

Biodiversity Action Plan and Biodiversity Off-set Management Plan (Appendix B)

Project Number: 42916
31 January 2015

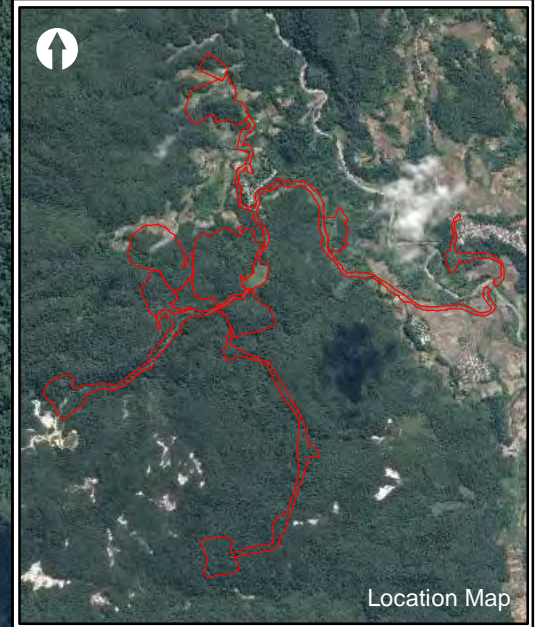
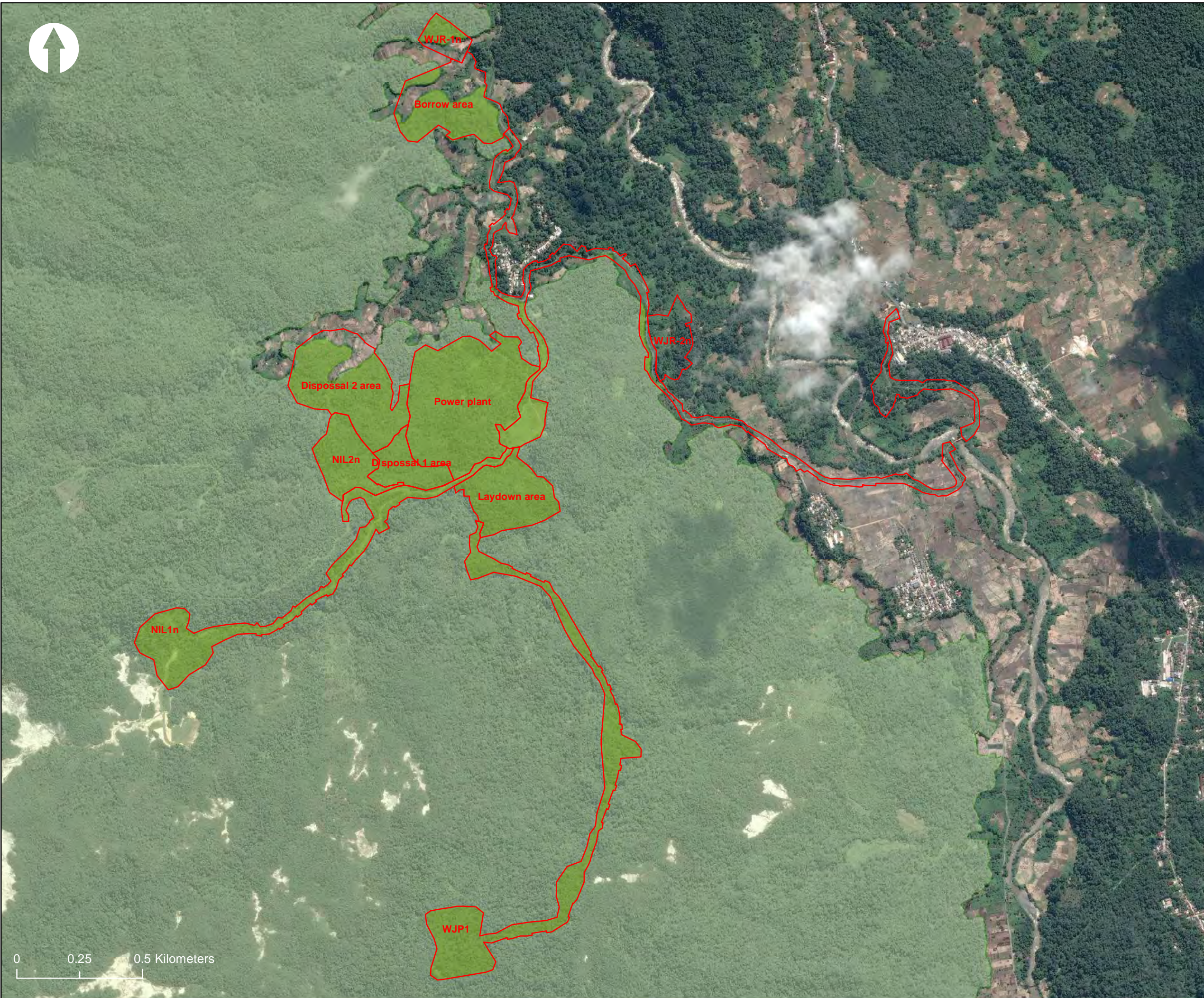
Sarulla Geothermal Power Development Project (Republic of Indonesia)

