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24 April 2024

Santos Reference: EQ24-01

Dr Forough Ghasemi
Team Leader (Assessment)
Energy, Extractive and South West Compliance | Environmental Services and Regulation
Department of Environment, Science and Innovation
Level 7, 400 George Street
BRISBANE QLD 4001

Dear Dr Forough,

Replacement Plan of Operations – Environmental Authority (EA) EPPG03515915

Santos CSG Pty Ltd (Santos) has prepared the attached replacement Plan of Operations for Environmental Authority EPPG03515915. The Plan of Operations has been prepared in accordance with Section 293 of the *Environmental Protection Act 1994* (EP Act). The plan covers tenure PL 1088, within the Scotia Project Area.

This amendment application has been updated to include additional proposed activities as detailed in Table 1.

This application is being submitted with an amended Estimated Rehabilitation Cost application. There has been no change to existing activities on all tenures authorised by EA EPPG003515915, since the last ERC decision 28 November 2022. The following information is attached as the Plan of Operations:

- Appendix 1 – Application Form
- Appendix 2 – Spatial Information
- Appendix 3 – Plan of Activities (proposed activities)
- Appendix 4 – Proposed Activities Map
- Appendix 5 – Action Program
- Appendix 6 – Rehabilitation Program
- Appendix 7 – Compliance Statement

There is no prescribed fee for PoO applications under the Environmental Protection Regulation 2019.

Please contact Alex Clarke (alex.clarke@santos.com) should you have any questions in relation to the application.

Yours sincerely,

Bennett Warren

Team Leader Environment - Approvals

Santos Ltd

Santos

Table 1: Additional Proposed Activities

Domain and Activity Type	Additional Proposed Infrastructure	Additional Proposed Disturbance
Domain 2: Tracks, Laydown and Borrow Pits		
Tracks	Track, Earthen, No Replace, 6 m Wide	18 km in Pasture 2 km in Native
	Track, Rock, No Replace, 6 m wide	42.31 km in Pasture 20.75 km in Native
Domain 5: Wells Pads and Associated Infrastructure		
CSG	Coal seam gas, Appraisal/Development, Single well	24 Well Pads
	Coal seam gas, Operation/Production, Single well	10 Well Pads
Domain 6: Pipelines		
Gas Pipeline	Buried gas decommissioning – purging (< = 0.5 m diameter)	15 km

Appendix 1

Application Form

Form

Environmental Protection Act 1994

Submission of a plan of operations

This is the approved form that is to be used by an environmental authority holder under section 291 of the Environmental Protection Act 1994 (EP Act) to submit a plan of operations to the administering authority.[1]

A plan of operations is only required for an environmental authority for a petroleum activity authorised under a petroleum lease (other than a petroleum lease granted under the *Petroleum Act 1923*), if the petroleum activity is an ineligible environmentally relevant activity (ERA). However, where the information provided in this plan of operations is to be used to satisfy the spatial information and/or rehabilitation plan requirements in the Estimated Rehabilitation Cost (ERC) application, this plan of operations must include all disturbance and rehabilitation activities under all tenures of the environmental authority for the plan period (including 1923 petroleum leases, authority to prospect (ATP) etc).

An environmental authority holder must not carry out, or allow the carrying out of, an activity under the relevant lease unless a plan of operations for all relevant activities has been given to the administering authority. The environmental authority holder must comply with the plan of operations when carrying out an activity under the relevant lease.

This plan of operations form may be used for submission of an initial plan of operations, replacement plan of operations, or amendment of a current plan of operations. **All of the information provided in this form, including all attachments and submitted spatial information, amounts to the plan of operations**.

Note that a proposed plan of operations may relate to one or more petroleum leases authorised under an environmental authority.

For information on plans of operations, including details of submission requirements and supporting information to be provided, please refer to the guideline Preparing a plan of operations for an environmental authority relating to a petroleum lease (ESR/2015/1821[2]).

If you would like to have a pre-lodgement meeting, please fill out and lodge the form Application for pre-lodgement services (ESR/2015/1664) prior to lodging this application.

Definitions of terms used in this form

Where there is inconsistency between the definition of terms here and the terms used in the EP Act, the terms in the EP Act apply.

[1] The Department of Environment, Science and Innovation is the administering authority under the *Environmental Protection Act 1994*.

[2] This is the publication number. The publication number can be used as a search term to find the latest version of a publication at www.qld.gov.au.

Queensland Government

Ineligible ERA	An environmentally relevant activity that does not comply with the eligibility criteria in effect for the activity, or for which eligibility criteria are not in effect, or that is carried out as part of a significant project.

GUIDE

If you require assistance in answering any part of this form, or have any questions about your submission, please contact the Energy and Extractive Resources Business Centre. Contact details are at the end of this form.

The environmental authority number and details may be found on the existing environmental authority or quoted in other correspondence received from the administering authority.

If more space is required for any responses, please attach additional information as a separate page.

If there is an agent acting on behalf of the environmental authority holder, provide details in this section. An agent could be a consultant or a contact for the environmental authority holder.

As statutory documents need to be sent to all applicants, this section can also be used when there are multiple environmental authority holders to nominate an address for statutory documentation to be sent 'care of' to.

Application details

1. Environmental authority

ENVIRONMENTAL AUTHORITY NUMBER EPPG03515915
ENVIRONMENTAL AUTHORITY HOLDER NAME/S Santos CSG Pty Ltd, PAPL (Upstream II) Pty Limited; Total E&P Australia II; KGLNG E&P Pty Ltd; Total E&P Australia

Project name (if applicable)

Scotia

Address for service / Agent details

The address supplied here will be used as a service address for sending statutory documents. If blank, statutory documents will be sent to the address previously supplied for the holder or principal applicant for the environmental authority.

INDIVIDUAL OR BUSINESS NAME (INCLUDE TRADING NAME IF RELEVANT) Santos CSG Pty Ltd	
RESIDENTIAL ADDRESS OR REGISTERED BUSINESS ADDRESS (NOT A POST OFFICE BOX ADDRESS) Level 22, 32 Turbot Street BRISBANE QLD 4000	
POSTAL ADDRESS (IF DIFFERENT FROM ABOVE) PO Box 1010 BRISBANE QLD 4001	
CONTACT PERSON AND POSITION Bennet Warren	
PHONE 07 3838 3000	FACSIMILE
EMAIL onshoreenvcompliance@santos.com	

2. Plan of operations type

☒ Amendment	Proceed to question 3
☐ Replacement	Proceed to question 4
☐ Initial	Proceed to question 4

Refer to the guideline Preparing a plan of operations for an environmental authority relating to a petroleum lease (ESR/2015/1821), for the most up to date information required to be included with this submission.

3. Amendment details

Provide details of the amendments, including the reasons for the amendment and a summary of any changes to activities.

Additional development proposed as detailed in Table 1 of the cover letter.

4. Plan period

A plan of operations must state a plan period of a maximum of five years

State the period for which the plan will apply.

An amendment cannot extend the current plan period.

COMMENCEMENT DATE	30 / 04 / 2024
COMPLETION DATE	01 / 09 / 2025

An ERC decision must be in effect and cover the period of the plan period.

It is a condition of the environmental authority that the plan period for the plan of operations must be consistent with the ERC period. The commencement date for the plan of operations should be on or after the ERC commencement date, and the completion date for the plan of operations should be on the same day as the completion date for the ERC completion date.

If you are submitting a replacement plan of operations, you must submit an ERC decision application on the same day with the same period.

However, if you are submitting a replacement plan of operations you must submit an ERC decision application on the same day, with the same period.

☒ An application for an ERC decision requesting the same period as the proposed plan of operations period has been submitted

OR

☐ An existing ERC decision that covers the period of the initial proposed plan of operations period is in effect and the existing ERC amount for that decision has not changed.

Petroleum resource being extracted includes all minerals authorised under the P&G Act. For example, Crude Oil, CSG or Natural Gas.

5. Description of each petroleum lease

Provide a description of each petroleum lease for the environmental authority in the table below.

LEASE NUMBER	PETROLEUM RESOURCE BEING EXTRACTED	WILL THERE BE ANY NEW DISTURBANCE TO THE LEASE DURING THE PLAN PERIOD?
1088	CSG	☒ Yes ☐ No
		☐ Yes ☐ No
		☐ Yes ☐ No

6. Description of land to which each lease applies

Spatial information must provide a description of the land to which each petroleum lease applies. This description must address the following information for each lease:

- Original land use(s)
- Post-operation land use(s)
- Sensitive receptor(s)
- Project boundary

Spatial information must be prepared and submitted in accordance with the department's guideline: Spatial Information Submission (ESR/2018/4337).

This information must be consistent with the applicable schema table in Attachment 1.

☒ Spatial information has been submitted

OR

If you have previously submitted this spatial information in a former plan of operations and the information is still current and relevant, you may use this information to satisfy this requirement.

☐ Spatial information has previously been submitted to the department

7. Description of the land to which the plan applies

Refer to the guideline Preparing a plan of operations for an environmental authority relating to a petroleum lease (ESR/2015/1821), for the most up to date information required to be included with this submission, and the

Identify the categories contained in the table below, where relevant to any areas or potential areas of significant disturbance during the plan period.

definitions of these categories.

CATEGORY	RELEVANT?
Category A environmentally sensitive area (ESA) defined under the Environmental Protection Regulation 2019	☒ No ☐ Yes
Category B ESA defined under the Environmental Protection Regulation 2019	☐ No ☒ Yes
Matters of National Environmental Significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999*	☐ No ☒ Yes
Matters of State environmental significance (MSES) under the Environmental Offsets Regulation 2014	☐ No ☒ Yes
Areas of regional interest under the *Regional Planning Interest Act 2014*	☐ No ☒ Yes
Critically endangered, endangered, vulnerable, near threatened or least concern wildlife species under the *Nature Conservation Act 1992*	☐ No ☒ Yes
Watercourses, wetlands, springs (including relevant environmental values) or river improvement trust asset areas	☐ No ☒ Yes

8. Plan of all activities

Provide a plan describing all activities to be carried out on the land within the plan period.

