



## CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

**Purpose Permit number:** CPS 1496/2  
**Permit Holder:** Shire of Dundas  
**Duration of Permit:** 24 December 2006 – 23 December 2024

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 gravel extraction and road realignment.

#### 2. Land on which clearing can be done and Area of Clearing

The Permit Holder must not clear more than 50 hectares of native vegetation within the area solid filled yellow on attached Plans:

- Plan 1496/2a
- Plan 1496/2b
- Plan 1496/2c
- Plan 1496/2d
- Plan 1496/2e
- Plan 1496/2f
- Plan 1496/2g
- Plan 1496/2h
- Plan 1496/2i
- Plan 1496/2j
- Plan 1496/2k
- Plan 1496/2l
- Plan 1496/2m
- Plan 1496/2n
- Plan 1496/2o
- Plan 1496/2p
- Plan 1496/2q
- Plan 1496/2r
- Plan 1496/2s
- Plan 1496/2t
- Plan 1496/2u

#### 3. Application

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

#### 4. Type of clearing authorised

Any clearing authorised under this Permit must be completed by 23 December 2019, being 10 years from the date from which this Permit becomes valid.

#### 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 and 2 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. Weed control

- (a) When undertaking any clearing and *revegetation*, 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 road building materials, mulch, fill* or other material is 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.
- (b) 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 and *revegetated* under this Permit.

#### 9. Revegetation

- (a) The Permit Holder shall retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that is already cleared.
- (b) Prior to undertaking works pursuant to conditions 9(c), the Permit Holder shall rip the pit floor and contour batters within the extraction site.
- (c) Within 12 months of the area no longer being required for the purpose of gravel extraction, and where a dam for the purpose of fire control is not constructed, the permit holder must deliberately lay the vegetative material and topsoil retained under condition 9(a) on the cleared area.
- (d) Within two (2) years of laying the vegetative material and topsoil on the cleared area in accordance with condition 9(c) of this Permit, the Permit Holder must:
  - (i) determine the species composition, structure and density of the area *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 9(d)(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 *revegetate* the area by 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 ensuring only *local provenance* seeds and propagating material are used.

#### 10. Offsets

- (a) The Permit Holder shall undertake the following measures by 23 December 2019 for 15 ha of areas previously cleared before 24 December 2006 for gravel extraction:
- (i) remove all rubbish and artificial debris;
  - (ii) rip the pit floor and contour batters within the extraction site;
  - (iii) spread overburden to an even depth;
  - (iv) lay the vegetative material and topsoil containing seed to an even depth on exposed overburden and soil;
- (b) Within two (2) years of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(a)(iv) of this Permit, the Permit Holder must:
- (i) determine the species composition, structure and density of the area *rehabilitated*; and
  - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 10(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 *revegetate* the area by 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 ensuring only *local provenance* seeds and propagating material are used.

#### 11. Flora Management

- (a) Prior to undertaking any clearing authorised under this Permit, the site shall be inspected by a *flora specialist* for the presence of rare flora listed in the *Wildlife Conservation (Rare Flora) Notice 2008 (2)*.
- (b) Where rare flora or priority flora taxa are identified in relation to condition 11(a) of this Permit, 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 50 metres of identified rare flora, unless approved by the CEO; and
  - (iii) no clearing occurs with 10 metres of identified *priority flora taxa*, unless approved by the CEO.

### PART III – RECORD KEEPING AND REPORTING

#### 12. 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 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 9 and 10 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*.
- (c) In relation to flora management pursuant to condition 11 of this Permit:
- (i) the location of each rare flora and *priority flora taxa* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; and
  - (ii) the species of each rare flora or *priority flora taxa* identified.

### 13. 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 12 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 23 October 2024, the Permit Holder must provide to the CEO a written report of records required under condition 12 of this Permit where these records have not already been provided under condition 13(a) of this Permit.

### DEFINITIONS

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

*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;

*fill* means material used to increase the ground level, or fill a hollow;

*flora specialist* means a person with specific training and/or experience in the ecology and taxonomy of Western Australian flora;

*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;

*priority flora taxa* means those plant taxa that described as priority flora classes 1, 2, 3 or 4 in the Department's Declared Rare and Priority Flora List for Western Australia (as amended);

*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;

*road building materials* means rock, gravel, soil, stone, timber, boulders and water;

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

*weed* 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 Agricultural and Related Resources Protection Act 1976.

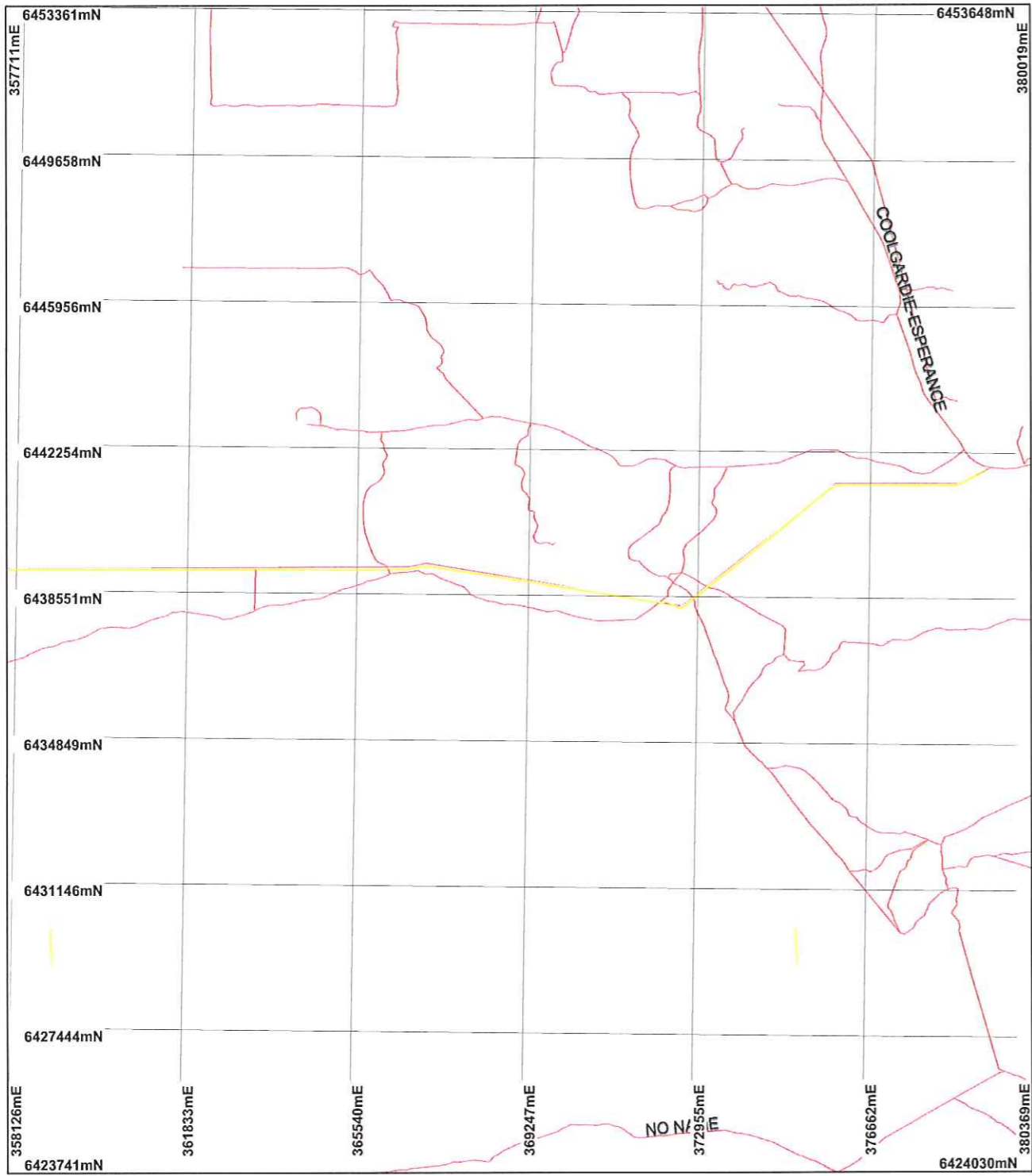


Kelly Faulkner  
MANAGER  
NATIVE VEGETATION CONSERVATION BRANCH

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

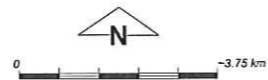
23 December 2009

# Plan 1496/2a



## LEGEND

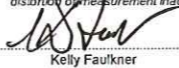
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1/3/04
-  Cadastre - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear



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(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 23/12/09

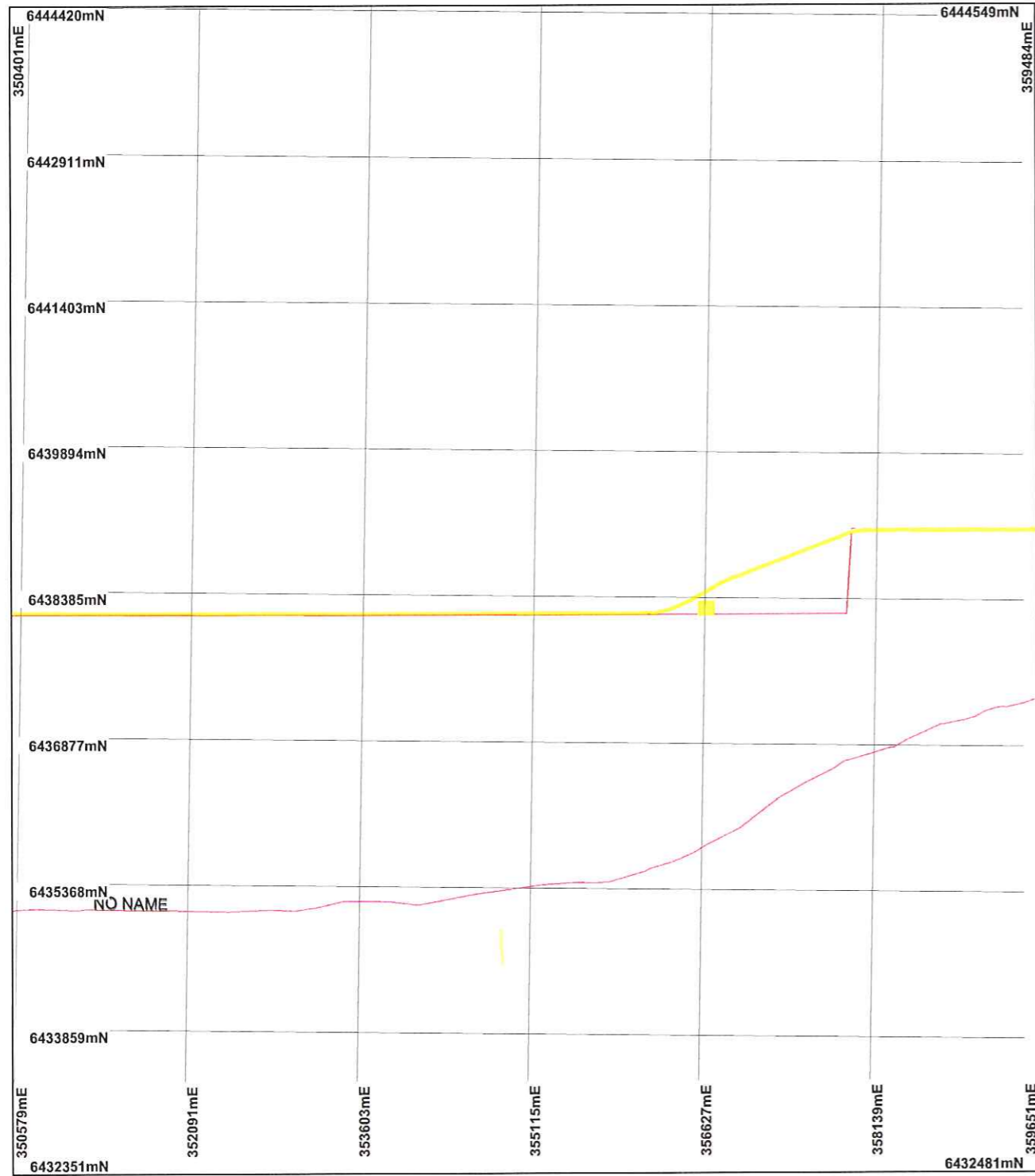
Kelly Faulkner  
Officer with delegated authority under Section 20 of  
the Environmental Protection Act 1986

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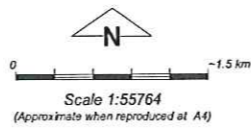
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2b



## LEGEND

- Road Centrelines - DLI 1/3/04
- Cadastre - DLI Clearing Instruments\_1
- Areas Approved to Clear



