



# **Tubridgi Gas Storage – Flowlines Construction**

**SUMMARY**

**E-PLN-043**

### DOCUMENT CONTROL

Rev	Date	Description
A	17/09/2023	Initial Submission to match TGSP Flowline EP (E-PLN-043)
B	15/11/2023	Amended to be in consistent with TGSP Flowline EP Rev 4 (E-PLN-043).
C	2/01/2024	Consistent with TGSP Flowline EP Rev 5 (E-PLN-043).
D	05/01/2024	Amended to be in consistent with TGSP Flowline EP Rev 6 (E-PLN-043).
E	30/01/2024	Updated Table 7.6 to reflect the updated TGSP Flowline EP Rev 7 (E-PLN-043).
F	14/03/2025	Updated to reflect the updated TGSP Flowline EP Rev 8 (E-PLN-043).
G	31/10/2025	5 year review of the TGS Flowlines Construction EP (E-PLN-043)Rev 9

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## 1. Introduction

### 1.1 Background

AGI Tubridgi Pty Limited (AGIT) operates and maintains the Tubridgi Gas Storage (TGS), a subsurface gas injection and extraction facility in Western Australia (WA) with a nominal supply capacity of up to 120 TJ/d of natural gas. The storage facility (TGS Facility) is connected to the Dampier to Bunbury Natural Gas Pipeline (DBNGP) via the Wheatstone Ashburton West Pipeline (WAWP), allowing gas producers to store or withdraw gas from the TGS. The TGS benefits gas producers and customers alike who may require storage capacity to bank unused gas, smooth production profiles or to store gas to cover planned production outages.

The TGS utilises a seven well program (wells TGS1, TGS3, TGS5, TGS6, TGS9, TRW 2 and TRW8) with associated flowlines back to the TGS Facility. The Department of Mine, Petroleum and Exploration (DMPE, formerly the Department of Mines, Industry Regulation and Safety (DEMIRS)) under the *Petroleum and Geothermal Energy Resources Act 1967* has issued production licence L9 for activities related to TGS.

AGIT proposes to drill and flow test four new wells (TCW-11, TRW-12, TRW-14 and TRW-16) within the L9 area, based on forecast of increased gas use. The construction and installation of additional flowline sections to connect two of the new wells (TRW-12 and TRW-14) into the existing flowline network, and to directly connect existing well TGS-9 to Flowline 3 to reduce pressure losses in Flowline 1. TCW-11 and TRW-16 will be exploratory wells only, and no connection is required to the existing TGS flowline network.

The Petroleum and Geothermal Energy Resources (Environment) Regulations 2012 require the development and implementation of an Environment Plan (EP) to the satisfaction of the DMPE. This EP covers the construction of the new flowline sections. Once operational, the flowlines will be managed under the existing in-force *Tubridgi Gas Storage – Operations Environment Plan* (TGS Operations EP).

### 1.2 Operator

AGIT, as the instrument licence holder and nominated operator, exercises all rights and retains all obligations associated with production Licence L9.

AGIT is part of the Australian Gas Infrastructure Group (AGIG), which also includes the Dampier Bunbury Pipeline group of companies (DBP). AGIT relies on the services of DBP, the owner of the DBNGP, for the provision of labour and equipment to undertake its business. In this regard, AGIT adopts all AGIG and DBP policies and procedures across the operation of its business.

Table 1-1 details the contact information of the Operator of the TGS infrastructure.

Table 1-1: Contact details of the Operator

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### 1.3 Objectives

The objective of this EP is to identify and assess environmental aspects to construct additional sections to existing flowlines associated with TGS infrastructure and establish suitable controls so as to eliminate or minimise risks to As Low As Reasonably Practicable (ALARP). Additionally, the EP aims to establish performance objectives and measurement criteria for the monitoring of environmental performance.

Ultimately, this EP is intended as both a legally binding regulatory document and a practical tool for the management of environmental risk during the construction of the new flowline sections.

This EP has been developed in accordance with the Guideline for the Development of Petroleum, Geothermal and Pipeline Environment Plans in WA (DEMIRS, November 2024).

### 1.4 Scope

The scope of this EP includes all activities associated with the construction of the new flowline sections only, to connect the new wells to the existing TGS flowline network.

This EP does not include the construction and commissioning of the four new wells, of which will be addressed within a separate EP (TGS Well Construction EP (E-PLN-041)). Once constructed and commissioned, the new wells will then be managed under the TGS Operations EP (E-PLN-023).

The TGS Operations EP will subsequently be revised to include the new flowline sections following the completion of flowline construction activities.

This EP is part of a suite of documents and should be read in conjunction with the following:

- TGS Field Management Plan (TSF-Z-PLN-001-01);
- TGS Well Management Plan (TGS-Z-PLN-003-01);
- TGS Emergency Response Procedure (TGS-Z-PRO-011-01);
- TGS Safety Case (TGS-Z-PLN-006-01); and
- TGS Asset Management Plan (TGS-Z-PLN-004-01).

### 1.5 Location

The TGS is situated at the previous Griffin Export Facility (GEF), located approximately 31 kilometres (km) southwest of Onslow. Construction of the new flowline sections will be in the immediate vicinity

of the existing in situ wells and flowlines (**Figure 1-1** and **Figure 1-2**). Approximate coordinates of the new flowline sections and access roads are provided within **Table 1-2**.

Flowline 3 will be extended from existing well TRW-2 to connect with the new TRW-14 well for approximately 2.96 km. A branching of approximately 0.175 km will connect TRW-12 to Flowline 3. Both flowline sections will retain and maintain an access track (within the construction disturbance footprint) for the TGS operational activities. Flowline 1 will also be extended for approximately 0.69 km, directly connecting existing well TGS-9 to Flowline 3 Flowline 1 pressure losses.

Table 1-2 Location of new flowline sections

Flowline ID	Description	Total Length	Longitude	Latitude
Flowline 3 extension(western end point) TRW14 Flowline (eastern end point)	Connection of existing TRW-2 well with new TRW-14 well	2.96 km	114.893689	-21.752050
			114.866500	-21.75872
Flowline 3branching (to TRW-12)	Connection to new TRW-12 well from Flowline 3	0.175 km	114.848912	-21.765756
			114.849765	-21.764362
Flowline 1 to Griffin Line Interconnect	Connection of existing TGS-9 well from Flowline 1 to Flowline 3	0.69 km	114.840787	-21.764822
			114.846486	-21.763852

