

# **GLNG**

### Annual Environmental Return 2014 EPBC NO 2008/4096 Gas Transmission Pipeline

Document Number: 3380-GLNG-4-1.3-0213



#### **Table of Contents**

1	INTF	ODUCTION	2
2	COM	IPLIANCE WITH CONDITIONS – CONDITION 62(A)	2
3		TERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE – DITION 62(B)	3
	3.1	Unavoidable Adverse Impacts on MNES	3
	3.2	Mitigation Measures Applied to Avoid Adverse Impacts on MNES	4
	3.3	Rehabilitation Work Undertaken in Connection with any Unavoidable Adverse Impacts on MNES	4
4	NON	-COMPLIANCES – CONDITION 62(C)	4
5	AME	NDMENTS TO PLANS – CONDITION 62(D)	6
۸DE	ENIDIA	DEC.	6



#### 1 INTRODUCTION

On 22 October 2010, the GLNG Project proponents, Santos Limited and PETRONAS Australia Pty Ltd (**GLNG**) received approval from the then Minister for Sustainability, Environment, Water, Population and Communities to develop, construct, operate and decommission a 430 km pipeline network (**Gas Transmission Pipeline or GTP**) to link coal seam gas fields to a proposed LNG facility on Curtis Island as described in referral EPBC No 2008/4096 (**EPBC Approval**).

The 2014 Annual Environmental Return (**2014 AER**) has been developed to satisfy Condition 62 of the EPBC Approval.

#### Condition 62 states:

"62. The Proponent must produce an Annual Environmental Return, which:

- a) addresses compliance with these conditions;
- b) records any unavoidable adverse impacts on MNES, mitigation measures applied to avoid adverse impacts on MNES, and any rehabilitation work undertaken in connection with any unavoidable adverse impact on MNES;
- c) identifies all non-compliances with these conditions; and
- d) identifies any amendments needed to plans to achieve compliance with these conditions."

The 2013 AER is structured as follows:

- Section 2 addresses the matters required by Condition 62(a);
- Section 3 addresses the matters required by Condition 62(b);
- Section 4 addresses the matters required by Condition 62(c); and
- Section 5 addresses the matters required by Condition 62(d).

Condition 63 of the EPBC Approval also states:

"63. The proponent must publish the Annual Environmental Return on the on its website within 20 business days of each anniversary date of this approval."

The relevant anniversary date of the EPBC Approval for the purposes of the 2014 AER is 22 October 2014.

The 2014 AER covers the period 21 October 2013 – 22 October 2014 (**AER Period**) and will be published on the internet by 20 November 2014.

#### 2 COMPLIANCE WITH CONDITIONS - CONDITION 62(a)

The table provided in Appendix A demonstrates how GLNG has or is addressing each of the conditions imposed by the EPBC Approval.



### 3 MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE - CONDITION 62(b)

#### 3.1 Unavoidable Adverse Impacts on MNES

During this AER Period, GLNG completed all construction works of the GTP in accordance with the EIS for the GLNG Project and the EPBC Approval. The GLNG GTP is currently in the rehabilitation phase of the project, with final areas requiring reinstatement now underway. Unavoidable impacts for those listed threatened ecological communities and potential habitat for listed threatened species or migratory species set out in conditions 11 and 12 as a result of the GTP construction during the 2014 AER period are outlined in Table 1. Minimal clearing was completed in this AER period which is reflected in in the low disturbance impacts and individual species encountered below.

Table 1: EPBC Listed threated ecological communities					
Ecological Community	EBPC Status	Disturbance Limit (ha)	Actual Disturbance during 2014 AER period (ha)		
Brigalow (Acacia harpophylia dominant and co-dominant)	Endangered	22.0	0 ha		
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nadewar Bioregions	Endangered	2.4	0 ha		
Species	EBPC Status	Disturbance Limit (ha)	Actual Disturbance (ha) or Individual (ind.) Numbers Encountered during 2014 AER period		
Cycas megacarpa (Large-fruited Zamia)	Endangered	27.8	0 ha		
Philotheca sporadica	Vulnerable	N/A	0 ind.		
Cadellia pentasylis (Ooline)	Vulnerable	N/A			
Paradelma orientalis (Brigalow Scaly-foot)	Vulnerable	N/A	1 ind.		
Furina dunmalli (Dunmall's snake)	Vulnerable	N/A	0 ind.		
Egernia rugosa (Yakka skink)	Vulnerable	N/A	0 ind.		
Geophaps scripta scripta (Squatter pigeon – southern)	Vulnerable	N/A	1 ind.		
Nyctophilus timoriensis (Eastern Long-eared bat)	Vulnerable	N/A	0 ind.		
Chalinolobus dwyeri (Large- eared Pied bat)	Vulnerable	N/A	0 ind.		
Xeromys myoides (Water mouse)	Vulnerable	N/A	0 ind.		

Threatened species or migratory species encountered during construction of the GTP during the 2014 AER period for those species not identified in Conditions 11 or 12 were as follows:

Table 2: EPBC Listed species				
Species	EBPC Status	Individual (ind.) Numbers Encountered during 104 AER period		
Xerothamnella herbacea	Endangered	0 ind.		
Delma torquate (Collared delma)	Vulnerable	1 ind.		
Merops ornatus (Rainbow		32 ind.		



Bee-eater)		
Denisonia maculata (Ornamental Snake)	Vulnerable	4 ind.

#### 3.2 Mitigation Measures Applied to Avoid Adverse Impacts on MNES

The Significant Species Management Plan (SSMP) was developed based on pre-clearance ecological surveys to include MNES species as listed in conditions 11 and 12 of the EPBC Approval as well as those encountered that were not already referred to in the EPBC Approval. Works did not commence within a construction area where the relevant MNES listed in Conditions 11 and 12 were located until the applicable SSMP had been approved by the Department. Where MNES species not mentioned in the EPBC Approval were potentially located or encountered, construction was suspended in the relevant area until a SSMP for the species or ecological community had been submitted and approved.

