHANNON 6262)
LOT 321 ON PLAN 36426 (SHANNON 6262)
LOT 13316 ON PLAN 240298 (SHANNON 6262)
ROAD RESERVE (SHANNON 6262)
LOT 13316 ON PLAN 240298 (SHANNON 6262)
PART LOT 13463 ON PLAN 240359 (BROKE 6398)
LOT 13037 ON PLAN 175503 (SHANNON 6262)
STATE FOREST 41 (BOORARA BROOK 6262)
ROAD RESERVE (SHANNON 6262)
ROAD RESERVE (SHANNON 6262)
LOT 13316 ON PLAN 240298 (SHANNON 6262)
ROAD RESERVE (BROKE 6398)
ROAD RESERVE (BROKE 6398)
LOT 316 ON PLAN 52590 (BROKE 6398)
LOT 318 ON PLAN 52592 (SHANNON 6262)
ROAD RESERVE (BROKE 6398)
ROAD RESERVE (SHANNON 6262)
LOT 318 ON PLAN 52592 (BROKE 6398)
ROAD RESERVE (BROKE 6398)
ROAD RESERVE (BROKE 6398)
ROAD RESERVE (SHANNON 6262)
ROAD RESERVE (BROKE 6398)
LOT 333 ON PLAN 36448 (NORTH WALPOLE 6398)
ROAD RESERVE (BROKE 6398)
ROAD RESERVE (BROKE 6398)
LOT 317 ON PLAN 52591 (BROKE 6398)
ROAD RESERVE (NORTH WALPOLE 6398)
ROAD RESERVE (NORTH WALPOLE 6398)
ROAD RESERVE (NORTH WALPOLE 6398)
STATE FOREST 48 (NORTH WALPOLE 6398)
ROAD RESERVE (WALPOLE 6398)
ROAD RESERVE (WALPOLE 6398)
CROWN RESERVE 31362 (WALPOLE 6398)
ROAD RESERVE (WALPOLE 6398)
ROAD RESERVE (WALPOLE 6398)

LOT 13076 ON PLAN 219920 (Lot No. 13076 SWANN NORTH WALPOLE 6398)

Local Government Area:

Colloquial name:

1.4. Application

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

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>There are nine Beard (1980) mapped vegetation associations within the area under application:</p> <p>- 1 - Tall forest; Eucalyptus diversicolor (Karri).</p> <p>- 3 - Medium forest; Eucalyptus marginata (Jarrah) - Corymbia calophylla (Marri).</p> <p>- 23 - Low woodland; Eucalyptus marginata - Banksia spp.</p> <p>- 27 - Low woodland; Melaleuca sp. (Paperbark).</p> <p>- 51 - Sedgeland; reed swamps, occasionally with heath.</p> <p>- 1112 - Mosaic: Tall forest; Eucalyptus diversicolor / Tall forest; Eucalyptus marginata and Corymbia calophylla.</p> <p>- 1134 - Medium woodland; Eucalyptus marginata (south coast).</p> <p>- 1139 - Tall forest; Eucalyptus diversicolor and Eucalyptus guilfoylei (Yellow Tingle).</p> <p>- 1144 - Tall forest; Eucalyptus diversicolor and Corymbia calophylla.</p> <p>There are seventeen Mattiske (1998) mapped vegetation complexes within the area under application:</p> <p>- A (Angove) - Open forest of Eucalyptus marginata subsp. marginata (Jarrah) - Banksia ilicifolia (Holly-leaved Banksia) - Nuytsia floribunda (WA Christmas Tree) with some Eucalyptus diversicolor (Karri) on gently sloping sandy terrain in hyperhumid and perhumid zones.</p> <p>- BU (Burnett) - Mosaic of tall shrubland of Taxandria linearifolia (Swamp Peppermint) - Taxandria parviceps, open heaths of Myrtaceae - Proteaceae -</p>	<p>This application for a purpose permit proposes the clearing of up to 63.5 hectares of native vegetation to enable the installation of telecommunications optical fibre cable, linking Northcliffe East exchange to Walpole exchange. The clearing is proposed to occur within DEC-managed conservation estate and road reserves along the alignment and will involve strips of 5-8 metres parallel to the road formation and diversions around large trees and drains, and boring for 60-90 metres under water course crossings.</p>	<p>Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)</p>	<p>The condition and description of the vegetation under application was determined via the use of aerial mapping systems and two flora and vegetation surveys conducted by Mattiske Consulting, the first conducted in 2008 to accompany CPS 3305/1, the second conducted in 2009 to accompany the current application for an amendment.</p>

Papilionaceae spp. with some emergent Eucalyptus patens (Blackbutt) and Eucalyptus megacarpa (Bullich) and sedgeland of Anarthria - Lepidosperma spp. on broad flats in the hyperhumid zone.

