

GLNG

Annual Environmental Return 2013 EPBC No2008/4059 CSG Fields

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1. Introduction

On 22 October 2010, Santos Ltd (**Santos**) received conditional approval to develop, construct, operate and decommission coal seam gas resources in the Surat and Bowen Basins between Roma and Emerald in Queensland to supply gas for a related proposal for a natural gas liquefaction and export facility near Gladstone as described in referral EPBC No 2008/4059 (**EPBC Approval**).

The 2013 Annual Environmental Return (2013 AER) has been developed to satisfy Condition 110 of the EPBC Approval.

Condition 110 states:

110. 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 conditions 110(a);
- Section 3 addresses the matters required by condition 110(b);
- Section 4 addresses the matters required by condition 110(c); and
- Section 5 addresses the matters required by condition 110(d).

Condition 111 of the EPBC approval also states:

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

The anniversary date of the EPBC approval is 22 October.

The 2013 AER covers the period 22 October 2012 – 22 October 2013 (AER period) and will be published on the internet by 19 November 2013.

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2. Compliance with conditions – Condition 110(a)

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

3. Matters of National Environmental Significance – Condition 110(b)

3.1. Unavoidable Adverse Impacts on MNES

As per the written notification sent to the Department on 19 April 2013 activities to develop, construct and operate Coal Seam Gas under the EPBC Approval commenced on the 9 February 2012.

Unavoidable impacts from Gas Field Development on Commonwealth listed threatened ecological communities have been quantified and are in accordance with limits as set in condition 25.

Unavoidable impacts to Commonwealth listed species from Gas Field Development are still being quantified as part of the Land Disturbance Project. Santos is revising the CSG Fields SSMP to provide additional information on habitat definitions for Commonwealth listed species. In accordance with Condition 89, the SSMP will be resubmitted to the Department for approval. Impacts to listed species habitat will need to be quantified based on the revision to the CSG Fields SSMP. Santos will advise the Department when the SSMP has been updated and impact figures have been quantified.



3.2. Mitigation Measures Applied to Avoid Adverse Impacts on MNES

Implementation of the following management plans provide for mitigation and avoidance of adverse impacts on MNEs:

- Environmental Protocol for Constraints Planning and Field Development (the Protocol) (approved by the Department of Sustainability, Environment, Water, Population and Communities (Department) on 28/09/2011). The Protocol is currently undergoing review;
- Significant Species Management Plan (approved by the Department on 23/02/2012); and
- Remediation, Rehabilitation and Recovery Monitoring Plan (approved by the Department on 19/01/2012).

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

To date no rehabilitation works have been undertaken in connection with unavoidable adverse impacts on MNEs. Rehabilitation works are due to commence as soon as reasonably practicable following the completion of construction activities.

4. Non-compliances – Condition 110(c)

Condition 97 states:

The proponent must comply with all environmental authorisation issued by the State, including conditions of an environmental authority issued under the EP Act.110.

Condition 106 states:

106. The proponent must, when first becoming aware of a noncompliance with these conditions, or a plan required to be approved by the Minister under these conditions:

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.

In relation to condition 97 of the EPBC approval, potential non-compliances with State environmental authorisations have resulted in notifications to the State environment Regulator. As a result, incidents associated with the activities carried out under the EPBC Approval have been reported to DOTE in accordance with the requirements of Condition 106.



5. Amendments to plans – Condition 110(d) No amendments to plans have been identified as required to achieve compliance with the conditions of the EPBC Approval.



APPENDIX A - 2013 COMPLIANCE WITH CONDITIONS OF EPBC NO2008/4059 CSG FIELDS

Condition	201
Project area	
 The project area is the area illustrated in Figure 1, with the maximum gas field development area within petroleum tenures of 6,887 km2, being limited to the Santos GLNG Coal Seam Gas Field Reasonable Foreseeable Development Area (RFDA) within the following petroleum tenures (as they are at the date of the decision to which these conditions are attached): PLs 232-236 (Fairview) PLs 90-92 & 99-100 (Fairview) PLs 3-9 (Roma), 13 (Roma), 309 (previously PLA 250)3, 310 (previously PLA 251)1, 3, 2811, 2, 2821, 2 1 Under Application; 2 Previously Part of ATP 631P; 3 Previously part of ATP 336P Authorities to prospect ATPs 526P & 653P (Fairview) ATPs 526P & 653P (Fairview) PTs 526P & 653P (Fairview) 	The No2 Sar Fain Pro
Infrastructure limits	
2. Impacts must be limited to a maximum of 2,650 production wells and impacts related to associated gas field development.	The Sar Sha
Constraints Planning and Field Development	
Protocol for Constraints Planning and Field Development	
3. Before the commencement of gas field development, the proponent must develop a Constraints Planning and Field Development Protocol (the Protocol).	San
 4. The Protocol must include and apply for the life of the project and include the principles of: a) avoiding direct and indirect adverse impacts on MNES; b) mitigating and managing direct and indirect impacts to minimise cumulative adverse impacts on MNES; c) active site remediation and rehabilitation of impacted areas to promote and maintain long-term recovery of MNES. 	Prot Dev DO The (file

013 Compliance Status

The project area as illustrated by Figure 1 of EPBC lo2008/4059 CSG Fields has been included in the Bantos (GLNG Project) Plan of Operations for the Fairview, Roma Shallow Gas and Arcadia Valley Project Areas.

The limit of 2,650 wells has been further iterated in the Bantos Plan of Operations for the Fairview, Roma Shallow Gas and Arcadia Valley Project Areas.

Santos submitted the CSG Fields Environmental Protocol for Constraints Planning and Field Development September 2011 0020-GLNG-3-3.3-0063-DOC to the Department on 21/09/2011. The Department approved the Protocol on 28/09/2011 file reference: 2001/00841)

Condition

5. The Protocol must:

a) Classify the following as being within the proponent's high environmental constraint class B (or should the proponent's classification be revised, an equivalent high environmental constraints class):

i) all listed threatened ecological communities;
 ii) all listed flora species; and

iii) those listed threatened and migratory fauna species habitats as identified in management plans required under these conditions, which where relevant may be described in terms of specific niche habitat types; Note: The proponent's approach to environmental constraint class B and related avoidance and impact mitigation is described in SEIS Attachment D5 (dated November 2009). The protocol conditions do not apply to the other constraints that the proponent has included in environmental constraint class B unless these are relevant to MNES.

b) take into account all current survey data and available information and maps of all MNES relevant to the project area as described within environmental constraint class B;

c) require the undertaking and documentation of planning and pre-clearance site assessments and field ecological surveys in proposed gas field development areas where constraint class B is mapped, likely or found. The preclearance site assessments and field ecological surveys must identify and assess options relating to potential gas field development adverse impacts on MNES and provide recommendations to inform the proponent's decision to develop the project area;

d) to avoid direct and indirect adverse impacts on MNES, including fragmentation and edge effects, require the proponent to determine the location of proposed infrastructure in accordance with the following:

i) preferentially avoid native vegetation that constitutes a listed ecological community and/or may provide habitat for listed species and utilise previously cleared or previously utilised areas;

ii) exclude exploration and production wells from within areas identified as environmental constraint class B unless their location in environmental constraints class B is justified as an exception given other constraints and the impact on any MNES will be minimal, short term, and recoverable; and

Note: Directional drilling and multiple drill holes from one well pad are options to avoid well site and related infrastructure disturbance to environmental constraint class B.

iii) either:

(1) exclude other non linear infrastructure from the no impact zone; or

(2) where the location of other non linear infrastructure in the no impact zone cannot be avoided, only authorise the siting of that infrastructure in that zone where field ecological surveys demonstrate that there will be minimal, short term, and recoverable, or no adverse impact on any MNES, including habitat for any listed species; and

iv) either: (1) exclude linear infrastructure from the impact risk zone: or

(2) where the location of linear infrastructure in the impact risk zone is justified given other constraints and cannot be avoided, only authorise the siting of that infrastructure in that zone where field ecological surveys demonstrate that there will be minimal adverse impact on any MNES, including habitat for any listed species;

Note: Justification is reportable in accordance with condition 13 a) vii). The management plan requirements under condition 8 h) may also indicate that a species or its habitat can co-exist with specific types of gas field infrastructure and operations.

e) require the proponent to plan for and decide the extent that proposed linear infrastructure may have an adverse impact on MNES in accordance with the following:

i) all linear disturbance within environmental constraint class B for MNES and the impact risk zone must be in accordance with the limits specified in Table 1 and Table 2 and condition 5e) ii):

ii) gas and water trunkline rights of way, water distribution pipeline rights of way, and other major linear infrastructure disturbance corridors within environmental constraint class B and the impact risk zone must be:

(1) limited to 30 m in width where there are one or two gas and water trunklines, underground 33kV power lines and fibre optic cables in parallel;

(2) limited to 30 metres plus an additional 4 metres for every additional gas or water trunkline in parallel with the initial one or two gas or water trunklines, power lines and fibre optic cable.

iii) where feasible, gas trunklines, pipelines for associated water and other transmission lines must be co-located to reduce total disturbance on MNES.