Specific preventative actions and mitigation measures as detailed in the relevant SSMP and Aquatic Values Management Plan (AVMP) have been applied during construction in order to minimise adverse impacts on MNES.

## 3.3 Rehabilitation Work Undertaken in Connection with any Unavoidable Adverse Impacts on MNES

Reinstatement works have now been completed along the entire GTP ROW, following pipeline installation, with only one temporary Extra Work Space (EWS) associated with a camp still to be completely reinstated (due to be finalised in November 2014). This includes all areas associated with each listed MNES species.

Rehabilitation is now considered underway along the 420km GTP; however the reinstated pipeline ROW and associated temporary areas are yet to be subject to favourable growing conditions (i.e. wet season) and are therefore considered to be in its very initial stages of rehabilitation. Rehabilitation of the GTP continues to be monitored to progress towards the satisfaction of the required rehabilitation criteria, including that associated with the SSMP and MNES species.

#### 4 NON-COMPLIANCES - CONDITION 62(c)

Potential non-compliances with the EPBC Approval have occurred within the AER period as per the table below. This includes potential non-compliances with State environmental authorisations as referred to in condition 49 which were reported to the Department.

Incident Date	Location	Incident Type
~26/09/13	KP323 & KP327 / Mainland	During access track upgrades a number of <i>Cycas</i> megacarpa were impacted
24/10/13	UMW171 KP373 / Mainland	Sediment laden water release during dewatering activities
25/10/13	UMW149 KP349.2 / Mainland	Sediment release following a rainfall event
26/10/13	Camp 3 / Mainland	Unauthorised release of treated effluent (~1,000L)
27/10/13	UMW176 KP381.6 / Mainland	During trenching activities isolated pools within watercourse were filled, resulted in 8 fish deaths
30/10/13	KP346-349 / Mainland	Sediment releases following a rainfall event
31/10/13	KP19-30 / Mainland	Sediment releases following two short intense storm events



31/10/13	KP129-172 / Mainland	Sediment releases following a rainfall event
31/10/13	KP324 / Mainland	Sediment release following two rainfall events
	Humpy Creek KP407.8 /	Sediment laden water release to watercourse
04/11/13	Marine Crossing	during reinstatement activities
14-16/11/13	KP130-406.25 / Mainland	Sediment releases following significant rainfall
	UMW185 KP397.8 /	Sediment laden water release during dewatering
15/11/13	Mainland	activities
	KP406.25-414.55 / Marine	
18/11/13	Crossing	Sediment releases following short intense storms
18/11/13	KP414.55-419 / Curtis	Sediment releases following substantial rainfall
21/11/13	KP52 / Mainland	Release of hydrotest water release before receipt of laboratory results
22-25/11/13	KP397-399 / Mainland	Sediment laden water release during dewatering activities
22-27/11/13	KP135-406 / Mainland	Sediment releases following significant rainfall
03/12/13	KP352 / Mainland	Sediment laden water release during installation of a clean water diversion
04/40/40	Mimosa Creek KP220 /	Release of sediment laden water during
04/12/13	Mainland	reinstatement works
12-13/12/13	KP141-167 & KP308.6 / Mainland	Sediment releases following substantial rainfall
16/12/13	KP309-311 / Mainland	Unknown encounter with Rainbow Bee-Eaters
16/12/13	KP155 / Mainland	Sediment laden water release during bellhole dewatering activities
07-09/01/14	KP135-280 & KP372-	Sediment releases following multiple days of
07-09/01/14	404.4 / Mainland	rainfall
07 &	KP414.7 & KP416.1 /	Sediment laden water release during dewatering
09/01/14	Curtis Island	activities
8-11/01/14	KP414-417 / Curtis Island	Sediment releases following substantial rainfall
15/01/14	UMW123 KP285.2 /	Sediment plume caused in drainage feature during
	Mainland	reinstatement works
30/01-	KP358-420 / Mainland,	Sediment releases following significant rainfall
01/02/14	Marine Crossing & Curtis	
05/02/14	Island KP417 / Curtis Island	Sediment laden water release during dewatering activities
	KP334-420 / Mainland,	activities
08-09/02/13	Marine Crossing & Curtis Island	Sediment releases following significant rainfall
14/02/14	Targinnie Creek / Marine Crossing	Sediment laden water release due to Water Treatment Plant turbidity metre failure
05/03/14	Laird Point / Marine Crossing	Diesel spill occurred during loading of the barge
23-24/03/14	Baffle Creek EWS / Mainland	Sediment releases following overnight storm event
26/03/14	Camp 3 / Mainland	Diesel spill occurred due to rainfall overtopping fuel station bund
24-29/03/14	/ Mainland	Sediment releases following significant rainfall
24-29/03/14	/ Curtis Island	Sediment releases following significant rainfall
25-29/03/14	Targinnie Creek / Marine Crossing	Sediment releases following significant rainfall
02/04/14	KP413 / Marine Crossing	Sediment laden water release during bellhole dewatering activities
26/05/14	KP342-346 / Mainland	Release of hydrotest water release before receipt of laboratory results



### 5 AMENDMENTS TO PLANS - CONDITION 62(d)

GLNG has not sought to amend any of its management plans during the 2014 AER Period.

