

The approach to the assessment of potential visual impacts has focussed on changes in landform associated with the maximum extent of the visible project components to assess the degree of change in visual catchment associated with the Project relative to existing and approved NPM operations.

### 5.12.1 Existing Visual Amenity

The area surrounding the Project is utilised primarily for broad scale agriculture and includes a number of private residences. The closest private residences vary in distance to the Project Area ranging from approximately 1 kilometre to the east, approximately 2.7 kilometres to the west and approximately 2.8 kilometres to the south of the Project Area boundary as shown on **Figure 5.28**.

Bogan Road is located approximately 1 kilometre to the east of the Project Area; with views of the NPM operations available along extents of Bogan Road (refer to **Figure 5.28**). Other minor roads including Adavale Lane, Five Chains Lane and McClintock's Lane also have existing views of NPM's operations.

The existing night time character of the Project Area and surrounding landscape is rural with scattered residences and night glow from existing NPM operations.

Given the nature of the topography and land use in the Project Area and surrounds there is minimal variation in scenic quality. In general terms, scenic quality is considered to improve with increasing diversity of topographic ruggedness, vegetation patterns, natural and agricultural landscapes and water bodies (Andrews Neil 1999). Scenic quality is typically considered to decrease with views of the built environment (including both urban and industrial development) and areas of extensive earthworks (e.g. mines and quarries).

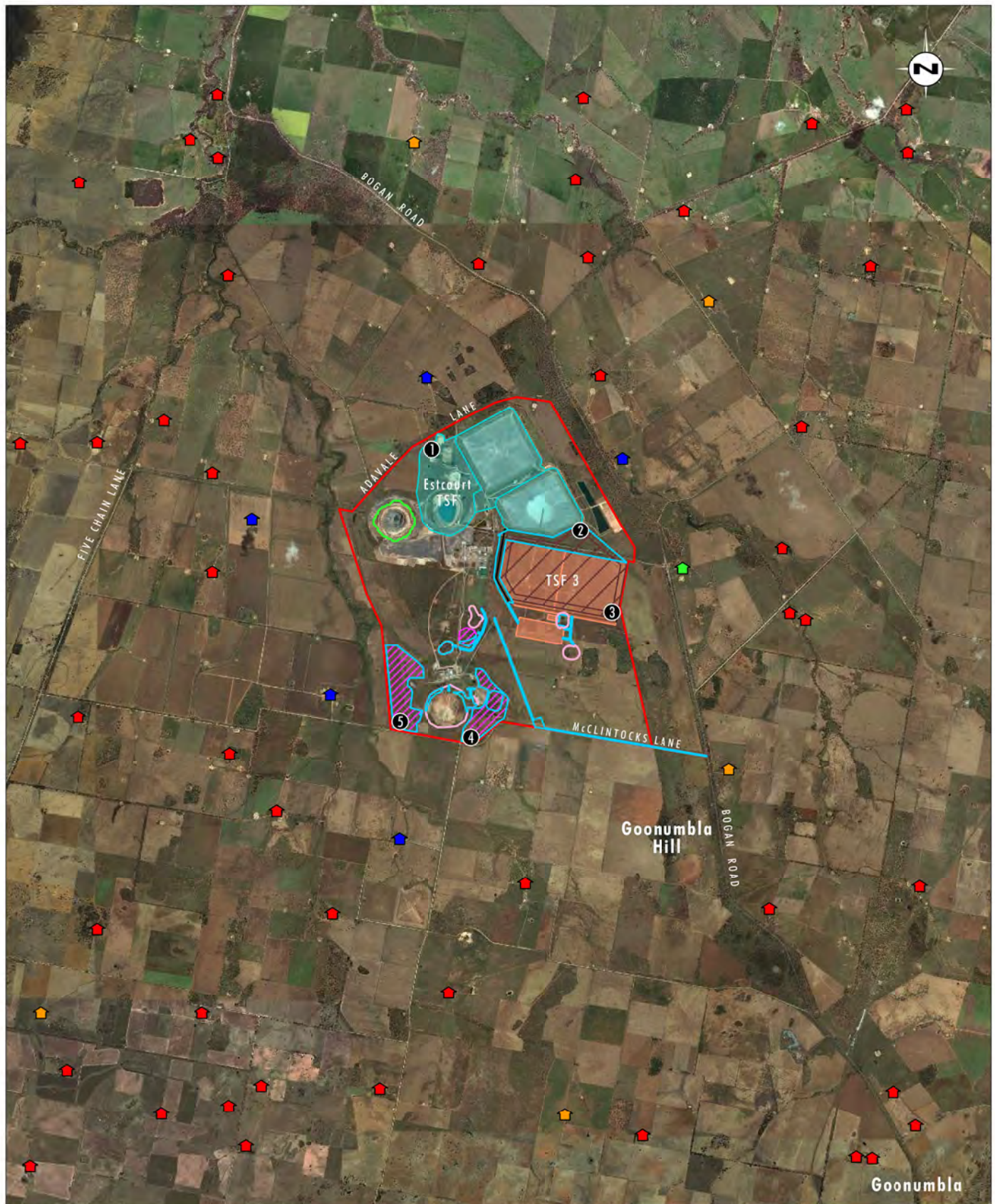
As outlined in **Section 1.2.1**, the topography of the land surrounding the mine site is generally flat and is utilised extensively for dry land cropping. Given the relative low change in relief surrounding the Project Area, there are no specific areas that would provide for increased views of the NPM operations. As such, the views of the existing NPM operations in the surrounding area are variable dependent on the location of the receiver, in particular the relative distance to the Project Area. In addition, the effect of localised features, such as areas of vegetation, particularly along public roads and property margins, and localised areas of topographical relief, will also influence visibility of the Project Area from surrounding areas.

