



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 3912/1
Permit Holder:	Commissioner of Main Roads Western Australia
Duration of Permit:	14 November 2010 – 14 November 2015

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of constructing a trace-line associated with the James Price Point LNG Precinct.

2. Land on which clearing is to be done

Road Reserve, Waterbank 6725 (PIN 11731920)
unallocated Crown land (Lot 259 on Plan 220696, Waterbank 6725)

3. Area of Clearing

The Permit Holder must not clear more than 7.6 hectares of native vegetation within the combined areas shaded yellow on attached Plan 3912/1a, Plan 3912/1b, Plan 3912/1c, Plan 3912/1d, Plan 3912/1e, Plan 3912/1f, Plan 3912/1g, Plan 3912/1h, Plan 3912/1i, Plan 3912/1j, Plan 3912/1k and Plan 3912/1l.

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 activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Land Administration Act 1997*, *Main Roads Act 1930* or any other written law.

6. Compliance with Assessment Sequence and Management Procedures

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

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

8. Weed control

- (a) 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*:
 - (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 soil, *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 under this Permit.

9. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

- (a) Retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) within two months following completion of trace-line investigations *revegetate* and *rehabilitate* areas not required for the proposed James Price Point access road by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) laying the vegetative material and topsoil retained under condition 9(a) on the cleared area(s).
- (c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 9(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 9(c)(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, *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.

PART III - RECORD KEEPING AND REPORTING

10. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit.

- (a) In relation to the clearing of native vegetation authorised under this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iii) the date that the area was cleared; and
 - (iv) the size of the area cleared (in hectares).
- (b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 9 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*.

11. 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 10 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 14 August 2015, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

Definitions

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

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

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

impacts means any impact of clearing on environmental values;

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

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

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

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;

weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

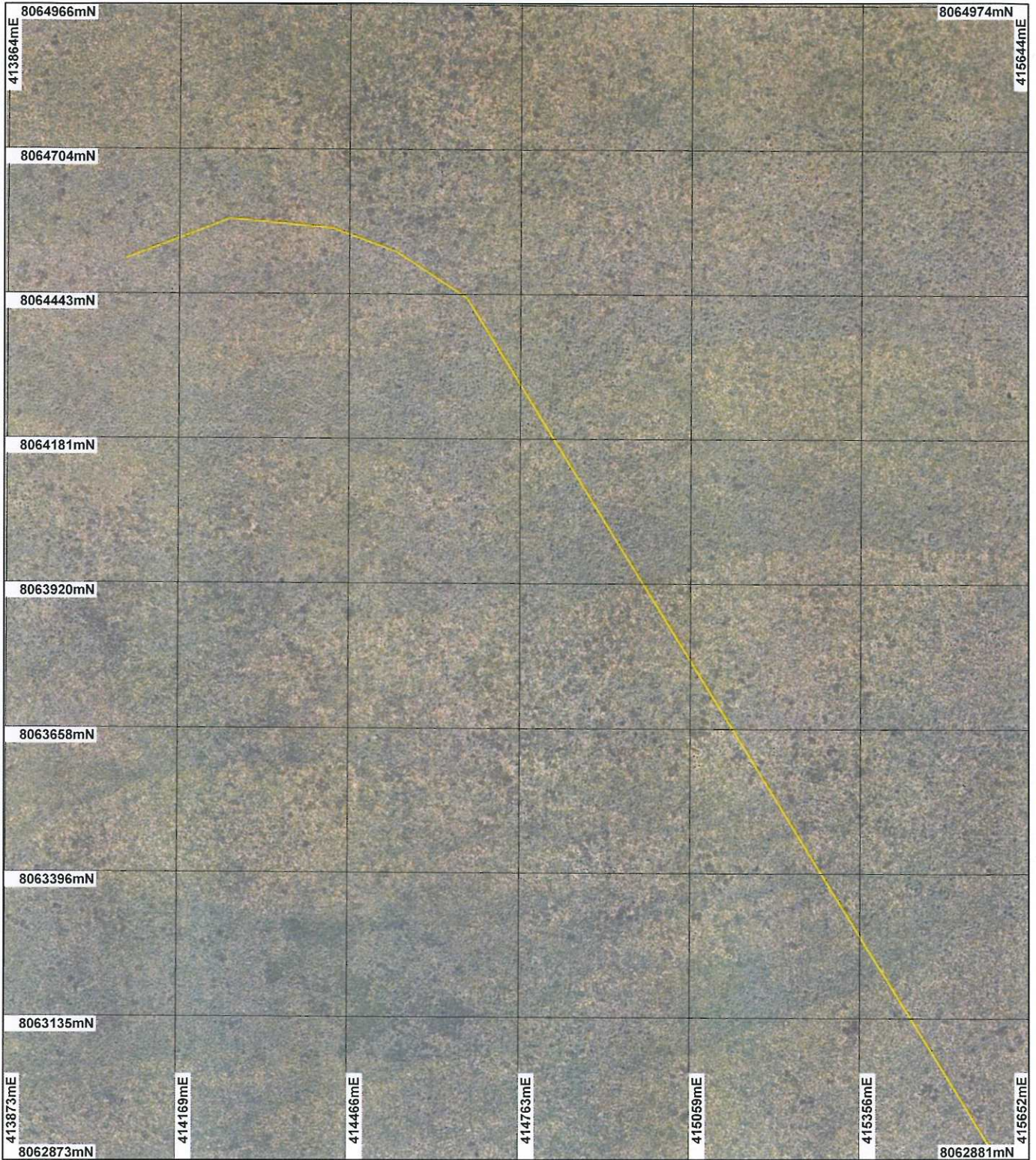


Matthew Warnock
ACTING MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

14 October 2010

Plan 3912/1a



LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Road Centrelines
 - Cadastre
 - Broome 50cm Orthomosaic - Landgate 2007



0 -250 m

Scale 1:9699

(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 14/10/10

M Warnock

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

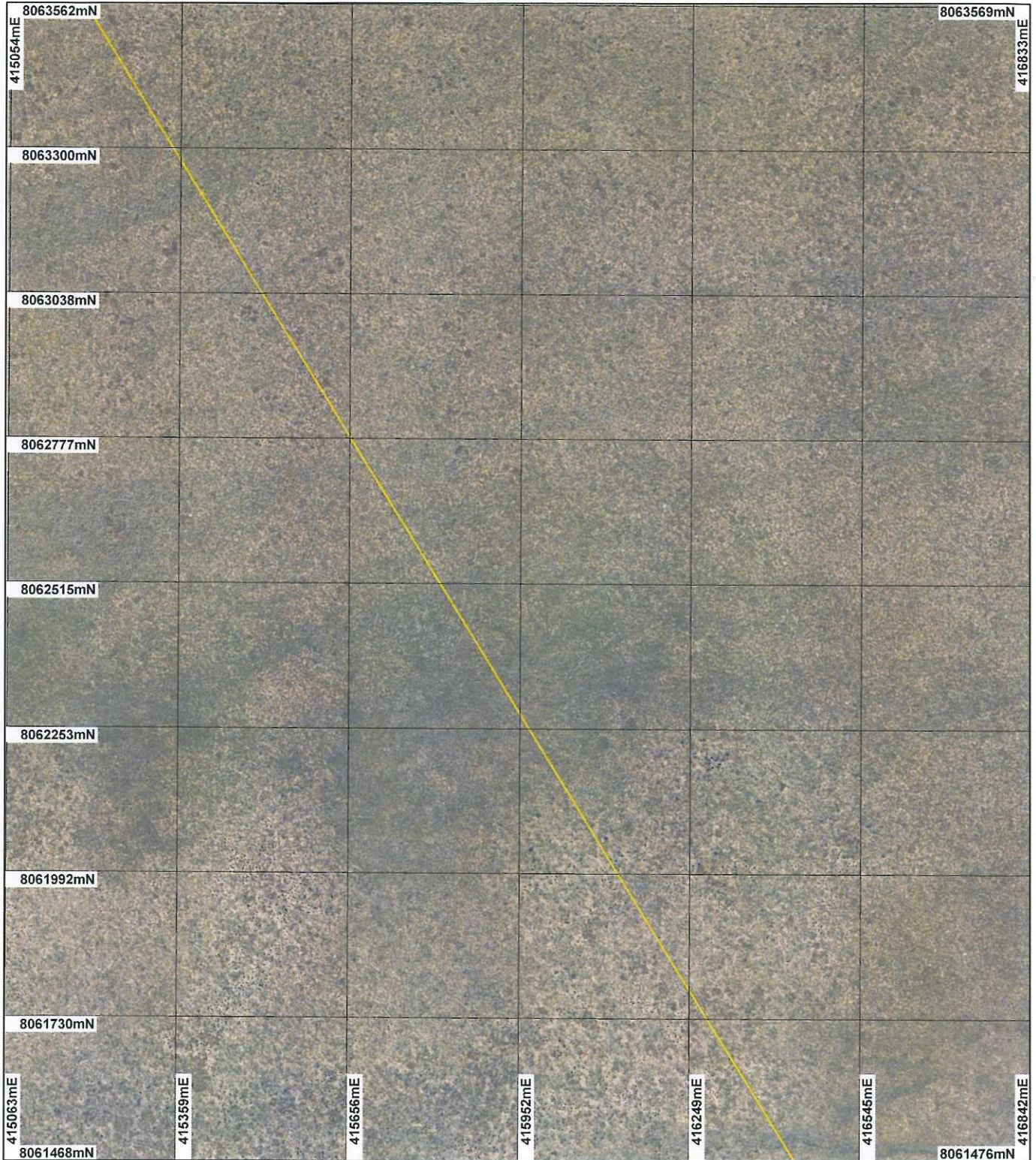
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Plan 3912/1b



LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Road Centrelines
 - Cadastre
 - Broome 50cm Orthomosaic - Landgate 2007



Scale 1:9698

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Geocentric Datum Australia 1994

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M Warnock Date 14/10/10

M Warnock

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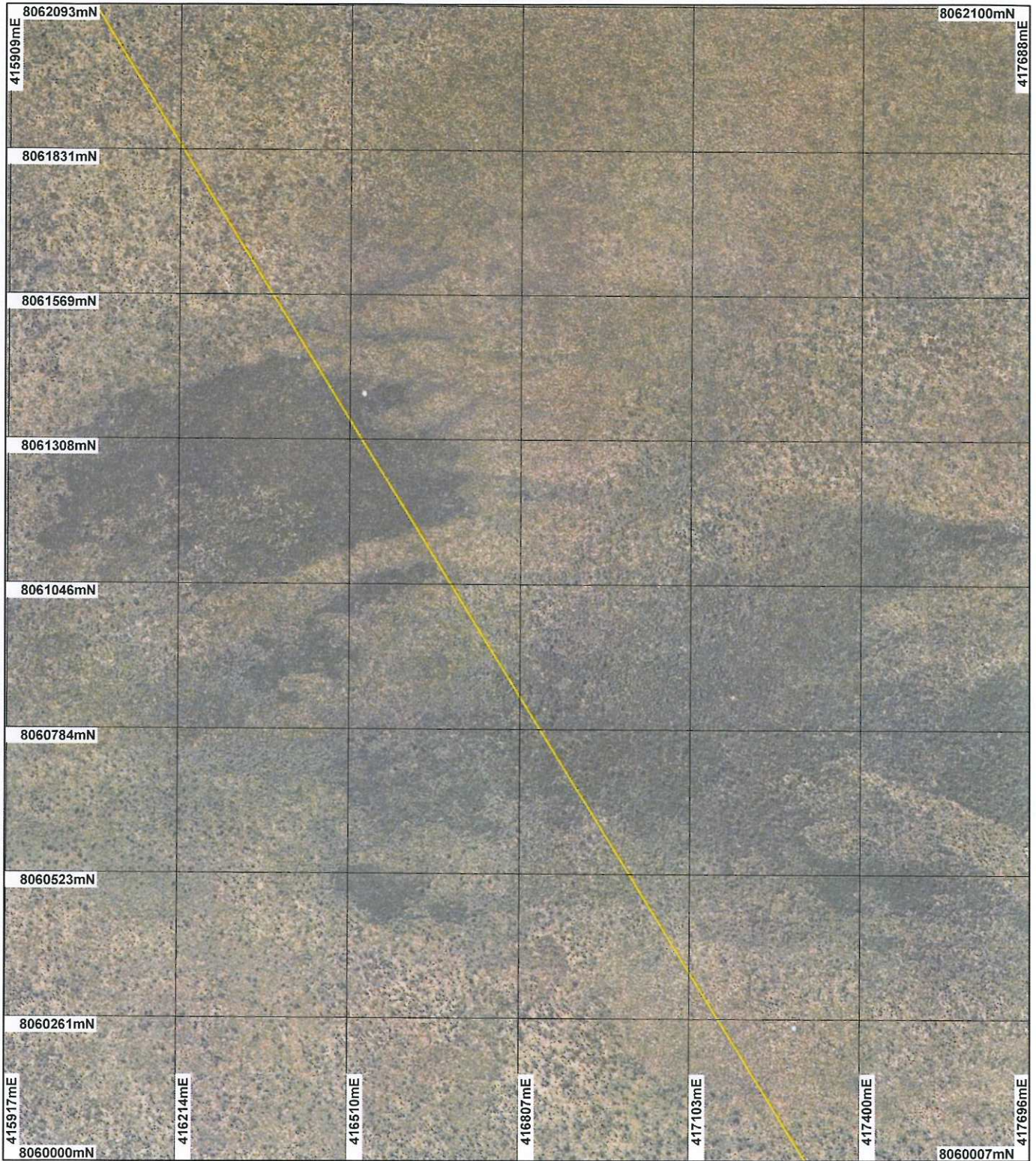
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LEGEND

- Clearing Instruments
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- Broome 50cm Orthomosaic - Landgate 2007



Scale 1:9698

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Geocentric Datum Australia 1994

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M Warnock Date 14/10/10

M Warnock
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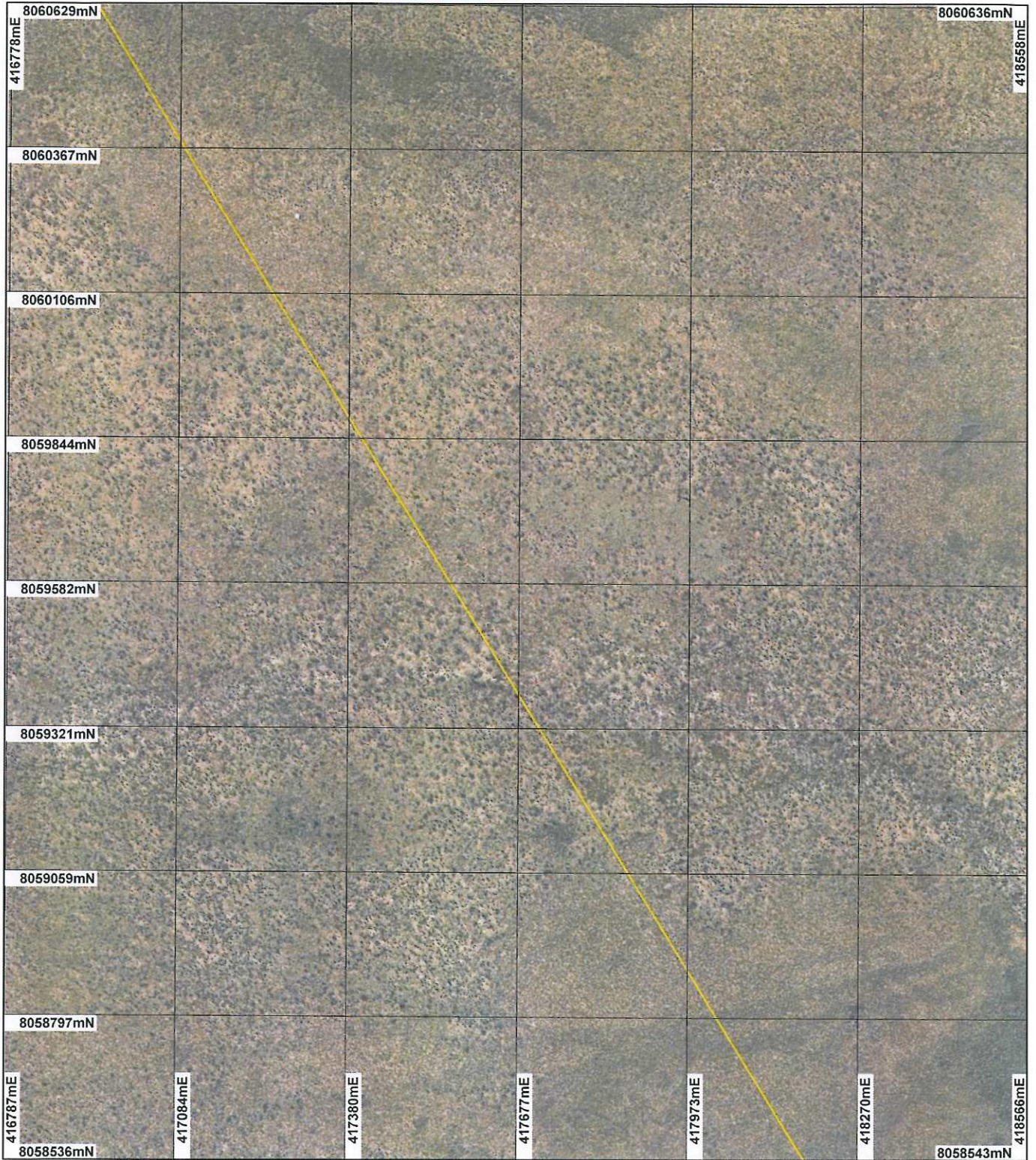
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LEGEND