Note: Any area of a disturbance referred to in this condition would be subtracted from the disturbance limits specified elsewhere in these conditions;

f) support bioregional corridors for listed threatened species and migratory species, and connectivity for listed threatened ecological communities;

g) ensure site assessments and field ecological surveys:

i) are undertaken in accordance with the Department's survey guidelines in effect at the time of the survey. This information can be obtained from http://www.environment.gov.au/epbc/guidelines-policies.html#threatened; ii) take account into and reference previous ecological surveys undertaken in the area and relevant new information on likely presence or absence of MNES;

iii) are undertaken by a suitably qualified ecologist approved by the Department;

iv) document the survey methodology, results and significant findings in relation to MNES;

v) apply best practice site assessment and ecological survey methods appropriate for each listed threatened species, migratory species, their habitat and listed ecological communities;

Note: Best practice includes applying the optimum timing and frequency of site assessments and surveys to determine presence or absence of listed threatened species or migratory species or their habitat, or a listed threatened ecological community.

vi) apply the mapping of environmental constraints class B; the infrastructure location requirements; minimum no impact zones; impact risk zones; and the width requirements for linear infrastructure corridors described in e); and vii) reports are published by the proponent on the Internet 20 business days before clearance of native vegetation in an infrastructure impact area and provided to the Department on request;

h) require species and ecological community management plans which include:

i) relevant avoidance and mitigation measures to be applied;

ii) measures for protecting each listed threatened species and migratory species and their habitat, and each listed threatened ecological community not previously assessed by the proponent, should one or more be found in the project area at any time over the life of the project. Any such management plans must be developed in a timeframe to be approved by the Department. Notification of additional MNES found must be provided to the Department in writing within 10 business days. Measures must include the development of a management plan consistent with requirements under condition 8.

i) the proponent must ensure constraints planning and field development decisions are made in accordance with the Protocol (including any relevant species and ecological community management plans) before final selection of specific sites for gas field development within the project area.

6. The Protocol must ensure relevant information on MNES is available and used by the proponent to support field development and management decisions throughout the life of the project.

Management plans for listed species and ecological communities

7. Before commencement of each major stage of gas field development the proponent must develop management plans for that area addressing each listed species and listed ecological community that, as indicated through assessment or more recent information, may be potentially impacted by gas field development within the project area (defined by condition 1), or external to the project area as a result of gas field development.

2013 Compliance Status

The Protocol has since been amended as follows; -RevB 29/11/11 Amended to include Arcadia Valley Project Area

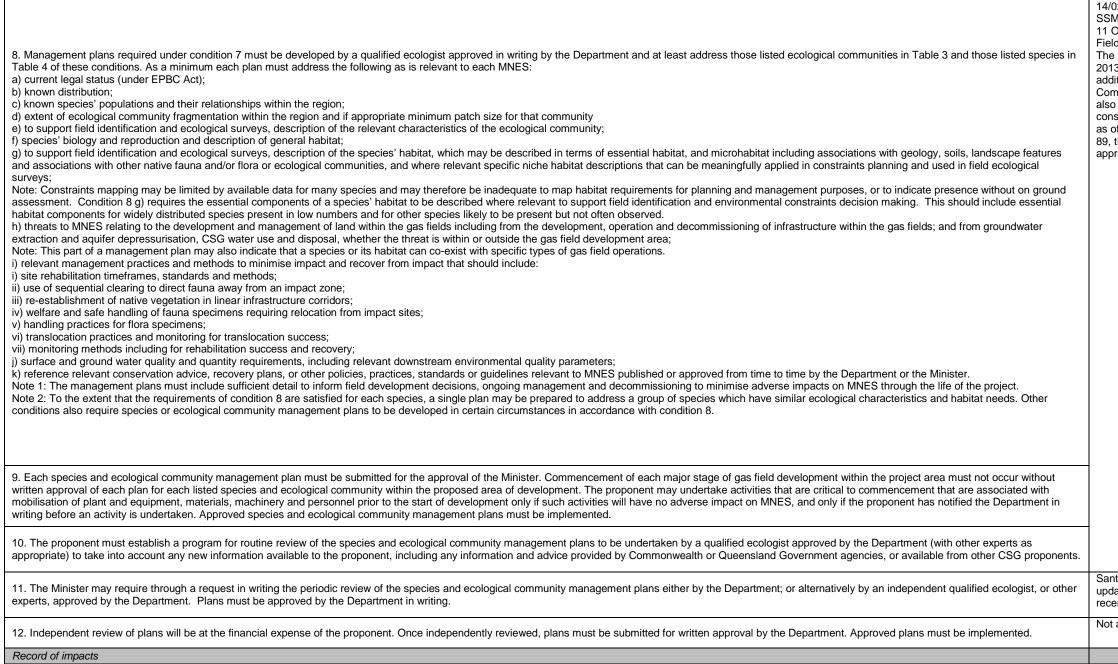
-RevC 7/8/13 Draft amendment to allow mutually beneficial activities in Constraints Class A with DNPRSR approval

-RevD 22/8/13 amendment to allow mutually beneficial activities in Constraints Class A with DNPRSR approval -RevE 12/9/13 Amended following DOTE review and comments on RevD

Santos has developed the CSG Fields Significant Species Management Plan (SSMP) 0020-GLNG-4-1.3-0003.The SSMP was submitted to the Department on



Condition



2013 Compliance Status

14/02/2012 for approval. The Department approved the SSMP on 23/02/2012 (file reference: 2011/11197). On 11 October 2013, Santos submitted a revised CSG Fields SSMP (Rev 7) to the Department for approval. The Department approved the SSMP on 15 October 2013. The SSMP (Rev 7) will be updated to provide additional information on habitat definitions for Commonwealth listed species. In addition, the Plan is also being updated to reflect the most recent species conservation advice on a listed fauna species as well as offset requirements. In accordance with Condition 89, the SSMP will be resubmitted to the Department for approval.

Santos received a request from the Department to update the CSG Fields SSMP and align it with GLNG's recently approved GTP SSMP.

Not applicable during this AER Period.



