

Our reference: D24/141478



Department of
**Housing, Local Government,
Planning and Public Works**

18 September 2024

Ms Ky-Ann Worthington-Sheppard
Environmental Advisor,
Santos Limited
email: Ky-Ann.Worthington-Sheppard@santos.com; onshoreenvcompliance@santos.com

Dear Ms Worthington-Sheppard

REQUIREMENT NOTICE

RPI24/005: Santos – Hector 2, Hector Southeast 3 and Roulette 1 Development

(given under section 44 of the *Regional Planning Interests Act 2014*)

I refer to the assessment application which was properly made on 4 September 2024 under section 29 of the *Regional Planning Interests Act 2014* (RPI Act). The application is seeking a regional interests development approval (RIDA) for resource activity: petroleum and gas for the Santos – Hector 2, Hector Southeast 3 and Roulette 1 Development in the Channel Country strategic environmental area (SEA).

Application details

| | |
|---------------------------|--|
| Applicant | Santos Limited ABN 80 007 550 923 |
| Project | Santos – Hector 2, Hector Southeast 3 and Roulette 1 Development |
| Description | Petroleum wells and supporting infrastructure |
| Area of regional interest | Channel Country SEA |
| Proposed disturbance area | 42.4 ha |

Site details

| | |
|---------------------------|----------------------|
| Real property description | Lot 2528 on PH429 |
| Local government area | Bulloo Shire Council |

Information Requirement

Pursuant to section 44 of the RPI Act, you are advised that further information is required to assist in the assessment of the application against the assessment criteria contained in the RPI Act and the Regional Planning Interests Regulation 2014 (RPI Regulation).

The further information required is detailed in **Attachment A**.

The period in which the information must be provided is a maximum of three months from the date of this notice.

An extension to this period may be requested if necessary.

Another requirement notice may be given if, for example, the response to this requirement notice does not provide sufficient information to assess and decide the application or in response to matters raised in a submission.

Public notification requirement

Pursuant to section 34(4) of the RPI Act, it has been determined that the application requires notification. The reason for the decision is that the delegate for the chief executive has determined that it is in the public interest for the application to be publicly notified.

In accordance with section 35 of the RPI Act, you are required to:

- publish a notice about the application '*at least once in a newspaper circulating generally in the area of the land*' as prescribed in section 13 of the RPI Regulation
- where not the owner of the land, give the owners of the land notice about the application.

Please provide proof of delivery of notice about the application to landowners to RPIAct@dasilgp.qld.gov.au

Public notification must be undertaken within 10 business days of providing the response to the requirement notice to the Department of Housing, Local Government, Planning and Public Works (DHLGPPW).

The notification period is 15 business days after the notice about the application is first published, with the closing date being a day that is after the end of the notification period.

The approved form for public notification is available on DHLGPPW's website at [rpi-regional-interests-dev-approval-template.doc \(live.com\)](#)

Please provide a copy of the notice as it appears in the newspaper circulating generally in the area to RPIAct@dasilgp.qld.gov.au

You are also referred to the RPI Act Statutory Guideline 06/14 Public notification of assessment applications at [RPI Act - Statutory Guideline 06/14 \(windows.net\)](#) for further information.

If you require any further information, or have any queries, please contact Morag Elliott, Manager, Planning Group, DHLGPPW on 3452 7653 or by email at RPIAct@dsdilgp.qld.gov.au who will be pleased to assist.

Yours sincerely

A handwritten signature in black ink, appearing to read 'P. Beutel'.

Paul Beutel
A/Director
Development Assessment Division
Planning Group

Encl. Attachment A

ATTACHMENT A

Information required for assessment against SEA criteria – Schedule 2, Part 5 of the Regional Planning Interests Regulation 2014 (RPI Regulation)

