


Ecological Gaps Analysis and Assessment:

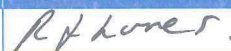
An assessment report is to finalise the ecological assessment work completed for the Roma West Phase 2b Project

Document Number: 0029-650-REP-0005

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Appendices

Appendix A: Habitat Mapping Assessment Tool (HMAT) outputs for the RWP2B Project

List of Abbreviations

Abbreviation	Description
BVG	Broad Vegetation Group
DBH	Diameter at Breast Height
DEHP	Department of Environment and Heritage Protection (Queensland)
DERM	Department of Environment and Resource Management (previous Queensland Department)
DNRW	Department of Natural Resources and Water
EA	Environmental Authority
EA	Environmental Authority
EDL	Ecologically Dominant Layer
EPA	Environmental Protection Agency (previous Queensland Department)
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)
ESA	Environmentally Sensitive Area
EVNT	Endangered Vulnerable and Near Threatened
GES	General Ecological Significance
GIS	Geographic Information System
GLNG	Gladstone Liquefied Natural Gas
GPS	Global Positioning System
ha	Hectare
HES	High Ecological Significance
HVR	High Value Regrowth
NCA	Nature Conservation Act, 1992
QGIS	Queensland Government Information Service
RE	Regional Ecosystem
REDD	Regional Ecosystem Description Database
SEQ	South East Queensland
TEC	Threatened Ecological Community
UMA	Unique Mapping Area
VMA	Vegetation Management Act, 1999

1.0 Introduction

1.1 Roma West Phase 2B Project Description

The Roma West Phase 2b (RWP2b) project involves the drilling of 71 new wells and the connection of 159 wells (on 118 well pads) via the construction and installation of approximately 133 km of buried flowlines (gas and water) as well as power distribution and communications. This gathering system of flow lines will connect to gas and water collection facilities at the existing Santos GLNG Roma Hub 2 Compressor Station, for ultimate supply of gas to the Gladstone LNG Facility. In addition, the project will involve the installation of surface well lease mechanical and electrical equipment on the pre-existing well pads. Limited additional disturbances to existing well pads are required to house the additional infrastructure.

The RWP2b development is located with the Roma Shallow Gas Project Area, occurring across Petroleum Lease (PL) 309, PL 310 and PL 314. The site consists of undulating terrain, with much of the proposed area of development existing within cleared grazing land with a ground cover dominated by exotic pasture species (i.e. buffel grass). Large tracts of vegetation (and associated fauna habitat) are reasonably limited with impacted areas being largely restricted to crossings of watercourses / drainage features and traversing through areas of young regrowth sufficient to provide cover for threatened reptile species. Construction of the RWP2b development is currently scheduled for the end of 2015 and the beginning of 2016.

1.2 Purpose

The purpose of this assessment report is to finalise the ecological assessment work completed for the RWP2b project. A major driver for this report was to quantify areas of threatened species habitat and ecological communities that are subject to statutory disturbance limits in the Santos GLNG environmental approvals.

