

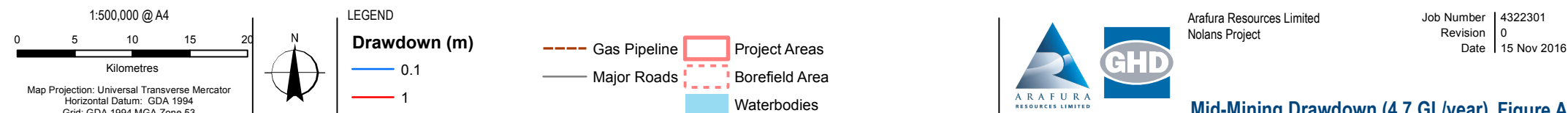
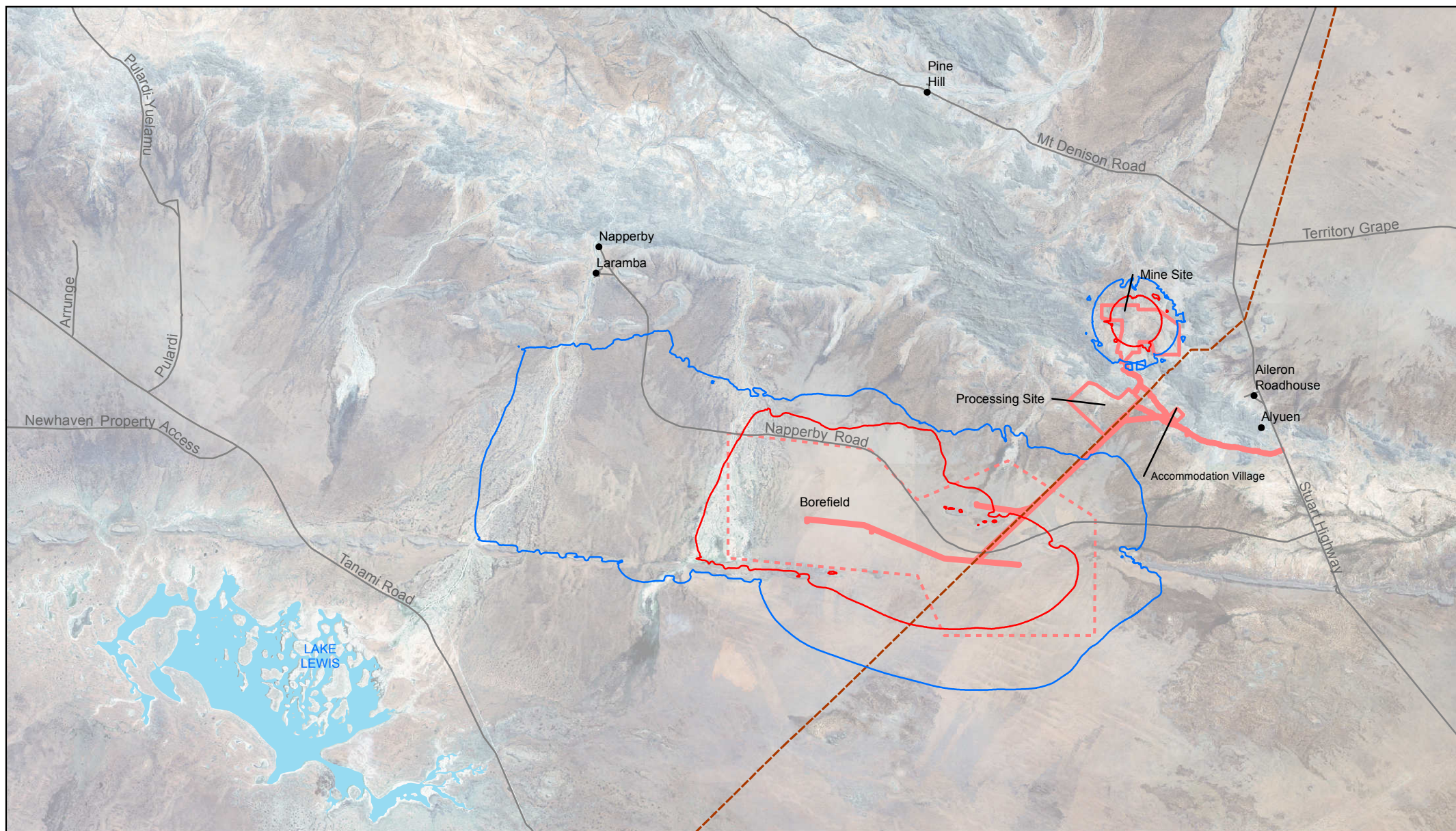
Appendix 10 EIS Groundwater Models (139, 307, 400) (GHD 2016)

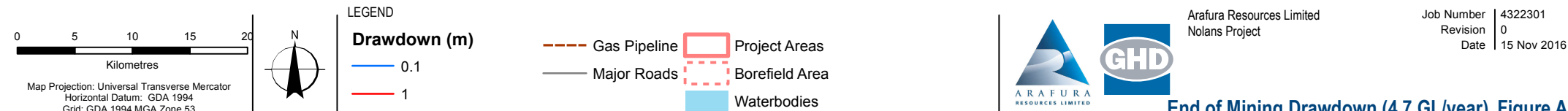
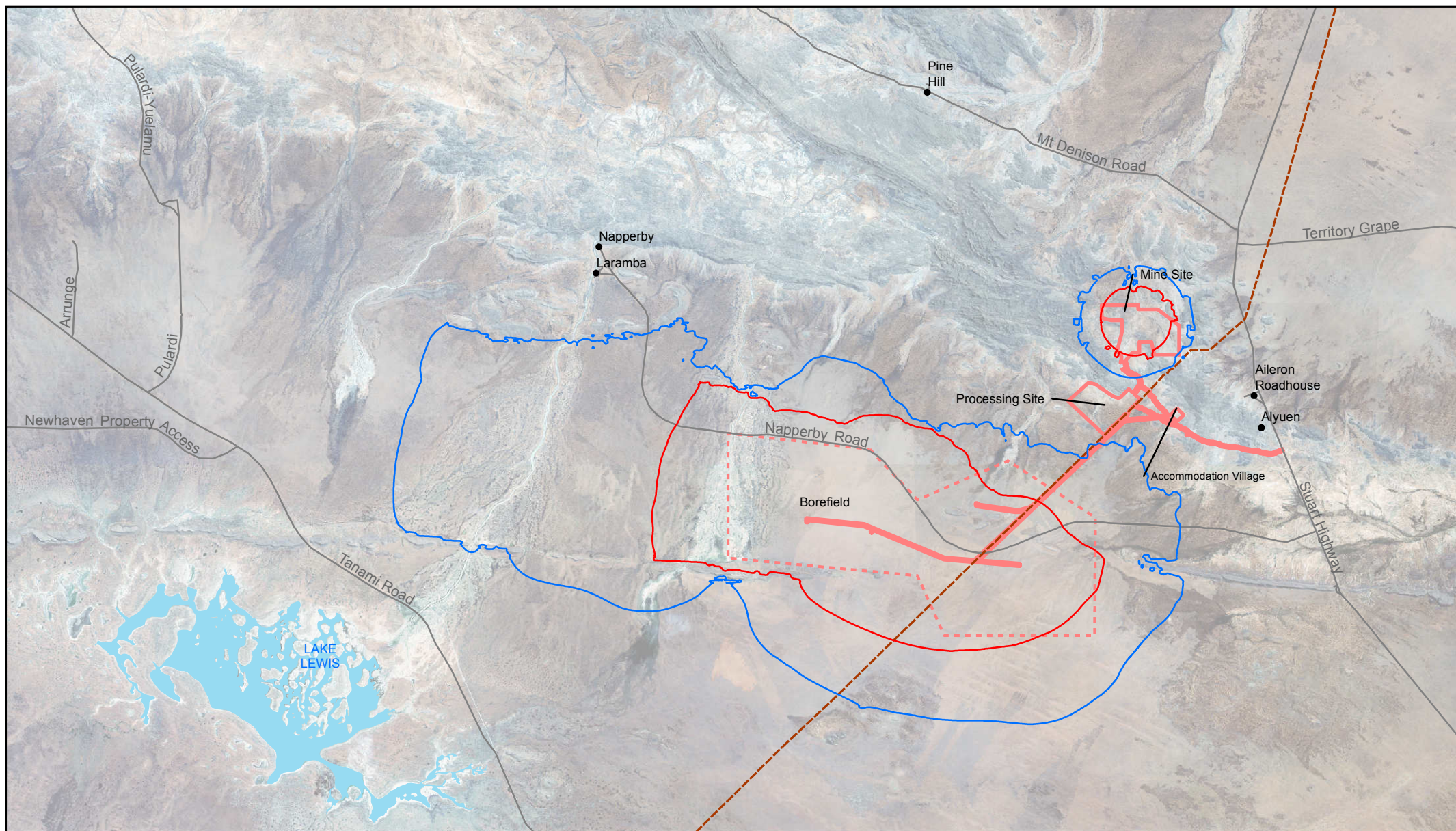
Groundwater Modelling Scenarios

