Appendix 9.9

Preliminary Visual Assessment

Prepared by RPS

Centennial Coal

Preliminary Visual Assessment

Ventilation Facility Project

Angus Place Colliery

July 2012

Centennial Coal
Environment Matters

Prepared by:

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Prepared for:

CENTENNIAL ANGUS PLACE PTY LTD

IMPORTANT NOTE

We have prepared this report for the sole purposes of Centennial Angus Place Pty Ltd ("**Client**") for the specific purpose of providing an preliminary visual assessment regarding the proposed Angus Place Colliery Ventilation Facility Project ("**Purpose**"). This report is limited to the Purpose and the facts and matters stated in it and may not apply directly or indirectly to any other application, purpose, use or matter.

In preparing this report we have made certain assumptions. We have assumed that all information and documents provided to us by the Client or as a result of a specific request or enquiry were complete, accurate and up-to-date. Where we have obtained information from a government register or database, we have assumed that the information is accurate. Where an assumption has been made, we have reviewed the information the subject of that assumption to the extent that would reasonably be expected of a suitably qualified and experienced professional for the preparation of the report and while we are not aware of any reason why any of the assumptions are incorrect we cannot guarantee the accuracy of the matters or information on which the assumptions are based.

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Document Status

Version	Purpose of Document	Orig	Review	Review Date	QA Review	RPS Release Approval	Issue Date
0	Issue	KH	BJL	27 July 2012	AC	KH	27 July 2012

Contents

1.0 Introduction

A preliminary visual assessment has been undertaken by RPS to determine the potential for visual impacts from the proposed Ventilation Facility Project at Angus Place Colliery. The project comprises the following as shown on Figure 1:

- Development of underground roadways from the eastern extent of longwall 910 to the proposed Ventilation Facility;
- Development of underground roadways eastwards of the Ventilation Facility to undertake trial mining;
- Construction and operation of a Ventilation Facility consisting of both upcast (exhaust) and downcast (intake) shafts, an air compressor station, emulsion mixing and supply plant, various services boreholes, electrical substation, self-bunded diesel storage tank, back-up generator, internal roadways and hardstand area, spoil emplacement area, water management control ponds, fire controls (including Bushfire Asset Protection Zones), security fencing and miscellaneous buildings;
- Construction of a new access track from Sunnyside Ridge Road to the Ventilation Facility;
- Establishment of a 66kV/11kV electrical substation (including Bushfire Asset Protection Zone and security fencing situated off Sunnyside Ridge Road;
- Construction and operation of a switchyard facility and security fencing (including access track);
- 66kV trenched electrical power supply from existing powerline (running adjacent to Blackfellows Hands Road and Sunnyside Ridge Road) via a proposed switchyard and to the proposed substation following Sunnyside Ridge Road; and
- 11kV trenched electrical power supply from the proposed substation to the proposed Ventilation Facility along Sunnyside Ridge Road and the proposed new track to the Ventilation Facility.

Construction is anticipated to be undertaken from January 2013 to September 2015 (approximately two years and nine months). The Ventilation Facility would be operational from October 2015. Rehabilitation would be undertaken in accordance with a Rehabilitation Strategy (GSS, 2012).

Both residential and recreational receptors have been identified as described below. An analysis of visual envelopes from the residential and recreational receptors has been undertaken with Microimages TNT Mips software. This analysis identifies the potential visual envelope from the receptors, taking into account topography and is used to identify any potentially significant visual impacts. It does not take into account any vegetation. The proposed works are within forest and therefore the analysis is conservative. However, the analysis is useful in identifying potential views and any need for further assessment. Assumptions made for the visual envelope analysis are:

- Residential properties are single storey except R3 which comprises two storey dwellings;
- Maximum height at the proposed Ventilation Facility would be 12m;
- Maximum height of the substation would be 5m at ESA7; and
- Maximum height at the switchyard would be 20m.

2.0 Existing Situation

Visual Character

The Project Application Area is wholly within the Newnes State Forest located on Newnes Plateau. The proposed surface infrastructure is at an elevation of between 1,123m and 1,182m. The Project Application Area includes a section of Sunnyside Ridge Road which is an unsealed public road, managed by Forests NSW. There are overhead powerlines in the vicinity of the Project Application Area and various areas of mining related infrastructure such as the concreted and fenced areas associated with bores.

Six residential properties are located to the north and west of the Project Application Area all of which are over 7km away. There are no residential properties closer than this to the Project Application Area.

Recreational activities such as walking, driving (4WD), camping and picnicking are undertaken in the Newnes State Forest. Such activities are promoted by a number of organisations such as Tourism NSW and Lithgow City Council. Sunnyside Ridge Road is used by those visiting the Newnes State Forest for recreation and also by others including Forests NSW. Places of interest to bushwalkers include:

- Bungleboori picnic area;
- The Lost City;
- Bald Trig;
- Bungleboori Lookout;
- Carne Creek Shrub Swamp;
- Lurlene Jack Lookout;
- Birds Rock; and
- Wolgan Falls.

The general area comprises mature vegetation. The Wolgan River and its tributaries are to the west and Carne Creek and its tributaries are to the east.

The Project Application Area is located on a ridgeline and on the mildly undulating and relatively flat terrain of the Newnes Plateau. To the west the land falls towards the Wolgan River at around 1,100m. To the north the land falls towards tributaries of the Wolgan River. To the east the land falls towards Carne Creek and its tributaries to around 1,000m and then rises again towards the south east. To the south is undulating land towards the Lost City.

National Park is located to the north and east of the Project Application Area as follows:

- Gardens of Stone National Park approximately 9km to the north:
- Wollemi National Park approximately 15km to the north east; and
- Blue Mountains National Park approximately 14km to the east.

The Gardens of Stone National Park comprises sandstone, limestone and alluvial deposits. There are sandstone pagoda rock forms, low woodlands, heathlands, shrublands and Blue Mountains sandstone forests. The landscape of Wollemi National Park comprises gorges, river valleys, canyons, hanging swamps, waterfalls and precipitous sandstone escarpments. The Blue Mountains National Park is known for its views, waterfalls and rock formations and it is part of the Greater Blue Mountains World Heritage Area (OEH, NSW National Parks and Wildlife Service website).

Visual Receptors

The immediate area (approximately 1km from the Project Application Area) includes Sunnyside Ridge Road (which passes through the Project Application Area) and Blackfellows Hands Road and therefore those using these roads would potentially be receptors. Sunnyside Ridge Road (part of which is within the Project Application Area) is used by recreational 4WDsand promoted as a 4WD route. There would be views of the project components from this road, Blackfellows Hands Road and within the immediate vicinity.

Residential properties are located between 7 and 9kms to the west and north west of the Project Application Area as shown on Figure 2. Their elevations range from 760 to 930m. These are the same receptors as identified for the noise and air assessments (SLR, 2012a and b) for the project.

Residential properties located at Lidsdale are at lower elevations than the Project Application Area and this together with existing vegetation suggests significant changes to views from these locations would be unlikely.

In addition to the residential receptors above, potential recreational receptors are located between 1.6 and 8km from the Project Application Area. The locations of the recreational receptors are the same as those used for the noise impact assessment by SLR and are shown on Figure 2.

Elevations of the Gardens of Stone National Park, Wollemi National Park and Blue Mountains National Park within a 40km radius to the north, east and south of the Project Application Area are below the lowest elevation of the land at the proposed infrastructure. Therefore, it is unlikely that there would be significant changes in views from the national parks towards the Project Application Area due to topography, distance and the vegetation in the vicinity of the Project Application Area. Any potential views from National Parks would comprise a small element within a distant view and would not be a significant impact.

3.0 Construction Impacts

Visual impacts, in a regional context, were raised as an issue during the community consultation sessions in March 2012 and as such this increases the importance to the community of any visual impacts.

The following components of the project have potential for visual impacts during construction:

- The construction activities for the proposed Ventilation Facility, substation and powerlines;
- Stray light and night lighting; and
- Construction traffic.

The analysis undertaken using topographical mapping and has been undertaken for the residential and recreational receptors identified above and in Figure 2. The results of the analysis are shown in Figures 3 to 16 which identify the extent of the visual envelope from each of the residential and recreational receptors.

There is uncertainty about the precise location of the recreational viewpoints. Points were selected to be consistent with those identified for the noise and air assessments for the project (SLR, 2012a and b). However, the potential for a view was kept in mind and this resulted in the location of R10 being adjusted uphill as this gained a view of part of the project. However, it should be noted that views will vary depending on the precise point chosen and that this is a preliminary assessment to determine potential views only.

The analysis shows that the works are not likely to be seen from the residential receptors. Also, the works are within forest which would provide screening.

There are potential adverse impacts on views of those using the area for recreation. Construction works would be visible from within the immediate area, in particular Sunnyside Ridge Road and Blackfellows Hands Road and there would be a greater number of large vehicles using the road due to the construction works. The analysis (Figures 3 to 16) shows that parts of the works would potentially be seen from the recreational receptors R8 Lost City, R9 Bald Trig and R11 Carne Creek Shrub Swamp. As this analysis was undertaken without taking into account any vegetation this is a conservative estimate as there is intervening vegetation. Any adverse impacts would be temporary for the duration of construction (approximately two years and nine months).

The substation and Ventilation Facility would be lit at night during construction to adhere to operational and safety requirements. Therefore, at night, lighting would be present where there is currently no lighting. Night lighting would be noticeable to recreational users in the vicinity such as those driving along Sunnyside Ridge Road. This would be a temporary adverse effect at night time and mitigation is identified below.

The Traffic Impact Assessment (ARC, 2012) for the project forecasts up to 20 truck trips per day along the designated heavy vehicle route via Old Bells Line of Road and up to 22 light vehicle trips per day along the light vehicle route via State Gully Mine Road (or via Old Bells Line of Road). Therefore, additional trucks and light vehicles would be seen travelling along these routes with a temporary visual effect on local people who use these routes (as well as recreational users as identified above). Whilst construction vehicles would generally be restricted to daylight hours, headlights from those outside daylight hours may be visible during the evening and night.