The plan must include:

A. Existing activities

Spatial information must be prepared and submitted in accordance with the department's guideline: Spatial Information Submission (ESR/2018/4337).

Spatial information must provide the location and details of all existing activities carried out/ infrastructure constructed on the land at the commencement of the plan period. This information must be consistent with the applicable schema table in Attachment 1.

☒ Spatial information has been submitted

B. Proposed activities

Attach details of all proposed activities to be carried out/ infrastructure to be constructed on the land within the plan period. This information must be in the same format and include the information outlined in Appendix 1.

☒ Proposed activities attached

Refer to the guideline Preparing a plan of operations for an environmental authority relating to a petroleum lease (ESR/2015/1821), for the most up to date information required to be included with this submission.

9. Action program

Attach an action program for complying with each schedule of conditions in your environmental authority. This program must be in the same format and include the information outlined in Appendix 2.

☒ Action program attached

OR

If you have previously submitted this action program (in the format of Appendix 2) in a former plan of operations and the information is still current and relevant, you may use this document to satisfy this requirement.

☐ Action program has previously been submitted to the department

Refer to the guideline Preparing a plan of operations for an environmental authority relating to a petroleum lease (ESR/2015/1821), for the most up to date information required to be included with this submission.

10. Rehabilitation program

Attach a rehabilitation program for land disturbed or proposed to be disturbed under each relevant lease during the plan period.

Note: If the information in a plan of operations is to be used to satisfy the rehabilitation plan requirements of the ERC application, the rehabilitation program in the plan of operations is to include information about rehabilitation required for disturbance proposed to be undertaken in the plan period AND rehabilitation required for all existing disturbance.

The rehabilitation program must contain the following:

A. Rehabilitation plan

Attach a detailed rehabilitation plan developed with consideration of the nature, staging and areas of proposed rehabilitation works:

☒ Rehabilitation plan attached

OR

If you have previously submitted a rehabilitation plan, or equivalent plan, to the administering authority and the information is still current and relevant, you may use this plan to satisfy this requirement.

☐ Equivalent document has previously been submitted to the department

Name of document:

Date document was submitted:

B. Rehabilitation schedule

Spatial information must be prepared and submitted in accordance with the department's guideline: Spatial Information Submission (ESR/2018/4337)

Attach a schedule of rehabilitation activities detailing the type and areas of rehabilitation proposed to be undertaken within the plan period. This schedule must be in the same format and include the information outlined in Appendix 3.

Note: If the information in a plan of operations is to be used to satisfy the rehabilitation plan requirements of the ERC application, the rehabilitation schedule is to include information about rehabilitation required for disturbance

proposed to be undertaken in the plan period AND rehabilitation required for all existing disturbance.

☒ Rehabilitation schedule attached

Existing Rehabilitation

Spatial information must provide the location and details of all existing rehabilitation present on the land at the commencement of this plan period. This information must be consistent with the applicable schema table in Attachment 1.

☒ Spatial information has been submitted

11. Compliance statement

A compliance statement for this plan of operations must be provided by completing the form in Appendix 4: Compliance statement for a plan of operations.

Please note: **It is an offence to give the administering authority information that is false, misleading or incomplete.**

☒ Compliance statement attached

The compliance statement must be made:

1) If the holder is an individual/s—by the holder
2) If the holder is a corporation—by the executive officer of the corporation

Where there is more than one holder of the environmental authority, this declaration is to be signed by all holders, unless there is an agreement between all holders that one can sign on behalf of the other.

Note: If only one holder is signing this application form, they are committing all holders to the content of the application and the declaration.

Where the environmental authority holder is a company, this form must be signed by an authorised person for that company.

Privacy statement

Pursuant to section 540 of the *Environmental Protection Act 1994* (EP Act), A copy of this form, its attachments and submitted spatial information are releasable to the public register. The public register is available for inspection by members of the public who are able to take extracts, or copies of the documents from the public register. Documents that are required to be kept on the public register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

12. Declaration

Note: If you have not told the truth in this application you may be prosecuted.

Where an agreement is in place between all holders of the environmental authority, that one holder can sign on behalf of the other joint holders, please tick the below checkbox.

☒ I have the authority to sign this form on behalf of all the joint holders of the environmental authority.

I declare that:

- I am the holder of the environmental authority or an authorised signatory.
- The information provided is true and correct to the best of my knowledge.
- I understand that it is an offence under section 480 of the *Environmental Protection Act 1994* to give to the administering authority a document containing information that I know, or ought reasonably to know, is false or misleading in a material particular.
- I understand that it is an offence under section 480A of the *Environmental Protection Act 1994* to give to the administering authority a document containing information that I know, or ought reasonably to know, contains incomplete information in a material particular.
- I understand that failure to provide sufficient information may lead to the plan of operations being invalid.
- I understand that all information supplied on or with this application form may be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

SIGNATORY'S NAME David Gornall	
SIGNATURE 	
POSITION OF SIGNATORY Manager Environment EA PNG	DATE 24/04/2024
JOINT HOLDER'S NAME (IF APPLICABLE)	JOINT HOLDER'S SIGNATURE (IF APPLICABLE)
JOINT HOLDER'S NAME (IF APPLICABLE)	JOINT HOLDER'S SIGNATURE (IF APPLICABLE)

Applicant checklist

- ☒ Application form has been completed and signed
- ☒ Question 6: Spatial information describing each petroleum lease submitted
- ☒ Question 8A: Spatial information for all existing activities submitted
- ☒ Question 8B: Plan of proposed activities attached
- ☒ Question 9: Action program attached
- ☒ Question 10A: Rehabilitation plan attached (if applicable)
- ☒ Question 10B: Rehabilitation schedule for the plan period attached
- ☒ Question 10C: Spatial information for all existing rehabilitation submitted
- ☒ Question 11: Compliance statement attached

Please submit your completed form to the Energy and Extractive Resources Business Centre, Department of Environment, Science and Innovation by:

- Email: EnergyandExtractive@des.qld.gov.au
- Regular post: GPO Box 2454, BRISBANE QLD 4001

Enquiries:

Energy and Extractive Resources Business Centre

Phone: 07 3330 5715

Email: EnergyandExtractive@des.qld.gov.au

Further information

The latest version of this publication and other publications referenced in this document can be found at www.qld.gov.au using the relevant publication number (e.g. ESR/2018/4340 for this document) as a search term.

APPENDIX 1—PLAN OF ACTIVITIES: PART B (PROPOSED ACTIVITES)

1. *Include all domains which are applicable to the activities proposed to be undertaken on the land during the plan period.*
2. *For each domain, add a line for each activity that applies. A list of activities is provided in Attachment 2 of this form.*
3. *Where a particular activity is not listed in Attachment 2, you may add your own line item to the below table. This activity can be inserted into the applicable domain, or into the 'Additional Activity' domain.*
4. *Where the information provided in this plan of operations is to be used to satisfy the spatial information requirements in the Estimated Rehabilitation Cost (ERC) application, this plan of activities must include all proposed activities under all tenures of the environmental authority for the plan period (including 1923 petroleum leases, ATP's etc) and must be consistent with what will be input into the ERC calculator.*

ACTIVITY *Example (exploration): Seismic 2D*	**DISTURBANCE DETAILS**														
	YEAR 1			**YEAR 2** *(if applicable)*			**YEAR 3** *(if applicable)*			**YEAR 4** *(if applicable)*			**YEAR 5** *(if applicable)*		
	TENURE *Example: PL123*	**ADDITIONAL PARAMETERS** *Example: 200 km*	**DISTURBANCE AREA (ha)** *Example: XX Ha*	**TENURE**	**ADDITIONAL PARAMETERS**	**DISTURBANCE AREA (ha)**	**TENURE**	**ADDITIONAL PARAMETERS**	**DISTURBANCE AREA (ha)**	**TENURE**	**ADDITIONAL PARAMETERS**	**DISTURBANCE AREA (ha)**	**TENURE**	**ADDITIONAL PARAMETERS**	**DISTURBANCE AREA (ha)**
DOMAIN 1: EXPLORATION (*if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 2: ROADS, TRACK, LAYDOWN AND BORROW PITS (*if applicable)*															
Total Domain Disturbance Area (ha)															

DOMAIN 3: CAMPS, BUILDINGS AND SEWAGE TREATMENT PLANTS *(if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 4: POWER GENERATION AND DISTRIBUTION *(if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 5: WELL PADS AND ASSOCIATED INFRASTRUCTURE *(if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 6: PIPELINES *(if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 7: GAS PROCESSING AND OIL STORAGE FACILITIES *(if applicable)*															

Total Domain Disturbance Area (ha)															
DOMAIN 8: WATER TREATMENT PLANTS AND TRANSFER STATIONS *(if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 9: WATER STORAGE INFRASTRUCTURE (DAMS / PONDS & TANKS) *(if applicable)*															
Total Domain Disturbance Area (ha)															
DOMAIN 10: ADDITIONAL ACTIVITIES *(if applicable)*															
Domain Disturbance Area (ha)															
TOTAL DISTURBANCE AREA (ha) *per year* *(= D1 + D2 + D3 + D4 + D5 + D6 + D7 + D8 + D9 + D10)*															

APPENDIX 2 —ACTION PROGRAM

1. *Complete required details demonstrating how you will comply with the conditions of your environmental authority.*
2. *At a minimum, include all schedules on your environmental authority. Individual conditions may also be included where appropriate.*