| | |
|-----|--|
| 1. | <p><u>Issue:</u></p> <p>Section 2 Application details of the Assessment Application Form (Assessment Form) identifies a proposed SEA disturbance area of 42.4 ha.</p> <p>Section 2 Proposed Development of the Regional Interests Development Application Assessment Report RPI24/005 Santos (Hector 2, Hector Southeast 3 & Roulette 1 Development) prepared by Santos and dated 03/09/2024, (Supporting report) identifies the maximum area of disturbance within the SEA as being 41.14 ha.</p> <p>Table 2 of the Supporting report identifies the Total Disturbance of SEA to be 42.37 ha.</p> <p><u>Actions:</u></p> <p>Confirm the total disturbance area of SEA of the proposed resource activities.</p> |
| 2. | <p><u>Issue:</u></p> <p>It is unclear whether the proposed disturbance area of SEA includes only the disturbance area associated with the proposed infrastructure, as shown on the figure 'PL 1046 Regional Location or Proposed Activities' and figure 'PL 1046 Proposed Infrastructure and Construction Disturbance Zone' of the Supporting report or whether the total area of the CDZs is included in the proposed SEA disturbance area</p> <p><i>Note: The RPI Act and RPI Regulation do not differentiate between temporary construction activities and permanent resource activities for the purpose of calculating the proposed disturbance area.</i></p> <p><u>Actions:</u></p> <p>Clarify whether the areas of the CDZs are included in the proposed area of disturbance of SEA.</p> |
| 3.. | <p><u>Issue:</u></p> <p>Figure 'PL 1046 Regional Location or Proposed Activities' and figure 'PL 1046 Proposed Infrastructure and Construction Disturbance Zone' of the Supporting report indicate the SEA, PL 1046, the CDZs and the proposed infrastructure. They do not include the lot the subject of the application.</p> <p><u>Actions:</u></p> <p>Amend the figures at pages 10 and 13 to also include the lot the subject of the application.</p> |
| 4. | <p><u>Issue:</u></p> |

| | |
|----|--|
| | <p>Section 3 Environmental Attributes of the Supporting report identifies environmental attributes for the Channel Country SEA. However, the RPI Regulation, current as at 2 August 2024, identifies additional environmental attributes for the Channel Country SEA than those identified.</p> <p><i>Note: The RPI Regulation, current as at 2 August 2024, can be viewed at Regional Planning Interests Regulation 2014 - Queensland Legislation - Queensland Government</i></p> <p><u>Actions:</u></p> <p>(a) Amend the application material to reflect the environmental attributes for the Channel Country SEA as identified in the RPI Regulation current as at 2 August 2024.</p> <p>(b) Ensure that the potential impacts of the proposed activities on all the environmental attributes for the Channel Country SEA have been adequately demonstrated.</p> |
| 5. | <p><u>Issue:</u></p> <p>The Supporting report notes that the proposed activities include three new conventional petroleum wells. No information is provided on the proposed depths or formations targeted by the petroleum wells and it is unclear whether these activities will impact the natural hydrologic processes of groundwater sources, including the Great Artesian Basin, as per Section 7 of the RPI Regulation.</p> <p><u>Actions:</u></p> <p>Provide information on the formations targeted by the three productions wells and confirm that aquifers of the Great Artesian Basin (Eromanga Basin) will be isolated out by cement grouting.</p> |
| 6. | <p><u>Issue:</u></p> <p>Section 4.1 of the Supporting report notes that borrow pits '<i>have the potential to result in diversion or interception of a negligible amount of overland flow</i>'. The Supporting report does not include information on the dimension of the proposed pits; however, the GIS files indicate that the seven borrow pit areas are approximately 12,000m² each in surface area. Depending on depth, these pits could each hold 30-50ML which is not negligible given the Water Plan (Cooper Creek) 2011 limits the capture of overland flow to 10ML without further need of a water entitlement. No information is provided regarding measures to prevent or minimise the volume of overland flow entering borrow pits.</p> <p><u>Actions:</u></p> <p>Provide information of estimated depths/volumes of the borrow pits and provide details on what measures will be undertaken to prevent or minimise the capture of overland flow in the borrow pits.</p> |
| 7. | <p><u>Issue:</u></p> <p>The description of the activity provided in section 2.1.1 of the Supporting report states that following the completion of drilling the drill waste stored in the onsite drilling fluids sumps would be removed, 'if required'. Given the proximity of the proposed works to waters and areas identifies as Matters of State Environment Significance (MSES) regulated vegetation – defined watercourse and MSES</p> |