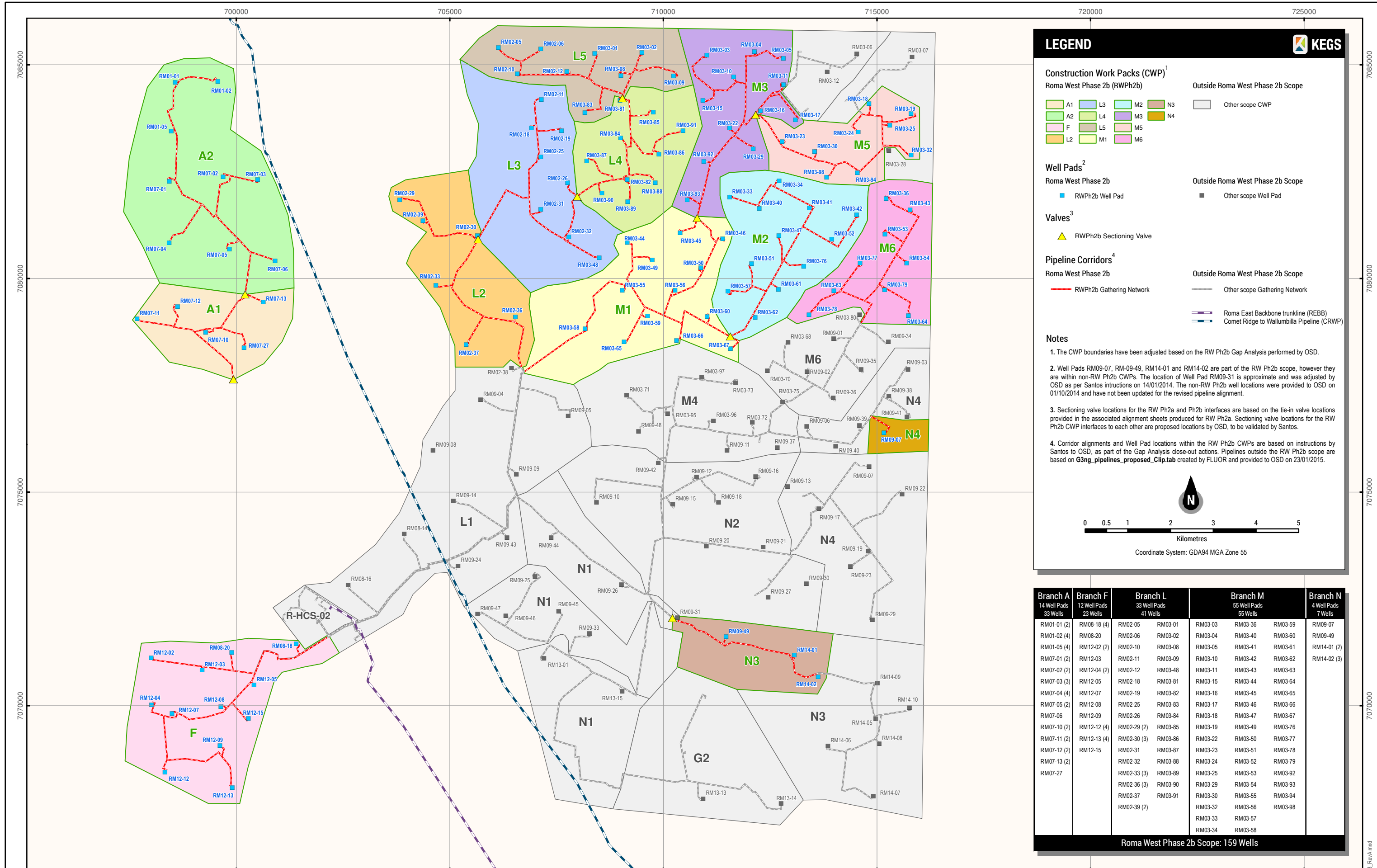
1.3 Scope

Due to the size and scale of the RWP2b project the siting of infrastructure is a dynamic process and a number of small locations changes were required throughout the project planning process. Once the infrastructure locations were finalised a review of the existing ecological reports and data collected for the RWP2B project was completed to identify knowledge gaps where supplementary assessment was needed. This report documents the identified knowledge gaps and the additional assessments that were conducted to bridge these gaps.

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Figure 1 Roma West Phase 2B indicative infrastructure locations



LEGEND

Construction Work Packs (CWP)¹
 Roma West Phase 2b (RWPh2b): A1, A2, F, L2, L3, L4, L5, M1, M2, M3, M4, M5, M6, N3, N4
 Outside Roma West Phase 2b Scope: Other scope CWP

Well Pads²
 Roma West Phase 2b: RWPh2b Well Pad
 Outside Roma West Phase 2b Scope: Other scope Well Pad

Valves³
 RWPh2b Sectioning Valve

Pipeline Corridors⁴
 Roma West Phase 2b: RWPh2b Gathering Network
 Outside Roma West Phase 2b Scope: Other scope Gathering Network, Roma East Backbone trunkline (REBB), Comet Ridge to Wallumbilla Pipeline (CRWP)

Notes

- The CWP boundaries have been adjusted based on the RW Ph2b Gap Analysis performed by OSD.
- Well Pads RM09-07, RM09-49, RM14-01 and RM14-02 are part of the RW Ph2b scope, however they are within non-RW Ph2b CWPs. The location of Well Pad RM09-31 is approximate and was adjusted by OSD as per Santos instructions on 14/01/2014. The non-RW Ph2b well locations were provided to OSD on 01/10/2014 and have not been updated for the revised pipeline alignment.
- Sectioning valve locations for the RW Ph2a and Ph2b interfaces are based on the tie-in valve locations provided in the associated alignment sheets produced for RW Ph2a. Sectioning valve locations for the RW Ph2b CWP interfaces to each other are proposed locations by OSD, to be validated by Santos.
- Corridor alignments and Well Pad locations within the RW Ph2b CWPs are based on instructions by Santos to OSD, as part of the Gap Analysis close-out actions. Pipelines outside the RW Ph2b scope are based on G3ng_pipelines_proposed_Clip.tab created by FLUOR and provided to OSD on 23/01/2015.

0 0.5 1 2 3 4 5
Kilometres
Coordinate System: GDA94 MGA Zone 55

Branch A	Branch F	Branch L	Branch M	Branch N
14 Well Pads 33 Wells	12 Well Pads 23 Wells	33 Well Pads 41 Wells	55 Well Pads 55 Wells	4 Well Pads 7 Wells
RM01-01 (2)	RM08-18 (4)	RM02-05	RM03-01	RM09-07
RM01-02 (4)	RM08-20	RM02-06	RM03-02	RM09-49
RM01-05 (4)	RM12-02 (2)	RM02-10	RM03-08	RM14-01 (2)
RM07-01 (2)	RM12-03	RM02-11	RM03-09	RM14-02 (3)
RM07-02 (2)	RM12-04 (2)	RM02-12	RM03-48	
RM07-03 (3)	RM12-05	RM02-18	RM03-81	
RM07-04 (4)	RM12-07	RM02-19	RM03-82	
RM07-05 (2)	RM12-08	RM02-25	RM03-83	
RM07-06	RM12-09	RM02-26	RM03-84	
RM07-10 (2)	RM12-12 (4)	RM02-29 (2)	RM03-85	
RM07-11 (2)	RM12-13 (4)	RM02-30 (3)	RM03-86	
RM07-12 (2)	RM12-15	RM02-31	RM03-87	
RM07-13 (2)		RM02-32	RM03-88	
RM07-27		RM02-33 (3)	RM03-89	
		RM02-36 (3)	RM03-90	
		RM02-37	RM03-91	
		RM02-39 (2)	RM03-92	
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			RM03-149	
			RM03-150	