EA CONDITION	INTERNAL PROCESS / MANAGEMENT SYSTEM *(if applicable)*	ENVIRONMENTAL MANAGEMENT STRATEGIES
Example: Schedule X	*XXXX Monitoring Plan*	*Schedule construction for dry time of year, get CPESC to develop ESC plan, undertake monitoring and ensure maintenance of ESC measures during construction phase*

APPENDIX 3 —REHABILITATION SCHEDULE

- *Detail all the rehabilitation activities proposed to be undertaken on the land during the plan period.*
- *Similar rehabilitation activities can be aggregated together (e.g. 3 wells), provided that the same rehabilitation methodology will be used for all sites and they are all located in areas of equal environmental sensitivity (e.g. if one well is located in a MSES that would need to be a separate line item).*
- *Where the information provided in this plan of operations is to be used to satisfy the spatial information requirements in the ERC application, this schedule must include all rehabilitation activities under all tenures of the environmental authority for the plan period (including 1923 petroleum leases, ATP's etc).*
- *If the information in a plan of operations is to be used to satisfy the rehabilitation plan requirements of the ERC application, the rehabilitation schedule in the plan of operations is to include information about rehabilitation required for disturbance proposed to be undertaken in the plan period AND rehabilitation required for all existing disturbance. The 'DOMAIN' and 'REHABILITATION WORKS ALREADY UNDERTAKEN' columns are only required where this plan of operations is to be used to satisfy the rehabilitation plan requirements in the ERC application.*

DOMAIN[1]	ACTIVITY	LOCATION	AREA (ha)	POST-OPERATION LAND USE	TIMING (WHEN)[2]	REHABILITATION METHODOLOGY[3]	REHABILITATION WORKS ALREADY UNDERTAKEN[4]
Roads, Tracks, Laydowns and Borrow Pits	*Roads*	*PLXXX*	*XX*	*Grazing*	*Rehabilitation site works – Q3 2026 (Year 4 of the Plan)* *Completed for handover or relinquishment – Q3 2027 (Year 5 of the Plan)*	• *Removal of aboveground infrastructure.* • *Strip capping material and reprofile pad.* • *Reinstate natural drainage lines and contours.* • *Reinstate topsoil.* • *Application of seed and fertiliser.* • *Installation of erosion and sediment controls as required.* • *Installation of fencing as required.*	*Nil, sites are still active.*

[1] This column is only required where this plan of operations is to be used to satisfy the rehabilitation plan requirements in the ERC application. If this column is required, insert the Domain type from the ERC calculator.

[2] If this rehabilitation schedule is to be used to satisfy the rehabilitation plan requirements in the ERC application and the rehabilitation is to be undertaken outside of the plan period, include the year if known or insert “Rehabilitation to be undertaken outside of plan period”.

[3] Provide a description of rehabilitation activities that will be specifically undertaken during the plan period. If this rehabilitation schedule is to be used to satisfy the rehabilitation plan requirements in the ERC application, include the rehabilitation methodology required to restore all existing disturbance and disturbance proposed to be undertaken in the plan period to its post-operation land use.

[4] This column is only required where this plan of operations is to be used to satisfy the rehabilitation plan requirements in the ERC application. If this column is required, provide a description of rehabilitation activities that have already been undertaken at the start of the plan period.

Attachment 1—Spatial data requirements for plan of operations

Attachment 1 provides guidance on the required content of spatial information (shapefiles) for the submission of areas of disturbance and rehabilitation on site as authorised under an environmental authority. This attachment should be read in conjunction with the department's guideline: Spatial Information Submission (ESR/2018/4337). To obtain a copy of the guideline visit www.qld.gov.au and search for "ESR/2018/4337". The following sections provide information about the required fields and attributes for datasets.

Important note: where the information provided in a plan of operations is to be used to satisfy the spatial information requirements in the ERC application, the plan of operations must include all disturbance and rehabilitation activities under all tenures of the environmental authority for the relevant plan period (including 1923 petroleum leases, ATP's etc.)

1. Required files—Table 1

Environmental authority holders must submit shapefiles detailing the existing disturbance and rehabilitation on site in addition to a description of the relevant petroleum lease(s). Where the plan relates to a site that has no existing disturbance or rehabilitation, this should be stated in the spatial information submission email to which the description of the petroleum lease file is attached.

Each geometry type must be submitted in a separate file, as outlined within table 1. Each file must be named in accordance with the requirements outlined within the department's guideline: Spatial Information Submission (ESR/2018/4337).

Table 1: Plan of operations shapefile checklist

File	Spatial information requirement	Schema	Example file name (e.g. using submission date of 30 June 2023)
1	Disturbance and rehabilitation on site – points	Table 2	EPPR00372287_PoO_PT_30062023.zip
2	Disturbance and rehabilitation on site -lines	Table 2	EPPR00372287_PoO_LN_30062023.zip
3	Disturbance and rehabilitation on site - polygons	Table 2	EPPR00372287_PoO_PY_30062023.zip
4	Description of petroleum lease	Table 3	EPPR00372287_PoOL_PY_30062023.zip

Where:

- PT = point (geometry)
- LN = line (geometry)
- PY = polygon (geometry)
- PL = description of the petroleum lease(s)

2. Requirements for disturbance and rehabilitation data – Table 2

Table 2 comprises the schema for disturbance and rehabilitation data as required within questions 8A and 10C of the approved form. It is important to note that a number of options are provided for some fields, however only one value for each field should be populated from the available list.

A spreadsheet containing the schema and a shapefile template is available on the department's website at www.des.qld.gov.au, using the search term "submission of spatial information".

Table 2: Schema for plan of operations - disturbance and rehabilitation

Field Name	Type	Length	Definition	Domain Values[3]	Domain Value Description	Mandatory/ Optional
FID	Object ID	N/A	The unique identifier for the spatial feature.			Mandatory
SHAPE	Geometry	N/A	Allowed Geometry: Polygon, Line, Point.			Mandatory
PERMIT_REF	TEXT	50	The alpha-numeric environmental authority number relevant to the spatial information.			Mandatory
PROCESS	TEXT	4	The relevant process spatial data is being submitted for.	PoO	Plan of Operations	Mandatory
SITE_NAME	TEXT	254	Site name relating to the environmental authority.			Mandatory
SITE_ID	TEXT	20	This field contains a unique identifier for the spatial feature, which has been generated by the proponent.			Mandatory

[3] If blank, populate based on Attribute type and definition.

Field Name	Type	Length	Definition	Domain Values[3]	Domain Value Description	Mandatory/ Optional
MAP_ID	TEXT	5	This field contains a unique user entered identifier linking to ERC calculator. This field is optional and should only be used where a MAP ID is to be provided in the ERC Calculator.			Optional
DATE_START	DATE	dd/mm/yyyy	This field indicates the reporting commencement date e.g. 01/01/2023.			Mandatory
DATE_END	DATE	dd/mm/yyyy	This field indicates the reporting end date e.g. 31/12/2023.			Mandatory
STATUS	TEXT	3	This field relates to the status of the activity in terms of rehabilitation or disturbance. Certified Rehabilitation is rehabilitation which has been completed and approved as progressively certified under section 318ZH of the EP Act.	Dis	Disturbance	Mandatory
				Reh	Rehabilitation	
				CR	Certified Rehabilitation (for which progressive certification has been approved in accordance with the EP Act)	
SOURCE	TEXT	5	This field identifies the source of the spatial information and the capture methodology for the spatial information provided.	DIG	Digitising (Tracing over Ortho Imagery)	Mandatory
				GPSD	GPS Differential Survey	
				GPSND	GPS Non Differential Survey	
				RTK	Real-Time Kinematic (RTK) Survey	

Field Name	Type	Length	Definition	Domain Values[3]	Domain Value Description	Mandatory/ Optional
				UK	Un Known	
ACT_TYPE	TEXT	4	This field indicates the type of activity. If the activity is for rehabilitation, please select the previous activity for the area. If your activity is not available from the list and the ACTIVITY_TYPE is selected as 'Other', you must select the appropriate domain in the DOMAIN_TYPE field and provide information on the activity type in the COMMENTS field.	AW	Appraisal Well (Point)	Mandatory
				Core	Core hole (Point)	
				OGW	Conventional oil/gas well (Point)	
				OW	Operational Well (Point)	
				GPA	Gas pipeline (above ground) (Line)	
				GPB	Gas pipeline (below ground) (Line)	
				OPA	Oil pipeline (above ground) (Line)	
				OPB	Oil pipeline (below ground) (Line)	
				PL	Power Lines (Line)	
				WPA	Water pipeline (above ground) (Line)	
				WPB	Water pipeline (below ground) (Line)	
				AT	Access Track (Polygon)	
				BP	Borrow Pit (Polygon)	
				CT	Communication tower (Polygon)	
				DTB	Demountable / temporary building (Polygon)	
				GPF	Gas processing facility (Polygon)	
				LF	Landfills (Polygon)	
				LNGP	LNG plant (Polygon)	
				LY	Laydown yard (Polygon)	
				NRDL	Non-regulated dam - lined (Polygon)	
				NRDU	Non-regulated dam - unlined (Polygon)	
				OSF	Oil storage facility (Polygon)	
				PB	Stand-alone permanent building (Polygon)	