- BWp (Blackwater) - Mosaic of low open woodland of Melaleuca preissiana (Moonah), low open woodland of Melaleuca cuticularis (Saltwater Paperbark), open heath of Myrtaceae - Proteaceae spp. and sedgelands of Restionaceae spp. on low lying flats in hyperhumid and perhumid zones.

- COb (Collis) - Tall open forest of Eucalyptus diversicolor - Corymbia calophylla (Marri) on crests of hills arising above the southern coastal plain in the hyperhumid zone.

- COy1 (Collis 1) - Tall open forest to woodland of Eucalyptus marginata subsp. marginata - Corymbia calophylla - Banksia grandis (Bull Banksia) - Allocasuarina fraseriana (Sheoak) on low hills and with Allocasuarina decussata (Karri Sheoak) on slopes in perhumid and humid zones.

- CRb (Crowea) - Tall open forest of Corymbia calophylla - Eucalyptus diversicolor on upper slopes with Allocasuarina decussata - Banksia grandis on upper slopes in hyperhumid and perhumid zones.

- KO (Kordabup) - Mosaic of low forest of Taxandria juniperina, closed heath of Myrtaceae - Proteaceae - Papilionaceae spp. with occasional emergent Melaleuca preissiana and Banksia littoralis (Swamp Banksia) on broad swampy plains in hyperhumid and perhumid zones.

- Kb (Keystone) - Mosaic of tall open forest of Eucalyptus guilfoylei (Yellow Tingle) - Eucalyptus jacksonii (Red Tingle) - Eucalyptus diversicolor on slopes of major hills rising above coastal plain with Allocasuarina decussata - Banksia grandis - Agonis

flexuosa (Peppermint) on slopes in hyperhumid and perhumid zones and tall open forest of Eucalyptus brevistylis (Rates Tingle) - Eucalyptus marginata subsp. marginata - Corymbia calophylla and the occasional Eucalyptus megacarpa near rock outcrops in hyperhumid and perhumid zones.

- MTb (Mattaband) - Mixture of tall open forest of Eucalyptus diversicolor - Corymbia calophylla and woodland of Eucalyptus marginata subsp. marginata - Corymbia calophylla - Agonis flexuosa on small hills arising above the coastal plain with some outcrops in hyperhumid and perhumid zones.

See above

Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)

See above

- MTy1 (Mattaband) - Mixture of tall open forest of Eucalyptus diversicolor - Eucalyptus guilfoylei, tall open forest of Eucalyptus jacksonii - Eucalyptus diversicolor and an open forest of Eucalyptus marginata subsp. marginata - Corymbia calophylla - Banksia grandis on hills rising above the coastal plain in hyperhumid and perhumid zones.

- Pi (Pingerup) - Mosaic of closed heaths of Myrtaceae spp. and sedgeland of Restionaceae - Cyperaceae spp. with occasional emergent Eucalyptus patens and Melaleuca preissiana on broad depressions and drainage corridors in hyperhumid and perhumid zones.

- Q (Quagering) - Mosaic of low open woodland of Eucalyptus marginata subsp. marginata - Banksia ilicifolia - Nuytsia floribunda and low open woodland of Eucalyptus patens - Melaleuca preissiana - Nuytsia floribunda on less undulating flats in hyperhumid and perhumid zones.

- S1 (Granite Valleys) - Tall open forest of Eucalyptus diversicolor - Corymbia calophylla on slopes with some Eucalyptus patens and Eucalyptus megacarpa on valley floors in hyperhumid and

perhumid zones.

- S3 (Shadow Valleys) -
Low woodland of
Eucalyptus marginata
subsp. *marginata* -
Corymbia calophylla on
slopes, and mosaic of low
open woodland of
Melaleuca preissiana -
Banksia littoralis, closed
heaths and sedgeland of
Cyperaceae spp. on valley
floors with impeded
drainage in hyperhumid
and perhumid zones.