The 0.1 m and 1 m drawdown contours for various times including mid-mining, end of mine, after 100 years of closure and after 1000 years of closure for the following drawdown scenarios:

- A. the EIS model [Model 139].
- B. a scenario with reduced flow rates and reduced bedrock hydraulic conductivity (on request from Arafura) [Model 307]; and
- C. a scenario with a reduced specific yield (from 0.10 used in the EIS model to 0.04, on request from the Water Resources Division, [Model 400]).

This supplementary report documents the changes to the EIS model only and therefore must be read in conjunction with the original Groundwater Report, and the limitations, assumptions and qualifications contained throughout the original Groundwater Report (Appendix K of EIS).



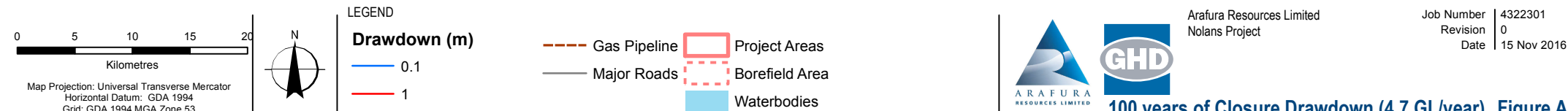
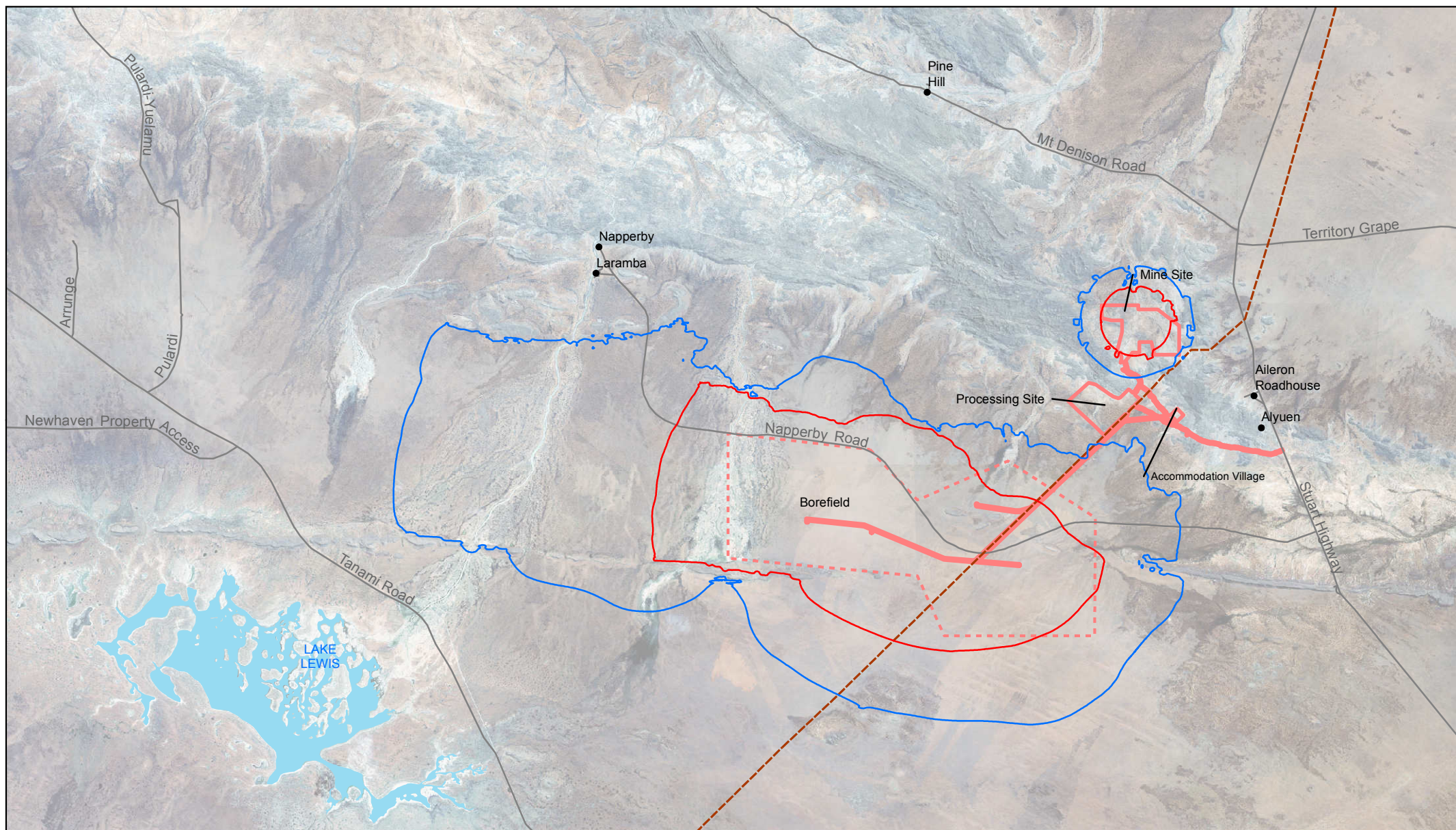