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0 250 m

Scale 1:9698
(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

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M Warnock Date 14/10/10

M Warnock

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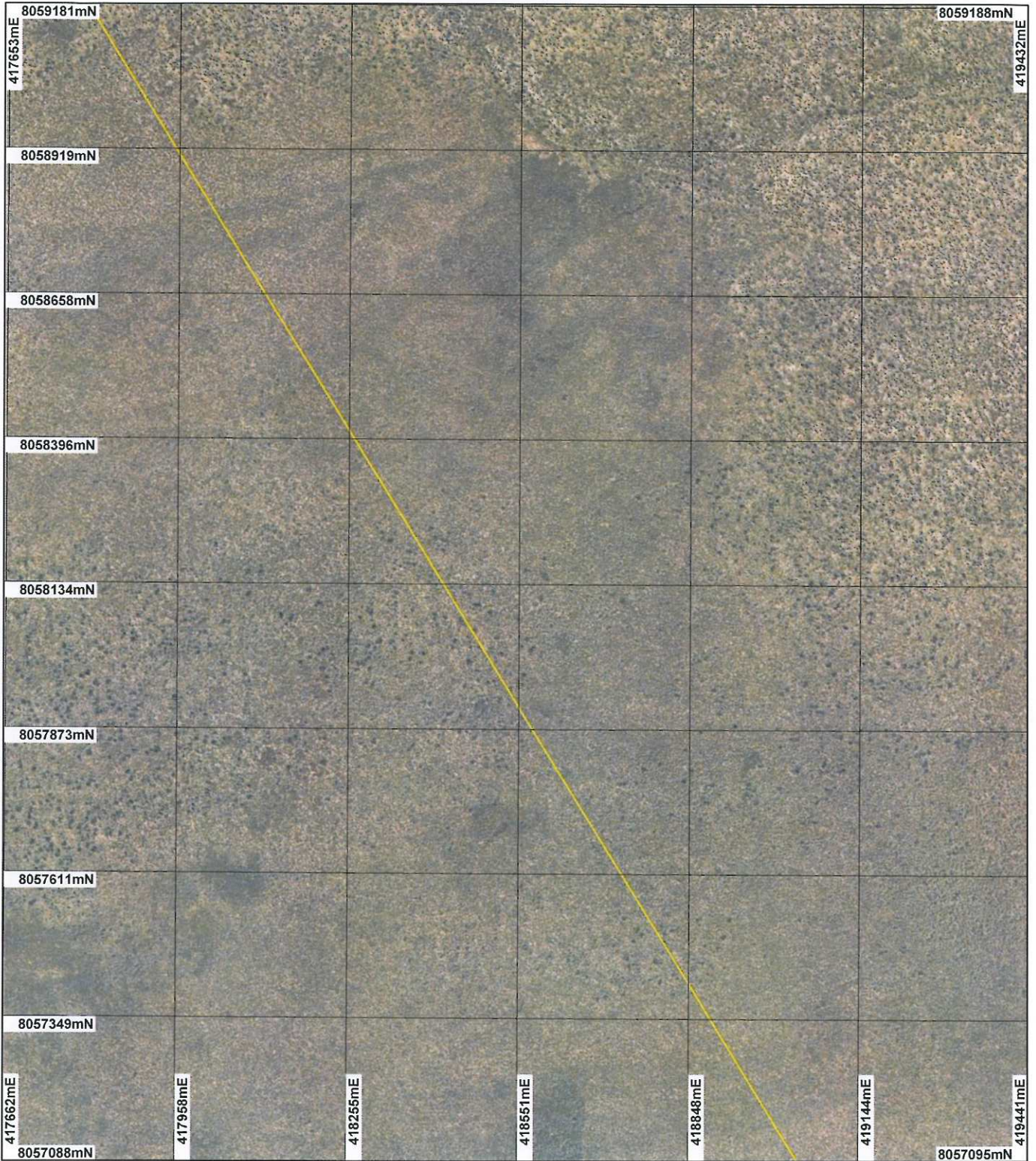
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0 ~250 m

Scale 1:9697
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Geocentric Datum Australia 1994

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M Warnock Date 19/10/10

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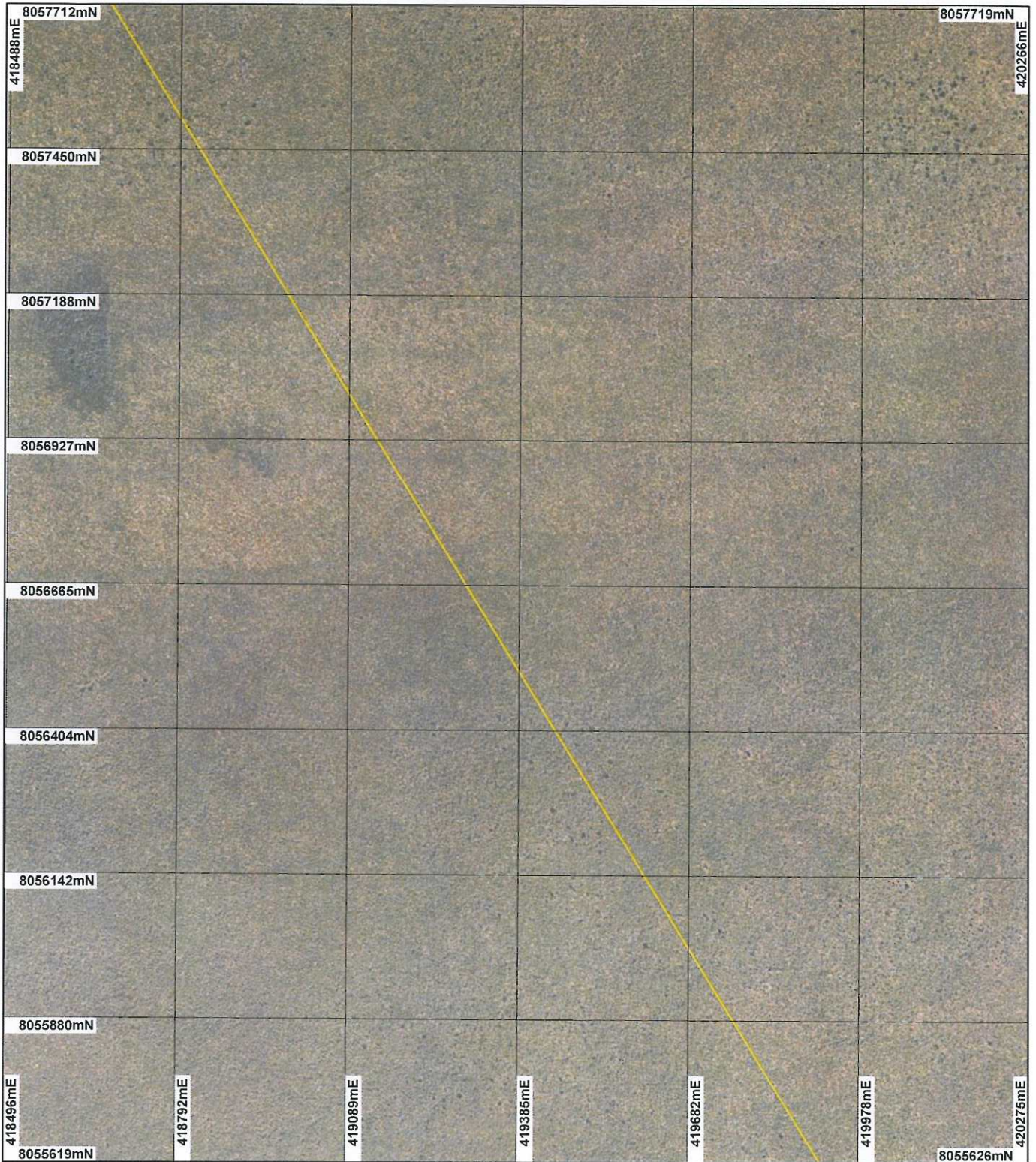
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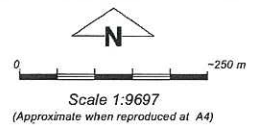
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LEGEND

- Clearing Instruments
- Areas Approved to Clear
 - Road Centrelines
 - Cadastre
- Broome 50cm Orthomosaic - Landgate 2007



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M Warnock Date *14/10/10*
M Warnock