Geocentric Datum Australia 1994

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Date 23/12/09

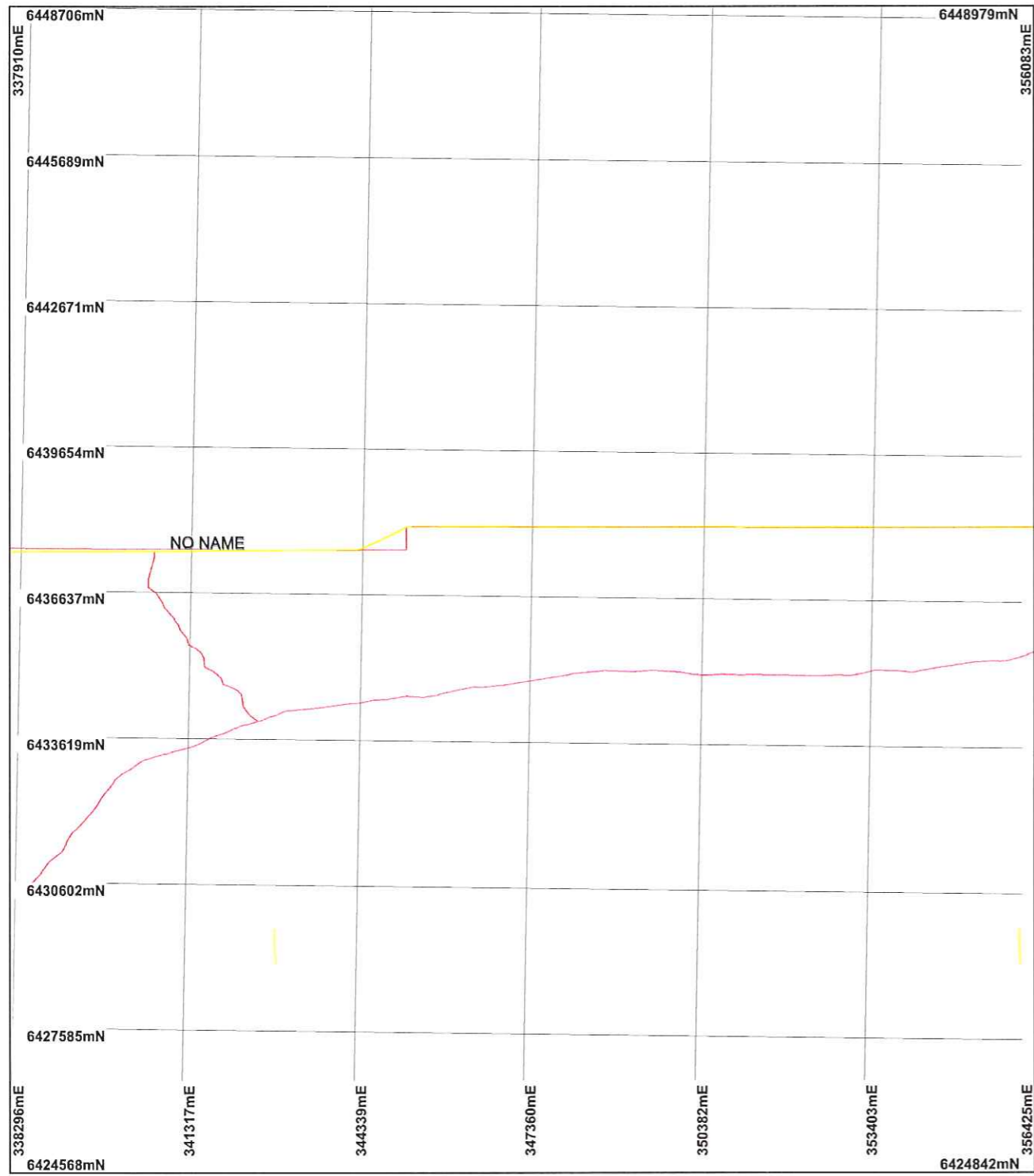
Kelly Faulkner  
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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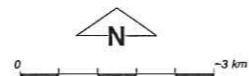
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2c



## LEGEND

-  Road Centrelines - DLI  
1/8/04
-  Cadastre - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear




Scale 1:111520

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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 Date 23/12/09

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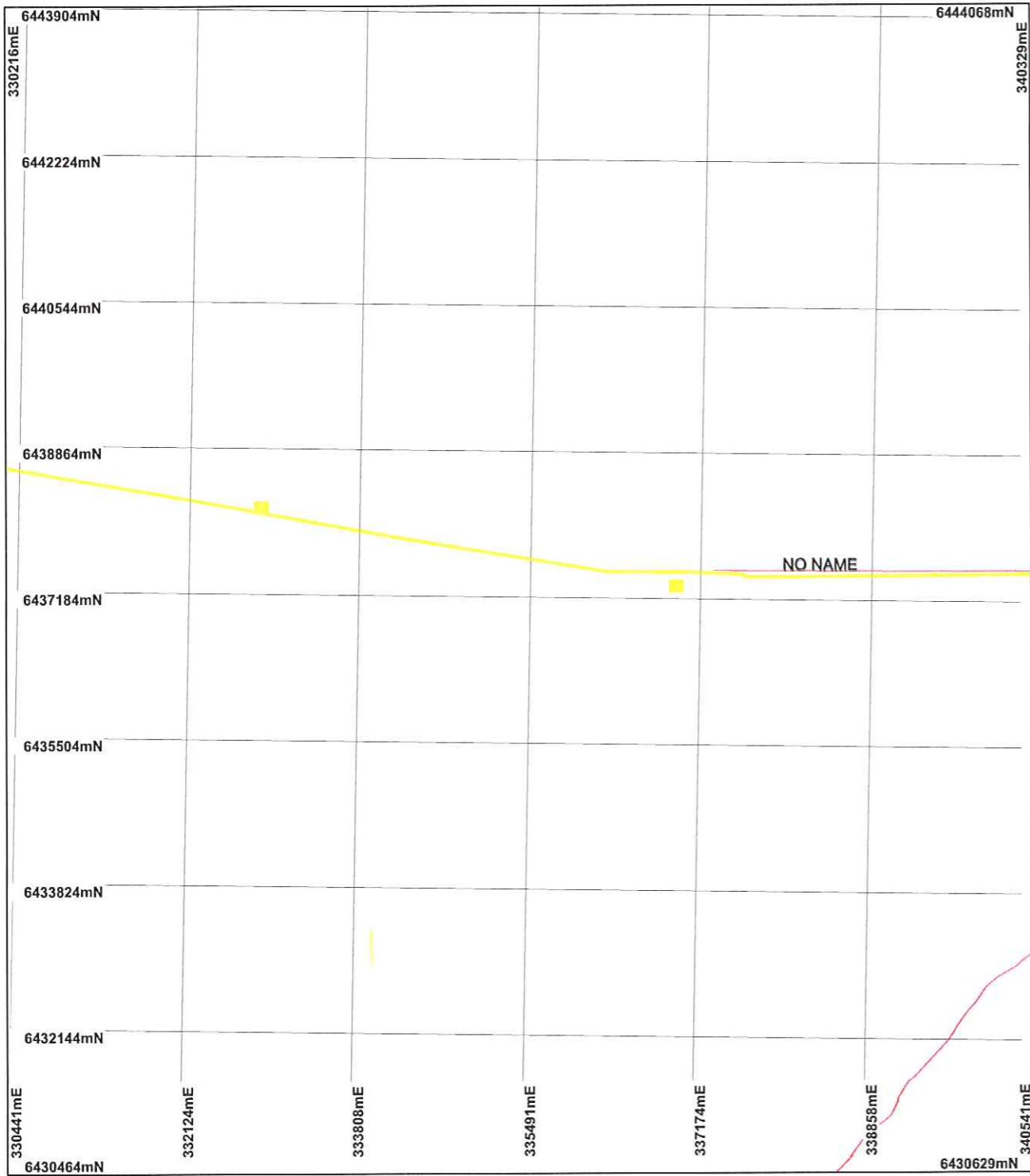
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# Plan 1496/2d



## LEGEND

- Road Centrelines - DLI 1/504
- Cadastre - DLI Clearing Instruments\_1
- Areas Approved to Clear



Scale 1:62092  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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Date 23/10/09

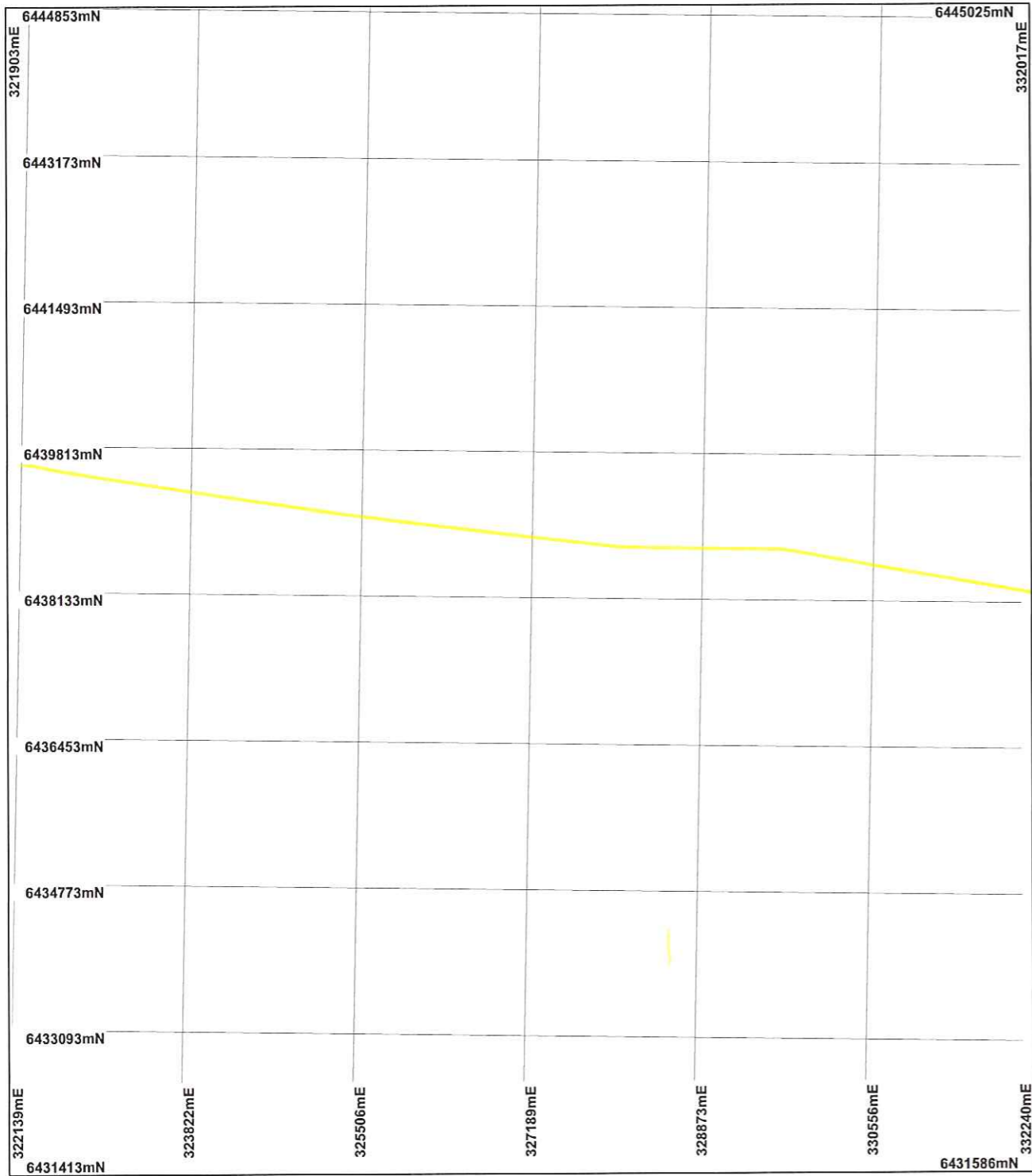
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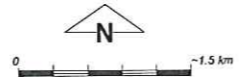
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2e



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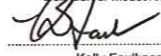
-  Road Centrelines - DLI 1/304
-  Cadastre - DLI Clearing Instruments\_1
-  Areas Approved to Clear



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Geocentric Datum Australia 1994

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 Date 23/12/09

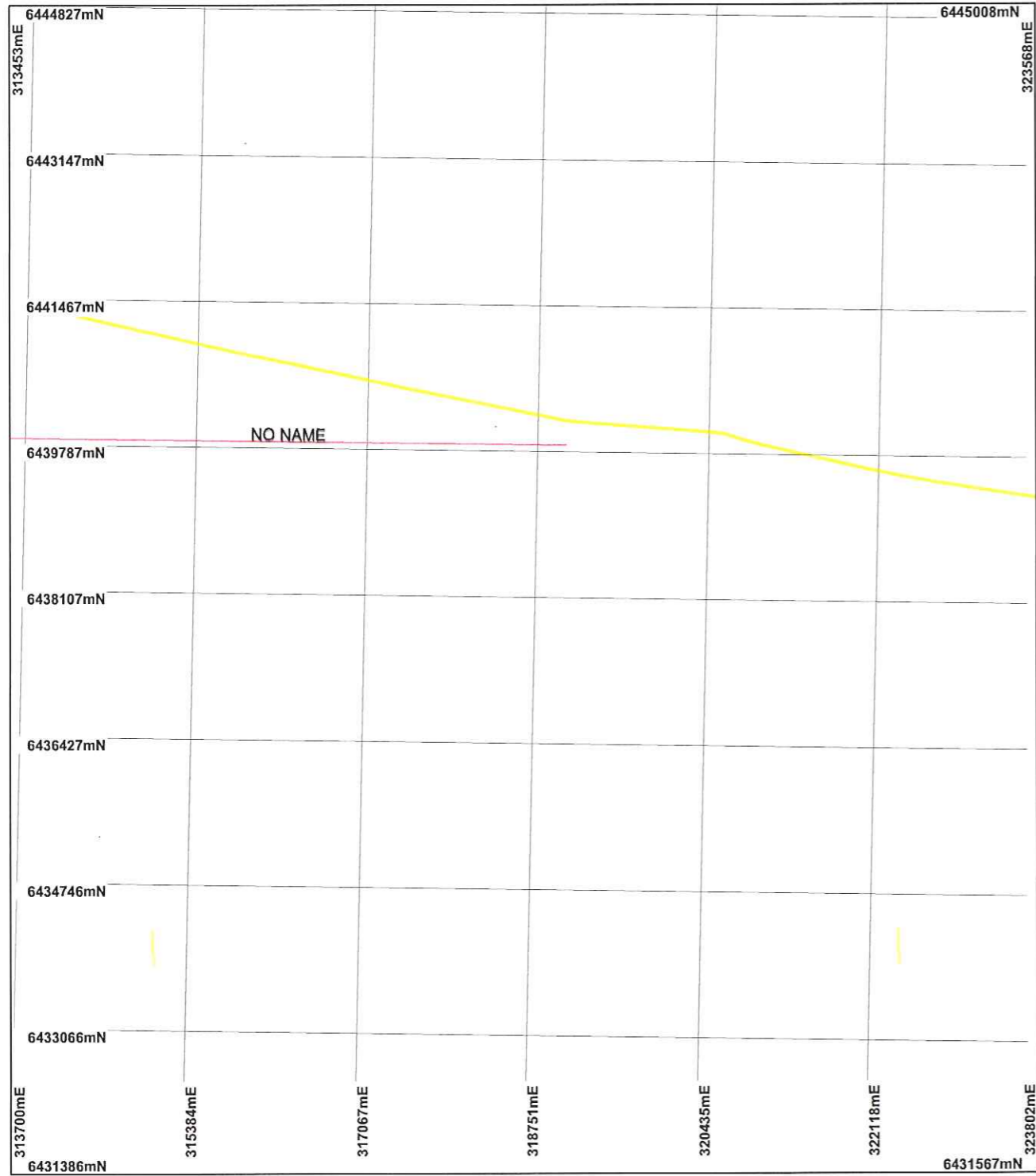
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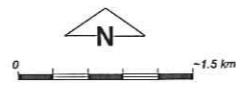
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2f