4.0 Operation Impacts

The following components of the project have potential for visual impacts during operation:

- The operational surface facilities - the substation, switchyard and Ventilation Facility;
- Piles of cuttings (stored for rehabilitation use);
- Cleared area beside Sunnyside Ridge Road due to a trenched power supply line; and
- Operational traffic.

During operation, the substation, switchyard and Ventilation Facility would not be lit at night.

Within the immediate area, the proposed substation, switchyard and clearance associated with the power supply line would be visible to those using Sunnyside Ridge Road and by other recreational users in the immediate vicinity. In the case of a substation, this would be a visual change from the current plantation, that is not endemic, to a building with cleared vegetation around it. Sunnyside Ridge Road would change on one side in terms of vegetation clearance associated with the trench. These changes would be in the context of an area that already includes mining infrastructure. The switchyard would also be seen by recreational users of Blackfellows Hands Road.

The analysis, shown in Figures 3 to 16, identifies the extent of the visual envelope from each of the residential receptors and the recreational receptors. This shows that the surface infrastructure is not likely to be seen from the residential receptors. Also, the surface infrastructure is within forest that would screen the project components.

Similarly to the works during construction, the project components would potentially be seen from three recreational receptors to the south east and east of the Project Application Area as follows:

- From R8 Lost City parts of the switchyard have potential to be seen (two points were tested (a and b) because it was found that part of the project could potentially be seen depending on where the precise point is located);
- From R9 Bald Trig parts of the powerline, substation and the Ventilation Facility have potential to be seen;
- From R11 Carne Creek Shrub Swamp part of the power supply has potential to be seen.

As stated previously this is considered to be a conservative assessment as the analysis does not take into account vegetation, only topography, and the area is predominantly forested.

Operational traffic generated by the project is predicted to be minor (ARC, 2012) therefore there is not anticipated to be a significant visual impact associated with traffic.

The proposed rehabilitation comprises the return of any land disturbed due to exploration or mining activities to a capacity which was present pre-mining. Therefore, the Project Application Area would be returned to State Forest and the consequent reversal visual changes. The substation site, currently comprising a pine plantation, would be returned to endemic planting and therefore a potential improvement in the immediate area.

5.0 Mitigation

The project would be within a State Forest used for recreational purposes, it would have the potential to be viewed from three recreational receptors and this issue is important to the community as it was raised during community consultation. Therefore, methods to minimise views should be investigated during detailed design.

Ideally, the proposed substation will be screened by native vegetation to mitigate views to it from the surrounding area. However this would entail moving the substation westwards towards the slope. During the course of the assessment, the findings of the bushfire risk assessment have shown that the substation should be kept away from the slope to reduce bushfire risk.

Mitigation measures are as follows:

- Where feasible, buildings and structures will be coloured to blend into the surroundings;
- Night lighting during construction will be restricted to the minimum required for operational and safety requirements. Also it will be directed away from sensitive receptors where practicable;
- The potential for native vegetation screens at the substation site will be investigated, subject to bushfire risk considerations;
- The height of all buildings will be kept to a minimum;
- Cleared areas that are no longer required to be clear will be revegetated with suitable native vegetation in accordance with the rehabilitation strategy; and
- Opportunities to enhance the area currently supporting a pine plantation will be investigated, following rehabilitation of the substation site.

6.0 Residual Impacts

Some night lighting during construction would still be visible from surrounding receptors and this would be temporary.

Parts of the project such as the substation and the clearance area along Sunnyside Ridge Road would be visible from the immediate area and also from recreational locations within the Newnes State Forest. In the long term, impacts would be managed through the Rehabilitation Strategy for the project (GSS, 2012) and the Project Application Area returned to forest.

7.0 References

ARC, 2012, Traffic Impact Assessment, Ventilation Facility Project, Angus Place Colliery

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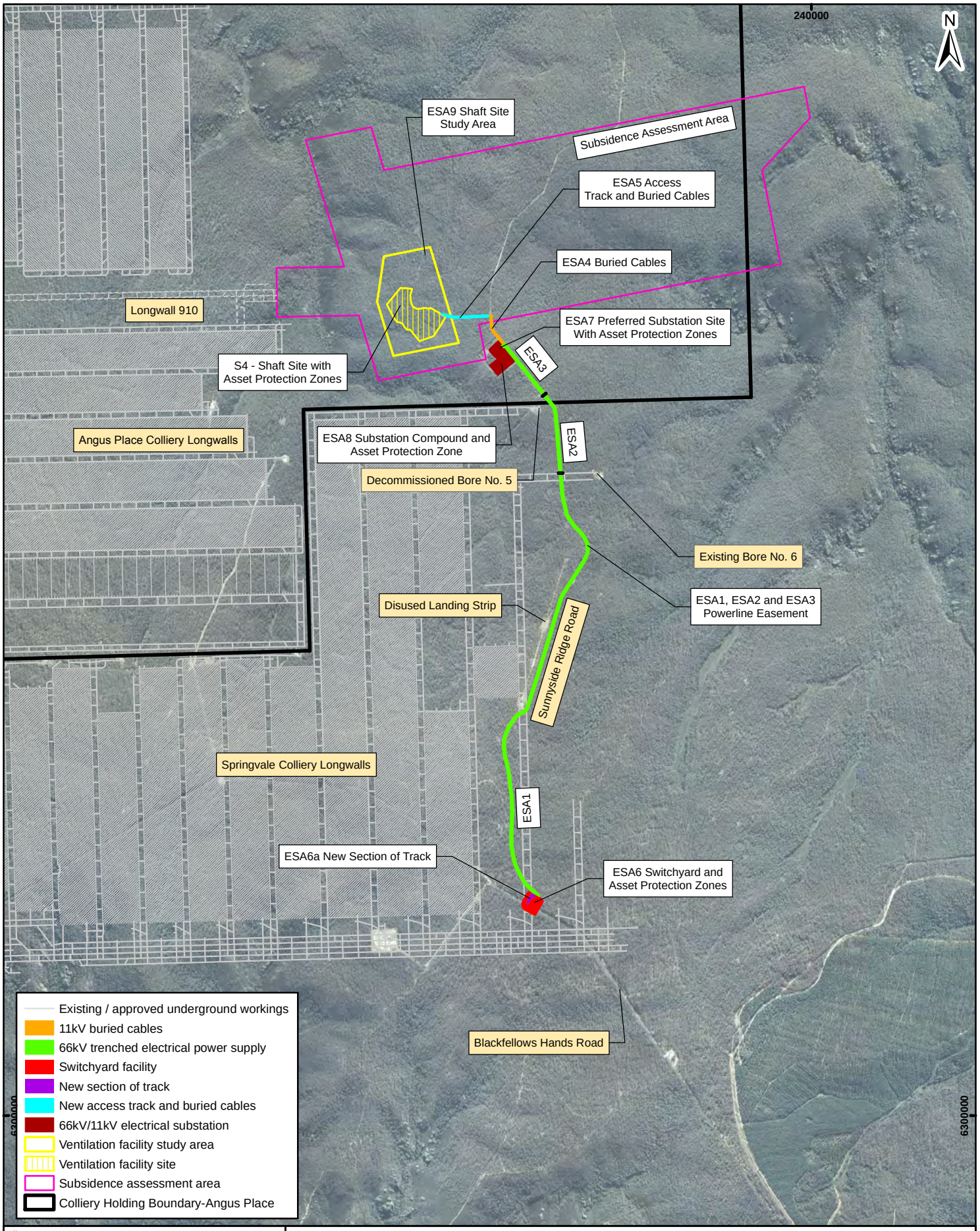

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Compiled by:	TW	Date:	23/07/2012
Approved by:	JAK	Date:	23/07/2012

