
DURALIE PROJECT
LIGHTING MANAGEMENT PLAN

DECEMBER 2002

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Figure 1 DCM General Arrangement

1 INTRODUCTION

This Lighting Management Plan outlines management procedures for the control of light emissions associated with the Duralie Open Cut Coal Mine (Duralie Project), under development by Duralie Coal Pty Limited (DCPL).

This Plan summarises the Duralie Project light generating activities, identifies light spill mitigation measures and considers management procedures for the potential impacts. The general arrangement of the Duralie Project is shown on Figure 1.

The potential for light associated impacts from the Duralie Project is generally considered to be low but may be moderate in some local situations.

2 DURALIE PROJECT DEVELOPMENT CONSENT

“36 Flood Lighting”

The Applicant shall prepare an engineering report on lighting impacts from the operation of the mine and submit for Great Lakes Council’s approval prior to any use of night lighting. The report shall identify:

- a) all potential light sources and their impacts upon residences in the vicinity of the mine operations;
and
- b) technical measures and work practices necessary to minimise the spillage of light from immediate areas to be illuminated and to minimise the total night glow from the operations.

3 POTENTIAL LIGHT EMISSION RECIPIENTS

There are four categories of potential recipients of light emissions from DCPL operations:

- people residing in nearby private residences along Johnsons Creek Road;
- passers-by on Johnson Creek Road;
- rail passengers on the North Coast Railway; and
- people residing in the general vicinity of the mine.

Privately Owned Residences Along Johnson Creek Road

Direct views of mine lighting will generally be avoided by careful placement and orientation of individual lights. Existing and proposed landforms, particularly Tombstone Hill, together with vegetation will block direct views of the lights from residences not owned by DCPL.

The mine lighting is expected to create a glow in the night sky that will be visible to residents along Johnson Creek Road.

Passers-by on Johnson Creek Road

Direct views of lighting associated with night time operations will generally be blocked by existing and proposed landforms and vegetation, though it will be visible in some sections particularly at the point Johnson Creek Road lies due east and within 0.5km of the mine operation.

A general site glow will emanate from the mine site and be quite obvious to persons travelling along Johnson Creek Road, particularly when adjacent to operations.

Rail Passengers on the North Coast Railway

There is a significant potential for views of night lighting for rail passengers due to the close proximity of the railway line to the mining operations. However, this will be mitigated by the use of directional lighting and early construction of the lower slopes of the out-of-pit waste dump waste which will be located between the rail line and the open cut excavation.

People Residing in the General Vicinity of the Mine

It is anticipated that night time operations of the Duralie Project will produce a night sky glow that will be similar to that associated with existing towns and villages in the region.

4 ANTICIPATED LIGHT SOURCES

- Portable generator towers used to illuminate working areas of the waste emplacements and open cut. Lighting towers will be repositioned as required;
- Fixed lighting on mobile plant (haul trucks, grader, excavator, dozer, light vehicles);
- Lighting from towers within the run-of-mine (ROM) coal storage and handling area (2 lamps with a mounting height of 24m);
- Lighting at the maintenance workshop;
- Lighting mounted on the rail load out bin (a combination of low wattage fluorescent light fittings on the bin support structure and higher wattage light fittings in the area of rail car loading); and
- Lighting mounted along the rail load out bin feeder conveyor (low wattage fluorescent light fittings).

5 MITIGATION MEASURES

Measures to reduce potential light impacts on the surrounding area include the following:

- Lighting of operational areas (ie. waste emplacements and open cut) will be served by directional lighting only (ie. oriented to a specific area);
- Lighting will be screened (shielded) where necessary to limit spillage to adjacent residences and to eliminate driver glare along Johnson Creek Road;

- waste emplacements and tree planting will further reduce potential lighting spillage, in particular towards the Doherty and Hattan residences;
- Haul trucks will operate with dipped headlights;
- No trains leaving site after 9pm or before 6am (locomotive light);
- Limited use of fixed lighting within the train load out bin area due to the restriction on trains leaving the site; and
- The DCPL complaints register will record lighting related complaints. This will allow any such complaints to be documented and appropriately actioned.

6 MONITORING AND REPORTING

Lighting emissions to the surrounding area would be periodically monitored and the effectiveness of control measures, light emission monitoring and complaints received would be reported in the Annual Environmental Management Report.

7 REFERENCES

Duralie Coal Pty Limited (1996) *Duralie Coal Project Environmental Impact Statement*.

NSW Department of Urban Affairs and Planning (1999) *Duralie Coal Pty Limited Development Consent Conditions*.

FIGURE