Prepared by Sarulla Operations Limited for the Asian Development Bank

This report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature. Your attention is directed to the "terms of use" section of this website.




In preparing any country program or strategy, financing any project, or by making any designation on or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

Appendix B. Drawings




Location Map

Legend

-  Site boundary
-  Site boundary in forest
-  Contiguous forest boundary

P1	03/01/2014	First Issue	B	PM	NM
Rev	Date	Description	Drawn	Chk'd	App'd



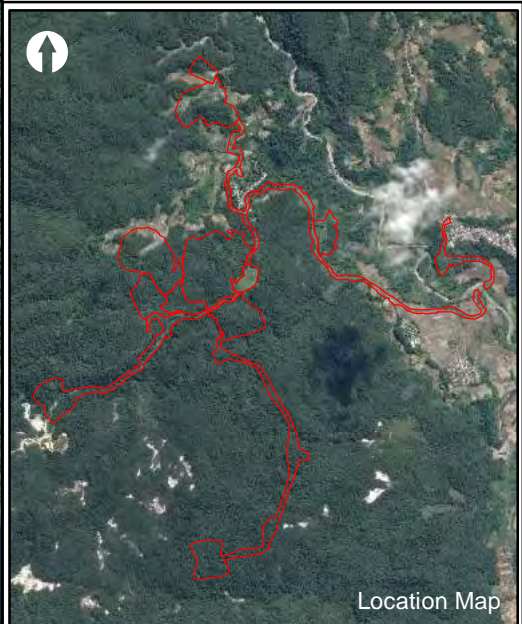
Environment Division
Demeter House, Station Road
Cambridge, CB1 2RS
T +44 (0)1223 463 500
F +44 (0)1223 461 007
W www.mottmac.com

Project Title
Sarulla Geothermal

Drawing Title
Location of NIL infrasture and forest boundary

Scale 1 cm = 143 meters	MM Project No. 326959	Status APR
GIS File Sarulla NIL area and forest boundary.mxd		