#### **APPENDICES**

**APPENDIX A – Compliance with EPBC Approval.** 



### APPENDICES APPENDIX A – Compliance with EPBC Approval

Condition	Compliance Notes
The pipeline route and ROW is depicted in the map at Attachment 1.	The Gas Transmission Pipeline (GTP) has been constructed generally in accordance with the pipeline route and ROW depicted in the map at Attachment 1 of the EPBC Approval and as shown in the Environmental Management Plans approved by the Department.
2. The proponent must prepare a Environmental Management Plan to manage the impacts of construction, operation and decommissioning of the pipeline (other than in relation to the Narrows) on listed threatened species and ecological communities, listed migratory species and values of the World and National Heritage-listed Great Barrier Reef.  3. The Environmental Management Plan must include:  a. provisions for detailed pre-clearance surveys by a suitably qualified ecologist along the entire length of the ROW, in accordance with conditions 5 to 10;  b. measures to minimise native and riparian vegetation clearance and to minimise the impact on listed species, their habitat and ecological communities in accordance with management plans required for MNES under this approval;  c. measures to manage the impact of clearing on each listed species and ecological community in accordance with management plans required for MNES under this approval;  d. measures to regenerate vegetation on the ROW where natural regeneration is not successful to a condition at least equivalent to the ROW condition prior to commencement;  e. measures to minimise impacts on fauna during pipeline construction, including:  i. measures to protect MNES in the areas of the ROW where trenching is being undertaken, including measures to exclude listed terrestrial fauna from gaining access to those areas of the ROW where trenching is currently being undertaken  ii. mechanisms to allow fauna to escape from the pipeline trench;  iii. daily morning surveys for trapped fauna;  iv. mechanisms for a suitably qualified person to relocate fauna; and  v. record keeping for all survey, removal and relocation activities.  f. machinery wash down procedures and ongoing monitoring to minimise the spread and establishment of weeds in the ROW. Monitoring of weed infestations within disturbed areas must occur at least monthly during construction and then quarterly for a period of two years after completion of construction. Appropriate weed control measures must be imp	Environmental Management Plans have been prepared for the Mainland, Marine Crossing and Curtis Island sections of the GTP meeting the requirements of condition 3 and were approved by the Department on 21 June, 7 December and 21 June 2012 respectively.  The Environment Management Plan required by conditions 2 to 4 inclusive, is comprised in the following plans:  Significant Species Management Plan; Pest and Weed Management Plan; Fosion and Sediment Control Plans; Species Management Plan; Mosquitoes and Midges Management Plan; Maste Management Plan; Landscape Rehabilitation Management Plan Stormwater Management and Erosion and Sediment Control Plan; Concept Dewatering, Hydrotest Water and Land Release Management Plan.  Collectively for the mainland, marine crossing and Curtis Island GTP components.
i. measures for the management of acid sulfate soils;	



Condition	Compliance Notes
4. The Environmental Management Plan must be submitted for the approval of the Minister. Commencement must not occur without approval (except for activities critical to commencement and associated with mobilisation of plant, equipment, materials, machinery and personnel prior to start of pipeline construction which will have no adverse impact on MNES). The approved plan must be implemented.	
5. Before the clearance of native vegetation in the pipeline ROW, the proponent must: a. undertake pre-clearance surveys for the presence of listed threatened species and migratory species, their habitat and listed ecological communities. b. alternatively, where recent surveys have already been undertaken and those surveys meet the Department's requirements for surveys for the relevant MNES, the proponent may elect to develop management plans based on those surveys in accordance with the requirements of Condition 8.	Preclearance ecological surveys in accordance with conditions 5 and 6 commenced in October 2011 and were completed for the entire GTP. Preclearance survey (Ecological) reports have been published online <a href="http://www.santosglng.com/environment-and-water/environmental-management-plans.aspx">http://www.santosglng.com/environment-and-water/environmental-management-plans.aspx</a>
<ul> <li>6. Pre-clearance surveys must:</li> <li>a. for each listed species, be undertaken in accordance with the Department's survey guidelines in effect at the time of the survey.</li> <li>b. be undertaken by a suitably qualified ecologist approved by the Department in writing;</li> <li>c. document the survey methodology, results and significant findings in relation to MNES;</li> <li>d. apply best practice site assessment and ecological survey methods appropriate for each listed threatened species, migratory species, their habitat and listed ecological communities.</li> <li>7. Pre-clearance survey reports (which document the methods used and the results obtained) must be published by the proponent and provided to the Department on request.</li> </ul>	
8. If a listed threatened species or migratory species or their habitat, or a listed ecological community is encountered during the surveys undertaken as required by condition 5 and is not specified in the Table 1 or 2 at condition 11 and 12, the proponent must submit a separate management plan for each species or ecological community to manage the unexpected impacts of clearing. In relation to each listed species or ecological community, each plan must address:  a. the relevant characteristics describing each ecological community  b. a map of the location of species, species' habitat, or ecological community in proximity to the ROW;  c. measures that will be employed to avoid impact on the species, species' habitat, or ecological community;  d. a quantification of the unavoidable impact (in hectares and/or individual specimens);  e. where impacts are unavoidable and a disturbance limit is not specified for the listed species or ecological community under condition 11, propose offsets to compensate for the impact on the population of the species' habitat, or the ecological community;  f. current legal status (under the EPBC Act);  g. known distribution.	Management plans for each listed species and ecological community (comprised in the Significant Species Management Plan (SSMP)) were developed by GLNG following the pre-clearance surveys in accordance with the requirements of condition 8 and the final plan was approved by the Minister on 7 June 2013.  Quantification of the unavoidable impact to listed threatened species, migratory species, their habitat, or a listed ecological community is recorded in the Significant Species Management Plan (SSMP). GLNG is currently revising for submission the SSMP to reflect the actual impacts to MNES as compared to anticipated impacts arising from the GTP construction. In relation to condition 8 (e), on 27 September 2013, the Offset Plan submitted by GLNG was approved by the Department as satisfying condition 8 of the EPBC Act approval in relation to the direct offset obligations that arise from the Kangaroo Island wetlands, Narrows and Curtis Island elements of the GTP project.
For listed species, each plan must also include: a. known species' populations and their relationships within the region; b. biology and reproduction;	Once the revised SSMP is approved and the final impacts quantified, GLNG will submit a revised Offset Plan to address the remaining impacts to MNES