Field Name	Type	Length	Definition	Domain Values[3]	Domain Value Description	Mandatory/ Optional
				PC	Permanent camp (Polygon)	
				PGF	Power generation facility (Polygon)	
				RDL	Regulated dam - lined (Polygon)	
				RDU	Regulated dam - unlined (Polygon)	
				Road	Road (Polygon)	
				RoW	Right of way (Polygon)	
				STP	Sewage treatment plant (Polygon)	
				S2D	Seismic 2D (Polygon)	
				S3D	Seismic 3D (Polygon)	
				TC	Temporary camp (Polygon)	
				WaTS	Water transfer station (Polygon)	
				WP	Well pads (Polygon)	
				WTP	Water treatment plant (Polygon)	
				WTS	Waste transfer station (Polygon)	
				OTH	Other (Point, Line, Polygon)	
DOM_TYPE	TEXT	4	This field indicates the domain for the petroleum activity. If the activity is for rehabilitation, please select the domain of the previous activity for the area. If the ACTIVITY_TYPE = 'Other', select the relevant domain to the activity type.	Exp	Exploration	Mandatory
				RTLB	Roads, tracks, laydown, borrow pits	
				CB	Camps, Buildings and Sewage Treatment Plants	
				PGD	Power generation and distribution facility	
				WPI	Well Pads and associated infrastructure	
				Pipe	Pipelines	
				GOF	Gas processing facility or Oil Storage	
				WTTS	Water treatment plants and transfer stations	

Field Name	Type	Length	Definition	Domain Values[3]	Domain Value Description	Mandatory/ Optional
				WS	Water storage infrastructure	
				LNG	LNG plant	
				AA	Additional Activities	
REHAB_ACT	TEXT	254	This field provides a description of the rehabilitation activities which have been undertaken to date. Mandatory if STATUS = Reh.			Mandatory if STATUS = Reh
AREA_HA	DOUBLE	N/A	This field indicates the area in Hectares. (Polygon only)			Mandatory for Polygon only
COMMENTS	TEXT	254	A free text field has been provided to include any additional information the proponent wishes to provide in relation to the data or to provide a description for activities which are not included in this table.			Mandatory if ACT_TYPE = OTH

3. Requirements for describing petroleum leases—Table 3

Table 3 outlines the schema for providing spatial information to describe the petroleum lease(s) as required within question 6 of the approved form. All data for the petroleum lease(s) description is required to be provided as a single file which meets the naming convention within the department's guideline: Spatial Information Submission.

All features provided in this shapefile must be a polygon.

Table 3: Description of petroleum lease schema

Field Name	Type	Length	Definition	Domain Values[4]	Domain Value Description	Mandatory/ Optional
FID	Object ID	N/A	The unique identifier for the spatial feature.			Mandatory
SHAPE	Geometry	N/A	Allowed Geometry: Polygon			Mandatory
PERMIT_REF	TEXT	50	The alpha-numeric environmental authority number relevant to the spatial information.			Mandatory
PROCESS	TEXT	4	The relevant process spatial data is being submitted for	PoOL	Plan of Operations Lease	Mandatory
SITE_NAME	TEXT	254	Site name relating to the environmental authority.			Mandatory
FEATURE	TEXT	4	This field contains the land use feature on site which this polygon is describing. Select the relevant option of either original land use, post-operation land use, sensitive receptor or project boundary using the codes specified.	OLU	Original land use	Mandatory
				PoLU	Post-operation land use	
				SR	Sensitive receptor	
				PB	Project boundary	

[4] If blank, populate based on Attribute type and definition.

Field Name	Type	Length	Definition	Domain Values[4]	Domain Value Description	Mandatory/ Optional
FEAT_DESC	TEXT	254	Feature description		This field provides a description of the feature identified in 'FEATURE'.	Mandatory
DATE_	DATE	dd/mm/yyyy	Date of submission			Mandatory
SOURCE	TEXT	5	This field identifies the source of the spatial information and the capture methodology for the spatial information provided.	DIG	Digitising (Tracing over Ortho Imagery)	Mandatory
				GPSD	GPS Differential Survey	
				GPSND	GPS Non Differential Survey	
				RTK	Real-Time Kinematic (RTK) Survey	
				UK	Un Known	
COMMENTS	TEXT	254	A free text field has been provided to include any additional information the proponent wishes to provide in relation to the data.			Optional

Attachment 2—list of petroleum activities

1. *Use the following list to complete the table in Appendix 1 (Proposed Activities) and Appendix 3 (Rehabilitation Schedule).*
2. *Where a particular activity is not listed in the table below, you may add you own line item into the applicable table and choose the appropriate 'additional parameters' (e.g. if you have additional work areas on site, add these as an additional line item in Appendix 1 and include the 'number' of work areas as the additional parameter).*
3. *Where using this table to complete information which will be used for an ERC application, ensure that the ERC calculator is consistent with the domains and activity types used in the supporting information.*

Domain	Activity type	Additional Parameters
Exploration	Seismic 2D	Length (km)
	Seismic 3D	Length (km)
	Coreholes	Number
Roads, Track, Laydown and Borrow Pits	Road	Length (km)
	Access Track	Length (km)
	Laydown Yard	Number
	Borrow Pits	Number
	Landfills	Number
Camps, Buildings and Sewage Treatment Plants	Temporary Camp	Number
	Permanent Camp	Number
	Demountable/ Temporary Building	Number
	Stand-alone Permanent Building	Number
	Waste Transfer Station	Number
	Sewage Treatment Plant	Number
Power Generation and Distribution	Power Lines	Length (km)
	Power Generation Facility	Number
	Communication Tower	Number
Well Pads and Associated Infrastructure	Appraisal Well	Number
	Operational Well	Number
	Conventional Oil/ Gas Well	Number
	Well pads	Number
Pipelines	Gas Pipelines (Below Ground)	Length (km)
	Oil Pipelines (Below Ground)	Length (km)
	Water Pipelines (Below Ground)	Length (km)
	Gas Pipelines (Above Ground)	Length (km)
	Oil Pipelines (Above Ground)	Length (km)
	Water Pipelines (Above Ground)	Length (km)
	Right of way	Number
Gas Processing and Oil Storage Facilities	Gas Processing Facility	Number
	Oil Storage Facility	Number

Water Treatment Plants and Transfer Stations	Water Treatment Plant	Number
	Water Transfer Station	Number
Water Storage Infrastructure (Dams and Tanks)	Regulated Dam – lined	Number
	Regulated Dam – unlined	Number
	Non-regulated Dam – lined	Number
	Non-regulated Dam – unlined	Number
Additional Activities	(Description of activity)	Number / Length (km)

Appendix 2

Spatial Information

Appendix 3

Plan of Activities (proposed activities)

Plan of Activities

In accordance with Question 8 of the DES Form – *Submission of a plan of operations (ESR/2018/4340)*, the details of all proposed activities to be carried out / infrastructure to be constructed on the land within the plan period is detailed in Table 1.

The number and location of proposed petroleum activities to be carried out / constructed on relevant land during the PoO period is subject to change dependent on landholder agreements, regulatory approval constraints, cultural heritage, and detailed design.

The Scotia Project Area encompasses PL 1088.

Spatial information detailing all existing petroleum activities will be provided to DES at the time of PoO submission in accordance with ESR/2018/4337.

Domain and Activity Type	Disturbance Details								
	Year 1			Year 2 (if applicable)[1]			Year 3 (if applicable)[2]		
	Tenure	Additional Parameters	Disturbance Area (ha)	Tenure	Additional Parameters	Disturbance Area (ha)	Tenure	Additional Parameters	Disturbance Area (ha)
Domain 1: Exploration *(if applicable)*									
Nil									
Total domain disturbance area (ha)	0 ha			N/A			N/A		
Domain 2: Roads, tracks, laydown and borrow pits *(if applicable)*									
Access track	PL 1088	90 km	54 ha	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Laydown		NA	5 ha						
Borrow Pit		NA	8 ha						
Total domain disturbance area (ha)	67 ha			N/A			N/A		
Domain 3: Camps and buildings *(if applicable)*									
Nil									
Total domain disturbance area (ha)	0 ha			N/A			N/A		
Domain 4: Power generation and distribution *(if applicable)*									
Powerlines	PL 1088	55 km	4 ha (remainder captured in RoW below)	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Total domain disturbance area (ha)	4 ha			N/A			N/A		

[1] Whilst disturbance schedules are in place, the schedules are flexible. Given this flexibility, the allocation of disturbance details past year 1 may result in non-compliance with the Plan of Operations and has therefore not been specified.
[2] Whilst disturbance schedules are in place, the schedules are flexible. Given this flexibility, the allocation of disturbance details past year 1 may result in non-compliance with the Plan of Operations and has therefore not been specified.

Domain and Activity Type	Disturbance Details								
	Year 1			Year 2 (if applicable)[1]			Year 3 (if applicable)[2]		
	Tenure	Additional Parameters	Disturbance Area (ha)	Tenure	Additional Parameters	Disturbance Area (ha)	Tenure	Additional Parameters	Disturbance Area (ha)
Domain 5: Well pads and associated infrastructure *(if applicable)*									
Well pads	PL 1088	74	74 ha	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Total domain disturbance area (ha)	74 ha			N/A			N/A		
Domain 6: Pipelines *(if applicable)*									
Gas pipelines (below ground)	PL 1088	78 km	Refer to RoW	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Water pipelines (below ground)		58 km	Refer to RoW						
Right of way		NA	126 ha						
Total domain disturbance area (ha)	126 ha			N/A			N/A		
Domain 7: Gas processing and oil storage facilities *(if applicable)*									
Nil									
Total domain disturbance area (ha)	0 ha			N/A			N/A		
Domain 8: Water treatment plants and transfer stations *(if applicable)*									
Reverse Osmosis Plant (ROP)	PL 1088	1 ROP	1 ha	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Total domain disturbance area (ha)	1 ha			N/A			N/A		
Domain 9: Water storage infrastructure (dams and tanks) *(if applicable)*									
Regulated Dam - lined	PL 1088	1 dam	4 ha	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Tank		1 tank	1 ha	PL 1088	Activities not completed in year 1 will carry over to year 2		PL 1088	Activities not completed in years 1 and 2 will carry over to year 3	
Total domain disturbance area (ha)	5 ha			N/A			N/A		