In general terms, the visual catchment of existing and approved NPM operations extends to the immediate area of 1 kilometre to 2 kilometres to the north and north-east, with potential for longer distance views to the west and south of the Project Area of up to 2 kilometres to 6 kilometres from the Project Area boundary (refer to **Figures 5.28 to 5.33**).

### 5.12.2 Visibility of the Project

The underground mining components of the project will occur within previously disturbed areas, and will continue to utilise existing surface infrastructure associated with approved NPM operations. All other surface infrastructure associated with NPM, including ore stockpiling and processing infrastructure, and existing stockpiles will remain unchanged as part of the Project.

Elements of the Project that will be potentially visible from surrounding private residences and public roads are generally limited to the proposed amendments to TSF infrastructure and proposed waste dumps located in the southern extent of the Project Area (refer to **Figure 5.28**).



Source: NPM (2013), Google Earth (2010)

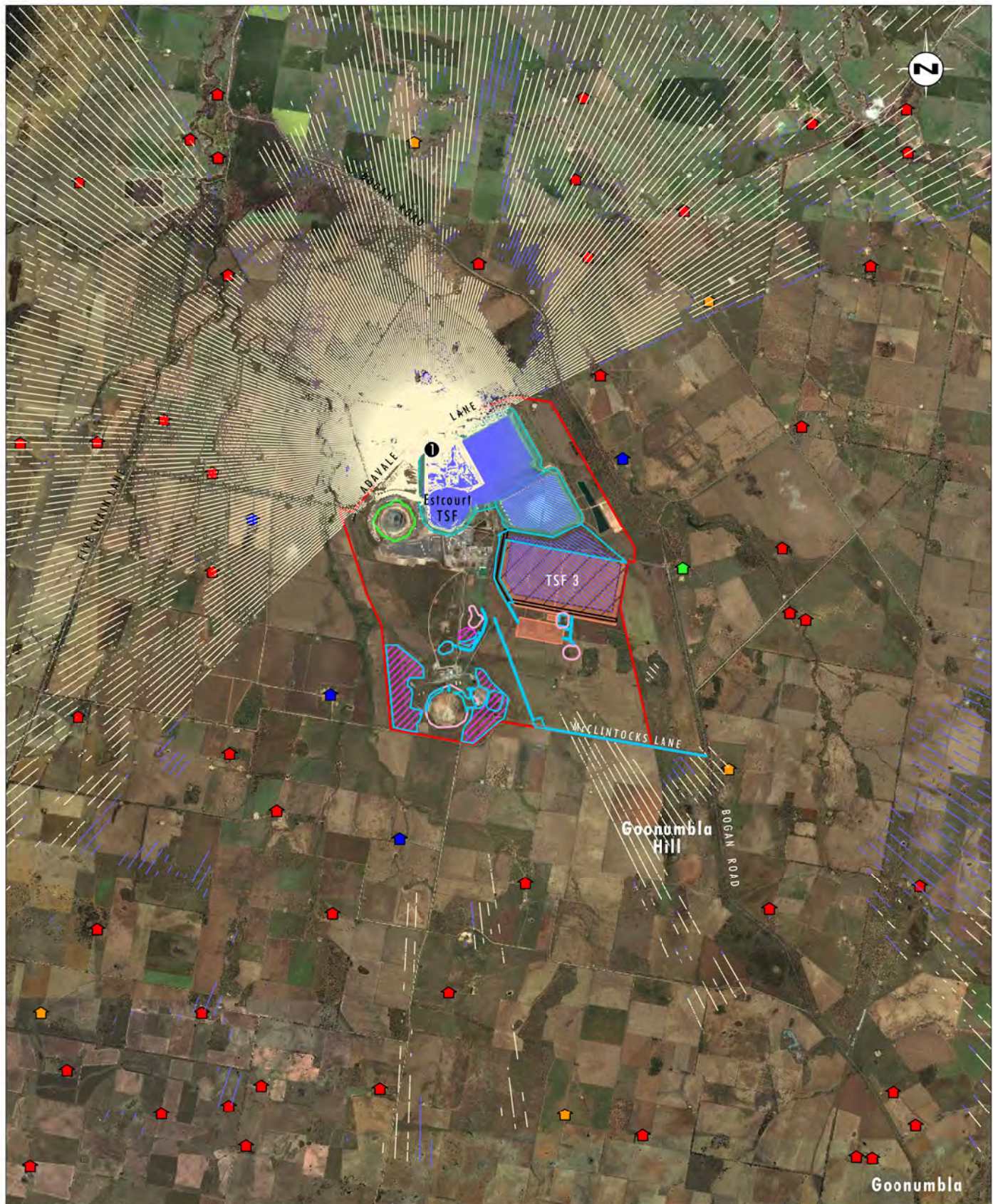
0 1.0 2.5 5.0 km  
1:100 000

### Legend

- |  |  |
|--|--|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Project Area  | <span style="background: repeating-linear-gradient(45deg, transparent, transparent 2px, black 2px, black 4px); display: inline-block; width: 20px; height: 10px;"></span> Proposed Waste Dumps         |
| <span style="border: 1px solid blue; display: inline-block; width: 20px; height: 10px;"></span> Proposed Additional Disturbance Area   | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black;"></span> Visual Assessment Location |
| <span style="background-color: #f08080; display: inline-block; width: 20px; height: 10px;"></span> Approved Tailings Storage Facility (Rosedale)   | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid blue;"></span> Mined Owned Residence       |
| <span style="background-color: #00bfff; display: inline-block; width: 20px; height: 10px;"></span> Existing Tailings Storage Facility  | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid green;"></span> Agreement Residence        |
| <span style="background: repeating-linear-gradient(-45deg, transparent, transparent 2px, black 2px, black 4px); display: inline-block; width: 20px; height: 10px;"></span> Proposed TSF3 | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid orange;"></span> Derelict Residence        |
| <span style="border: 1px solid green; display: inline-block; width: 20px; height: 10px;"></span> New Underground Block Cave Mining Area  | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid red;"></span> Private Residence            |
| <span style="background-color: #ffe0e0; display: inline-block; width: 20px; height: 10px;"></span> Proposed Open Cut Areas   |  |

FIGURE 5.28  
Radial Analysis  
Locations





Source: NPM (2013), Google Earth (2010)