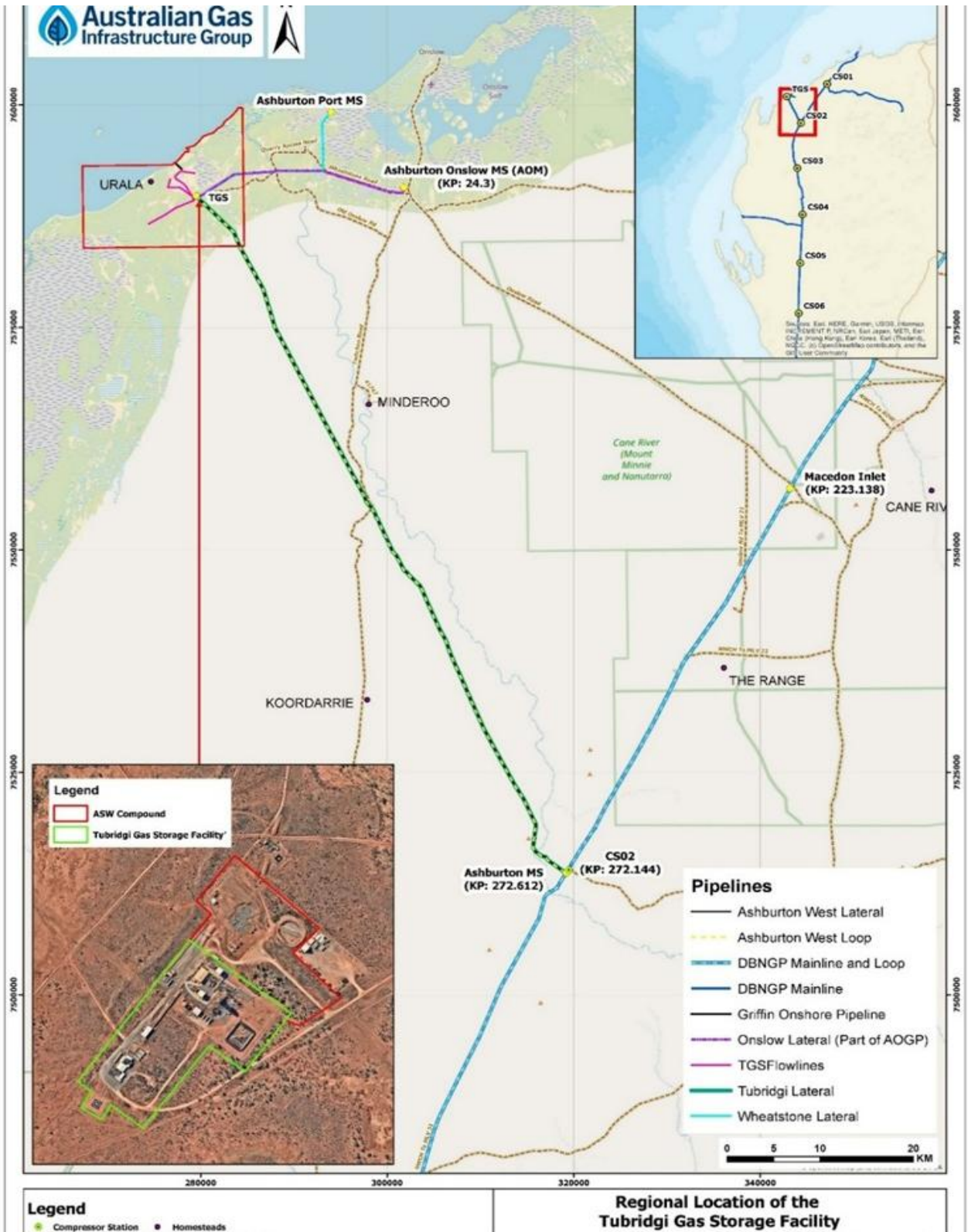


Figure 1-1 Tubridgi Gas Storage – Regional Location

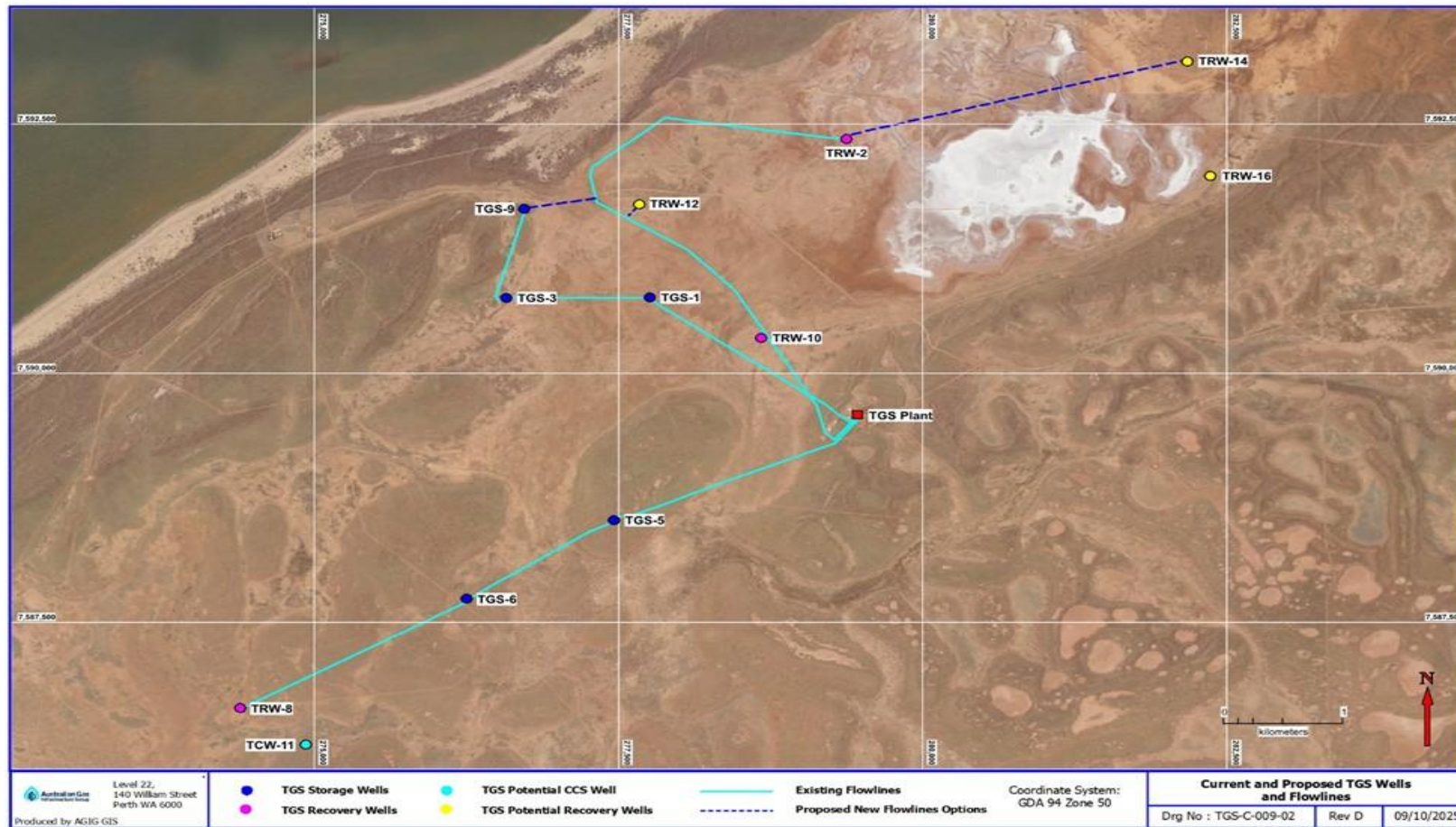


Figure 1-2 New Flowline Sections within the Existing TGS Flowline Network

## 1.6 Schedule

The construction of additional flowline sections is scheduled to commence in Quarter 2 2026. Each section will take approximately 6 weeks, with completion of all additional flowline sections by 2027 (**Table 1-3**).