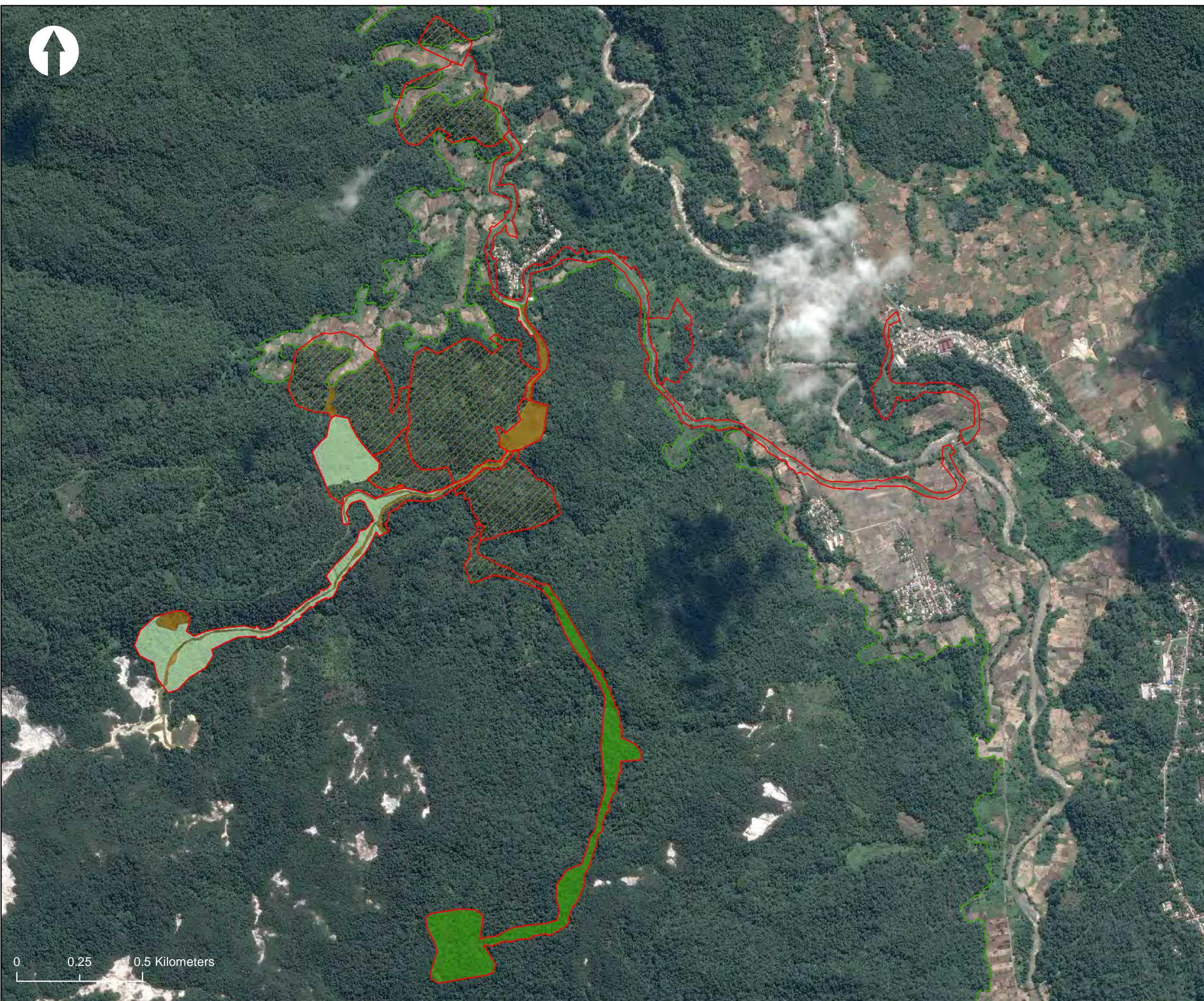
Drawing No. MMD-326959-EC-GIS-00-XX-0001	Rev P1
--	------------------



Location Map


Legend

- Site boundary
 - Contiguous forest boundary
- Habitats**
- Clearance
 - Disturbed forest
 - Low primary forest
 - Mixed forest
 - Open forest



0 0.25 0.5 Kilometers

P2	06/02/2014	First Issue	B	PM	NM
Rev	Date	Description	Drawn	Chk'd	App'd

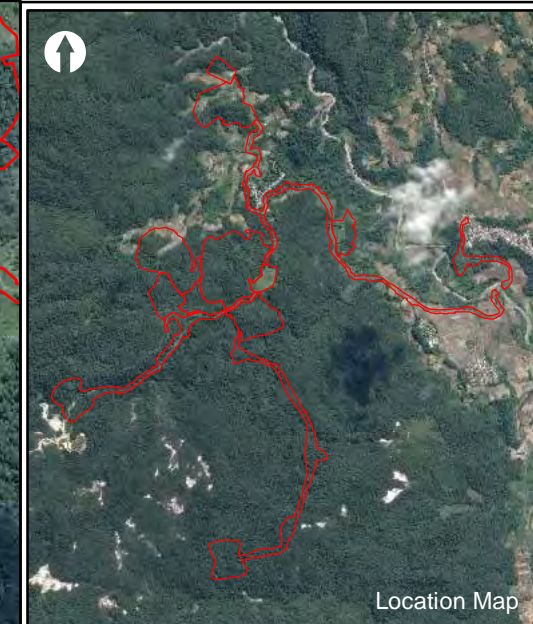
 Environment Division
Demeter House, Station Road
Cambridge, CB1 2RS
T +44 (0)1223 463 500
F +44 (0)1223 461 007
W www.mottmac.com