## LEGEND

-  Road Centrelines - DLI  
1:304
-  Cadastre - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear



Scale 1:62096  
(Approximate when reproduced at A4)

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 Date 23/12/09  
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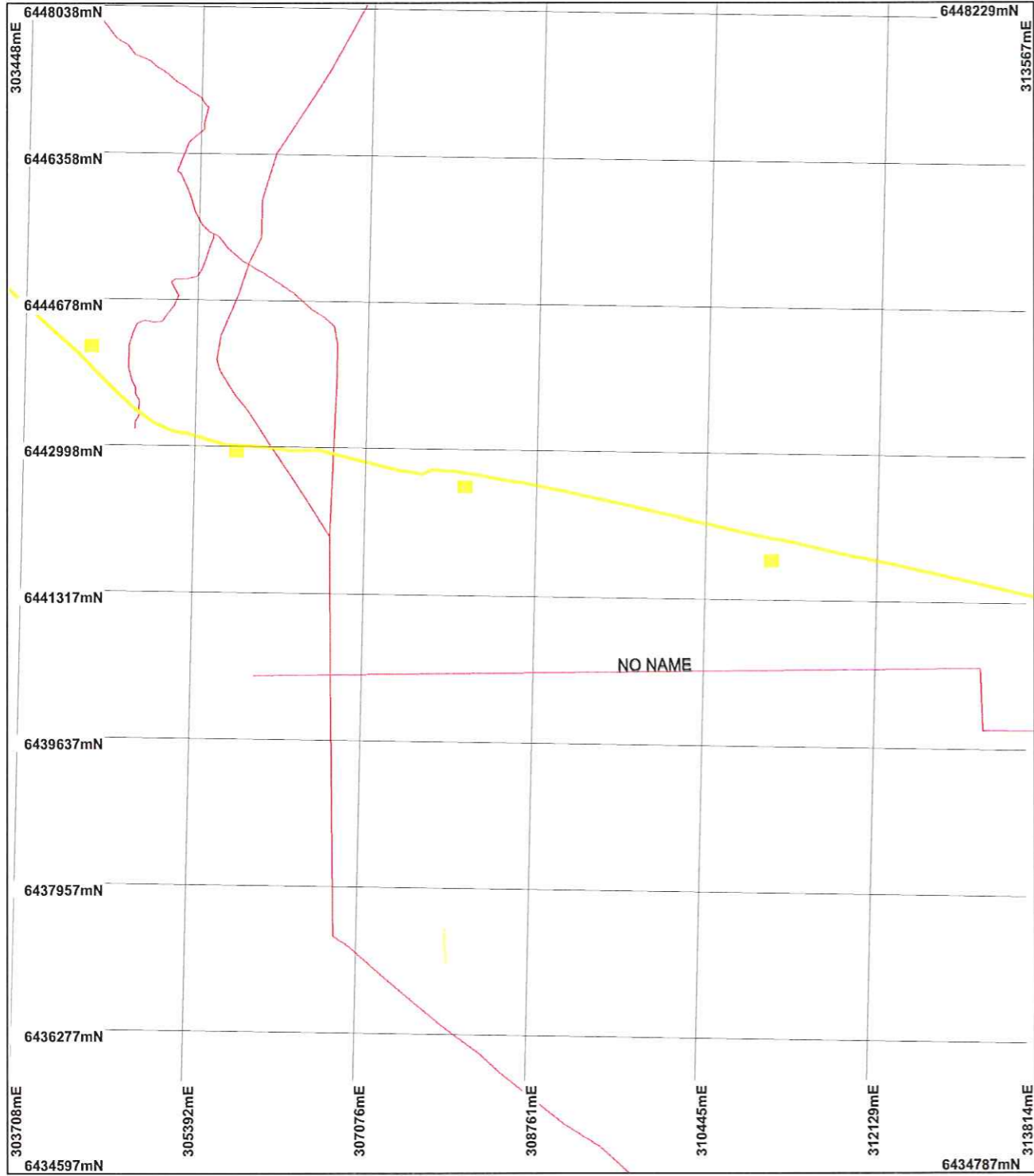
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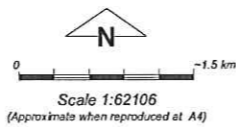
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# Plan 1496/2g



- LEGEND**
- Road Centrelines - DLI 1/3/04
  - Cadastre - DLI Clearing Instruments\_1
  - Areas Approved to Clear



Geocentric Datum Australia 1994  
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Date 23/12/09  
 Kelly Faulkner

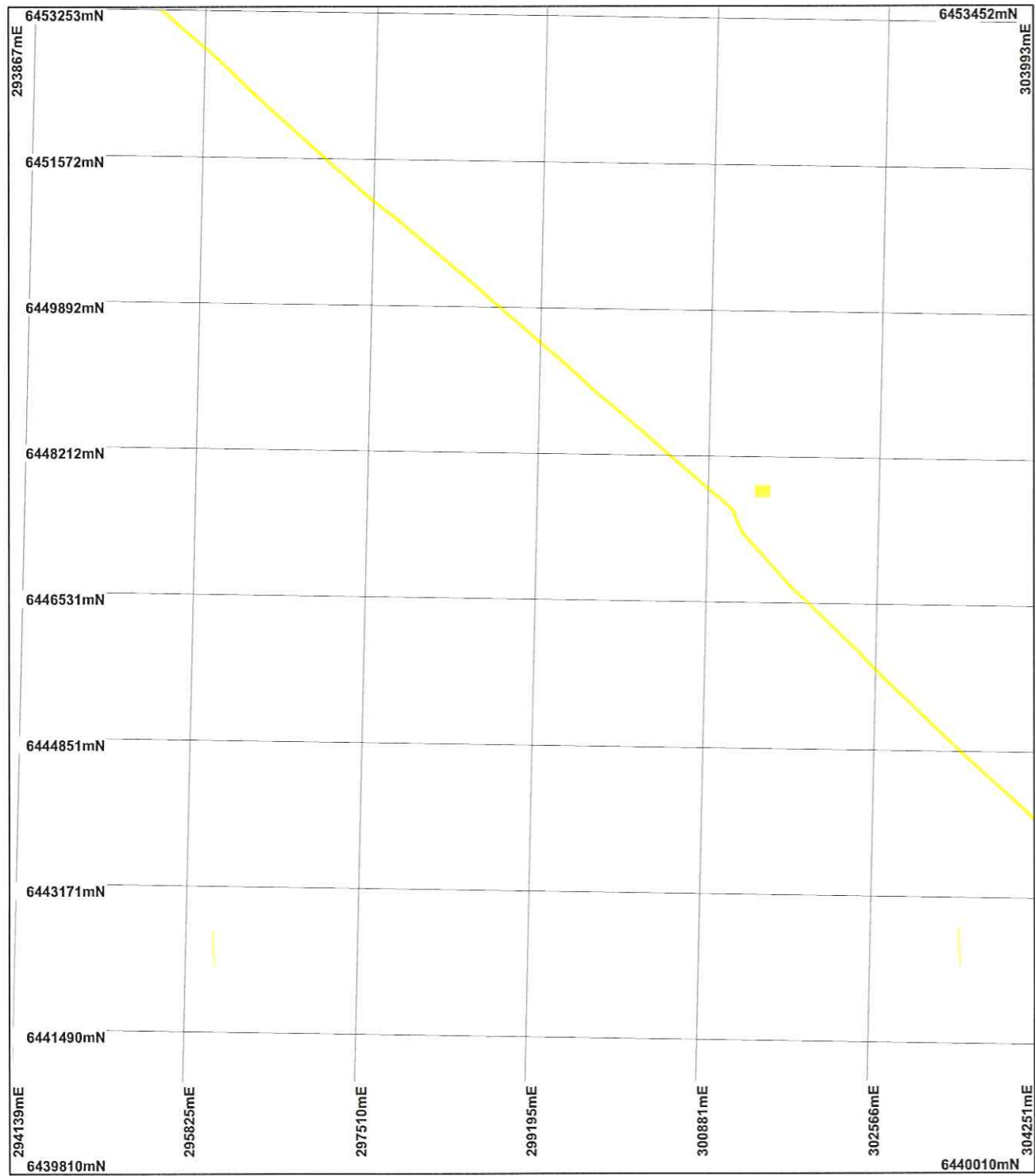
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\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2h



## LEGEND

-  Road Centrelines - DLI 1/3/04
-  Cadastre - DLI Clearing Instruments\_1
-  Areas Approved to Clear



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 Date 23/12/09

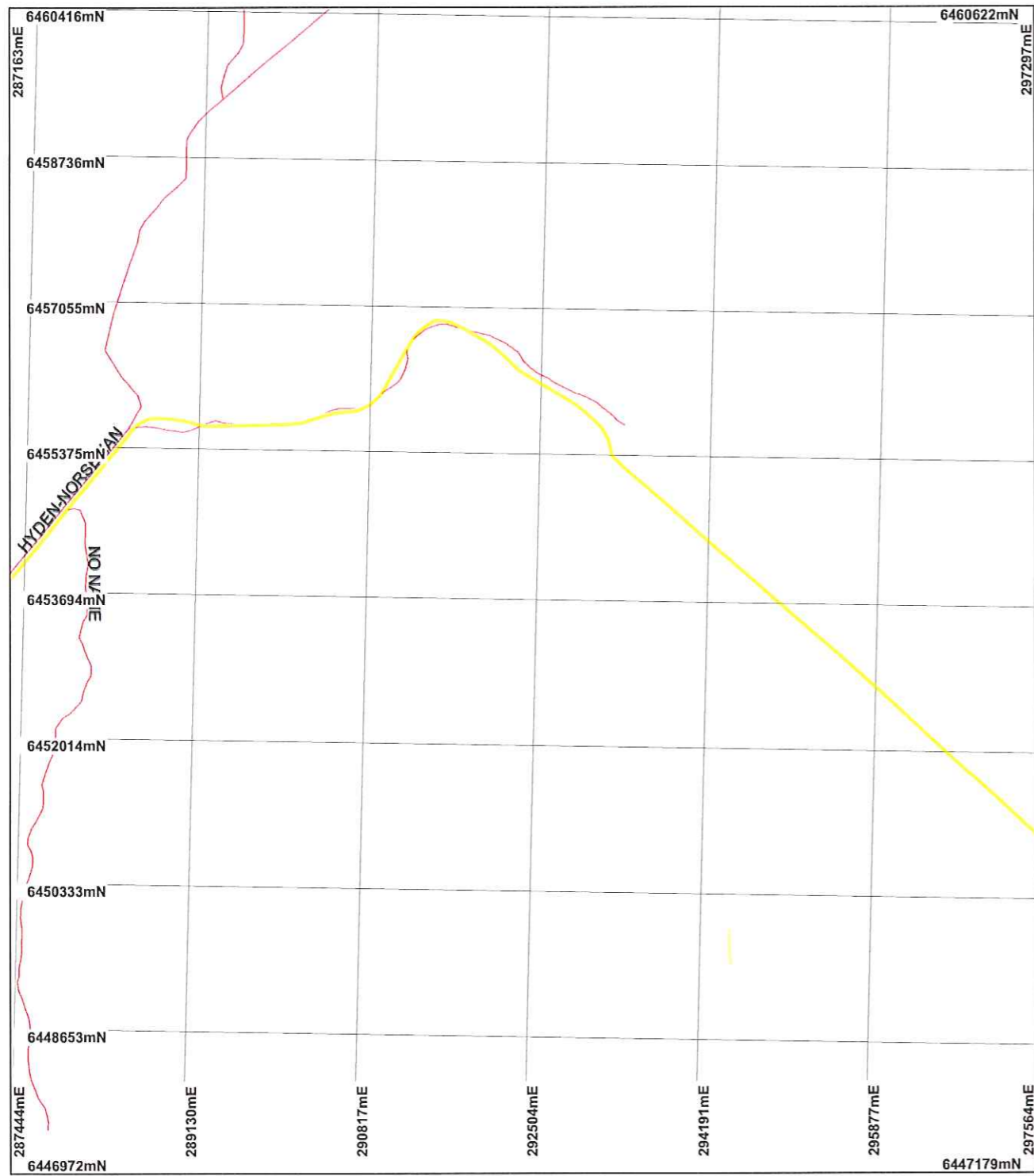
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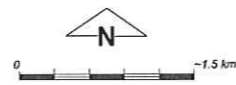
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2i