Condition	(	Compliance Notes	
c. preferred habitat and microhabitat including associations with geology, soils, landscape features and associations with other native fauna and/or flora or ecological communities; d. anticipated threats to MNES from pipeline construction, operation and decommissioning; e. management practices and methods to minimise impacts, such as:  i. site rehabilitation timeframes, standards and methods; ii. use of sequential clearing to direct fauna away from impact zones; iii. re-establishment of native vegetation in linear infrastructure corridors; iv. handling practices for flora specimens; v. translocation and/or propagation practices and monitoring for translocation/propagation success; vi. monitoring methods including for rehabilitation success and recovery; f. reference to relevant conservation advice, recovery plans, or other policies, practices, standards or guidelines relevant to MNES published or approved from time to time by the Department.  9. Each plan required under condition 8 must be submitted for the approval of the Minister. Commencement in the location covered by the management plan must not occur without approval. Each approved plan must be implemented.	resulting from the construction Offset Plan approved on 27 S		re not addressed by the
10. If, during construction a listed threatened species or migratory species or their habitat, or a listed ecological community is encountered and is not specified in the table at condition 11 or 12, the proponent must submit a separate management plan for each species or ecological	Threatened species or migrat the GTP during the 2014 AE Conditions 11 or 12 were as f	R period for those spe	
community in accordance with condition 8 within 20 business days of encountering that MNES. Work must not continue at the construction site where the MNES is encountered until the	Table	2: EPBC Listed specie	26
relevant management plan has been approved.	Species	L. Li Bo Listed specia	Individual (ind.)
and a sign of the second state of the second s		EBPC Status	Numbers Encountered
	Delma torquate (Collared delma)	Vulnerable	1 ind.
	Paradelma orientalis (Brigalow Scaly Foot)	Vulnerable	1 ind
	Geophaps scripta scripta (Squatter Pidgeon)	Vulnerable	1 ind.
	Merops ornatus (Rainbow Bee-eater)		32 ind.
	Denisonia maculata (Ornamental Snake)	Vulnerable	4 ind.
	Separate management plans requirements of condition 8 w 13 September and 19 Decemincorporated into the Signification	ere prepared and apportively	proved by the Minister on 7. These plans were then



Condition			Compliance Notes	
11. The following maximum disturbance limits apply to any disturbances authorised for unavoidable impacts on listed threatened communities and potential habitat for listed threatened species or migratory species as a result of the construction, operation and decommissioning of the pipeline (and all associated activities).			Construction of the GTP continued during the 2014 AER period. Disturbance for unavoidable impacts on listed threatened communities and potential habitat for listed threatened species or migratory species as a result of the construction was within the limits set out in condition 11.	
Table 1: EPBC Listed threaten	ed ecological commun	ities		
Ecological community	EPBC Status	Disturbance	imit (ha)	
Brigalow (Acacia harpophylia dominant and co-dominant)	Endangered	22.0		
Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nadewar Bioregions	Endangered	2.4		
Species	EPBC Status	Disturbance	imit (ha)	
Cycas megacarpa (Large- fruited Zamia)	Endangered	27.8		
12. The proponent must prepare a management plan for each species in the table below. Each plan must be prepared in accordance with the requirements of condition 8. Table 2: Species management plans required before commencement			The SSMP includes management plans meeting the requirements of condition 8 for each individual species listed in Table 2.  GLNG prepared the individual management plans comprised in the SSMP	
Table 2: Species management	plans required before	commencement		through a staged approach to align with the GTP construction schedule.
Listed species	· · · · · · · · · · · · · · · · · · ·	EPBC Act Status		These have been approved by the Department and no further individual
Philotheca sporadica		/ulnerable		management plans are expected to be required. GLNG is however currently
Cadellia pentasylis (Ooline)	\	/ulnerable		revising the SSMP to reflect the actual impacts to MNES arising from the GTP construction.
Paradelma orientalis (Brigalow S	Scaly-foot)	/ulnerable		
Furina dunmalli (Dunmall's Snak		/ulnerable		On 27 September 2013, the Offset Plan submitted by GLNG was approved
Egernia rugosa (Yakka Skink)		Vulnerable		by the Department as satisfying condition 8 of the EPBC Act approval in
Geophaps scripta scripta (Squatter pigeon – Vulnerable southern)			relation to the direct offset obligations that arise from the Kangaroo Island wetlands, Narrows and Curtis Island elements of the GTP project.	
Nyctophilus timoriensis (Eastern Long-eared Bat) Vulnerable			Once the revised SSMP is approved and final impacts quantified, GLNG will	
Chalinolobus dwyeri (Large-eared Pied Bat)		Vulnerable		submit a revised Offset Plan to address the remaining unavoidable impacts
		/ulnerable		to MNES resulting from the construction of the GTP which were not addressed by the Offset Plan approved on 27 September 2013.
		Note: Brigalow Scaly-foot ( <i>Paradelma orientalis</i> ) has since been delisted under the EPBC Act.		



