



## CLEARING PERMIT

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

|                               |                                     |
|-------------------------------|-------------------------------------|
| <b>Purpose Permit number:</b> | CPS 6191/1                          |
| <b>Permit Holder:</b>         | City of Gosnells                    |
| <b>Duration of Permit:</b>    | 21 February 2015 – 21 February 2020 |

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 purposes of constructing road shoulders and table drains.

**2. Land on which clearing is to be done**

Canning-Mills Road reserve, Martin (PIN 11137378, 11137382, 11157504, 11920609, 11632993, 11137380, 11137381)

**3. Area of Clearing**

The Permit Holder must not clear more than 2.4 hectares of native vegetation within the areas shaded yellow on attached Plan 6191/1a, Plan 6191/1b, Plan 6191/1c, Plan 6191/1d, Plan 6191/1e, Plan 6191/1f, Plan 6191/1g, Plan 6191/1h, Plan 6191/1i, Plan 6191/1j, Plan 6191/1k and Plan 6191/1l.

**4. Application**

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

**5. Type of clearing authorised**

This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

### PART II – MANAGEMENT CONDITIONS

**6. Fauna management**

Where hollow bearing *black cockatoo habitat tree/s* have been identified and their written locations provided to the CEO within the 'City of Gosnells Canning Mills Road Improvement Project, Targeted Rare Flora and Black Cockatoo surveys, 13 October 2014' the Permit Holder shall not clear these trees between the months of August to April.

## 7. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared;
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared;

## DEFINITIONS

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

***black cockatoo habitat tree/s***: means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater;

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

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

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

***mulch*** means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

***soil disease status*** means soil types either infested, not infested, uninterpretable or not interpreted with a pathogen.

***weed/s*** means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.

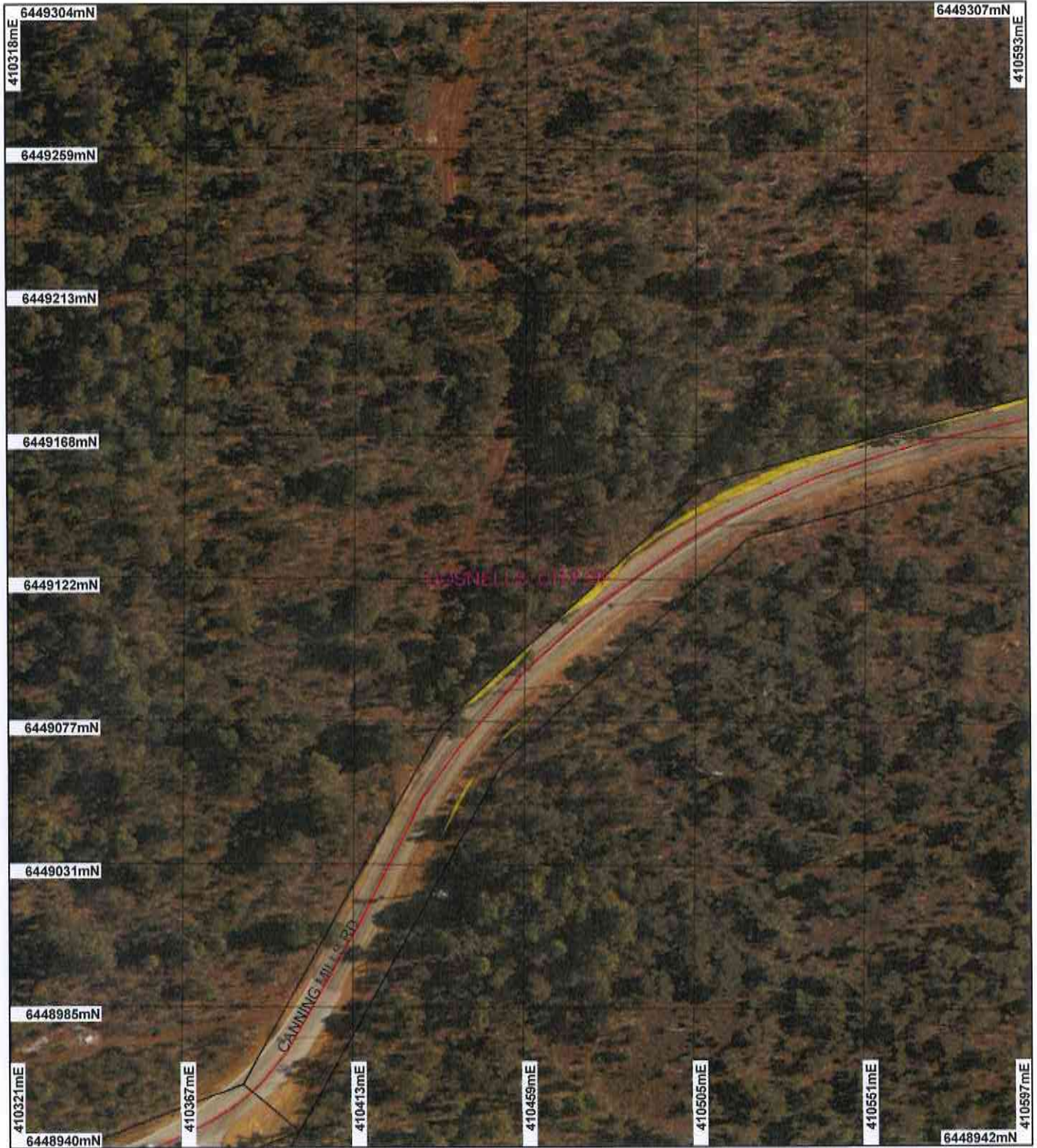


M Warnock  
SENIOR MANAGER  
CLEARING REGULATION

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

22 January 2015

# Plan 6191/1a



## LEGEND

- |                                                                  |                                                       |
|------------------------------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>                                      | <input type="checkbox"/> Local Government Authorities |
| Areas Approved to Clear                                          |                                                       |
| Road Centrelines                                                 |                                                       |
| Cadastral                                                        |                                                       |
| Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012 |                                                       |



Scale 1:1615  
(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.

*M Warnock* Date 22/1/15

M Warnock

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

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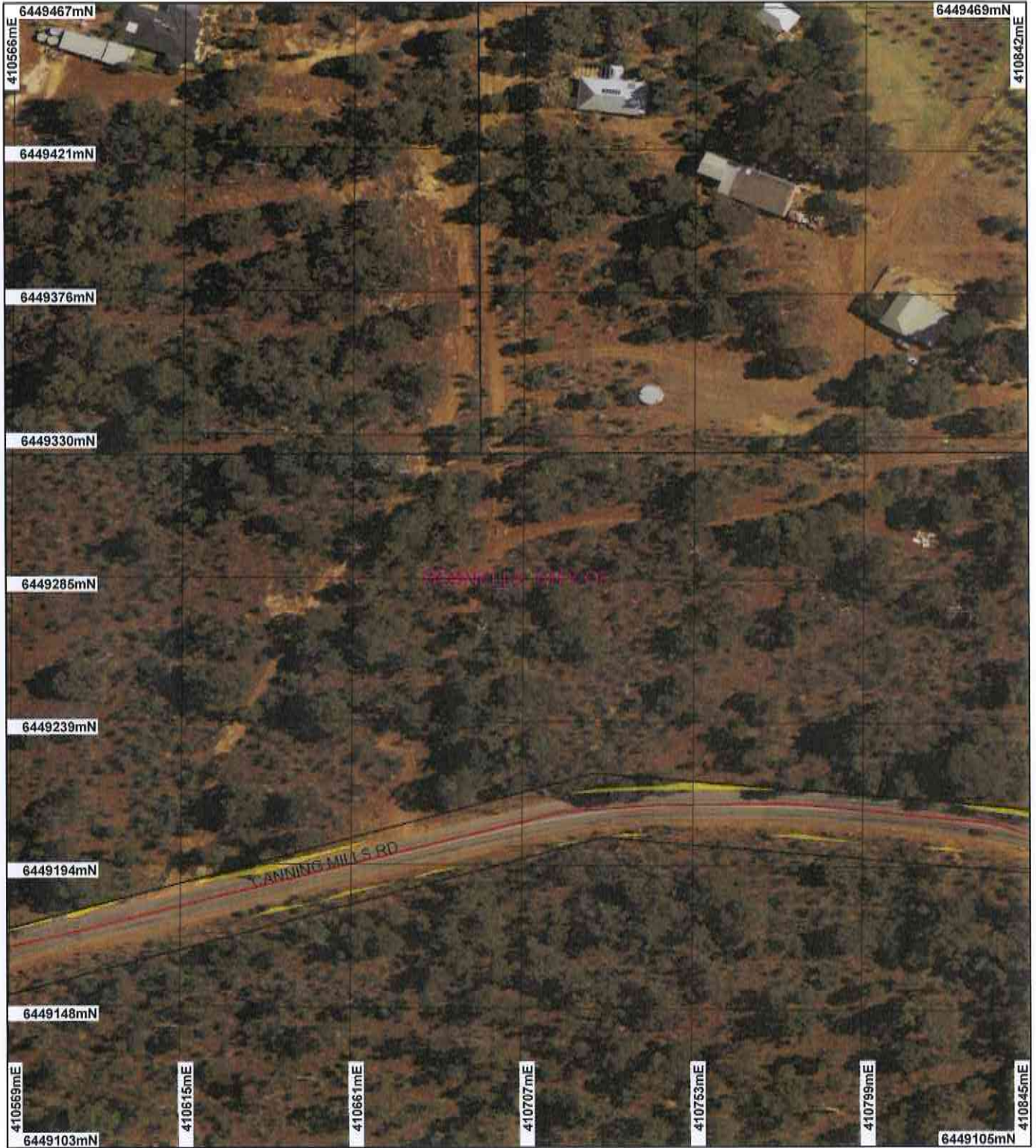