## LEGEND

-  Road Centrelines - DLI  
1/3/04
-  Cadastral - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear



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 Date 23/12/09

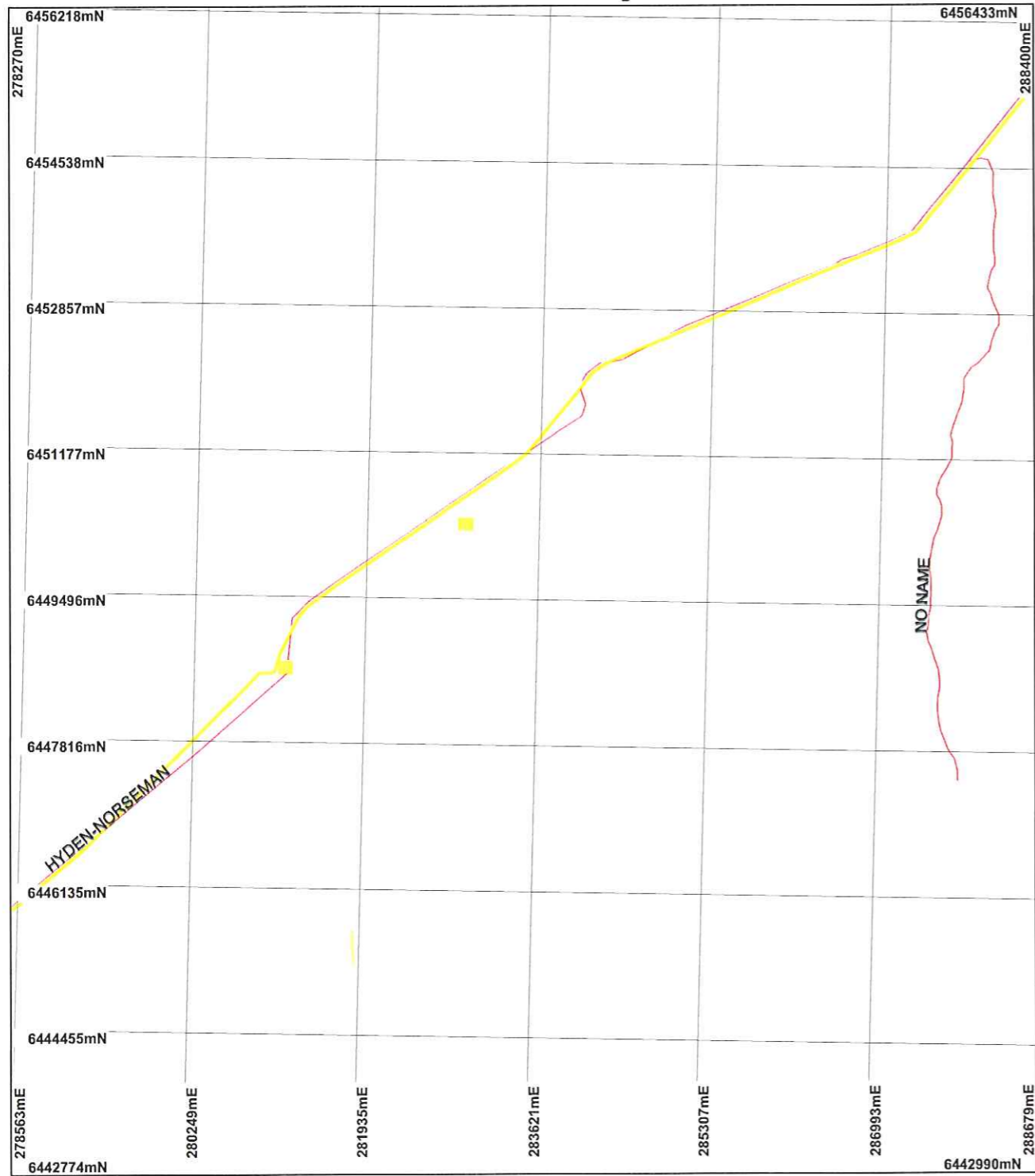
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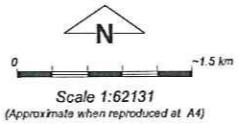


\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2j



- LEGEND**
- Road Centrelines - DLI 1/3/04
  - Cadastre - DLI Clearing Instruments\_1
  - Areas Approved to Clear

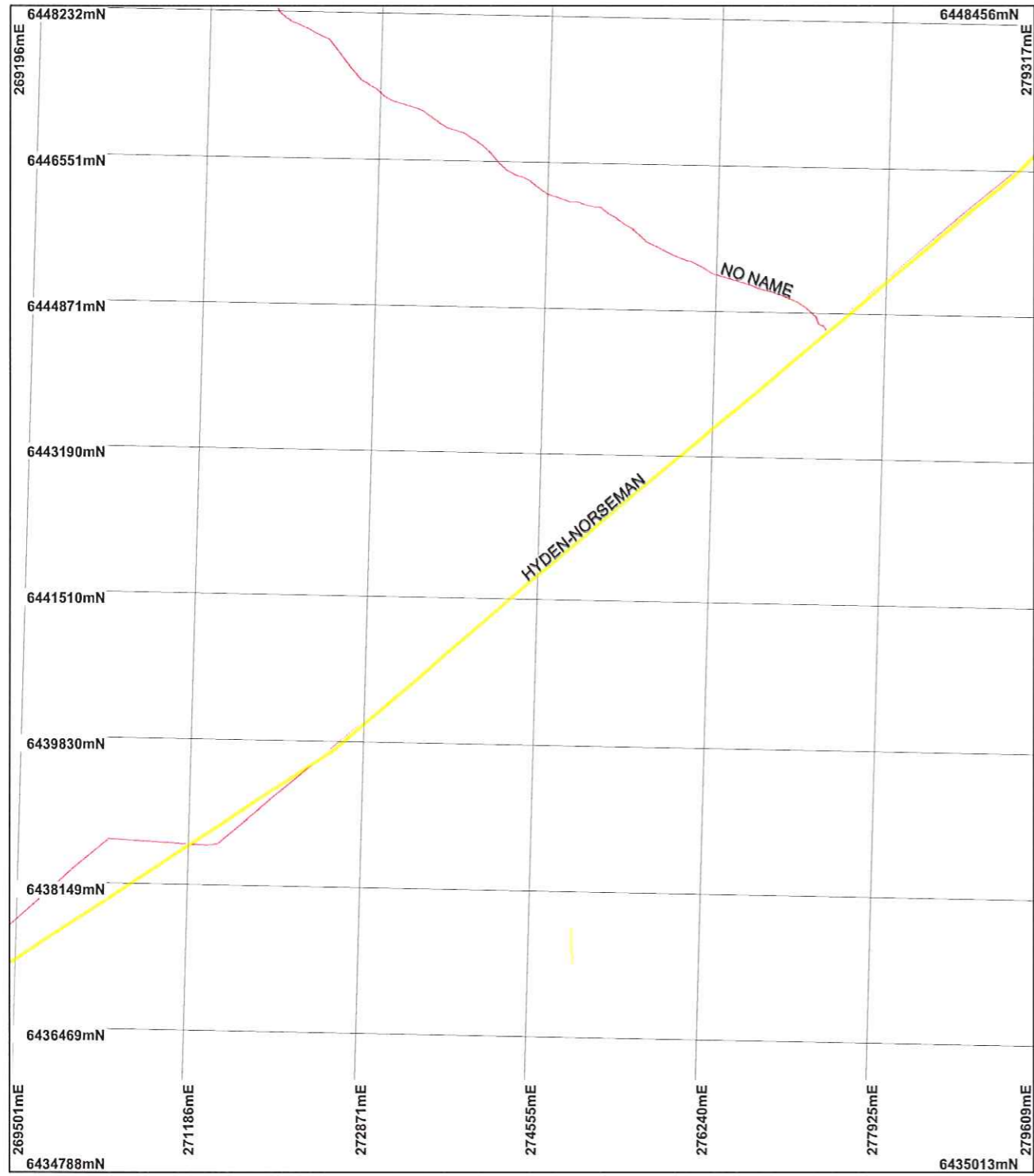


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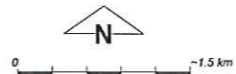
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2k



## LEGEND

-  Road Centrelines - DLI 1/8/04
-  Cleared Instruments\_1
-  Areas Approved to Clear



Scale 1:62108  
(Approximate when reproduced at A4)

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 Date 23/12/09  
Kelly Faulkner

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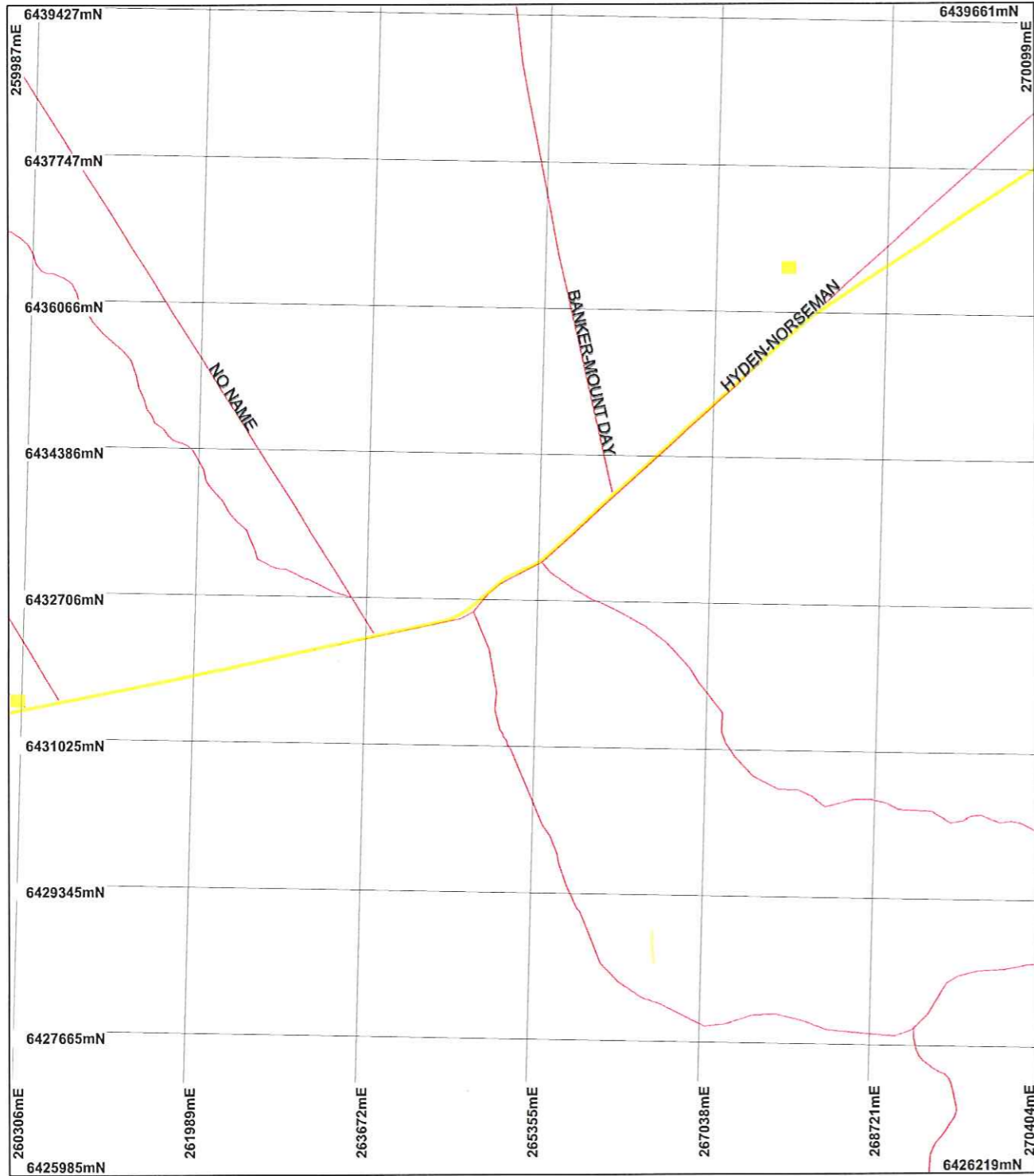


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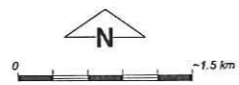


# Plan 1496/2I



## LEGEND


-  Road Centrelines - DLI 1/3/04
-  Cadastral - DLI Clearing Instruments\_1
-  Areas Approved to Clear



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(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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 Date 23/12/09