Condition	Compliance Notes
13. Each management plan must be submitted for the approval of the Minister.  Commencement must not occur without approval. Commencement in the location covered by the management plan must not occur without approval. Each approved plan must be implemented.	Each of the individual management plans comprising the SSMP was submitted and approved prior to works commencing in the area relevant to the species/habitat.
14. Disturbance of vegetation related to the construction and maintenance of the pipeline must be confined to the ROW. Any proposed siting of construction camps, vehicle access tracks and pipe lay-down areas outside the ROW during construction must be undertaken so as to minimise potential adverse impacts on MNES and must comply with conditions 5 to 13.	Clearing outside the RoW has been undertaken in a way that minimises the potential impacts caused by construction activities. All clearing has been conducted in compliance with the site specific Management plans and set conditions.
15. Within 12 months of the commencement of pipeline development the proponent must prepare an Offset Plan to provide an offset area for the approved disturbance limits relating to Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions within the project area. The offset area to be secured must be an area of private land which	GLNG OPL submitted the GTP Environmental Offset Plan (EOP) for the GTP Project on 22 April 2011.
includes at least 19.2 ha of Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions.	Note: The commencement date for the controlled action the subject of the EPBC Act approval (the GTP) was the 2 August 2012.
<ul> <li>16. The Offset Plan must include details of the offset area including: the timing and arrangements for property acquisition, maps and site description, environmental values relevant to MNES, connectivity with other habitats and biodiversity corridors, a rehabilitation program, and mechanisms for long-term protection, conservation and management.</li> <li>17. The Offset Plan must be submitted for the approval of the Minister within 12 months of the commencement of gas field development. The approved Offset Plan must be implemented within 30 business days of approval.</li> </ul>	The EOP included properties that would be suitable to meet the offset requirement for SEVT Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions. In addition, the OEP identified offset properties that would address the offset requirements for listed flora and fauna species, World Heritage and National Heritage values.
	The EOP will be updated to reflect the offset requirements for the GTP Project once the final SSMP has been approved. This EOP will be resubmitted to the Department for approval (refer to Compliance Notes for condition 8).
18. If the approved Offset Plan cannot be implemented because of failure of arrangements to secure the necessary area of private land then the proponent must submit for the Minister's approval an alternative Offset Plan. The alternative Offset Plan must provide at least an equivalent environmental outcome to those specified under condition 15. The approved alternative Offset Plan must be implemented.	Not applicable
19. If the proponent proposes any action within a proposed offset area, other than actions related to managing that area as an offset property, approval must be obtained, in writing from the Department. In seeking Departmental approval the proponent must provide a detailed assessment of the proposed action including a map identifying where the action is proposed to take place and an assessment of all associated adverse impacts on MNES. If the Department agrees to the action within the proposed offset site, the area identified for the action must be excised from the proposed offset and alternative offsets secured of equal or greater environmental value in relation to the impacted MNES.	Not applicable.



Condition	Compliance Notes
20. The proponent must secure the offset within 2 years of commencement.	The commencement date for the controlled action the subject of the EPBC Approval (the GTP) was 2 August 2012.  On 19 <sup>th</sup> March 2014, GLNG advised that the proposed offset for the SEVT Semi-evergreen vine thickets of the Brigalow Belt (North and South) and
	Nandewar Bioregions threatened ecological community had been secured.
<ul> <li>21. Within 12 months of securing the offset area required under the approved Offset Plan, the proponent must develop an Offset Area Management Plan which must specify measures to improve the environmental values of the offset area in relation to MNES, including;</li> <li>a. the documentation and mapping of current environmental values relevant to MNES of the area;</li> <li>b. measures to address threats to MNES including but not limited to grazing pressure and damage by livestock and adverse impacts from feral animals and weeds;</li> <li>c. measures to provide fire management regimes appropriate for the MNES;</li> <li>d. measures to manage the offset area to improve the condition of the SEVT ecological community within the offset area and to increase the areal extent of SEVT ecological community within the offset area as objectives of the program.</li> <li>e. monitoring, including the undertaking of ecological surveys to assess the success of the management measures against identified milestones and objectives;</li> <li>f. performance measures and reporting requirements against identified objectives, including trigger levels for corrective actions and the actions to be taken to ensure performance measures and objectives are met.</li> <li>22. Within 12 months of securing the offset area the Offset Area Management Plan must be implemented.</li> </ul>	Not applicable. The Offset Area Management Plan (OAMP) will be developed once the EOP has been approved by the Department.
NOTE CONDITION 23 (as per below) was varied by DOTE on 15 April 2014 23. To offset the unavoidable impacts to Cycas megacarpa from all activities associated with this approval including implementing the baseline route through the Callide and Calliope Ranges assessed in the Environment Impact Statement, the proponent must:	GLNG submitted the GTP Environmental Offset Plan (EOP) in relation to condition 23 on 22 April 2011. The Plan identified a number of properties that would be suitable as potential recipient sites for the translocated and propagated Cycads.
<ul> <li>a. legally protect the environmental values of an offset area of at least 166.8ha as an offset (the "offset area") for receiving no less than 3990 translocated and propagated individuals by:         <ol> <li>i. within 44 months of the date of this approval:</li> </ol> </li> </ul>	The GLNG <i>Cycas megacarpa</i> Management Plan (CMP) was prepared to address condition 23, 24 and 25 of EPBC Approval 2008/4096. Document reference number: 3380-GLNG-4-1.3-0013 (Rev 5). GLNG identified in the CMP a preferred offset property and demonstrated that it was suitable as a translocation and offset site.
<ul> <li>I. implementing measures to secure a legal interest in a suitable offset area;</li> <li>II. implementing measures to maintain and improve the ecological condition of the offset area including control and management of weeds, fire, feral animals,</li> </ul>	The CMP was approved by the Department on 4 March 2013. Document reference number: SEWPaC letter_Ref:2012/14056. Subsequent amendments have been made to the approved CMP. The amended CMPs