Domain and Activity Type	Disturbance Details								
	Year 1			Year 2 (if applicable)[1]			Year 3 (if applicable)[2]		
	Tenure	Additional Parameters	Disturbance Area (ha)	Tenure	Additional Parameters	Disturbance Area (ha)	Tenure	Additional Parameters	Disturbance Area (ha)
Domain 10: LNG plants *(if applicable)*									
Nil									
Total domain disturbance area (ha)	0 ha			N/A			N/A		
Domain 11: Additional activities *(if applicable)*									
Nil									
Total domain disturbance area (ha)	0 ha			N/A			N/A		
Total disturbance area (ha)	277 ha			N/A			N/A		

Appendix 4

Proposed Activities Map

150°

150°05'

-25°50'

-25°55'

-26°

N

W

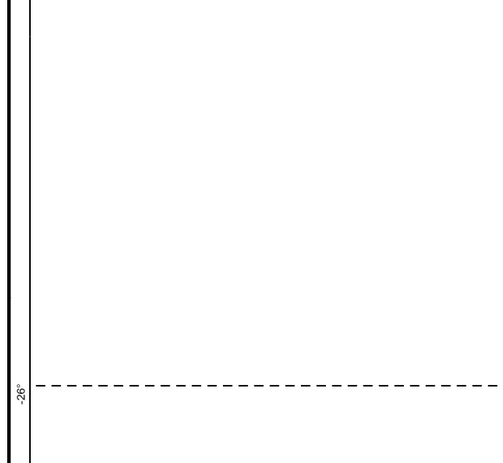
E

S

PL 1088

Indicative only – final location and design subject to landholder agreement, regulatory approval constraints, cultural heritage and detailed design.

Overview



Proposed Infrastructure

Location of proposed activities

Certain information in this map is provided under license from third parties and is subject to intellectual property rights. Santos has made every effort to ensure that information is accurate and up-to-date but does not guarantee or warrant the accuracy, completeness or currency of, and takes no responsibility for any error or omission relating to, this map. Santos and its related bodies corporate accept no responsibility for any errors or omissions. The "User" acknowledges that information and maps are in a constant state of change and accepts all limitations. To the maximum extent permitted by law, Santos and its related bodies corporate will not be liable for any cost, loss or damage arising out of the use of this map.

Santos GLNG

Eastern Queensland

Scotia

Proposed Infrastructure

0 2

kilometers

Scale 1:50,000

Date: 28/07/2022 File No. ENVIR 970a.WOR

GDA 2020

Appendix 5

Action Program

Action Program

This Action Program has been developed utilising the Santos Management System (SMS) to demonstrate Santos's capacity to comply with the conditions of the EA relevant to this PoO. The action program is detailed in Table 2, and further information on the SMS is provided in Sections 1.1 to 1.2. The Action Program addresses the requirements of Question 9 of the DES Form – Submission of a plan of operations (ESR/2018/4340).

1.1 Management Framework

Santos has a company-wide integrated management system (the Santos Management System (SMS)), which applies to all Santos operations worldwide. The SMS provides a structured framework for effective environmental, and health and safety practices across all activities and operations through the company's corporate values, policy statements (particularly the environment, health and safety policy) and supporting the standards and procedures, processes and tools, which set minimum performance requirements. Although the SMS is not certified, its goals and processes are consistent with those of ISO 14001/18001.

The documents that constitute the SMS are controlled, with the current version maintained in electronic form in a central database ("Discover"), which is accessible to all Santos sites and personnel.

Further discussion of the components of the SMS is provided in the following sections.

1.1.1 Policies and the Santos Code of Conduct

The policies and code of conduct outline the company's objectives and the behaviours expected of anyone who works for or with Santos. Relevant policies are outlined in Table 1.

Table 1. Relevant Corporate Policies

Policy	Commitment
Environment, Health and Safety policy	Santos is committed to a workplace where we all go home without injury or illness and manage the impact of our operations on the environment.
Climate change policy	Santos recognises the science of climate change and supports the objective of limiting global temperature rise to less than 2 degrees Celsius. Our strategy focusses on natural gas which we believe will continue to play a key role in a low carbon future. We are committed to being part of the solution by supporting the twin objectives of limiting greenhouse gas emissions while providing access to reliable and affordable energy to domestic and global markets.
Risk Management	Santos is committed to managing risk in a proactive, structured and effective manner in order to achieve our business objectives.

1.1.2 Management Standards and Procedures

Each Policy is supported by Management Standards and Procedures which set the minimum performance requirements:

- **Management standards** — identifies the minimum and mandatory requirements in relation to key business processes, operational matters and assurance activities to systematically manage environmental health and safety (EHS) risk across our operations and activities; and

- **Procedures, Technical Standards, Processes and Tools** – outline how the performance requirements and expectations in the Policies, Code of Conduct and Management Standards are to be met.

The management standards and corresponding procedures, technical standards, processes and tools relevant to Environment, Health and Safety are listed below:

- Environment, Health and Safety Policy
- Climate Change Policy
- SMS-MS01-ST04 Management of Change Procedure
- SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure
- SMS-HSS-OS03-PD02 Occupational Exposure Management Procedure
- SMS-INS-OS02 Data and Information Systems Management Standard
- SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure
- SMS-OES-OS04-PD02 Operating Practices Procedure
- SMS-MS15-ST1 Assurance Procedure
- Charters for the Board and Executive sub committees

1.1.3 Environmental Management Plans

Environmental Management Plans have been prepared to address requirements of the Santos Project. These management plans are largely risk based, taking into account the legal, other obligations and commitments for the Project. These plans include:

- Santos Eastern QLD Upstream and GTP Contingency Plan for Emergency Environmental Incidents.
- Santos Queensland Onshore CSG Soil Management Plan.
- Santos Eastern QLD Upstream and GTP Noise Management Plan.
- Santos GLNG Upstream Decommissioning and Demolition Management Plan
- Santos Eastern QLD Upstream and GTP Waste Management Plan
- Santos GLNG Upstream Rehabilitation Monitoring Plan
- Santos GLNG Project Significant Species Management Plan
- Santos Eastern Queensland Stimulation Impact Monitoring Program
- Eastern QLD Upstream and GTP Seepage Monitoring Program
- Santos GFD Project Offset Plan
- Santos GLNG Environmental Protocol for Constraints Planning and Field Development – GFD
- Santos GLNG Significant Species Management Plan – GFD Project
- Santos GFD CSG Waste Management Plan.

A summary overview of the environmental management documents and their applicability to the schedules of the Scotia EA is provided in Table 2.

1.2 Key Compliance Tools

Santos uses the following key compliance systems / tools to manage compliance with legal and other obligations:

- EHS Toolbox.
  - Incident Management System (IMS).
  - Audit and Inspection Manager (AIM).
  - Integrated Risk Register (IRR).
  - SRM Complaints Register
- Comtrack (regulatory approvals database).
- EQuIS (Environmental Quality Information System).

Table 2. Action Plan

EA Condition	Internal Process/Management System (if applicable)	Environmental Management Strategies
Schedule A – General Conditions	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos Eastern QLD Upstream and GTP Contingency Plan for Emergency Environmental Incidents • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox: ○ Incident Management System (IMS) ○ Audit and Inspection Manager (AIM) ○ Integrated Risk Register (IRR) ○ SRM Complaints Register • Comtrack (regulatory approvals database) • Environmental Quality Information System (EQuIS) • Third Party Audit Report
Schedule B – Water	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos Eastern QLD Upstream and GTP Waste Management Plan • Santos GLNG Project Environmental Protocol for Planning Constraints and Field Development - GFD • Santos Queensland Onshore CSG Soil Management Plan • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure

EA Condition	Internal Process/Management System (if applicable)	Environmental Management Strategies
		• SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule C & D – Land and Biodiversity Values	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos GLNG Environmental Protocol for Constraints Planning and Field Development – GFD • Santos Queensland Onshore CSG Soil Management Plan. • Santos GLNG Upstream Rehabilitation Monitoring Plan • Santos Eastern QLD Upstream and GTP Waste Management Plan • Santos GFD Project Offset Plan • Santos GLNG Project Significant Species Management Plan • Santos GLNG Upstream Decommissioning and Demolition Management Plan • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure

EA Condition	Internal Process/Management System (if applicable)	Environmental Management Strategies
		• SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule E - Waste	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos Eastern QLD Upstream and GTP Waste Management Plan • Santos GFD CSG Waste Management Plan. • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule F- Acoustic	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos Eastern QLD Upstream and GTP Noise Management Plan. • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting

EA Condition	Internal Process/Management System (if applicable)	Environmental Management Strategies
		• SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule G - Air	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos GLNG Environmental Protocol for Constraints Planning and Field Development – GFD • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule H – Regulated Structures	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos GLNG Environmental Protocol for Constraints Planning and Field Development – GFD • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure

EA Condition	Internal Process/Management System (if applicable)	Environmental Management Strategies
		• SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule I – Drilling and Stimulation	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos Eastern Queensland Stimulation Impact Monitoring Program • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule J - Rehabilitation	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos GLNG Upstream Rehabilitation Monitoring Plan • Santos GLNG Upstream Decommissioning and Demolition Management Plan • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure