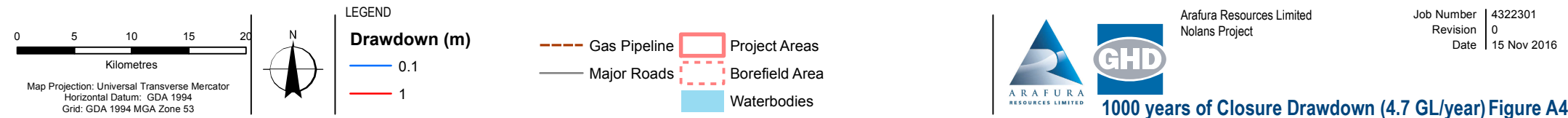
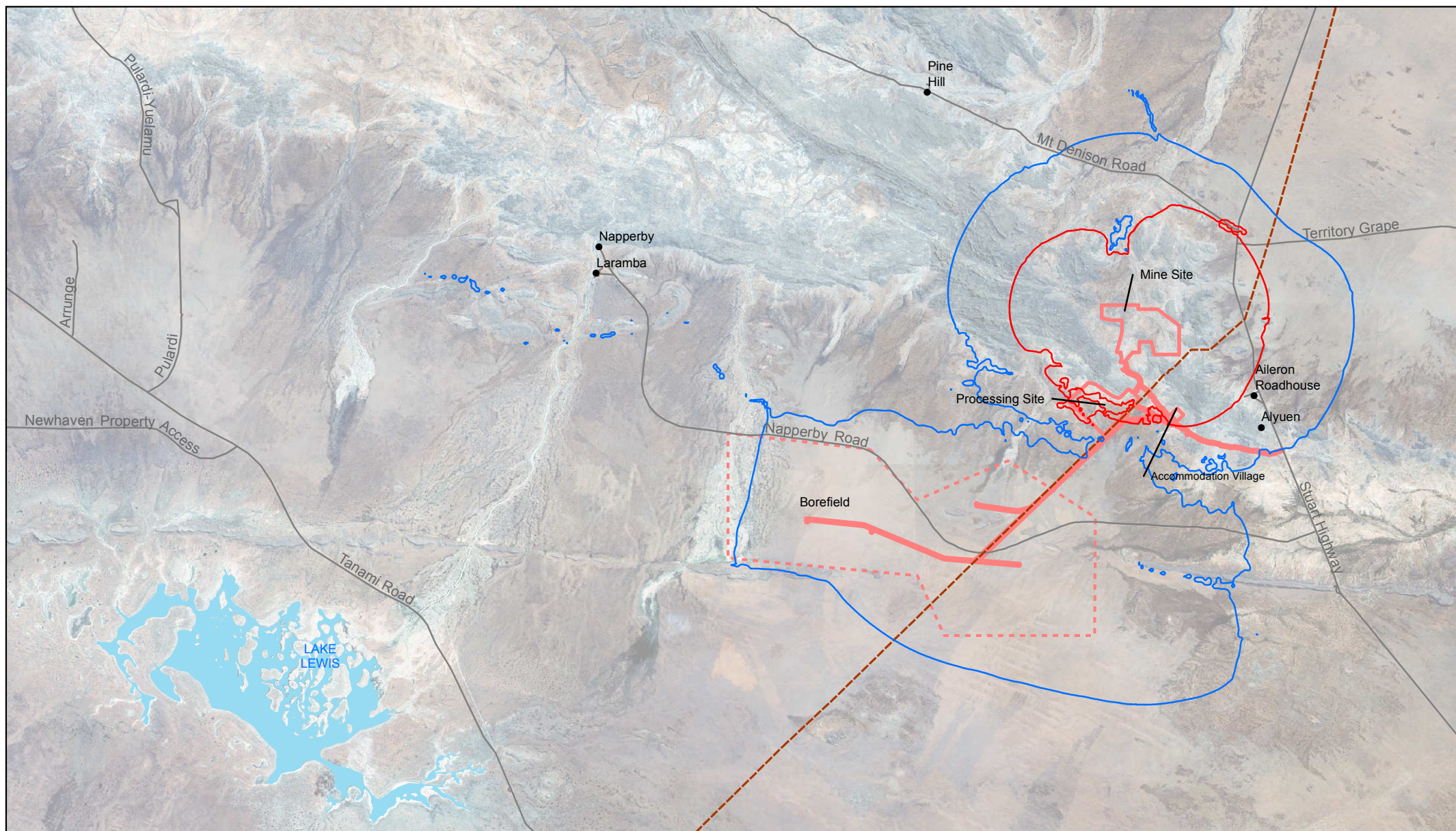
G:\4322301\GIS\Maps\PDF\Lee Drawdown Maps\Figure A2 EOM.mxd

© 2016. Whilst every care has been taken to prepare this map, GHD, Google, GA, Ride and Arafura Resources make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Google Earth Pro - Imagery (Date extracted: 04/02/2015), Ride - Groundwater Data (2015), ARL - Project Areas (2015), GA - Placenames, Railways, Gas Pipeline, Major Roads, Waterbodies (2015). Created by: CM

Level 5 66 Smith Street Darwin NT 0800 Australia T 61 8 8982 0100 F 61 8 8981 1075 E drwmail@ghd.com W www.ghd.com



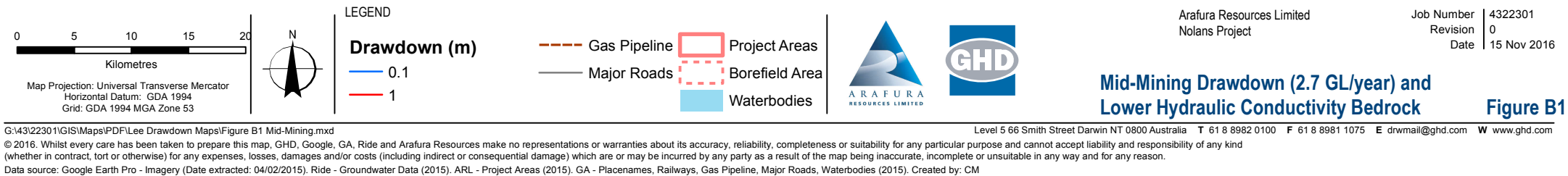
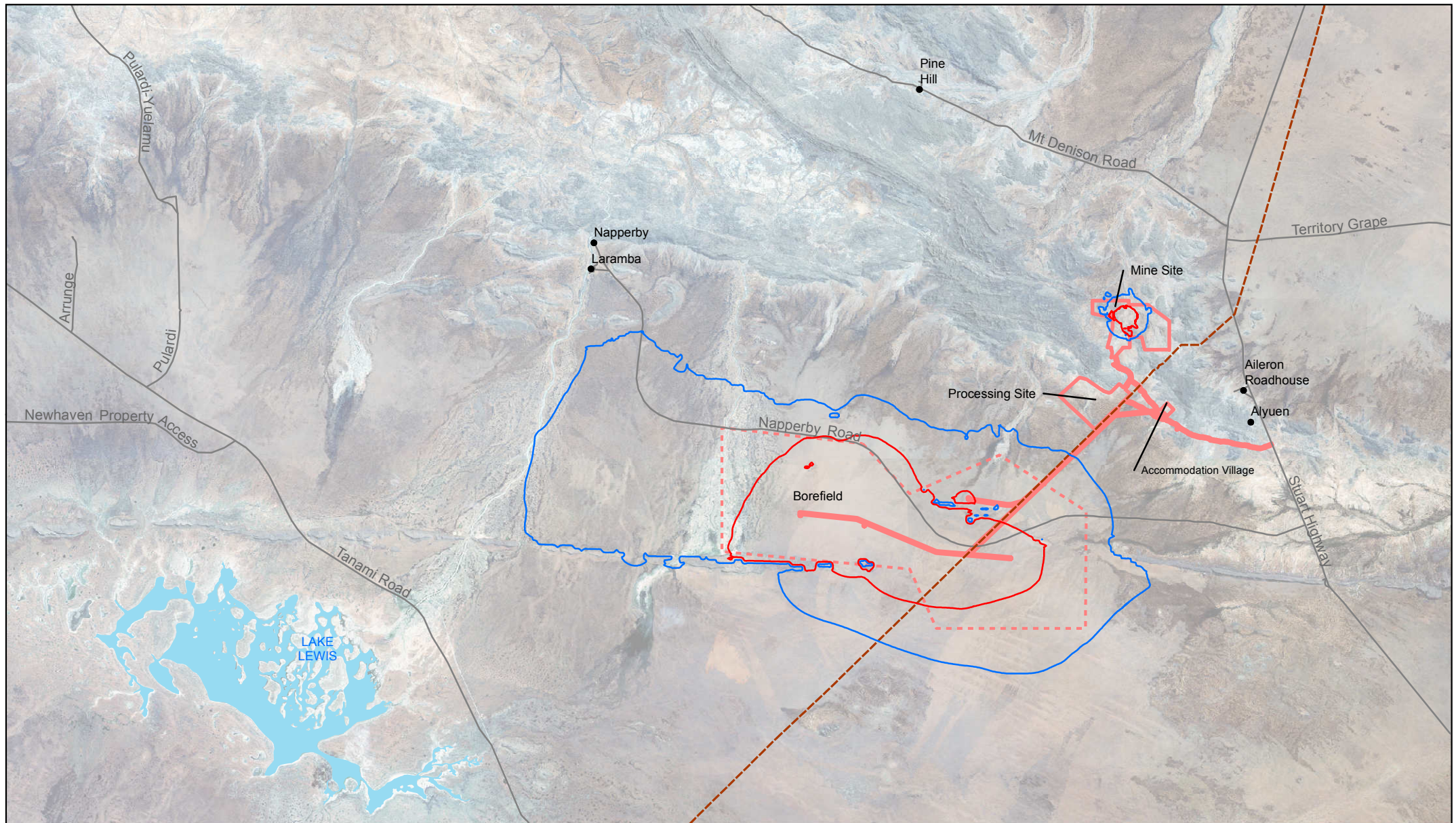


