

GLNG

Annual Environmental Return 2016 EPBC No 2008/4058 Marine Facilities

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1. INTRODUCTION

On 22 October 2010, Santos and PETRONAS (**GLNG**) received approval for the development of marine facilities to service natural gas liquefaction park, Gladstone LNG Project – Marine Facilities, as described in referral EPBC No 2008/4058 (**EPBC Approval**).

The 2016 Annual Environmental Return (**2016 AER**) has been developed to satisfy Condition 49 of the EPBC Approval.

Condition 49 states:

"49. 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 2016 AER is structured as follows:

- Section 2 addresses the matters required by Condition 49(a);
- Section 3 addresses the matters required by Condition 49(b);
- Section 4 addresses the matters required by Condition 49(c); and
- Section 5 addresses the matters required by Condition 49(d).

Condition 50 of the EPBC Approval also states:

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

The anniversary date of the EPBC Approval is 22 October 2016.

The 2015 AER covers the period 22 October 2015 – 21 October 2016 (**AER Period**) and will be published on the Santos GLNG Project website by 19 November 2016.

2. COMPLIANCE WITH CONDITIONS – CONDITION 49(a)

The table in Appendix 1 provides an update on how GLNG is addressing each of the conditions imposed by the EPBC Approval.



3. MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE – CONDITION 49(b)

3.1. Unavoidable Adverse Impacts on MNES

GLNG continued to progress the construction and commissioning of the Marine Facilities, including jetty and materials offloading facility, during the 2016 AER Period in accordance with Queensland statutory approvals for the GLNG Project and the EPBC Approval for the Marine Facilities.

3.2. Mitigation Measures Applied to Avoid Adverse Impacts on MNES

GLNG applied the mitigation measures detailed in the GLNG Project Construction Environmental Management Plan and the Operational Environmental Management Plan to Address Matters of National Environmental Significance for the LNG Facility and Marine Facilities and other approved environmental plans as applicable during the 2016 AER Period.

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

No rehabilitation works in connection with unavoidable adverse impacts were necessary during the 2016 AER Period.

4. NON-COMPLIANCES - CONDITION 49(c)

There were no incidents reported to the Department as potential non-compliances with this EPBC Approval during the 2016 AER period.

5. AMENDMENTS TO PLANS - CONDITION 49(d)

The GLNG Project Construction Environmental Management Plan to Address Matters of National Environmental Significance for the LNG Facility and Marine Facilities was updated to address requirements of the Queensland regulatory agencies and to reflect the general progression of the project.

Revision 9 of the plan was approved by the Department on 25 October 2015.

The Operational Shipping Activity Management Plan was updated to include Phase 2 – Ferries and Barges and was approved by the Department 22 December 2015.



APPENDIX 1 – COMPLIANCE WITH EPBC APPROVAL FOR THE MARINE FACILITIES



Condition	Compliance Notes
1. The project area is the area substantially in accordance with the area indicated in Attachments 1 and 2.	Construction of the Marine Facilities is being carried out substantially in the project area shown in Attachments 1 and 2.



- 2. The proponent must submit to the Minister, a Dredging Management Plan which must include:
- a) mapping of significant and sensitive receptors in the area of the marine facilities, with linkages to applicable monitoring programs;
- b) assessment of all potential and real environmental risks to matters protected by the EPBC Act from dredging activities;
- c) appropriate measures (for example mitigation measures, performance indicators/trigger levels and corrective actions/management actions) that will ensure that there are no unacceptable impacts on the Great Barrier Reef World Heritage Area, Great Barrier Reef National Heritage Place, EPBC listed threatened or migratory species. These must include:
- (i) operating procedures to minimise injury to, or mortality of, EPBC Act listed threatened or migratory species from dredging activities:
- (ii) reporting mechanisms that ensure reporting to the Minister within one business day of the proponent becoming aware of injury to, or mortality of, an EPBC listed threatened or migratory species caused by dredging activities or construction activities;
- (iii) management triggers, based on results obtained from the Water Quality Monitoring Program, including a reporting requirement to advise the Department in writing within one working day when triggers are exceeded;
- (iv) contingency measures, based upon results of water quality and seagrass monitoring and applicable research and monitoring programs , when dredging operations must be varied or suspended:
- (v) management triggers and contingency measures when construction or pile driving must be varied or suspended;
- (vi) measures that minimise the risk of introduced marine pest species, including ballast-water management and vessel inspections for any nondomestic vessels;
- (vii) measures to minimise light emissions onto the water from the measures as reducing light spill, during construction and operations; and
- (viii) responsive actions that will be undertaken in the event contingency measures are employed, including reporting to the Minister.