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 13. If an impact (which may include a presumed impact where the species is presumed to be present) occurs to a MNES during gas field development, operation, or decommissioning the proponent must: a) record the impact by reference to: i) the location, specific site and type of infrastructure or activity; ii) each MNES subject to disturbance; iii) the related site assessment or field ecological survey documentation and recommendations, or the decision that the particular MNES was presumed to be present; iv) the disturbance limit set under condition 25; v) the total area of actual disturbance; vi) the remaining disturbance limit for each affected MNES; vii) the remaining disturbance limit for each affected MNES; viii) the reasons for the decision including justification for the action taken, description of the efforts taken to avoid impact, and explanation why other constraints might justify the adverse impact on MNES; viii) actions and commitments by the proponent to remediate, rehabilitate, or make good any unauthorised disturbance; and Note: This condition applies to any adverse impact on MNES, whether or not a disturbance limit has been set, and whether or not the impact has been decided by the proponent under the Protocol based on other physical constraints. b) record the information to a standard which can be independently audited. 	A De wir At Fit the CS ha ac res liss on ad up
Site remediation, rehabilitation and recovery plan	
 14. Where a direct or indirect impact has occurred to MNES (which may include a presumed impact where the species is presumed to be present) the proponent must under the Protocol apply remediation, rehabilitation and recovery measures appropriate for each MNES to restore connectivity or rehabilitate disturbed areas to pre-clearance quality or better, and to minimise cumulative impacts throughout the life of the project. 15. Before commencement of gas field development the proponent must develop a Remediation, Rehabilitation, Recovery and Monitoring Plan. The Plan must: a) include site remediation measures including timeframes and standards for preventing erosion and stabilising disturbed soil in impact areas; b) include measures to support recovery of listed species' habitat and recovery of listed ecological communities affected by gas field development; c) include responses to threats to MNES from the proponent's operational activities and land management activities including the disposal and use of associated water, damage by livestock, and impacts from feral animals and weeds; d) provide for fire prevention and management regimes during construction, operation, and decommissioning to protected MNES; e) include performance measures and related monitoring to assess site remediation, Rehabilitation and recovery; f) provide for reporting on the implementation of the Remediation, Rehabilitation, Recovery and Monitoring Plan including monitoring and performance to a standard which can be independently audited; g) reference relevant conservation advice, recovery plans, species management plans, or policies, practices, standards or guidelines endorsed or approved from time to time by the Department. Note: The proponent may develop the plan to satisfy the requirements of both the Queensland Government and these conditions as indicated in condition 98 b). 	Sa Re 00 th De re
 16. The Remediation, Rehabilitation, Recovery and Monitoring Plan must be submitted for the approval of the Minister. Commencement of gas field development must not occur without written approval of this Plan. The proponent may undertake activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of development only if such activities will have no adverse impact on MNES, and only if the proponent has notified the Department in writing before an activity is undertake. The approved Remediation, Rehabilitation, Recovery and Monitoring Plan must be implemented. 17. The proponent must establish a program to routinely review the Remediation, Rehabilitation, Recovery and Monitoring Plan by an independent qualified ecologist, or other experts, approved by the Department to take into account any new information available to the proponent, including any information and advice provided by Commonwealth or Queensland Government agencies, or available from other CSG proponents. 18. The Minister may require through a request in writing the periodic review of the Remediation, Rehabilitation, Recovery and Monitoring Plan by the Department; or alternatively by independent qualified ecologist, or other experts, approved by the Department in writing. 	_
19. Independent review of plans will be at the financial expense of the proponent. Once independently reviewed, plans must be submitted for written approval by the Department. Approved plans must be implemented.	In∘ P€
Approval and Review of Protocol	

13 Compliance Status

record of the impact to TEC's from Gas Field bevelopment has been quantified and is in accordance vith limits set under condition 25.

At the time of preparation however the unavoidable mpacts to Commonwealth listed species from Gas Field Development were still being quantified as part of the Land Disturbance Project. Santos is revising the CSG Fields SSMP to provide additional information on abitat definitions for Commonwealth listed species. In accordance with Condition 89, the SSMP will be esubmitted to the Department for approval. Impacts to sted species habitat will need to be quantified based in the revision to the CSG Fields SSMP. Santos will divise the Department when the SSMP has been pdated and impact figures have been quantified.

antos has developed a CSG Fields Remediation, tehabilitation, Recovery and Monitoring Plan (RRRMP) 020-GLNG-4- 1.3-0012.The RRRMP was submitted to neDepartment on 23/12/2011 for approval.The pepartment approved the RRRMP on 19/01/2012 (file eference: 2001/00845).

dependent reviews were not required during the AER eriod.



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20. The Protocol must be submitted for the approval of the Minister. Commencement of gas field development must not occur without written approval of the Protocol. The proponent may undertake activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of development only if such activities will have no adverse impact on MNES, and only if the proponent has notified the Department in writing before an activity is undertaken. The approved Protocol must be implemented. Note: The review required following completion of the Cumulative Impact Assessment Report required by the Queensland Government may be done after approval of the Protocol. The Department may seek review of the Protocol to align with Queensland Government requirements to support efficiency and avoid duplication.	The De 20 ⁻ -Re Pro -Re ber DN -Re act -Re cor
21. The proponent's review of the Protocol must take into account all relevant studies, policies, standards, guidelines and advice relating to CSG activity published or provided to the proponent by the Commonwealth or Queensland governments, or published or provided by other proponents undertaking similar activities, or published or provided by other parties, including any findings of an audit against conditions, or plans or other documentation required under the conditions of this approval.	Th this and
22. The Protocol and related plans must be reviewed and updated by the proponent: to take into account the findings of the Cumulative Impact Assessment Report required by the Queensland Government; before each major stage of the proponent's gas field development; or following a written request from the Department; or following a written request from the Department. Reviewed and updated Protocols and plans must be submitted for the Minister's written approval. Once approved, updated Protocols and plans must be implemented.	No De
23. The Department may require through a request that the Protocol and related plans be revised or amended before approval. Any such request must be acted on within the time frame specified.	Fo the rec ap rec
24. The approved Protocol must be incorporated into the proponent's management procedures, operational plans and other relevant documentation and kept current for the life of the project.	Th Op rel
Disturbance limits	
25. The following maximum disturbance limits in Table 3 and Table 4 below apply to authorised unavoidable adverse impacts on MNES as a result of exploration, development, operation and decommissioning of the CSG fields within the project area illustrated in Figure 1, and external to it, ('whole of project' disturbance limits) as a result of all associated gas field activities for the life of the project.	Th Pro mo
Offsets	
Plan to secure offsets	

13 Compliance Status

e Protocol was approved by the epartment on 21/09/2011 (file reference: 11/00841).

e Protocol has since been amended as follows; evB 29/11/11 Amended to include Arcadia Valley bject Area

evC 7/8/13 Draft amendment to allow mutually neficial activities in Constraints Class A with IPRSR approval

evD 22/8/13 amendment to allow mutually beneficial tivities in Constraints Class A with DNPRSR approval evE 12/9/13 Amended following DOTE review and mments on RevD

e Protocol is currently undergoing review to address s condition. If required, the Protocol will be updated d will be resubmitted to Department for approval.

t applicable during this stage of CSG Field evelopment

llowing submission of the Protocol, the SSMP and RRRMP, Santos received comments and was quested to amend the documents accordingly prior to proval. This request has been actioned and approval ceived.

e Protocol is referenced in the SSMP, RRRMP, berational Plans and other management plans where evant.

e disturbance limits have been incorporated into the otocol. A disturbance database will be used to onitor the amount of authorised disturbance to MNES.



