1. Introduction

1.1 Background

Compass Resources NL (Compass) is proposing the development of the Browns Oxide Project, located in the Northern Territory approximately 65 km south of Darwin and 7 km northwest of Batchelor (Figure 1.1). Compass proposes to utilise open cut mining methods and a conventional hydrometallurgical process to extract oxide ore and produce copper, cobalt and nickel over four years. The project is located on granted mineral leases (MLN 139 to 147 and MLN 150 to 152 inclusive) near to, but separate from, former mining areas at Rum Jungle. These leases (175 ha in total) comprise the 'project area', with the actual footprint of project components being 90 ha. Although the Rum Jungle Mine, which operated from 1954 to 1971, produced both uranium and copper, uranium levels in the Browns Oxide deposit are very low[1] and uranium will not be produced as part of the development.

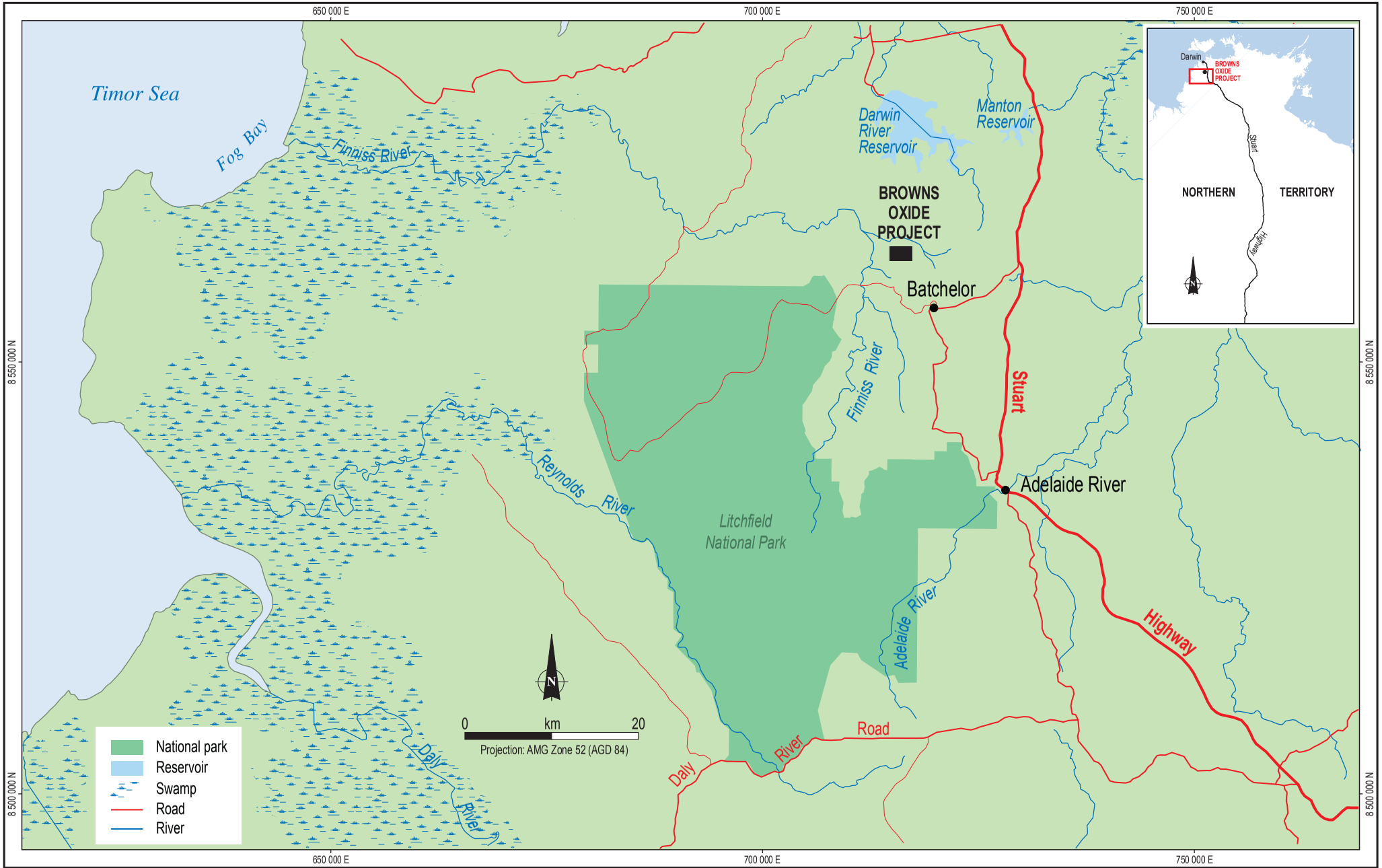
This Public Environmental Report (PER) addresses the environmental and social impacts of, and management strategies for, the Browns Oxide Project. Preparation of the report is based on guidelines prepared by the Office of Environment and Heritage (OEH)[2] following a determination by the Northern Territory Government that a PER was the appropriate level of assessment required under the Northern Territory *Environmental Assessment Act* (EA Act). Following submission of a referral to the Commonwealth Department of the Environment and Heritage (DEH), the project was deemed a 'controlled action' under the *Environment Protection and Biodiversity Conservation Act 1999*. The PER therefore addresses Commonwealth requirements as they relate to this project, as required by the bilateral agreement between the Northern Territory and the Commonwealth (see Chapter 2).