All dredging related to the GLNG project including for the Marine Facilities has been conducted under the Gladstone Western Basin Strategic Dredging and Disposal Project (EPBC 2009/4904) and Gladstone Port's Corporation's (GPC) approved Dredging and Construction Management Plan.

Annual reports required by EPBC 2009/4904 are submitted by GPC.



Condition	Compliance Notes
d) details of dredge spoil placement;	
e) provisions to sample and analyse dredge spoil composition.	
Note 1: Applicable research and monitoring programs may include programs undertaken in accordance with conditions attached to the approval for the Gladstone Western Basin Dredging and Disposal Project (EPBC 2009/4904).	
Note 2: These conditions do not prevent the Gladstone Ports Corporation, on behalf of the proponent, from submitting a single dredge management plan which relates to both dredging for the construction dock under these conditions, and dredging undertaken under conditions attached to the approval for the Gladstone Western Basin Dredging and Disposal Project (EPBC 2009/4904).	
3. The proponent must not undertake any underwater dredge material rehandling.	
4. One trailer suction hopper dredge (TSHD) is permitted to operate at any given time.	
5. When the TSHD is in use, a maximum of two cutter suction dredges may operate at any given time unless otherwise prescribed in an approved Water Quality Monitoring Program required under conditions attached to the Gladstone Western Basin Dredging and Disposal Project (EPBC 2009/4904).	
6. The TSHD must not operate in overflow mode except during the last one hour of flood tide and first three hours of ebb tide unless otherwise in accordance with the approved Water Quality Monitoring Program.	
7. The TSHD must not operate in overflow mode for more than 30 minutes per cycle, with no more than two cycles per tide unless otherwise in accordance with the approved Water Quality Monitoring Program.	
8. Where construction and/or dredging methods with lower environmental impacts are identified to be practical, these methods must be implemented.	



Condition	Compliance Notes
9. In this condition, "at any given time" means at any given time with any other dredging operations being undertaken by another proponent under conditions of any separate approval under the EPBC Act relating to dredging in Port Curtis.	
Note: Similarly to conditions attached to the approval for the Gladstone Western Basin Dredging and Disposal Project (EPBC 2009/4904), these conditions are intended to limit the number of dredges being operated at any one time in Port Curtis.	
10. A Dredging Management Plan satisfying State requirements and addressing the matters identified in this condition will be deemed to have been submitted and approved.	



Condition	Compliance Notes
11. For the construction of the marine facilities on Curtis Island and the mainland, the proponent must submit to the Minister a Construction Management Plan which must include:	The GLNG Project Construction Environmental Management Plan to address Matters of National Environmental Significance for the LNG Facility and Marine Facilities (CEMP for MNES) was approved by the Minister on 11 April 2011.
(a) assessment of all potential and real environmental risks to matters protected by the EPBC Act from construction activities;	Since then GLNG has updated the CEMP for MNES in accordance with Condition 28 to address requirements of the Queensland regulatory agencies and to reflect the general
(b) appropriate measures (for example mitigation measures, performance indicators/trigger levels and corrective actions/management actions) that will ensure that there are no unacceptable impacts on the Great Barrier Reef World Heritage Area, Great Barrier Reef National Heritage Place, EPBC listed threatened species or migratory species. These include:	progression of the project. The current version of the MNES CEMP (Revision 9) was approved by the Department on 25 October 2015.
(i) operating procedures to minimise injury to, or mortality of, EPBC Act listed threatened or migratory species from construction activities;	
(ii) reporting mechanisms that ensure reporting to the Minister within one business day of injury to, or mortality of, an EPBC listed threatened or migratory species caused by construction activities;	
(iii) management triggers and contingency measures when construction or pile driving must be varied or suspended;	
(iv) measures that minimise the risk of introduced marine species, including ballast-water management and vessel inspections for any non-domestic vessels;	
(v) measures to minimise light emission onto the water from the Product Loading Facility and Material Offloading Facility including such measures as reducing light spill, during construction and operations; and	
(vi) responsive actions that will be undertaken in the event contingency measures are employed, including reporting to the Minister.	
12. The Construction Management Plan must be submitted for the approval of the Minister within 20 business days of commencement. The approved plan must be implemented.	