Table 1-3: Indicative Schedule for the Additional TGS Flowline Sections

Flowline Sections	Indicative Date
Flowline 1 to Flowline 3 Interconnector	2026
Flowline to TRW-12 commissioning	2026
Flowline to TRW-14 commissioning	2027
Flowline to TRW-16 commissioning (route to be finalised in 2027)	2028

## 2. Existing Environment

The objective of this section is to provide a description of the existing natural, social and cultural environment that may be affected by the construction of the new flowline sections.

### 2.1 Climate

The proposed works are located in a sub-tropical arid zone with temperatures varying slightly throughout the region, mainly due to distance from the coast and elevation. Typical temperatures for the site(s) can be taken from the nearest town of Onslow, which has a mean monthly maximum of 36.5°C in January and 25.6°C in July. Corresponding mean monthly minimums are 25.1°C and 13.1°C (BOM, 2022).

Mean evaporation figures are very high, often exceeding 300 mm/month in summer and varying between 150 and 200 mm/month during winter. Humidity is relatively high with maximum mean monthly relative humidity (9am) being approximately 42% in October and 63% in June. Rainfall is generally low and erratic, with mean monthly rainfalls ranging from 0.8mm in October to 70 mm in February. The average annual total rainfall for Onslow is 303.8 mm (BOM, 2022).

The Summer season is characterised by prolonged dry periods created by anti-cyclonic activities to the south. Thunderstorms may develop as a result of convectional activity, with tropical cyclones occurring regularly in the area. Tropical cyclones often produce large amounts of rainfall, which can cause widespread flooding and the temporary isolation of regional population centres (BOM, 2022).

During winter, moderate to strong south easterlies and easterlies prevail, while in summer, moderate southerly and westerly winds dominate. Spring and autumn tend to be transitional periods during which both summer and winter winds can occur. Periods of light winds (less than 11 km/hr) prevail for approximately 43% of the year.

The region experiences on average two cyclones per year, with the 'cyclone season' extending from December to April. Cyclones typically approach from the north east and either remain offshore or turn southwards to cross the mainland coast between Dampier and the North West Cape.

### 2.2 Geology, Soils and Topography

The proposed works are situated within the Coastal Plains Geomorphic Province, which is characterised by extensive sandy plains with north-west or north trending longitudinal dunes, broad clay-pans and circular grassy depressions. Natural relief across the province rarely exceeds 40 m above the surrounding plains and occurs in the form of dune crests and isolated hills.

The Coastal Plains Geomorphic Province is dominated by the Coastal Plains Soil Region. This soil region consists of eight broad units including skeletal soils, stony plains, sandy plains, sand dunes, drainage floors, clay-pans, swamps and depressions, and coastal mud flats.

Soils are generally red-brown with poorly developed profiles. Soils are commonly alkaline as a result of accumulation of sodium and calcium ions at shallow depths. Rangeland surveys carried out indicate soils on the Onslow Coastal Plain tend to be low in nitrogen and phosphorus (Payne et al., 1988).

A review of Pilbara acid sulphate soils (ASS) data (DWER-053) confirms that the proposed flowline connecting TRW-14 to TRW-2 intersects moderate to high ASS risk area. A soil investigation will be conducted prior to construction, and if required, an ASS Management Plan will be prepared.

## 2.3 Land Systems

The proposed flowline sections are located within the Onslow Land System, as described by Payne et al. (1988) and Van Vreeswyk et al. (2004), and are described below:

- Onslow system: Undulating sandplains, dunes and level clay plains supporting soft spinifex grasslands and minor tussock grasslands.
- Dune system: Dune fields supporting soft spinifex and minor hard spinifex grasslands.
- Littoral system: Bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse acacia shrublands and mangrove forests.

## 2.4 Flora

The Interim Biogeographic Regionalisation for Australia (IBRA) currently recognises 89 bioregions and 419 subregions (DCCEE, 2025a). The TGS is located within the Carnarvon Bioregion, specifically within the Cape Range Subregion of rugged tertiary limestone ranges and extensive red Aeolian dunefields, quaternary coastal beach dunes and mud flats. Acacia shrublands (e.g., *Acacia bivenosa*) over *Triodia* spp. occur on limestone and red dunefields, *Triodia* hummock grasslands with sparse Eucalyptus trees and shrubs on the Cape Range. Tidal mudflats of the Exmouth Gulf support extensive mangroves while the eastern hinterlands comprise a mosaic of saline alluvial plains with samphire and saltbush low shrublands (Kendrick and Mau, 2002).

### 2.4.1 Vegetation Communities and Condition

An in-field survey of the proposed flowline sections (Mattiske, 2025) identified the six distinct vegetation communities (**Table 2-1**). None of the vegetation communities mapped were suspected of being locally restricted.

Table 2-1 Description of Vegetation Communities within the New Flowlines Sections

Vegetation Community Code	Vegetation Community Description
C2	<i>Tecticornia</i> spp. low sparse chenopod shrubland with <i>Sporobolus mitchellii</i> , <i>Eriachne helmsii</i> low isolated tussock grasses
C3	<i>Acacia tetragonophylla</i> , <i>Acacia synchronicia</i> , * <i>Vachellia farnesiana</i> mid isolated shrubs over <i>Urochloa occidentalis</i> var. <i>occidentalis</i> , <i>Chrysopogon fallax</i> , <i>Sporobolus mitchellii</i> , * <i>Cenchrus ciliaris</i> low open tussock grasses
C4	<i>Tecticornia</i> spp. low shrubland (B)
C5	<i>Acacia coriacea</i> subsp. <i>coriacea</i> mid isolated shrubs over <i>Acacia synchronicia</i> low shrubland over <i>Eragrostis xerophila</i> , <i>Eriachne obtusa</i> and <i>Sporobolus mitchellii</i> low tussock grassland with <i>Tecticornia</i> sp. low samphire shrubs
CP1	<i>Eucalyptus victrix</i> low open woodland over <i>Acacia tetragonophylla</i> , <i>Acacia sclerosperma</i> subsp. <i>sclerosperma</i> , <i>Scaevola spinescens</i> tall sparse shrubland over <i>Triodia epactia</i> mid open hummock grassland with <i>Sporobolus mitchellii</i> , <i>Chrysopogon fallax</i> , * <i>Cenchrus ciliaris</i> low sparse tussock grassland
IP8	<i>Eucalyptus victrix</i> low isolated trees over <i>Acacia tetragonophylla</i> , <i>Acacia synchronicia</i> tall, isolated shrubs with <i>Acacia stellaticeps</i> , <i>Acacia coriacea</i> subsp.