Roma West Phase 2b Scope: 159 Wells

OSD limited.com ABN 57 058 047 046 GeoSynergy.com.au ABN 32 133 400 343										DRN: SK DATE: 06-02-2015 SCALE: 1:80,000 CHKD: GO ENG: NM Q.A.: AA PROJ: 145002-EG-MAP-001 ACC: A.B.N. 80 007 550 923										Santos GLNG Project										OSD GeoSynergy										GLNG ROMA WEST PHASE 2B FEED 7699 ROMA WEST CONSTRUCTION WORK PACKS									
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ESRI ArcGIS

File: 7699_Roma_West_CWP_map_A3_RevA.mxd

A3 SHEET

2.0 Methodology

2.1 Desktop Review and Gaps Identification

A review of the existing ecological reports and data collected for the RWP2b project was completed. Where information gaps were identified a review of the available information, aerial photography and ecological data was conducted to determine the required additional assessments. Additional assessments focussed on the identification and mapping of EVNT fauna habitat and/or vegetation communities.

A total of 23 ecological assessment reports were conducted for the RWP2b project. These were reviewed as part of the gaps analysis. Of these, six were completed by Santos's in-house environmental advisors and ecologists and 17 were completed by Boobook Ecological Consulting. The 23 reports reviewed to quantify impacts to threatened species habitat for the RWP2B Project are:

- Pasadena PR5_Infrastructure_Zone_Ecology_Assessment_Report_Rev0
- MtHope_Infrastructure_Zone_RM02-26_Assessment_Report_Rev0_20130604
- MtHope_Infrastructure_Zone_RM02-19_Assessment_Report_Rev0_20130708
- MtHope_Modified_Infrastructure_Zone_RM03-58_Assessment_Report_Rev0
- MtHope_Modified_Infrastructure_Zone_RM03-58_Assessment_Report_Rev0
- MtHope_Infrastructure_Zone_RM03-49_Assessment_Report_Rev0_20130723
- MtHope_Infrastructure_Zone_RM03-45_Assessment_Report_Rev0_20130723
- MtHope_Infrastructure_Zone_RM03-45_Assessment_Report_Rev0_20130723
- MtHope_Infrastructure_Zone_RM03-67_Assessment_Report_Rev0_20130604
- RM03-16 Rev 1_ENVIRO_Well Lease Assessment_Final_2012
- MtHope_Modified_Infrastructure_Zone_RM03-15_Assessment_Report_Rev0
- RM03-22 Rev 2_Well Lease Assessment_ENVIRO_final
- MtHope_Infrastructure_Zone_RM03-05_Assessment_Report_Rev0
- RM03-04-1 Rev 1A_Well Lease Assessment_ENVIRO_final
- MtHope_Infrastructure_Zone_RM03-11_Assessment_Report_Rev0_20130703
- RM03-54_Well Lease Assessment_final
- RM03-30 Rev 1_Well Lease Assessment_Dec_2012_final
- MtHope_Well_Infrastructure_Zone_RM03-09_Assessment_Report_Rev0_20130703
- MtHope_Well_Infrastructure_Zone_RM03-09_Assessment_Report_Rev0_20130703
- MtHope_Well_Infrastructure_Zone_RM03-09_Assessment_Report_Rev0_20130703
- MtHope_Infrastructure_Zone_RM03-02_Assessment_Report_Rev0_20130723
- MtHope_Infrastructure_Zone_RM03-02_Assessment_Report_Rev0_20130723
- MtHope_Well_Infrastructure_Zone_RM02-05_Assessment_Report_Rev0_20130604

These individual reports have been compiled together in the report titled Ecological reports for RWP2b (Document Number 0029-650-REP-0006).

2.2 Habitat Mapping Assessment Tool (HMAT)

Where the desktop assessment and gaps analysis revealed the potential for fauna habitat to exist within the disturbance location / assessment area, further desktop and/or field based assessments were conducted. The impacts to EPBC Act threatened species was quantified using the Habitat Mapping Assessment Tool (HMAT). HMAT is a tool developed to aid in the identification and quantification of habitat disturbances to the 11 fauna species regulated by a disturbance limit in the GLNG Upstream environmental approvals.

Using HMAT assessments of the following factors were undertaken and recorded on the HMAT:

1. Tenement in which the Habitat Zone is located (Part A of HMAT);
2. Location on the Biodiversity Planning Assessment (BPA) Mapping (Part B of HMAT);
3. Proximity to water (Part C of HMAT);
4. Underlying vegetation type (Part D of HMAT); and,
5. Specimen backed records (Part E of HMAT).
6. Complete the microhabitat features assessment (Part F).