Condition	Compliance Notes
13. The proponent must prepare a Shipping Activity Management Plan ('the Plan') (for shipping undertaken by or under the control of the proponent) which	The Department originally approved the GLNG Shipping Activity Management Plan (SAMP) on 21 March 2011.
includes: (a) provision for the protection of Dugongs (<i>Dugong dugon</i>); Green Turtles	Revision 8 of the SAMP addressing shipping associated with the construction of the LNG plant was approved by the Department on 16 October 2014.
(Chelonia Mydas); Loggerhead Turtles (Caretta caretta); Flatback Turtles	An Operational Shipping Activity Management Plan – Phase 1 for LNG Carriers was
(Natator depressus); and Water Mouse, (Xeromys myoides) and the seagrass species Halodule uninervis, Halophila ovalis, Halophila decipens, Halophila	approved by DoTE on 12 th March 2015.
minor, Halophila spinulosa, and Zostera capricorni;	The Operational Shipping Activity Management Plan was subsequently updated to include Phase 2 – Ferries and Barges and was approved by DoTE on 22 December
(b) identification of the habitats, activities, and environmental tolerances in relation to the shipping activity associated with this referral for the species specified in condition 13(a);	2015.
(c) to minimise environmental disturbance to the species mentioned in condition13(a):	
(i) limits on vessel speeds, including speeds for particular vessel types;	
(ii) limits on vessel movements, including the use of thrusters; and	
(iii) limits on vessel light and sound.	
(d) a comprehensive outline of mitigation measures and controls for each of the types of shipping activities to minimise their impact on the species mentioned in condition 13(a), including actions to;	
(i) prevent and respond to the impact of accidental fuel, oil or chemical spills;	
(ii) minimise the impact of marine discharges, including those associated with vessel cleaning, anti-fouling and waste disposal;	
(iii) minimise disturbance to the seagrass species mentioned in condition 13(a);	
(iv) minimise the impact of bow-wash on Water Mouse (Xeromys myoides) nesting sites; and	
(v) proposed remedial action in the event of any impacts directly attributable to the proponent's shipping activities on the species specified in condition 13(a), and the habitats identified in condition 13(b), including a feasible and beneficial offsets strategy.	



Condition	Compliance Notes
(e) a comprehensive outline of monitoring arrangements to determine the impact of shipping activity on the species specified in condition 13(a), which includes:	
(i) recommendations on the timing and frequency of species surveys;	
(ii) proposed monitoring arrangements; and	
(iii) the nature and frequency of proposed reporting arrangements.	
14. The plan required under condition 13 must be submitted for the approval of the Minister before commencement. The action must not commence until the plan has been approved. The approved plan must be implemented.	
15. The plan required under condition 13 may be provided in two parts, to address:	
(a) Shipping associated with the construction of the LNG plant; and	
(b) LNG tanker operation and LNG tanker activities.	
16. If the plan required under condition 13 is provided in two parts, each part must be provided before the commencement of the activity to which that part relates.	
17. To protect the Water Mouse (<i>Xeromys myoides</i>), the proponent must submit to the Minister an Environmental Management Plan (the Water Mouse Environmental Management Plan) which must include:	The Department approved the 'GLNG Curtis Island Facility: Water Mouse Survey and Habitat Assessment' on 21 March 2011.
a) results of a pre-clearance survey undertaken at the appropriate time and season for the species;	
b) a map of the location of potential habitat for the Water Mouse in proximity to marine facilities;	
c) measures that will be employed to avoid impacts on the Water Mouse or its potential habitat; and	
d) if impacts on the Water Mouse or its potential habitat are unavoidable, propose offsets to compensate for the impacts.	