<p><i>coriacea</i>, <i>Senna artemisioides</i> subsp. <i>oligophylla</i> low sparse shrubland over <i>Triodia epactia</i> mid hummock grassland with <i>Eulalia aurea</i>, <i>Eragrostis eriopoda</i>, <i>*Cenchrus ciliaris</i> low sparse tussock grassland</p>
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The condition of the vegetation within the 2025 survey area of the proposed wells and flowline sections ranged from Excellent to Completely Degraded, according to the Trudgen (1988) scale. Within the survey area the vegetation could be delineated as follows:

- Excellent: Areas of vegetation where no exploration or drill tracks encroach, typically at least 20 m distance from tracks.
- Good to Very Good: Areas between tracks and drill lines, typically 5 m to 20 m from track/drill line edge, or burnt areas.
- Poor: Areas bordering tracks and drill lines.
- Degraded: Old waste mounds and old tracks that have had some past attempts at rehabilitation.
- Completely Degraded: Old mine pits and surrounds.

#### 2.4.2 Threatened and Priority Flora

No threatened flora species as listed by the Department of Biodiversity, Conservation and Attractions (DBCA) under the BC Act and as listed by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the EPBC Act were recorded within the proposed flowline sections (Mattiske, 2025).

One priority taxa, *Stackhousia clementii* (P3), was recorded at the proposed TRW-12 site. This P3 taxa was known to occur in the region (Mattiske, 2025). Introduced Plant Species

A total of four introduced (weed) species were recorded within the proposed well and flowline section areas. The recorded introduced species were *Aerva javanica* (Kapok bush), *Cenchrus ciliaris* (Buffel grass), *Flaveria trinervia* (Clustered yellowtops) and *\*Vachellia farnesiana* (Mimosa bush) (Mattiske, 2025).

None of the recorded weed species have been listed as Weeds of National Significance (WoNS) or Declared Pests (Plant) pursuant to the BAM Act and are known to have been recorded in the area from previous in-field surveys (Mattiske, 2018 to 2025).

AGIT acknowledges that Mesquite is known to occur within L9 and the broader Pilbara region. Mesquite is a declared pest pursuant to the BAM Act.

## 2.5 Threatened and Priority Ecological Communities

No Threatened or Priority Ecological Communities were recorded or inferred to occur within the proposed well and flowline section areas (Mattiske 2016, 2018 and 2025, Biota 2020, DCCEEW 2025).

## 2.6 Conservation Reserves

No conservation estate is intersected by the proposed well and flowline section areas. The Cane River Conservation Park is the closest gazetted conservation reserve, which is located approximately 70 km (south-east) away; The Cane River Conservation Park is the closest gazetted conservation reserve, which is located approximately 70 km south-east away; the future Mount Minnie and Nanutarra addition

to the Cane River Conservation Park (gazetted in progress) section is approximately 30 km (CAPAD2022\_terrestrial dataset) away (DCCEEW, 2025; Mattiske, 2016 and 2025).

## 2.7 Fauna

The Protected Matters Search Tool (PMST) query identified the potential occurrence of conservation significant fauna species protected under the EPBC Act (also covers the migratory bird agreements) surrounding the infrastructure within production licence L9. There are 17 avifauna and 2 terrestrial mammals that potentially occur in the area, with details provided in Table 3 2 (DCCEEW, 2025).

Table 2-2 Conservation Significant Fauna Species Potentially Occurring in L9

Species	Common Name	Presence	EPBC Act Status	BC Act Status	Migratory Bird Agreement Convention
<b>Birds</b>					
<i>Calidris acuminata</i>	Sharp-tailed Sandpiper	Known	Vulnerable	-	Bonn, CAMBA, JAMBA, ROKAMBA
<i>Calidris canutus</i>	Red Knot, Knot	May	Vulnerable	Endangered	CAMBA, JAMBA, ROKAMBA
<i>Calidris ferruginea</i>	Curlew Sandpiper	May	Critically Endangered	Critically Endangered	Bonn, CAMBA, JAMBA, ROKAMBA
<i>Charadrius leschenaultii</i>	Greater Sand Plover, Large Sand Plover	Likely	Vulnerable	Vulnerable	CAMBA, JAMBA, ROKAMBA
<i>Erythrotriorchis radiatus</i>	Red Goshawk	May	Endangered	Endangered	-
<i>Falco hypoleucos</i>	Grey Falcon	Likely	Vulnerable	Vulnerable	-
<i>Limnodromus semipalmatus</i>	Asian Dowitcher	May	Vulnerable	-	Bonn, CAMBA, JAMBA, ROKAMBA
<i>Limosa lapponica menzbieri</i>	Northern Siberian Bar-tailed Godwit, Russkoye Bar-tailed Godwit	Known	Endangered	Critically Endangered	-
<i>Macronectes giganteus</i>	Southern Giant-Petrel, Southern Giant Petrel	May	Endangered	-	Bonn

Species	Common Name	Presence	EPBC Act Status	BC Act Status	Migratory Bird Agreement Convention
<i>Numenius madagascariensis</i>	Eastern Curlew, Far Eastern Curlew	Likely	Critically Endangered	Critically Endangered	Bonn, CAMBA, JAMBA, ROKAMBA
<i>Pezoporus occidentalis</i>	Night Parrot	May	Endangered	Critically Endangered	-
<i>Phaethon lepturus fulvus</i>	Christmas Island White-tailed Tropicbird, Golden Bosunbird	May	Endangered	-	-
<i>Phaethon rubricauda westralis</i>	Red-tailed Tropicbird (Indian Ocean), Indian Ocean Red-tailed Tropicbird	May	Endangered	-	-
<i>Rostratula australis</i>	Australian Painted Snipe	May	Endangered	Endangered	-
<i>Sternula albifrons</i>	Little Tern	Known	Vulnerable	-	Bonn, CAMBA, JAMBA, ROKAMBA
<i>Sternula nereis nereis</i>	Australian Fairy Tern	Likely	Vulnerable	Vulnerable	-
<i>Thalassarche carteri</i>	Indian Yellow-nosed Albatross	May	Vulnerable	Endangered	Bonn
<b>Mammals</b>					
<i>Dasyurus hallucatus</i>	Northern Quoll, Digul, Wijingadda, Wiminji	Likely	Endangered	Endangered	-
<i>Macroderma gigas</i>	Ghost Bat	Likely	Vulnerable	Vulnerable	-

## 2.8 Hydrology and Hydrogeology

The Ashburton River, situated approximately 9 km from TGS, is an intermittent watercourse that travels in a northwest direction and meanders through extensive flood plains between Nanutarra and Onslow. The river is characterised by long dry periods and with irregular significant flow events resulting from high intensity rainfall events. The magnitude of stream flow is predominantly determined by the Average Rainfall Interval (ARI) of the rainfall events. On average, flows occur in the Ashburton River every one to three years. River flows predominantly occur during the wet season

(October to March) and are typically short-lived (AECOM, 2010). The region usually experiences a dry season during the months of March to September.