Once the data entry stage of the HMAT is complete, the HMAT's predicted modelled habitat classes of Unlikely, General, Essential or Core habitat for each of the significant species were verified. Where the results of the HMAT were disputed an explanation of why the results were disputed was entered into the "Results" tab of the HMAT. A HMAT was completed for all locations identified in the gaps analysis. The results of all HMAT completed as part of the RWP2B project are provided in Appendix 1

2.3 Delineation of a Vegetation Communities

Where the desktop review and gaps analysis identified that additional delineation of vegetation communities was required, an assessment and mapping process was completed using Santos' Guideline for Conducting Vegetation Assessments (Document Number: 0007-650-GDE-0002).

A preliminary desktop assessment was conducted to determine whether the proposed disturbance location / assessment area contains either a mapped vegetation community, or the aerial photography indicates the presence of woody vegetation which may constitute a functioning RE.

Using the WebGIS, for each unique community the following was determined:

- If the vegetation community has previously been groundtruthed (i.e. should not require groundtruthing again unless identified as non-remnant regrowth vegetation) and the outcomes of that assessment;
- The RE / community represented by mapping;
- The likelihood of the RE / community type being accurate based on aerial imagery;
- The likely accuracy of the mapped land zone based on geology and soils mapping and interpretation of the aerial imagery; and
- Areas of potential controlled vegetation communities, including possible patches of regrowth endangered RE (i.e. using the aerial photography, mature regrowth and pre-clear mapping).

In areas where a nearby vegetation community has previously been groundtruthed and the high resolution aerial photography and site photos indicate that the vegetation present is the same broad vegetation community as the one assessed then no additional field work was undertaken. In areas where the high resolution aerial photography and previous groundtruthed data were inconclusive a field assessment was undertaken by Santos' field environmental advisors and the field data was sent to Brisbane for confirmation by a DotE approved ecologist.

3.0 Results

3.1 Desktop Review and Gaps Identification

The review identified that all 23 ecological assessment reports contained a total 32 areas of EVNT fauna habitat that required assessment and mapping using the Habitat Mapping Assessment Tool (HMAT). The results of the HMAT analysis are discussed in Section 3.2 below.

Nine of the 32 areas requiring HMAT assessment were also identified as areas where potential disturbances had not been assessed in detail on the ground and impacts to vegetation communities had not been adequately quantified. The vegetation communities in these areas were identified and quantified. The delineation of the vegetation communities in these nine sites is discussed in Section 3.3 below.

3.2 Habitat Mapping Assessment Tool (HMAT)

Habitat in the disturbance location / assessment areas of the RWP2B project were likely to support four of the 11 fauna species regulated by a disturbance limit in the GLNG Upstream EPBC Act approval. The four species impacted as well as the quantum and location of impact is shown in Table 1 and the full HMAT datasheets showing the inputs and the outputs for all disturbance location / assessment areas mentioned in Table 3 are provided in Appendix A.

Table 1: The extent and location of impacts to EVNT fauna habitat in the RWP2B Gaps Analysis

Well Lease	Location (MGA Zone 55)		General Habitat				Total area to be disturbed (ha)
	Easting	Northing	Yakka Skink	Dunmall's snake	Collared Delma	SE Long Eared Bat	
RM12-07	698802	7069747	Y	Y	Y	Y	0.30
RM02-30	705979	7081477	Y	Y	Y		0.15
RM02-30	706602	7081932	Y	Y			0.05
RM02-26	707918	7081969	Y	Y	Y		0.12
RM02-19	707245	7083453	Y	Y	Y		0.14
RM03-58	708304	7079095	Y			Y	0.61
			Y	Y	Y	Y	0.09
RM03-49	709321	7080501	Y			Y	0.24
RM03-45	711113	7081017	Y	Y	Y	Y	0.35
	711056	7081171	Y	Y	Y	Y	0.12
RM03-67	711623	7078587	Y	Y	Y		0.15
RM03-16	712384	7084130	Y	Y	Y	Y	0.72
RM03-15	710920	7084247	Y	Y	Y	Y	0.35
RM03-22	711555	7083485	Y	Y	Y	Y	0.73
RM03-05	712747	7085170	Y	Y	Y	Y	1.79
RM03-04	711939	7084479	Y	Y	Y	Y	0.50
RM03-11	712193	7084528	Y	Y	Y	Y	0.19
RM03-54	715640	7080396	Y	Y	Y	Y	1.45
RM03-30	713628	7082755	Y	Y	Y	Y	0.21

Well Lease	Location (MGA Zone 55)		General Habitat				Total area to be disturbed (ha)
	Easting	Northing	Yakka Skink	Dunmall's snake	Collared Delma	SE Long Eared Bat	
RM03-09	710100	7084873	Y	Y	Y	Y	0.17
	709986	7084890	Y	Y	Y	Y	1.06
	710250	7084728	Y	Y	Y	Y	0.18
RM03-02 (Q1)	709481	7085274	Y	Y	Y	Y	1.69
RM03-02 (Q3)	709060	7084276	Y	Y	Y	Y	0.25
RM02-05	706474	7085149	Y	Y	Y	Y	0.04
RM03-87	708737	7082411	Y	Y	Y	Y	0.11
RM03-90	708511	7082011	Y	Y	Y	Y	0.12
RM03-85	709217	7083090	Y	Y	Y	Y	0.63
RM03-85	709139	7082755	Y	Y	Y	Y	0.12
RM03-81	708872	7084154	Y	Y	Y	Y	0.94
RM03-83	709003	7084248	Y	Y	Y	Y	0.28
RM01-01	698407	7083951	Y	Y	Y	Y	0.37