Condition	2013 Compliance Status
26. Within 6 months of the commencement of the action the proponent must prepare an Offset Plan to provide an offset area for the approved disturbance limits relating to MNES within the project area. The offset area must secure an area of private land which includes at least:a) 6.4 ha of Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions; b) 41.6 ha of Natural Grasslands of the Queensland Central	Santos has developed the CSG Fields Environmental Offsets Plan. The plan was submitted to the Department on 22/4/2011The Department provided comments on the CSG Fields Offset Plan on 11 April 2012. The Plan is being updated to address these comments. The updated Plan will be submitted to DOTE for approval.
Highlands and the northern Fitzroy Basin;c) 800.8 ha of potential Dasyurus hallucatus (Northern QuoII) habitat which includes micro habitat required for the species;d) 864.8 ha of Chalinolobus dwyeri (Large-eared Pied Bat, Large Pied Bat) habitat which includes micro habitat required for the species;g) 89.6 ha of Rostratula australis (Australian Painted Snipe) habitat which includes micro habitat required for the species;g) 89.6 ha of Rostratula australis (Australian Painted Snipe) habitat which includes micro habitat required for the species;g) 89.6 ha of Rostratula australis (Australian Painted Snipe) habitat which includes micro habitat required for the species;g) 41.6 ha of Delma torquata (Collared Delma) habitat which includes micro habitat required for the species; (1) 1593.6 ha of Bostratula australis (Sustema) habitat which includes micro habitat required for the species; (1) 40.6 ha of Delma torquata (Collared Delma) habitat which includes micro habitat required for the species; (1) 19.9 ha of Egernia rugosa (Yakka Skink) habitat which includes micro habitat required for the species; (1) 203.2 ha of Nyctophilus timoriensis (Eastern Lorg-eared Bat) habitat which includes micro habitat required for the species; (1) 203.2 ha of Nyctophilus timoriensis (Eastern Lorg-eared Bat) habitat which includes micro habitat required for the species; (1) 203.2 ha of Nyctophilus timoriensis (Eastern Lorg-eared Bat) habitat which includes micro habitat required for the species; (1) 203.2 ha of Nyctophilus timoriensis (Eastern Lorg-eared Bat) habitat which includes micro habitat required for the species; (1) 203.2 ha of Nyctophilus timoriensis (Eastern Lorg-eared Bat) habitat which includes micro habitat required for the species; (1) 200.2 ha of Bigalow with presentation of the following; (1) 30% remnant Bigalow add; (2) other Bigalow requirements for some species' habitat may be accommodated within the Brigalow components if this habitat is verified as present and includes specific habitat requirements for each relevant	
27. The Offset Plan must include details of the offset area including: the timing and arrangements for securing properties, 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.	The Plan will be updated to fully address these matters.
28. The Offset Plan must be submitted for the approval of the Minister within 6 months of the commencement of the action. The approved Offset Plan must be implemented.	The Plan was submitted in April 2011 for approval.
29. 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 26 a) to o). The approved alternative Offset Plan must be implemented.	Not applicable during this AER period
30. 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 during this AER period
31. The proponent must secure the offset within 2 years of commencement.	Not applicable during this AER period
Offset Area Management	
	Not applicable during this AER period
 32. 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; a) the documentation and mapping of current environmental values relevant to MNES of the area; 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; c) measures to provide fire prevention and management regimes appropriate for the MNES; d) management of revegetation areas to the stage where habitat is established or improved for listed species and revegetation areas meet the criteria for 'remnant status' for that threatened ecological community; e) an objective, that revegetation areas meet the criteria applicable at the time for 'remnant status' and measures to ensure application is made to have the revegetation areas reclassified as 'remnant vegetation' in accordance 	
with the relevant Queensland legislation; f) monitoring including the undertaking of ecological surveys to assess the success of the management measures against identified milestones and objectives; g) 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.	Not applicable during this AER period
33. Within 12 months of securing the offset area the Offset Area Management Plan must be submitted for the approval of the Minister. The approved Offset Area Management Plan must be implemented.	The applicable during this ALIX period

Rehabilitation Area Offset

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Condition	2013
	Not a
34. Within 2 years of the commencement of gas field development the proponent must secure a Rehabilitation Area Offset of at least 1550 hectares of privately held property to compensate for indirect adverse impacts on	
MNES. The proponent must: a) obtain ownership or a legally binding agreement from a landowner over an area of property to re-establish areas in perpetuity of the threatened Brigalow (Acacia harpophylla dominant and co-dominant) ecological community Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions, Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin and associated listed migratory and listed	
threatened species' habitat; and b) notify the Department in writing within 30 business days of securing the Rehabilitation Area Offset. Note: The Rehabilitation Area Offset is an additional area to the Offset area required under condition 26.	
	Not a
 35. The Rehabilitation Area Offset must: a) be within historical distributions of the ecological communities (before clearing occurred) and as close as possible to the project area; 	
b) include intact elements of remnant and/or high value regrowth of the ecological communities; and c) include or have potential for providing habitat and micro habitat requirements for listed migratory and threatened species in condition 25, Table 4, that relate to the ecological communities).	
36. If, within 2 years of the commencement of gas field development the Rehabilitation Area Offset has not been secured, then the proponent must within 30 business days, notify the Minister and provide for the Minister's approval an alternative offset measure. The alternative must provide at least an equivalent environmental outcome to those specified in relation to the Rehabilitation Area Offset. The approved alternative must be secured and implemented in accordance with conditions 34 and 35.	Not a
Rehabilitation Area Plan	
	Not a
27 Within 2 years of commencement of see field development, the proposent must propose a Debabilitation Area Dias for the effect required under condition 24	
37. Within 2 years of commencement of gas field development, the proponent must prepare a Rehabilitation Area Plan for the offset required under condition 34.	Not a
	NOL 6
38. The Rehabilitation Area Plan must provide for commitments and actions to lead to the increase in the spatial extent and improvement in the condition of existing remnants, and for the establishment of new self sustaining functional 'remnant vegetation' communities, consistent with that which existed prior to clearing and with the capacity to provide habitat for the species identified in condition 25, as unavoidably impacted by the action.	
	Not a
39. The Rehabilitation Area Plan must include: a) details of the area to be rehabilitated including location and maps;	
b) documentation including mapping of current environmental values relevant to MNES of the area;	
c) where revegetation through planting seedlings and/or seeds is intended details of appropriate species and ratios of species relevant to historically occurring listed migratory and threatened species' habitat and the Brigalow (Acacia harpophylla dominant and co-dominant) ecological community; Semi-evergreen vine thickets of the Brigalow Belt (North and South) and Nandewar Bioregions; Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin;	
 d) the source and provenance of the seed and/or seedlings which will be used; e) 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; f) measures to provide fire management regimes appropriate for the MNES; 	
g) measures to manage the Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin in accordance with the recommendations of the approved conservation advice for the ecological community; h) monitoring measures including ecological surveys to measure the establishment and ongoing success of the revegetation based on a comparison with high quality habitat for listed migratory and listed threatened species, and	
ecological community reference sites; i) 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.	
	Not a
40. Within 2 years of the commencement of gas field development the Rehabilitation Area Plan must be submitted for the approval of the Minister. The approved Rehabilitation Area Plan must be implemented.	