Condition	Compliance Notes
Note: To avoid doubt, if a condition of another approval held by the proponent requires a Water Mouse Environmental Management Plan, the proponent may simultaneously meet the relevant requirements of both conditions by submitting a single plan. The plan may also be prepared in consultation with the Gladstone Ports Corporation in accordance with conditions imposed for the Gladstone Western Basin Dredging and Disposal Project (EPBC 2009/4904), or otherwise.	
18. The Water Mouse Environmental Management Plan must be submitted for the approval of the Minister within 6 months of this Approval. The plan must be implemented.	
19. The proponent must submit to the Minister an Environmental Management Plan (the Migratory Shorebirds Environmental Management Plan) which includes measures for: a) managing the impacts of the action on listed Migratory Shorebirds including but not limited to the Whimbrel (<i>Numenius phaeopus</i>) and the Terek Sandpiper (<i>Xenus cinereus</i>); b) determining baseline population densities and habitat utilisation for migratory shorebirds on or contiguous to the proponent's LNG facility site including, at a minimum, undertaking annual/twice annual surveys during northwards and southwards migrations; c) minimising impacts from noise and light on the feeding and roosting sites of listed migratory seabirds; and d) monitoring the effect of the construction of the marine facilities on shorebirds, including but not limited to and to the extent relevant: (i) pile driving; (ii) construction dredging;	The Department approved the 'GLNG Curtis Island Marine Facilities Migratory Shorebirds Environmental Management Plan' on 21 March 2011. Since the Department's approval on the 21 March 2011, GLNG has conducted migratory shorebird surveys on the following dates: • 31 May to 2 June 2011; • 9 to 11 November 2011; • 11 to 13 April 2012; • 12 to 14 December 2012; • 25 to 27 June 2013; • 3 to 5 December 2013; • 14 to 16 April 2014; • 3 to 5 December 2014; and • 31 March to 2 April 2015. • 9-11 December 2015 • 21-23 March 2016
(iii) noise impulse levels;(iv) light spill;(v) water quality reduction;	The results of these surveys are compiled into a report titled "GLNG Shorebird Surveys" which is available on the GLNG website.



Condition	Compliance Notes
(vi) decreased access to intertidal foreshore habitat;	
(vii) increased sedimentation; and	
(viii) displacement.	
20. The Migratory Shorebirds Environmental Management Plan must be submitted for the approval of the Minister. Commencement, other than dredging for the Material Offloading Facility, must not occur without approval. The approved plan must be implemented.	
21. Unless the proponent advises the Department that it cannot decommission the site because of lawful continuing use rights by a third party (that might include the State of Queensland), at least five years before the planned date of cessation of operations of the Marine Facilities on Curtis Island the proponent must develop a Decommissioning Plan. The Plan must:	Not applicable as the project is still in the operations phase.
(a) ensure that, following the cessation of operations of the Marine Facilities on Curtis Island, decommissioning arrangements are prepared;	
(b) define a timetable for the future implementation of decommissioning including for:	
(i) the removal of remnant infrastructure and works that interfere with natural coastal processes, and human recreational and commercial activities;	
(ii) the return of sediment levels and water quality in the immediate area of the Marine Facilities to pre-construction background levels; and	
(iii) the rehabilitation of the Marine Facilities and associated sites to their natural state, and their ongoing management during rehabilitation.	
22. If decommissioning does not commence on the date proposed in the initial Decommissioning Plan, the proponent must review the decommissioning plan before each subsequent third anniversary of the date of the submission of the initial decommissioning plan over the operational life of the Marine Facilities. The proponent must advise the Minister in writing of the outcomes of this review, including any proposed changes to the decommissioning plan. Any proposed	