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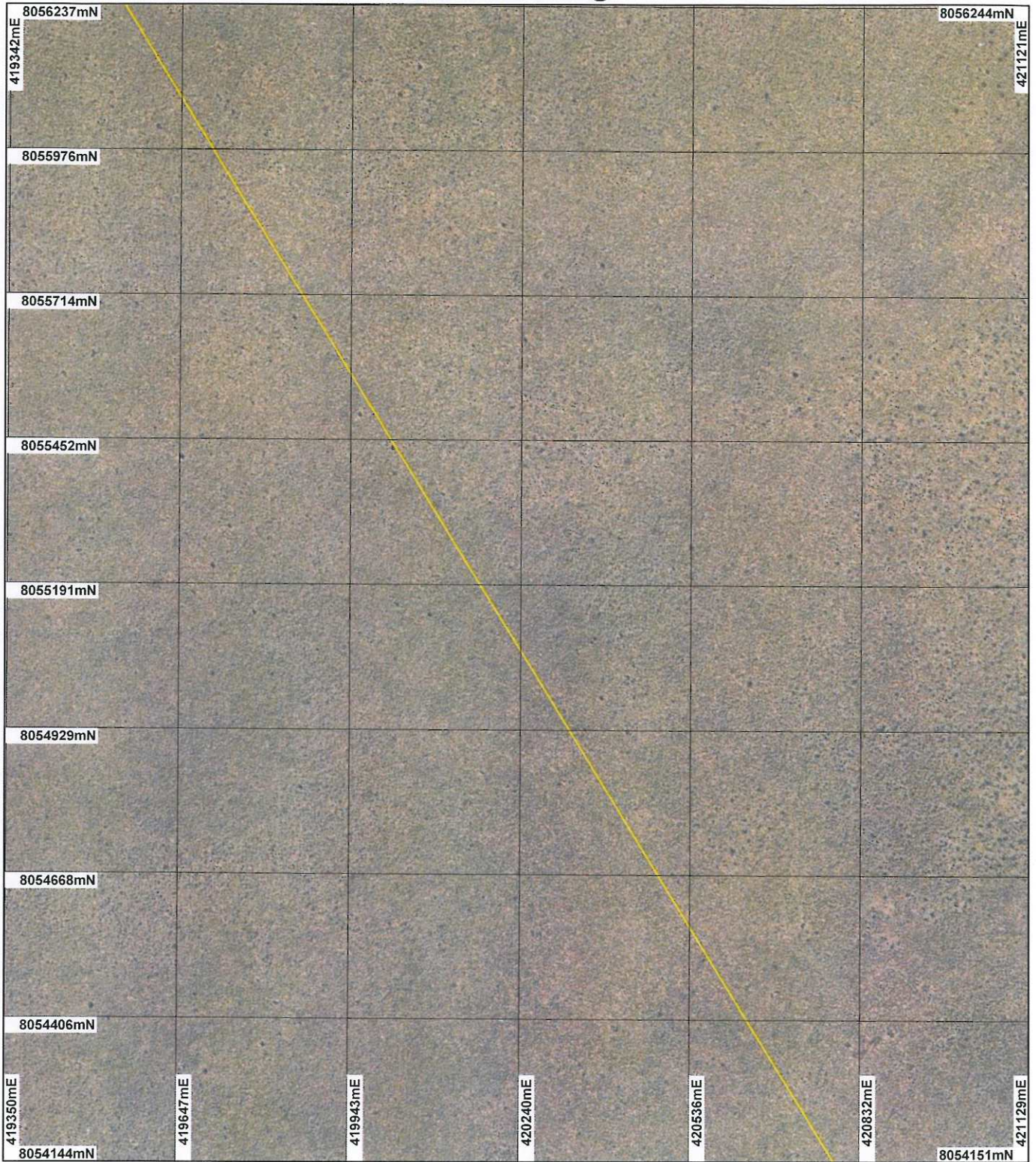
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LEGEND

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0 250 m

Scale 1:9697

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Geocentric Datum Australia 1994

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M Warnock Date 14/10/10

M Warnock
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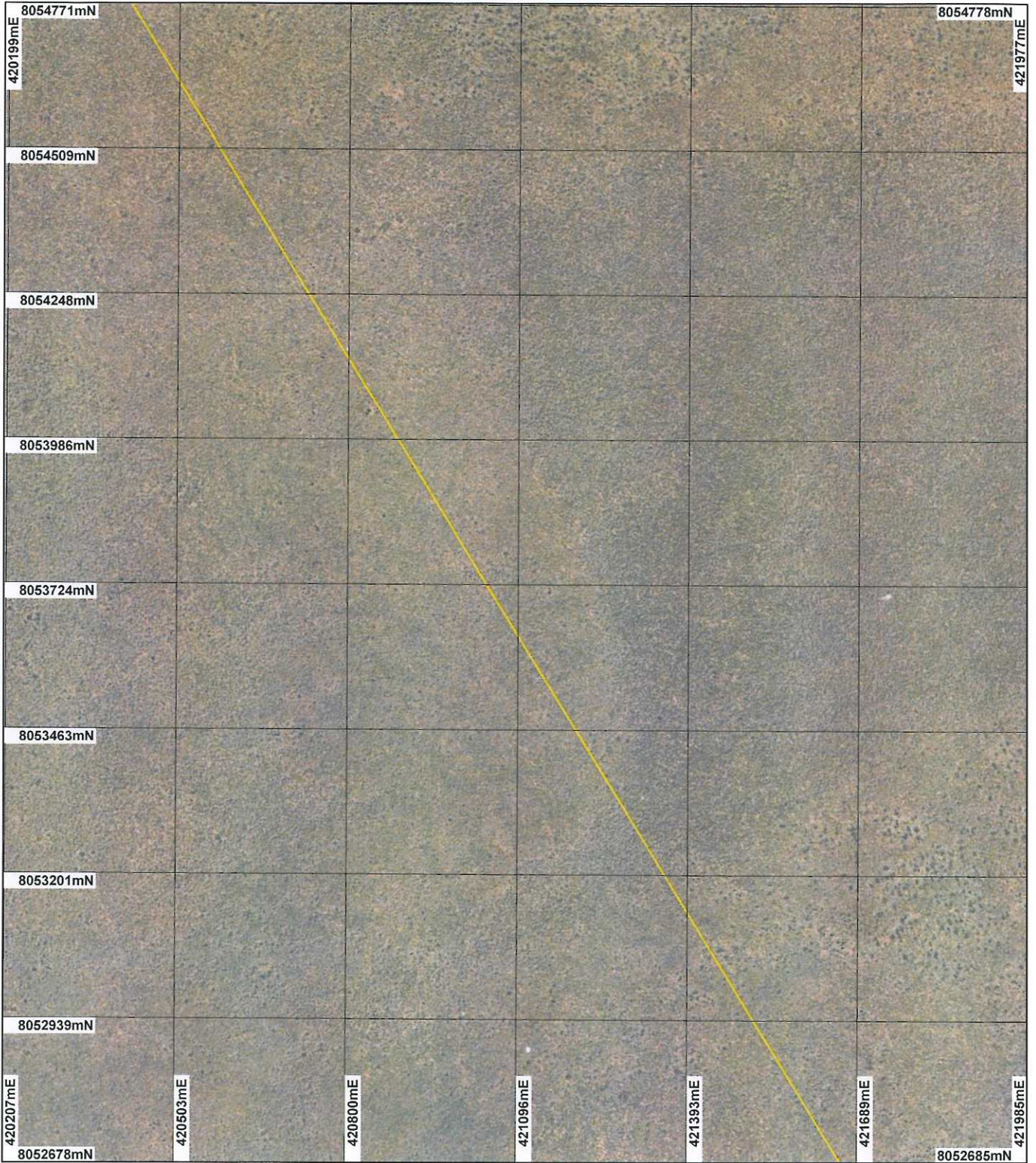
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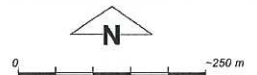
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Scale 1:9696
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Geocentric Datum Australia 1994

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M Warnock Date *14/10/10*

M Warnock

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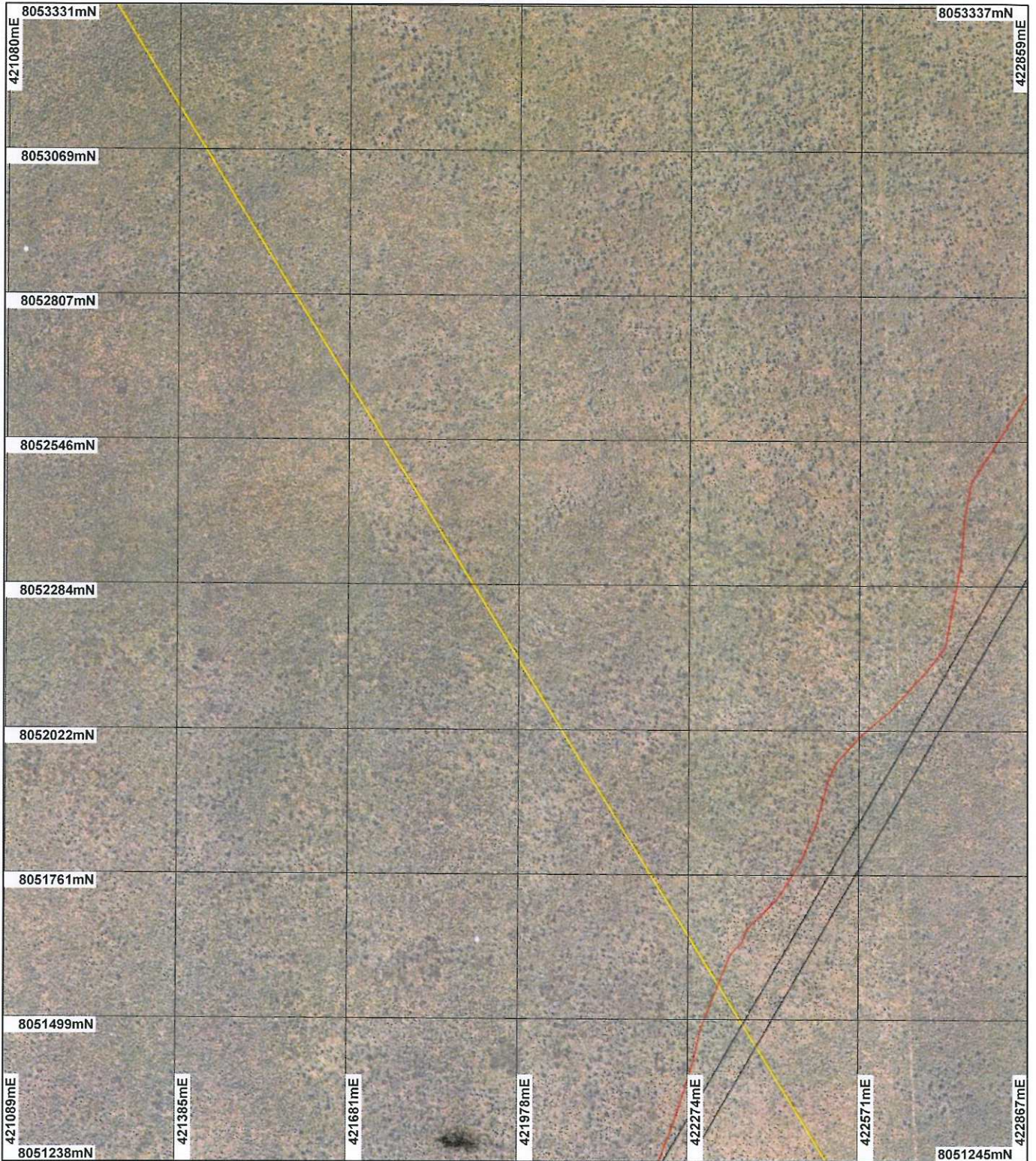
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LEGEND