0 1.0 2.5 5.0 km  
1:100 000

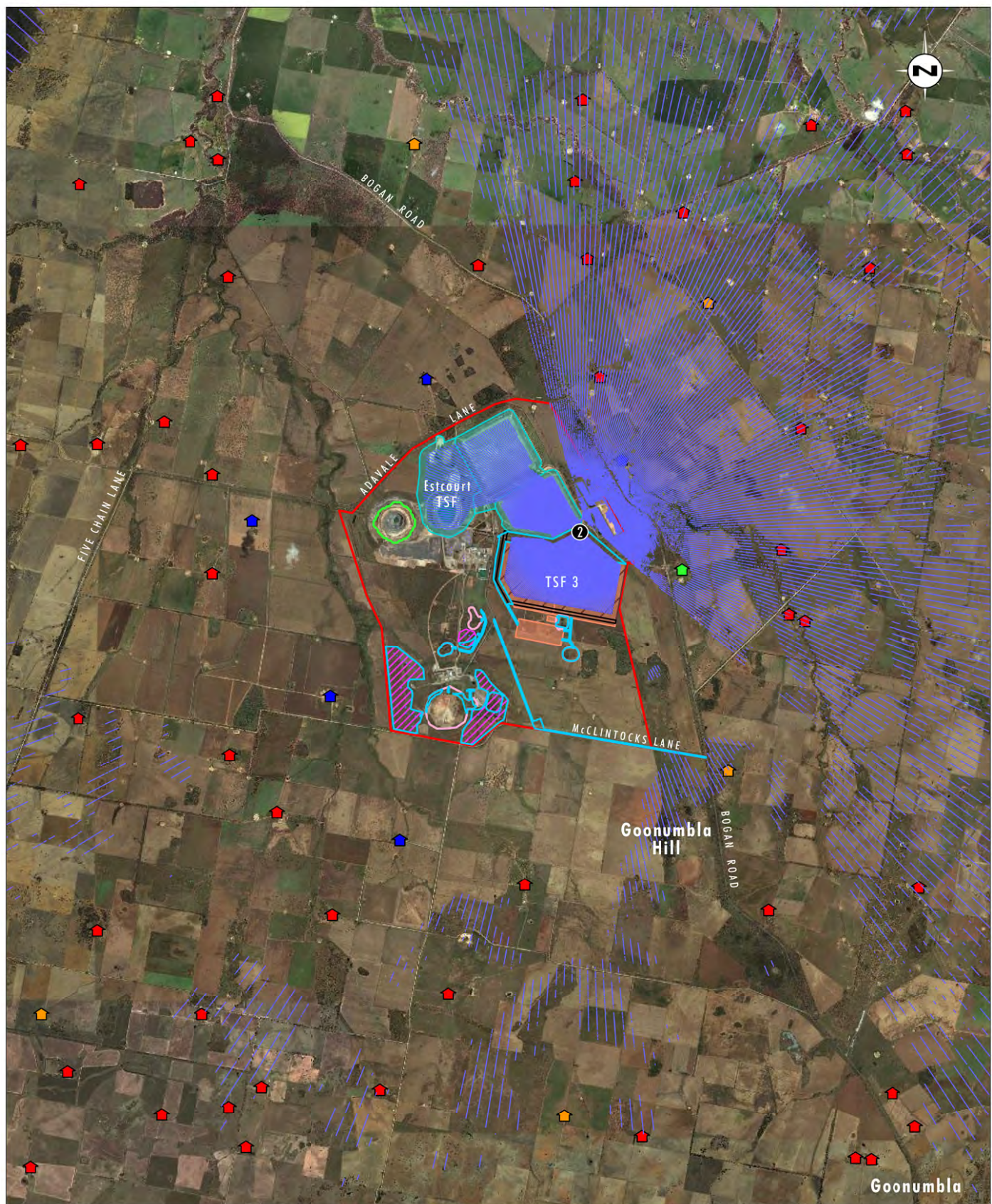
#### Legend

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|--|---|--|
| <span style="border: 2px solid red; padding: 2px;"> </span> Project Area   | <span style="background-color: #ffccff; border: 1px solid red; padding: 2px;"> </span> Proposed Waste Dumps | <span style="color: red;">■</span> Private Residence |
| <span style="border: 2px solid blue; padding: 2px;"> </span> Proposed Additional Disturbance Area                                    | <span style="color: black;">●</span> Visual Assessment Location   |  |
| <span style="background-color: #ffccff; border: 1px solid red; padding: 2px;"> </span> Approved Tailings Storage Facility (Rosedale) | <span style="color: blue;">—</span> Visual Catchment-Approved Operations                                    |  |
| <span style="background-color: #ccffcc; border: 1px solid blue; padding: 2px;"> </span> Existing Tailings Storage Facility           | <span style="color: blue;">—</span> Visual Catchment-Proposed Operations                                    |  |
| <span style="background-color: #ffccff; border: 1px solid red; padding: 2px;"> </span> Proposed TSF3                                 | <span style="color: blue;">■</span> Mined Owned Residence   |  |
| <span style="background-color: #ccffcc; border: 1px solid blue; padding: 2px;"> </span> New Underground Block Cave Mining Area       | <span style="color: green;">■</span> Agreement Residence  |  |
| <span style="background-color: #ffccff; border: 1px solid red; padding: 2px;"> </span> Proposed Open Cut Areas                       | <span style="color: orange;">■</span> Derelict Residence  |  |

FIGURE 5.29

Existing and  
Proposed Landform  
Radial Analysis Location 1





Source: NPM (2013), Google Earth (2010)