3.3 Delineation of a Vegetation Communities

The gaps analysis identified nine locations where potential disturbances had not been assessed in detail on the ground and impacts to vegetation communities had not been quantified. The assessment of these nine sites identified three separate Regional Ecosystem vegetation communities. The vegetation communities impacted, their corresponding RE and their status under Queensland and Commonwealth legislations is shown in Table 2.

Table 2: Regional Ecosystem vegetation communities identified in the RWP2B Gaps Analysis

Regional Ecosystem	Biodiversity Status	VM Act Status	EPBC Act Status
11.3.25	Of Concern	Least Concern	Not listed
11.9.5	Endangered	Endangered	Endangered - Brigalow (<i>Acacia harpophylla</i> dominant and co-dominant)
11.10.11	No Concern at Present	Least Concern	Not listed

The extent and location of impacts to these three RE vegetation communities is shown in Table 3.

Table 3: The extent and location of impacts to vegetation communities identified in the RWP2B Gaps Analysis

Well Lease	Location (MGA Zone 55)		Regional Ecosystem	Total area to be disturbed (ha)
	Easting	Northing		
RM02-30	705979	7081477	11.3.25	0.15
RM02-30	706602	7081932	11.3.25	0.05
RM03-87	708737	7082411	11.10.11	0.11
RM03-90	708511	7082011	11.10.11	0.12
RM03-85	709217	7083090	11.10.11	0.63

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RM03-85	709139	7082755	11.10.11	0.12
RM03-81	708872	7084154	11.10.11	0.94
RM03-83	709003	7084248	11.10.11	0.28
RM01-01	698407	7083951	11.9.5	0.37

4.0 Summary and Recommendations

4.1 Summary

The ecological survey conducted for the RWP2B project were carried out in accordance with the environmental conditions required by relevant Commonwealth and State authorities and revealed the following key information. Following the completion of 23 separate ecological reports this gaps analysis was completed to allow finalisation of the ecological impact assessment and to facilitate issuing of Santos' internal environmental approvals for the project.

This report should be read in conjunction with the Ecological reports for RWP2B (Document Number 0029-650-REP-0006).

4.2 Recommendations

Due to notable fauna habitat being located in the project area, project managers should consider using an experienced fauna handler (i.e. spotter-catcher) holding a valid State Rehabilitation Permit to undertake a preclearance fauna habitat survey prior to and as close as practicable to clearing operations taking place. The fauna handler must also be on site to supervise the clearing of fauna habitat features and coordinate the relocation of viable fauna habitat features in accordance with the Upstream Species Management Plan for Roma, Arcadia and Fairview Coal Seam Gas (CSG) Fields and the Significant Species Management Plan.

A disturbance limit request must be submitted and approved prior to any ground disturbance activities. The disturbance limit request needs to cover the following:

- The Endangered Ecological Community - Brigalow (*Acacia harpophylla* dominant and co-dominant)
- Yakka Skink
- Dunmalls snake
- Collared Delma
- South-eastern Long Eared Bat
- Regional Ecosystems 11.9.5, 11.3.2 and 11.9.7

Clearing and grading activities must be conducted in conjunction with the implementation of erosion and sediment control measures in accordance with the GLNG Erosion and Sediment Control Manual. The current condition of the area relies on the mix of grassy ground cover to maintain soil stability. Any clearing activity is likely to increase the potential risk of erosion and loss of sediment.

5.0 References

EHP, (2014). www.ehp.qld.gov.au/ecosystems/biodiversity/re_introduction.html

Eyre, T.J., Kelly, A.L, Neldner, V.J., Wilson, B.A., Ferguson, D.J., Laidlaw, M.J. and Franks, A.J. (2011). *BioCondition: A Condition Assessment Framework for Terrestrial Biodiversity in Queensland. Assessment Manual. Version 2.1*. Department of Environment and Resource Management (DERM), Biodiversity and Ecosystem Sciences, Brisbane.

Neldner, V.J., Wilson, B.A., Thompson, E.J. and Dillewaard, H.A. (2012) *Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland*. Version 3.2. Updated August 2012. Queensland Herbarium, Queensland Department of Science, Information Technology, Innovation and the Arts, Brisbane. 124 pp; Environmental Protection Agency (EPA) and

Wilson, P.R. and Taylor, P.M. (2012) *Land Zones of Queensland*. Queensland Herbarium, Queensland Department of Science, Information Technology, Innovation and the Arts, Brisbane. 79 pp. Department of Environment and Resource Management (DERM);

Appendix A

Habitat Mapping Assessment Tool (HMAT) outputs for the RWP2B Project.