The flood plain is underlain by shallow, saline to hyper-saline groundwater that displays levels of dissolved metals above marine guideline criteria values (ANZECC, 2000), commensurate with accumulation of salt in the local groundwater environment and the high groundwater salinity.

Shallow, unconfined aquifers associated with major river channels occur within the hinterland to the north of the Tubridgi precinct (Ashburton North), within 10 m of the surface inland, and within a few metres of the surface at the coast. Shallow hydrological investigations beneath the local area indicate the localised subsurface groundwater flow also occurs in a south easterly direction, generally following surface contours (Astron Environmental, 1996).

Monitoring data indicates that the groundwater at the site is relatively saline, which is likely to be the natural state of the groundwater, due to high salinities expected in coastal low-lying areas (GHD, 2011). Salinities of up to 35,000 milligrams per litre (mg/L) (as Total Dissolved Solids [TDS]) have been recorded, with most bores generally having a salinity of between 5,000 and 25,000 mg/L (GHD, 2011). Any runoff from Tubridgi is likely to drain southeast along the topographic contours of the calcrete rise. Direction of flow within the gas field area is generally towards the ocean based on Dames and Moore 1997 monitoring of the Griffin Pipeline dune areas.

Groundwater at the monitoring bores of the three recently added wells (TRW-2, TRW-8 and TRW-10) was shallow, with depth to groundwater measurements ranging between approximately 1.6 metres below ground level (mBGL) at well BH3 (TRW-8) and 4.1 mBGL at well BH1 (TRW-2) (based on an estimated well stickup of 0.5 m above ground level). Wells BH2 (TRW-10) and BH3 (TRW-8) measured minimal difference in groundwater depths (<0.1 m difference). Well BH1 measured a greater difference in groundwater depth, with a drop of 0.47 m in groundwater between the October and November 2023 (Senversa, 2024).

Studies by Woodward Clyde Pty Ltd (1993) and Astron Environmental (unpublished data 1995 [a], [b] and [c]) suggest that there is fresh water located within the coastal dune areas, which is restricted to small reserves, that is, "lenses above more saline water". These lenses are replenished during recharge periods, with the salinity of these lenses fluctuating seasonally, which is primarily due to rainfall and evaporation.

The TGS footprint (including new wells and flowlines) do not encroach within 500 m of any surface water bodies, nor intersects any conservation significant wetlands or drainage lines.

The closest Public Drinking Water Source Area (PDWSA) is the Priority 1 Cane River Water Reserve, which is at least 45 km east of the TGS area. The closest water bore/tank (ID 844; WCORP-73 dataset) is located just south of Onslow, which is approximately 23 km northeast of the production licence L9 area.

## 2.9 Contamination

The TGS and ASW facilities, being located at the former GEF, were subjected to remediation works from previous contamination prior to AGIT handover. The TGS Facility falls outside the boundary of this contaminated site, categorised under the *Contaminated Site Act 2003* as 'remediated for restricted use', which is being managed under a separate (ASW) EP.

Previous due-diligence studies by GHD on Urala Station in 2015 found no contamination along existing flowlines (across the Tubridgi Gas Field), old wellheads or any other signs of contamination across areas that may have been impacted by the TGS activities. No additional contaminated areas have been identified across the recently constructed flowlines and wellheads.

## 2.10 Socio-economic

The TGS is located within the pastoral region of WA, which extends from Dampier in the City of Karratha to the Shire of Northampton. Specifically, the TGS falls within the Shire of Ashburton’s Local Government Area (LGA), which spans approximately 105,647 km<sup>2</sup> and has a population of approximately 7,952 (ABS, 2021). Onslow is the closest major town, located 31 km north of the TGS. Major industries and land use include mining, pastoralism, fishing, fish processing, oil, salt and tourism.

The TGS facilities are located within Lot 226, zoned industrial by the Shire of Ashburton. The Crown Lease was transferred to AGI Development Group Nominees Pty Limited (formerly DBP Services Co Nominees Pty Limited) on 28 September 2012 from BHP Billiton.

The entire TGS infrastructure is located on Urala Station, which was established in 1912 and covers approximately 55,988 hectares (ha). The pastoral station is used predominantly for grazing cattle, sheep and other livestock. AGI Operations Pty Limited is the current holder of Urala Station Pastoral Lease (2016), subleasing to Harvest Road.

As related entities, AGIT has land access arrangements in place with AGI Development Group Nominees Pty Limited and AGI Operations Pty Limited to enable operational access to any area within production licence L9 that are required for the TGS and utilises Lot 226 and parts of Urala Station under the same in-house arrangement. This allows for uninterrupted access to the site from a landholder perspective.

The Urala homestead is the closest sensitive receptor, located approximately 6.5 km from the TGS facilities. The homestead may be inhabited depending on the needs of the station and has permanent managers in residence.

Access to site utilising Old Onslow Road and Urala Road includes crossing Minderoo Station, and traffic management measures are in place for simultaneous operations during the TGS-related activities, maintaining access roads to the current or better standard.

## 2.11 Cultural heritage

No World, Commonwealth and National heritage places are known to occur in the TGS area. The closest recognised heritage site is in the vicinity of the beach dunes located some 3.5 km from Lot 226, where the TGS facilities are located (DCCEEW 2025).