- V4 (Granite Valleys) - Tall
open forest of *Eucalyptus*
diversicolor - *Allocasuarina*
decussata - *Agonis*
flexuosa with *Eucalyptus*
patens and *Corymbia*
calophylla on slopes at the
interface between granite
hills and the southern
coastal plain, with some
shrublands of *Myrtaceae*
species in hyperhumid and
perhumid zones.

- Vh3 (Granite Valleys) -
Tall open forest of
Eucalyptus diversicolor -
Eucalyptus guilfoylei on
slopes and woodland of
Eucalyptus rudis (Flooded
Gum) - *Banksia littoralis* on
lower slopes in
hyperhumid and perhumid
zones.

- Wp (Walpole) - Low
woodland of *Allocasuarina*
fraseriana - *Banksia*
attenuata (Slender
Banksia) - *Banksia ilicifolia*
with stunted *Eucalyptus*
marginata subsp.
marginata on flats in the
hyperhumid zone.

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

This application for a clearing permit is the result of an amendment to CPS 3305/1. The proposed changes will alter the alignment of the telecommunications fibre optic cable at the eastern end of the application area. Instead of following South West Highway, the alignment will now traverse Hill Road, Deep Road, Centre Road and Angrove Road. No change in the size of the area to be cleared has been made, the area proposed to be cleared remains at 63.5 hectares. The assessment findings for CPS 3305/1 have been used in this assessment as they are current and relevant. The region has advised that they have no concerns with the proposed alterations to the cable route or the clearing which is to occur within State Forest F48 (Old growth forest) and as the changes were developed in consultation with the Warren region and the proponent the Warren region supports and authorise the amended alignment (DEC, 2010). The new alignment was surveyed by Matiske Consulting between 1 December and 3 December 2009. This survey supplements earlier studies of the alignment conducted between 6 and November 2007 (Matiske, 2008; Matiske, 2010).

During the field surveys 295 taxa were recorded, including one rare flora, and nine priority flora species, two of which are range extensions. A total of 16 vegetation communities were defined in the proposed corridor (Matiske, 2010).

The purpose of the proposed clearing of up to 63.5 hectares of native vegetation is to enable the installation of telecommunications optical fibre cable, linking Northcliffe East exchange to Walpole exchange. The clearing is

proposed to occur within DEC-managed conservation estate and road reserves along the alignment and will involve strips of 5-8 metres parallel to the road formation and diversions around large trees and drains, and boring for 60-90 metres under water course crossings.

There are nine Beard mapped vegetation associations and seventeen Matiske (1998) mapped vegetation complexes within the area under application. Aerial photography suggests that most of the alignment is vegetated and is likely to be of good or better condition with some degree of edge effect from the road.

It is likely that the vegetation under application comprises a high level of biological diversity, however given the extensive cover of vegetation within the local context (much of which is contained within the conservation estate) it is unlikely that the clearing would have a significant impact on local biodiversity. Therefore the assessment recommendation is that the proposed clearing is not likely to be at variance to this principle.

- Methodology** **References:**
- Matiske (1998)
 - Matiske (2008)
 - Matiske (2010)
 - DEC (2010)
 - Proponent's supporting information - preliminary design
- GIS datasets:**
- Deep River 50cm Orthomosaic - Landgate04
 - Deep River 1.4m Orthomosaic - DLI 04/00
 - Northcliffe 1.4m Orthomosaic - DLI00

(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 clearing is proposed to occur predominantly within road reserves along the alignment and will involve strips of 5-8 metres parallel to the road formation and diversions around large trees and drains, and boring for 60-90 metres under water course crossings. There are diverse mapped vegetation types present within the area under application. Aerial photography suggests that most of the alignment is well vegetated and is likely to be of good or better condition with some degree of edge effect from the road.