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# Plan 6191/1b



## LEGEND

- Clearing Instruments**
- Areas Approved to Clear
- Road Centrelines
- Cadastre
- Perth Metropolitan Area
- Central 15cm Orthomosaic - Landgate 2012
- Local Government Authorities



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(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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*M. Warnock* Date 22/11/15  
M Warnock

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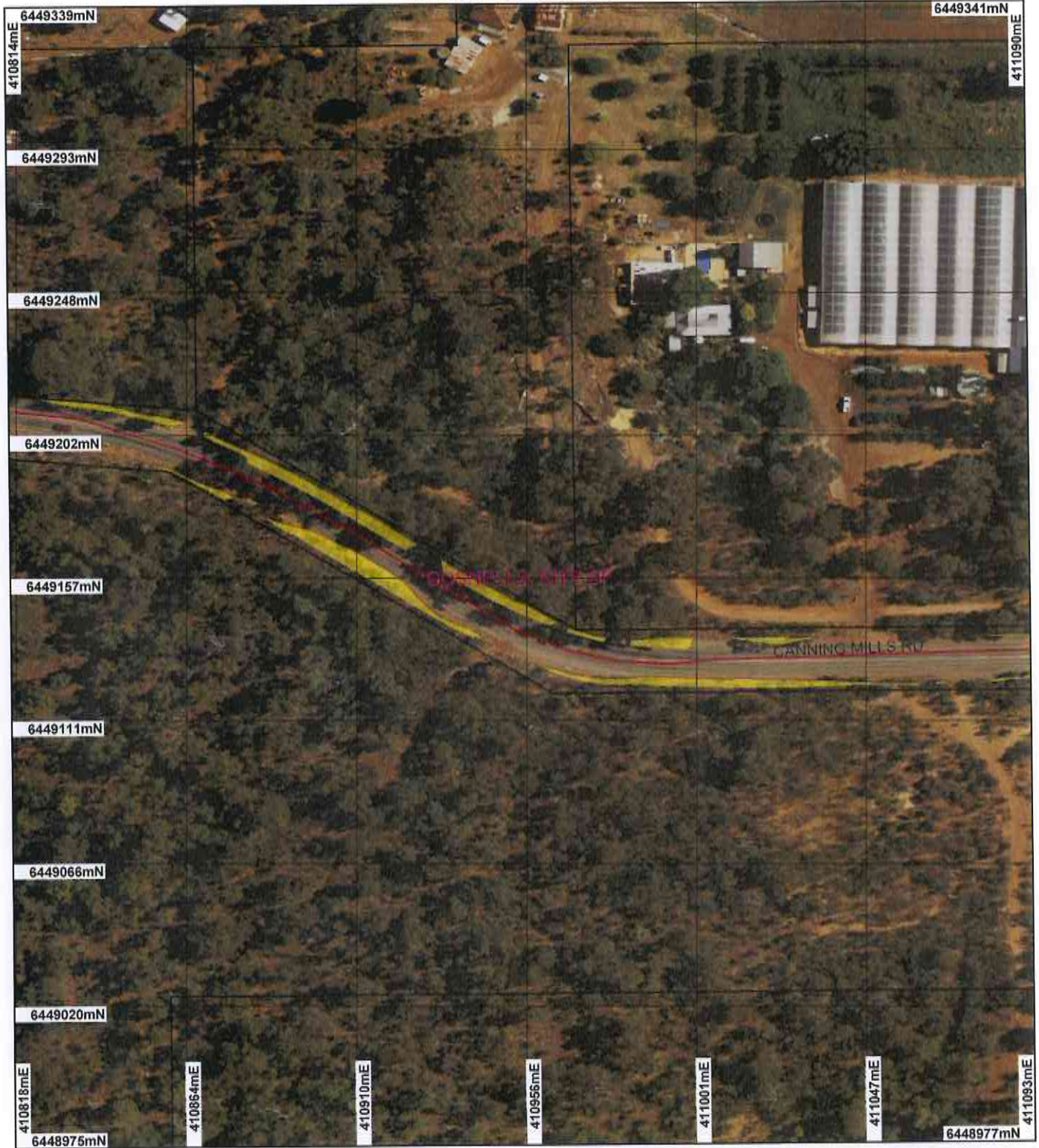


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# Plan 6191/1c



## LEGEND

- |                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>              | <input type="checkbox"/> Local Government Authorities |
| Areas Approved to Clear                  |                                                       |
| Road Centrelines                         |                                                       |
| Cadastre                                 |                                                       |
| Perth Metropolitan Area                  |                                                       |
| Central 15cm Orthomosaic - Landgate 2012 |                                                       |



Scale 1:1615  
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M Warnock

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# Plan 6191/1d



## LEGEND

- |                                                                                                 |                                                       |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>                                                                     | <input type="checkbox"/> Local Government Authorities |
| <input checked="" type="checkbox"/> Areas Approved to Clear                                     |                                                       |
| <input checked="" type="checkbox"/> Road Centrelines                                            |                                                       |
| <input type="checkbox"/> Cadastre                                                               |                                                       |
| <input type="checkbox"/> Perth Metropolitan Area<br>Central 15cm Orthomosaic -<br>Landgate 2012 |                                                       |



Scale 1:1615  
(Approximate when reproduced at A4)

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*M Warnock* Date: 22/1/15  
M Warnock

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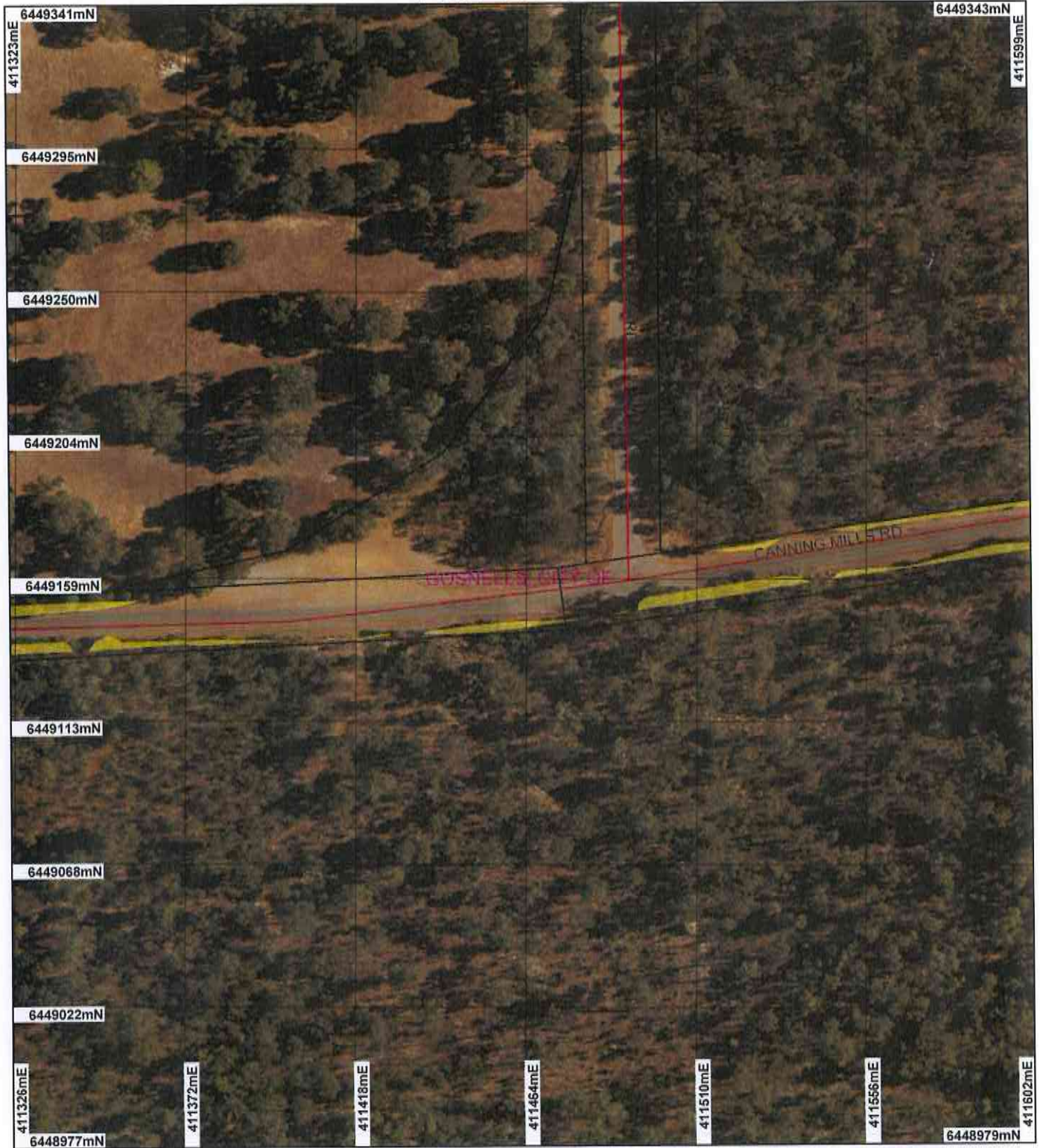