0 1.0 2.5 5.0km  
1:100 000

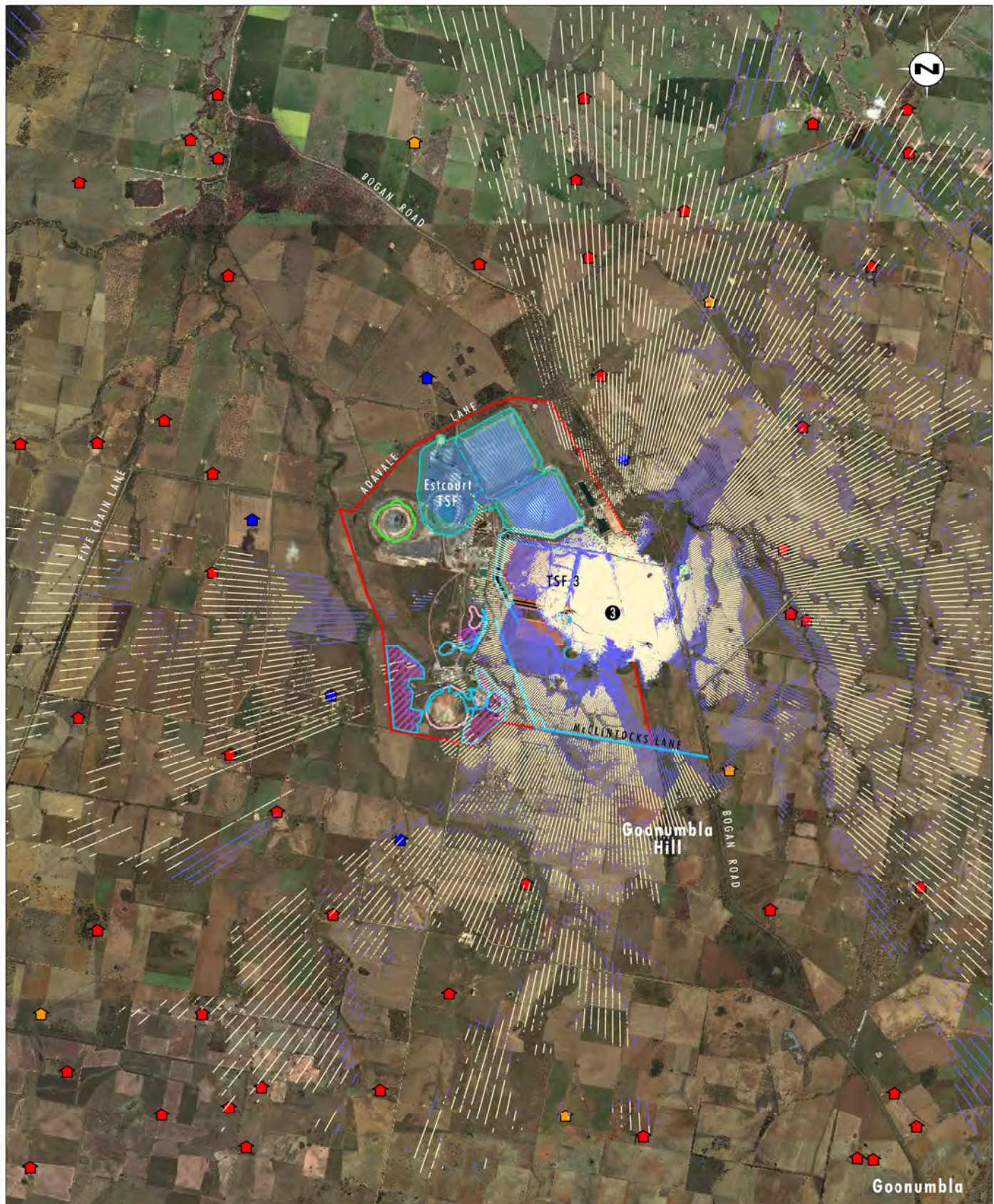
#### Legend

- |  |  |
|--|--|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Project Area  | <span style="background-color: pink; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Proposed Waste Dumps  |
| <span style="border: 1px solid blue; display: inline-block; width: 20px; height: 10px;"></span> Proposed Additional Disturbance Area                                     | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black;"></span> Visual Assessment Location |
| <span style="background-color: orange; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Approved Tailings Storage Facility (Rosedale) | <span style="border: 1px solid blue; display: inline-block; width: 20px; height: 10px;"></span> Visual Catchment-Proposed Operations   |
| <span style="background-color: cyan; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Existing Tailings Storage facility              | <span style="color: blue;">■</span> Mined Owned Residence  |
| <span style="background-color: lightblue; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Proposed TSF3                              | <span style="color: green;">■</span> Agreement Residence   |
| <span style="background-color: lightgreen; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> New Underground Block Cave Mining Area    | <span style="color: orange;">■</span> Derelict Residence   |
| <span style="background-color: pink; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Proposed Open Cut Areas                         | <span style="color: red;">■</span> Private Residence   |