0 250 500 1,000 1,500 m

Datum: GDA94 / MGA Zone 56

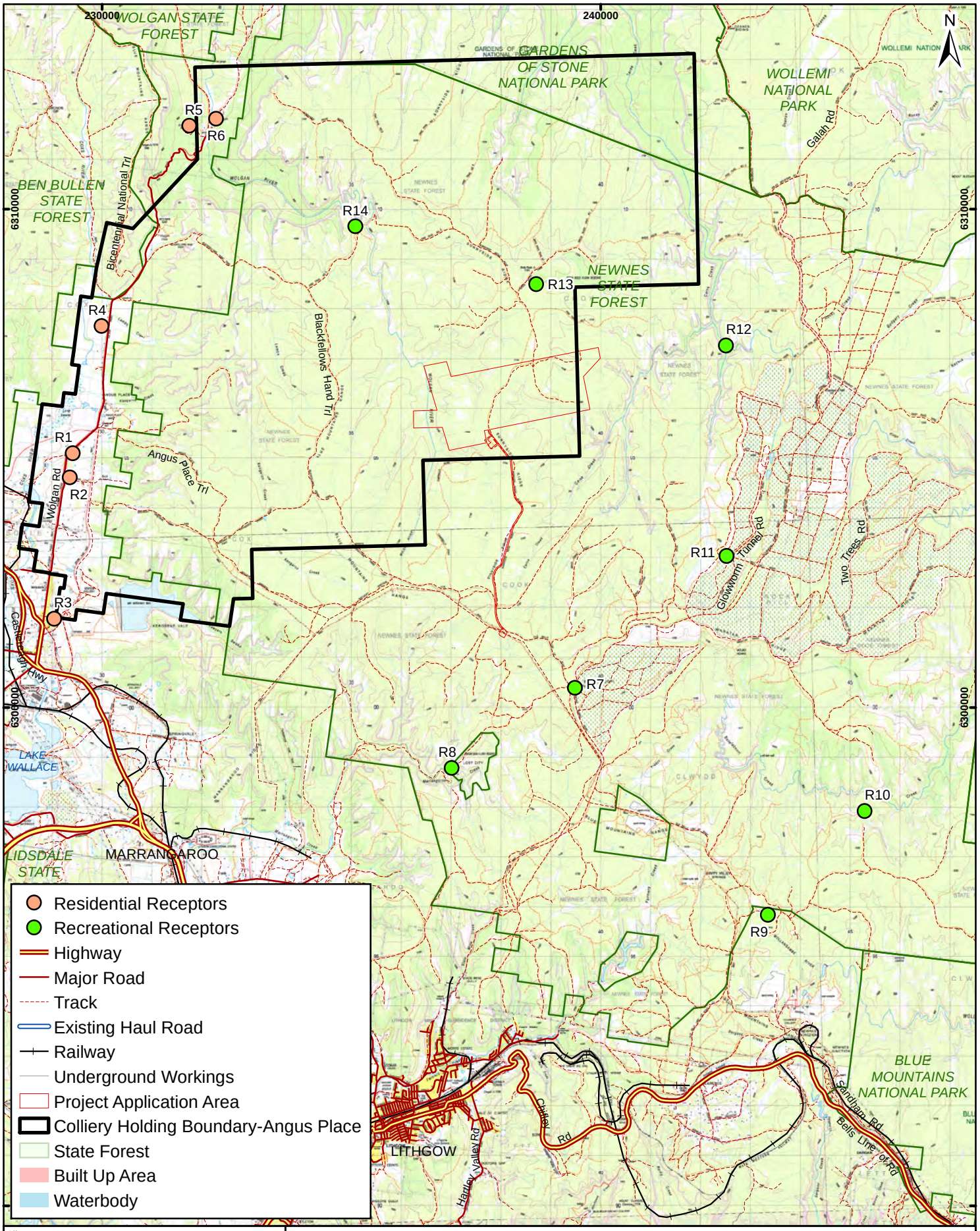
RPS

Proposed Ventilation Facility Project

Figure 1

Project: Angus Place Colliery Ventilation Facility Project

Source: Mine workings, project application features and orthophoto background © Centennial Coal 2012.



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Approved by: JAK	Date: 23/07/2012

0 0.5 1 2 3 km

Datum: GDA94 / MGA Zone 56

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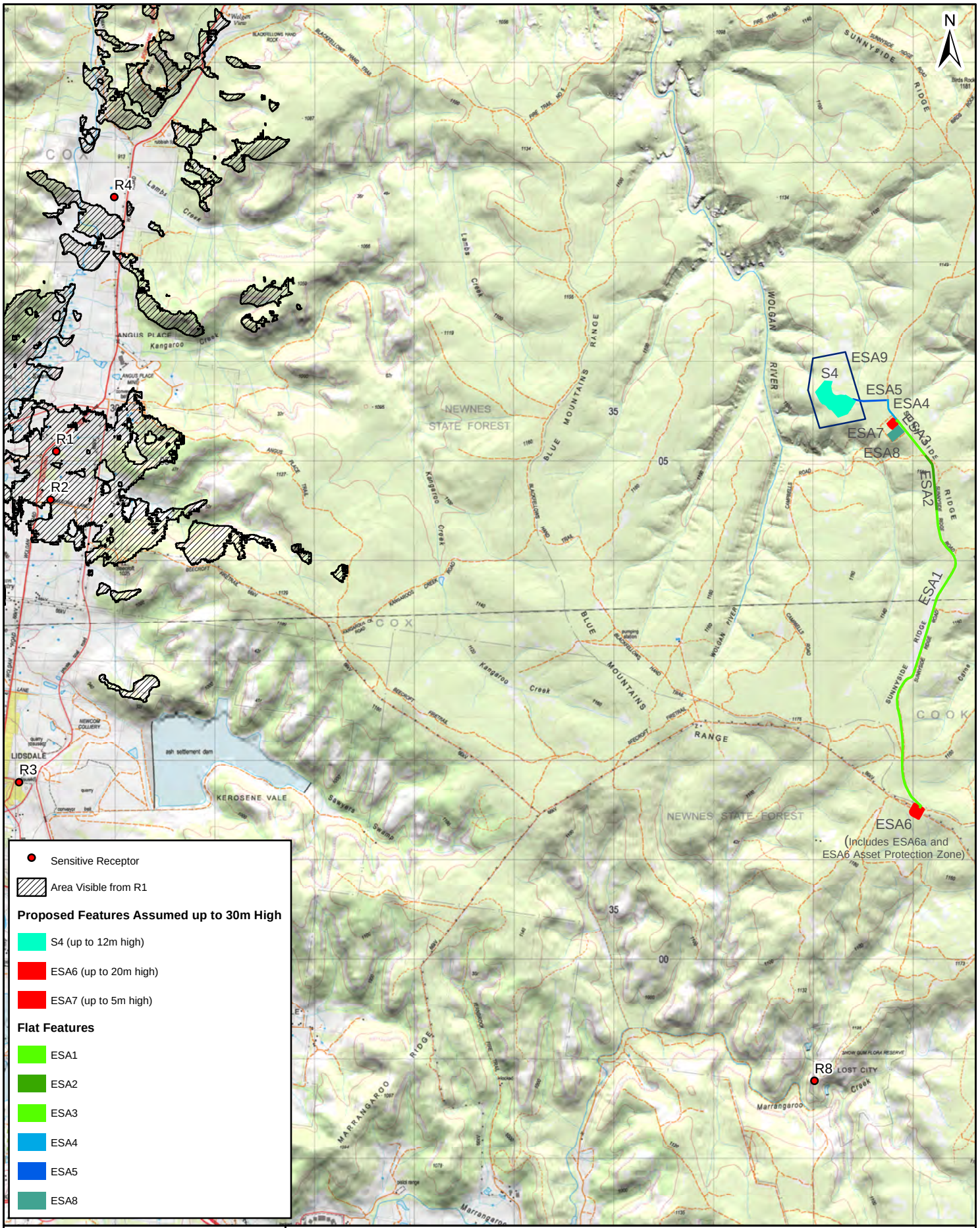
Residential and Recreational Receptors

Figure 2

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006.
Mine workings and project application features © Centennial Coal 2012.
Recievers, SLR 2012.
Background topographic map © Land and Property Management Authority(LPMA), Panorama Avenue Bathurst NSW 2795, www.lpma.nsw.gov.au



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Approved by: JAK	Date: 25/07/2012

0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

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Visible Area From Residential Receptor R1

Figure 3

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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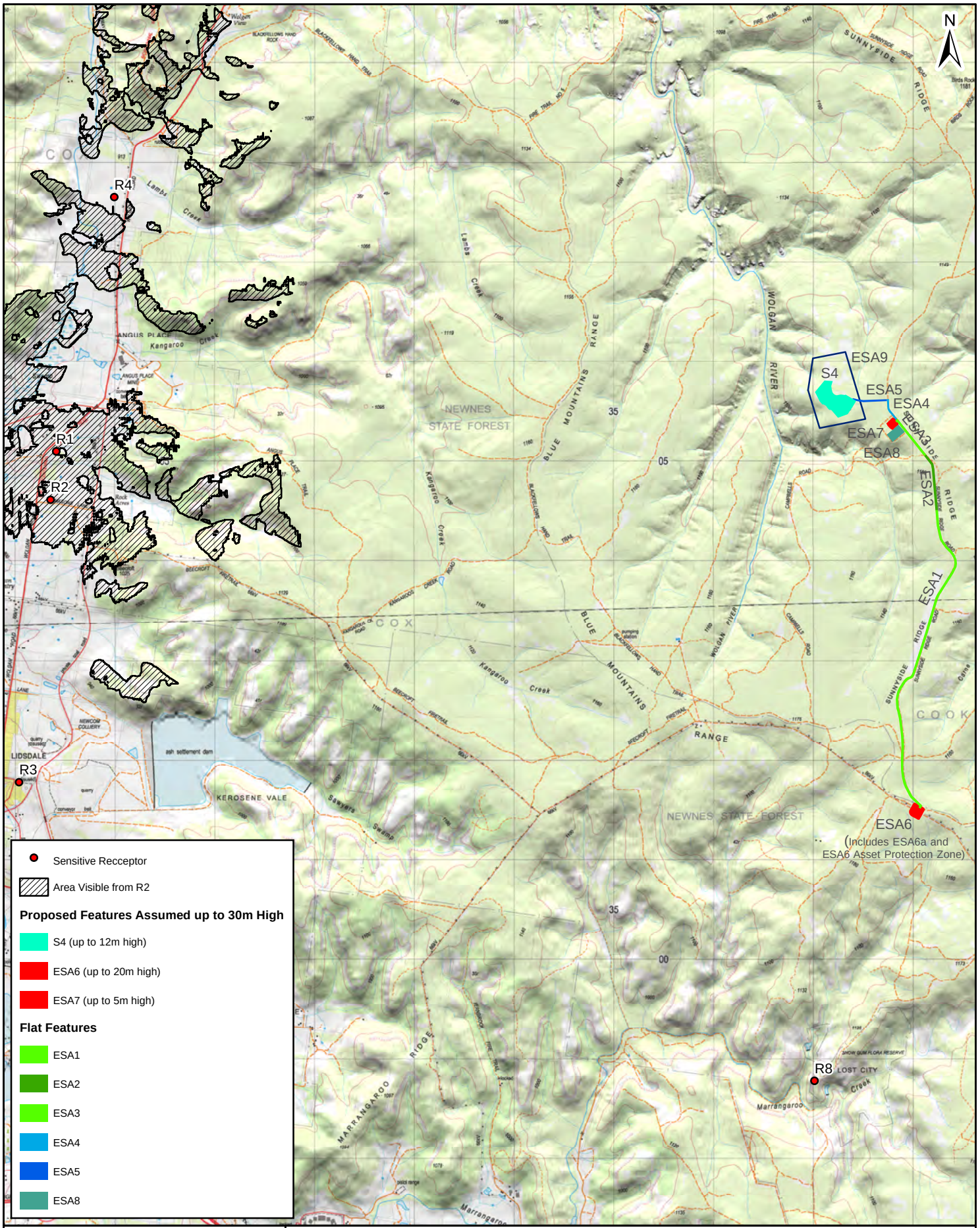