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# Plan 6191/1e



## LEGEND

- |                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>              | <input type="checkbox"/> Local Government Authorities |
| Areas Approved to Clear                  |                                                       |
| Road Centrelines                         |                                                       |
| Cadastre                                 |                                                       |
| Perth Metropolitan Area                  |                                                       |
| Central 15cm Orthomosaic - Landgate 2012 |                                                       |



Scale 1:1615  
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Geocentric Datum Australia 1994

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*M Warnock* Date 22/1/15  
M Warnock

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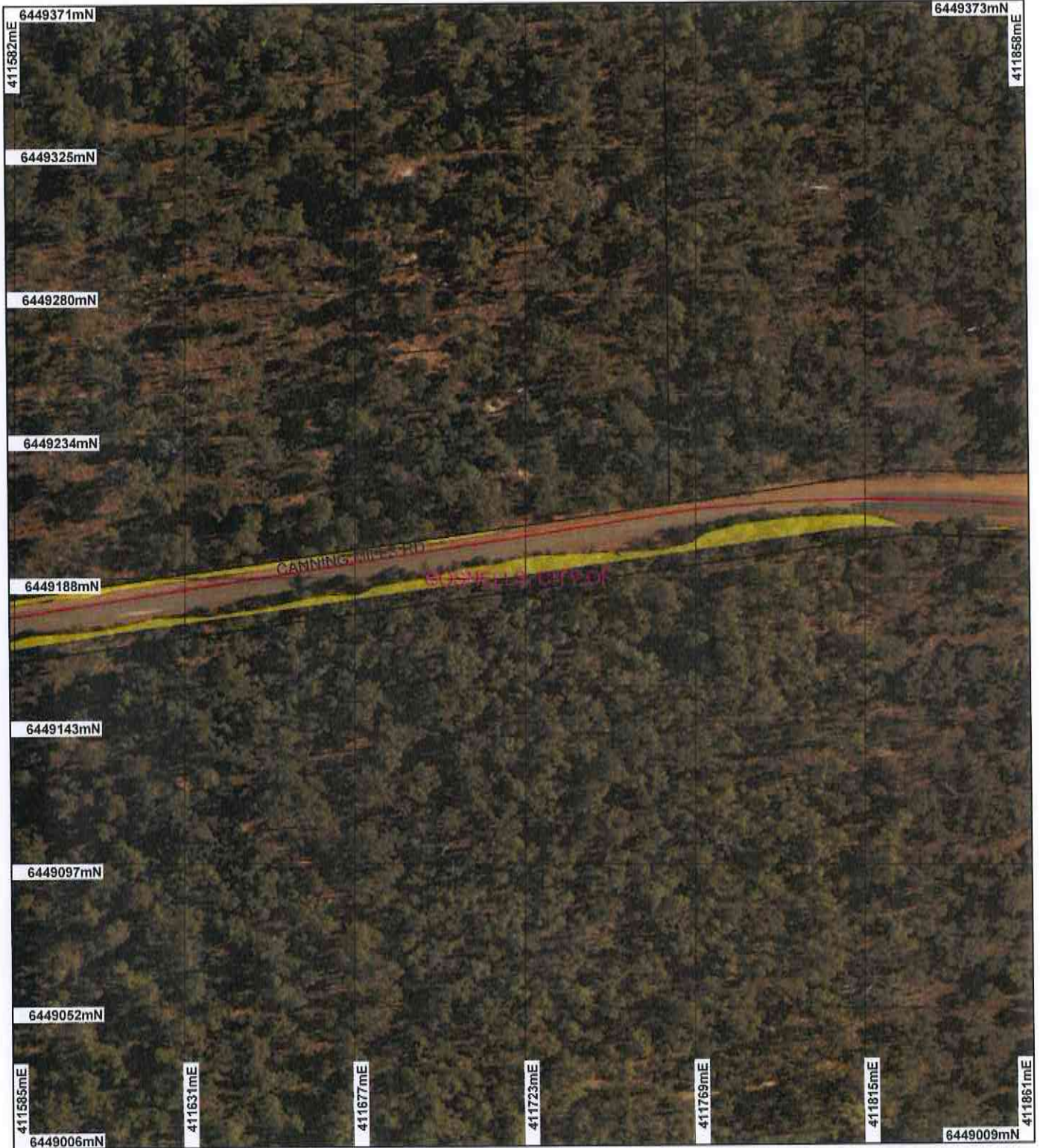
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# Plan 6191/1f



## LEGEND

- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Clearing Instruments</b></p> <ul style="list-style-type: none"> <li><span style="display: inline-block; width: 10px; height: 10px; background-color: yellow; border: 1px solid black; margin-right: 5px;"></span> Areas Approved to Clear</li> <li><span style="display: inline-block; width: 10px; border-bottom: 1px dashed red; margin-right: 5px;"></span> Road Centrelines</li> <li><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Cadastre</li> <li>Perth Metropolitan Area<br/>Central 15cm Orthomosaic -<br/>Landgate 2012</li> </ul> | <p><span style="display: inline-block; width: 10px; height: 10px; border: 1px solid black; margin-right: 5px;"></span> Local Government<br/>Authorities</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|



Scale 1:1615  
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*M Warnock* Date 22/1/15

M Warnock

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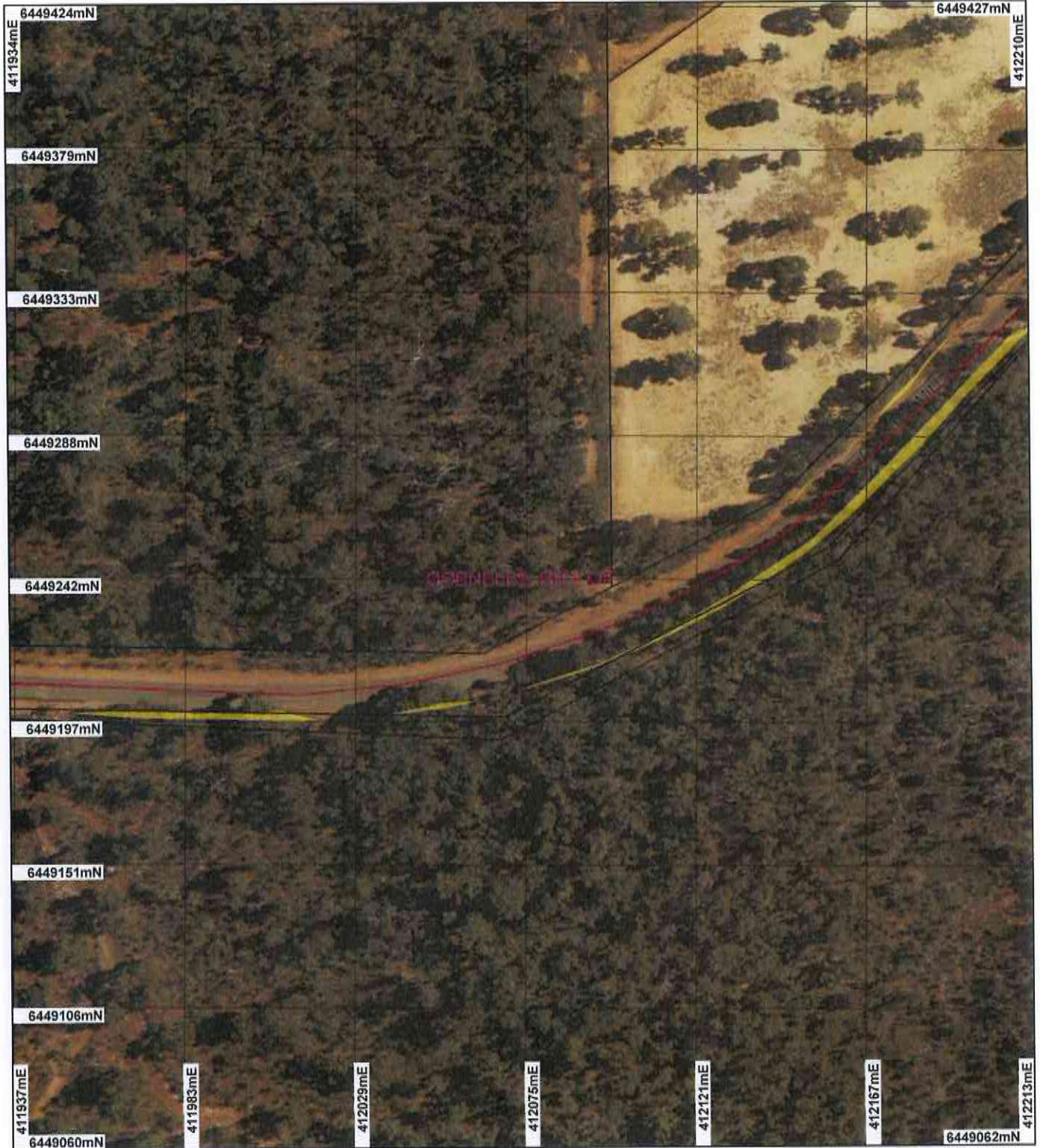
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# Plan 6191/1g