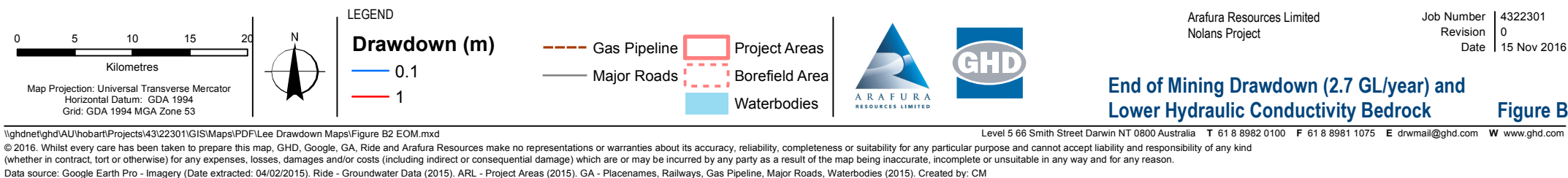
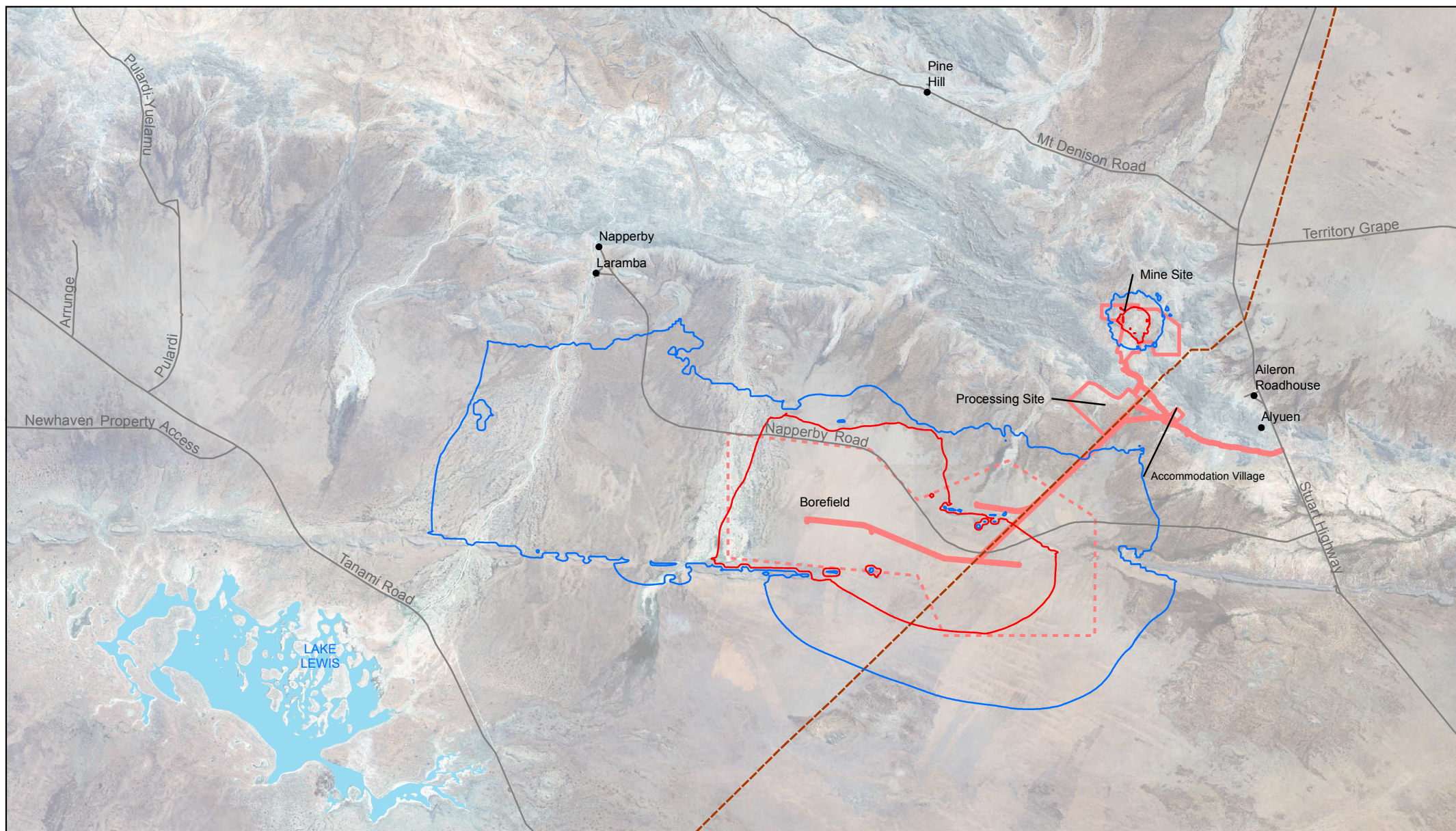
G:\4322301\GIS\Maps\PDF\Lee Drawdown Maps\Figure A4 1000 years.mxd