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Approved by:	JAK	Date:	23/07/2012

0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

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Visible Area From Residential Receptor R2

Figure 4

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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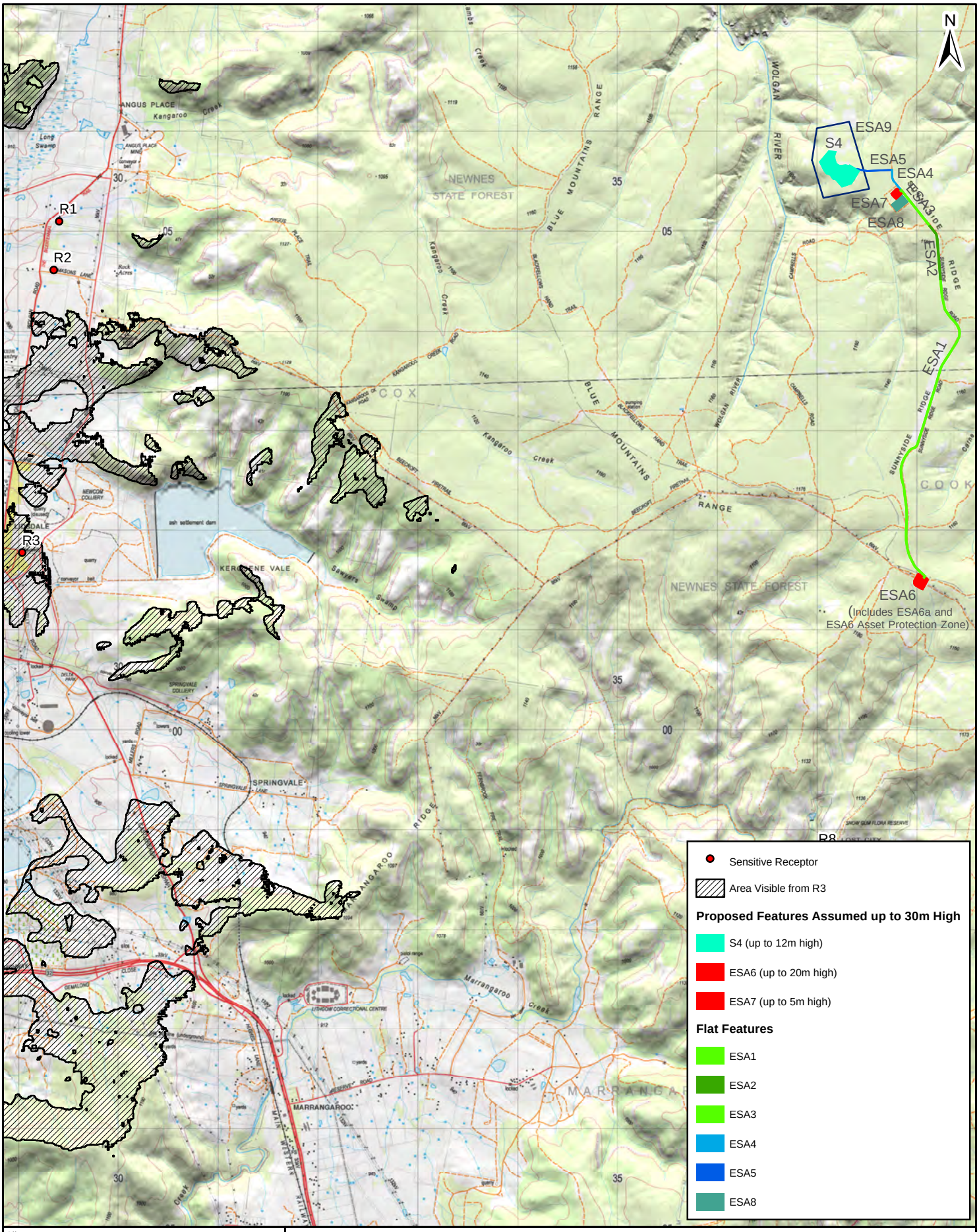

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Visible Area From Residential Recptor R3

Figure 5

Project: Angus Place Colliery Ventilation Facility Project

0 0.25 0.5 1 1.5 km

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Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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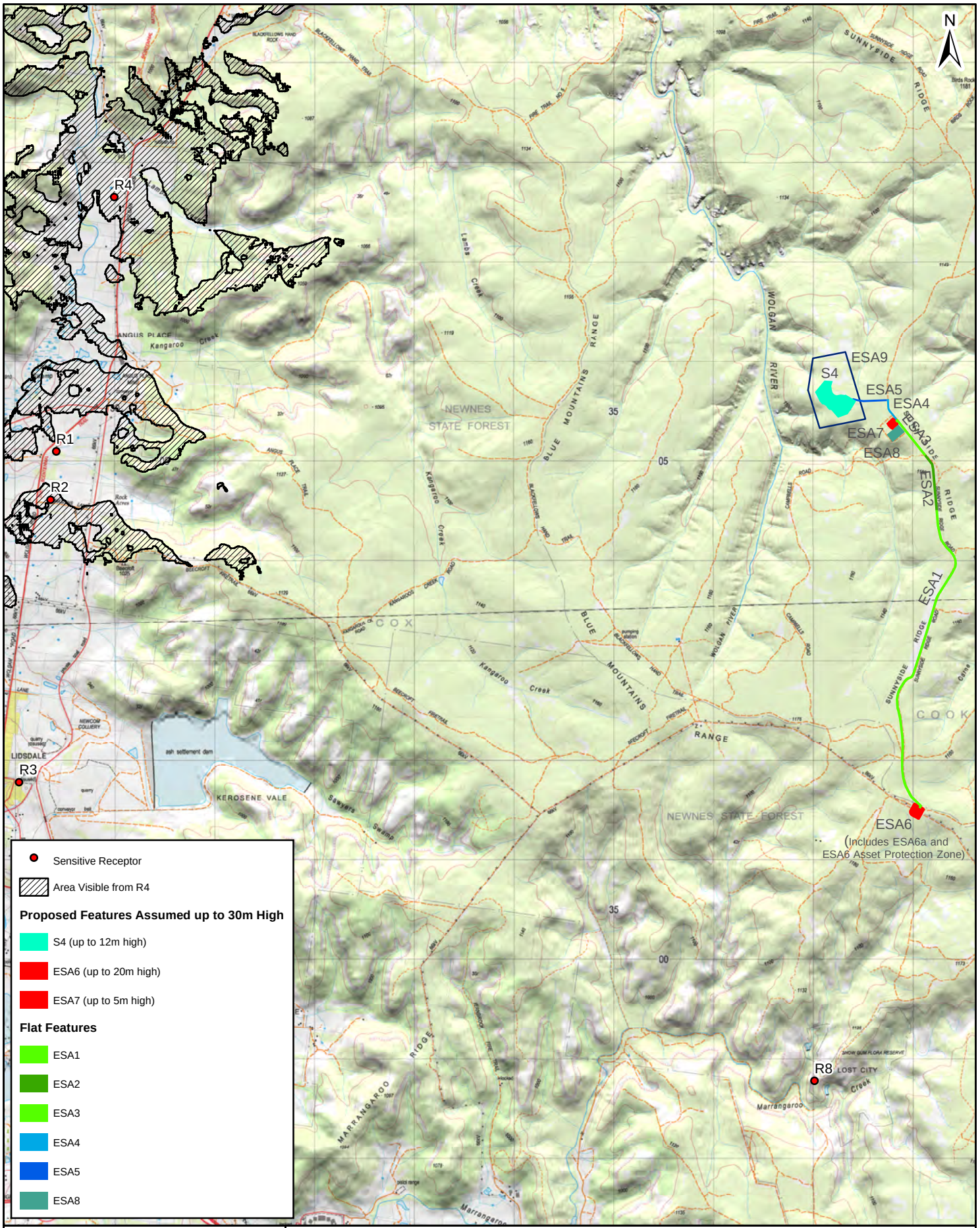

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0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

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Visible Area From Residential Receptor R4