## LEGEND

- |                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>              | <input type="checkbox"/> Local Government Authorities |
| Area Approved to Clear                   |                                                       |
| Road Centrelines                         |                                                       |
| Cadastre                                 |                                                       |
| Perth Metropolitan Area                  |                                                       |
| Central 15cm Orthomosaic - Landgate 2012 |                                                       |



Scale 1:1615  
 (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.

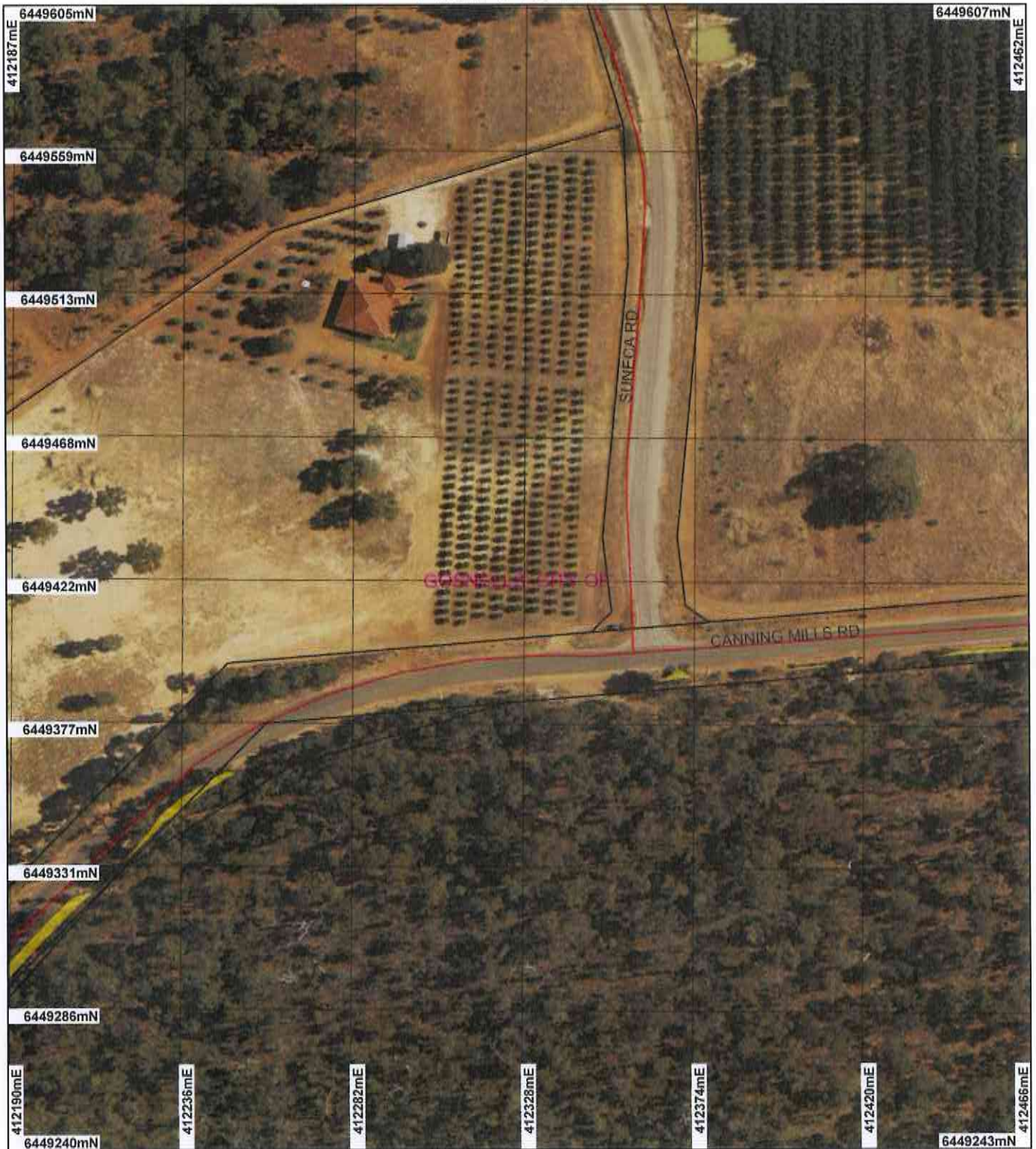
*M Warnock* Date 22/1/15  
 M Warnock

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.



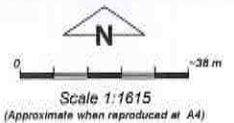
\* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

# Plan 6191/1h



## LEGEND

- |                                                                                                 |                                                       |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>                                                                     | <input type="checkbox"/> Local Government Authorities |
| <input type="checkbox"/> Areas Approved to Clear                                                |                                                       |
| <input checked="" type="checkbox"/> Road Centrelines                                            |                                                       |
| <input type="checkbox"/> Cadastre                                                               |                                                       |
| <input type="checkbox"/> Perth Metropolitan Area<br>Central 15cm Orthomosaic -<br>Landgate 2012 |                                                       |