There are more than 100 recorded occurrences of Threatened and priority-listed fauna within a 50 kilometre radius of the area under application, with the majority of these records from within adjacent conservation estate. The nearest recorded occurrences to the area under application are:

- Chuditch (*Dasyurus geoffroii*, Threatened) within the area under application;
- three occurrences of WA Pill Millipede (*Cynotelopus notabilis*, Threatened) within approximately 75 metres;
- three occurrences of Tingle Mogriddgea Spider (*Mogriddgea tingle*, Threatened) within approximately 100 metres;
- Brush-tailed Phascogale (*Phascogale tapoatafa*, Threatened) within approximately 120 metres;
- Quenda (*Isodon obesulus fusciventer*, Priority 5) within approximately 150 metres;
- two occurrences of Quokka (*Setonix brachyurus*, Threatened) within approximately 230 metres;
- Crested Shrike-Tit (*Falcunculus frontatus leucogaster*, Priority 4) within approximately 250 metres; and
- several Threatened and priority-listed fish species within river systems in close proximity (within approximately 250 metres) of proposed crossings.

A Level 1 vertebrate fauna assessment undertaken by Ninox Wildlife Consulting (February 2008) confirmed the presence of Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksia naso*, Threatened), Baudin's White-tailed Black-Cockatoo (*Calyptorhynchus baudinii*, Threatened) and Crested Shrike-Tit (*Falcunculus frontatus leucogaster*, Priority 4) within the area under application. It is not expected that the area under application would constitute sole habitat for these species.

Ninox Wildlife Consulting also identified a number of significant fauna and non-Threatened local fauna species that are likely to utilise habitat consistent with that present within the area under application. In particular, those habitats found within forested valleys and in and around wetlands and swamps within the area under application are considered to be significant for fauna.

The proponent's application indicates that wherever possible the alignment of the area under application will occur adjacent to existing roads, thus minimising the impact of the proposed clearing.

Therefore the assessment recommendation is that the proposed clearing may be at variance to this principle. due to It being likely that the vegetation under application comprises significant habitat for fauna, however ,given the extensive cover of vegetation within the local context (much of which is contained within the conservation estate) it is unlikely that the clearing would have a significant impact on fauna habitats.

- Methodology** **References:**
- Level 1 Vertebrate Fauna Assessment (Ninox Wildlife Consulting; TRIM Ref DOC48815)

GIS dataset

- SAC Bio dataset - Fauna 24/10/07

- Pre-European Vegetation

- Mattiske Vegetation

(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

There are over 70 recorded occurrences of Declared Rare and Priority Flora within a 10 kilometre radius of the area under application. The nearest recorded occurrences to the area under application are:

- *Meziella trifida* (Declared Rare) three populations within approximately 10 metres (Deeside Coast Road, Chesapeake Road), and one population within approximately 200 metres (Chesapeake Road);
- *Kennedia glabrata* (Declared Rare) within approximately 10 metres (South Western Highway);
- *Reedia spathacea* (Declared Rare) one population within approximately 50 metres (South Western Highway), and one population within approximately 420 metres (Chesapeake Road);
- *Microtis globula* (Declared Rare) one population within approximately 150 metres (South Western Highway), and one population within approximately 420 metres (South Western Highway);
- *Banksia verticillata* (Declared Rare) within approximately 250 metres (South Western Highway);
- *Lomandra ordii* (Priority 3) two populations within approximately 10 metres (South Western Highway), and three populations within approximately 150 metres (Chesapeake Road);
- *Gonocarpus simplex* (Priority 3) within approximately 10 metres (Deeside Coast Road);
- *Amperea protensa* (Priority 3) two populations within approximately 10 metres (Deeside Coast Road), one population within approximately 120 metres (Deeside Coast Road), and one population within approximately 30 metres (South Western Highway);
- *Meeboldina crassipes* (Priority 3) within approximately 10 metres (South Western Highway);
- *Hypocalymma cordifolium* subsp. *minus* (Priority 4) two populations within approximately 10 metres (Chesapeake Road, South Western Highway), one population within approximately 240 metres (Broke Inlet Road), and one population within approximately 470 metres (Broke Inlet Road);
- *Sphenotoma parviflorum* (Priority 3) within approximately 10 metres (South Western Highway);
- *Tyrbastes glaucescens* (Priority 4) two populations within approximately 30 metres (Chesapeake Road), and one population within approximately 100 metres (South Western Highway);
- *Actinotus* sp. *Walpole* (Priority 3) within approximately 30 metres (South Western Highway);
- *Goodenia filiformis* (Priority 3) within approximately 30 metres (South Western Highway);
- *Caladenia plicata* (Priority 4) within approximately 100 metres (South Western Highway);
- *Chamelaucium floriferum* subsp. *floriferum* (Priority 3) within approximately 100 metres (South Western Highway);
- *Chamelaucium floriferum* subsp. *diffusum* (Priority 2) within approximately 100 metres (South Western Highway);
- *Pleurophascum occidentale* (Priority 4) one population within approximately 100 metres (South Western Highway), and one population within approximately 100 metres (South Western Highway);
- *Caladenia abbreviata* (Priority 2) within approximately 200 metres (South Western Highway);
- *Microtis media* (Priority 4) within approximately 250 metres (Broke Inlet Road);
- *Anthocercis sylvicola* (Priority 2) within approximately 350 metres (South Western Highway); and
- *Cyathochaeta stipoides* (Priority 3) within approximately 350 metres (Lower Shannon Road);