Figure 6

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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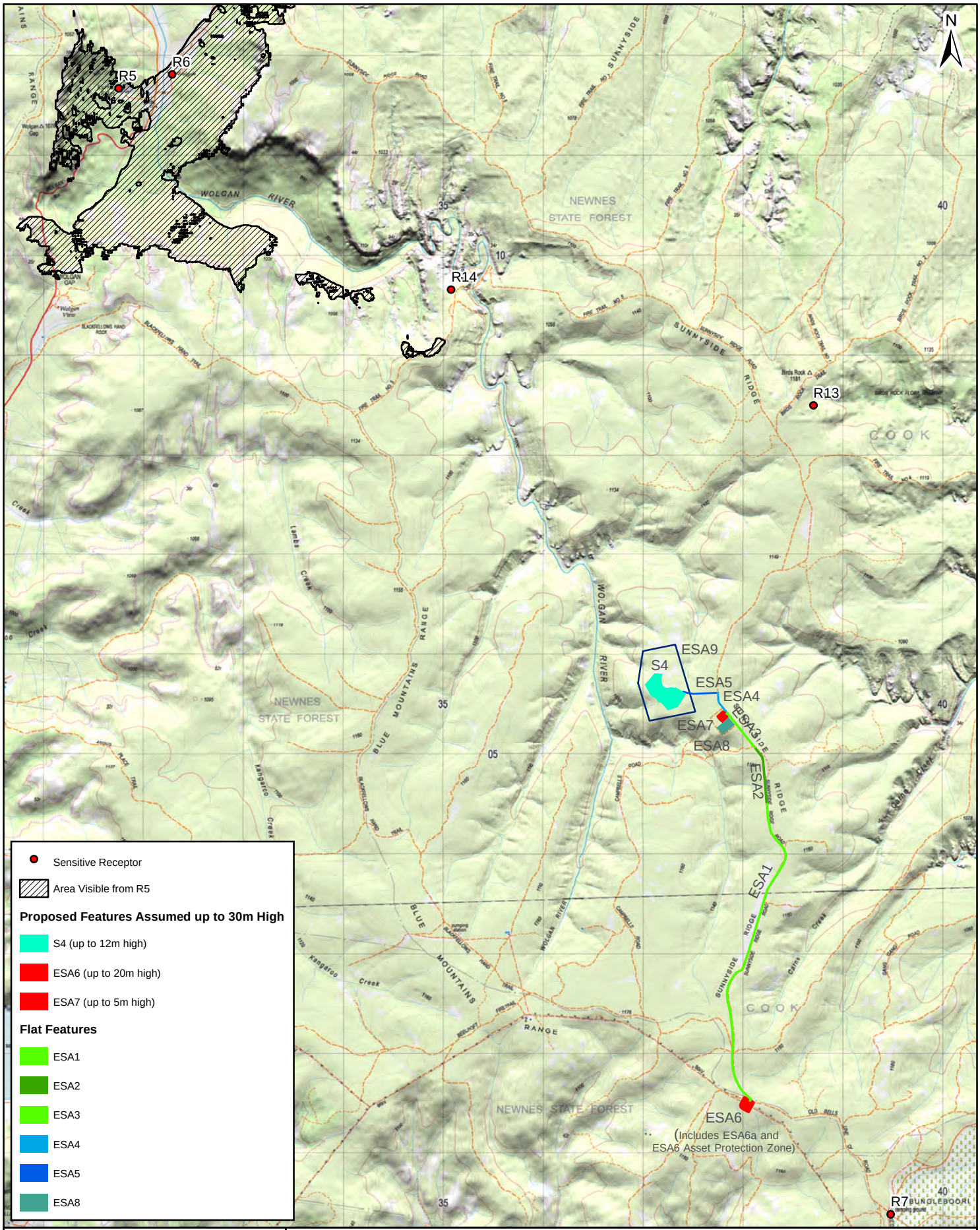

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0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

RPS

Visible Area From Residential Reciever R5

Figure 7

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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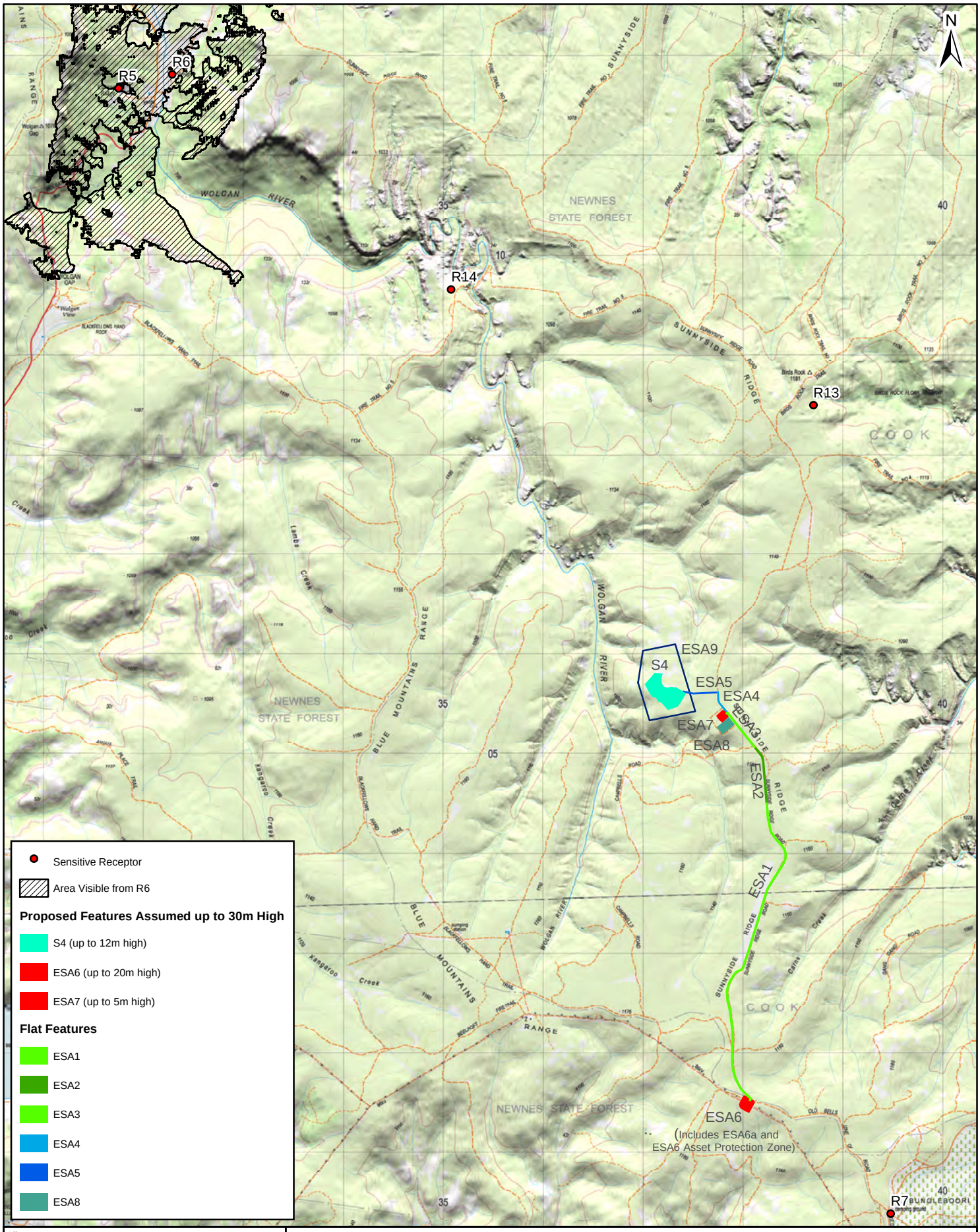

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0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

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Visible Area From Residential Receptor R6

Figure 8

Project: Angus Place Colliery Ventilation Facility Project

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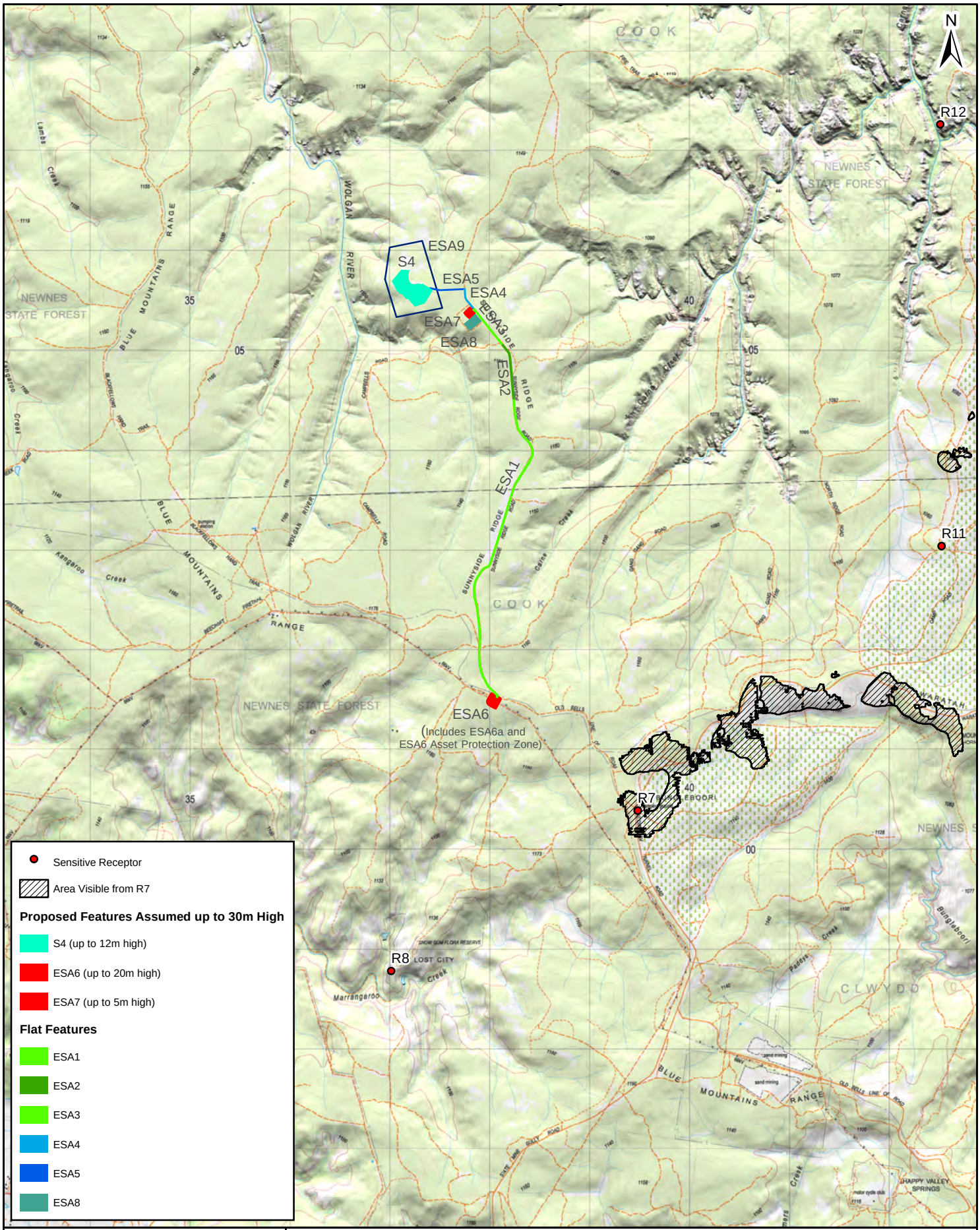