13 Compliance Status
t applicable during this AER period
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Condition	2013 Compliance Status
	Not applicable during this AER period
 41. To ensure the long term protection of the Rehabilitation Area the proponent must: a) manage Brigalow and Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar Bioregions components of the Rehabilitation Area to a stage where they meet the respective criteria for 'remnant status' for the Brigalow (Acacia harpophylla dominant and co-dominant) ecological community and 'remnant status' for the Semi-evergreen Vine Thickets of the Brigalow Belt (North and South) and Nandewar Bioregions; b) When areas of revegetation meet criteria applicable at the time for 'remnant vegetation' ensure application is made to have the revegetation areas remapped and reclassified as 'remnant vegetation' in accordance with the relevant Queensland legislation. The management measures must continue to be implemented in areas not meeting the criteria for 'remnant status' until this has been achieved (or until approval to cease the management regime is provided by the Minister in writing); c) manage the Natural Grasslands of the Queensland Central Highlands and the northern Fitzroy Basin as required by condition 39 for the life of the project; d) define corrective actions which will be undertaken if performance measures and reporting indicate that successful rehabilitation has not been achieved; e) identify persons responsible and arrangements for implementing the Rehabilitation Area as 'remnant vegetation' within 30 business days of the reclassification occurring. 42. 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 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	Not applicable during the AER Period.
impacted MNES.	
CSG Water Management	
 43. The proponent must: a) take all reasonable measures to ensure that CSG water, including extracted groundwater, treated or amended CSG water, and any associated waste water, brine crystals and/or solids generated as a result of treating or amending water have no significant impact on any MNES during or beyond the life of the project; and b) if any such impacts arise apply measures identified in the Coal Seam Gas Water Monitoring and Management Plan, or other requirements under these conditions, to mitigate or make good such impacts to the satisfaction of the Minister. 	A Stage 1 CSG Water Monitoring and Management Plan (CWMMP) has been developed. The plan includes measures to ensure that CSG water, including extracted groundwater, treated or amended water and any associated waste water, brine crystals and/or solids have no significant impact on any MNES during or beyond the life of the project. The Stage 1 CWMMP has been superseded by the Stage 2 CWMMP (revision 2), submitted to the Department on 9 October 2013. The Stage 2 CWMMP includes measures to ensure that CSG water, including extracted groundwater, treated or amended water and any associated waste water, brine crystals and/or solids have no significant impact on any MNES during or beyond the life of the project. No impacts to MNES occurred as a result of CSG Water during the AER Period.
Coal Seam Gas Water Monitoring and Management Plan	
Hydraulic connection	
44. If the proponent demonstrates to the satisfaction of the Minister, on the advice of the expert panel, that an aquifer has negligible hydraulic connectivity to other aquifers, then groundwater drawdown limits and threshold values (for groundwater drawdown and quality) for response measures in these conditions do not apply to that aquifer.	The Department has specified default drawdown limits on 15/02/2011 (file reference: 2011/00913). This will apply until the Department approves the drawdown limits and threshold triggers proposed by Santos within the Stage 1 CSG Water Monitoring and Management Plan submitted on 14/10/2011, since superseded by Stage 2 CWMMP (revision 2) submitted to the Department on 9 October 2013.
45. To avoid doubt, monitoring and risk management requirements in the Stage 1 Coal Seam Gas Water Monitoring and Management Plan (Stage 1 CSG WMMP) and the Stage 2 Coal Seam Gas Water Monitoring and Management Plan (Stage 2 CSG WMMP) (outlined below) will continue to apply to any aquifer which the proponent has demonstrated to the satisfaction of the Minister, on the advice of the expert panel, has negligible hydraulic connectivity to other aquifers.	As defined in the Stage 1 CWMMP, since superseded by Stage 2 CWMMP (Revision 2) submitted to the Department on 9 October 2013.
46. If the Minister is satisfied, acting on advice of an expert panel, that new evidence indicates a material change in hydraulic connectivity of an aquifer to which condition 44 applies, the Minister may notify the proponent, in writing, that condition 44 does not apply to that aquifer.	Santos has received no notifications from the Minister during the AER Period.
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Condition **2013 Compliance Status** Default drawdown 47. Within 20 business days from the date of the project approval, or such longer period specified by the Minister in writing, the proponent must submit to the satisfaction of the Minister, modelled groundwater drawdown contour data and contour plots for each targeted aquifer. 48. The Minister, having regard to the minimum drawdown prediction from the proponent's Environmental Impact Statement and the information supplied under condition 47, will specify to the proponent, in writing, the default groundwater drawdown limit for each aquifer that will apply until the Minister's approval of the Stage 1 CSG WMMP. The proponent must not exceed the groundwater drawdown limits specified by the Minister. reference: 2011/00913). Stage 1 CSG Water Monitoring and Management Plan Conditions 49, 50 and 51. 49. Within 6 months from the date of the project approval, the proponent must submit for the approval of the Minister a Stage 1 Coal Seam Gas Water Monitoring and Management Plan (Stage 1 CSG WMMP) which includes at least: Groundwater monitoring and management a) groundwater drawdown limits for each targeted aquifer; b) a program and schedule for aquifer connectivity studies and monitoring of relevant aquifers to determine hydraulic connectivity; c) a program and schedule for field piloting of aquifer reinjection of treated CSG water and other groundwater repressurisation techniques; d) early warning indicators where drawdown thresholds are being approached. Hydraulic fracturing e) the estimated number and the spatial distribution of boreholes where hydraulic fracturing may be necessary, an annual review of the estimate, and recording of actual use; f) details of constituent components of any hydraulic fracturing agents and any other reinjected fluid(s), and their toxicity as individual substances and as total effluent toxicity and ecotoxicity, based on methods outlined in the National Water Quality Management Strategy; Surface water monitoring and management g) an ongoing water quality and quantity surface water monitoring plan that includes at least: i) identification of the surface and aquatic systems to be monitored and their environmental values, water quality, and environmental characteristics, and the rationale for selection; ii) the number and locations of monitoring sites upstream and downstream of proposed discharge of CSG water (whether treated water, amended water or raw water), including test and reference sites upstream and downstream and before and after any proposed impacts; iii) the frequency of the monitoring and rationale for the frequency; iv) baseline data for each monitoring site for comparison of monitoring results over the life of the project; v) the approach to be taken to analyse the results including the methods to determine trends to indicate potential impacts; vi) threshold values that protect relevant MNES (such as reporting or control line values for additional investigation, more intensive management action, make good, and cease operations) at which management actions will be initiated to respond to escalating levels of risk and designed to protect water quality and the associated environmental values of surface and aquatic systems; vii) water treatment and amendment methods and standards; viii) water storage locations and volumes including any storage and volumes required to pilot or implement reinjection or other groundwater repressurisation techniques; ix) water use or disposal options and methods (whether for beneficial use or not) including frequency, volumes, quality and environmental values documented for each receiving environment; x) brine storage locations and volumes, and brine crystal waste management; xi) emergency water discharges, their volumes and quality; xii) references to standards and relevant policies and guidelines; Response actions h) mechanisms to avoid, minimise and manage risk of adverse impacts and response actions and timeframes that can be taken by the proponent if: (1) threshold values for surface water quality and water environmental values specified in the CSG WMMP are exceeded; (2) there are any unforeseen emergency discharges; and Reporting i) performance measures, annual reporting to the Department, and publication of reports on the internet. Note: A key objective of the CSG WMMP groundwater components is to maintain or restore aquifer pressure, as affected by CSG production, to levels that avoid risk of adverse impact on MNES. 50. The proponent must implement the Stage 1 CSG WMMP approved in writing by the Minister acting on advice of an expert panel. The proponent must not exceed the groundwater drawdown limits for each aquifer specified in the Stage 1 CSG WMMP. The Stage 1 CSG WMMP will apply until the commencement of the approved Stage 2 CSG WMMP Note: A key objective of the CSG WMMP groundwater components is to maintain or restore aquifer pressure, as affected by CSG production, to levels to avoid risk of adverse impact on MNES. 51. The proponent must implement the Stage 1 CSG WMMP approved in writing by the Minister acting on advice of an expert panel. The proponent must not exceed the groundwater drawdown limits for each aquifer specified in the Stage 1 CSG WMMP. The Stage 1 CSG WMMP will apply until the commencement of the approved Stage 2 CSG WMMP.

Stage 2 CSG Water Monitoring and Management Plan

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Modelled groundwater drawdown contour data and contour plots for each targeted aquifer were submitted to the Department on 22/10/2010.

The Department has specified in writing the default groundwater drawdown limit for each aguifer that will apply until the Stage 1 CWMMP is approved (file

The Stage 1 CSWMMP that was submitted to the Department on 21/4/2011 includes the requirements of

The Stage 1 CWMMP has since been superseded by the Stage 2 CWMMP (Revision 2) submitted to the Department on 9 October 2013