A desktop assessment using the Aboriginal Cultural Heritage datasets (DLPH-099 and DPLH-100), as well as Aboriginal Cultural Heritage Inquiry System (ACHIS) by the Department of Planning (DPLH), Land and Heritage, identified numerous (49) registered and (8) lodged sites within the L9 area, with details provided in Table 3 3

Table 2-3: Aboriginal Heritage Sites within L9

Place ID	Name	Type	Status
808	SAPPHIRE 1	Artefacts / Scatter, Camp, Other: 1920'S-1940'S	Registered Site
811	URALA 94 B	Midden / Scatter	Registered Site
812	URALA 94 C	Midden / Scatter	Registered Site

Place ID	Name	Type	Status
813	URALA 94 D	Artefacts / Scatter	Registered Site
814	URALA 94 E	Artefacts / Scatter	Registered Site
5951	Griffin Gas 01	Midden / Scatter	Registered Site
5952	GRIFFIN GAS 02	Midden / Scatter	Registered Site
5953	GRIFFIN GAS 03	Midden / Scatter, Skeletal Material / Burial	Registered Site
5954	GRIFFIN GAS 04	Midden / Scatter	Registered Site
5955	GRIFFIN GAS 05	Midden / Scatter	Registered Site
6534	URALA DUNE.	Artefacts / Scatter, Arch Deposit, Shell	Registered Site
6535	URALA STATION SOUTH	Midden / Scatter	Registered Site
6536	URALA DUNE RIDGE	Artefacts / Scatter, Midden / Scatter	Registered Site
6537	URALA SAND RIDGE	Artefacts / Scatter, Midden / Scatter	Registered Site
6541	URALA STATION WEST	Ceremonial	Registered Site
6542	URALA BURIAL	Skeletal Material / Burial	Registered Site
7057	URALA MIDDEN 1	Artefacts / Scatter, Midden / Scatter	Registered Site
7058	URALA MIDDEN 2	Artefacts / Scatter, Midden / Scatter	Registered Site
7286	KAPOK WELL BURIAL	Skeletal Material / Burial	Registered Site
7332	URALA STATION 12	Artefacts / Scatter, Midden / Scatter	Registered Site

Place ID	Name	Type	Status
7334	URALA STATION 14	Artefacts / Scatter, Midden / Scatter	Registered Site
7373	URALA STATION 01	Artefacts / Scatter, Midden / Scatter	Registered Site
7374	URALA STATION 02.	Artefacts / Scatter, Midden / Scatter, Camp	Registered Site
7379	URALA STATION 07	Artefacts / Scatter, Midden / Scatter	Registered Site
7381	URALA STATION 09	Artefacts / Scatter, Midden / Scatter, Skeletal Material / Burial, Camp	Registered Site
7382	ROCKY POINT MIDDEN COMPLEX	Artefacts / Scatter, Midden / Scatter	Registered Site
7383	ROCKY POINT EAST	Artefacts / Scatter, Midden / Scatter	Registered Site
7384	URALA STATION 10	Midden / Scatter	Registered Site
7385	URALA STATION 11	Artefacts / Scatter, Midden / Scatter	Registered Site
11402	URALA DUNE BURIAL	Artefacts / Scatter, Midden / Scatter, Skeletal Material / Burial	Registered Site
15926	TUBRIDGI 01	Artefacts / Scatter, Midden / Scatter, Shell	Registered Site
15927	TUBRIDGI 02	Artefacts / Scatter, Midden / Scatter, Shell	Registered Site
15928	TUBRIDGI 04	Artefacts / Scatter, Shell	Registered Site
15929	TUBRIDGI 05	Artefacts / Scatter, Shell	Registered Site
15930	TUBRIDGI 06	Midden / Scatter, Shell	Registered Site
15931	TUBRIDGI 07	Midden / Scatter, Shell	Registered Site
15932	TUBRIDGI 08	Artefacts / Scatter, Midden / Scatter, Shell	Registered Site

Place ID	Name	Type	Status
15933	TUBRIDGI 09	Artefacts / Scatter, Midden / Scatter, Shell	Registered Site
16792	Site A	Midden / Scatter, Shell	Registered Site
16793	Site B	Midden / Scatter, Shell	Registered Site
21606	Roller/Skate Site 5	Artefacts / Scatter, Shell	Registered Site
21607	Roller/Skate Site 2	Midden / Scatter, Shell	Registered Site
21608	Roller/Skate Site 3	Midden / Scatter, Shell	Registered Site
21609	Roller/Skate Site 4	Artefacts / Scatter, Midden / Scatter, Shell	Registered Site
28615	MP08-53	Ceremonial, Mythological, Water Source	Registered Site
28695	MP08 - 6	Midden / Scatter, Camp, Shell	Registered Site
28700	MP08 - 50	Artefacts / Scatter, Camp	Registered Site
28701	MP08 - 52	Artefacts / Scatter, Midden / Scatter, Camp, Shell	Registered Site
37522	Mindurru (Ashburton River)	Mythological	Registered Site
810	URALA 94 A	Midden / Scatter	Lodged
7333	URALA STATION 13	Artefacts / Scatter, Midden / Scatter	Lodged
7377	URALA STATION 05	Artefacts / Scatter, Midden / Scatter	Lodged
7378	URALA STATION 06	Midden / Scatter	Lodged
7380	URALA STATION 08	Midden / Scatter	Lodged
15306	WYLOO DAM 01	Artefacts / Scatter	Lodged
15312	WYLOO DAM 07	Artefacts / Scatter	Lodged

Place ID	Name	Type	Status
41443	Ngundabugga (Ngoorndabooja) Ngarrari (Ngardarri)	Burial; Artefacts / Scatter; Camp; Grinding areas / Grooves; Shell	Lodged

AGIT is aware of its obligations under the AH Act and has worked with the Thalanyji group to ensure these obligations are met. Risk assessments have been completed over the recently added wells and flowline sections. During on-ground archaeological and ethnological surveys conducted in November 2020 with the BTAC/representatives of the Thalanyji group, sites of cultural heritage significance were identified. Any known or identified risk of heritage areas has been recorded and avoided in accordance with MS1209.

In addition, AGIT has a heritage agreement in place as of 20 November 2020 for future developments of the TGS (i.e. well drilling program and flowlines).

#### **2.11.1 Native Title Determination**

The TGS facilities lie in the determination area of the Thalanyji Native Title (WCD2008/03) registered on 18 September 2008. The Buurabalayji Thalanyji Aboriginal Corporation (BTAC) is the Registered Native Title Body Corporate (RNTBC) for the Thalanyji People. In this determination, it was found that Native Title had been extinguished within the boundaries of Lot 226, and within the larger boundary of the production licence L9 to the extent that the rights exercised by AGIT are deemed to take precedence over any Native Title rights that may exist.

The TGS facilities and associated easements are listed as exclusions and therefore not subject to the Thalanyji Native Title determination.

#### **2.11.2 Indigenous Land Use Agreement**

The Thalanyji and Minderoo Pastoral Indigenous Land Use Agreement (ILUA) (W12009/024), registered on 7 January 2010, applies to the TGS facilities which outlines that the easements and leases on Minderoo are specifically excluded (as per the consent determination) from this ILUA.

### 3. Activity Description

This section describes the activities to be conducted, as well as general equipment that will be utilised to construct the new flowline sections. The key planned activities are summarised below:

- Clearing, levelling and preparation of the flowline disturbance corridors, to facilitate the installation of new flowlines (pipelines) (access to these areas via existing tracks)
- Trenching
- Installation of flowlines to connect into the existing flowline network, followed by backfilling
- Pressure testing and commissioning.