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

*M Warnock* Date *22/1/15*  
 M Warnock

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

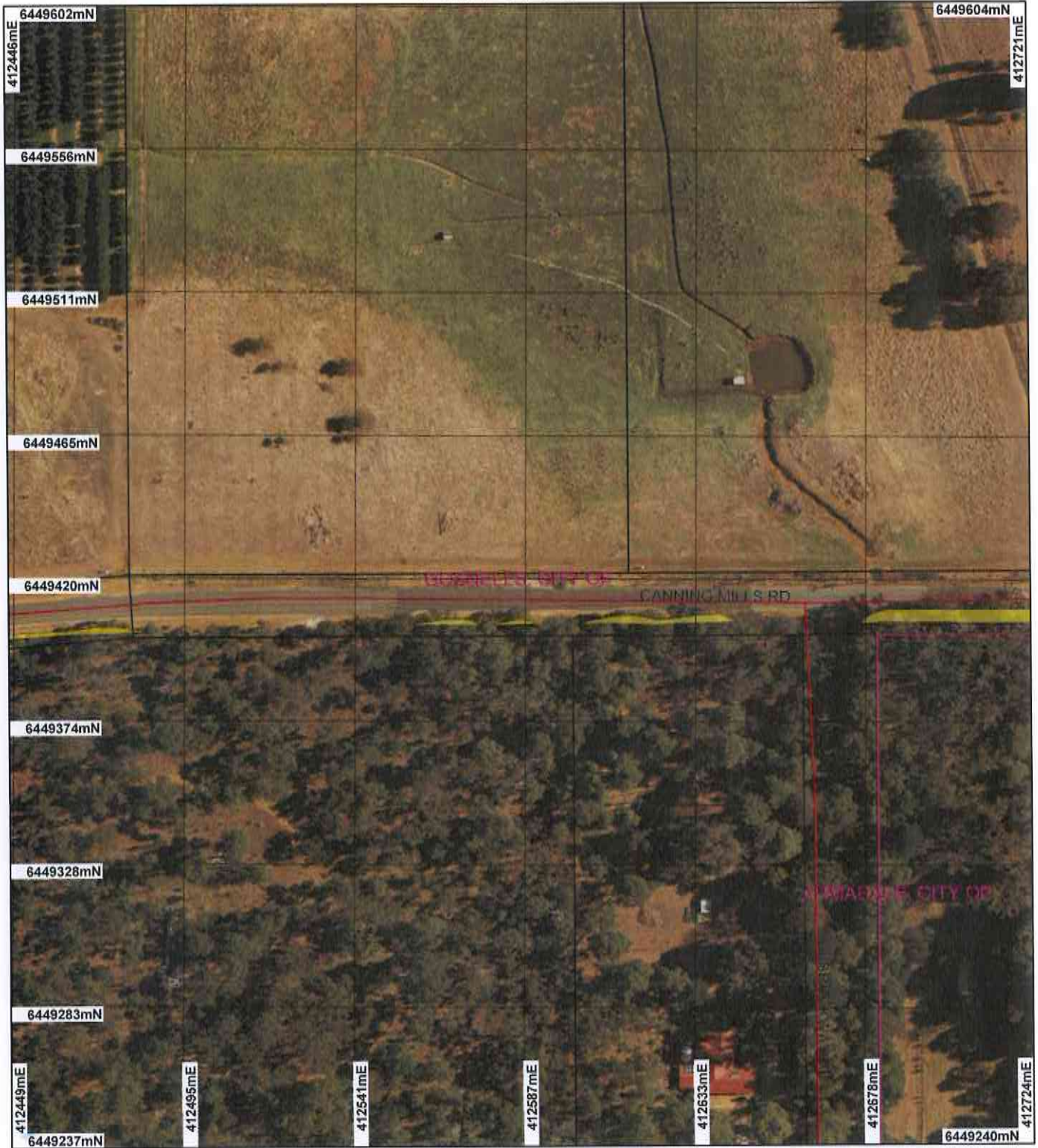


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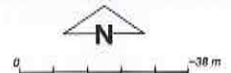
\* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

# Plan 6191/1i



## LEGEND

- |                                                                                                                                                                                                                                |                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Clearing Instruments</li> <li>Areas Approved to Clear</li> <li>Road Centrelines</li> <li>Cadastral</li> <li>Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012</li> </ul> | <ul style="list-style-type: none"> <li>Local Government Authorities</li> </ul> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|



Scale 1:1615  
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*M Warnock* Date 22/1/15

M Warnock

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

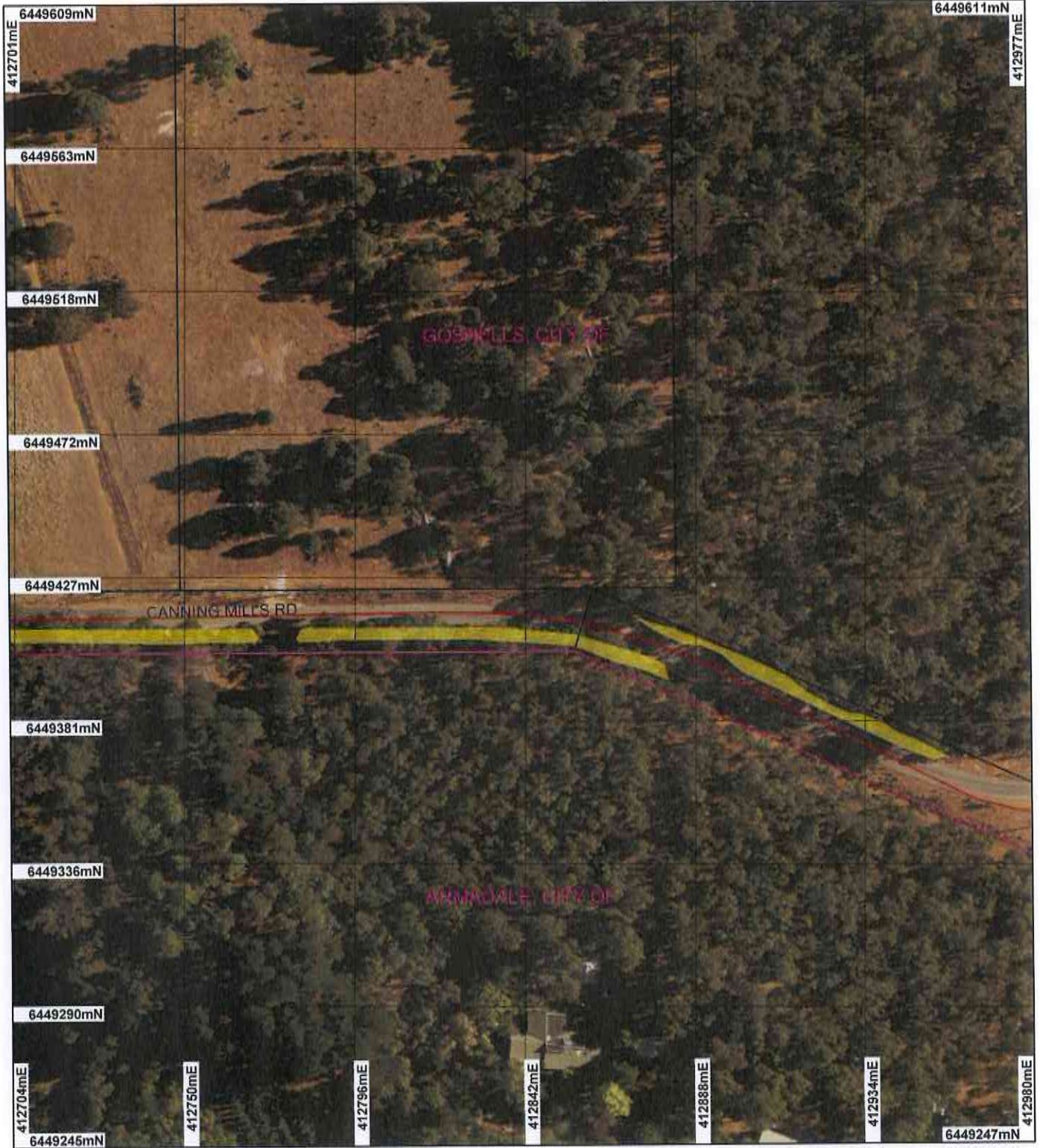


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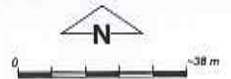
\* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

# Plan 6191/1j



## LEGEND

- |                                          |                                                       |
|------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>              | <input type="checkbox"/> Local Government Authorities |
| Areas Approved to Clear                  |                                                       |
| Road Centrelines                         |                                                       |
| Cadastre                                 |                                                       |
| Perth Metropolitan Area                  |                                                       |
| Central 15cm Orthomosaic - Landgate 2012 |                                                       |



Scale 1:1615  
(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.

*M Warnock* Date 22/1/15

M Warnock  
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.