Condition

52. Within 18 months from the date of the approval of the action the proponent must submit for the approval of the Minister, a Stage 2 Coal Seam Gas Water Monitoring and Management Plan (Stage 2 CSG WMMP). The proponent must allow a further 3 months for the Minister's consideration of approval of the Stage 2 CSG WMMP.
53. In addition to the matters in the Stage 1 CSG WMMP, the Stage 2 CSG WMMP must also include:
Groundwater monitoring and management a) an ongoing CSG water treatment program to ensure that any water to be used for re-injection, or used for other groundwater repressurisation options, is treated at least equal to the water quality of the receiving groundwater system or environment; b) the method, data and the evidentiary standards necessary to support a conclusion that an aquifer from which CSG water is being extracted is not hydraulically connected to other aquifers; c) a groundwater quality and quantity monitoring plan to monitor the aquifers underlying the project area using a statistically and hydrogeologically valid, best practice bore monitoring network across the project area addressing at least;
 i) the aquifers to be monitored and the rationale for selection; ii) the number and locations of monitoring bores and their flow, pressure, head, and water quality characteristics; iii) the frequency of the monitoring and rationale for the frequency; iv) baseline data for each monitoring site for comparison of monitoring results over the life of the project;
v) the approach to be taken to analyse the results including the methods to determine trends to indicate potential impacts; vi) groundwater drawdown threshold values and groundwater quality threshold values for each aquifer (based on regional groundwater modelling endorsed by the Minister) at which management actions (such as reporting or control line values for additional investigation, more intensive management action, make good, and cease operations) will be initiated to respond to escalating levels of risk, including increasing levels of drawdown, contamination of groundwater, or subsidence;
 vii) references to standards and relevant policies and guidelines; viii) mechanisms to monitor, avoid, minimise, manage, and respond to risks; and ix) performance measures, annual reporting to the Department, and publication of reports on the internet; Note 1: Threshold values will be identified in the plan and during the life of the approval and related conditions may be varied by the Minister on advice from an expert panel to reflect the best available data and scientific information.
Note 2: For clarity, the monitoring required under this condition may be undertaken jointly with others.
Response actions d) an exceedence response plan that includes: i) mechanisms to avoid, minimise and manage risk of adverse impacts and response actions and timeframes that can be taken by the proponent if: (1) threshold values for surface water quality and water environmental values specified in the CSG WMMP are exceeded; (2) threshold values specified in the CSG WMMP for aquifer drawdown or groundwater contamination are exceeded; (3) subsidence or surface deformation occurs which impacts on surface or groundwater hydrology; (4) there are any unforeseen emergency discharges; and ii) a program and timetable for repressurisation using re-injection of CSG water from hydraulically connected aquifers back into appropriate permeable aquifers and for other groundwater repressurisation options to re-establish pressure levels and water qualities to the satisfaction of the Minister on the advice of an expert panel, in conjunction with appropriate measures to forecast and proactively manage any short-term impacts. Note: The design of these groundwater repressurisation activities must be informed by a regional-scale groundwater model and a hydrochemical model approved by the Minister.
Implementation of Stage 1 and Stage 2 CSG WMMP
54. The proponent must implement the approved Stage 2 CSG WMMP, no later than 31 October 2013
55. Three months before commencement of each subsequent major stage of the proponent's gas field development the proponent must submit a revised Stage 2 CSG WMMP for the consideration of approval of the Minister. Note: The Coal Seam Gas Water Monitoring and Management Plan should be based on the proponent's planned staged development within the project area over the total life of the project consistent with approvals granted by the Queensland Government. Condition 88 requires notification of commencement of major stages of gas field development.
56. The proponent may only have, own, hold, take, or otherwise utilise sufficient CSG water as is required to undertake the approved activities within the approved project area.
57. The Stage 1 and Stage 2 CSG WMMP as approved by the Minister in writing, acting on advice of an expert panel, and in accordance with the timing requirements under these conditions, must be implemented. Note: The Queensland Coordinator-General also requires surface water and groundwater monitoring and management. The proponent may incorporate requirements into plans that meet both Queensland and Commonwealth requirements.

Revisions of Stage 1 and Stage 2 CSG WMMP

58. Consistent with an adaptive management approach the Stage 2 CSG WMMP must be reviewed and updated for each new stage of gas field development: to take into account of major updates to the Regional Groundwater Model; and to address findings of Cumulative Impact Assessment Reports required by the Queensland Government and these conditions of this approval.

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2013 Compliance Status

The Stage 2 CWMMP (Revision 2) submitted to the Department on 9 October 2013

Not applicable during this annual return period Not applicable during this annual return period

The Stage 2 CWMMP (Revision 2) submitted to the Department on 9 October 2013

The Stage 2 CWMMP (Revision 2) was submitted to the Department on 9 October 2013 and will implement accordingly.

Condition

59. A reviewed and updated Stage 2 CSG WMMP must be submitted to the Minister for written approval. Commencement of each new stage of gas field development must not occur without approval. The proponent may undertake activities that are critical to commencement that are associated with mobilisation of plant and equipment, materials, machinery and personnel prior to the start of development only if such activities will have no adverse impact on MNES, and only if the proponent has notified the Department in writing before an activity is undertaken. The approved CSG WMMP must be implemented for the relevant gas field area.

60. The Minister may, through a request in writing, require that the Stage 1 or Stage 2 CSG WMMP be revised or amended, which may include requirements for amendments to address expert advice. Any such request must be acted on within the timeframe specified.

Note: The Minister may throughout the project life seek advice from experts, or an expert panel. As a consequence specific matters identified through such advice may need to be addressed in the Plan. Where such advice is sought the proponent would be provided with opportunity to submit information and respond to the specific matters identified, in order to ensure the Plan is based on the best available information. Review requirements will facilitate adaptive management, alignment with Queensland Government approval requirements, and account for potential cumulative impacts as new scientific information becomes available over the life of the project.

Regional groundwater model

61. To avoid or minimise direct or indirect adverse impacts on MNES, the proponent must:a) develop a regional scale, multi-layer, transient groundwater flow model of the cumulative effects of multiple CSG developments; b) develop and implement an adaptive management framework, applicable at both the project scale and regional-scale, that includes monitoring and mitigation approaches to assess and manage the impacts of CSG developments, which takes into account the groundwater model of cumulative impacts required under (a); andc) contribute data as requested over the life of the Project to inform a Basin-scale multi-layer, transient groundwater flow model of the cumulative effects of multiple CSG developments in the Surat and Bowen Basins.Note 1: In the absence of sufficient evidence to characterise and quantify potential impacts at the regional scale, this condition requires the model to be developed as an early warning system, informed by any other regional cumulative hydrological modelling, such that any hydrological changes can be identified at an early stage and appropriate, effective remedial actions implemented before irreversible environmental adverse impacts on MNES.Note 2: Condition 7 Part 2, Appendix 2 of the Queensland Coordinator-General's report 28 May 2010, provides for the proponent to provide a regional groundwater model.Note 3: The Minister may throughout the project life seek advice from the Department or additional advice from experts, or an expert panel. As a consequence specific matters in order to ensure the Model is based on the best available information and advice.

62. The model required under condition 61 (a) must:

a) use the best hydrostratigraphic and hydrogeological information available at the time, to identify the likely cumulative impacts of multiple CSG developments across the Surat and Bowen Basins;

b) detail all data relating to the hydraulic connectivity between aquifers and aquitards used to substantiate the model parameterisation;

c) be calibrated against measured piezometer responses in areas where CSG development has commenced;

- d) in relation to the reporting of model outputs conform to the recommendations of the former Murray Darling Basin Commission Groundwater Modelling Guidelines;
- e) include:

i) water balances for the major aquifers affected by the CSG operations including the expected timeframe of any changes in water balance and pressure;

ii) recharge versus extraction volumes for those aquifers;

iii) details of justification for and assumptions regarding aquifer seal integrity (i.e. thickness and distribution of aquitards);

iv) quantification of hydraulic connectivity between different units (aquifers and aquitards) through drill stem and pump testing; and

v) quantification of the impacts of reinjection and other groundwater repressurisation techniques on aquifer water balances;

f) provide for adaptive monitoring, through six-monthly reporting of monitoring results and new data, and annual updates of numerical simulation models and re-interpretation of results to relevant Queensland Government and Commonwealth agencies.

63. The model under condition 61 (a) must be provided at the same time it is provided to fulfil requirements of the Queensland Government.

64. The proponent must seek approval of the Department if the requirement for a model required under 61 (a) is to be satisfied the proponent's contribution to a regional groundwater model developed by the Queensland Water Commission (or its successor agency), as agreed between the proponent and the Commission.

Note: Where the proponent is conditioned (here or elsewhere under the approval) to address a matter that may be most efficiently managed by another party, whether another CSG proponent or a Queensland Government agency, the proponent may discharge their responsibility under the condition by contributing financially and cooperating with other parties to meet the condition i.e. to develop a single representative regional model and/or to provided a single report from one or more proponents.

Groundwater assessment, mitigation and monitoring

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Not applicable during this annual return period

Not applicable during this annual return period

This is now being undertaken by Queensland Water Commission (QWC) Approval has been granted by the Department on 15/07/2011 for QWC to undertake the Regional Groundwater Model (file reference: 2011/00915 and 2011/00917).