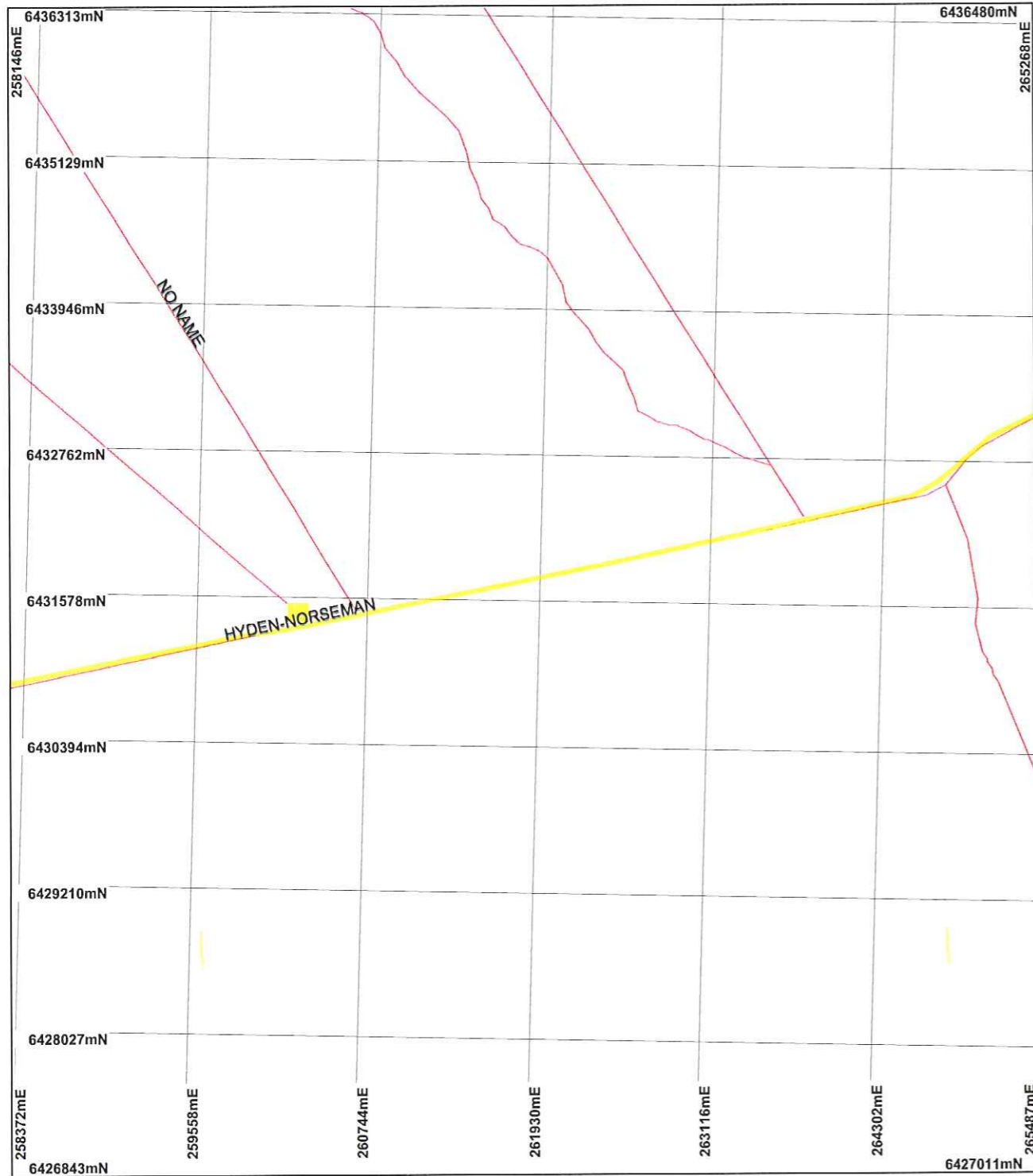
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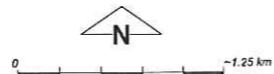
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2m



## LEGEND

-  Road Centrelines - DLI 1/3/04
-  Cadastre - DLI Clearing Instruments\_1
-  Areas Approved to Clear



Scale 1:43736  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994  
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 Date 23/12/07

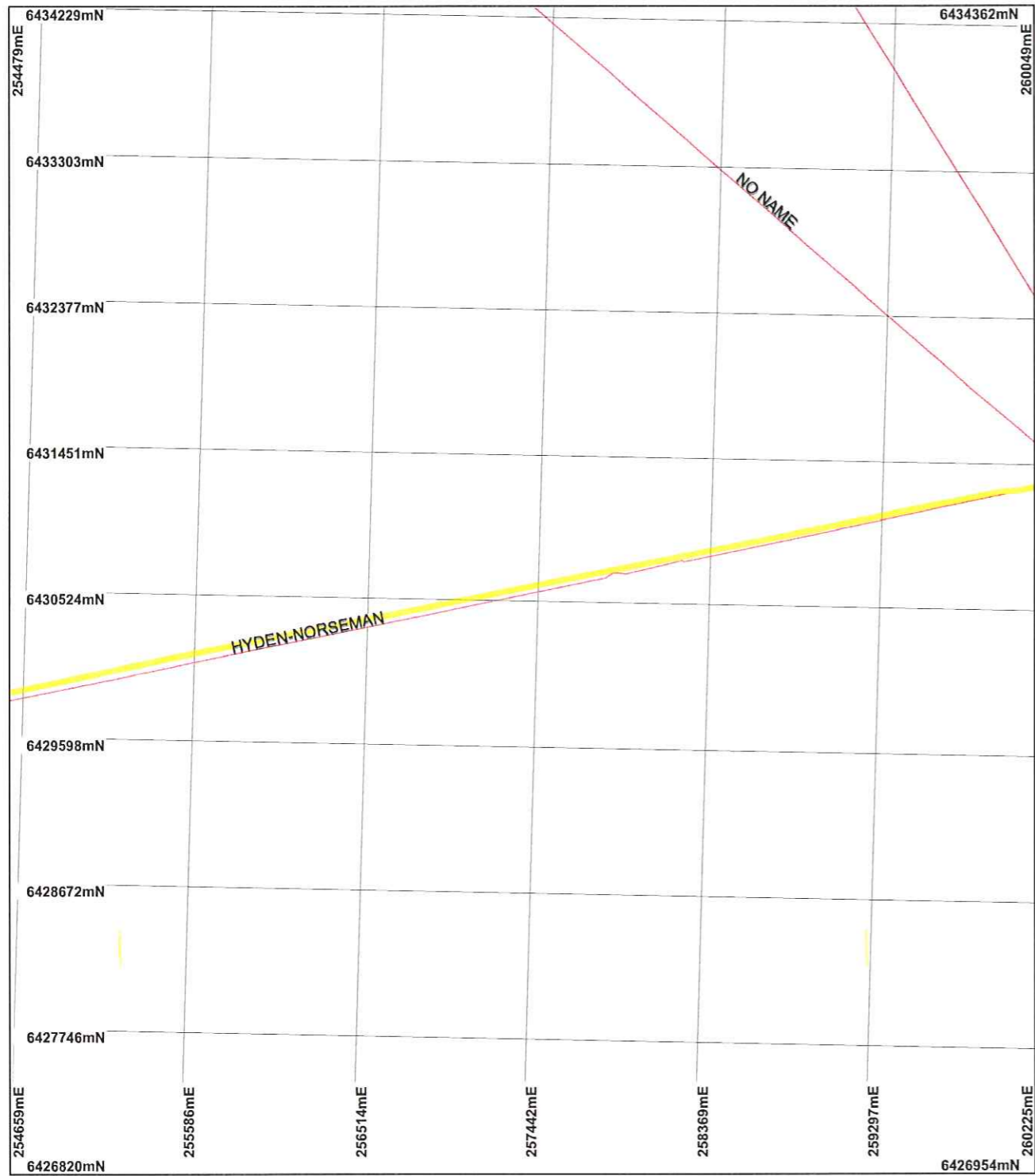
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\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2n



## LEGEND


-  Road Centrelines - DLI 1/3/04
-  Cadastre - DLI Clearing Instruments\_1
-  Areas Approved to Clear



Scale 1:34212  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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 Date 23/12/09

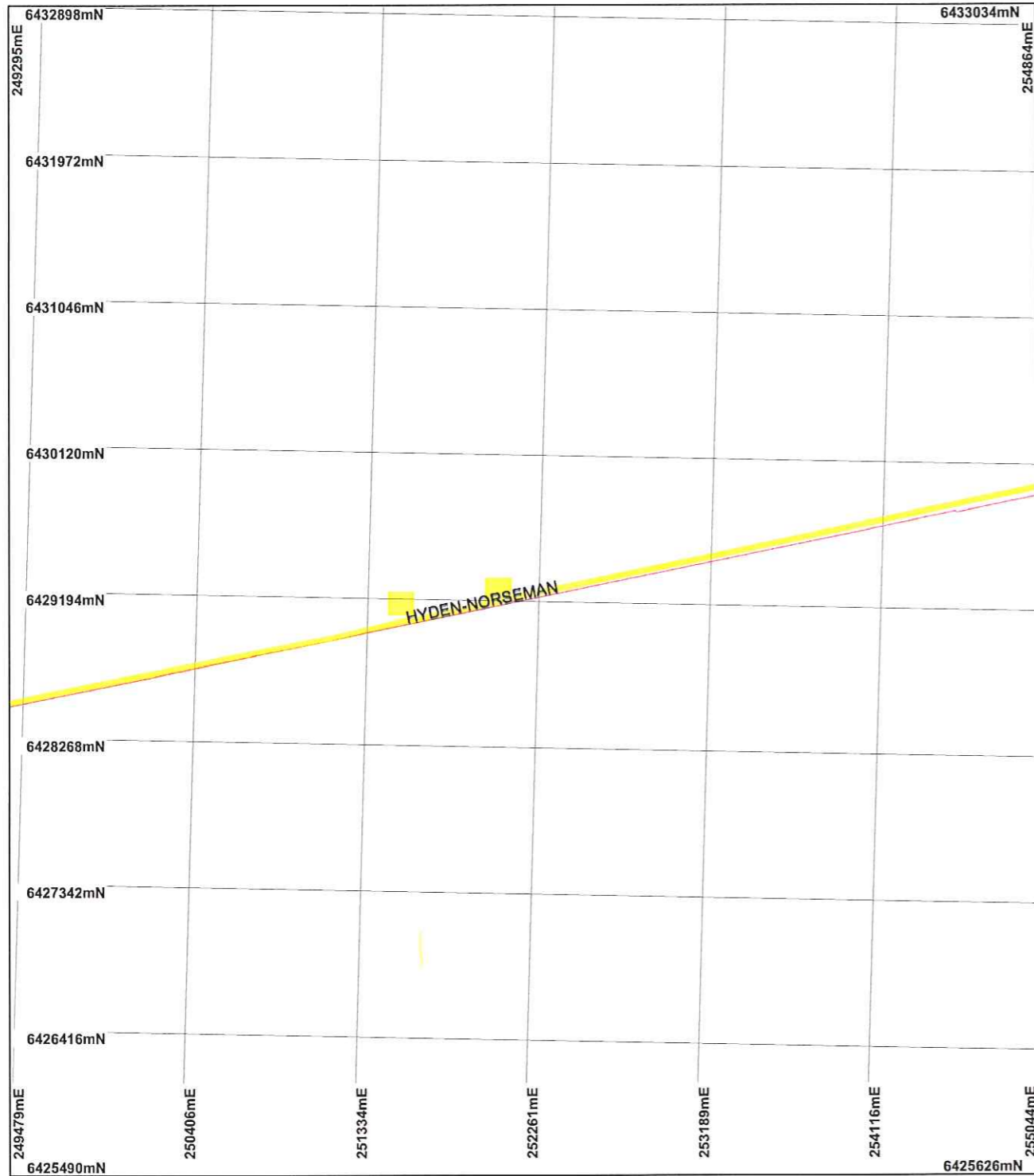
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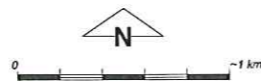
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2o



## LEGEND


-  Road Centrelines - DLI 1/304
-  Cadastre - DLI Clearing Instruments\_1
-  Areas Approved to Clear



Scale 1:34210  
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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 Date 23/12/09  
Kelly Faulkner