Project Title
Sarulla Geothermal

Drawing Title
Location of NIL infrasture and habitats within forest boundary

Scale 1 cm = 143 meters	MM Project No. 326959	Status APR
GIS File Sarulla NIL area and habitats.mxd		

Drawing No. MMD-326959-EC-GIS-00-XX-0002	Rev P2
--	------------------




Location Map

Legend

- Site boundary
- Tiger (*Panthera tigris sumatrae*) CE
- Malayan sun bear (*Helarctos malayanus*) VU
- Sumatran serow (*Carpicornis sumatraensis*) VU
- Sambar deer (*Cervus unicolor*) VU
- Pangolin (*Manis javanica*) EN
- Primates**
- Pig-tailed macaque (*Macaca nemestrina*) VU
- Mitred leaf monkey (*Presbytis melalophos*) EN
- Agile gibbon (*Hylobates agilis*) EN
- Siamang (*Hylobates syndactylus*) EN

P3	14/07/2014	First Issue	B	PM	EL
Rev	Date	Description	Drawn	Chk'd	App'd



Environment Division
Demeter House, Station Road
Cambridge, CB1 2RS
T +44 (0)1223 463 500
F +44 (0)1223 461 007
W www.mottmac.com

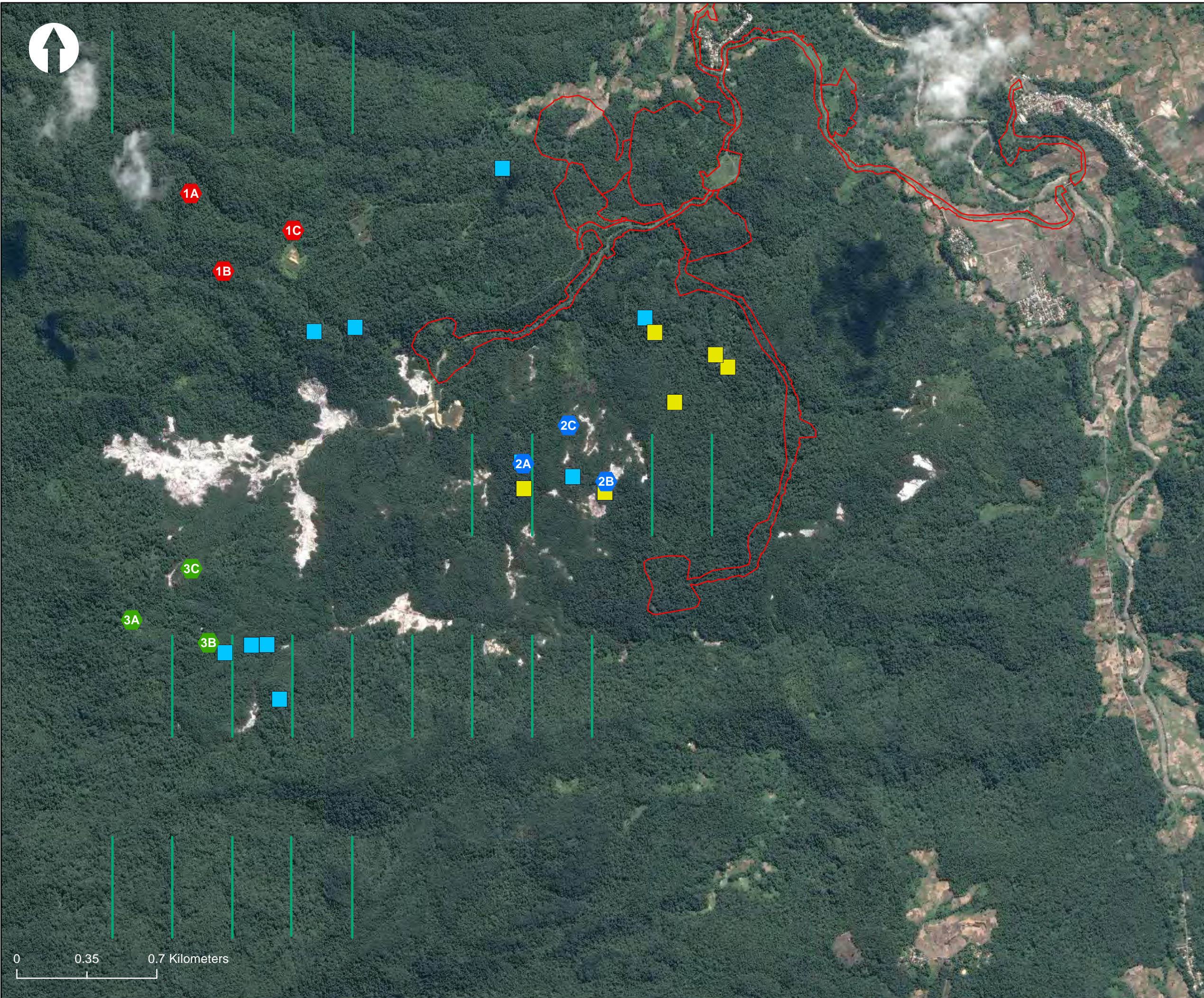
Project Title
Sarulla Geothermal

Drawing Title
Location of NIL infrasture and sigthing locations of Critically Endangered (CE), Endangered (EN) and Vulnerable (VU) species (excluding primates) during November 2013 surveys.