FIGURE 5.30

Proposed TSF 3 Extension  
Radial Analysis  
Location 2





Source: NPM (2013), Google Earth (2010)

0 1.0 2.5 5.0 km  
1:100 000

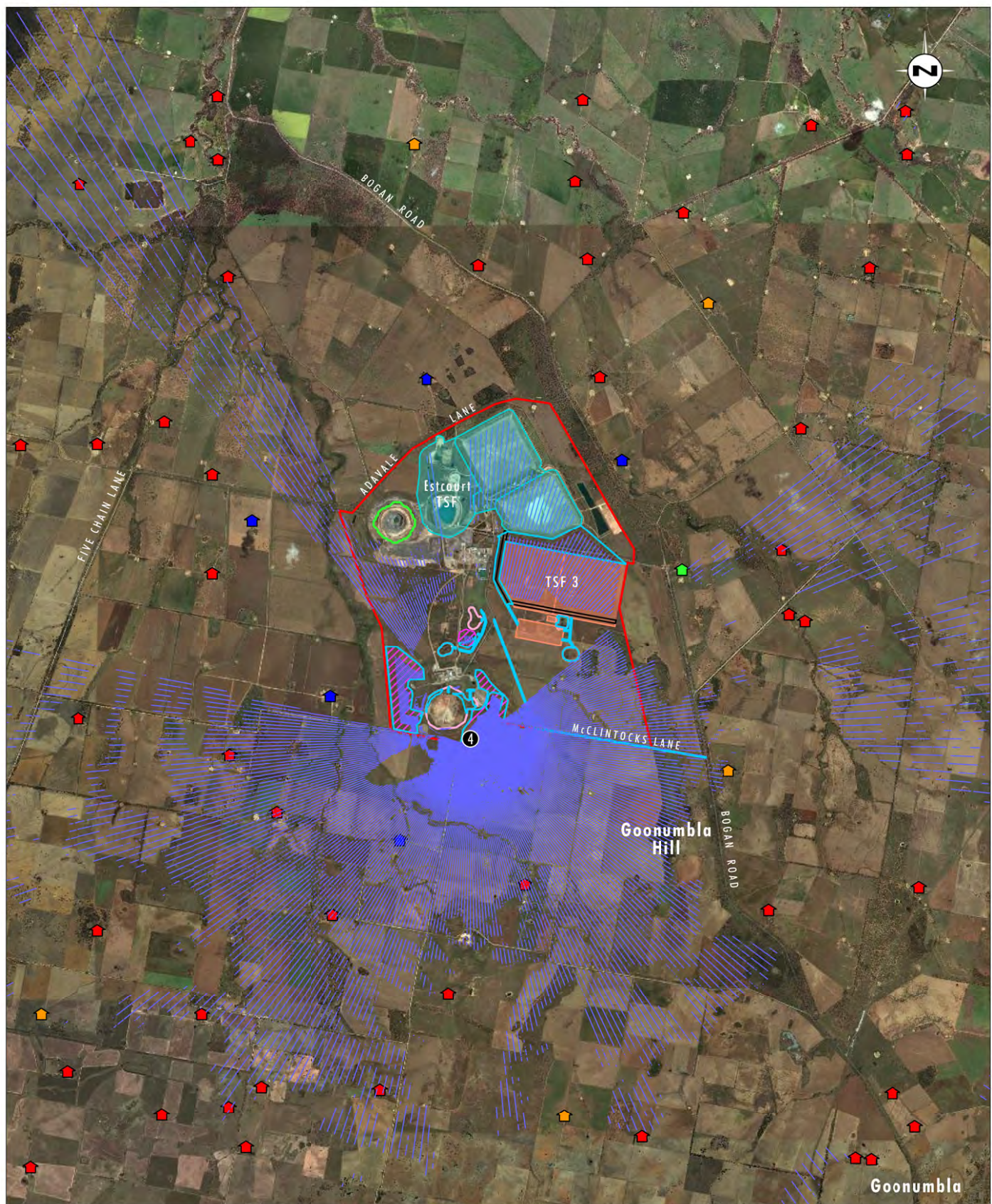
### Legend

- |   |  |  |
|---|--|--|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Project Area   | <span style="background-color: #ffccff; border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Proposed Waste Dumps | <span style="color: red;">■</span> Private Residence |
| <span style="border: 1px solid blue; display: inline-block; width: 20px; height: 10px;"></span> Proposed Additional Disturbance Area                                    | <span style="color: black;">●</span> Visual Assessment Location  |  |
| <span style="background-color: #ffccff; border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Approved Tailings Storage Facility (Rosedale) | <span style="color: blue;">—</span> Visual Catchment-Approved Operations   |  |
| <span style="background-color: #ccffcc; border: 1px solid green; display: inline-block; width: 20px; height: 10px;"></span> Existing Tailings Storage Facility          | <span style="color: blue;">—</span> Visual Catchment-Proposed Operations   |  |
| <span style="background-color: #ffccff; border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Proposed TSF3                                 | <span style="color: blue;">■</span> Mined Owned Residence  |  |
| <span style="background-color: #ccffcc; border: 1px solid green; display: inline-block; width: 20px; height: 10px;"></span> New Underground Block Cave Mining Area      | <span style="color: green;">■</span> Agreement Residence   |  |
| <span style="background-color: #ffccff; border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Proposed Open Cut Areas                       | <span style="color: orange;">■</span> Derelict Residence   |  |

FIGURE 5.31

Existing and Proposed TSF 3  
Radial Analysis  
Location 3





Source: NPM (2013), Google Earth (2010)