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0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

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Visible Area From R7 Bungleboori Picnic Area

Figure 9

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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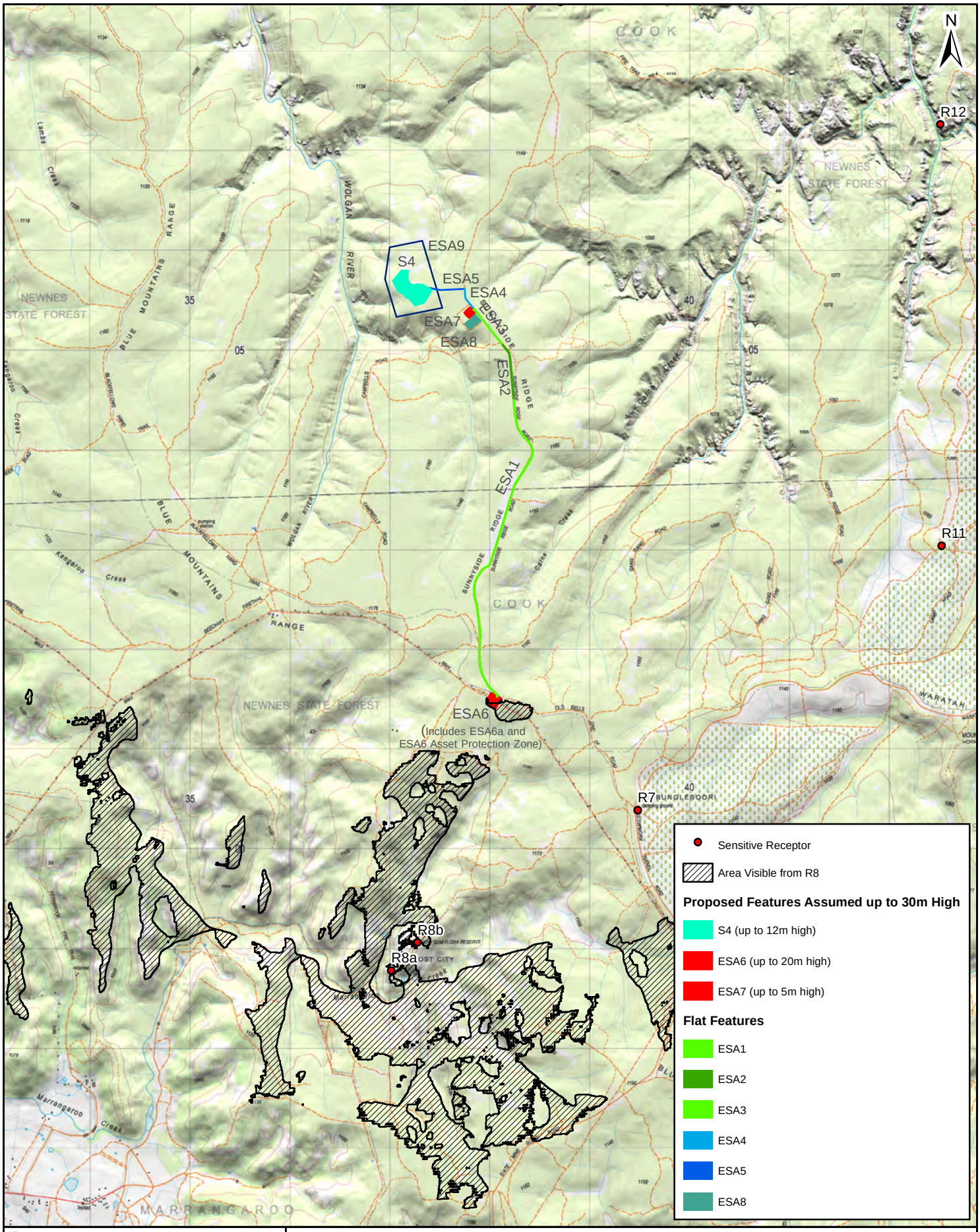

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Visible Area From R8 The Lost City

Figure 10

Project: Angus Place Colliery Ventilation Facility Project

0 0.25 0.5 1 1.5 km

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Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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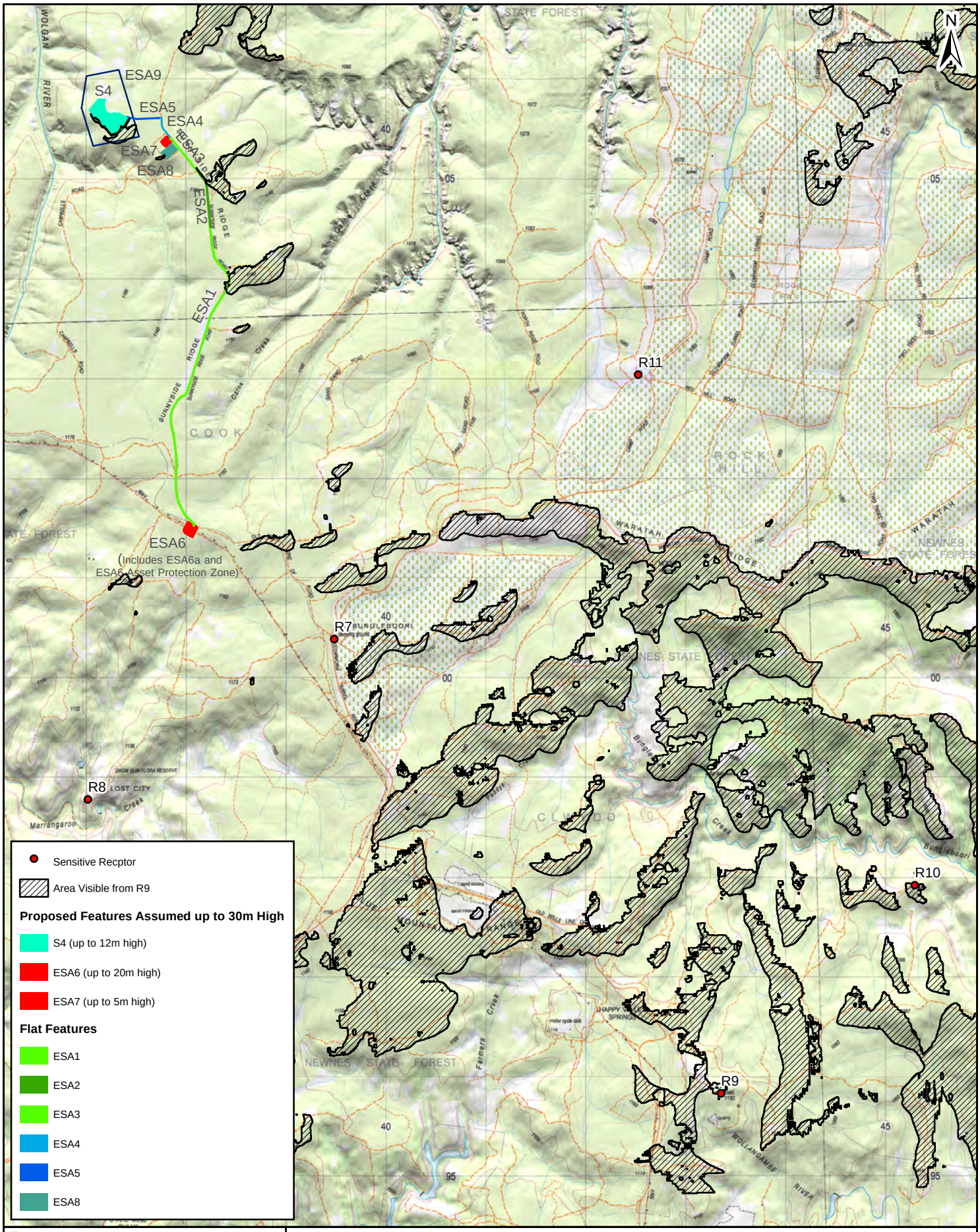
Receptor R8b was included as a worst case scenario where the viewer is located aproximately 400m up hill and back up the road from The Lost City lookout. Both R8a and R8b were modelled and the results combined to form the visible area.