| | |
|----|---|
| | <p>regulated vegetation – 100m from a wetland, these materials may impact the surrounding riparian environment should the materials remain insitu.</p> <p>The Supporting report states that the drilling of the well is expected to take up to 11 days, during which time the material removed from the bore will be stored within an adjacent drilling sump.</p> <p>Following completion of these works, the backfilling of the sump is expected to be completed up to six months later. There are concerns that during this time, this may result in stormwater, either directly falling into the sump or via surface flows of water coming into contact with the drilling fluids and becoming contaminated. Given the sensitive nature of the surrounding environment, this contaminated water may not be suitable for release and may require treatment or collection and disposal to an appropriate facility. Given the remote nature of the location there are concerns about how this will be monitored and managed.</p> <p>It is noted that there are groundwater bores and the recharge zone for groundwater dependant ecosystems mapped as being present within the footprint of the proposed works that would also suggest the presence of groundwaters in the area. While the existing EA (EPPG03517415) includes conditions for mix-bury-cover disposal of residual drilling material, the EA also includes conditions, specifically B1 and I5 that prohibit the direct or indirect release of contaminants to waters. Waters in this instance also includes underground water. Hydraulic stimulation of the wells is also authorised as part of the activity. The returned material may include additional contaminants obtained through the stimulation process (i.e. dissolved salts and minerals) that may pose a risk to the water quality of any receiving waters.</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> (a) Provide further information as to how it will be determined when and how the disposal of the waste drill fluids will remain insitu. This must include any certification obtained by a suitably qualified third party of the material being of acceptable quality for disposal to land and that the proposed method will not result in environmental harm. (b) Provide further information as to why backfilling of the drilling sump is expected to take up to six months. (c) Provide further information as to how stormwater will be managed to prevent contact with the drill material and the release of any contaminated waters, including contaminated stormwaters captured in the drilling sump seeping into the underlying soil and groundwaters. (d) Given the remote nature of the sites, provide further information as to how the sites will be managed and monitored during the period of time, prior to works being completed to backfill the sumps, to ensure no release of contaminated materials occur. (e) Provide further information as to how the fluids used during stimulation will be managed. This includes how returned stimulation fluids returned to the surface are stored prior to collection and removal from the site. |
| 8. | <p><u>Issue:</u></p> <p>The installation of the buried flow lines will involve establishing a right-of-way (ROW) of approximately 15m wide. It is noted that the soil types in this area are extremely prone to erosion. There are concerns that the construction of these ROWs will provide a preferential pathway for the surface flows of water as they</p> |

offer a flow path of less resistance. Additionally, it would also appear the direction of these flow lines run perpendicular to the apparent flow path of the surface waters within the flat lying, braided flood and alluvial plains in the area, given the visible soil structures in aerial photographs of the area further impacting surface flows of water.

This increases the risk of erosion within these areas as surface flows of waters are directed to these areas and without any vegetation or other physical barriers to slow the flow of water, may result in increased rates of erosion. This may also impact hydrological processes, not only in the immediate area but also in those areas downstream from this location, due to erosion and the subsequent deposition of sediment causing further impacts downstream as the sediment forms barriers to the flow of surface waters.

It is also noted the re-establishing these landforms to return the site to its previously state, prior to disturbance to ensure that the hydrology of the area is also likely to be extremely difficult due the intricate nature of these small intricate, interlinked channels that make up the existing topography. This is also likely to be further compounded by the action of erosive forces such as those discussed.

Additionally, given the relatively low rate of rainfall in these areas, any disturbance will likely require significantly longer periods for revegetation to become established and require more direct intervention to ensure that areas will be likely to survive long enough to ensure that sufficient rehabilitation has occurred to allow the environmental authority to be surrendered.

There are concerns regarding the potential impact of these activities including the potential for erosion, the deposition of sediment and the subsequent impacts on the hydrological characteristics of the area and how these may impact the function of riparian processes associated with the adjacent watercourses, lakes, floodplains and wetlands present in the area. Likely impacts are not considered to be minimal due to the size of the proposed development with the overall footprint of the SEA. The supplied supporting information does not appear to consider localised impacts.

These actions also have the potential to directly and indirectly affect the function of wildlife corridors by causing changes that will impact the natural habitat present in the watercourse systems. It is unclear if there are also springs present in the area, however given that the area is mapped as including potential groundwater dependant ecosystems, this is a possibility.

The activities have the potential to impact the natural water quality in the watercourse channels and aquifers and on flood plains in the area, by increasing erosion and sediment deposition from construction and operation. The risk is further exacerbated by the extremely fragile and sensitive nature of the area.

Actions:

Provide further information relating to:

- (a) how the management of erosion and sediment will be managed within these areas during construction as well as during the life of the project

- (b) how the installation of the flow lines will be undertaken in such a way as to prevent significant disturbance to the current soil profile and soil structures and general topography of the site
- (c) how the original topography will be re-established following the installation of the proposed flow lines and establishing right of ways and how this will be achieved given the proposed establishment and maintenance of the 15m wide ROWs
- (d) the proposed timeframe for rehabilitation to be completed following the installation of the flow lines
- (e) what rehabilitation methods will be undertaken to ensure a successful and timely rehabilitation outcome.

9. **Issue:**

The proposed activities also include the installation of 8 km of new access tracks. These tracks are proposed to be up to 13 m in width to accommodate a trafficable roadway. The Supporting report also states that, where necessary, the width may be required to be widened where cuttings are required to be made into elevated terrain.