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Infrastructure ID	RM03-02
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	Yes

PART C	How close are you to a significant water source?
	>1km and <3km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-02
Site ID	Q3

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	Yes

PART C	How close are you to a significant water source?
	>1km and <3km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM02-05
Site ID	Q2

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Brigalow vegetation communities

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement		PL 309
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	Unlikely Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-09
Site ID	Q3

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-09
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-09
Site ID	Q2

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	Yes

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID RM03-81
 Site ID 708872E 7084154N

PART A Tenement
 PL 309

PART B BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
 No

PART C How close are you to a significant water source?
 <1km of a water source

PART D What is the vegetation type?
 Woodlands/Open forest on non-alluvial plains and uplands

PART E Have the following species been observed

Koala	
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	
Northern quoll	
Ornamental snake	
Dunmall's snake	
Brigalow scaly-foot	
Yakka skink	
Collared delma	
Australian painted snipe	
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

PART F What microhabitat features present?

Dense leaf litter (> 50%)	Yes
Tall trees present (> 18m)	Yes
Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
Deeply dissected sandstone rock faces, cliffs line and caves	
Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
Rivers with large deep pools and abundant rock or woody habitat features	
Rivers with large deep pools interconnected by riffles	
Loose/exfoliating bark	Yes
Cracking clay soils	
Swamps, gilgai and other ephemeral wetlands	
Hollow-bearing trees within 1km	Yes
Hollow logs	Yes
Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
Thick shrub layer (>30% shrub cover)	Yes
Myrtaceae dominated canopy	Yes
Sink holes/tunnel erosion	
Termite mounds	Yes
Burrow complexes	Yes

Data Entry Instructions:

Data entry into the green cells is mandatory
 Data entry into the blue cells is optional

1. PART A Select the relevant petroleum tenement
2. PART B Enter the BPA Mapping Results
3. PART C Select the distance to water
4. PART D Select the prevalent vegetation
5. PART E Enter any observed EVNT Fauna
6. PART F Enter the relevant microhabitat features
7. Confirm Results - Click [HERE](#)

INFORMATION ONLY

EVNT Fauna potentially located in Tenement	PL 309
Koala	Yes
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	Yes
Northern quoll	
Ornamental snake	
Dunmall's snake	Yes
Brigalow scaly-foot	Yes
Yakka skink	Yes
Collared delma	Yes
Australian painted snipe	Yes
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID RM03-83
 Site ID 709003E 7084248N

PART A Tenement
 PL 309

PART B BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
 No

PART C How close are you to a significant water source?
 >1km and <3km of a water source

PART D What is the vegetation type?
 Woodlands/Open forest on non-alluvial plains and uplands

PART E Have the following species been observed

Koala	
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	
Northern quoll	
Ornamental snake	
Dunmall's snake	
Brigalow scaly-foot	
Yakka skink	
Collared delma	
Australian painted snipe	
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

PART F What microhabitat features present?

Dense leaf litter (> 50%)	Yes
Tall trees present (> 18m)	Yes
Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
Deeply dissected sandstone rock faces, cliffs line and caves	
Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
Rivers with large deep pools and abundant rock or woody habitat features	
Rivers with large deep pools interconnected by riffles	
Loose/exfoliating bark	Yes
Cracking clay soils	
Swamps, gilgai and other ephemeral wetlands	
Hollow-bearing trees within 1km	Yes
Hollow logs	Yes
Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
Thick shrub layer (>30% shrub cover)	Yes
Myrtaceae dominated canopy	Yes
Sink holes/tunnel erosion	
Termite mounds	Yes
Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY

EVNT Fauna potentially located in Tenement	PL 309
Koala	Yes
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	Yes
Northern quoll	
Ornamental snake	
Dunmall's snake	Yes
Brigalow scaly-foot	Yes
Yakka skink	Yes
Collared delma	Yes
Australian painted snipe	Yes
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-85
Site ID	709217E 7083090N, 709139E 7082755N

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID RM03-87
 Site ID 708737E 7082411N

PART A Tenement
 PL 309

PART B BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
 No

PART C How close are you to a significant water source?
 <1km of a water source

PART D What is the vegetation type?
 Woodlands/Open forest on non-alluvial plains and uplands

PART E Have the following species been observed

Koala	
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	
Northern quoll	
Ornamental snake	
Dunmall's snake	
Brigalow scaly-foot	
Yakka skink	
Collared delma	
Australian painted snipe	
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

PART F What microhabitat features present?

Dense leaf litter (> 50%)	
Tall trees present (> 18m)	Yes
Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
Deeply dissected sandstone rock faces, cliffs line and caves	
Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
Rivers with large deep pools and abundant rock or woody habitat features	
Rivers with large deep pools interconnected by riffles	
Loose/exfoliating bark	Yes
Cracking clay soils	
Swamps, gilgai and other ephemeral wetlands	
Hollow-bearing trees within 1km	Yes
Hollow logs	Yes
Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
Thick shrub layer (>30% shrub cover)	Yes
Myrtaceae dominated canopy	Yes
Sink holes/tunnel erosion	
Termite mounds	
Burrow complexes	

Data Entry Instructions:

Data entry into the green cells is mandatory
 Data entry into the blue cells is optional