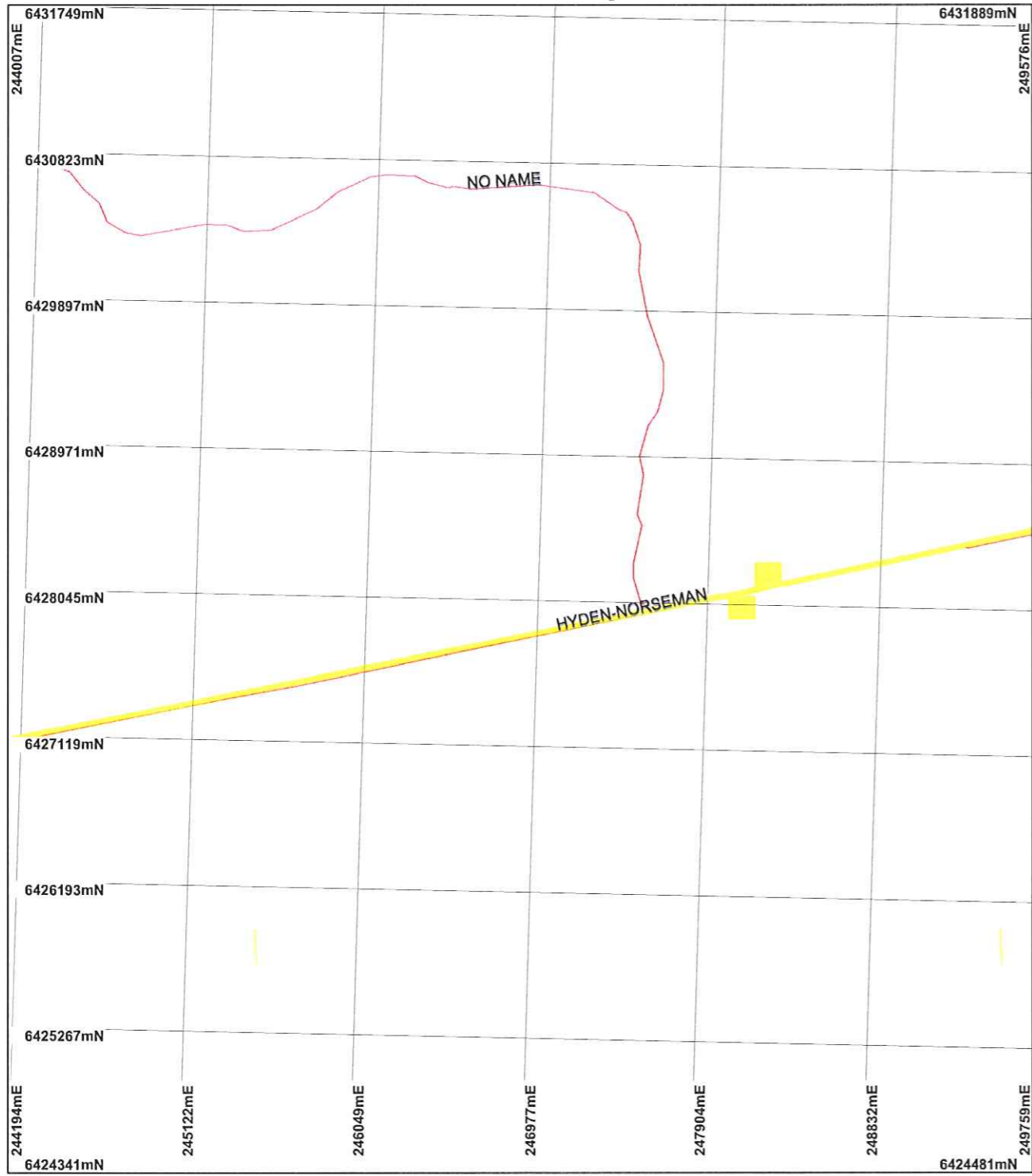
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\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2p



## LEGEND

-  Road Centrelines - DLI  
1/8/04
-  Cadastre - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear



0 ————— 1 km

Scale 1:34208

(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 29/12/09

Kelly Faulkner

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

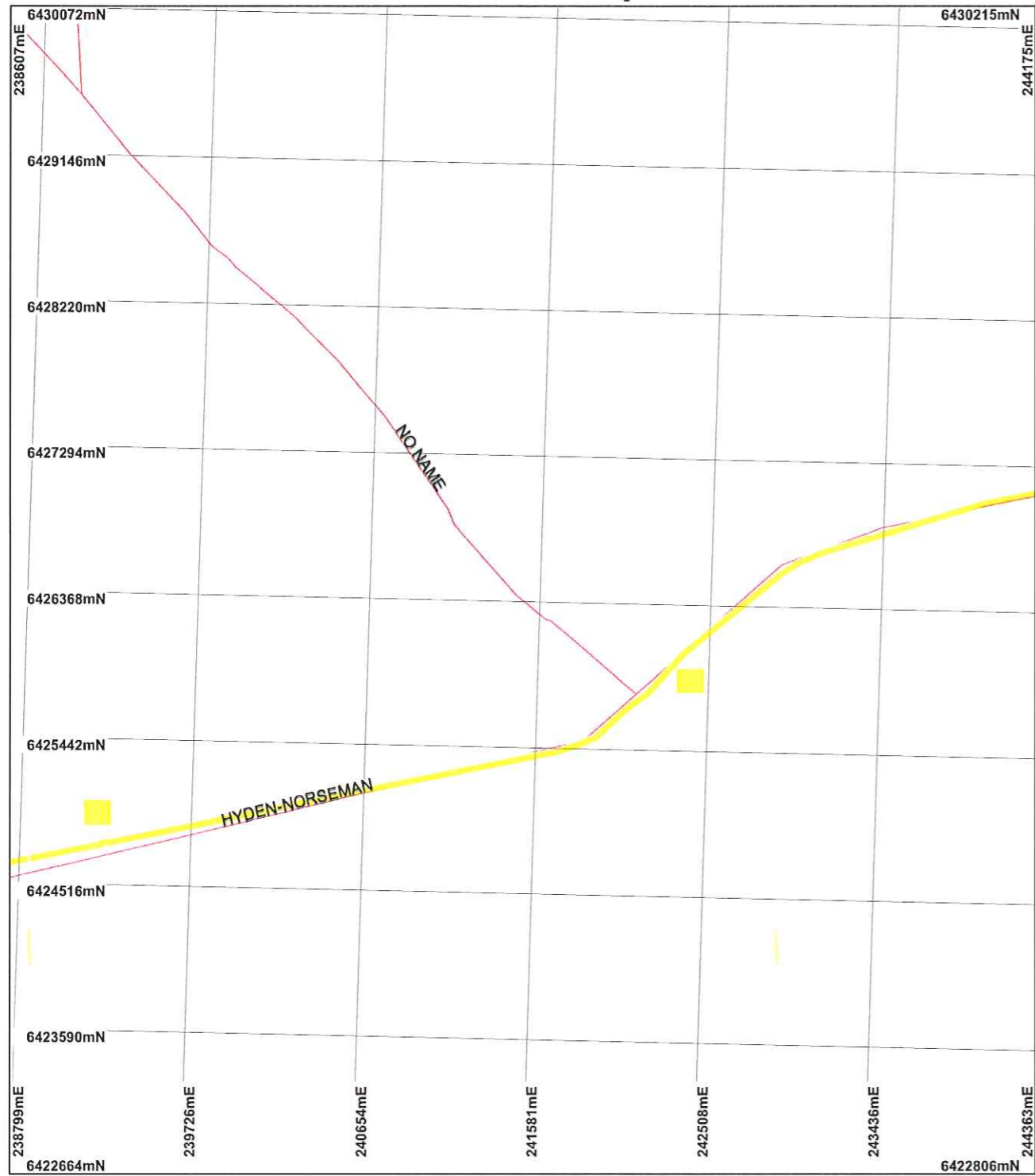
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



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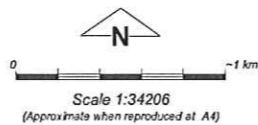
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2q




## LEGEND

-  Road Centrelines - DLI 1/8/04
-  Cadastre - DLI Clearing Instruments\_1
-  Areas Approved to Clear



Geocentric Datum Australia 1994

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

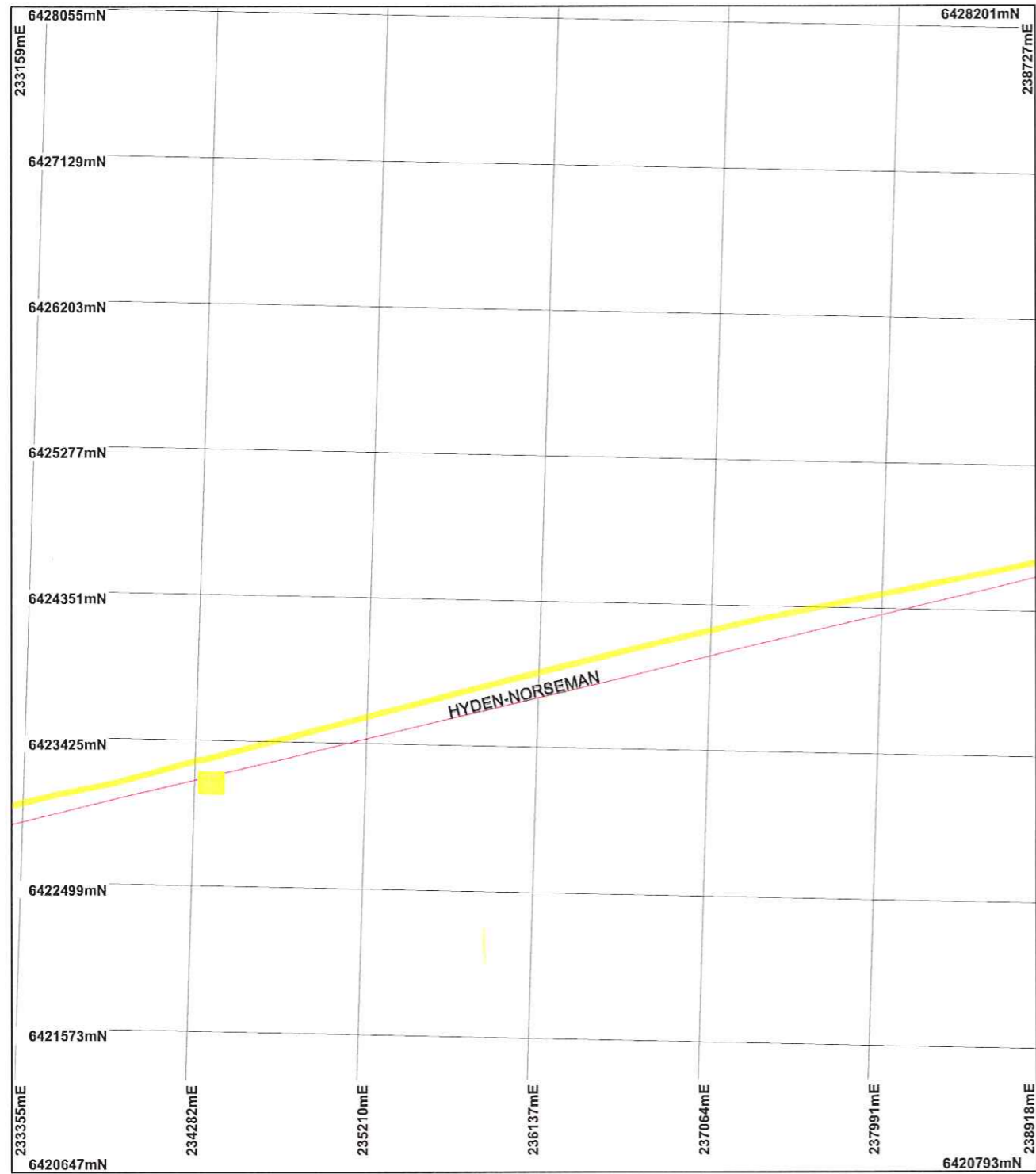
 Date 28/12/09  
Gilly Faulkner

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

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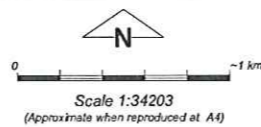


# Plan 1496/2r

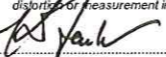


## LEGEND

-  Road Centrelines - DLI  
1/8/04
-  Cadastre - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear



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

 Date 23/12/09  
 Kelly Faulkner

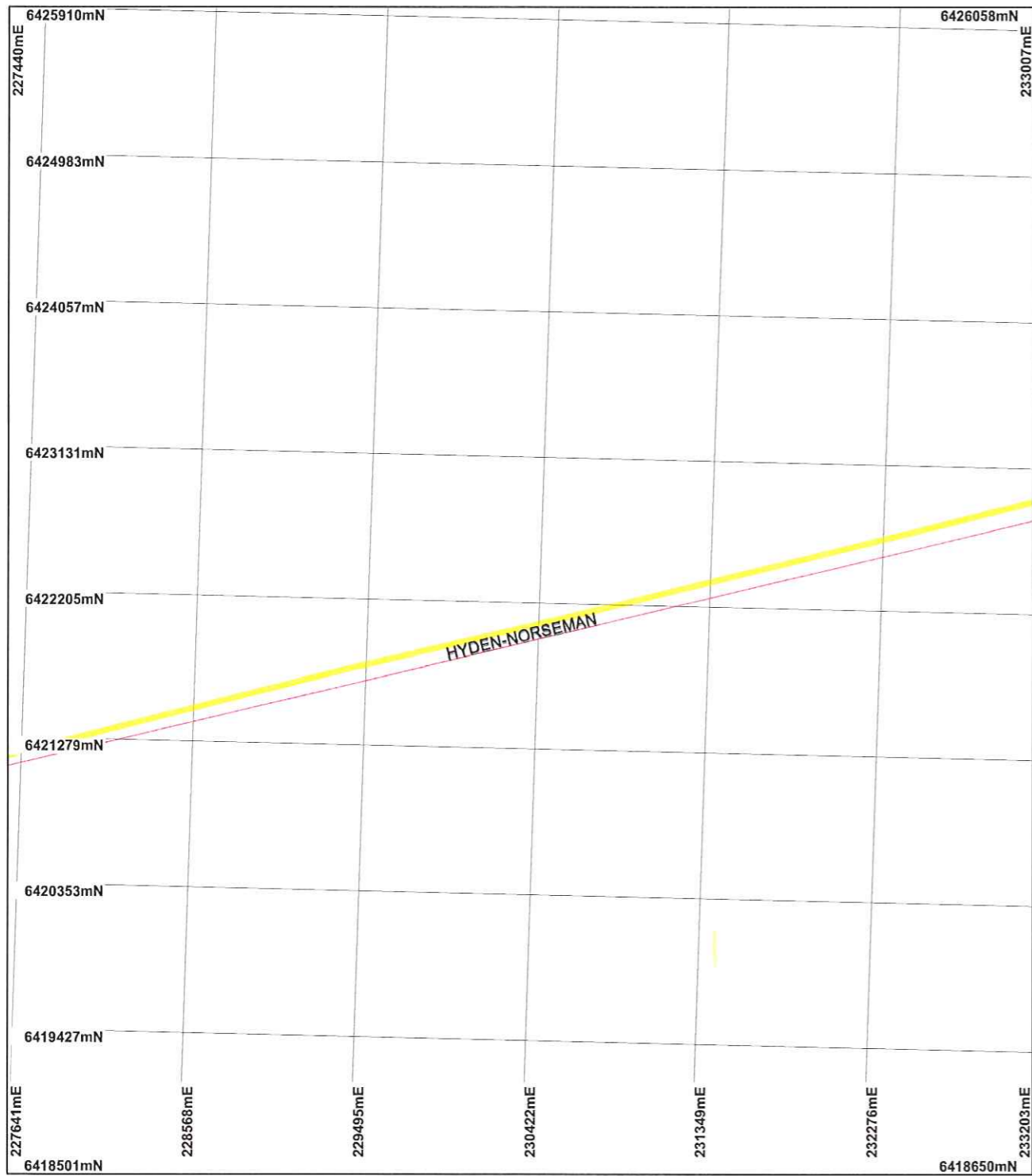
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