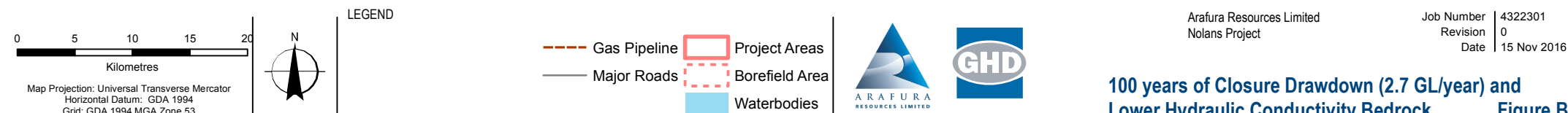
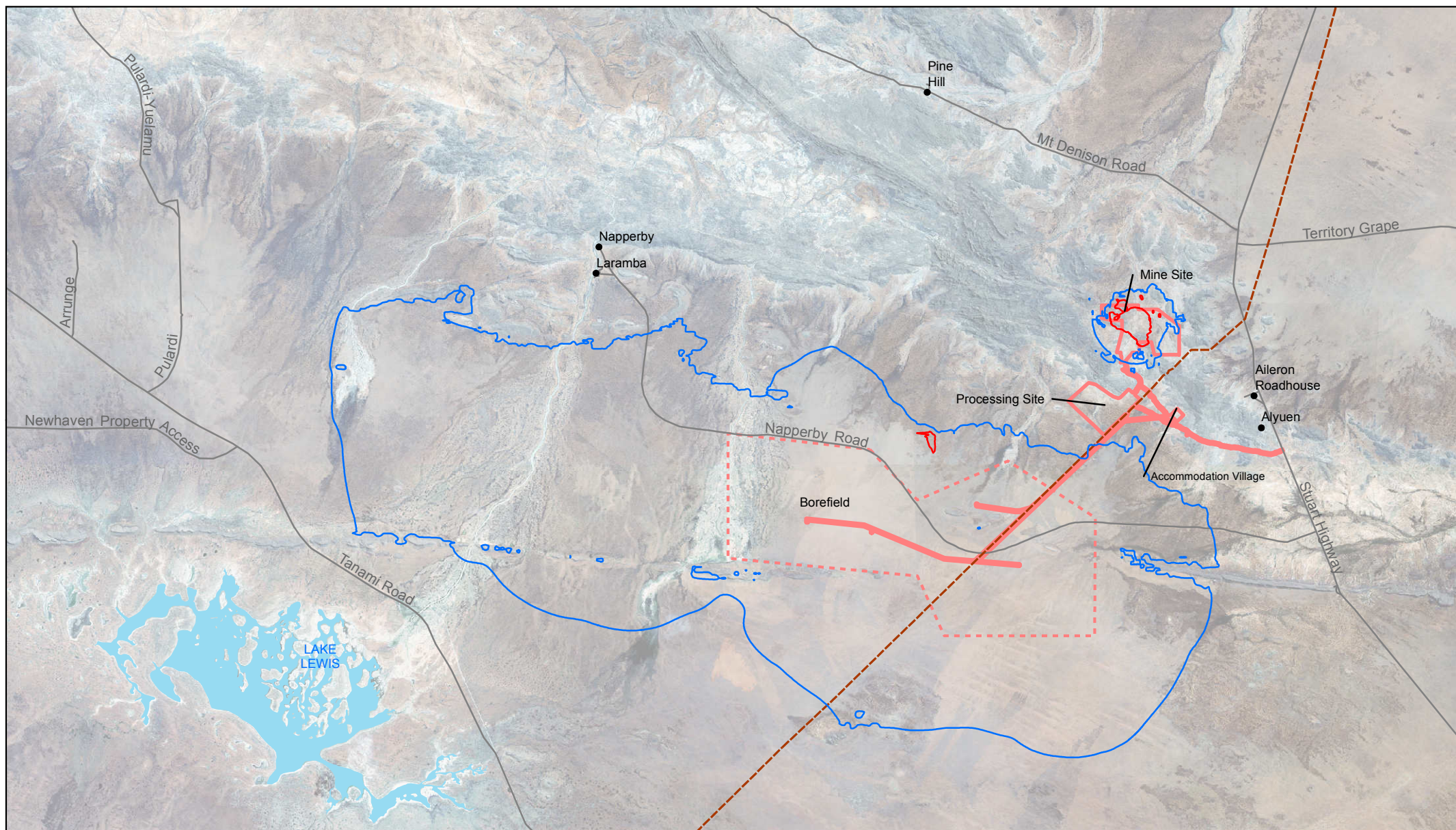
© 2016. Whilst every care has been taken to prepare this map, GHD, Google, GA, Ride and Arafura Resources make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

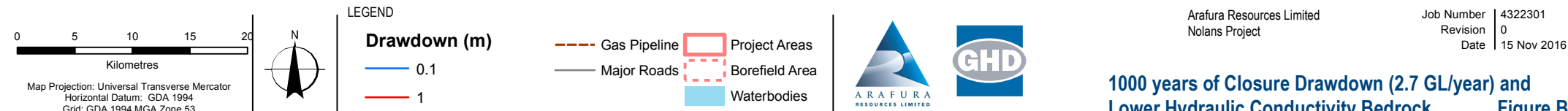
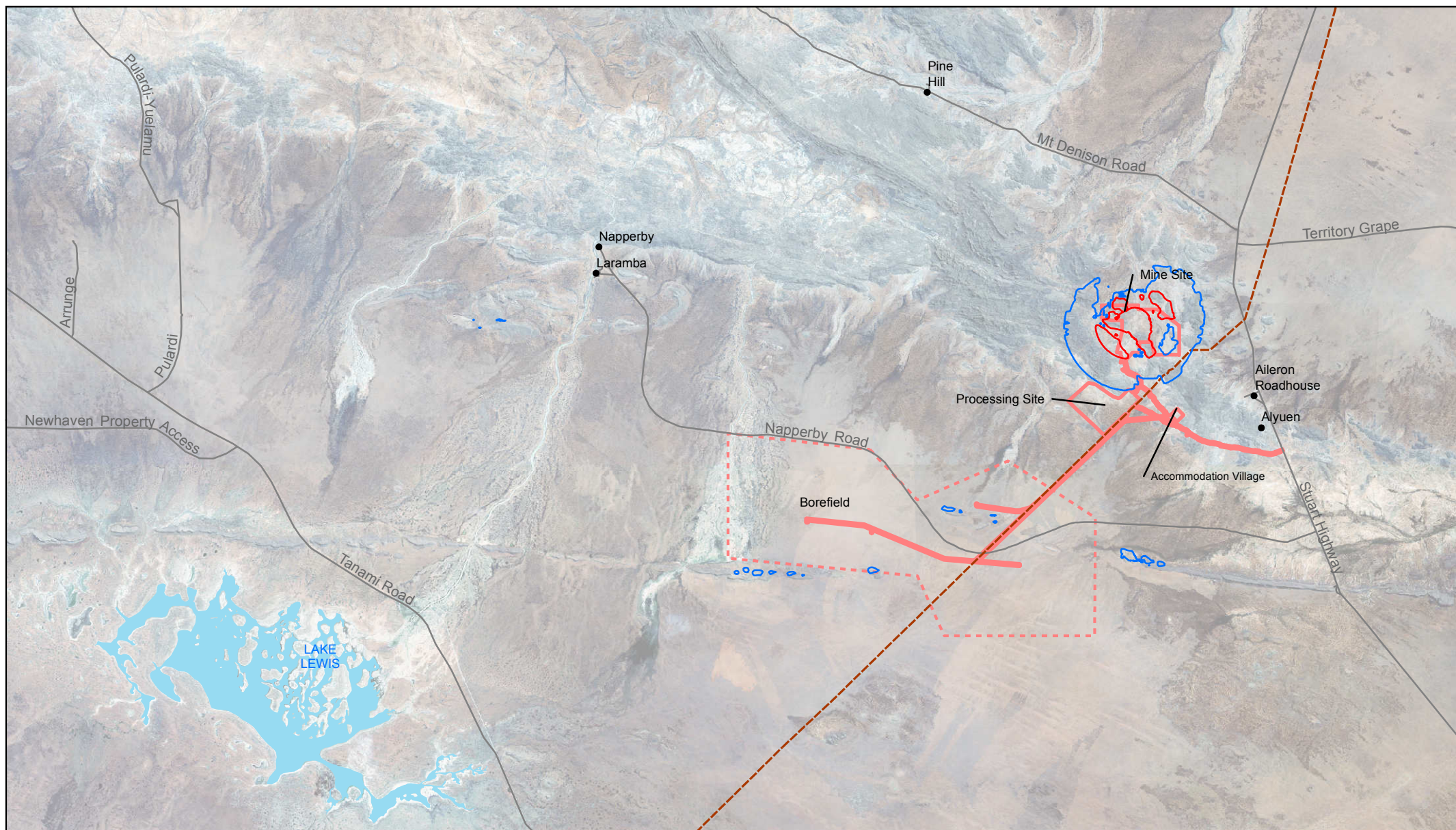
Data source: Google Earth Pro - Imagery (Date extracted: 04/02/2015), Ride - Groundwater Data (2015), ARL - Project Areas (2015), GA - Placenames, Railways, Gas Pipeline, Major Roads, Waterbodies (2015). Created by: CM