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0 250 m

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M Warnock Date 14/10/10

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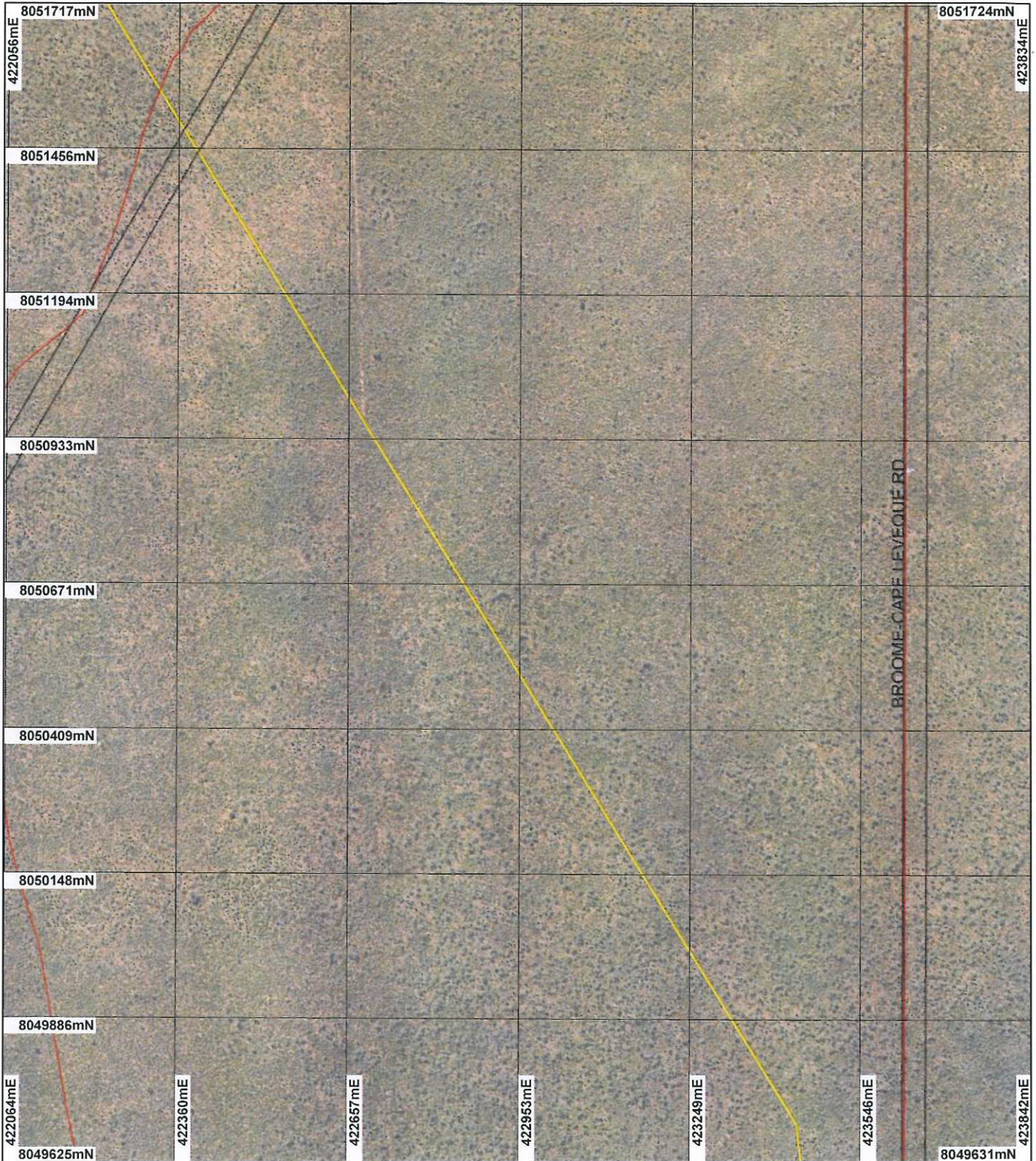
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LEGEND

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Geocentric Datum Australia 1994

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M Warnock Date 14/10/10

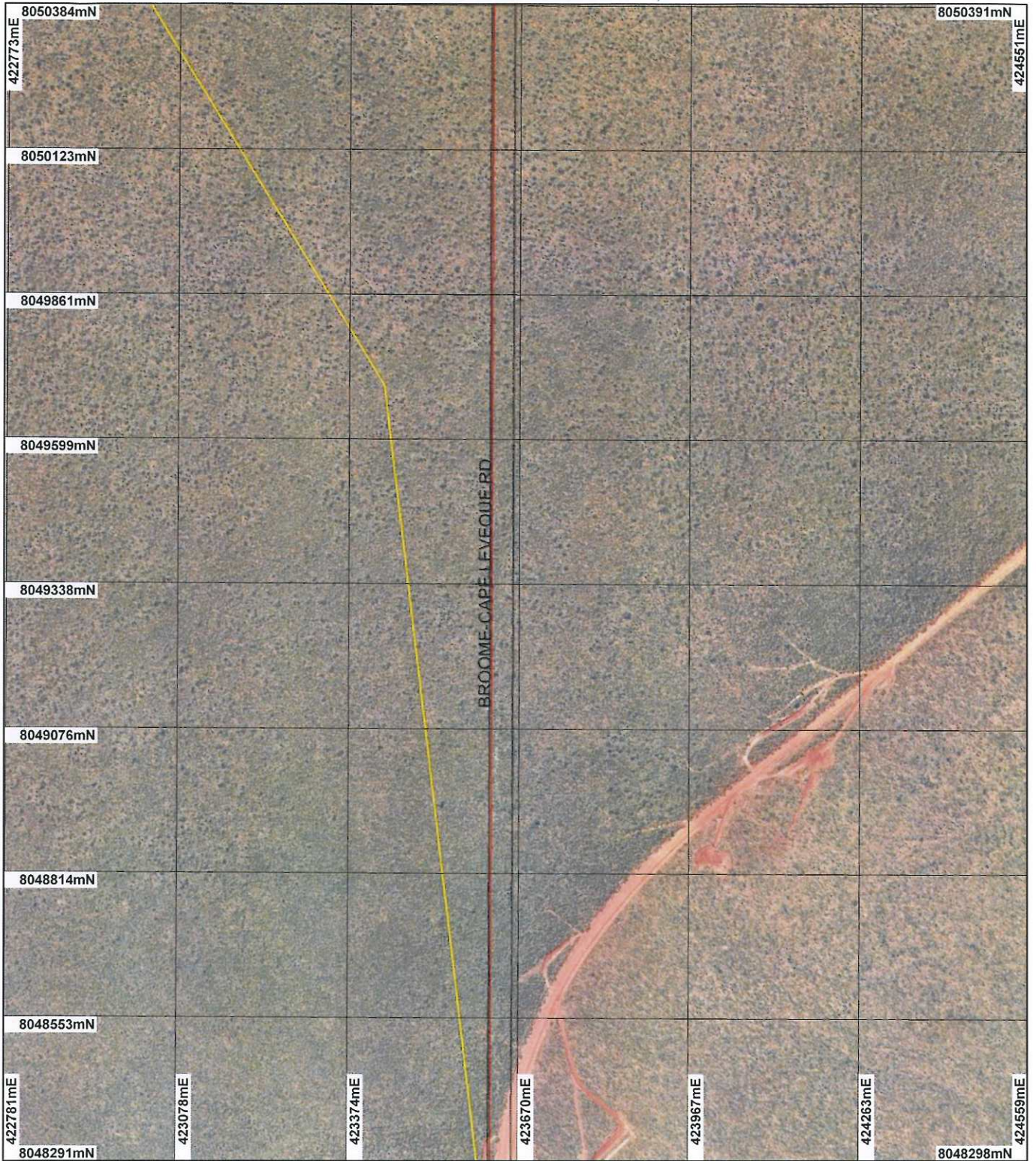
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LEGEND