Condition	Compliance Notes
access and grazing;  III. implementing measures to protect the existing <i>Cycas megacarpa</i>	have been submitted for approval to the Department. The Department approved the most recent version of the CMP (Rev 8) on 30 August 2013. Document reference: SEWPaC letter Ref:2013/02492.
population within the offset area; and  ii. within 56 months of the date of this approval, securing the offset area to ensure that it is protected in perpetuity;  b. identify alternative recruitment methods if it is considered unlikely that translocation and propagation will be successful;  c. notify the Department in writing of the acquisition or transfer of ownership of the area identified in Condition 23(a) within one month of securing the land;  d. if the proponent proposes any action within a proposed offset area, other than actions related to managing that area as an offset property, approval must be obtained, in writing from the Department. In seeking Departmental approval the proponent must provide a detailed assessment of the proposed action including a map identifying where the action is proposed to take place and an assessment of all associated adverse impacts on MNES. If the Department agrees to the action within the proposed offset site, the area identified for the action must be excised from the proposed offset and alternative offsets secured of equal or greater environmental value in relation to the impacted MNES;  e. demonstrate that the measures undertaken in accordance with 23(a) for securing and managing the offset will ensure that the offset is protected in perpetuity.	In October 2013 GLNG requested a further extension of time to secure the preferred Cycad Offset Site. DOTE approved this request on 15 April 2015 through the variation of Condition 23.  GLNG has entered into binding contracts for the purchase of the offset property and is progressing satisfaction of the various conditions precedent to completion of the contracts, such as the obtaining of development approvals.  GLNG has also developed a Cycad Offset Area Management Plan (COAM Plan). The OAMP addresses details including the management of weeds, fire, feral animals and grazing within the offset site.
24. The proponent must prepare a <i>Cycas megacarpa</i> Management Plan in consultation with an expert approved by the Department in writing.  25. The <i>Cycas megacarpa</i> Management Plan must include: a. confirmation of the pipeline route across the Callide Range b. measures to ensure all <i>Cycas megacarpa</i> within the ROW are avoided using, for example suitable trenchless technique(s) as necessary or, if avoidance is not possible, individual plants must be removed and kept offsite and replanted in the same location, or alternatively translocated. Where it can be demonstrated that removal and translocation of individuals is unlikely to succeed, translocation may be substituted by establishing propagated individuals; c. measures to propagate and plant <i>Cycas megacarpa</i> individuals removed or impacted by construction activities to maintain a population of no less than 3990 (2610 if the CRAR is pursued) individuals within the offset site required by Condition 23(a); d. a detailed methodology for translocation, propagation, and planting, including a map of the location of the offset site; e. details of funding required to secure, maintain and enhance the values of the offset site in perpetuity; f. details of a suitably qualified person to undertake translocation, propagation and planting;	In accordance with condition 24 to 26, GLNG submitted and had approved Cycas megacarpa Management Plan by the Department on 04 March 2013. The Plan has been updated on occasions with the final revision (Revision 8 being approved by the Department on 30 August 2013.



Condition	Compliance Notes
g. details of the erosion and sediment control measures to be implemented in the ROW in the	
Callide and Calliope Ranges;	
h. measures to rehabilitate the ROW in the Callide and Calliope Ranges;	
i. measures for the control and management of weeds, fire, feral animals, access and grazing	
in translocation sites;	
j. measures for the management, maintenance and protection of the population of <i>Cycas</i>	
megacarpa individuals in the offset site for a period of five years following final planting;	
k. details of monitoring practices to assess the success of proposed management regimes of the offset:	
I. performance measures, reporting requirements, trigger levels for corrective actions and	
identification of those actions to be taken to ensure performance measures are met; and	
m. a reconciliation statement of impacts against the agreed limit of disturbance, as defined	
above in condition 11 must be updated by the proponent every 12 months from commencement	
until construction is complete.	
26. The Cycas megacarpa Management Plan must be submitted for the approval of the	
Minister. Commencement in the location covered by the management plan must not occur	
without approval. The approved plan must be implemented.	
27. To avoid doubt, a single offset management plan can be submitted to meet all offset	Not applicable; condition is an aid to interpretation.
management plan requirements.	
28. Condition 28 was revoked by decision of the Department dated 31 October 2013.	
29. The proponent must prepare an Environmental Management Plan for the crossing of the	The Environmental Management Plan for the crossing of the Narrows has
Narrows. This must include:	been approved by the Department.
a. if the crossing is undertaken concurrently with the construction of one or more additional gas	Construction of The Narrows crossing was undertaken by tunnel boring
transmission pipelines (a 'bundled crossing'):	machine (TBM). Management strategies for the Narrows crossing were
i. the roles and responsibilities of each party involved in the bundled crossing;	incorporated into the overall project Environmental Management Plans.
ii. details of the final pipeline route, engineering design and construction methodology,	GLNG did not participate in the "bundled crossing".
including details of the total number of gas transmission pipes including any pipelines for water	derive and not participate in the sandred drooting.
supply and/or sewerage;	
iii. potential impacts from the construction of the pipeline on listed threatened species,	A Receiving Environment Monitoring Program was developed by Cardno to
ecological communities, migratory species and World and National Heritage-listed values of the Great Barrier Reef:	monitor the actual and potential impacts of the construction activities on the
iv. mitigation measures to reduce impacts on listed threatened species, ecological	receiving environment within the Narrows region.
communities, migratory species and World and National Heritage-listed values of the Great	
Barrier Reef:	The EMP for the Marine Crossing includes an Acid Sulfate Soils
v. proposed offset measures to compensate for unavoidable impacts on listed threatened	Management Plan (ASSMP). This ASSMP has been approved by DEHP.
species and ecological communities, listed migratory species and values of the World and	This plan outlines the measures which were taken in order to manage acid
National Heritage-listed Great Barrier Reef;	sulfate soils.
vi. measures for the management of acid sulfate soils (both potential and actual);	
vii. measures for ongoing maintenance and decommissioning of the pipelines, or	