EA Condition	Internal Process/Management System (if applicable)	Environmental Management Strategies
		• SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)
Schedule K- Social	• Environment, Health and Safety Policy • Climate Change Policy • Charters for the Board and Executive sub committees • SMS-LR G-OS04 - Compliance Standard • SMS-INS-OS02 - Data and Information Management Standard	• Santos Eastern QLD Upstream and GTP Contingency Plan for Emergency Environmental Incidents. • SMS-EXA-OS01-PD02 Environmental Hazard Controls Procedure • SMS-OES-OS04-PD02 Operating Practices Procedure • SMS-PEO-OS02-PD01 Competency and Training Procedure • SMS-OES-OS02-PD02 Process Safety in Operations Procedure • SMS-HSS-OS02-PD01 Work Activity Risk Management Procedure • SMS-PRC-OS01-PD01 Source to Contract Procedure • SMS-MS01-ST04 Management of Change Procedure • SMS-HSS-OS05-PD01 – Crisis, Incident Management & Emergency Response Procedure • SMS-EXA-OS01-PD01 Environmental Approvals Procedure • SMS-EXA-OS01-PD02-PD01 Waste Monitoring and Reporting • SMS-MS15-ST1 Assurance Procedure • SMS-GXA-OS01-PD01 Stakeholder and Community Management Plan Procedure • EHS Toolbox (tools and resources as described in Schedule A)

Appendix 6

Rehabilitation Program

1 Rehabilitation Program

In accordance with Question 10 of the Department of Environment and Science (DES) Form – *Submission of a plan of operations (ESR/2018/4340)*, a rehabilitation program must be provided for land disturbance or proposed to be disturbed during the plan period. The program must be comprised of a rehabilitation plan, schedule of rehabilitation activities and spatial information. The rehabilitation plan and schedule of rehabilitation activities are presented in the Sections 1.1 to 1.6 below. Spatial information detailing all existing rehabilitation present on the land at the commencement of this plan period will be provided to DES at the time of Plan of Operations submission in accordance with ESR/2018/4340. Details of existing rehabilitation is presented in Section 1.7.

1.1 Rehabilitation Requirements

Rehabilitation will occur progressively over the life of the project in accordance with the conditions of the Environmental Authority (EA). During the plan of operations period, it is proposed to rehabilitate the pipeline right of way by backfilling the trench, reinstating the topsoil and re-profiling, reinstatement of surface drainage as required and re-establishment of appropriate groundcover. In accordance with the conditions of the EA, the pipeline trenches will be backfilled and topsoils reinstated within three months after pipe laying and the reinstatement and revegetation of the right of way will commence within six months following the completion of construction. The rehabilitated right of way must be:

a) a stable landform;

b) re-profiled to a level consistent with surrounding soils;

c) re-profiled to original contours and established drainage lines; and

d) vegetated with groundcover which is not a declared pest species, and which is established and growing

Areas no longer required for the on-going activities will be rehabilitated within 12 months and maintained to meet transitional rehabilitation criteria (TRC), defined as:

a) contaminated land resulting from petroleum activities is remediated and rehabilitated

b) the areas are:

   i. non-polluting;

   ii. a stable landform;

   iii. re-profiled to contours consistent with the surrounding landform

c) surface drainage lines are re-established;

d) topsoil is reinstated; and

e) either:

   i. groundcover, that is not a declared pest species, is growing; or

   ii. an alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained.

At decommissioning/abandonment, final rehabilitation will be completed to meet the final rehabilitation criteria (FRC) measured either against the highest ecological value adjacent land use or the pre-disturbed land use:

a) greater than or equal to 70 per cent of native ground cover species richness

b) greater than or equal to the total per cent ground cover

c) less than or equal to the per cent species richness of declared plant pest species

d) where the adjacent land use contains, or the pre-clearing land use contained, one or more regional ecosystem(s), then at least one regional ecosystem(s) from the same broad vegetation group, and with the equivalent biodiversity status or a biodiversity status with a higher conservation value as any of the regional ecosystem(s) in either the adjacent land or pre-disturbed land, must be present.

Where petroleum activities have resulted in significant disturbance to land in an environmentally sensitive area (ESA), the following final additional rehabilitation criteria as measured against the pre-disturbance biodiversity values assessment must be met:

a) greater than or equal to 50 per cent of organic litter cover;

b) greater than or equal to 50 per cent of total density of coarse woody material; and

c) all predominant species in the ecologically dominant layer, that define the pre-disturbance Regional Ecosystem(s) are present.

1.2 Rehabilitation process

Final rehabilitation requirements apply when assets that are no longer required for ongoing petroleum activities and are not assets being retained by the landholder. Assets being retained by the landholder are not subject to final rehabilitation. An asset refers to any of the activities listed in Table 1 below.

The rehabilitation process is presented in Figure 1.

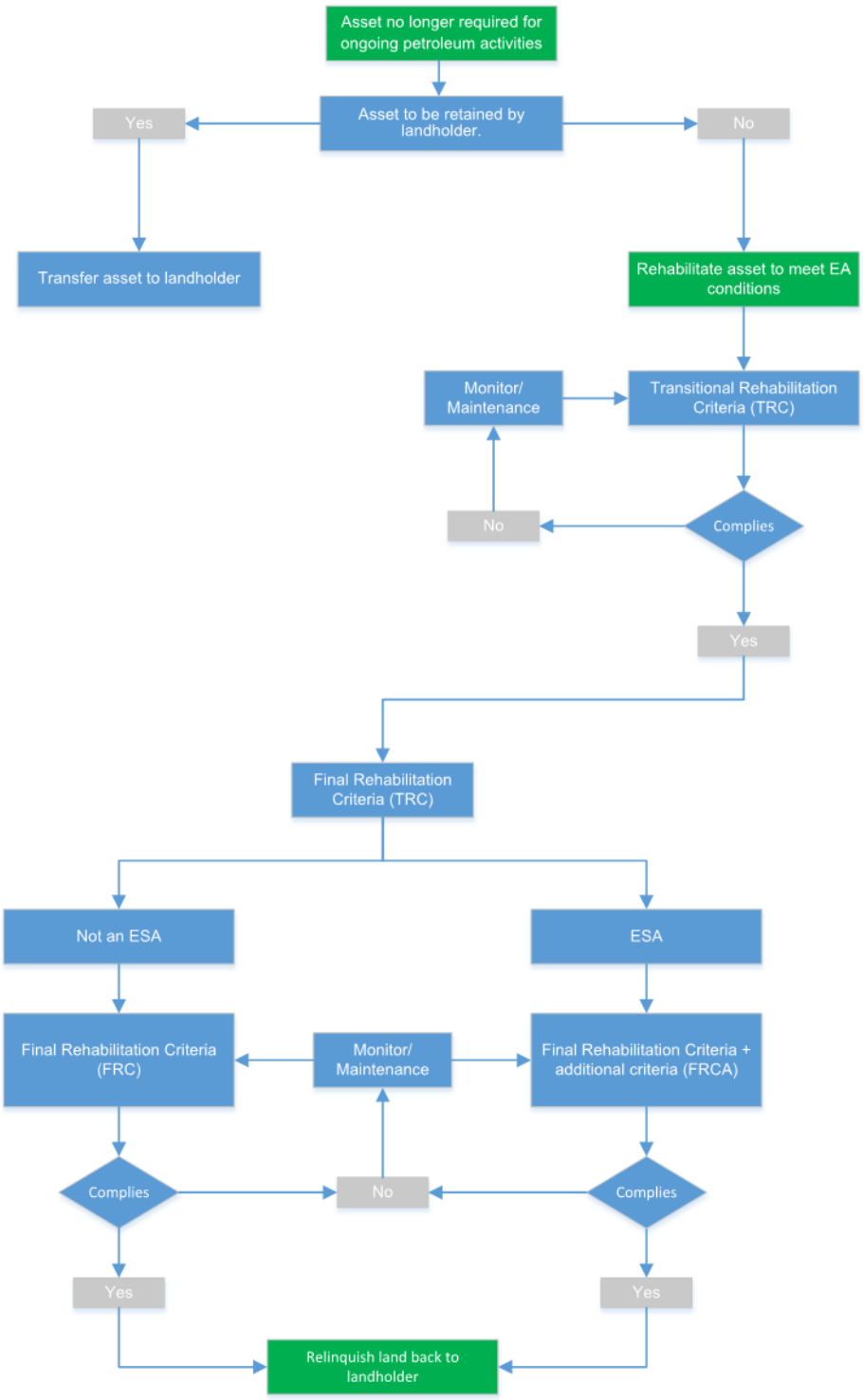


Figure 1: Final Rehabilitation Flowchart

1.3 Rehabilitation techniques

There are a number of techniques available to Santos to carry out rehabilitation works, to achieve the requirements of the EA conditions and will be tailored depending on the desired final land use (grazing versus native). Regardless of the technique employed and location, monitoring is key to understanding the success of rehabilitation across the asset lifecycle which is detailed in Section 1.5.

Site preparation

All infrastructure (except items wanted by the landholder) will be removed from the site and correctly disposed of in accordance with the waste hierarchy. Steel, concrete and metal items will be preferentially recycled, with landfilling as the last option for disposal. If appropriate, concrete pads and foundations can be crushed to be reused. This will be considered prior to recycling.

If required, erosion and sedimentation control devices will be installed prior to the commencement of rehabilitation works.

Landform Management

Sites will be reprofiled to a safe and stable landform, with the removal of capping material and the reinstation of surface drainage lines and topsoil. Where practical, sites will be reprofiled to contours consistent with the surrounding landform. However, where this is not practical (i.e. cut and fill operations on slopes, or within highly dispersive soils), a stable landform will be reinstated by surface re-profiling, contouring or benching. Methods to reshape the landform will vary depending on the level of disturbance.

Sodic Soil Amelioration

Sodic soils when encountered will be blended with an appropriate soil ameliorant (i.e. gypsum, lime) during rehabilitation processes to reduce dispersiveness. Amelioration with gypsum and/or lime or addition of organic mulch can improve soil structure, infiltration and soil aeration can promote vegetation establishment.

Soil Compaction

For long-term disturbances such as well pads, it is likely that the soil will have become compacted over time. Where necessary, the soil will be treated (e.g. deep ripped) to alleviate the soil compaction. This will occur prior to reshaping the upper layers of the soil stratum.