0 1.0 2.5 5.0 km  
1:100 000

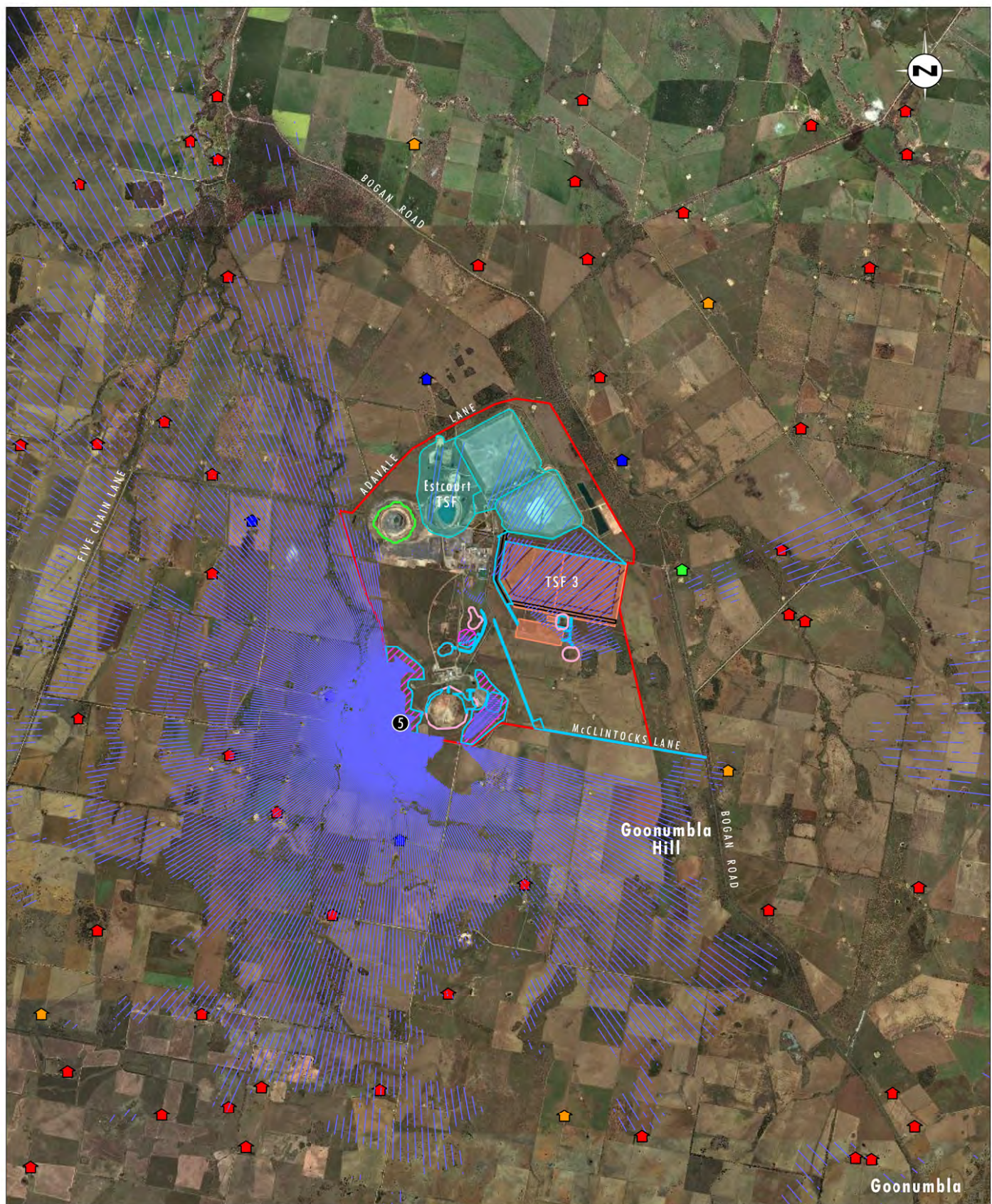
#### Legend

- |  |   |
|--|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Project Area  | <span style="background: repeating-linear-gradient(45deg, transparent, transparent 2px, blue 2px, blue 4px); display: inline-block; width: 20px; height: 10px;"></span> Proposed Waste Dumps                    |
| <span style="border: 1px solid cyan; display: inline-block; width: 20px; height: 10px;"></span> Proposed Additional Disturbance Area   | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black;"></span> Visual Assessment Location          |
| <span style="background-color: #f08080; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Approved Tailings Storage Facility (Rosedale)              | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid blue;"></span> Visual Catchment-Proposed Operations |
| <span style="background-color: #90ee90; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Existing Tailings Storage facility                         | <span style="display: inline-block; width: 10px; height: 10px; background-color: #4682b4; border: 1px solid black;"></span> Mined Owned Residence   |
| <span style="background: repeating-linear-gradient(-45deg, transparent, transparent 2px, blue 2px, blue 4px); display: inline-block; width: 20px; height: 10px;"></span> Proposed TSF3 | <span style="display: inline-block; width: 10px; height: 10px; background-color: #90ee90; border: 1px solid black;"></span> Agreement Residence   |
| <span style="border: 1px solid green; display: inline-block; width: 20px; height: 10px;"></span> New Underground Block Cave Mining Area  | <span style="display: inline-block; width: 10px; height: 10px; background-color: #ffa500; border: 1px solid black;"></span> Derelict Residence  |
| <span style="border: 1px solid pink; display: inline-block; width: 20px; height: 10px;"></span> Proposed Open Cut Areas  | <span style="display: inline-block; width: 10px; height: 10px; background-color: #ff0000; border: 1px solid black;"></span> Private Residence   |

FIGURE 5.32

Proposed Waste Stockpile  
Radial Analysis  
Location 4





Source: NPM (2013), Google Earth (2010)