Condition	Compliance Notes
If the proponent does not proceed in a bundled crossing: b. a construction method which, in the opinion of the Minister, will result in minimal surface disturbance to the Kangaroo Island Wetlands and minimal disturbance to the area of the estuary of the Narrows (preferably achieved by horizontal directional drilling or tunnelling); i. details of the final pipeline route, design and construction methodology, including details of inclusion of pipes for water supply and sewerage; ii. potential impacts from the construction of the pipeline on listed threatened species, ecological communities, migratory species and World and National Heritage-listed values of the Great Barrier Reef; iii. mitigation measures to reduce impacts to listed threatened species, ecological communities, migratory species and World and National Heritage-listed values of the Great Barrier Reef; iv. proposed offsets to compensate for the unavoidable impacts of the action on listed threatened species and ecological communities, listed migratory species and values of the World and National Heritage-listed Great Barrier Reef; v. measures for the management of acid sulfate soils; vi. measures for ongoing maintenance and decommissioning of the pipeline.  30. The Environmental Management Plan must be submitted for the approval of the Minister. The activity which is the subject of the Environmental Management Plan must not start without approval. The approved plan must be implemented.	
31. If the pipeline construction involves dredging to be undertaken by the proponent under the approval to which these conditions are attached, the proponent must prepare a Dredge Management Plan.  32. The Dredge Management Plan required under these conditions must include: a. details of dredging methods, planned commencement, duration and frequency of dredging; b. identification of areas of potentially impacted seagrass habitat and their environmental tolerances; c. site specific water quality objectives for the designated habitats as a guideline for habitat protection and that are in accordance with the National Water Quality Management Strategy including the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, the Australian Guidelines for Water Quality Monitoring and Reporting, the Great Barrier Reef Water Quality Guidelines and the Queensland Water Quality Guidelines; d. measures to refine the plume modelling data presented in the proponent's Environmental Impact Statement; e. mitigation measures and controls for the dredging and spoil disposal activities; f. triggers for initiating adaptive management and potential remediation measures; g. monitoring of: i. potential impacts of dredging on seagrass including but not limited to turbidity and light attenuation;	Not applicable. The pipeline construction methodology does not include dredging.



Condition	Compliance Notes
<ul> <li>ii. the triggers established under condition 32(f); and</li> <li>iii. the long term impacts of the action;</li> <li>h. options, linked to the triggers established under condition 32(f), for adaptively managing the action – including options for varying the timing and location of dredging and spoil disposal activities;</li> <li>i. details for monitoring of dredging activities, including timing and variables measured such as turbidity and light attenuation in a format as directed by the Department to allow validation of other modelling of dredging impacts relating to the Port of Gladstone;</li> <li>j. measures to minimise the impact on listed migratory birds from noise associated with construction activities;</li> <li>k. measures to prevent and respond to the introduction of marine pest species;</li> <li>l. measures to protect dugongs and listed turtles including the use of turtle excluder devices;</li> <li>m. details of dredge spoil placement;</li> <li>n. provisions to sample and analyse dredge spoil composition.</li> <li>33. The Dredge Management Plan must be submitted for the approval of the Minister. The activity the subject of the Dredge Management Plan must not occur without approval. The approved plan must be implemented.</li> </ul>	
34. East of the Callide Range, the proponent must locate the pipeline within the Callide Infrastructure Corridor State Development Area as indicated in the map at Attachment 1.	The Pipeline has been constructed within the Callide Infrastructure Corridor State Development Area (CICSDA).
35. Where reasonably possible horizontal directional drilling must be used for major waterway crossings, including: a. those within the Fitzroy and Calliope River catchments and any water crossing within the known distribution of the Fitzroy River Turtle ( <i>Rheodytes leukops</i> ) and Murray Cod ( <i>Maccullochella peelii</i> ). Pipeline construction across waterways must not take place during the	The Aquatic Values Management Plan (AVMP) details the construction methodology to be used for each individual watercourse crossing in order to minimise the impact on MNES. Seasons and the ecology of species are taken into consideration within the AVMP and SSMP.
nesting and breeding season of the Fitzroy River Turtle; b. Humpie and Targinie Creeks before marshlands near Kangaroo Island and The Narrows  36. Trenchless techniques are not required in minor creek beds within the known distribution of the Fitzroy River Turtle ( <i>Rheodytes leukops</i> ) and Murray Cod ( <i>Maccullochella peelii peelii</i> ) where there is no water at the crossing site and the distance to the nearest water is sufficient to	Any watercourses within the known distribution areas were determined to be adequately mitigated against potential impacts to MNES without the use horizontal directional drilling.
buffer any potential impacts resulting from the crossing technique.  37. The proponent must prepare an Aquatic Values Management Plan. This plan must include: a. a detailed assessment of aquatic values, including animal breeding locations for listed threatened and migratory species within the ROW; b. measures to minimise impacts on listed riparian, aquatic and water dependent flora and	No works commenced in the applicable watercourse until the relevant AVMP submitted by GLNG was approved by the Department. The final AVMP was approved by the Department 3 October 2013.
fauna; c. measures to minimise erosion and sediment impacts to waterways; d. measures to maintain water quality and water flow requirements, including treatment and disposal methods for hydrostatic test water; e. site-specific mitigation measures for any potential impacts from construction and operation of	