Contaminated Land

Where there is a risk of contaminated land occurring, a site-specific contaminated land assessment and subsequent management plan may be developed for each asset. The management strategy will be site specific, based on scale and type of contamination. Small volumes may be disposed offsite via facilities licenced to accept the waste whereas larger volumes may be managed on site using landfarming techniques.

Watercourse Crossings

Where clearing of riparian vegetation is unavoidable, the objective will be to reinstate the creek banks and riparian vegetation, as soon as practical post-construction. To minimise erosion and destabilisation of creek banks, erosion controls will be constructed or installed, where necessary. The surface will typically be lightly scarified before spreading the topsoil, to promote regeneration of native vegetation and prevent loss of topsoil.

Topsoil Management

Topsoil that is stripped and stored as part of construction activities is to be re-spread as part of stabilisation and rehabilitation activities. Correctly preserved topsoil resources can provide viable sources of seed-stock, biological life and nutrient conditions that assist with soil productivity and fertility, and thereby vegetation establishment.

Revegetation

Active seeding will be completed on all areas of disturbance where revegetation is required to ensure stability during operations or to meet transitional and/or final rehabilitation criteria. Within areas of native vegetation, a combination of tube-stock and seeding may be implemented. Tube-stock will be used for canopy and shrub species, while a combination of tube-stock and seeding is appropriate for herbs, forbs and grasses. Species will be selected based on assessments of the adjacent vegetation community composition and other appropriate benchmark guidelines. Any habitat features such as logs, hollow bearing trees and rocks retained during construction will be placed back in the rehabilitated area.

Mulching and Placement of Vegetation

Vegetation cleared during construction phases, will be retained on-site for use during stabilisation and/or rehabilitation activities. Mulch and vegetation may be respread over the site as required. This will assist in site stabilisation, revegetation efforts and suppressing weed growth.

Weed Management

Weed management will be required to enable the regeneration of pre-disturbance land uses and to ensure that the disturbance does not allow for the introduction of new species to an area or increase the localised population of a species. Weed control requiring chemicals will be undertaken by licenced contractors under the *Agricultural Chemicals Distribution Control Act 1966*. All chemical application will be carried out in strict accordance with registered labels and SDS requirements and considering any Minor Use Permit PER11463 requirements as issued by the Australian Pesticides and Veterinary Medicines Authority for ground-based herbicide application in non-agricultural areas (i.e. bushland areas).

Pest and Livestock Management

Where livestock occur within areas undergoing rehabilitation, temporary stock fencing may be erected to ensure cattle/pigs cannot damage rehabilitation works. Fencing will be erected primarily to well pads, laydowns etc where there is a localised disturbance footprint. Rehabilitation of linear infrastructure is more difficult to fence and will require detailed planning to ensure cattle remain off site for as long as practicable.

1.4 Rehabilitation methodology

A summary of rehabilitation methodology to meet TRC and FRC for each activity relevant to the Scotia Project Area is presented in Table 1 below. These are standard methods to be applied to all significantly disturbed areas.

In environmentally sensitive areas (ESAs), additional criteria is to be met to meet FRC. Specific techniques for ESAs generally include the use of tube stock and placement of any habitat features such as logs, hollow bearing trees and rocks retained during construction.

All final rehabilitation will be completed to meet the FRC measured either against the highest ecological value adjacent land use or the pre-disturbed land use.

Table 1: Rehabilitation Methodology

Activity	Rehabilitation Methodology
Seismic	• Stabilise significantly disturbed land, topsoil and re-establish natural drainage. • Lightly rip surface to relieve any compaction. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Declared pest plant control, where required.
Roads/Tracks	• Strip capping material and reinstate topsoil. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Declared pest plant control, where required.
Laydowns and Temporary Work Areas	• Strip capping material and reprofile pad. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Contaminated land assessment completed as required. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.
Borrow pits	• Stabilise landform by surface re-profiling, contouring or benching. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. Installation of fencing as required. • Declared pest plant control, where required.
Camps and buildings	• Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.
Power generation and distribution	Power generation and distribution • Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required.

Activity	Rehabilitation Methodology
	• Installation of fencing as required. • Declared pest plant control, where required. Communication infrastructure • Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required.
Well pads	• Removal of infrastructure. • Strip capping material and reprofile pad. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Contaminated land assessment, as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.
Pipelines	• Backfill trenches and compact. • Re-instate topsoil, natural channels, and drainage. • Install erosion and sediment controls (watercourse crossings stabilisation, diversion berms, fencing etc) as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • In some instances, temporary fencing may be installed during rehabilitation of high-risk sites e.g. watercourse crossings. • Declared pest plant control, where required.
Gas processing facilities	• Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.
Water treatment plants and transfer stations	• Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required.

Activity	Rehabilitation Methodology
	• Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.
Water storage infrastructure	Dams • Decommissioning will be conducted in accordance with statutory requirements, and in accordance with the conditions of the EA. • Contaminated land assessment will be undertaken as required. • Disturbance area will be re-shaped. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required Installation of fencing as required. • Declared pest plant control, where required. Tanks • Removal of infrastructure. • Strip capping material and reprofile pad. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required Installation of fencing as required. • Declared pest plant control, where required.

1.5 Rehabilitation Monitoring

Monitoring will inform rehabilitation decisions in relation to remediation of non-conformances relating to transitional or final rehabilitation criteria. Where required, data will be compared to the pre-disturbed land use data or an analogue site in the highest ecological value adjacent land use.

Final Rehabilitation Register

A Final Rehabilitation Register (FRR) will capture the results of rehabilitation against the set compliance conditions. All monitoring data will be captured in a GIS database and a “traffic light report” will be generated to understand the progress of rehabilitation using a risk-based assessment methodology.

Risk based methodology

Upon decommissioning/abandonment, a risk-based approach will be used to proactively identify the compliance risk level based on the intended final land use and progress towards the FRC. A site may contain a combination of the below risk profiles.

a) High risk areas – rework/rectify - High risk areas are classified as areas requiring rework or rectification in order to meet the TRC and/or FRC. High risk areas (rework/rectification) may require a combination of stabilisation works, reprofiling and/or reseeding/revegetation works. An area that is deemed high risk will require a review of the rehabilitation works based on the final land use requirements. Fencing, where practical, should remain intact until FRC are met.

b) Medium risk areas – maintain/monitor - Medium risk areas are those areas meeting the TRC but require time and potentially maintenance to meet the FRC. Fencing, where practical, should remain intact until FRC are met.

c) Low risk areas – site relinquishment - Low risk areas are defined as rehabilitated areas meeting the TRC and FRC and are ready for final acceptance and site relinquishment.

Monitoring

On decommissioning/abandonment, monitoring should be undertaken against the TRC and FRC. The status of sites should be entered into the FRR along with any recommended actions to achieve rehabilitation criteria. Based on the risk assessment described above, the monitoring frequency will be assessed on a case by case basis and may depend on weather conditions and predicted time to meet the rehabilitation criteria. As a guide, the monitoring schedule in Table 2 is proposed to check achievement of TRC/FRC and/or to inform maintenance/monitoring actions required. TRC and FRC monitoring indicators are detailed in Table 3 and Table 4.

Table 2: Monitoring frequency

Risk rating	Rehabilitation Status	Monitoring frequency	Method
High risk areas	Rework/Rectify	Annually	Remote sensing / ground survey/ sampling
Medium risk areas	Maintain/monitor	Annually (pending weather conditions)	Remote sensing / ground survey/ sampling
Low risk areas	Ready for site relinquishment	Based on previously collected data	On-ground Third Party Rehabilitation Assessment & Reporting

Table 3: Transitional Rehabilitation Monitoring

Land use	TRC	Monitoring data indicators
All	Contaminated land resulting from petroleum activities is remediated and rehabilitated	Where there is a risk, or records confirming contaminated land (i.e. hydrocarbon/chemicals) occurring from petroleum activities, remediate to meet legislative requirements.
	Stable landform, non-polluting and re-profiled to contours consistent with the surrounding landform	No run-off or subsidence caused by the decommissioning of petroleum activities. Erosion no more that surrounding landscape. Re-profiled to natural landform or where not practical reprofiled to ensure stability and ESC.
	Surface drainage lines are re-established	No evidence of ponding, landform reinstated to be consistent with drainage in surrounding landscape
	Topsoil is reinstated	Where disturbed during decommissioning, reinstated topsoil is consistent with surrounding soil profile of the site. No evidence of soil profile mixing or compaction.
	Groundcover, that is not a declared pest species, is growing OR an alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained	No restricted species present on site. Ground cover stable across site.

Table 4: Final Rehabilitation Monitoring

Land use	FRC	Monitoring data indicators
All	Greater than or equal to 70 per cent of native ground cover species richness For grazing areas native refers to what is native inside and outside. In vegetated area Native refers to the any plant as defined by the QLD Herbarium (ref).)	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. The 50x10m plot method of the BioCondition Assessment methodology V2.2 as per Eyre *et al*. (2015) or any subsequent updated version is to be used in the rehabilitated area in comparison to the analogue site.
	Greater than or equal to the total per cent ground cover	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. The 1x1m quadrats method of the BioCondition Assessment methodology V2.2 as per Eyre *et al*. (2015) or any subsequent updated version is to be used in the rehabilitated area in comparison to the analogue site. Per cent ground cover will be categorised into gradients of <19%, 19-39%, 40-59%, 60-79%, 80-100%.
	Less than or equal to the per cent species richness of declared plant pest species	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. The 50x10m plot method of the BioCondition Assessment methodology V2.2 as per Eyre *et al*. (2015) or any subsequent updated version is to be used in the rehabilitated area in comparison to the analogue site.
Non ESA areas only	Where the adjacent land use contains, or the pre-clearing land use contained, one or more regional ecosystem(s), then: (i) at least one Regional Ecosystem(s) from the same broad vegetation group, as demonstrated by the predominant species in the ecologically dominant layer, must be present; and, (ii) the Regional Ecosystem present in (I3/J7/J11)(d)(i) must possess an equivalent or higher conservation value (biodiversity status) than the Regional Ecosystem(s) in either the adjacent land or pre-disturbed land	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. Regional Ecosystem delineation following the "Methodology for survey and mapping of regional ecosystems and vegetation communities in Queensland. Version 5.0." (Neldner *et al*, 2019) or any subsequent updated version of this methodology. Once Regional Ecosystem has been confirmed it will require confirmation of its Broad Vegetation Group, as well as the Biodiversity status.
ESA only	Greater than or equal to 50 per cent of organic litter cover	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. The 1x1m quadrats method of the BioCondition Assessment methodology V2.2 as per Eyre *et al*. (2015) or any subsequent updated version is to be used in the rehabilitated area in comparison to the analogue site.