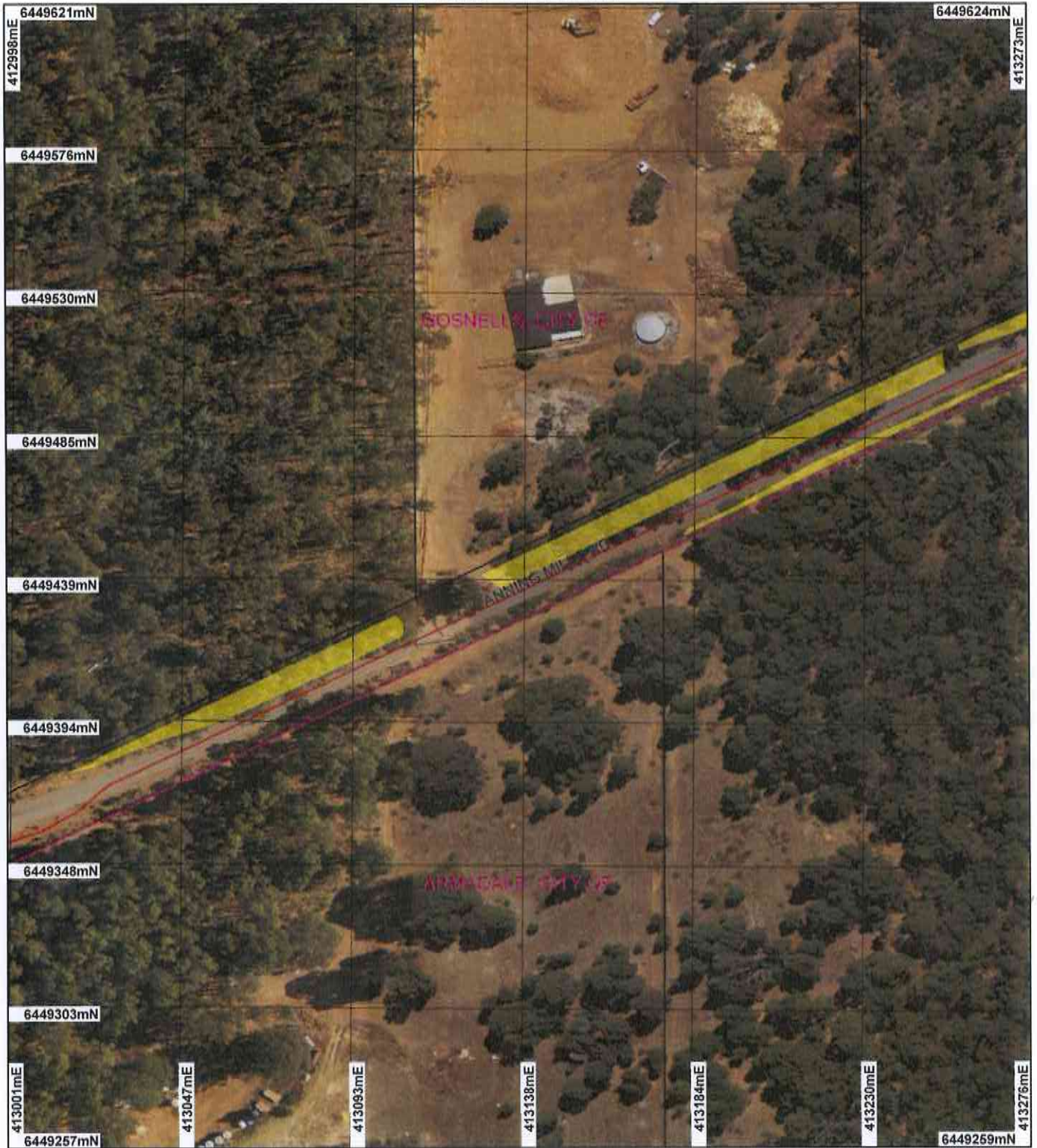


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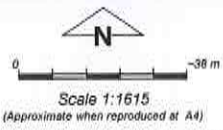
\* Project Data is denoted by asterisk. This data has not been quality assured. Please contact map author for details.

# Plan 6191/1k



## LEGEND

- |                                                                                                      |                                                       |
|------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>                                                                          | <input type="checkbox"/> Local Government Authorities |
| <input checked="" type="checkbox"/> Areas Approved to Clear                                          |                                                       |
| <input checked="" type="checkbox"/> Road Centrelines                                                 |                                                       |
| <input checked="" type="checkbox"/> Cadastre                                                         |                                                       |
| <input checked="" type="checkbox"/> Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012 |                                                       |



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

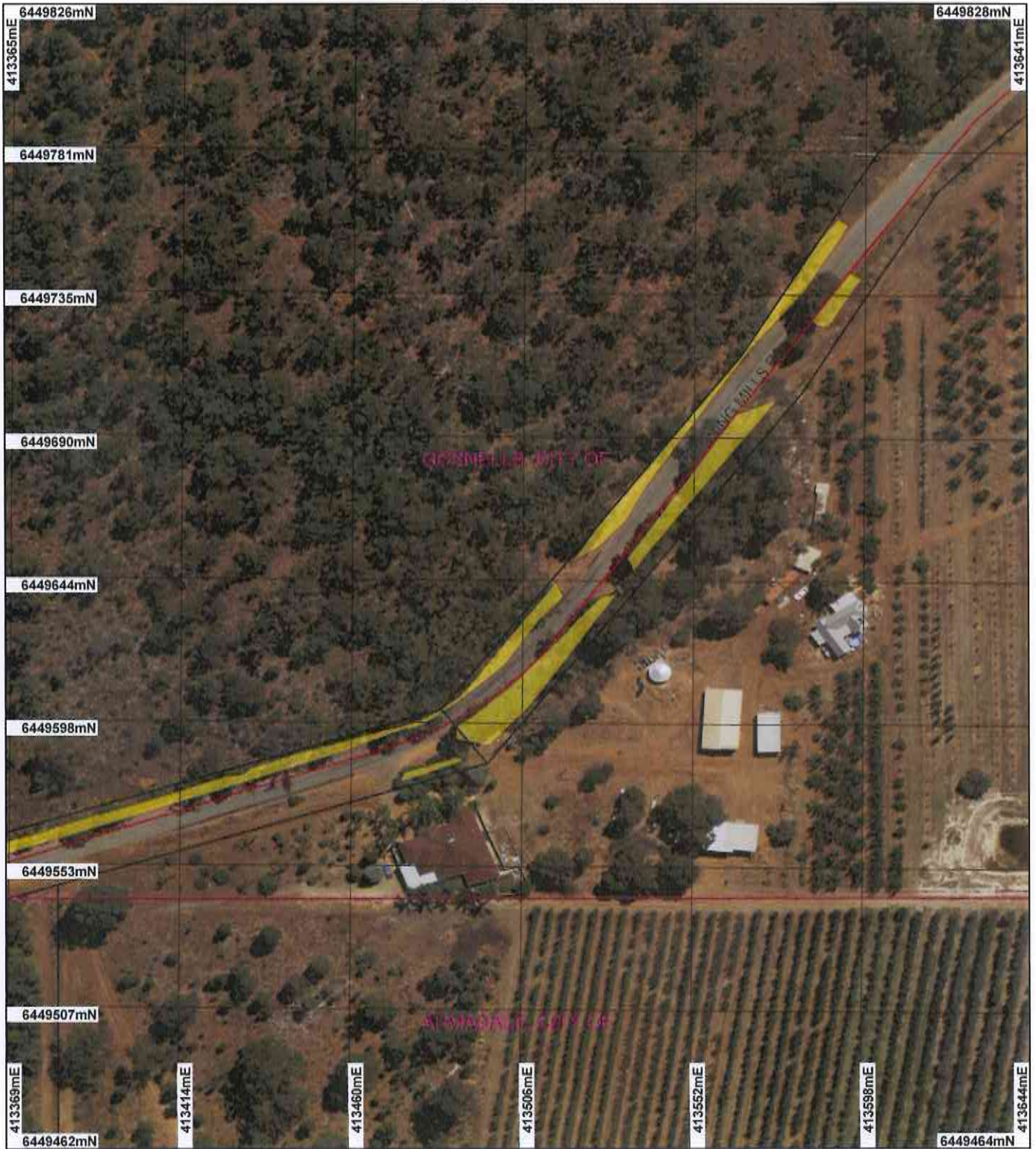
*M Warnock* Date 22/1/25  
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# Plan 6191/1I



## LEGEND

- |                                                                  |                                                       |
|------------------------------------------------------------------|-------------------------------------------------------|
| <b>Clearing Instruments</b>                                      | <input type="checkbox"/> Local Government Authorities |
| Areas Approved to Clear                                          |                                                       |
| Road Centrelines                                                 |                                                       |
| Cadastre                                                         |                                                       |
| Perth Metropolitan Area Central 15cm Orthomosaic - Landgate 2012 |                                                       |



Scale 1:1615  
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Geocentric Datum Australia 1994

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*M Warnock* Date 22/1/15  
M Warnock

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## 1. Application details

### 1.1. Permit application details

Permit application No.: 6191/1  
Permit type: Purpose Permit

### 1.2. Proponent details

Proponent's name: City of Gosnells

### 1.3. Property details

Property: ROAD RESERVE ( MARTIN 6110)  
Local Government Area: City of Gosnells  
Colloquial name:

### 1.4. Application

| Clearing Area (ha) | No. Trees | Method of Clearing | For the purpose of:              |
|--------------------|-----------|--------------------|----------------------------------|
| 2.4                |           | Mechanical Removal | Road construction or maintenance |

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 22 January 2015

## 2. Site Information

### 2.1. Existing environment and information

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

| Vegetation Description                                                                                                                                                                                                          | Clearing Description                                                                                                                                                                        | Vegetation Condition                                                                                                   | Comment                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mapped Beard vegetation association 3: Medium forest; jarrah-marri (Shepherd et al, 2001)                                                                                                                                       | The application is to clear up to 2.4 hectares of native vegetation within various road reserves, Martin, City of Gosnells for the purpose of constructing road shoulders and table drains. | Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)   | The area under application has an overstorey predominantly of <i>Corymbia callophylla</i> (Marri) with the midstorey predominately being <i>Banksia sessilis</i> (DER, 2014). There is a distinct ground cover of a variety of native vegetation species. Weed invasion is occurring within the application area (DER, 2014). |
| Mapped Beard vegetation association 4: Medium woodland; marri & wandoo (Shepherd et al, 2001)                                                                                                                                   |                                                                                                                                                                                             | To                                                                                                                     | The vegetation under application is in a degraded to excellent (Keighery, 1994) condition (DER, 2014).                                                                                                                                                                                                                        |
| Hedde vegetation complex Yarragil Complex In Medium to High Rainfall - no description (Hedde et al, 1980)                                                                                                                       |                                                                                                                                                                                             | Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994) | The condition and structure of the vegetation under application was determined by a site inspection undertaken by the Department of Environment Regulation (DER) on 22 August 2014.                                                                                                                                           |
| Hedde vegetation complex Dwellingup Complex In Medium to High Rainfall - no description (Hedde et al, 1980)                                                                                                                     |                                                                                                                                                                                             |                                                                                                                        |                                                                                                                                                                                                                                                                                                                               |
| Mattiske vegetation complex (D2) Dwellingup 2: Open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia callophylla</i> on lateritic uplands in subhumid and semiarid zones (Mattiske and Havel, 1998). |                                                                                                                                                                                             |                                                                                                                        |                                                                                                                                                                                                                                                                                                                               |
| Mattiske vegetation complex (Yg1) - Yarragil 1: Open forest of                                                                                                                                                                  |                                                                                                                                                                                             |                                                                                                                        |                                                                                                                                                                                                                                                                                                                               |

*Eucalyptus marginata*  
subsp. *marginata*-  
*Corymbia calophylla* on  
slopes with mixtures of  
*Eucalyptus patens* and  
*Eucalyptus megacarpa* on  
the valley floors in humid  
and subhumid zones  
(Mattiske and Havel,  
1998).