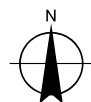
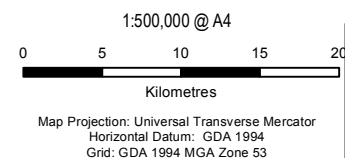
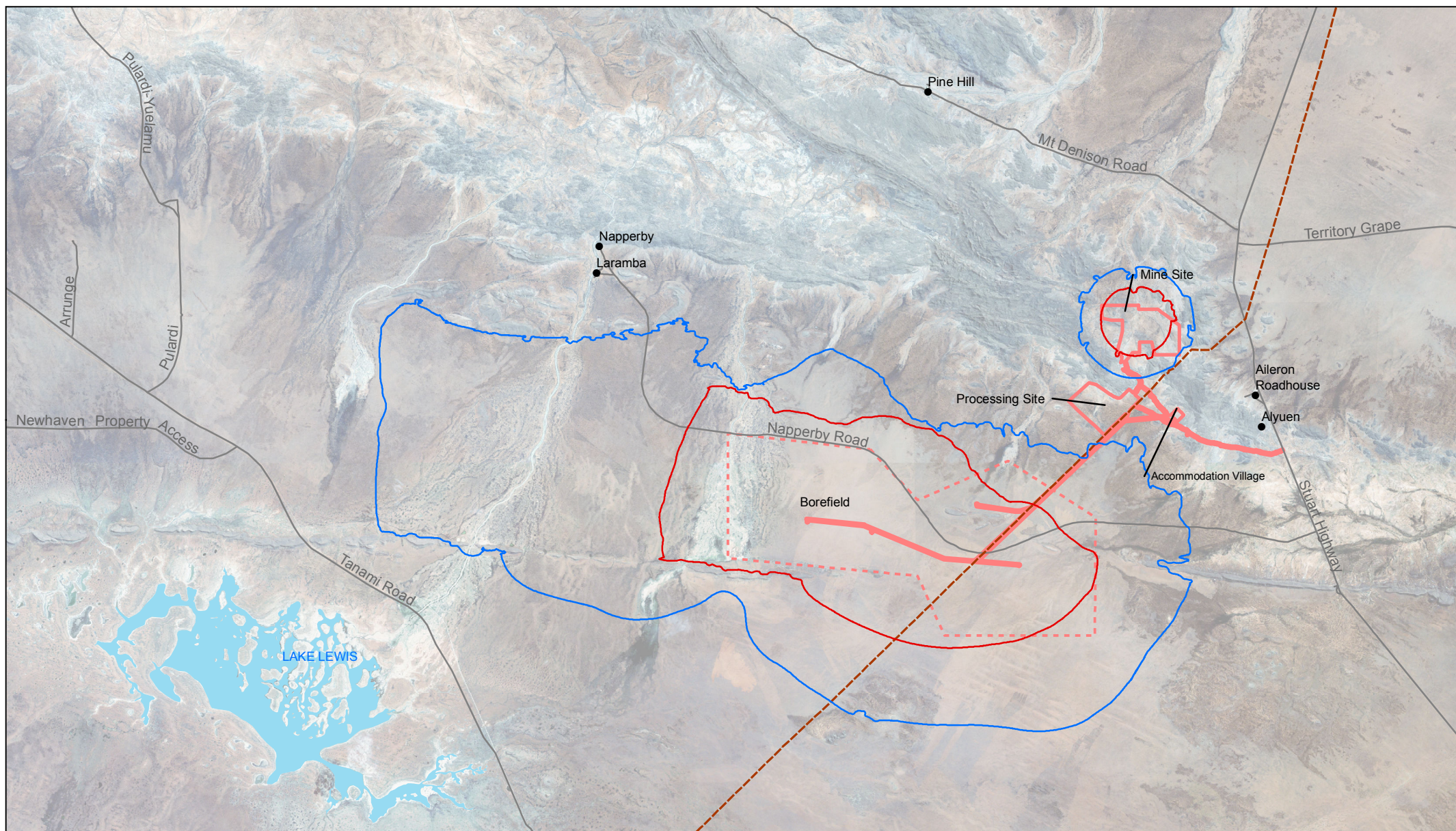
Level 5 66 Smith Street Darwin NT 0800 Australia T 61 8 8982 0100 F 61 8 8981 1075 E drwmail@ghd.com W www.ghd.com











LEGEND

Drawdown(m)