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

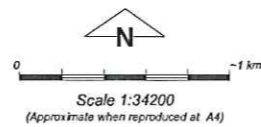


\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2s



- LEGEND**
- Road Centrelines - DLI 1/5/04
  - Cadastre - DLI Clearing Instruments\_1
  - Areas Approved to Clear



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

*Kelly Faulkner* Date 23/12/09  
Kelly Faulkner

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

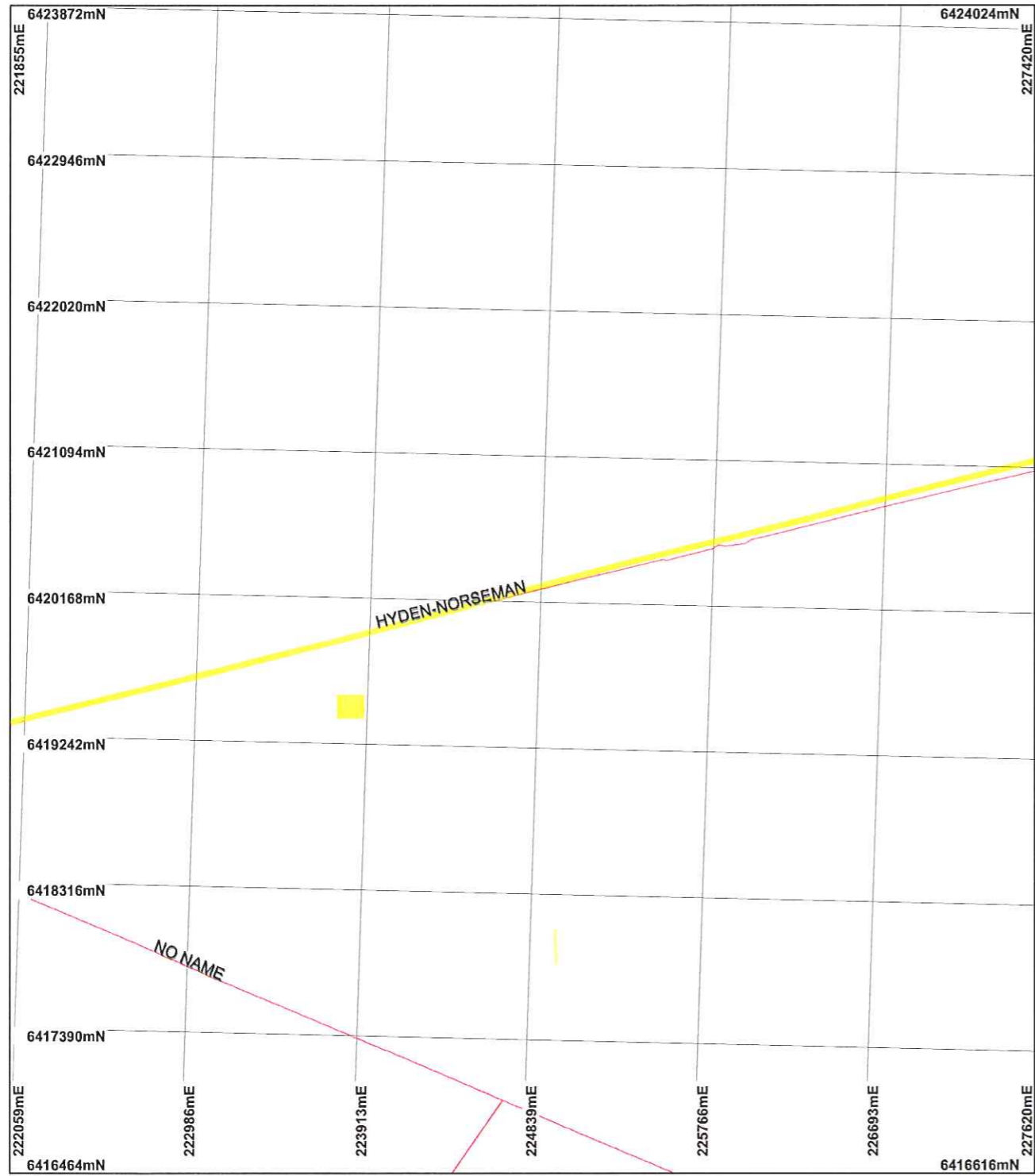
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



\* Project Data. This data has not been quality assured. Please contact map author for details.

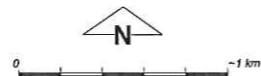


# Plan 1496/2t



## LEGEND


-  Road Centrelines - DLI  
1/8704
-  Cadastre - DLI  
Clearing Instruments\_1
-  Areas Approved to Clear



Scale 1:34197  
(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 23/12/09

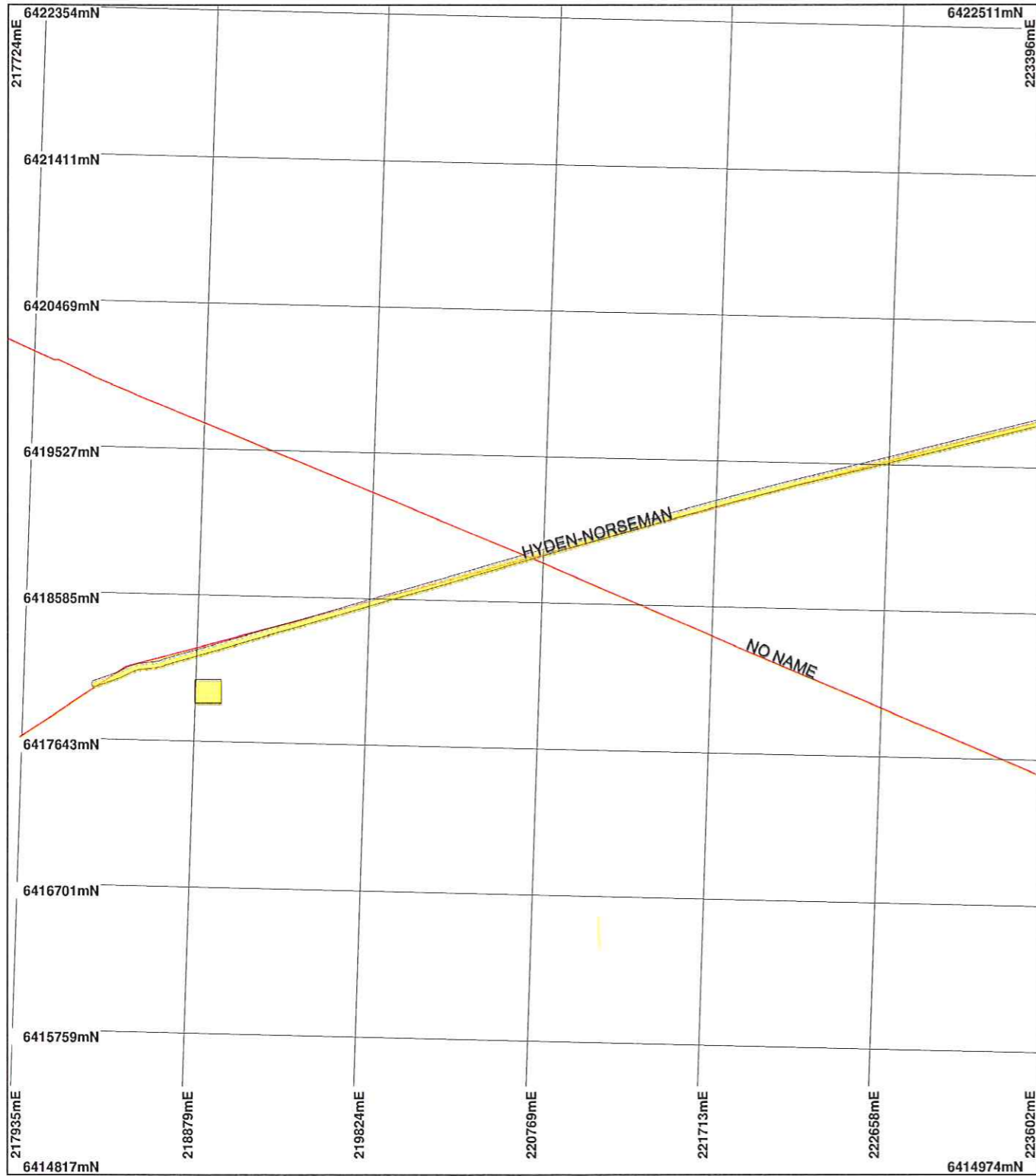
Kelly Faulkner  
Officer with delegated authority under Section 20 of  
the Environmental Protection Act 1986

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



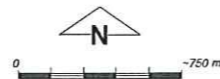
\* Project Data. This data has not been quality assured. Please contact map author for details.

# Plan 1496/2u



## LEGEND

-  Road Centrelines
-  Clearing Instruments
-  Areas Approved to Clear



Scale 1:33279

(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 23/12/09  
Kelly 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.



## 1. Application details

### 1.1. Permit application details

Permit application No.: 1496/2  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: Shire of Dundas

### 1.3. Property details

Property: UNALLOCATED CROWN LAND ( NORSEMAN 6443)  
UNALLOCATED CROWN LAND ( NORSEMAN 6443)  
UNALLOCATED CROWN LAND ( NORSEMAN 6443)  
ROAD RESERVE ( NORSEMAN 6443)  
UNALLOCATED CROWN LAND ( VICTORIA ROCK 6429)  
ROAD RESERVE ( NORSEMAN 6443)  
ROAD RESERVE ( NORSEMAN 6443)  
LOT 313 ON PLAN 40385 ( NORSEMAN 6443)

Local Government Area: Shire Of Dundas & Shire Of Kondinin

Colloquial name:

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
40		Mechanical Removal	Extractive Industry
10		Mechanical Removal	Road construction or maintenance

## 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
Medium woodland; salmon gum & gimlet;	The areas under application are for the extension of existing gravel pits and road realignment.	Pristine: No obvious signs of disturbance (Keighery 1994)	Interpretation based on site visit undertaken by DEC staff on 18 October 2006.
Medium woodland; coral gum (Eucalyptus torquata) & goldfields blackbutt (E. le soufil);	Of the 32 gravel pits inspected by DEC staff during a site visit on 18 October 2006, 21 are to be extended for the purpose of gravel extraction and 11 redundant pits have been identified by the Shire of Dundas for rehabilitation.		
Bare areas; salt lakes;			
Bare areas; rock outcrops;			
Medium woodland; morrel & Dundas blackbutt (E. dundasii);			
Medium woodland; salmon gum & morrel;	The site inspection undertaken by DEC staff on 18 October 2006 found the areas under application generally to be in pristine condition with little or no signs of disturbance. Some of the areas proposed to be cleared have been previously disturbed by fire caused by lightning strikes, but this is a frequent and natural occurrence and regeneration of native vegetation appears to be a rapid process. Native vegetation along road verges is also in excellent condition with little evidence of weed invasion.		
Shrublands; mallee scrub, Eucalyptus eremophila;			
Medium woodland; redwood (Eucalyptus transcontinentalis) & merritt (E. floctoniae);			
Shrublands; Casuarina acutivalvus & calothamnus (also melaleuca) thicket on greenstone hills;			
Mosaic: Shrublands; melaleuca patchy scrub / Succulent steppe; samphire;			
Shrublands; acacia, casuarina & melaleuca thicket.			

### 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 may be at variance to this Principle**

The proposal is for the clearing of 50 hectares of native vegetation for the purpose of gravel extraction and road realignment along the Norseman Hyden Road in the Shire of Dundas. There are a range of vegetation types present with Acacia, Casuarina & Melaleuca shrublands, salmon gum woodland, redwood (*Eucalyptus transcontinentalis*) & merrit (*E. floctoniae*) woodland and morrel & Dundas blackbutt (*E. dundasii*) woodlands predominating. A site inspection by DEC staff found the area under application to be in pristine condition with little signs of disturbance other than from fires caused by lightning strikes. Although the percentage remaining of these vegetation types is above 50%, the area is considered to have high biodiversity values.

The area is believed to be relatively poorly surveyed, therefore the range and number of fauna, flora and vegetation records despite the low survey effort indicates that it is potentially an area of high biodiversity value (DEC 2006).

Therefore, the proposal may be at variance to this principle. The rehabilitation and revegetation of 50 ha of previously cleared gravel pits and the rehabilitation and revegetation of gravel pits proposed to be cleared under this permit will be a condition of the permit to mitigate any impacts on biodiversity.