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0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

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Visible Area From R9 Bald Trig

Figure 11

Project: Angus Place Colliery Ventilation Facility Project

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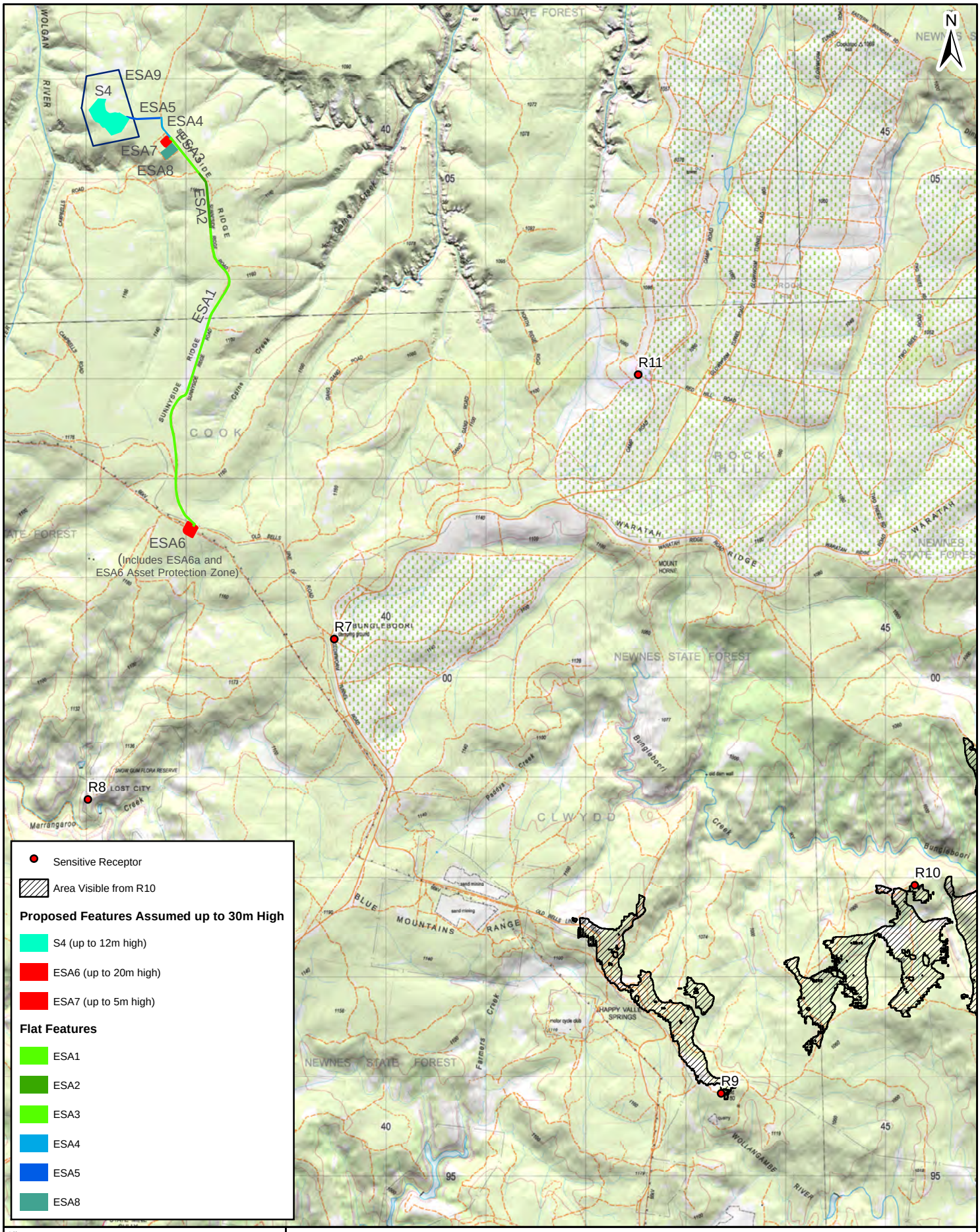

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0 0.25 0.5 1 1.5 km

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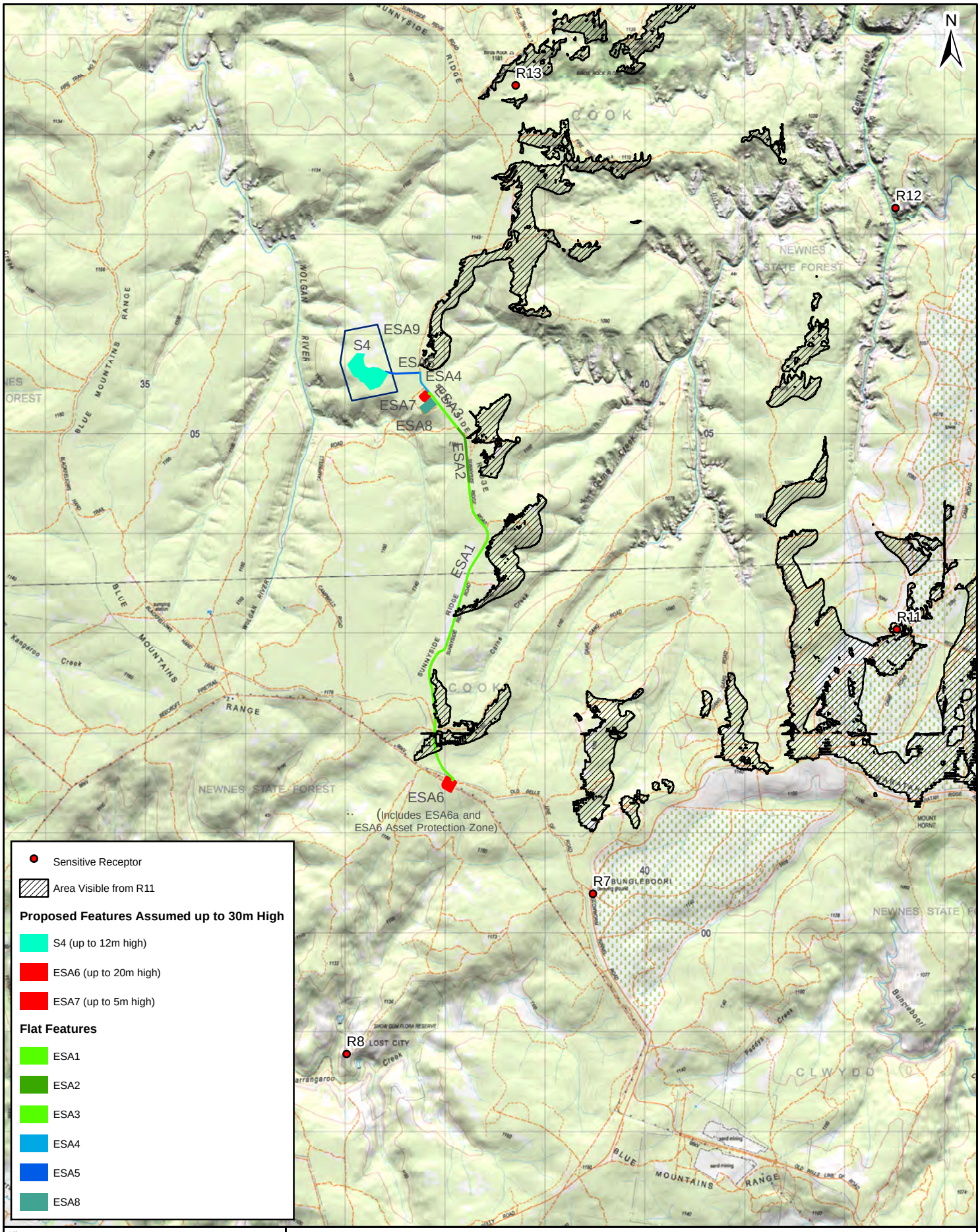
Visible Area From R10 Bungleboori Lookout

Figure 12

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
Background topographic map © Land and Property Management Authority(LPMA), Panorama Avenue Bathurst NSW 2795, www.lpma.nsw.gov.au



Client:	Centennial Coal
Compiled by: TW	Date: 23/07/2012
Approved by: JAK	Date: 23/07/2012

0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

RPS

Visible Area From R11 Carne Creek Shrub Swamp

Figure 13

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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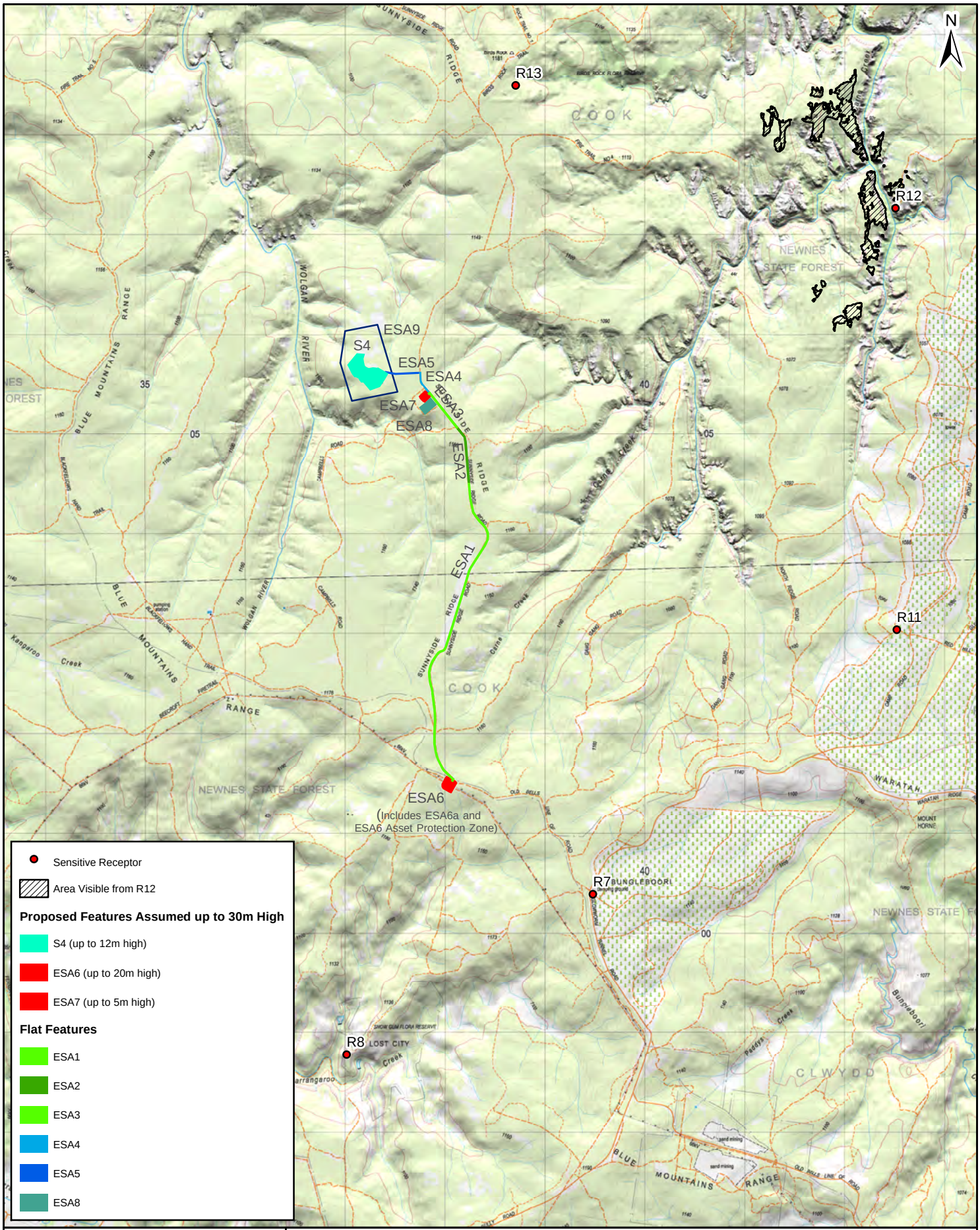