- Clearing Instruments
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 - Road Centrelines
 - Cadastre
- Broome 50cm Orthomosaic - Landgate 2007



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Geocentric Datum Australia 1994

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M Warnock Date 14/10/10

M Warnock

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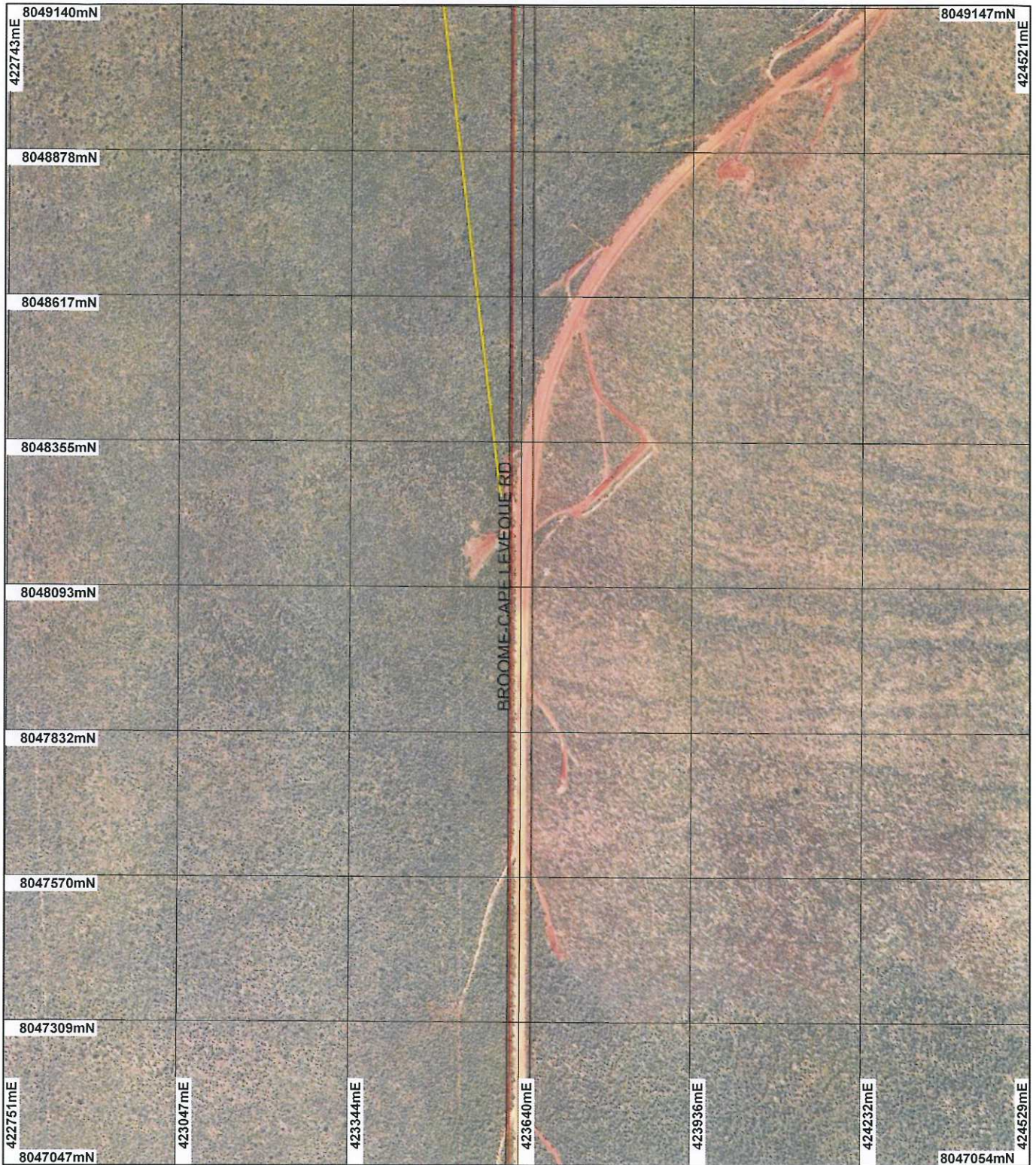
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LEGEND

Clearing Instruments

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- Cadastre
- Broome 50cm Orthomosaic - Landgate 2007



0 ~250 m

Scale 1:9695

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Geocentric Datum Australia 1994

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M Warnock Date *22/10/10*

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1. Application details

1.1. Permit application details

Permit application No.: 3912/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Commissioner of Main Roads

1.3. Property details

Property: LOT 259 ON PLAN 220696 (WATERBANK 6725)
ROAD RESERVE (WATERBANK 6725)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.6		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
<p>The vegetation under application is mapped as being composed of Beard 750: Shrublands, pindan; <i>Acacia tumida</i> shrubland with grey box & cabbage gum medium woodland over ribbon grass & curly spinifex (Shepherd, 2009).</p> <p>Based on nearby local scale vegetation mapping, the following vegetation communities described by Biota (2009) are likely to occur in the project area (AECOM, 2010):</p> <p>Tall Closed Scrub</p> <ul style="list-style-type: none"> - <i>Acacia monticola</i> (<i>Acacia coleii</i>, <i>Acacia eriopoda</i>) tall closed scrub over <i>Acacia hippuroides</i>, <i>Calytrix exstipulata</i>, <i>Distichostemon hispidulus</i> low open shrubland. <p>Pindan Shrubland</p> <ul style="list-style-type: none"> - <i>Corymbia flavescens</i>, <i>Corymbia dampieri</i>, <i>Eucalyptus miniata</i> scattered low trees over <i>Acacia eriopoda</i> shrubland over <i>Aristida hygrometrica</i>, <i>Aristida. holathera</i> var. <i>holathera</i>, <i>Eriachne obtusa</i> open grassland. - <i>Corymbia zygophylla</i> low open woodland over <i>Acacia monticola</i>, <i>Acacia. Eriopoda</i> tall open scrub. - <i>Corymbia flavescens</i> scattered low trees over <i>Acacia tumida</i> var. <i>tumida</i> (<i>Acacia coleii</i> var. <i>coleii</i>, <i>Acacia platycarpa</i>) shrubland over <i>Aristida holathera. holathera</i> open grassland. <p>Open Woodland</p> <ul style="list-style-type: none"> - <i>Eucalyptus miniata</i> open woodland over open pindan scrubland on sandy soils. - <i>Corymbia polycarpa</i> open woodland over open pindan shrubland along Kundandoo Creek. 	<p>The proposed clearing of 7.6 hectares of native vegetation is for the purpose of constructing a four metre wide, 19 kilometre long trace line. The trace line will follow the preferred alignment for the development of a potential future access road which will allow the service of the proposed Liquefied Natural Gas Precinct at James Price Point. The trace line will allow any geotechnical, survey, engineering and environmental aspects, including aboriginal heritage, associated with the potential future access road taking place prior to its construction.</p> <p>Vegetation mapping has previously been conducted for the northern part of the trace line (AECOM, 2010). The vegetation condition ranged from good to excellent (Keighery, 1994). Given the remote location of the proposed trace line, it is likely that the vegetation within the southern portion of the applied area is also in good to excellent condition (AECOM, 2010), however, the southern most parts of this section may be disturbed due to the proximity to road reserve (AECOM, 2010).</p>	<p>Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)</p>	<p>The description and condition of the vegetation under application was determined via the use of aerial imagery and a Preliminary Environmental Impact Assessment conducted by AECOM (2010).</p>

- Eucalyptus jensenii open woodland over Acacia monticola shrubland in localised patches.

Open Forest

- Eucalyptus miniata open forest to low woodland over Acacia eriopoda, Acacia tumida var. tumida, Acacia platycarpa open shrubland over Triodia schinzii open hummock grassland with Chrysopogon pallidus, Eriachne obtusa very open tussock grassland on inland yellow sandplains.

As above	As above	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	As above
As above	As above	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	As above

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 proposed clearing of 7.6 hectares of native vegetation is for the purpose of constructing a four metre wide, 19 kilometre long trace line. The trace line will follow the preferred alignment for the development of a potential future access road which will allow the service of the proposed Liquefied Natural Gas Precinct at James Price Point (JPP). The trace line will allow any geotechnical, survey, engineering and environmental aspects, including aboriginal heritage, associated with the potential future access road taking place prior to its construction.

The JPP area is located approximately 60km north of Broome, on the Dampier Peninsula. The applied area is reported to be located in a relatively low risk area and lacks many of the natural features that are unique to the North Kimberley hotspot (AECOM, 2010a).

Vegetation mapping has previously been conducted for the northern part of the trace line (AECOM, 2010). The vegetation condition ranged from good to excellent (Keighery, 1994). Given the remote location of the proposed trace line, it is likely that the vegetation within the southern portion of the applied area is also in good to excellent condition (AECOM, 2010), however, the southern most parts of this section may be disturbed due to the proximity to road reserve (AECOM, 2010).