Scale 1 cm = 125 meters	MM Project No. 326959	Status APR
GIS File Sarulla NIL area and threatened species Nov 2013 surveys P3.mxd		

Drawing No. MMD-326959-EC-GIS-00-XX-0003	Rev P3
--	------------------





Legend

- Site boundary
- Vocalization listening points
- 1A
- 2A
- 3A
- Camerat traps SOL
- Camera traps YEL
- Transect survey

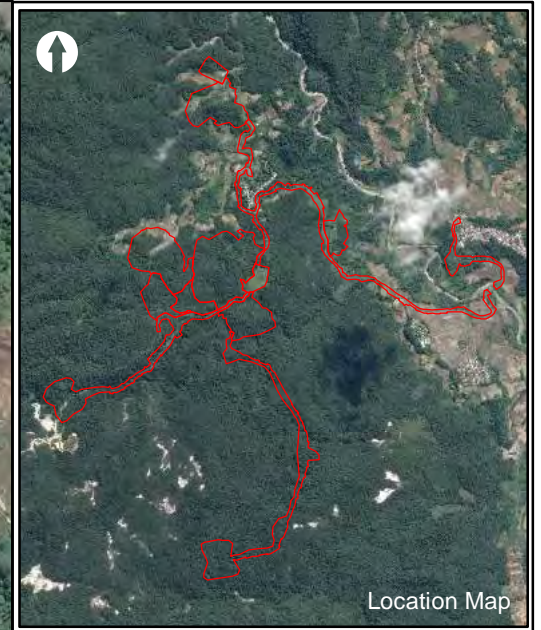
P2	14/07/2014	First Issue	B	PM	EL
Rev	Date	Description	Drawn	Chk'd	App'd

Mott MacDonald
 Environment Division
 Demeter House, Station Road
 Cambridge, CB1 2RS
 T +44 (0)1223 463 500
 F +44 (0)1223 461 007
 W www.mottmac.com

Project Title
Sarulla Geothermal

Drawing Title
 Location of NIL infrasture, camera traps, vocalisation listening points and transect surveys

Scale 1 cm = 180 meters	MM Project No. 326959	Status APR
GIS File Sarulla NIL area camera trap locations listening points and transects P2.mxd		



Legend

- Site boundary
- Area of temporary habitat loss

P1	10/07/2014	First Issue	B	SH	KH
Rev	Date	Description	Drawn	Chk'd	App'd

Mott MacDonald
 Environment Division
 Demeter House, Station Road
 Cambridge, CB1 2RS
 T +44 (0)1223 463 500
 F +44 (0)1223 461 007
 W www.mottmac.com