Condition	Compliance Notes
the pipeline on listed threatened species, including but not limited to the Fitzroy River Turtle.	
38. The Aquatic Values Management Plan must be approved in writing by the Minister. Activities the subject of the plan must not start without approval. The Plan must be implemented.	
39. Within 20 business days of commencement, the proponent must advise the Department in writing of the actual date of commencement.	The Department was informed of the commencement date of the GTP construction on 23 August 2012.
40. If, at any time after five years from the date of this approval, the Minister notifies the proponent in writing that the Minister is not satisfied that there has been commencement of the action, the action must not commence without the written agreement of the Minister.	Not applicable.
41. If the proponent wants to act other than in accordance with a plan approved by the Minister under these conditions, the proponent must submit a revised plan for the Minister's approval.	GLNG submitted revised plans as required to ensure all works were conducted in accordance with the approved plan.
<ul> <li>42. If the Minister approves the revised plan, then that plan must be implemented instead of the plan originally approved.</li> <li>43. Until the Minister has approved the revised plan, the proponent must continue to implement</li> </ul>	
the original plan.	
44. If the Minister believes that it is necessary or desirable for the better protection of a relevant controlling provision for the action, the Minister may request the proponent to make, within a period specified by the Minister, revisions to a plan approved under these conditions.	No requests have been made by the Department during the 2014 AER period.
45. If the Minister makes a request for revision to a plan, the proponent must: a. comply with that request; and	
b. submit the revised plan to the Minister for approval within the period specified in the request.  46. The proponent must implement the revised plan on approval of the Minister.	
47. Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	
48. For any plan required to be approved by the Minister under these conditions, the proponent must ensure the Minister is provided at least 20 business days for review and consideration of the plan, unless otherwise agreed in writing between the proponent and the Minister.	Not applicable.
49. The proponent must comply with all environmental authorisations issued by the State, including conditions of an environmental authority issued under the EP Act.	Refer to Section 4 of this 2014 AER which includes potential non-compliances with State environmental authorisations.
50. If a condition of a State approval requires the proponent to provide a plan then the proponent must also provide the plan to the Department or Minister on request, within the period specified in the request.	State required plans are available to the Department or Minister.
51. If these conditions require the proponent to provide something by a specified time, a longer period may be specified in writing by the Minister.	Refer to Compliance Notes for condition 23. Not otherwise relevant to the 2014 AER period.
52. On the request of and within a period specified by the Department, the proponent must ensure that:  a. an independent audit of compliance with these conditions is conducted; and	No independent audit of compliance with these conditions was requested by the Department during the 2014 AER period.



Condition	Compliance Notes
b. an audit report, which addresses the audit criteria to the satisfaction of the Department, is	
published on the Internet and submitted to the Department.	
53. Before the audit begins, the following must be approved by the Department:	
a. the independent auditor; and	
b. the audit criteria.	
54. The audit report must include:	
a. the components of the project being audited;	
b. the conditions that were activated during the period covered by the audit;	
c. a compliance/non-compliance table;	
d. a description of the evidence to support audit findings of compliance or non-compliance;	
e. recommendations on any non-compliance or other matter to improve compliance;	l l
f. a response by the proponent to the recommendations in the report (or, if the proponent does	l l
not respond within 20 business days of a request to do so by the auditor, a statement by the	
auditor to that effect);	
g. certification by the independent auditor of the findings of the audit report.	
55. The financial cost of the audit will be borne by the proponent.	
56. The proponent must:	
a. implement any recommendations in the audit report, as directed in writing by the Department	
after consultation with the proponent;	
b. investigate any non-compliance identified in the audit report; and	
c. if non-compliance is identified in the audit report - take action as soon as practicable to ensure	
compliance with these conditions.	
57. If the audit report identifies any non-compliance with the conditions, within 20 business days	
after the audit report is submitted to the Department the proponent must provide written advice	
to the Minister setting out the:	
a. actions taken by the proponent to ensure compliance with these conditions; and	
b. actions taken to prevent a recurrence of any non-compliance, or implement any other	
recommendation to improve compliance, identified in the audit report.	
58. The proponent must, when first becoming aware of a non-compliance with these	All potential non-compliances have been notified to the Department. Refer to
conditions, or a plan required to be approved by the Minister under these conditions:	Section 4 of the 2014 AER period.
a. report the non-compliance and remedial action to the Department within five business days;	'
b. bring the matter into compliance within a reasonable time frame specified in writing by the	
Department.	
59. The proponent must:	All required records are maintained in a central compliance database and
a. maintain accurate records substantiating all activities associated with or relevant to these	are available to the Department on request.
conditions of approval, including measures taken to implement a plan approved under these	
conditions; and	
b. make those records available on request to the Department. Such records may be subject to	
audit by the Department or an independent auditor in accordance with section 458 of the EPBC	



Condition	Compliance Notes
Act, or used to verify compliance with these conditions.	
60. The proponent must:  a. provide the Minster with a financial assurance in the amount and form required from time to time by the Minster for activities to which these conditions apply; and b. review and maintain the amount of financial assurance based on proponent reporting on compliance with these conditions, and any auditing of the activities.  61. The financial assurance is to remain in force until the Minister is satisfied that no claim is likely to be made on the assurance.	Not applicable.
62. The proponent must produce an Annual Environmental Return which: a. addresses compliance with these conditions; b. records any unavoidable adverse impacts on MNES, mitigation measures applied to avoid adverse impacts on MNES; and any rehabilitation work undertaken in connection with any unavoidable adverse impact on MNES; c. identifies all non-compliances with these conditions; and d. identifies any amendments needed to plans to achieve compliance with these conditions.	This document: Annual Environmental Return 2014 EPBC No 2008/4096 Gas Transmission Pipeline 3301-GLNG-4-1.3-0213.
63. The proponent must publish the Annual Environmental Return on its website within 20 calendar days of each anniversary date of this approval. In complying with this publication requirement, the proponent must ensure that it has obtained relevant rights in relation to confidentiality and intellectual property rights of third parties	The Annual Environmental Return 2014 will be published on the GLNG website by 20 November 2014.
64. If requested by the Department, the proponent must provide all species and ecological survey data and related survey information from ecological surveys undertaken for MNES. The data must be collected and recorded to conform to data standards notified from time to time by the Department.	Not applicable.
65. All plans approved by the Minister under these conditions must be published on the proponent's website within 30 business days of approval by the Minister.	All plans which have been approved by the Minister during the AER Period have been published in accordance with this condition and are available at <a href="http://www.santosglng.com/environment-and-water/environmental-management-plans.aspx">http://www.santosglng.com/environment-and-water/environmental-management-plans.aspx</a>
66. The Department may request the proponent to publish on the internet a plan in a specified location or format and with specified accompanying text. The proponent must comply with any such request.	Not applicable.