Arafura Resources Limited
Nolans Project

Job Number | 4322301
Revision | 1
Date | 28 Jul 2017

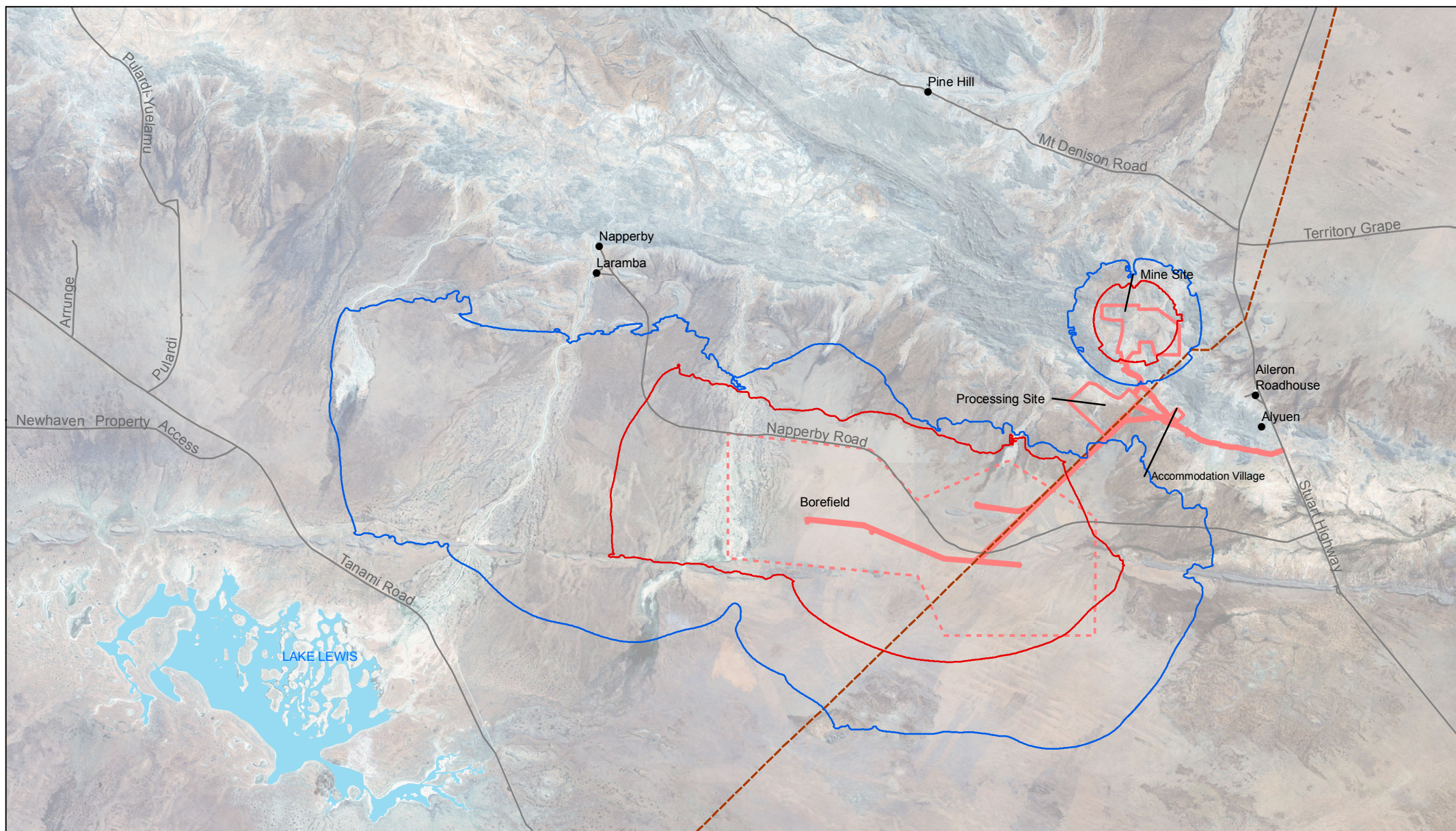
Mid-Mining Drawdown (2.7GL/year & Specific Yield 0.04) Figure C1

G:\4322301\GIS\Maps\Working\4322301_FigureC1 Mid Mining_Rev1.mxd

Level 5 66 Smith Street Darwin NT 0800 Australia T 61 8 8982 0100 F 61 8 8981 1075 E drwmail@ghd.com W www.ghd.com

© 2017. Whilst every care has been taken to prepare this map, GHD, Google, GA, Ride and Arafura Resources make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

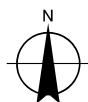
Data source: Google Earth Pro - Imagery (Date extracted: 04/02/2015), Ride - Groundwater Data (2015), ARL - Project Areas (2015), GA - Placenames, Railways, Gas Pipeline, Major Roads, Waterbodies (2015). Created by: CM



1:500,000 @ A4

0 5 10 15 20
Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 53



LEGEND

Drawdown (m)

0.1
1

Gas Pipeline
Major Roads
Project Areas
Borefield Area
Waterbodies



Arafura Resources Limited
Nolans Project

Job Number 4322301
Revision 0
Date 28 Jul 2017

**End of Mining Drawdown
(2.7GL/year & Specific Yield 0.04)**

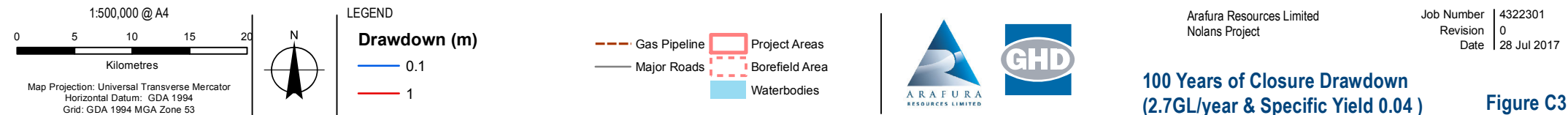
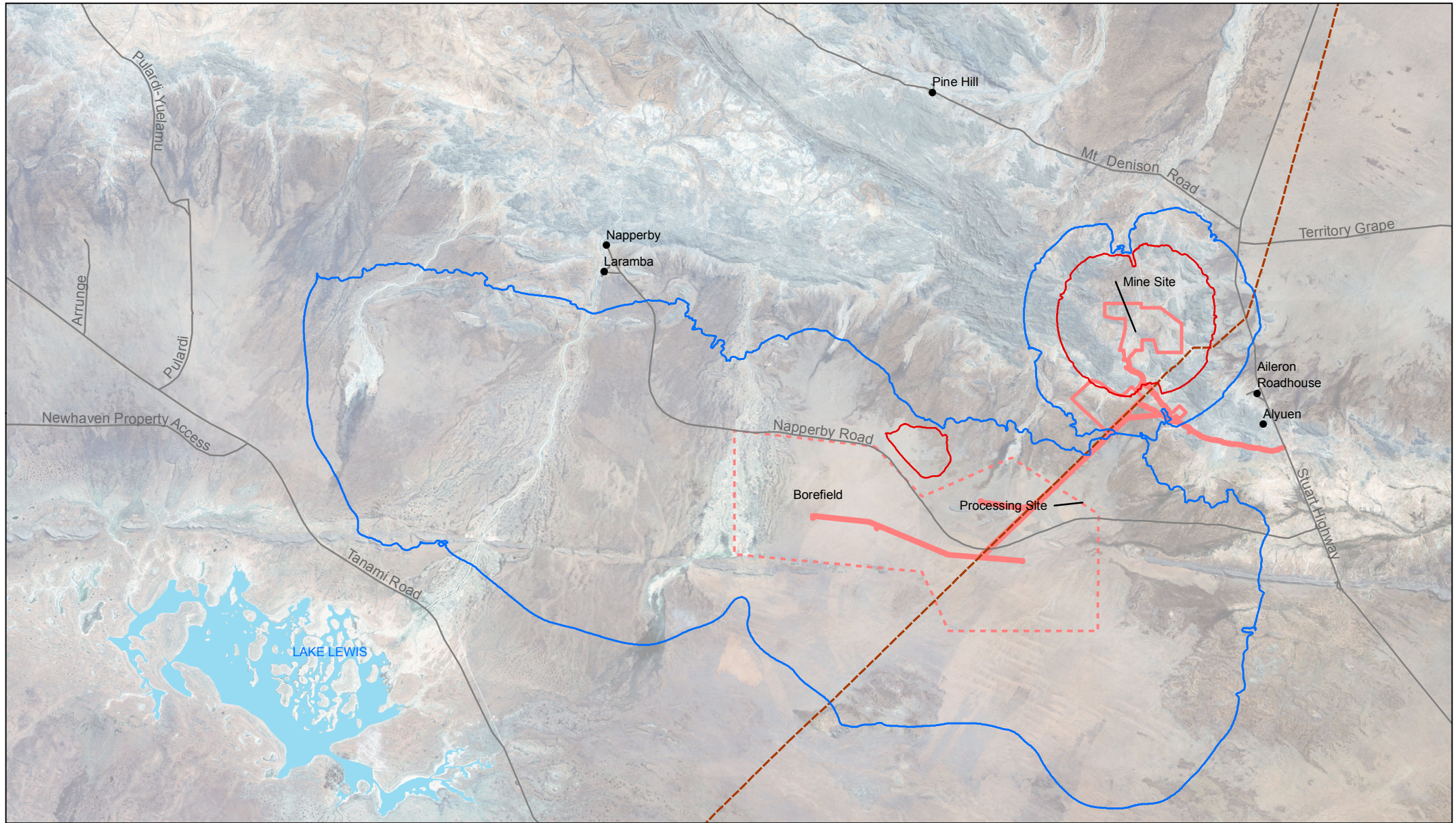
Figure C2