Condition	Compliance Notes
changes to the decommissioning plan must be approved in writing by the Minister.	
23. The Decommissioning Plan must be submitted for the approval of the Minister. Decommissioning must not occur without approval. Subject to condition 21, the approved plan must be implemented.	
24. A management plan required under these conditions may be comprised of by a plan (a joint plan) submitted by the Gladstone Ports Corporation under conditions of approval for the Western Basin Dredging and Disposal Project (EPBC 2009/4904). If a plan is submitted by the GPC for this purpose, it must also be specified as a plan for the purpose of (as relevant) conditions of these conditions.	Not applicable.
25. If a joint plan is submitted under these conditions the plan may specify roles and responsibilities of the proponent, and the roles and responsibilities of another person. A role and responsibility of the proponent must be implemented by the proponent, unless otherwise specified in the joint plan.	
Note: The purpose of this condition is to allow a single management plan to be submitted by different proponents, so that actions with related potential impacts may be considered and addressed cumulatively.	
26. Within 20 business days of commencement, the proponent must advise the Department in writing of the actual date of commencement.	GLNG advised the Department on 20 May 2011 that construction would commence on the 25 May 2011.
27. If, at any time after 5 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.



Condition	Compliance Notes
28. 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.	See compliance notes under condition 11, for information regarding submission of plans to the Department.
29. If the Minister approves the revised plan, then that plan must be implemented instead of the plan originally approved.	
30. Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	
31. 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.	Not applicable.
32. 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.	
33. The proponent must implement the revised plan on approval of the Minister.	
34. Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	
35. 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.
36. The proponent must comply with all environmental authorisations issued by the State, including conditions of an environmental authority issued under the EP Act.	There have been no potential non-compliances with the environmental authorisations issued by the State applicable to the activities the subject of EPBC No 2008/4058 during the 2016 AER period.



Condition	Compliance Notes
37. 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.	Not applicable.
38. If these conditions require the proponent to provide something by a specified time, a longer period may be specified in writing by the Minister.	Not applicable
39. 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(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.	No independent audit was requested by the Department during the 2016 AER period.
40. Before the audit begins, the following must be approved by the Department: (a) the independent auditor; and (b) the audit criteria.	
41. 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;	
(f) a response by the proponent to the recommendations in the report (or, if the proponent does 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.42. The financial cost of the audit will be borne by the proponent.	



Condition	Compliance Notes
43. The proponent must:	
(a) implement any recommendations in the audit report, as directed in writing by the Department;	
(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.	
44. 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.	
Note: To avoid doubt, independent third party auditing may include audit of the proponent's performance against the requirements of any plan required under these conditions.	
45. The proponent must, when first becoming aware of a non-compliance with these conditions, or a plan required to be approved by the Minister under these conditions:	There have been no non-compliances during the 2016 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 time frame specified in writing by the Department.	



Condition	Compliance Notes
46. The proponent must: (a) maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures taken to implement a plan approved under these conditions; and	All required records are maintained in a central compliance database and are available to the department upon request.
(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 Act, or used to verify compliance with these conditions.	
Note: Audits or summaries of audits carried out under these conditions, or under section 458 of the EPBC Act, may be posted on the Department's website. The results of such audits may also be publicised through the general media.	
47. The proponent must:	Not applicable.
(a) provide the Minister 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.	
48. The financial assurance is to remain in force until the Minister is satisfied that no claim is likely to be made on the assurance.	
Note: The financial assurance may be used for rehabilitation of habitat and other purposes not addressed adequately by the proponent during the life of the project.	
49. The proponent must produce an Annual Environmental Return which:	This document: 2016 Annual Environmental Returns EPBC No 2008/4058 Marine Facilities.
(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	



Condition	Compliance Notes
(d) identifies any amendments needed to plans to achieve compliance with these conditions.	
50. The proponent must publish the Annual Environmental Return on the Internet within 20 business days of each anniversary date of this approval. In complying with this publication requirement, the proponent must ensure that it has obtained the relevant confidentiality and intellectual property rights of third parties.	The Annual Environmental Return 2016 will be published on the Santos GLNG Website by 19 November 2016.
51. 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.	All required records are maintained in a central database and are available to the department upon request.
52. 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.	Approved plans are available on the Santos GLNG Project website.
53. 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.