A more detailed description of these activities and the related equipment is provided in the subsequent sections.

#### 3.1 Site Preparation

AGIT will utilise existing access tracks on Urala Station to access all TGS infrastructure. AGIT will maintain the existing tracks in consultation with the Urala subleasee as well as any required maintenance on access tracks used in consultation with Minderoo Station and the Shire of Ashburton.

Flowline section disturbance corridors will initially be cleared of vegetation using heavy machinery. Each flowline section corridor will be cleared to a maximum 30 m width to facilitate construction equipment access, pipe layout areas, trench excavation and stockpiles. Vegetation, topsoil and subsoil will be stripped and stockpiled at a maximum height of 2 m within the cleared corridor. These stockpiles will be used in reinstatement, within a few months post-construction.

#### 3.2 Construction and Installation of the Flowline Sections

Construction widths for the flowline sections are anticipated to be approximately 30 m wide. Alignments of the trench would only be deviated in the event of encountering a sub-surface obstruction.

Excavation of a trench will occur, with all excavated spoil temporarily stockpiled immediately alongside the trench. Trench width will be approximately 2m deep and 1m wide. Trenches will undergo daily checks for the presence of any native fauna prior to the commencement of each day shift. Lengths of flowline pipeline will be placed alongside the trench, prior to installation, with end caps in place prior to install (to prevent ingress by fauna).

Smaller sections of the flowline (comprising carbon steel that is externally coated) will be field joined (welded), prior to lowering into the trench. Joints will be grit blasted, prior to the application of a primer and application of an inner and outer tape wrap system as part of pipeline protection. Padding of the trench will then occur with screened trench spoil placed back over the piping, prior to the trench being backfilled with the remainder of excavated spoil and compacted.

To ensure the newly installed flowline sections are structurally sound and meet required design requirements, hydrostatic testing will then be completed. Hydrotesting will use potable water and this will be disposed of via tanks and utilised for dust suppression. If available, water may also be stored in the well mud sumps depending on quantity, freeboard management. These lined storage compounds are managed under the TGS Well Construction Environment Plan (E-PLN-041).

### 3.3 Water Source

Water (for compaction and/or dust suppression) will be sourced from the Ashburton River and trucked to location. An approved Surface Water Licence (SWL 166334) is in place for AGIT use. Water requirements are predicted not to exceed 10,000 kL. If surface water abstraction is not viable, water shall be sourced from Onslow through a third-party contract to supply potable water for the camp.

A 20 L diesel pump shall be in place temporarily at the pump site at Ashburton River to fill watercarts. This location was used for previous projects and the pipe stand is currently on site. The unit is fully self-bunded to prevent the release of fuel or oil outside the unit. The pump shall also be located within a HDPE plastic lined earth bund to prevent any spills from entering the waterway. A spill kit will also be available at the location to assist in combating any spills.

### 3.4 Hazardous Substances

#### 3.4.1 Diesel

During the planned activities diesel will be required to fuel the construction equipment. Bulk diesel is stored on location at the TGS Facility (existing storage) with a temporary tank to be located at the laydown area in ≤20 kL self-bunded diesel storage tank. A self-contained refuelling trailer (<6 kL) will be used to refuel any self-contained light towers and small gen-sets located within the flowline disturbance footprint and mobile equipment (i.e. excavators, welding units, pipe booms). All small gen-sets shall have secondary containment.

Drip trays etc will be used for transfer of diesel with a preference for light vehicles to use the bunded area at TGS. Refuelling and onsite diesel management will be conducted in accordance with Section 5.9.

#### 3.4.2 Hydraulic Oils and Engine Oils

Hydraulic and engine oils will be provided in 1,000 L IBCs or 160-200 L drums and will be stored in dedicated bunds. This will include waste oil whilst on location. Small 20 L drums will also be used where only small volumes are required. Waste oils and hydraulic fluid will be disposed of by an approved contractor to a certified waste facility.

#### 3.4.3 Hazardous Chemicals

The bulk of non-hazardous chemicals will be transported to and from site and stored on dedicated tautliner curtain-sided trailers at site for the duration of the campaign.

Hazardous Chemicals shall be stored in secondary containment and segregated as required. These chemicals shall be managed through the contractor with a chemical register available at all times on site. Hazardous chemicals and dangerous goods shall be minimised with no excess storage to be held onsite.

### 3.5 Waste Management

Waste generated during flowline construction will be categorised as general waste, putrescible waste and industrial waste. Septic waste is dealt with in the following section. Where possible and in consultation with Shire of Ashburton (Onslow Landfill), recycling bins may also be made available.

Within the flowline disturbance footprint, dedicated waste skip and wheelie bins will be provided for each of these waste streams and labelled appropriately. Skip bins will have lids or mesh covers/nets to ensure waste remains within the bins and to minimise or reduce potential fauna access and entrapment.

Waste skips will be collected regularly by a licensed contractor and disposed of at appropriate waste management facility (ie. Onslow Tip).

### **3.5.1 Septic Waste**

On-site septic waste will be treated with an in-built wastewater treatment system.

Grey water will be discharged via a temporary sprinkler system. The sprinkler outlet will be set-up immediately off the associated cleared well-sites, taking into account the local landforms and water run-off. The sprinkler head will be protected from fauna via a temporary fence. This area will form part of the daily inspection to ensure no adverse impact are occurring, this includes water ponding or erosion.

Black waste will be pumped out for disposal by a licensed waste disposal contractor at a licensed waste disposal facility.

## **3.6 Accommodation and Amenities**

Personnel will be accommodated within the TGS accommodation facility. An additional five temporary building blocks (3 rooms per building) will be installed consisting of 15 additional rooms. The total number of existing permanent (14) rooms with the additional temporary rooms will be 29 in total. The permanent accommodation is located in the south western corner of the TGS Facility and has a permanent kitchen with catering staff engaged to service all personnel accommodated in this facility. It is intended to use this facility to also support personnel involved in construction activities.

The TGS accommodation facility is approved under the existing in-force TGS Operations EP.

A construction site office for this TGS expansion project will be established with three buildings, including an ablutions building with a self contained potable water and waste tank.

## **3.7 Site Reinstatement and Rehabilitation**

### **3.7.1 Flowline Handover**

Upon completion of hydrostatic testing, flowline sections are successfully connected to the existing flowline network and construction is deemed complete.

Once connected (commissioned), the flowline sections will be included in the existing TGS Operations EP (E-PLN-023), which will be amended to include the additional wells and flowline sections as constructed.

The timeframe between suspension and connection to the well and flowline sections will be directly linked to the construction timeframe. The constructed wells will be in suspension until commissioning of the flowline sections commences to allow the flow of gas. This will be approximately 3-6 months from well construction based on construction timeframes.