### 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 application is to clear up to 2.4 hectares of native vegetation within various road reserves, Martin, City of Gosnells for the purpose of constructing road shoulders and table drains.

The vegetation under application is in a degraded to excellent (Keighery, 1994) condition (DER, 2014).

Several priority flora species have been recorded within 10 kilometres of the area under application. Several of these species have been recorded within the same vegetation and soil type associated to the application area. The application area may contain priority flora however, a targeted rare flora survey of the area under application did not record any priority flora species (Eco Logical Australia, 2014).

A site inspection undertaken by DER (2014) identified suitable habitat for of a rare flora species. This is based upon similar records of the species being identified within close proximity to the application area. These sites have the same type of vegetation type as the proposed clearing area (Parks and Wildlife, 2014). A targeted rare flora survey of the area under application did not record any rare flora species (Eco Logical Australia, 2014).

Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and forest Red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*) are known to exist in the local area (10 kilometre radius). A site inspection of the area under application identified breeding, roosting and foraging habitat within the proposed clearing area. The site inspection also observed several forest red-tailed black-cockatoos feeding within the applied area (DER, 2014). A targeted black cockatoo survey determined the applied area comprises of foraging and roosting habitat for black cockatoos (Eco Logical Australia, 2014). The survey also recorded 64 potential breeding trees with seven of these trees containing visible hollows (Eco Logical Australia, 2014).

Approximately 65 per cent of pre-European vegetation remains within 10 kilometres of the area under application, this includes large remnants within conservation areas in close proximity to the applied area in similar or better condition than the application area.

Whilst the habitat within the study area has been identified as suitable foraging, roosting and potential breeding habitat, clearing of this habitat would not be anticipated to be significant due to the extent of suitable habitat extending beyond the study area, the connectivity to suitable habitat within the Regional and National Parks, and due to the small amount proposed for clearing (Eco Logical Australia, 2014).

The vegetation under application contains a high level of biological diversity as it consists of habitat for black cockatoo species therefore the proposed clearing may be at variance to this principle.

##### Methodology

###### References:

DER (2014)  
Eco Logical Australia (2014)  
Keighery (1994)  
Parks and Wildlife (2014)

###### GIS Datasets:

- Carnaby Cockatoo breeding sites  
- Carnaby Cockatoo Roosting sites  
- SacBiodataSets - accessed August 2014

#### (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**

Several fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within a 10 kilometre radius of the application area. These include forest red-tailed black-cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's



cockatoo (*Calyptorhynchus latirostris*), Chuditch (*Dasyurus geoffroii*), Quokka (*Setonix brachyurus*) and Southern Brush-tailed (*Phascogale tapoatafa* subsp. *tapoatafa*) (DEC, 2007-).

There has been five confirmed Carnaby's cockatoo roost sites (four south and one north) within 10 kilometres of the application area. The area under application is mapped within a confirmed breeding area and unconfirmed feeding site for Carnaby's cockatoo. These areas were mapped based on the presence of vegetation types that Carnaby's cockatoo show preference for when choosing a food source.

A site inspection of the area under application observed several forest red-tailed black-cockatoos feeding within the applied area (DER, 2014). There was also evidence of foraging occurring within and around the area under application (DER, 2014).

The Environment Protection and Biodiversity Conservation Act 1999 referral guidelines define breeding habitat for black cockatoo's as trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of suitable diameter at breast height (DBH) to develop a nest hollow. For most trees, suitable DBH is 500 millimetres (DotE, 2012). Several trees observed during the site inspection are of an appropriate size for breeding purposes for black cockatoos (DER, 2014). The site inspection also determined that some of these trees have already developed hollows (DER, 2014).

The Carnaby's cockatoo recovery plan (Department of Environment and Conservation, 2012) summarises habitat critical to the survival of Carnaby's cockatoos as:

- The eucalypt woodlands that provides nest hollows used for breeding, together with nearby vegetation that provides feeding, roosting and watering habitat that supports successful breeding;
- Woodland sites known to have supported breeding in the past and which could be used in the future, provided adequate nearby food and/or water resources are available or are re-established; and
- In the non-breeding season the vegetation that provides food resources as well as the sites for nearby watering and night roosting that enable the cockatoos to effectively utilise the available food resources.

The recovery plan also states, success in breeding is dependent on the quality and proximity of feeding habitat within 12 kilometres of nesting sites. Along with the trees that provide nest hollows, the protection, management and increase of this feeding habitat that supports the breeding of Carnaby's cockatoo is a critical requirement for the conservation of the species (Department of Environment and Conservation, 2012).

A targeted black cockatoo survey determined the applied area comprises of foraging and roosting habitat for black cockatoos (Eco Logical Australia, 2014). The survey also recorded 64 potential breeding trees with seven of these trees containing visible hollows (Eco Logical Australia, 2014). Whilst the habitat within the study area has been identified as suitable foraging, roosting and potential breeding habitat, clearing of this habitat would not be anticipated to be significant due to the extent of suitable habitat extending beyond the study area, the connectivity to suitable habitat within the Regional and National Parks (Eco Logical Australia, 2014). However, trees containing hollows suitable for breeding are proposed to be cleared and could potentially impact upon black cockatoos. The proposed clearing is outside of the breeding range for Baudin's cockatoo therefore, it is unlikely they would utilise the proposed clearing area for breeding purposes (Eco Logical Australia, 2014).

The development of nesting hollows is a dynamic process and so the existing nesting hollows are important as well as the maintenance of healthy trees to allow for the development of future hollows. Clearing and subsequent land degradation has eliminated most of the breeding habitat for black cockatoos. These birds require old trees with large hollows in which to nest, which may take many decades for trees planted now to become suitable. Competition for nesting hollows by increasing numbers of galahs, western corellas and non-native honey bees is significant (Burbridge 2004).

Appropriate fauna management practices will ensure that no black cockatoo are impacted by the proposed clearing.

Given the linear nature of the application area, it is unlikely significant ground dwelling fauna species will be impacted upon from the proposed clearing.

The application area contains habitat for forest red-tailed black-cockatoo, Baudin's cockatoo and Carnaby's cockatoo, however given the large amount of similar vegetation remaining within 10 kilometres of the proposed clearing area, impacts to black cockatoo species is unlikely to be significant.

The application may be at variance to this principle.

#### Methodology

References:  
Burbridge (2004)  
Cockerill et al (2013)  
DEC (2007-)  
DER (2014)

Department of Environment and Conservation (2012)  
DotE (2012)  
Eco Logical Australia (2014)

GIS Datasets:

- Carnaby Cockatoo breeding sites
- Carnaby Cockatoo feeding
- Hydrography linear
- Rivers

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

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

Several rare flora species have been recorded within 10 kilometres of the applied areas however, only one species is known to occur within the same soil and vegetation type as the applied area. The closest record of this species is approximately 400 metres away from the proposed clearing area.

This species is currently known from 10 broad locations across the Moora, Perth Hills and Great Southern Districts (Parks and Wildlife, 2014). The known range of the species is approximately 400 kilometres east-west and 450 kilometres north-south. A site inspection of the area under application indicates that the vegetation and soil type represented within the proposed clearing area is similar to the sites where species have been recorded nearby (Parks and Wildlife, 2014).

A targeted rare flora survey of the area under application did not record any rare flora species (Eco Logical Australia, 2014). The survey was undertaken in late September within the flowering time of the closest recorded rare flora species. The survey was undertaken via systematic, walked transects five metres apart along the 3.56 kilometre of the application area (Eco Logical Australia, 2014). Considering this, rare flora species would have been identified if they were present within the proposed clearing area.

The application is not likely to be at variance to this principle.