Many of these species occur within similar soil types and similar vegetation associations as those found within the area under application. Further to this, for those populations within close proximity of the area under application, it is possible that impact may occur to flora and on the habitat of that species.

The new alignment was surveyed by Mattiske Consulting between 1 December and 3 December 2009. This survey supplements earlier studies of the alignment conducted between 6 and November 2007 (Mattiske, 2008; Mattiske, 2010). During the field surveys 295 taxa were recorded, including one rare flora, and nine priority flora species, two of which are range extensions. A total of 16 vegetation communities were defined in the proposed corridor (Mattiske, 2010).

Mattiske Consulting (2008; 2010) identified 7 flora of significance within or immediately adjacent to the area under application. These include *Amperea protensa* (Priority 3), *Meeboldina thysanantha* (Priority 3), *Sphaerolobium pubescens* (Priority 3), *Hypocalymma cordifolium* subsp. *minus* (Priority 4), *Tripterococcus brachylobus* (Priority 4), *Stylidium rupestre* (range extension) and *Boronia fastigiata* (range extension). No Declared Rare species were identified within the area under application, however this may be due to the timing of the survey rather than an indication that they do not occur within the area under application.

Therefore the assessment recommendation is that the proposed clearing may be at variance to this principle. In order to mitigate impacts to flora, targeted flora surveys at an appropriate time of year will be required prior to any clearing being undertaken. The proponent should be aware that Ministerial approval is required to take Declared Rare flora.

Methodology References:

- Mattiske (2008)
- Mattiske (2010)
- Flora and Vegetation Survey (Mattiske Consulting Pty Ltd; TRIM Ref DOC48816)
- GIS dataset
- SAC Bio dataset - DeFI 13/02/08
- SAC Bio dataset - WAHerb 30/05/07
- Soils Statewide DAWA 1999
- Pre-European Vegetation
- Mattiske Vegetation

(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 may be at variance to this Principle

There are 18 occurrences of mapped Threatened Ecological Communities (TECs) within ten kilometres of the alignment of the area under application, the nearest is located approximately 85 kilometres south of the eastern end of the alignment along South Western Highway with another located 300 metres north of the alignment along Chesapeake Road and others within 500 metres of the area under application.

There is a possibility that the proposed clearing may have an impact on the two nearest TECs in the form of changed hydrology and/or sedimentation in the short term, since the topographic dataset indicates that the TECs are on approximately parallel contours as the area under application and possibly downslope.

The assessment recommendation is that the proposed clearing may be at variance to this principle, however given that the clearing is for the installation of a cable predominantly following existing linear cleared areas, vegetation cover is to be restored following installation, there are existing buffers of vegetation between the TECs and the area under application, any impact is expected to be short-term and minimal at the most.

Methodology GIS datasets
 - TEC database - 02/08
 - Topographic Contours, Statewide - 12/09/02

(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

There are 9 mapped Beard vegetation associations and 17 mapped Mattiske vegetation complexes within the area under application. Aerial photography suggests that most of the alignment is vegetated and is likely to be of good or better condition with a degree of edge effect from the roads.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Pre-European % in reserve/DEC
IBRA Bioregions: #				
- Warren	851,529	739,273	86.8	
Local governments: #				
- Shire of Manjimup	705,670	591,748	83.9	
Beard vegetation association (within IBRA region): *				
- 1	7,254	2,099	28.9	0.0
- 3	250,261	199,967	79.9	69.4
- 23	37,735	28,038	74.3	54.2
- 27	70,203	53,497	76.2	67.5
- 51	35,867	24,757	69.0	59.0
- 1112	11,085	10,357	93.4	94.7
- 1134	14,408	12,867	89.3	77.3
- 1139	15,253	14,282	93.6	88.2
- 1144	159,668	127,227	79.6	75.5
Mattiske vegetation complex: ##				
- A	397,028	355,374	89.5	74.8
- BU	70,298	69,978	99.5	99.5
- BWp	325,413	287,703	88.4	80.9
- COb	218,419	187,148	85.7	75.3
- COy1	228,751	192,244	84.0	71.2
- CRb	527,433	428,454	81.2	30.3
- KO	27,207	12,859	47.3	38.5
- Kb	283,460	231,926	81.8	64.3