1. PART A Select the relevant petroleum tenement
2. PART B Enter the BPA Mapping Results
3. PART C Select the distance to water
4. PART D Select the prevalent vegetation
5. PART E Enter any observed EVNT Fauna
6. PART F Enter the relevant microhabitat features
7. Confirm Results - Click [HERE](#)

INFORMATION ONLY

EVNT Fauna potentially located in Tenement	PL 309
Koala	Yes
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	Yes
Northern quoll	
Ornamental snake	
Dunmall's snake	Yes
Brigalow scaly-foot	Yes
Yakka skink	Yes
Collared delma	Yes
Australian painted snipe	Yes
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	Unlikely Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM02-19
Site ID	Q2

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM02-26
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement		PL 309
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RWP2B
Site ID	705979E 7081477N

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest associated with riparian zones and floodplains

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement		PL 309
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat		<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat		
Black-breasted button-quail	Unlikely Habitat		
Red goshawk	Unlikely Habitat		
Large-eared pied bat	Unlikely Habitat		
South-eastern long-eared bat	Unlikely Habitat		
Northern quoll	Unlikely Habitat		
Ornamental snake	Unlikely Habitat		
Dunmall's snake	General Habitat		
Brigalow scaly-foot	General Habitat		
Yakka skink	General Habitat		
Collared delma	General Habitat		
Australian painted snipe	Unlikely Habitat		
Fitzroy river turtle	Unlikely Habitat		
Murray cod	Unlikely Habitat		
Boggomoss snail	Unlikely Habitat		

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RWP2B
Site ID	706602E 7081932N

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest associated with riparian zones and floodplains

PART E	Have the following species been observed
	Koala
	Squatter pigeon
	Black-breasted button-quail
	Red goshawk
	Large-eared pied bat
	South-eastern long-eared bat
	Northern quoll
	Ornamental snake
	Dunmall's snake
	Brigalow scaly-foot
	Yakka skink
	Collared delma
	Australian painted snipe
	Fitzroy river turtle
	Murray cod
	Boggomoss snail

PART F	What microhabitat features present?
	Dense leaf litter (> 50%)
	Tall trees present (> 18m)
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes
	Deeply dissected sandstone rock faces, cliffs line and caves
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km
	Rivers with large deep pools and abundant rock or woody habitat features
	Rivers with large deep pools interconnected by riffles
	Loose/exfoliating bark
	Cracking clay soils
	Swamps, gilgai and other ephemeral wetlands
	Hollow-bearing trees within 1km
	Hollow logs
	Coarse woody debris (non-hollow logs and large pieces of bark)
	Thick shrub layer (>30% shrub cover)
	Myrtaceae dominated canopy
	Sink holes/tunnel erosion
	Termite mounds
	Burrow complexes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY	
EVNT Fauna potentially located in Tenement	PL 309
Koala	Yes
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	Yes
Northern quoll	
Ornamental snake	
Dunmall's snake	Yes
Brigalow scaly-foot	Yes
Yakka skink	Yes
Collared delma	Yes
Australian painted snipe	Yes
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	Unlikely Habitat		<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat		
Black-breasted button-quail	Unlikely Habitat		
Red goshawk	Unlikely Habitat		
Large-eared pied bat	Unlikely Habitat		
South-eastern long-eared bat	Unlikely Habitat		
Northern quoll	Unlikely Habitat		
Ornamental snake	Unlikely Habitat		
Dunmall's snake	General Habitat		
Brigalow scaly-foot	Unlikely Habitat		
Yakka skink	General Habitat		
Collared delma	Unlikely Habitat		
Australian painted snipe	Unlikely Habitat		
Fitzroy river turtle	Unlikely Habitat		
Murray cod	Unlikely Habitat		
Boggomoss snail	Unlikely Habitat		

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-05
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-11
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest associated with riparian zones and floodplains

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-15
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-16
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	Yes
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-22
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	Yes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	Species delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-30
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-45
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest associated with riparian zones and floodplains

PART E	Have the following species been observed
	Koala
	Squatter pigeon
	Black-breasted button-quail
	Red goshawk
	Large-eared pied bat
	South-eastern long-eared bat
	Northern quoll
	Ornamental snake
	Dunmall's snake
	Brigalow scaly-foot
	Yakka skink
	Collared delma
	Australian painted snipe
	Fitzroy river turtle
	Murray cod
	Boggomoss snail

PART F	What microhabitat features present?
	Dense leaf litter (> 50%)
	Tall trees present (> 18m)
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes
	Deeply dissected sandstone rock faces, cliffs line and caves
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km
	Rivers with large deep pools and abundant rock or woody habitat features
	Rivers with large deep pools interconnected by riffles
	Loose/exfoliating bark
	Cracking clay soils
	Swamps, gilgai and other ephemeral wetlands
	Hollow-bearing trees within 1km
	Hollow logs
	Coarse woody debris (non-hollow logs and large pieces of bark)
	Thick shrub layer (>30% shrub cover)
	Myrtaceae dominated canopy
	Sink holes/tunnel erosion
	Termite mounds
	Burrow complexes