Condition

65. The proponent must provide to the Minister a copy of the groundwater assessment required under condition 8 ('groundwater impact assessment report'), Part 2, Appendix 2 of conditions imposed by the Queensland Coordinator-General in his report dated 28 May 2010. In addition, as part of a staged process of adaptive management of CSG development, the proponent must also provide the following in relation to subsidence:

a) baseline and ongoing geodetic monitoring programs to quantify deformation at the land surface within the proponent's tenures. This should link from the tenement scale to the wider region across which groundwater extraction activities are occurring and any relevant regional program of monitoring;

b) modelling to estimate the potential hydrological implications of the predicted surface and subsurface deformation; and

c) measures for linking surface and sub-surface deformation arising from CSG activities.

66. When requested by the Department, the proponent must provide to the Department all geodetic monitoring data and related information from the program. This data must be provided within 30 days of request, or in a timeframe agreed to by the Department in writing.

67. Any program required under condition 65 must be submitted to the Minister for approval with a proposed implementation schedule. The approved program must be implemented in a timeframe specified by the Minister.

Springs assessment, mitigation and monitoring

68. As a precautionary approach, the proponent within 9 months of approval, or such other timeframe specified in writing by the Minister, survey for, reconfirm, and notify the Minister of the presence or absence of any springs proximal to the project area and within 100 kilometres of modelled limits of aquifer drawdown. The survey must:a) include the Lucky Last and the Scotts Creek springs in the vicinity of the Fairview gas field; and b) may with the written approval of the Minister comprise the proponent's contribution to a springs survey developed with input from the Department and undertaken by the Queensland Water Commission (or its successor agency). Note1: This survey may include use of remote sensing and may be aligned or combined with similar survey requirements that are to be undertaken by other proponents or the Queensland Water Commission. To avoid doubt, the survey should report on both discharge and recharge springs, as EPBC Act listed species may occur in association with either.Note 2: Surveys required under this condition may be undertaken by the proponent alone or in partnership with other CSG proponents.

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2013 Compliance Status

The Groundwater and Surface Water Impact Study was provided as Appendix B of the Stage 1 CSG WMMP.

Santos has received no requests during the AER Period.

The Stage 2 CWMMP (Revision 2) submitted to the Department on 9 October 2013and will be implemented accordingly upon approval by the Minister.

Approval by the Department was received on 15/07/11 for:- QWC to undertake the Springs Assessment; and an extension of the submission of the results to 30/11/11 (file reference: 2011/00915 and 2011/00917). Further extension to 23/04/12 was granted by the Department on 13/02/12 (to align with the date of submission of the Santos Stage 2 CSG WMMP).

On 23/04/12 Santos requested further extension to the submission of final reports. The Santos Stage 2 CWMMP (Revision 2) submitted to the Department on 9 October 2013 identified that to complete the spring survey undertaken by QWC within close proximity of the CSG fields, Santos GLNG was leading (on behalf of LNG Proponents Origin and QGC) a complementary EPBC spring survey in three stages:

Stage 1: A remote sensing exercise to identify all potential spring targets within the designated area;
Stage 2: A helicopter survey to confirm the presence or absence of springs at the remote sensing targets identified in the Stage 1; and

- Stage 3: A ground-truthing exercise of confirmed springs, previously un-mapped, to characterise the springs and identify if they are EPBC Act spring.

A copy of the report for Stage 1, EPBC Springs Identification, EPBC 100 km Spring Survey – Phase 1, (Halcrow, 2012) has been provided to DOTE.Stage 2 and Stage 3 Reports will be submitted to the Department during the next Annual Return Reporting period.

ſ	Condition	2013 C
		As above stage 3
	 69. If presence of The community of native species dependent on natural discharge of groundwater from the Great Artesian Basin, or listed threatened species that are reliant on springs, is confirmed by a survey under condition 68, then the proponent must (unless the proponent is not able to gain access to the spring, even with the assistance of relevant government agencies): a) for springs within the project area - within 1 month of survey completion protect the ecological community and/or listed threatened species from gas field development activities by establishing and maintaining a minimum 200 m employee/contractor exclusion gan field Development Protocol will also apply. b) Within 12 months of the survey completion provide to the Minister a management plan for all the relevant springs which includes: i) a specific monitoring and revield Development Protocol will also apply. b) Within 12 months of the survey completion provide to the Minister a management plan for all the relevant springs, what may arise from CSG water extraction, including identifying trigger levels and responses in the case of changes to groundwater flow or quality in each relevant spring; ii) a baseline analysis of four 3-monthy samplings to determine the seasonal presence or absence of all relevant springs, and certablish, the existence, dispersion and extent of listed threatened species; aquatic plants; water quality characteristics; spring physical parameters including seasonal variation, depth, and flow rate; aquifer source including hydrochemical and isotopic analysis, of our control line values for additional investigation, more intensive management actions, make good, and cease operations) at which management actions will be initiated to respond escalating levels of impact and designed to protect The community of the stellest dependent on the natural discharge of groundwater from the Great Artesian Basin in the case of changes to groundwater pressure, flow, or water quality in	
-	70. Any management plan required under condition 69(b) must be submitted to the Minister for consideration of approval including seeking advice from an expert panel. The approved plan must be implemented within the timeframe specified by the Minister. The approved plan must be published on the Internet within 20 business days of being approved by the Minister.	1
Ī	71. The results of the baseline analysis under 69 (b) must be incorporated into the regional groundwater model required under condition 61.	
	Discharge, disposal or use of CSG salts, brine concentrates and heavy metals / metalloids	
	72. Concentrated CSG salts and other brine concentrates derived from CSG water may only be disposed by either:a) injection into deeper, underlying confined aquifers of equivalent water chemistry; or, failing that,b) in secure contaminated waste disposal facilities that are licensed, operated, and monitored in accordance with the requirements of the Queensland Government.Note: This condition does not preclude the harvesting of salts and heavy metals for commercial purposes.Note: Salt disposal within the Murray-Darling Basin must be in accordance with the requirements for salinity management and accountability set out in the Water Act 2007 and the Basin Salinity Management Strategy.	The Sau 0020-G line with Append Plan 00 Water M
	Notification of threshold breaches and response actions	
	73. Within 10 business days of the proponent identifying monitoring outcomes that indicate a risk of reduction in groundwater pressure or water quality, the proponent must notify the Minister in writing of the trend and the proponent's response action.	No mon reductio during t A Notifie across t aware o
-	74. Within 10 days of a surface or groundwater threshold value (for example, water quality, environmental value, pressure, head, volume, or flow) being exceeded, the proponent must advise the Minister in writing of the circumstances, the threshold exceeded, the immediate action taken by the proponent, and proposed action to remedy the breach and avoid a subsequent breach.	No surfa exceede
	75. Immediate action may include the ceasing of water / gas extraction and / or water discharge or use in the area affected until investigations can be completed to determine the cause and remedial action. The proponent's proposed response action must be notified to the Minister in writing.	
	76. The Minister may direct in writing that the proponent cease water / gas extraction and/or water discharge or use in the area affected, and if the Minister is not satisfied that the action proposed or taken by the proponent will remedy the situation, or make good any environmental loss, the Minister may direct the proponent to implement alternative action at the expense of the proponent. Note: The proponent will be provided with a reasonable opportunity to comment on any such direction before it is required to be implemented.	No dired during t

Notifications and requirements about construction, operation, brine management and environmental management plans

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above, to be finalised following the completion of ge 3 of the survey under condition 68.

e Santos Upstream Brine Management Strategy 20-GLNG-3-1.3-0014 (BMS) has been developed in e with condition 72. The BMS was included as pendix C in the Fairview CSG Water Management an 0020-GLNG-3-1.3-0009 and the Roma CSG ater Management Plan 0020-GLNG-3-1.3-0015.

monitoring outcomes have indicated a risk of duction in groundwater pressure or water quality ring the AER Period.