- MTb	118,149	105,589	89.4	80.7
- MTy1	204,273	190,809	93.4	90.8
- Pi	138,275	134,819	97.5	95.0
- Q	149,548	142,078	95.0	80.5
- S1	255,050	215,886	84.6	53.3
- S3	62,306	54,949	88.2	62.5
- V4	54,178	52,345	96.6	91.4
- Vh3	124,009	108,802	87.7	66.7
- Wp	10,449	6,221	59.5	25.8

statistics from Shepherd et al 2001 (Technical Report 249)

* statistics from AGWA 2006 (Shepherd et al 2001) - within IBRA Bioregion

*** Within the Intensive Landuse Zone

statistics from Mattiske Consulting Pty Ltd RFA report 1998

Of the mapped vegetation types occurring within the area under application, but with the exception of Beard association 1 and possible exception of Mattiske complex KO, the vegetation associations and complexes present within the Warren IBRA region have the greater portion of their pre-European extents remaining and are generally well represented (>25% of pre-European extent) within the conservation estate. The Beard association 1 has slightly less than 30% of its pre-European extent remaining and the Mattiske complex KO has slightly less than 50% of its pre-European extent remaining, however given that the total area proposed for clearing is 63.5 hectares it is not expected that the portion of the proposed clearing within these vegetation types will significantly impact on their current extents.

Therefore the assessment recommendation is that the proposed clearing is unlikely to be at variance to this principle.

Methodology

Reference:

- Shepherd et al. (2001)

- DAWA 2001

EPA Position Paper No 2 Agriculture Region - DEP 12/00

GIS dataset

- Pre-European Vegetation

- Mattiske Vegetation

- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

- Deep River 50cm Orthomosaic - Landgate04

- Deep River 1.4m Orthomosaic - DLI 04/00

- Northcliffe 1.4m Orthomosaic - DLI00

(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 area under application traverses 4 hydrographic catchments, being Broke Inlet_Shannon River, Gardner River, Nornalup Inlet and Nornalup Inlet_Deep River. The area under application also occurs within two Public Drinking Water Source areas, being Deep River Water Reserve and Walpole Weir Catchment Area.

DEC Warren Region advice indicates that the Broke Inlet and the adjacent surrounding lands subject to inundation comprise a Wetland of International Importance.

There are 6 significant wetland areas within close proximity to the eastern end of the area under application; Bellanger Barrier, Collier Creek, an un-named wetland and Broke Inlet occur within 2 kilometres.

The area under application traverses several watercourses. Canterbury River intersects at the western end, Chesapeake Brook intersects that section of the area under application at Deeside Coast Road and again at Chesapeake Road, Shannon River intersects at Chesapeake Road, Forth River and Kingsman Brook intersect at Chesapeake Road at the northern end of Broke Inlet, Big Creek intersects at Chesapeake Road on the eastern side of Broke Inlet, a tributary of Inlet Brook intersects at Chesapeake Road and at South Western Highway, Inlet Brook intersects at South Western Highway, Deep River intersects at South Western Highway, and a tributary of Walpole Inlet intersects South Western Highway at the northern end of Walpole Inlet.

The proponent proposes to undertake boring for 60-90 metres under watercourse crossings. This being considered, the assessment recommendation is that the proposed clearing is at variance to this principle.

Methodology

DEC Warren Region advice (verbal, 07/04/08)

GIS dataset

- Hydrographic Catchments - Catchments - DOW

- Public Drinking Water Source Areas (PDWSAs) - DOW

- South Coast Significant Wetlands - DOE 4/8/03
- ANCA, Wetlands - CALM 08/01
- Topographic Contours Statewide DOLA 2002

(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

The clearing is linear and will occur predominantly alongside existing roads. In the short-term there may be an impact of sedimentation in runoff, however given that the proponent intends to revegetate the area once clearing and cable installation is complete, in the long term it is unlikely that the proposed clearing will result in increased wind or water erosion.