**Methodology** DEC Site Visit (2006)  
DEC (2006)  
GIS Databases:  
- Pre-European Vegetation - DA 01/01  
- Declared Rare and Priority Flora List - CALM 01/07/05

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

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

Ortho-photography is not available for the application area, and the corporate remnant vegetation or vegetation mask (Land Monitor) datasets do not cover the application area (DEC 2006). A site visit that was conducted on the 18th October 2006 (DEC) indicated that a vast expanse of native vegetation occupied the greater area to the north and south of the Hyden-Norseman Road. Orthophotography and remnant vegetation datasets were not available for the local area or surrounds. Native vegetation of the existing uncleared areas predominantly appeared to be undisturbed and have a high level of cover and connectivity, except in areas where recent wildfires had occurred (although regeneration appeared to be healthy). It is therefore expected that the various habitat types of the area along the Hyden-Norseman Road are represented in relatively large tracts within the remnant vegetation to the north and south of the road. The lack of fauna records within the local area is likely to be due to a paucity of fauna surveys being conducted in the area. However, given the extent of uncleared conservation lands that are adjacent or in close proximity to the application area, there is a high probability that they will contain comparable habitat to the vegetation that is proposed to be cleared.

This vegetation is therefore unlikely to provide a significant habitat for indigenous fauna.

**Methodology** DEC (2006)  
DEC Site Visit (2006)

#### (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**

Two species of rare flora were identified within the local area:

*Eucalyptus platydisca* (Jimberlana mallee. Current name: *Eucalyptus* sp. Norseman): No current description. Previous description of *Eucalyptus platydisca*: "Flowering occurs from March to June, with flowers being white in colour. This mallee resembles karri but has fruit with a level disc, slightly larger buds, and a very restricted habitat. Jimberlana mallee is known only from north-east of Norseman, over a geographic range of 18km. It grows in dark brown, sand loam amongst granite boulders, in open shrub mallee (*Eucalyptus oleosa*), spinifex (*Triodia*) and speargrass (*Stipa*)" (Western Australia's Threatened Flora, Department of Conservation and Land Management, 1998, Eds: Brown, A., Thomson-Dans, C. and Marchant, N.).

*Eremophila viscida* (Varnish Bush): This species is listed as a Schedule 1 (Extant Taxa) in Wildlife Conservation (Rare Flora) Notice 2006, of the Wildlife Conservation Act and as an Endangered Species within the EPBC Act 1986. This species was recorded at a site within the local area in 1979, and the recorded location is approximately 1.6 kilometres east of Gravel Pit 21 and approximately 600 metres south of the Hyden-Norseman Road. Given the date of the record the exact location may not be accurate. The recorded location of this rare flora species is within the same Beard vegetation type as Gravel Pit 21.

This species is described in Florabase as: Shrub, 1.2-4 m high. Fl. green, white, yellow, Sep-Nov. Granitic soils,

sandy loam. Stony gullies, sandplains. The habitat of this species is further described in Interim Recovery Plan No. 137: Varnish Bush (*Eremophila viscida*) - Interim Recovery Plan 2003-2008 (Phillimore, R., Evans, R., Brown, A., and English V, 2003). The preferred habitat of Varnish Bush is described in this Interim Recovery Plan (IRP) as "areas of brown, sandy loam or red brown clay loam soils, in open woodland in association with *Eucalyptus loxophleba* and scrub vegetation often near areas of exposed granite or alongside saline lake systems." The IRP also states that "The critical habitat for *Eremophila viscida* comprises the area of occupancy of the known population; similar habitat within 200 metres of the known population; - as described above - "remnant vegetation that links subpopulations; and additional nearby occurrences of similar habitat that do not currently contain the species but may have done so in the past and may be suitable for translocations" and that "Given that this species is Critically Endangered it is considered that all known habitat is critical." The IRP describes threats to this species which include weed invasion, soil erosion (as a result of increased water flows channeling down a creekline and eroding soil along its banks [Phillimore et. al., 2003]), and road maintenance, which threatens most populations. Threats associated with road maintenance include grading, chemical spraying, construction of drainage channels and mowing of roadside vegetation, with some of these actions also encouraging weed invasion (Phillimore et. al., 2003). Some of this road maintenance activities, or similar activities, may occur as a result of the proposed road works. The IRP also states that "No developments should be approved unless the proponents can demonstrate that they will not have a deleterious impact on the species, or its habitat or potential habitat, or the local surface and ground water hydrology".

The area is believed to be relatively poorly surveyed, therefore the range and number of fauna, flora and vegetation records despite the low survey effort indicates that it is potentially an area of high biodiversity value. Given the identification of records for two rare flora species within the local area, a flora survey should be conducted of the application area to determine the potential significance of impacts to flora values of the area. Population estimates of any rare flora (and its critical habitat) and Priority Flora identified within the application area will need to be provided, along with expected levels of impact from the proposed gravel pit works.

There are many Priority species recorded within the Shire of Dundas. A condition will be placed on the permit requiring surveys for rare and priority flora and no clearing of rare and priority species unless approved by the CEO.

**Methodology** DEC (2006)  
GIS databases:  
- Declared Rare and Priority Flora List - CALM 01/07/05  
- Pre-European Vegetation - DA 01/01

**(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**  
Of 32 gravel pits inspected by DEC staff during a site visit on 18 October 2006, 22 were to be extended for the purpose of gravel extraction and 10 redundant pits were identified by the Shire of Dundas as requiring rehabilitation. A Priority Ecological Community (PEC) intersects the application area. It is believed that there are no active pits within the area classified as the Bremer Range PEC (only two pits which are to be rehabilitated), however one pit was identified on the eastern boundary (Pit 10) of the PEC. Conducting a flora survey of the application area will determine whether or not the proposed extension of Gravel Pit 10 will occur within the Bremer Range PEC.

The proponent has since removed Pit 10 from the clearing application, and its status has been amended to 'rehabilitate without dam'. The amended clearing application includes clearing for the extension of 21 gravel pits, and 11 pits assigned for rehabilitation.

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

**Methodology** DEC Site Visit (2006)  
DEC (2006)  
GIS Databases:  
- Threatened Ecological Communities - CALM 12/4/05

**(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**  
The proposed clearing occurs within the Coolgardie IBRA Region, where the area of vegetation remaining is 98.5% (Shepherd et al. 2001). The area predominantly traverses vegetation types 1413, 491, 936 and 522 where there is 60.6%, 84.4%, 89.2% and 89.6% remaining respectively. This proposal is considered unlikely to be at variance to this principle.

	Pre - European (ha)*	Current Extent (ha)*	Remaining %
IBRA Bioregion ***			

- Coolgardie	12,917,718	12,719,084	98.5
Beard Unit -			
1413	2,296,506	1,390,609	60.6
491	79,779	67,365	84.4
936	1,016,210	906,826	89.2
522	759,523	680,641	89.6
1148	320,705	271,706	84.7
125	3,940,746	3,536,992	89.8
128	412,121	325,830	79.1
511	409,458	219,324	53.6
519	2,221,704	1,346,958	60.6
552	40,252	36,688	91.1
8	1,238,672	675,472	54.5
9	250,894	250,183	99.7

\* (Shepherd et al. 2001)

\*\* (Department of Natural Resources and Environment 2002)

\*\*\* Within the Intensive Landuse Zone

**Methodology** Shepherd et al (2001)  
GIS Databases:  
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00  
- Pre-European Vegetation - DA 01/01

**(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 may be at variance to this Principle**  
A number of large lakes and wetlands occur within the local area, with the Lake Johnston wetland system occurring approximately 89 kilometres from the western end, near the intersection of the Hyden-Norseman Road and Victoria Rock Road (which is a track heading in the northerly direction). These lakes and wetlands are classified as non-perennial salt lakes (The Western Australian Wetlands Database, accessed 26th September 2006). The proposed works, particularly the creation of pits and dams, if they are to occur in proximity to this lake system may adversely impact on the drainage, water quality and environmental values of those lakes. Threats could include the destruction of wetland dependent habitat, including buffer areas surrounding wetlands and vegetation providing connectivity between wetlands; potential changes to hydrology as a result of gravel pit and dam construction and road drainage works; the potential for increased turbidity in adjacent wetlands; and, the spread of weeds. Three pits that are in reasonable proximity to wetlands or drainage lines are:  
- Pit 17 is approximately 350 metres north-east of a lake, and,  
- Pits 15 and 14 are located approximately 500 metres and 900 metres, respectively, from a drainage line that runs to a lake located approximately 1.5 kilometres to the north.  
Rehabilitation criteria should be developed that incorporate the landform being returned to as near to its original contour as possible.

Given the above, the proposal may be at variance to this principle.

**Methodology** DEC (2006)  
GIS Databases:  
- Rivers 250K - GA  
- ANCA, Wetlands - CALM 08/01  
- Geodata, Lakes - GA 28/06/02  
- Environmentally Sensitive Areas - DOE 22/10/04

**(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**  
DAFWA advises that "the proposed clearing of 108 hectares along the Hyden-Norseman Road is unlikely to cause appreciable land degradation if the guidelines in the 'Shire of Dundas Vegetation Management Plan' are adhered to during both the gravel extraction and pit rehabilitation phases. Therefore, this clearing is unlikely to be at variance with Principle (g)."

NB. DAFWA advice preceded the proposal being amended from 108 hectares to 50 hectares.

**Methodology** DAFWA (2006)

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

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

The areas proposed to be cleared are not within or adjacent to conservation areas. The closest conservation areas are Lake Cronin (14 km) and Jilbadji Nature Reserve (28 km). These areas are also identified on the Register of National Estate and are therefore environmentally sensitive areas. The vegetation types found within these reserves are the same as those found within the area proposed to be cleared (511, 1413, 125, 128, 8). However, as the percentage remaining of these types are all above 50% it is unlikely that the proposed clearing will have a significant impact on the environmental values of these conservation areas.

Two proposed nature reserves occur across the application area, recommended in the South Coast Region Regional Management Plan 1992. These proposed reserves are two of three areas that have been selected to 'represent the diversity of communities found in outcrop areas of the southern Goldfields' (CALM, 1992).

The three (existing) gravel pits for which extensions have been proposed, that occur in proximity to or within the proposed reserves, are not expected to cause a problem given the existing status of the pits and the 'proposed' state of the reserves.

It is expected that, provided the works involved in the gravel extraction are conducted and managed in an appropriate way, that small incursions into the proposed nature reserve will be of minimal impact so long as rehabilitation is undertaken immediately after the raw material has been extracted.

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

**Methodology DEC (2006)**

GIS Databases:

- CALM Managed Lands and Waters - CALM 1/07/05\_1
- Register of National Estate - EA 28/01/03\_1
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05
- Pre-European Vegetation - DA 01/01

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

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

The static groundwater level within the proposed area to be cleared ranges from 23 metres to 44 metres below ground level, with a mapped groundwater salinity of 14 000 to greater than 35 000 milligrams per litre.

The proposed clearing for gravel extraction may cause some short term water quality issues in terms of localised surface water sedimentation during works. However, these issues should be minimised as the Shire of Dundas is proposing to construct catchment dams within some of the gravel pits to retain surface water runoff on site. In the longer term exhausted gravel pits will be closed and rehabilitated as a condition of the permit.

**Methodology GIS Databases:**

- Groundwater Salinity, Statewide - 22/02/00
- WIN Groundwater Sites, Monitoring - DEWCP (Current)\_1

**(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**

Due to the scale and the nature of the proposed clearing it is unlikely to exacerbate flooding in the local area. In addition, the Shire of Dundas is proposing to construct catchment dams within the gravel pits to retain surface water runoff on site.

**Methodology GIS Database:**

Topographic Contours, Statewide - DOLA 12/09/02

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

**Comments**

An amendment for CPS 1496/1 was submitted (CPS 1496/2) to allow for additional time in which to comply 'offsets' and to reduce the number of gravel pits to be rehabilitated from 'areas previously cleared before 24 December 2006 for gravel extraction' to only those pits the Shire had previously cleared for gravel extraction.

Three submissions have been received from conservation groups in relation to the proposal (CPS1496/1). All expressed concern over what they considered excessive clearing of native vegetation for road widening, and the paucity of comprehensive flora and fauna surveys in the region. One submission referred to the large number of Declared Rare Flora and Priority flora identified by both CALM and a recent report by Paul

Armstrong and Associates (March 2006). Concerns included the lack of information on the distribution and populations of these species. One submission stated that the alignment of the road is incorrect and questioned whether the Shire will adequately implement their Vegetation Management Plan. Another concern considered the potential impact of dams (within gravel extraction sites) on wildlife within the area, specifically kangaroos, by providing additional water sources.

As a result of the DEC site visit undertaken on 18 October 2006, the area under application has been amended from 108 hectares to 50 hectares for the extension of existing gravel pits and road realignment (40 hectares and 10 hectares respectively). The Shire of Dundas has acknowledged that road widening is not required, but that realignment is necessary for certain sections considered to be hazardous. The Hyden-Norseman road has now been correctly aligned and gravel pits correctly sited using GPS waypoints by DEC staff during the site visit.

There is no RIWI Act Licence or Works approval required for the proposed works.

**Methodology**

GIS Databases:  
- Native Title Claims - DLI 07/11/05

**4. Assessor's comments**

**Comment**

The 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 proposal is not likely to be at variance to Principles (b), (d), (e), (g), (h), (i) and (j); and may be at variance to Principles (a), (c), and (f).

**5. References**

DAFWA Land degradation assessment report (2006). Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food Western Australia. DoE TRIM ref DOC8051.  
DEC Site Visit Photos (October 2006). DEC TRIM Ref DOC7945  
DEC Site Visit Report (October 2006). DEC TRIM Ref DOC8036  
Department of Environment and Conservation (DEC) biodiversity advice (2006), Western Australia. TRIM ref DOC9226  
Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.  
Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.  
Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

**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)