Land use	FRC	Monitoring data indicators
	Greater than or equal to 50 per cent of total density of coarse woody material	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. The 50x20m plot method of the BioCondition Assessment methodology V2.2 as per Eyre *et al*. (2015) or any subsequent updated version is to be used in the rehabilitated area in comparison to the analogue site.
	All predominant species in the ecologically dominant layer, that define the pre-disturbance Regional Ecosystem(s) are present	Comparison with analogue site in either the highest ecological value adjacent land use or the pre-disturbed land use. The 100x50m plot method of the BioCondition Assessment methodology V2.2 as per Eyre *et al*. (2015) or any subsequent updated version is to be used in the rehabilitated area in comparison to the analogue site.

1.6 Rehabilitation schedule

A schedule of rehabilitation activities detailing the type and areas of rehabilitation proposed during the plan of operations period is presented in Table 5 below. This table has been prepared in accordance with Appendix 3 of the Submission of a plan of operations form (ESR/2018/4340).

Table 5: Rehabilitation Schedule

Activity	Location	Area (ha)	Post-Operation Land Use	Timing (When)	Rehabilitation Activities
Pipelines	Scotia	126 ha	To be determined at the time of decommissioning in agreement with the landholder which is beyond the period of this Plan of Operations	As per the environmental authority requirements	Pipeline right of ways are reinstated immediately following pipeline construction (within 3 months). This involves reinstatement of topsoil and re-profiling, reinstatement of surface drainage as required. Re-establishment of appropriate groundcover will commence within six months following the completion of construction.

1.7 Existing Rehabilitation

Details on existing rehabilitation activities are presented in Table 6 below.

Table 6: Existing rehabilitation

Domain	Summary of rehabilitation methodology	Rehabilitation works already undertaken
Exploration	Seismic • Stabilise significantly disturbed land, topsoil and re-establish natural drainage. • Lightly rip surface to relieve any compaction. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Declared pest plant control, where required.	Seismic All seismic lines (if significantly disturbed) rehabilitated immediately following program including: • Stabilise significantly disturbed land, topsoil and re-establish natural drainage. • Lightly rip surface to relieve any compaction. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Declared pest plant control, where required.

Domain	Summary of rehabilitation methodology	Rehabilitation works already undertaken
Road, Tracks, Laydown and Borrow pits	<u>Roads/Tracks</u> • Strip capping material and reinstate topsoil. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Declared pest plant control, where required. <u>Laydowns</u> • Strip capping material and reprofile pad. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Contaminated land assessment completed as required. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required. <u>Borrow pits</u> • Stabilise landform by surface re-profiling, contouring or benching. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. Installation of fencing as required. • Declared pest plant control, where required.	Rehabilitation has commenced on roads, tracks and laydowns including: • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Application of seed and fertiliser or alternative soil stabilisation, as required.
Camps and Buildings	<u>Camps and Buildings</u> • Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required.	Rehabilitation has commenced on temporary camps including: • Removal of infrastructure. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil.

Domain	Summary of rehabilitation methodology	Rehabilitation works already undertaken
	• Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required. <u>Sewage Treatment Plant Irrigation Areas (confirm this methodology)</u> • Removal of irrigation infrastructure. • Installation of fencing as required.	• Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. Rehabilitation has commenced on STP irrigation areas including: • Removal of irrigation infrastructure. • Installation of fencing as required.
Power generation and distribution	<u>Power generation and distribution</u> • Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required. <u>Communication Infrastructure</u> • Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required.	Rehabilitation has commenced on powerline right of ways following construction. The rehabilitation includes: • Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required.

Domain	Summary of rehabilitation methodology	Rehabilitation works already undertaken
	• Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.	
Well pads and associated infrastructure	• Removal of infrastructure. • Strip capping material and reprofile pad. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.	2 wells have been plugged and abandoned. Rehabilitation has commenced on well pad rehabilitation including: • Removal of infrastructure. • Strip capping material and reprofile pad. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required.
Pipelines	• Backfill trenches and compact. • Re-instate topsoil, natural channels, and drainage. • Application of soil amelioration as required. • Install erosion and sediment controls (watercourse crossings stabilisation, diversion berms, fencing etc) as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • In some instances, temporary fencing may be installed during rehabilitation of high-risk sites e.g. watercourse crossings. • Declared pest plant control, where required.	Rehabilitation has commenced on pipeline right of ways following construction. The rehabilitation includes: • Backfill trenches and compact. • Re-instate topsoil, natural channels, and drainage. • Application of soil amelioration as required. • Install erosion and sediment controls (watercourse crossings stabilisation, diversion berms, fencing etc) as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • In some instances, temporary fencing may be installed during rehabilitation of high-risk sites e.g. watercourse crossings. • Declared pest plant control, where required.

Domain	Summary of rehabilitation methodology	Rehabilitation works already undertaken
		Pipeline removal or decommissioning will occur at end of project life.
Gas processing and Oil Storage Facilities	• Removal of infrastructure. • If present, removal of concrete pad and foundations or capping material and re-profile (concrete footings and pads will be broken up to at least 1.5 metres below the surface for crushing for beneficial reuse). • Contaminated land assessment completed as required. • Rip to relieve compaction, where required. • Reinstate natural drainage lines and contours. • Reinstate topsoil. • Installation of erosion and sediment controls as required. • Application of seed and fertiliser or alternative soil stabilisation, as required. • Installation of fencing as required. • Declared pest plant control, where required.	Nil, sites are still active. Rehabilitation works have commenced on laydown areas within the Gas Processing Facility footprint, but the facility remains active.

Appendix 7

Compliance Statement

APPENDIX 4 – COMPLIANCE STATEMENT

GUIDE

The compliance statement must be made:

1) If the holder is an individual/s—by the holder
2) If the holder is a corporation—by the executive officer of the corporation.

Where there is more than one environmental authority holder, this certification is to be signed by the person authorised to sign on behalf of all EA holders (i.e. the principal holder).

1. Joint holders

Where an agreement is in place between all holders of the environmental authority, that one holder can sign on behalf of the other joint holders, please tick the below checkbox.

☒ I have the authority to sign this form on behalf of all the joint holders of the environmental authority.

2. Person(s) making the compliance statement

This compliance statement is made by (tick one):

☐ **A.** the environmental authority holder (individual/s):

PRINT FULL NAME
PRINT FULL NAME
PRINT FULL NAME
PRINT FULL NAME
PRINT FULL NAME

☐ **B.** An executive officer of the environmental authority holder (corporation):

NAME OF ENVIRONMENTAL AUTHORITY HOLDER(S) Santos CSG Pty Ltd, PAPL (Upstream II) Pty Limited; Total E&P Australia II; KGLNG E&P Pty Ltd; Total E&P Australia
ABN / ACN 72 121 188 654
NAME OF EXECUTIVE OFFICER David Gornall
POSITION OF EXECUTIVE OFFICER Manager Environment EA PNG
ADDRESS OF EXECUTIVE OFFICER Level 22, 32 Turbot Street BRISBANE QLD 4000

3. Compliance statement

State the extent to which the plan of operations complies with the conditions of the environmental authority:

The Plan of Operations has been prepared on behalf of the holders of the environmental authority and complies with the conditions of the EA insofar as the EA conditions relate to the citing of existing petroleum activities.

Please read carefully through the certification opposite before signing.

4. Compliance statement certification

I do solemnly and sincerely declare that:

- I am the holder, or where the holder is a corporation, an executive officer of the holder of the environmental authority.
- To the best of my knowledge all information provided as part of this compliance statement, including attachments, addresses the relevant matters and is true, correct, complete, and does not contain misleading information.
- I have not knowingly failed to reveal any relevant information or document to the administering authority.
- The opinions expressed in this compliance statement, including attachments, are honestly and reasonably held.
- I understand that it is an offence under section 480 of the *Environmental Protection Act 1994* to give to the administering authority a document containing information that I know, or ought reasonably to know, is false or misleading in a material particular.
- I understand that it is an offence under section 480A of the *Environmental Protection Act 1994* to give to the administering authority a document containing information that I know, or ought reasonably to know, contains incomplete information in a material particular.
- I understand that all information supplied as part of this compliance statement, including attachments, can be disclosed publicly in accordance with the *Right to Information Act 2009* and the *Evidence Act 1977*.

SIGNATURE 	DATE 24/04/2024
NAME David Gornall	
The address provided must be the residential address of the signatory. ADDRESS Level 22, 32 Turbot Street BRISBANE QLD 4000	
JOINT HOLDER SIGNATURE(S) (WHERE APPLICABLE)	JOINT HOLDER SIGNATURE(S) (WHERE APPLICABLE)
JOINT HOLDER SIGNATURE(S) (WHERE APPLICABLE)	JOINT HOLDER SIGNATURE(S) (WHERE APPLICABLE)