Salinity mapping and salinity risk analysis indicate that salinity may be associated with watercourses. Given that the area under application is higher in the landscape except where it crosses these watercourses, and that it occurs along existing cleared areas and is to be revegetated, it is unlikely that the proposed clearing will exacerbate salinity.

The Broke Inlet and Walpole Inlet are mapped as having high to moderate risk of acid sulphate soils. These areas are downstream of and within 1 kilometre of the area under application.

Acid sulphate soil mapping is not available for the area under application, however given evidence of acid sulphate soils within areas subject to inundation and/or with peaty soils there is a likelihood that the low-lying sections of the area under application (particularly in close proximity to wetlands and where watercourses are traversed) will have a risk of acid sulphate soils. It is likely that the clearing and subsequent digging of a trench for the installation of a telecommunications fibre optic cable will disturb sulphides and possibly other metals and/or minerals at depth. However given that the proposed clearing is linear and restricted to an 8 metre corridor, and given that the soil will be replaced and revegetated once the purpose of the clearing is complete, it is unlikely that the clearing will result in acid sulphate soils.

The assessment recommendation is that the proposed clearing is unlikely to be at variance to this principle.

- Methodology**
- DAWA 2001
 - Schoknecht 2002
 - GIS dataset
 - Salinity Mapping LM (25m) DOLA 2000
 - Salinity Risk LM (25m) DOLA 2000
 - Topographic Contours Statewide (DOLA 2002)
 - Acid Sulfate Soil Risk Map, Estuaries

(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 at variance to this Principle

From west to east, the alignment of the proposed clearing occurs within Jane National Park, Shannon National Park, D'Entrecasteaux National Park, Mt Frankland South National Park, Keystone State Forest, and Walpole-Nornalup National Park, as well as within road reserves.

The alignment of the proposed clearing occurs within 2 System 2 areas, being Proposed South Coast National Park, and Shannon River Drainage Basin and Reservation of Karr.

The alignment of the proposed clearing occurs within 5 Register of National Estate areas, being Shannon Area, D'Entrecasteaux Area, Deep Area, Walpole Nornalup Area, and Proposed South Coast National Park.

Within 1 kilometre of the area under application is Shannon State Forest and an un-named reserve. The proposed amendments will alter the route so that clearing will now also occur within State Forest F48. The applicant has been in discussion with staff from the DEC's Warren Region and realigned the new route to utilise existing cleared tracks and minimize clearing requirements (DEC, 2010).

The proposed clearing will have an impact on the environmental values of the areas it traverses and as such, the assessment recommendation is that the proposed clearing is at variance to this principle, however given that the width of the proposed clearing is up to 8 metres and the alignment of the area under application is parallel and adjacent existing transport corridors, and will be revegetated once cable installation is complete, it is expected that the impact will be minimal and contained in the long-term.

- Methodology**
- DEC (2010)
 - GIS dataset
 - CALM Managed Lands and Waters - CALM 1/07/05
 - South Coast Significant Wetlands - DOE 4/8/03
 - ANCA, Wetlands - CALM 08/01

- System 1 to 5 and 7 to 12 Areas - DEP 06/95
- Register of National Estate EA 2003
- Clearing Regulations - Environmentally Sensitive Areas DOE 2005
- Agreement to Reserve (ATRs)
- SAC Bio dataset - Covenants CALM 2006
- SAC Bio dataset - National Trust of Australia (WA) covenant sites 2006

(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 may be at variance to this Principle

The area under application traverses 4 hydrographic catchments, being Broke Inlet_Shannon River, Gardner River, Nornalup Inlet and Nornalup Inlet_Deep River. The area under application also occurs within two Public Drinking Water Source areas, being Deep River Water Reserve and Walpole Weir Catchment Area.

In the short-term there may be an impact of sedimentation in runoff entering watercourses and as such the assessment recommendation is that the proposed clearing may be at variance to this principle. However given that the proponent intends to revegetate the area once clearing and cable installation is complete, in the long term it is unlikely that the proposed clearing will result in long-term impacts to water quality.