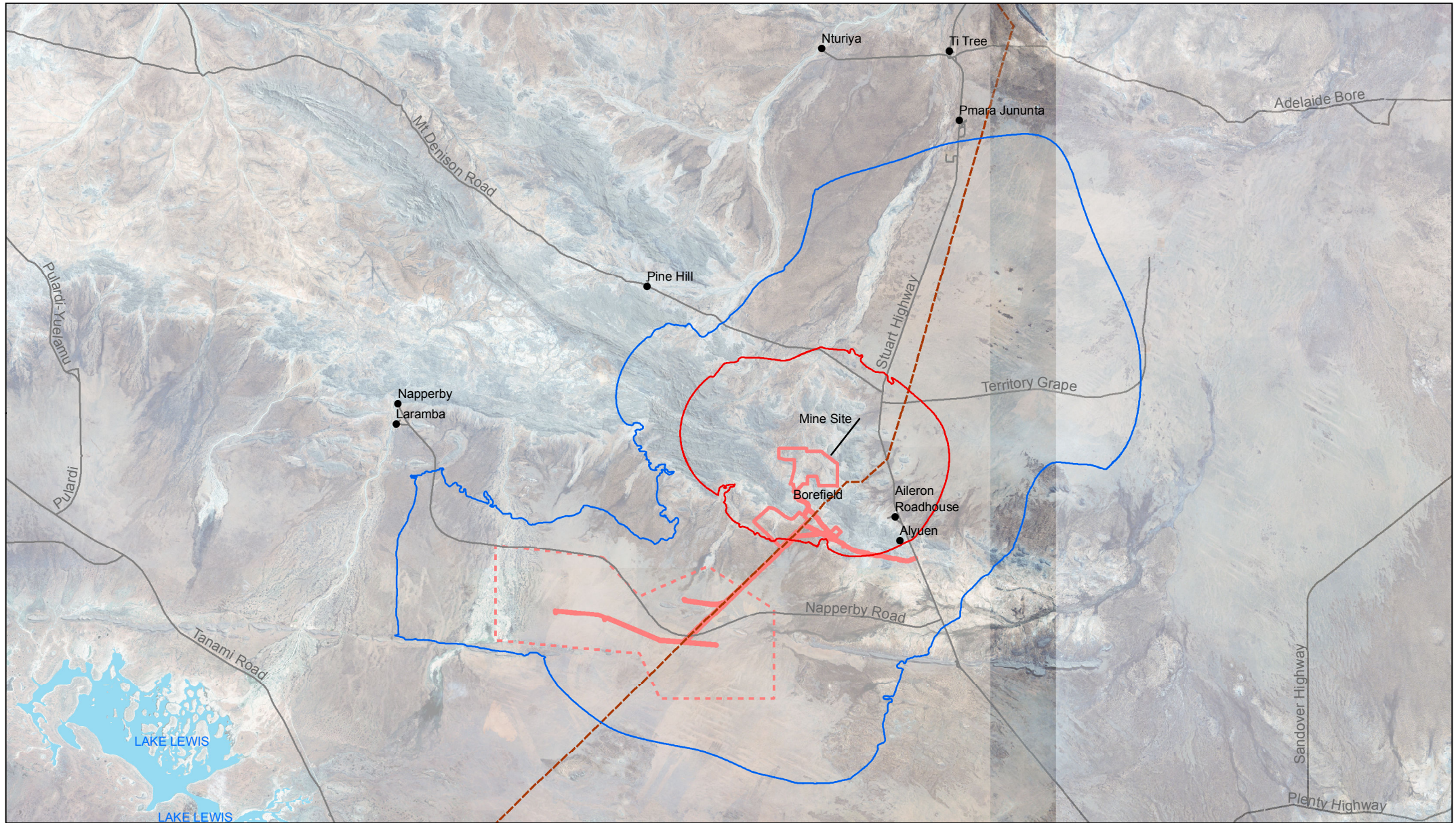
G:\4322301\GIS\Maps\Working\4322301_FigureC2_EOM_Rev1.mxd

© 2017. Whilst every care has been taken to prepare this map, GHD, Google, GA, Ride and Arafura Resources make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Google Earth Pro - Imagery (Date extracted: 04/02/2015), Ride - Groundwater Data (2015), ARL - Project Areas (2015), GA - Placenames, Railways, Gas Pipeline, Major Roads, Waterbodies (2015). Created by: CM

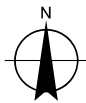
Level 5 66 Smith Street Darwin NT 0800 Australia T 61 8 8982 0100 F 61 8 8981 1075 E drwmail@ghd.com W www.ghd.com





1:500,000 @ A4
 0 5 10 15 20
 Kilometres

Map Projection: Universal Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 53



LEGEND

Drawdown (m)

0.1
 1

Gas Pipeline
 Major Roads
 Project Areas
 Borefield Area
 Waterbodies



Arafura Resources Limited
 Nolans Project

Job Number | 4322301
 Revision | 0
 Date | 28 Jul 2017

**1000 Years of Closure Drawdown
 (2.75GL/year & Specific Yield 0.04)**

Figure C4

G:\4322301\GIS\Maps\Working\4322301_FigureC4_1000_Rev1.mxd

Level 5 66 Smith Street Darwin NT 0800 Australia T 61 8 8982 0100 F 61 8 8981 1075 E drwmail@ghd.com W www.ghd.com

© 2017. Whilst every care has been taken to prepare this map, GHD, Google, GA, Ride and Arafura Resources make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: Google Earth Pro - Imagery (Date extracted: 04/02/2015), Ride - Groundwater Data (2015), ARL - Project Areas (2015), GA - Placenames, Railways, Gas Pipeline, Major Roads, Waterbodies (2015). Created by: CM