Project Title
Sarulla Geothermal

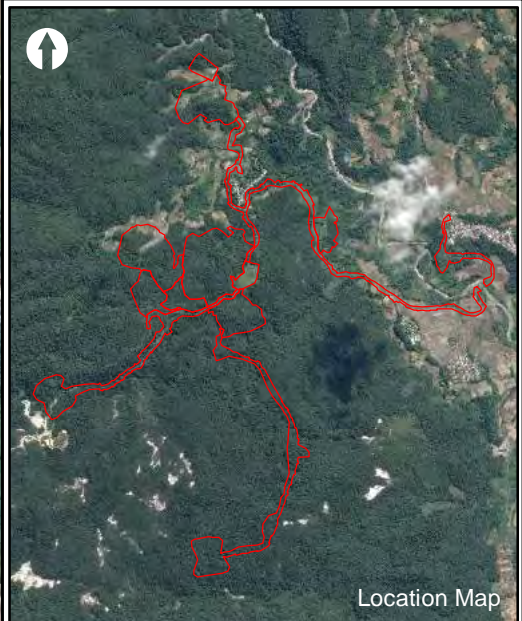
Drawing Title
 Location of NIL infrasture and areas of temporary habitat loss to be restored after construction

Scale 1 cm = 77 meters	MM Project No. 326959	Status REV
---------------------------	---------------------------------	----------------------

GIS File
 Sarulla NIL area temporary habitat loss.mxd








Drawing No. MMD-326959-EC-GIS-00-XX-0005	Rev P1
--	------------------






Location Map

Legend

-  Site boundary
-  Agile gibbon (*Hylobates agilis*) EN
-  Mitred leaf monkey (*Presbytis melalophos*) EN
-  Pig-tailed macaque (*Macaca nemestrina*) VU
-  Siamang
-  Sun bear sign
-  Orang-utan nest

P1	12/02/2014	First Issue	B	PM	EL
Rev	Date	Description	Drawn	Chk'd	App'd

 Environment Division
Demeter House, Station Road
Cambridge, CB1 2RS
T +44 (0)1223 463 500
F +44 (0)1223 461 007
W www.mottmac.com