0 1.0 2.5 5.0 km  
1:100 000

#### Legend

- |  |   |
|--|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Project Area  | <span style="background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); display: inline-block; width: 20px; height: 10px;"></span> Proposed Waste Dumps                      |
| <span style="border: 1px solid blue; display: inline-block; width: 20px; height: 10px;"></span> Proposed Additional Disturbance Area   | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid black;"></span> Visual Assessment Location          |
| <span style="background-color: orange; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Approved Tailings Storage Facility (Rosedale)             | <span style="display: inline-block; width: 0; height: 0; border-left: 5px solid transparent; border-right: 5px solid transparent; border-bottom: 10px solid blue;"></span> Visual Catchment-Proposed Operations |
| <span style="background-color: cyan; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Existing Tailings Storage facility                          | <span style="display: inline-block; width: 10px; height: 10px; background-color: blue; border: 1px solid black;"></span> Mined Owned Residence  |
| <span style="background: repeating-linear-gradient(-45deg, transparent, transparent 2px, red 2px, red 4px); display: inline-block; width: 20px; height: 10px;"></span> Proposed TSF3 | <span style="display: inline-block; width: 10px; height: 10px; background-color: green; border: 1px solid black;"></span> Agreement Residence   |
| <span style="background-color: green; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> New Underground Block Cave Mining Area                     | <span style="display: inline-block; width: 10px; height: 10px; background-color: orange; border: 1px solid black;"></span> Derelict Residence   |
| <span style="background-color: pink; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Proposed Open Cut Areas                                     | <span style="display: inline-block; width: 10px; height: 10px; background-color: red; border: 1px solid black;"></span> Private Residence   |

FIGURE 5.33

Proposed Waste Dump  
Radial Analysis  
Location 5