Although the area surrounding the project contains other prospects, e.g., the adjacent Browns East (immediately next to the project area), Area 55 (3 km to the southwest) and Mt Fitch (6 km to the north), any future development of these by Compass will be subject to separate evaluation and permitting. The Browns polymetallic sulfide deposit underlying the Browns oxide ore (see Section 1.2) will also require separate environmental approvals if it is to proceed in the future.

---

[1] Less than the regulatory exemption level of 1 Bq/g of any naturally occurring radionuclide other than ^{40}K.

[2] OEH is part of the Northern Territory Department of Natural Resources, Environment and the Arts (DNRETA).



enesar people and place	Job No: 836	Compass Resources NL	Figure No: 1.1
	File No: 836_08_F1.01_HB	Browns Oxide Project	Project location

1.2 Project History

Evaluation of the Browns Oxide Project area was part of an extensive mineral exploration program covering a wide area during the mid twentieth century. The base-metal potential of the project was recognised in the 1950s, with the Browns copper-lead-cobalt deposit being evaluated by Rio Tinto in the mid 1960s.

Compass commenced its involvement in the project in the late 1980s and this culminated in the purchase of the mineral leases from Rio Tinto in 1994. Compass has undertaken extensive work at Browns including a prefeasibility study for a large sulfide ore project, i.e., the Browns Polymetallic Project, which included resources below the present Browns Oxide Project. Over A$12M has been spent on the project since 1997. The sulfide ore project was suspended following the prefeasibility study due to its capital cost being too high for Compass to fund in its own right at the low metal prices prevalent at the time. However, associated metallurgical and engineering work indicated that the smaller and lower-cost Browns Oxide Project, which is the subject of this PER, would be a robust and profitable project that could be financed by Compass.

Compass has therefore committed to completing outstanding testwork and updating the financial model for the Browns Oxide Project, and intends to make a construction decision in the fourth quarter of 2005.

1.3 Project Objectives

The primary project objective is to mine and process oxide ore from the Browns deposit on a profitable basis, where this will involve:

- A conventional 1,000,000 t/a agitated leach operation producing approximately 10,000 t/a copper.
- Production of 1,000 t/a contained cobalt and 700 t/a contained nickel as hydroxides or sulfides.
- A project life of four years.
- Production to commence in the second half of 2006.

This primary objective will be achieved within a framework defined by the project's environmental and socio-economic objectives, which are to:

- Plan, operate and decommission the project in a manner that is consistent with good industry practice and in compliance with the conditions and standards prescribed by the Northern Territory and, where applicable, Commonwealth governments.
- Ensure that beneficial impacts associated with the development are maximised while at the same time minimising adverse impacts.

1.4 Project Proponent

The proponent for the Browns Oxide Project is Compass (ABN 51 010 536 820). Compass is the operator of an unincorporated joint venture between Compass and Guardian Resources NL, each having a right to 90% and 10%, respectively, of the project.

Compass is a Sydney-based Australian mineral exploration company that is listed on the Australian Stock Exchange (ASX code CMR). The company has interests in gold, copper and base metal deposits in the Northern Territory and New South Wales, as well as a project in Peru.

1.5 Report Structure

This PER comprises:

- An executive summary that provides a summary of the project.
- The main report (this report) which is intended to be understood without references to the technical reports on which it is based.
- A series of supporting studies (ten in total) whose content is represented in the main report.

The main report comprises 12 chapters and a table of contents that outlines figures, tables and plates in the relevant chapters. The format of the main report is:

Chapter 1 (this chapter)—background, project history, project objectives and project proponent.

Chapter 2—legislative framework (including international conventions, national policies, and codes of practice).

Chapter 3—environmental context (from a generally regional perspective).

Chapter 4—detailed description of the proposed project.

Chapter 5—description of alternatives considered during project design and planning.

Chapter 6—description of consultation undertaken by Compass to date and the proposed consultation program.

Chapter 7—assessment of the existing environment, key issues, avoidance/ management/mitigation measures and residual impacts.

Chapter 8—preliminary hazard analysis and risk assessment (from a broad, strategic perspective).

Chapter 9—description (at the conceptual level) of Compass' proposed environmental management measures and monitoring activities and a summary table of commitments made in the report (these are denoted by '[C]' where they appear in the report).

Chapter 10—bibliographic details of each reference used in the PER.

Chapter 11—details of the study team.

Chapter 12—glossary.

The supporting studies (Table 1.1) were commissioned to identify potential impacts and strategies for minimising or ameliorating those impacts, and to assist in the project design, as described in this PER.

Table 1.1 Studies and investigations that support the PER

Topic	Author	Appendix
Air quality and noise	Holmes Air Sciences	1
Water quality and biology	Enesar Consulting Pty Ltd	2
Groundwater	Coffey Geosciences Pty Ltd	3
Fauna	Ecological Management Services Pty Ltd (EMS)	4
Flora (2005 survey)	J. Egan	5A
Flora (2002 survey)	K. Metcalfe	5B
Archaeology and heritage	Begnaze Pty Ltd	6
Radiation	Australian Nuclear Science and Technology Organisation (ANSTO)	7
Tailing management	Australian Tailings Consultants (ATC)	8
Waste rock geochemistry	Environmental Geochemistry International Pty Ltd (EGi)	9

1.6 Report Conventions

The Browns Oxide Project is a development proposal and its implementation is conditional on a number of factors such as project approvals and successfully raising the required finance. For reason of style, however, the project and related proposed activities have been described in the active mood 'will' rather than 'would'.

At the time of PER preparation, the project engineering design was yet to be finalised. The PER therefore incorporates engineering design up to the 15 August 2005.