Project Title
Sarulla Geothermal

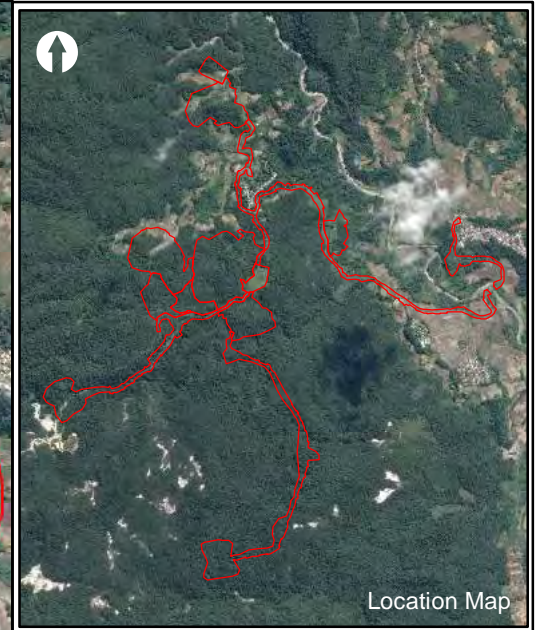
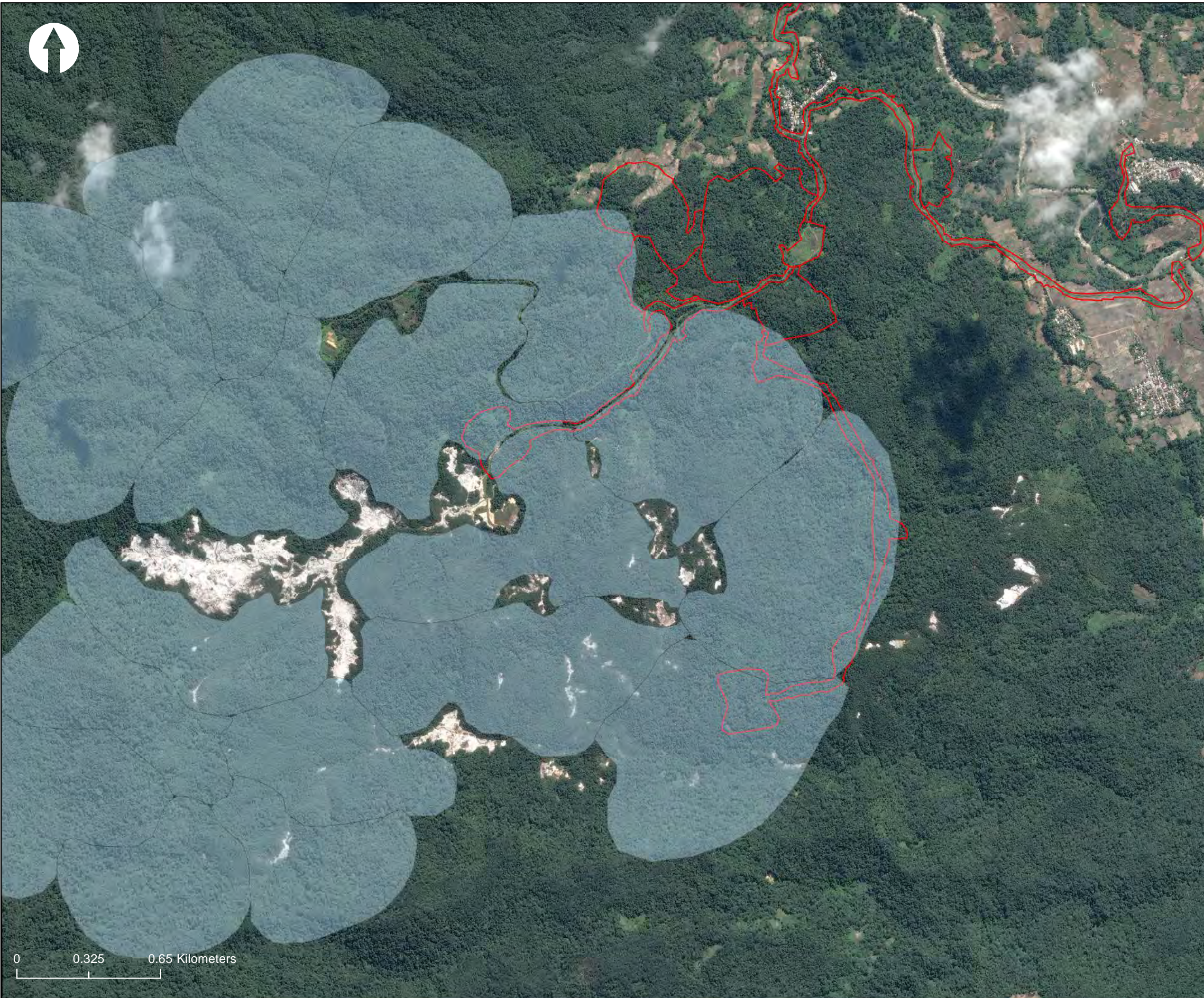
Drawing Title
Location of NIL infrasture and sigthing locations of Critically Endangered (CE), Endangered (EN) and Vulnerable (VU) species during June 2014 surveys.

Scale 1 cm = 169 meters	MM Project No. 326959	Status APR
----------------------------	---------------------------------	----------------------

GIS File
Sarulla NIL area and threatened species June 2014 surveys P1.mxd

Drawing No. MMD-326959-EC-GIS-00-XX-0006	Rev P1
--	------------------

0 0.35 0.7 Kilometers



Location Map

Legend

- Site boundary
- Estimated ranges of agile gibbons

P1	14/07/2014	First Issue	B	PM	EL
Rev	Date	Description	Drawn	Chk'd	App'd

Mott MacDonald
 Environment Division
 Demeter House, Station Road
 Cambridge, CB1 2RS
 T +44 (0)1223 463 500
 F +44 (0)1223 461 007
 W www.mottmac.com

Project Title
Sarulla Geothermal

Drawing Title
 Location of NIL infrasture and estimated ranges of agile gibbons during June 2014 surveys.

Scale 1 cm = 162 meters	MM Project No. 326959	Status APR
GIS File Sarulla NIL area and estimated ranges of agile gibbons June 2014 surveys P2.mxd		

Drawing No. MMD-326959-EC-GIS-00-XX-0007	Rev P1
--	------------------

0 0.325 0.65 Kilometers