While the area under application has not been surveyed, a flora survey was conducted by Biota (2009a), approximately 2.5km east of the northern section of the proposed trace-line at James Price Point. A total of 308 native vascular flora species from 175 genera belonging to 67 plant families were recorded from the survey area (Biota, 2009a). The number of native vascular flora recorded from the JPP area is considered to be moderate to high, taking into account the size of the area and the habitats present (Biota, 2009a). The JPP area is considered to have a moderate to high conservation value for flora (Biota, 2009a). The majority of the applied area is dominated by Pindan vegetation of varying composition and density which is regionally widespread (AECOM, 2010a).

The JPP area is susceptible to weed invasion adjacent to disturbed areas and a shift in vegetation structure from inappropriate fire regimes (AECOM, 2010a). Clearing activities are likely to increase the risk of the introduction of weed species which may impact on vegetation communities and priority flora (AECOM, 2010). In the event that a permit is granted, weed control conditions will be imposed to reduce the risk of weed introduction and spread.

Six priority flora species have been recorded within 10km of the area proposed to be cleared, all of which were mapped as occurring on the same soil and vegetation type to that of the clearing area. In addition to this, 14 priority listed flora species have been recorded within the local area (50km radius).

Of all the priority listed flora species recorded, three are considered likely to occur within the proposed clearing area, namely Glycine pindanica (P1), Eriachne semiciliata (P3) and Polymeria distigma (P1) (AECOM, 2010). However, given the linear nature of the proposed clearing and large amount of suitable habitat remaining for priority flora, impacts are unlikely to impact the security of these taxa.

A Priority Ecological Community (PEC) 'Corymbia paractia dominated community on dunes' is located 8.1km west of the applied area. This PEC is known to occur at the transition zone where coastal dunes merge with the Pindan. The proposed trace-line clearing is closest to the coast at the northern end; however, the vegetation at this location has been described as Pindan Shrubland, which is not consistent with the preferred habitat for the nearby PEC (Biota, 2009; AECOM, 2010).

Within the near vicinity of the application area (~2.5km west) a fauna survey undertaken by Biota (2009b) found evidence of a total of 115 vertebrate species. It is considered likely that the Bilby (*Macrotis lagotis*) may inhabit much of the Dampier Peninsula in very low densities and while diggings and burrows observed during fauna surveys were not conclusive of this species, they may suggest the presence of a few vagrant individuals (AECOM, 2010b). Due to the presence of Pindan vegetation within the applied area, suitable habitat may be present for the EPBC Act listed Golden Bandicoot (*Isodon auratus*), which was once widespread in arid and semi-arid areas, however is now restricted to grasslands, grassy woodlands and vine thickets of the Kimberley (AECOM, 2010b).

Given the above, the area under application may comprise a high level of biological diversity and as such, the proposed clearing of 7.6 hectares may be at variance to this Principle. However as the purpose of the proposed clearing is to establish a trace- line which will enhance further investigations such as environmental, aboriginal heritage, engineering, geotechnical and survey within the area , impacts to biodiversity are likely to be reduced for the proposed future access road to James Price Point. The findings of the trace-line investigations will aid in the preparation of an Environmental Impact Assessment and an Environmental Management Plan, which will be used in the management of the proposed future access road to James Price Point.

Methodology Biota (2009)
Keighery (1994)
AECOM (2010)
AECOM (2010a)
AECOM (2010b)
GIS DataBases:
- Broome 50cm Orthomosaic - Landgate 2007
- Pre European Vegetation
- Clearing Regulations, Environmentally Sensitive Areas
- SAC Biodatasets (accessed Sept 2010)

(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

Within the local area (50km radius) a total of 17 fauna species have been recorded. The most prevalent throughout the local area is the Bilby (*Macrotis lagotis*) with 10 occurrences, the closest of these recorded occurrences was 16km north of the applied area.

Historic records show the presence of the Red Goshawk (*Erythrotriorchus radiatus*) and Peregrine Falcon (*Falco hypoleucos*) at 8.4km south west and 10km north west respectively. Dampierland Plain Slider (*Lerista separanda*) was recorded 16km north, the Little Bittern (*Ixobrychus minutus*) 12.7km south and the Bush Stonecurlew (*Burhinus grallarius*) 14.4km south.

Two migratory species have the potential to occur within the vicinity of the trace-line, namely the Fork-tailed swift and Rainbow Bee-eater (AECOM, 2010).

Four species of conservation significance could potentially utilise the application area as suitable habitat. The Bilby (*Macrotis lagotis*), Chestnut-backed Button quail (*Turnix castanota magnifica*), Peregrine falcon and Dampierland Plain Slider (AECOM, 2010). In addition to these species the Masked Owl (*Tyto novaehollandiae kimberli*) has also been identified as potentially occurring within the applied area (AECOM, 2010).

Within the near vicinity of the application area (~2.5km west) a fauna survey undertaken by Biota (2009b) found evidence of a total of 115 vertebrate species. It is considered likely that the Greater Bilby (*M. lagotis*) may inhabit much of the Dampier Peninsula in very low densities and while diggings and burrows observed during fauna surveys were not conclusive of this species, they may suggest the presence of a few vagrant individuals (AECOM, 2010b). Due to the presence of Pindan vegetation within the applied area, suitable habitat may be present for the EPBC Act listed Golden Bandicoot (*Isodon auratus*), which was once widespread in arid and semi-arid areas, however is now restricted to grasslands, grassy woodlands and vine thickets of the Kimberley (AECOM, 2010b).

The proposed clearing is relatively small in size (7.6ha) and linear in nature. Given that the vegetation surrounding the area under application comprises vegetation in very good to excellent (Keighery, 1994) condition with a high remaining extent (approximately 90% vegetation remaining in local area), the applied area is not considered significant habitat for indigenous fauna in a local context. Therefore, the proposed clearing is considered not likely to be at variance to this Principle.

Methodology AECOM (2010)
AECOM (2010b)
Biota (2009b)
GIS DataBases:
- Broome 50cm Orthomosaic - Landgate 2007
- Pre European Vegetation
- SAC Biodatasets (accessed Sept 2010)
- Current Extent of Native Vegetation

(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

There is one rare flora species that has been recorded within the local area (50km radius), namely *Keraudrenia exastia*, which occurs on red sand in pindan and coastal sites (WA Herbarium 1998 -). This species was recorded 35km south of the applied area and is not known to occur in the near vicinity of James Price Point (AECOM, 2010).

A review of databases and survey data from GHD (2007) and Biota (2009) identified nineteen threatened and priority flora [including rare flora species *Keraudrenia exastia*] as occurring in the region (AECOM, 2010). Examination of the preferred habitat types and recorded locations of these species in comparison to the project area identified that no rare flora and three priority flora species are likely to occur within the proposed clearing area (AECOM, 2010). Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology AECOM (2010)
WA Herbarium (1998-)
GIS DataBases:
- Broome 50cm Orthomosaic - Landgate 2007
- Pre European Vegetation
- Clearing Regulations, Environmentally Sensitive Areas
- Current Extent of Native Vegetation
- SAC Biodatasets (accessed Sept 2010)
- Soils, Statewide DA 11/99
- WA Herbarium (1998-)

(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

It is considered unlikely that any Threatened Ecological Communities (TECs) will be impacted by the proposed clearing. The closest TEC occurrence 'Vine thickets on coastal sand dunes of Dampier Peninsula,' is recorded 7.4km west. This TEC is mapped on same soil and vegetation types to that of the applied area, however this TEC is known to occur on the leeward slopes of coastal sand dunes on the Dampier Peninsula (AECOM, 2010) and the applied area does not contain suitable habitat for the this TEC.

Methodology AECOM (2010)
GIS DataBases:
- Broome 50cm Orthomosaic - Landgate 2007
- Pre European Vegetation
- Clearing Regulations, Environmentally Sensitive Areas
- SAC Biodatasets (accessed Sept 2010)
- Soils, Statewide DA 11/99

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

Comments Proposal is not at variance to this Principle

The local area (50km radius) has approximately 90% remaining vegetation. The application area is mapped as being comprised of Beard vegetation association 750, which has approximately 99.82 % (1,229,175ha) of pre-European levels of native vegetation remaining in the Bioregion and 99.72% (1,115,573ha) remaining within the Shire (Shepherd, 2009).

Given the above, the vegetation under application is not considered to be significant as a remnant, as the surrounds have not been extensively cleared, therefore the proposed clearing is not considered to be at variance to this Principle.

Methodology AECOM (2010)
Commonwealth of Australia (2001)
Shepherd (2009)

GIS DataBases:

- Broome 50cm Orthomosaic - Landgate 2007
- Pre European Vegetation
- Current Extent of Native Vegetation

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

Comments Proposal is at variance to this Principle

There are two minor non-perennial watercourses that cross the proposed trace line. One intersects the proposed trace line in the northern half, the other in the southern section of the applied area. Short term impact to these systems and the vegetation associated with them, may result from the proposed clearing as non-perennial watercourses in this region can be inundated (DoW, 2010) and increased sediment loads are likely to occur.