**Methodology** Reference:  
Eco Logical Australia (2014)  
Parks and Wildlife (2014)

GIS Databases:  
- SAC Biodatasets - accessed August 2014  
- SAC Biodatasets - accessed August 2014

**(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**

Two threatened ecological communities (TEC's) have been recorded within 10 kilometres of the area under application with the closest being approximately three kilometres away.

- SCP20b - Endangered - Banksia attenuata and/or Eucalyptus marginata woodlands of the eastern side of the Swan Coastal Plain.

- SCP3b - Vulnerable - Eucalyptus calophylla - Eucalyptus woodlands on sandy clay soils of the southern Swan Coastal Plain.

Given the distance to nearest known TEC, the proposed clearing is not likely to impact on the recorded TEC's.

The application is not likely to be at variance to this principle.

**Methodology** GIS Databases:  
- SAC Biodatasets - accessed August 2014

**(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 area under application is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 54 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2013).

The vegetation under application is mapped as Beard vegetation associations 3 and 4 of which there is

approximately 68 per cent and 29 per cent pre-European vegetation extent remaining within the Jarrah Forrest bioregion respectively (Government of Western Australia, 2013).

The application area has been mapped within Heddle vegetation complexes Yarragil Complex and Dwellingup Complex which there is approximately 89 per cent and 85 per cent remaining respectively (Heddle et al, 1980).

The application area has been mapped within Mattiske vegetation complexes Yarragil 1 and Dwellingup 2 which there is approximately 84 per cent and 86 per cent remaining respectively (Mattiske and Havel, 1998).

The area under application is located within the City of Gosnells, within which there is approximately 28 per cent pre-European vegetation extent remaining (Government of Western Australia, 2013). The local area (10 kilometre radius) retains approximately 65 per cent native vegetation.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). Beard vegetation association 4 falls below this level. However, there is approximately 0.3 hectares of the application area mapped as Beard vegetation association 4, considering this and the linear nature of the proposed clearing it is unlikely impacts to this vegetation association will be significant.

The application area contains habitat for conservation significant fauna species but does not occur within an extensively cleared land therefore is not significant as a remnant.

The application is not likely to be at variance to this principle.

|                                           | Pre-European (ha) | Current Extent Remaining (ha) | Remaining (%) | Extent in DPaW Managed Lands (%) |
|-------------------------------------------|-------------------|-------------------------------|---------------|----------------------------------|
| IBRA Bioregion Jarrah Forrest             | 4,506,660         | 2,457,731                     | 54            | 68                               |
| Shire City of Gosnells                    | 12,716            | 3,672                         | 29            | 16                               |
| Beard Vegetation Association in Bioregion |                   |                               |               |                                  |
| 3                                         | 2,390,591         | 1,629,894                     | 68            | 80                               |
| 4                                         | 1,022,712         | 292,975                       | 29            | 22                               |
| Heddle Vegetation Complex                 |                   |                               |               |                                  |
| Yarragil Complex                          | 127,523           | 113,503                       | 89            | 84                               |
| Dwellingup Complex                        | 83,659            | 71,048                        | 85            | 69                               |
| Mattiske Vegetation Complex               |                   |                               |               |                                  |
| D2 - Dwellingup 2                         | 86,087            | 73,632                        | 86            | 70                               |
| Yg1 - Yarragil 1                          | 80,061            | 67,068                        | 84            | 76                               |

**Methodology** References:  
Commonwealth of Australia (2001)  
Government of Western Australia (2013)  
Heddle et al (1980)  
Mattiske and Havel (1998)

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

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

The closest watercourse to the area under application is a minor, perennial watercourse mapped approximately 200 metres east of the area under application. A Resource Enhancement Wetland has been recorded approximately one kilometre north from the applied clearing area.

A site inspection of the application area identified that the vegetation under application consists predominately of Marri over various native species and *Banksia sessilis* (DER, 2014). The identified vegetation under application is not growing in association with a watercourse.

The application is not at variance to this principle.

**Methodology** References:  
DER (2014)  
  
GIS Datasets:  
- Hydrography linear  
- Wetland, Swan Coastal Plain

**(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 area under application comprises of two landforms and soil types;

Soils JZ1 - Dissected plateau having a strongly undulating relief, and with some moderately incised valleys. The unit comprises much of the western part of the Darling Range south of the Swan River. It is characterized by lateritic gravels and block laterite. The chief soils are ironstone gravels with sandy and earthy matrices. (Northcote et al 1960 - 1968).

and

Soils Mw3 - Deeply incised, steep scarp and valley side slopes of the Darling scarp and its more deeply incised tributary valleys. Chief soils of the steep scarp and valley side slopes, on which massive rock outcrops are a feature, seem to be acid red earths on the colluvial slope deposits (Northcote et al 1960 - 1968).

Groundwater salinity within the application area has been mapped at 500-1000 total dissolved solids, milligrams per litre.

Given the linear nature of the application area, it is unlikely that the proposed clearing of native vegetation will cause appreciable land degradation. Therefore the proposed clearing is not likely to be at variance to this principle.

**Methodology**      **References**  
- Northcote et al (1960-1968)  
**GIS Datasets:**  
- Hydrography linear  
- Groundwater Salinity, Statewide  
- Topographic contours  
- Soils, Statewide

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

**Comments**      **Proposal may be at variance to this Principle**  
The eastern section of the proposed clearing adjoins onto the Korung National Park and Banyowala Regional Park. The vegetation under application is in a degraded to excellent (Keighery, 1994) condition (DER, 2014) and is connected to the vegetation within the national park.

The clearing as proposed may impact on the adjacent Korung National Park as the national park is likely to become susceptible to invasive weed species, thus reducing the value of the vegetation. The application may be at variance to this principle.

Weed and dieback management practices will assist in mitigating the risks to the Korung National Park and Banyowala Regional Park.

**Methodology**      **References**  
- DER (2014)  
- Keighery (1994)  
**GIS Datasets:**  
- DPaW Tenure

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

**Comments**      **Proposal is not likely to be at variance to this Principle**  
The proposed clearing does not intersect within any wetlands or watercourses. The closest watercourse to the area under application is a minor, perennial watercourse mapped approximately 200 metres east of the area under application. A Resource Enhancement Wetland has been recorded approximately one kilometre north from the applied clearing area.

Groundwater salinity within the application area has been mapped at 500-1000 total dissolved solids, milligrams per litre. Given this it is unlikely that the application will deteriorate ground or surface water through salinisation.

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

**Methodology**      **GIS Databases:**  
- Groundwater Salinity Statewide  
- Topographic Contours, Statewide

- Wetlands, Swan Coastal Plain
- Wetlands, Swan Coastal Plain

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

**Comments**

The proposed clearing does not intersect within any wetlands or watercourses. Considering this and the linear nature of the proposed clearing, it is unlikely the application will exacerbate the incidence or intensity of flooding.

The application is not likely to be at variance to this principle.

**Methodology**

- GIS Datasets:  
 - Hydrography linear

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

**Comments**

A letter was sent to the applicant on 2 October 2014 requesting information addressing potential impacts to rare flora and black cockatoos. A response was received on 23 December 2014 providing a targeted flora and fauna survey and a modified clearing footprint, reducing the required clearing down from 4.96 hectares to 2.4 hectares. The information provided has been considered within principles (a), (b), (c) and (e) of this assessment.

The applicant has advised the required clearing is a black spot funded program.

No public submissions have been received in relation to this application.

**Methodology**

**4. References**

- Cockerill, A., Lambert, T, Conole, L. and Pickett, E. (2013). Carnaby's Cockatoo Population Viability Analysis Model Report. Report funded by the Department of Sustainability, Environment, Water, Population, and Communities through the Sustainable Regional Development Program. Parsons Brinckerhoff, Perth.
- Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
- DEC (2007 - ) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: <http://naturemap.dec.wa.gov.au/>. Accessed August 2014
- Department of Environment and Conservation (2012). Carnabys cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Environment and Conservation, Perth, Western Australia.
- DER (2014) Site Inspection Report for Clearing Permit Application CPS 6191/1, Canning Mills Road Reserve, Douglas Road Reserve, Suneca Road Reserve, Brockway Road Reserve and unnamed road reserves, Martin. Site inspection undertaken 22 August 2014. Department of Environment Regulation, Western Australia (DER Ref:A807125).
- Eco Logical Australia (2014). City of Gosnells Canning Mills Road Improvement Project. Targeted Rare Flora and Black Cockatoo Surveys. Prepared for City of Gosnells. Additional information received in relation to Clearing Permit Application CPS 6191/1 (DER Ref:A852865).
- Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.
- Hedde, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, 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, 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.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
- Parks and Wildlife (2014) Advice received from Species and Communities Branch, Department of Parks and wildlife in relation to CPS 6191/1 - City of Gosnells. Received 15 September 2014 (DER Ref:A807127)
- Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.