Note: The applicant has previously provided the following photographs as examples of these tracks within other project areas within the Cooper Basin to support other applications. These photographs show examples of soft sandy soils disturbed by vehicle movements, as well as larger gravel being pushed aside, leaving tracks of exposed finer soils, both increasing the potential for erosion to occur within these surfaces. The supplied photographs also show material pushed to the side of the roads effectively forming bunds that would affect the surface flows of water.



The Supporting report states that the proposed access tracks will be designed to convey natural surface water flows consistent with the existing hydrology. Given the above examples however, it is unclear how this will be achieved.

The National Heavy Vehicle Register currently prescribes heavy vehicles a maximum width of 2.5m as per the Heavy Vehicle (Mass, Dimension and Loading) National Regulation 2013. It is unclear as to why it is necessary to construct a road more than five times the maximum allowable width for a heavy vehicle. While it may be necessary for vehicles travelling in opposite directions to pass each other, it is not thought that there would be sufficient traffic in such areas to justify sufficient space for 4 vehicles to pass each other. This also raises concerns regarding the volume of traffic proposed and the potential

| | |
|-----|--|
| | <p>impacts this may have the soils that make up these roads and whether the proposed dirt roads are sufficient, as well as concerns that this will result in significantly greater disturbance that may otherwise be required.</p> <p>There are similar concerns to those identified in Item 8 above, such as concerns including concerns regarding the potential impacts on the hydrological characteristics, the function of riparian processes and wildlife corridors and impacts on the natural water quality.</p> <p><u>Actions:</u></p> <ul style="list-style-type: none"> (a) Confirm if the spatial data provided also includes the proposed additional 8 km of tracks. If not, provide updated spatial data that includes the proposed location of these tracks. (b) Provide further information as to why it is necessary to construct these tracks 13m wide (or wider). (c) Provide further information regarding how erosion and sediment control will be managed within track areas during construction as well as during the life of the project. (d) Provide further information as to how the construction of these tracks will be undertaken in such a way as to prevent significant disturbance to the current soil profile and soil structures and general topography of the site. (e) Provide further information on how the topography will be re-established following the installation of the tracks as the current methodology appears not to be consistent with the objectives stated in the Supporting report. (f) Provide further information on what rehabilitation methods for these areas will be undertaken to ensure a successful and timely rehabilitation outcome. |
| 10. | <p><u>Issue:</u></p> <p>The proposed activities also include the installation of seven borrow pits that will be used to source material, locally for the construction of the proposed new infrastructure as well as ongoing maintenance. These borrow pits will be designed to have the side batters be maintained at a slope of approximately 6:1 (3:1 maximum) and the batters of the entrance/exit will be maintained at a slope of approximately 7:1. While not observed in the Supporting report, the supplied spatial information would suggest that the average dimension of these borrow pits would be approximately 70 m x150 m (approx. 1.3 ha each). The Supporting report does not appear to address the proposed depths of these borrow pits, other than once completed, ripping to a depth of 150 mm will be undertaken.</p> <p>The activities, by their nature, will increase the risk of erosion within these areas as the soil is extracted, resulting in increased rates of erosion. This, in turn, may also impact hydrological processes, not only in the immediate area but also in those areas downstream from this location, due to erosion and the subsequent deposition of sediment causing further impacts downstream. It is also noted that it is proposed to maintain these borrow pits to provide an ongoing source of material, meaning that there will be likely a total disturbance area of 10 ha for the life of the project, in a soil that is identified as being particularly prone to erosion. It is noted that other forms of extraction are required to have a means of capturing and addressing 24-hour rain events of an ARI of up to 1 in 10 years. However, it is unclear as to how it is proposed to address the management of erosion and sediment control within these areas.</p> |

It is also unclear as to what other measures will be employed to finalised rehabilitation of these borrow pits. It is noted that the Supporting report states that the remaining surface will be ripped to a depth of 150 mm, however it is unclear how this will address the likely difference in the depth of the former extraction area in relation to the surrounding area.

Actions:

- (a) Confirm the maximum dimensions of the proposed borrow pits. This must be taken from the extent of the extracted area, which includes the entirety of the proposed batter of each borrow pit. This must include GPS co-ordinates (GDA2020 MGA zone to 6 decimal places) for each corner of the extraction area.
- (b) Provide further information regarding how erosion and sediment control will be managed within burrow pit areas during construction as well as during the life of the project.
- (c) Identify the ARI event to which the sediment control measures will be designed and provide sufficient supporting information that demonstrates this.
- (d) Provide further information to understand the risk of pooling occurring in former borrow pits, as well and how the surface flow of waters will be re-established to ensure that no ongoing impact occurs to the flat lying, braided flood and alluvial plains in the area.