Given the presence of watercourses within the applied area,, the proposed clearing is considered to be at variance to this Principle. However, as the purpose of the proposed clearing is to establish a trace- line which will enhance further investigations such as environmental, aboriginal heritage, engineering, geotechnical and surveys, potential future impacts to watercourses (which may result from the proposed access road to James Price Point) are likely to be reduced. The findings of the trace-line investigations will aid in the preparation of an Environmental Impact Assessment and an Environmental Management Plan, which will be used in the management of the proposed future access road to James Price Point.

Methodology

GIS DataBases:

- Broome 50cm Orthomosaic - Landgate 2007
- Hydrography linear
- Hydrography linear (hierarchy)

(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 proposed clearing of 7.6 hectares of native vegetation is for the purpose of constructing a four metre wide, 19 kilometre long trace line. The applied area is mapped as being composed of two soil types. AB21 - Pindan country gently undulating sand plain with a few small rocky sandstone residuals; no external drainage: chief soils are red earthy sands and AB26 - Sand plain with longitudinal sand dunes and some active drainage-ways: chief soils are red earthy sands (Northcote et al. 1960 - 68).

The average annual rainfall is 800mm, however large rainfall events area known to occur within the region (AECOM, 2010),

Given the sandy nature of the soils present and large rainfall events, wind and water erosion may result from the proposed clearing, however, due to the linear nature and relatively small size (7.6ha) of the proposed clearing, spread across an expansive area of very good to excellent (Keighery, 1994) condition vegetation, the proposed clearing is considered unlikely to cause significant appreciable erosion or land degradation and is not likely to be at variance to this Principle.

Methodology

AECOM (2010)

Northcote et al. (1960-68)

GIS DataBases:

- Soils, Statewide
- Average Annual Rainfall Isohyets

(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 Coulomb Point Nature reserve is situated 18km north of the proposed trace line clearing area and the local area (50km radius) has approximately 90% remaining vegetation. Given the distance of the proposed clearing from the nearest conservation area and the large amount of vegetation remaining in the surrounding area, it is considered unlikely that the proposed clearing will impact on the environmental values of any conservation areas.

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

Methodology

GIS DataBases:

- Current Extent of Native Vegetation
- DEC Tenure (DEC 2010)

(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 is within the Cape Leveque Coast Basin catchment area. It is not within a Public Drinking Water Source Area or an area proclaimed under the Country Areas Water Supply Act (Part II) 1947.

Minor non-perennial watercourses cross the proposed trace line in the northern half and in the southern section of the applied area. Interference with minor watercourses and the clearing of riparian vegetation may result in the deterioration of surface water quality due to increased sedimentation, however it is anticipated that these impacts will be short term. Best practice management of erosion and stormwater should be implemented to ensure that the surface water quality or groundwater quality is not adversely impacted (DoW, 2010).

As the purpose of the proposed clearing is to establish a trace- line which will enhance further investigations such as environmental, aboriginal heritage, engineering, geotechnical and surveys, potential future impacts to watercourses (which may result from the proposed access road to James Price Point) are likely to be reduced. The findings of the trace-line investigations will aid in the preparation of an Environmental Impact Assessment and an Environmental Management Plan, which will be used in the management of the proposed future access road to James Price Point.

Given the above, it is considered not likely that the proposed clearing of native vegetation would cause surface or groundwater quality deterioration.

Methodology DoW (2010)
GIS DataBases:
- Broome 50cm Orthomosaic - Landgate 2007
- Hydrography linear
- Hydrography linear (hierarchy)

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

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

The local area (50km radius) and immediate surrounds (10km radius) are well vegetated and while high rainfall events are known to occur within the region (AECOM, 2010), the proposed clearing of a 4 metre wide, 19 km long trace line is considered unlikely to exacerbate flooding.

Methodology AECOM (2010)
GIS DataBases:
- Average Annual Rainfall Isohyets

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

Comments

DEC notified the Goolarabooloo - Jabirr Jabirr Native Title group and their representative of the application to clear native vegetation in accordance with Section 24MC of the Native Title Act 1993 (NT Act) to invite their comments. DEC notes that Main Roads Western Australia (MRWA) has the authority to access land under the Land Administration Act 1997 and the Main Roads Act 1930. As MRWA is conducting clearing under these Acts the application for a clearing permit is considered to be a secondary approval and does not constitute a future act.

A submission, from the Kimberley Land Council (KLC) on behalf of Native Title Claimants the Goolarabooloo - Jabirr Jabirr Native Title group, has been received in objection to this application (Submission, 2010). Concerns were raised in relation to:

- Lack of detailed information. The KLC state that a lack of detailed maps makes it impossible to identify the areas cleared with any certainty (Submission, 2010). KLC has been provided with geo referenced maps highlighting the areas under application. Further, the KLC state that the permit application lacks information on the following:
 - the level of biological diversity (Submission, 2010), this has been addressed in Principle (a);
 - the existence of significant habitats (Submission, 2010), this has been addressed in Principles (b), (c) and (e);
 - the presence of rare or priority flora, fauna or threatened ecological communities (Submission, 2010a), these have been addressed in Principles (a), (b), (c) and (d);
 - the impact of proposed clearing on nearby waterways and water quality, this has been addressed in Principle (i);and
 - the impact of any change in the use of the land (Submission, 2010), including impact on the land and any changes to existing or proposed pastoral or other infrastructure. these have been addressed in Principles (a), (b), (e), (f), (g) and (i).

- Environmental concerns. The KLC state that the land and ecology of the area under application are fragile and

that the proposed clearing will have a detrimental impact upon the local and regional environment, including flora, fauna, water flows, biodiversity and the ecological and cultural sustainability of the area (Submission, 2010). These concerns have been addressed in Principles (a), (b), (c), (f) and (i). The KLC further state that a clearing permit should not be granted until the applicant provides a detailed report assessing the environmental impacts of the clearing and that the Goolarabooloo - Jabirr Jabirr Native Title group should have time to consider the report and make further submissions.

- Impact on Native Title Rights. The KLC state that the proposed clearing of native vegetation has the potential to affect the Goolarabooloo - Jabirr Jabirr Title groups Native Title rights and interests that are dependent on the environmental integrity of the area (Submission, 2010).

- Impact on Aboriginal Heritage. The KLC state that the area under application may contain a number of cultural and ethnographic sites significant to the Goolarabooloo - Jabirr Jabirr Native Title group and that the Goolarabooloo - Jabirr Jabirr Native Title group are unable to determine the impact clearing will destroy or disturb any of these sites. The KLC request that the Goolarabooloo - Jabirr Jabirr Native Title group is consulted prior to any clearing and that a proper heritage clearance survey be carried prior to the granting of a clearing permit (Submission, 2010). The grant of a clearing permit does not absolve the permit holder from responsibility for compliance with the requirements of all Commonwealth, State and local government legislation. DEC acknowledges that there are registered Indigenous heritage sites within the local area (50km radius) of the area under application. If the permit to clear native vegetation is granted DEC will inform the permit holder that they have a responsibility to ensure that no Aboriginal Sites of Significance are damaged through the clearing allowed under the permit. In addition, the applicant has been advised to liaise with the Department of Indigenous Affairs regarding obligations under the Aboriginal Heritage Act 1972.

- Lack of consultation. The KLC state that the Goolarabooloo - Jabirr Jabirr Native Title group have not been properly consulted about the application to clear native vegetation (Submission, 2010). DEC has notified the Goolarabooloo - Jabirr Jabirr Native Title group and their representatives the KLC of the application to clear native vegetation in accordance with Section 24MC of the Native Title Act 1993 (NT Act) and has therefore met the requirements of the NT Act.

The Department of Water (DoW) has advised that they have no objections with the proposed clearing but have made the following comments (DoW, 2010):

- The subject area is located within the Roebuck sub-area of the Broome groundwater area proclaimed under the Rights in Water and Irrigation Act 1914. Therefore, if there is a requirement for groundwater on the subject area, an application should be made to DoW for a licence.
- If the proponent wishes to drill bores for the purpose of 'Taking Water' an application needs to be made to DoW. Under section 26D of the Rights in Water and Irrigation Act, 1914 the alteration of an existing bore and/or the construction of a new bore is required to be licensed.
- The subject area contains non-perennial watercourses and can be subject to inundation. Best practise management of erosion and stormwater should be implemented to ensure that the water quality and groundwater is not at risk from contamination.
- There is an existing bore within close proximity to the subject area. The proposed activities are not to disturb any existing bore infrastructure.

The Office of the Environmental Protection Authority (OEPA) has advised that the EPA is currently considering a draft Strategic Assessment Report (SAR) for the proposed development of the Browse Liquefied Natural gas Precinct. The Minister for State Development is the proponent for this proposal. At present it is not clear in the draft SAR that the proposed trace-line is part of the current SAR (OEPA, 2010).

Lot 259 (area where clearing is to take place) is unallocated Crown land.

Methodology

DoW (2010)
OEPA (2010)
Submission (2010)

4. References

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5. 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
DoIR	Department of Industry and Resources
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)