Notification Procedure has been developed rolled out ross the Project to ensure that all personnel are rare of conditions 73, 74, 75, 76 and 77.

surface or groundwater threshold value has been ceeded during the AER Period.

o direction was received by Santos by the Department ring the AER Period.

Condition

77. The proponent must notify the Department in writing when developing or reviewing construction, operational, groundwater, CSG water, brine management, salinity management, environmental management, or other plans where the scope of the plans relates to potential direct, indirect or cumulative adverse impacts on MNES, or involves management of MNES. The proponent must in the notification indicate the relevant components of such plans relating to MNES and their management, and the timeframe for development and approval of the plans under Queensland Government requirements.

78. Where the scope of the plans relates to potential adverse impact on MNES, or involves management of MNES the plans must be submitted to the Minister for approval of those components. Approved components of plans must be implemented.

Note: Where efficiency will be enhanced the proponent may also prepare and align management plans required under these conditions with the requirements of the Queensland Government as long as the relevant matters under the conditions of this approval are clearly and adequately addressed.

Cumulative Impact Report

Th 79. On the same date that an assessment of cumulative impacts is provided in accordance with requirements imposed by the Queensland Government, or such other timeframe specified in writing by the Minister, the proponent 29 must provide a copy of that report to the Minister. 20/

80. In addition to meeting any requirements imposed by the Queensland Government, the report on cumulative impacts provided to the Minister must also address the following, in relation to potential adverse impacts on MNES: a) cumulative impacts relating to all listed species and listed ecological communities within and outside project area, including The community of native species dependant on natural discharge of groundwater from the Great Artesian Basin:

b) any surface water and groundwater environmental values, including groundwater pressures and groundwater hydrochemistry which, if altered, may have an impact on listed species and ecological communities within and outside project area;

Note: These requirements may also be included together with the detailed assessment of cumulative impacts required under condition 2, Part 2, Appendix 2, of the Coordinator-General's reported dated 28 May 2010.

81. Within 3 years of the date that the cumulative impact report is provided to the Minister, or such other timeframe specified in writing by the Minister, the proponent must review that cumulative assessment and the report in the light of the most up-to-date information and the regional transient groundwater model required under condition 61 (a). The proponent must provide a report on the review to the Minister and at the same time publish the report on its website

Note: The assessment scope of the cumulative impact report is not limited to groundwater or surface water impacts. These conditions provide that, 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. The Minister may make such a request in the light of the cumulative impacts assessment, or the review of the cumulative impacts assessment. Section 136(1)(b) of the EPBC Act additionally provides that the Minister may revoke, vary or add to a condition of this approval if the action has a significant impact that was not identified in assessing the action, and if the Minister relevantly believes it is necessary.

Decommissioning Plan

82. Within five years of the commencement of gas field development, the proponent must develop a Decommissioning Plan. The Plan must:

a) require the progressive removal or reuse of infrastructure where gas field operations cease during the project life;

b) establish management practices and safeguards to minimise environmental disturbance;

c) ensure MNES are not impacted by progressive decommissioning, or final decommissioning of gas field infrastructure;

d) define rehabilitation actions for the infrastructure sites following decommissioning including for:

e) optimising habitat and habitat connectivity for MNES;

f) enhancing pre-construction environmental quality; and

g) ongoing management during rehabilitation.

83. The Decommissioning Plan must be submitted for the approval of the Minister. The approved Plan must be implemented.

Survey data

Th 84. All survey data collected for the project must be collected and recorded so as to conform to data standards notified from time to time by the Department. When requested by the Department, the proponent must provide to rec the Department all species and ecological survey data and related survey information from ecological surveys undertaken for MNES. This survey data must be provided within 30 business days of request, or in a timeframe sur agreed to by the Department in writing.

Publication of Protocol and Plans

85. The Protocol and 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.

86. 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

Notification of commencement

2013 Compliance Status
No plans were revised during the AER Period.
All plans that include a scope that relates to potential adverse impacts to MNES have been or are being prepared to be submitted to the Department for approval.
The Cumulative Impacts Assessment (dated 29/07/2010) was submitted to the Department on 20/01/2011.
Cumulative Impact Assessment Report to be reviewed by 20/01/2014
Not applicable during the AER Period. Plan due 12/01/2016.
This requirement is included in the Protocol. No
requests have been made by the Department for the survey data.
All approved plans have been published on the GLNG website within the required timeframe.
No such requests have been made during the AER Period.



Condition	2013
	The the D
	The
87. Within 20 business days of the commencement of the action, the proponent must advise the Department in writing of the actual date of commencement.	Depa
	being
	No a
88. The proponent must notify the Department in writing of the proposed dates for each subsequent major stage of gas field development at least 40 business days before their commencement, and within 20 business days	deve
notify actual commencement dates, and within 20 business days of any major variations to gas field development notify the variations.	
Request for variation of plans by proponent	
89. 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.	Any as re
90. If the Minister approves the revised plan, then that plan must be implemented instead of the plan originally approved.	_
91. Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	
Revisions to plans by the Minister	
92. 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. Without limiting this condition, the Minister may also make such a request following a study under s.255AA of the Water Act 2007.	Not a Depa
93. 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.	_
94. The proponent must implement the revised plan on approval of the Minister.	_
95. Until the Minister has approved the revised plan, the proponent must continue to implement the original plan.	
Minimum timeframes for consideration of plans	
96. 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.	All pl subn timef
Compliance with State environmental and other authorities	
	San
97. The proponent must comply with all environmental authorisations issued by the State, including conditions of an environmental authority issued under the EP Act.	conc relat
	enfo
Provision of State plans	
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98. If a condition of a State approval requires the proponent to provide a plan then the proponent must:	Som
a) provide the plan to the Department or Minister on request, within the period specified in the request; and	and
b) prepare and combine plans that meet both Queensland Government requirements and the Commonwealth requirements under this approval where this is efficient. In doing so the proponent must clearly identify the	All p how
respective responsibilities and how these are being addressed in relation to these conditions.	now
Timeframes	_
	No a
99. If these conditions require the proponent to provide something by a specified time, a longer period may be specified in writing by the Minister. Auditing	
100. On the request of and within a period specified by the Department, the proponent must ensure that:	Not a
 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. 	
 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. 101. Before the audit begins, the following must be approved by the Department: 	
 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. 	with durin

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13 Compliance Status
e Final Investment Decision was communicated to e Department on 16/02/2011. e date of commencement was communicated to the epartment on the 19/04/2013, commencement date ing 9/02/2012
action required until next subsequent major stage of velopment
y revision to plans have been submitted for approval required.
at applicable as no requests have been made by the partment during the AER Period.
plans required as a condition of this approval were bmitted to the Department within the required neframes.
antos has reported non-compliances against nditions of the relevant environmental authorities. In ation to this condition Santos has not received any forcement action from the Commonwealth to date.
ans have been submitted to the Department as quested. Ime plans have been prepared to meet both State d Commonwealth requirements (e.g. the Protocol). plans submitted contain a matrix table that outlines w relevant conditions have been met.
action required by Santos.
t applicable as no independent audit of compliance th these conditions was requested by the Department ring the AER Period.

Condition

102. 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.

103. The financial cost of the audit will be borne by the proponent.

104. 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.

Note: The Department will discuss findings of audit reports with the proponent to ensure compliance with conditions and before the issue of any directions.

105. 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; andb) actions taken to prevent a recurrence of any non-compliance, or implement any other recommendation to improve compliance, identified in the audit report.Note: Independent third party auditing may include audit of the proponent's performance against the requirements of any plan required under these conditions.

Reporting non-compliance

106. 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:

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.

Record-keeping

107. 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 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.

Financial assurance

108. The proponent must:

a) provide the Minister with a financial assurance in the amount and form required from time to time by the Minister 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

109. 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.

Annual Environmental Return

110. 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.

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

Oracted has an estad and entry linear a second in the
Santos has reported non-compliances according to these conditions.
these conditions.
In relation to these conditions Santos has not received
any enforcement action from the Commonwealth to
date.
All required records are maintained in a control
All required records are maintained in a central
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