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY	
EVNT Fauna potentially located in Tenement	PL 309
Koala	Yes
Squatter pigeon	
Black-breasted button-quail	
Red goshawk	
Large-eared pied bat	
South-eastern long-eared bat	Yes
Northern quoll	
Ornamental snake	
Dunmall's snake	Yes
Brigalow scaly-foot	Yes
Yakka skink	Yes
Collared delma	Yes
Australian painted snipe	Yes
Fitzroy river turtle	
Murray cod	
Boggomoss snail	

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-45
Site ID	Q2

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-54
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	Yes
	Tall trees present (> 18m)	Yes
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	delisted
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM03-58
Site ID	Q1

PART A	Tenement
	PL 309

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	Yes
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	
	Myrtaceae dominated canopy	
	Sink holes/tunnel erosion	
	Termite mounds	Yes
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 309	
Koala		Yes
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat		Yes
Northern quoll		
Ornamental snake		
Dunmall's snake		Yes
Brigalow scaly-foot		Yes
Yakka skink		Yes
Collared delma		Yes
Australian painted snipe		Yes
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	Unlikely Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.

Santos

GLNG Project

Infrastructure ID	RM12-07
Site ID	Q2

PART A	Tenement
	PL 314

PART B	BPA Mapping - "State or Regional Corridor", "Core Habitat" or "Habitat for EVR Taxa"
	No

PART C	How close are you to a significant water source?
	<1km of a water source

PART D	What is the vegetation type?
	Woodlands/Open forest on non-alluvial plains and uplands

PART E	Have the following species been observed	
	Koala	Yes
	Squatter pigeon	
	Black-breasted button-quail	
	Red goshawk	
	Large-eared pied bat	
	South-eastern long-eared bat	
	Northern quoll	
	Ornamental snake	
	Dunmall's snake	
	Brigalow scaly-foot	
	Yakka skink	
	Collared delma	
	Australian painted snipe	
	Fitzroy river turtle	
	Murray cod	
	Boggomoss snail	

PART F	What microhabitat features present?	
	Dense leaf litter (> 50%)	
	Tall trees present (> 18m)	
	Rocky habitats, including loose boulder-piles, rocky outcrops, steep rocky slopes	
	Deeply dissected sandstone rock faces, cliffs line and caves	
	Deeply dissected sandstone rock faces, cliffs line and caves within 5km	
	Rivers with large deep pools and abundant rock or woody habitat features	
	Rivers with large deep pools interconnected by riffles	
	Loose/exfoliating bark	
	Cracking clay soils	
	Swamps, gilgai and other ephemeral wetlands	
	Hollow-bearing trees within 1km	Yes
	Hollow logs	Yes
	Coarse woody debris (non-hollow logs and large pieces of bark)	Yes
	Thick shrub layer (>30% shrub cover)	Yes
	Myrtaceae dominated canopy	Yes
	Sink holes/tunnel erosion	
	Termite mounds	
	Burrow complexes	

Data Entry Instructions:
 Data entry into the green cells is mandatory
 Data entry into the blue cells is optional
 1. PART A Select the relevant petroleum tenement
 2. PART B Enter the BPA Mapping Results
 3. PART C Select the distance to water
 4. PART D Select the prevalent vegetation
 5. PART E Enter any observed EVNT Fauna
 6. PART F Enter the relevant microhabitat features
 7. Confirm Results - Click [HERE](#)

INFORMATION ONLY		
EVNT Fauna potentially located in Tenement	PL 314	
Koala	Yes	
Squatter pigeon		
Black-breasted button-quail		
Red goshawk		
Large-eared pied bat		
South-eastern long-eared bat	Yes	
Northern quoll		
Ornamental snake		
Dunmall's snake	Yes	
Brigalow scaly-foot	Yes	
Yakka skink	Yes	
Collared delma	Yes	
Australian painted snipe	Yes	
Fitzroy river turtle		
Murray cod		
Boggomoss snail		

Species	HMAT Output	Confirm or Reject HMAT Result	Justification
Koala	General Habitat	Confirmed	<i>If the HMAT results are rejected insert justification here.....</i>
Squatter pigeon	Unlikely Habitat	Confirmed	
Black-breasted button-quail	Unlikely Habitat	Confirmed	
Red goshawk	Unlikely Habitat	Confirmed	
Large-eared pied bat	Unlikely Habitat	Confirmed	
South-eastern long-eared bat	General Habitat	Confirmed	
Northern quoll	Unlikely Habitat	Confirmed	
Ornamental snake	Unlikely Habitat	Confirmed	
Dunmall's snake	General Habitat	Confirmed	
Brigalow scaly-foot	General Habitat	Confirmed	
Yakka skink	General Habitat	Confirmed	
Collared delma	General Habitat	Confirmed	
Australian painted snipe	Unlikely Habitat	Confirmed	
Fitzroy river turtle	Unlikely Habitat	Confirmed	
Murray cod	Unlikely Habitat	Confirmed	
Boggomoss snail	Unlikely Habitat	Confirmed	

Note: A decision from a suitably qualified person is required for all species listed on the HMAT. The Ecologist must either agree or disagree with the output of the HMAT. Where the ecologist disagrees with the HMAT results, a detailed justification for the decision is required in the free text "Justification" box above. This step is mandatory. The ecologists' rejection of a HMAT decision must not be accepted without the detailed justification.