Client:	Centennial Coal
Compiled by: TW	Date: 23/07/2012
Approved by: JAK	Date: 23/07/2012

0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

RPS

Visible Area From R12 Lurlene Jack Lookout

Figure 14

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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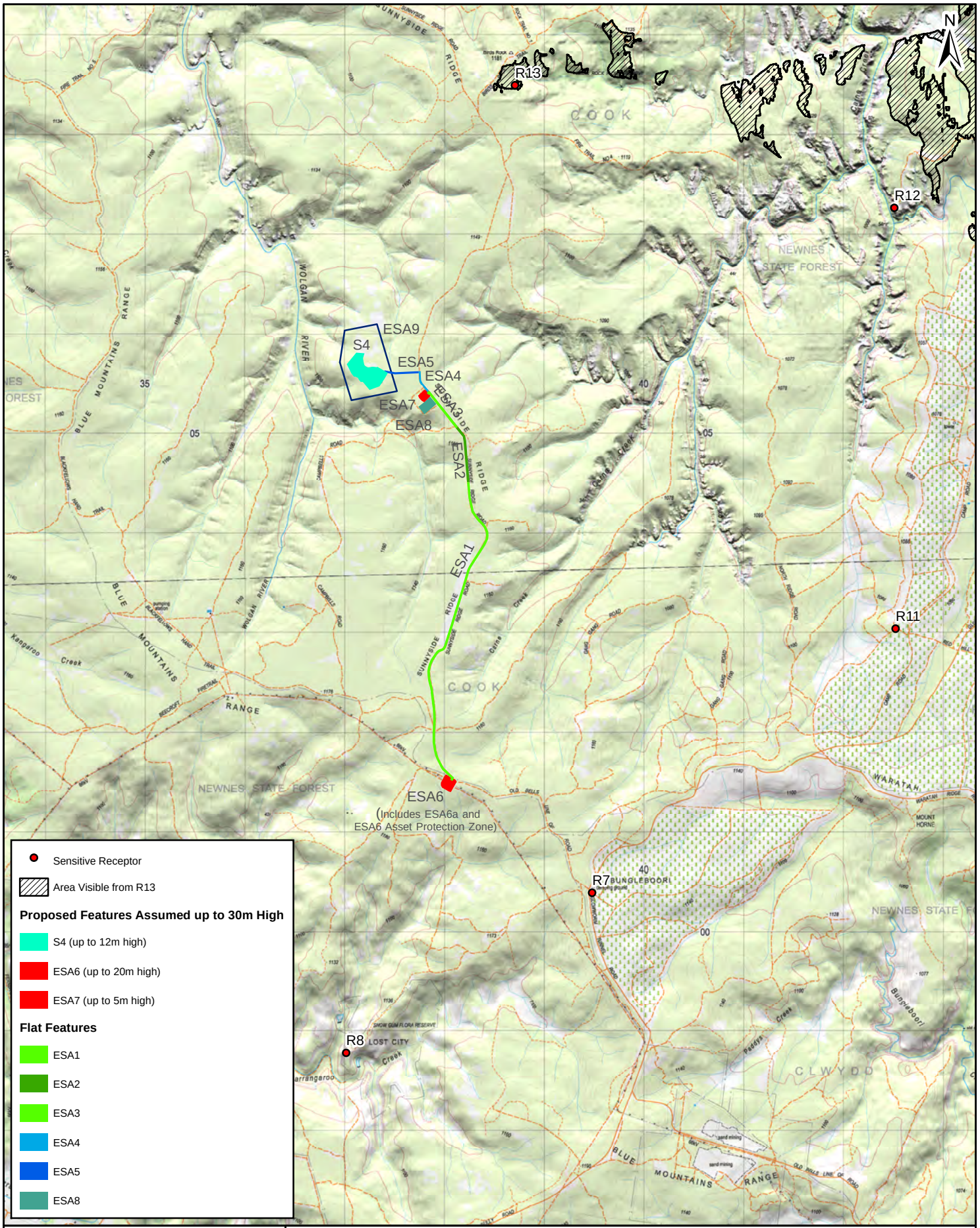


Client:	Centennial Coal		
Compiled by:	TW	Date:	23/07/2012
Approved by:	JAK	Date:	23/07/2012

0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

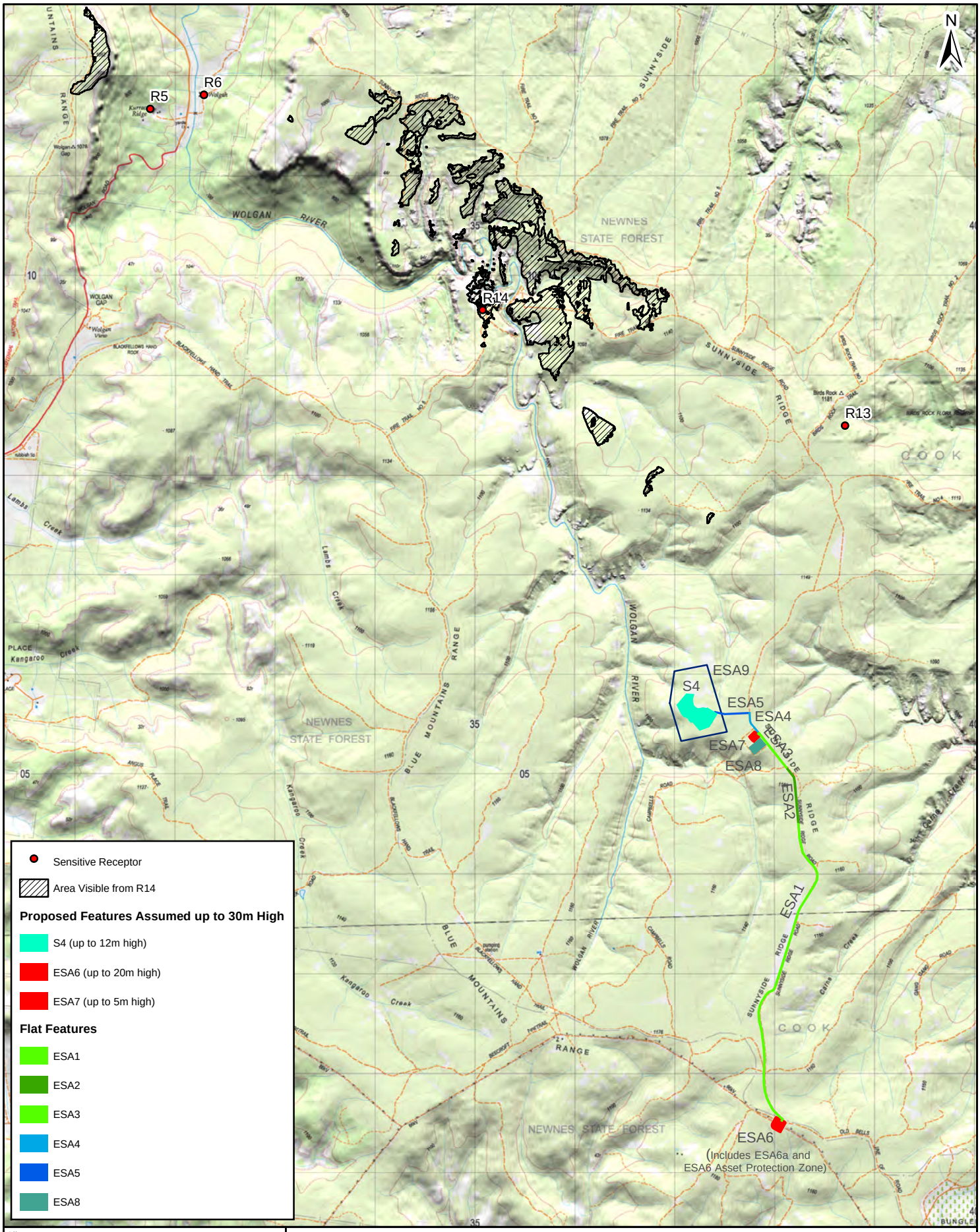
RPS

Visible Area From R13 Birds Rock

Figure 15

Project: Angus Place Colliery Ventilation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
Background topographic map © Land and Property Management Authority(LPMA), Panorama Avenue Bathurst NSW 2795, www.lpma.nsw.gov.au



Client:	Centennial Coal
Compiled by: TW	Date: 23/07/2012
Approved by: JAK	Date: 23/07/2012

0 0.25 0.5 1 1.5 km

Datum / Projection: GDA94 / MGA56

RPS

Visible Area From R14 Wolgan Falls

Figure 16

Project: Angus Place Colliery Ventialation Facility Project

Source: Base topographic data © Commonwealth of Australia (Geoscience Australia) 2006. Visible Area calculated from 2m Contour derived DEM close to proposed infrastructure and 1 Second SRTM Derived Hydrological Digital Elevation Model (DEM-H) Version 1.0 (Geoscience Australia 2011), captured 2000 for regional context.
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