- Methodology** GIS dataset
- Hydrographic Catchments - Catchments - DOW
 - Public Drinking Water Source Areas (PDWSAs) - DOW

(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

The area under application is subject to moderate rainfall of 1200-1300mm/annum and an evapotranspiration rate of approximately 900mm/annum.

The clearing is linear and will occur predominantly alongside existing roads. Given that the proponent intends to revegetate the area once clearing and cable installation is complete, in the long term it is unlikely that the proposed clearing will result in increased surface water runoff or increased duration of peak flooding, therefore the assessment recommendation is that the proposed clearing is unlikely to be at variance to this principle.

- Methodology** GIS dataset
- Evapotranspiration Area Actual BOM 2001
 - Mean Annual Rainfall Isohyets BOM 2001
 - Topographic Contours Statewide DOLA 2002

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

Comments

This application for a clearing permit is the result of an amendment to CPS 3305/1. The proposed changes will alter the alignment of the telecommunications fibre optic cable at the eastern end of the application area. Instead of following South West Highway, the alignment will now traverse Hill Road, Deep Road, Centre Road and Angrove Road. No change in the size of the area to be cleared has been made, the area proposed to be cleared remains at 63.5 hectares. The assessment findings for CPS 3305/1 have been used in this assessment as they are current and relevant. The region has advised that they have no concerns with the proposed alterations to the cable route or the clearing which is to occur within State Forest F48 (Old growth forest) (DEC, 2010).

A Clearance Survey report prepared for the proponent by Australian Interaction Consultants (AIC; February 2008) indicates that the area under application is in close proximity to 5 sites of Aboriginal significance, although none of these sites will be directly impacted by the proposed clearing. It is the responsibility of the proponent to ensure that matters of Aboriginal significance are addressed prior to undertaking any clearing.

There are additional approvals required prior to the proponent undertaking any clearing in the event that a clearing permit under the Environmental Protection Act 1986 is granted. These include:

- Ministerial approval for the taking of any Declared Rare flora;
- a license to occupy Conservation Commission land under the Conservation and Land Management Act 1984;
- a seed collection license to collect seed and plant propagation material;
- approval from DEC's CEO to collect seed and plant propagation material within National Park areas;
- compliance with the requirements of the Forest Management Plan and Old Growth Forest Policy; and
- approval to undertake an activity along a Level 1 travel route (being Deeside Coast Road) under the Forest Management Plan.

Native title notification letters were sent to the respective claimant and representative body. A response was received objecting to the proposed clearing on the grounds that the proponent has not yet involved consultation

with the claimants (Trim Ref: DOC123723), however, as the proponent is undertaking the clearing under the Telecommunications Act 1997, native title notification is not required.

The applicant has advised that where installation is located on DEC managed lands the Telecommunications Act cannot be utilised and the installation is being undertaken in accordance with a pending licence subject to conditions from the DEC's Warren Region (A298606).

Methodology

References:

- DEC (2010)

Clearance Survey (Australian Interaction Consultants; TRIM Ref DOC48815)

GIS dataset

- Aboriginal Sites of Significance DIA

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 the assessment recommendation is that the proposed clearing is:

- not likely to be at variance to principles (a), (e), (g) & (j)

- may be at variance to principle (b), (c), (d) & (i)

is at variance to principles (f) & (h)

5. References

- Australian Interaction Consultants (February 2008). Report on a Work Program Area Clearance Survey under the Aboriginal Heritage Act 1972 of the Proposed Fibre Optic Cable between Northcliffe East and Walpole, WA. Report prepared for proponent. TRIM Ref DOC48815
- Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.
- EPA (2004) Guidance for the Assessment of Environmental Factors: Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia. Guidance Statement No 56. 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
- Mattiske Consulting Pty Ltd (February 2008). Flora and Vegetation Survey of the Silcar Proposal - Northcliffe to Walpole. Report prepared for URS Corporation on behalf of proponent. TRIM Ref DOC48816
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia
- Ninox Wildlife Consulting (February 2008). A Level 1 Vertebrate Fauna Assessment of the Proposed Northcliffe East - Walpole Optic Fibre Cable Route, Western Australia. Report prepared for URS Corporation on behalf of proponent. TRIM Ref DOC48815.
- Schoknecht N. (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3
- 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.

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management (now DEC)
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)
DoW	Department of Water
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)