### **3.7.2 Flowline Site Reinstatement and Rehabilitation**

Portions of the flowline disturbance footprint associated with the construction activities will be retained as required to meet operational requirements (i.e. 10 m flowline corridor). Full decommissioning and rehabilitation may not occur until the flowline enters the end-of-life phase (obsolete / redundant infrastructure) and this will be managed under the TGS Operations EP (E-PLN-023) where Decommissioning and Rehabilitation objectives and criteria are set out. For the purposes of this EP, rehabilitation will focus on restoring natural land forms and allowing natural regeneration

of vegetation in areas within the flowline corridor not required (20 m of the original construction corridor) for TGS operational activities post flowline commissioning.

## 4. Environmental Risk Identification and Assessment

### 4.1 Overview

AGIT ensures the effective management of risk across its business through implementation of the AGIT Risk Management Policy. The AGIT Risk Management Policy makes a commitment to ensure that:

- systems are in place to identify (as far as reasonably practicable) risks faced by the business
- the impact of identified risks is understood
- risk treatment owners are nominated to manage the identified risks
- assurance is provided on the effectiveness of the risk management system and risk controls.

### 4.2 Methodology

To identify, understand and manage all environmental sources of risk and consequent impacts associated with the the construction of the flowline sections, an Environmental Hazard Identification (ENVID) workshop was completed on the 3 June 2022. The approach is in alignment with the following:

- ISO 31000:2018 process as summarised on **Figure 4-1**; and
- HB 203:2012 Managing Environment-related risk guidelines.

The risk management process provides a framework to demonstrate the identified impacts and risks have been reduced to ALARP and acceptable levels.

This initial ENVID, including the review, was undertaken by a multidisciplinary team of in-house personnel (HSE included) and followed a structured process which sought to:

- Outline the key operational activities;
- Identify, analyse and evaluate associated hazards and corresponding environmental impacts;
- Where necessary, establish suitable controls; and
- Systematically assess any associated residual environmental risks.

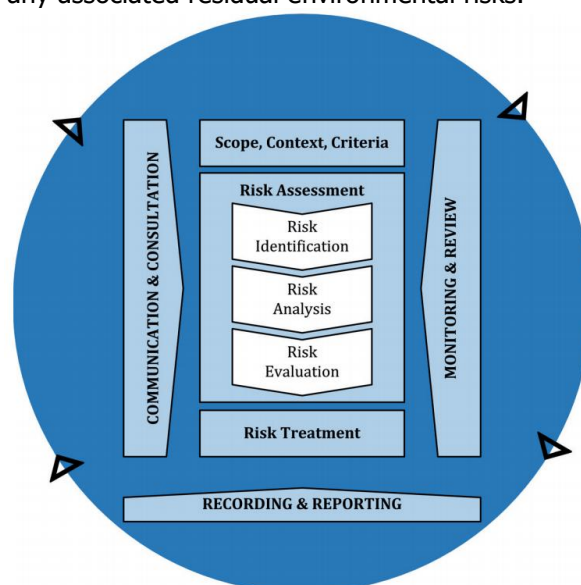


Figure 4-1: AS/NZS ISO 31000:2018 Risk Management Process

The following actions were undertaken during the risk management process:

- Step 1: Definition of the flowline areas.
- Step 2: Identification of activities and unplanned events including accidents, incidents and emergencies involved in operation and maintenance of the assets.
- Step 3: Brainstorming of the hazards and their causes.
- Step 4: Assessment of the risk associated with the identified hazards including:
  - Definition of the environmental impacts and risks for the routine activities identified in Step 2 and unplanned events identified in Step 3;
  - Determination of worst case credible consequences;
  - Identification of the existing safeguards (management control and mitigation systems and procedures);
  - Determination of the likelihood of the consequence occurring; and
  - Categorisation of the risk utilising the AGIT Operational Risk Matrix, in conjunction with the supporting consequence and likelihood classifications. Ranking of inherent risk is assigned.
- Step 5: Development of control measures (where deemed appropriate) to address the risks deemed unacceptable or not ALARP. Consideration of not just the proposed risk control action but also the accountability, resource requirements, timing, performance measures, monitoring and reporting requirements. Control measures that are classified into key categories of preventive, detection, and corrective/mitigating, are identified for each environmental aspect to ensure the risks associated are ALARP. They are also assigned to defined Environmental Performance Objectives that aim to eliminate, prevent, reduce and/or mitigate consequences associated with each identified environmental impact and risk.
- Step 6: Evaluation of the residual risk as per the methodology outlined in Step 4.
- Step 7: Documentation of all findings and a summary provided in the EP .

In February 2025, a detailed review of the environmental aspects and impacts, no new environmental risks were identified for the proposed flowline sections. A HAZID will be undertaken prior construction, and all environmental controls will be implemented.

## 5. Environment Management

The hazards and associated impacts identified during the ERA have been reviewed and attributed to environmental aspects. Within each environmental aspect (interaction subgroup), each group of impacts and risks has been addressed with an objective to:

- Define the environmental performance objectives to minimise the risks and impacts of the activity;
- Define the environmental performance standards to manage the environmental risks and impacts of the activity to ALARP and acceptable levels; and
- Define the measurement criteria to determine whether the environmental performance objectives and standards have been met, and the implementation strategy complied with for the activity.

Specific control measures have been developed to direct, review and manage activities so that environmental impacts and risks are continually reduced to ALARP. Each control measure has been assigned a role within the organisation to be responsible for its implementation. A summary of these controls is outlined below:

Aspect	Control Measures
Soil and Sediment	<ul style="list-style-type: none"> <li>• Areas of moderate or high ASS risk ASS have been avoided for placement of additional flowline sections. Reinstatement and natural regeneration of identified areas not required for the TGS operational activities.</li> <li>• Flowline section locations have been selected to minimise impacts to soil.</li> <li>• Any activities impacting the topsoil or soil profile shall abide by the Native Vegetation Clearance Procedure (E-PRO-002).</li> <li>• Non-operational areas will be reinstated in a procedural manner.</li> <li>• Erosion will be managed as per the Procedure for Management of Erosion Risk Areas (E-PRO-003)</li> <li>• Where erosion has been identified to occur arising from AGIT activities, repairs shall be undertaken and if warranted, erosion and sedimentation control structures shall be constructed.</li> <li>• Any activities impacting the topsoil or soil profile shall abide by the Native Vegetation Clearance Procedure (E-PRO-002).</li> <li>• Erosion will be managed as per the Procedure for Management of Erosion Risk Areas (E-PRO-003).</li> <li>• An Environmental Ground Disturbance Permit (EGDP) is implemented prior to any excavation works. - Prior to an excavation with a depth greater than 3 m or a total of 100 m<sup>3</sup>; and/or dewatering, a GIS (X-Info Connect) check shall be undertaken to determine (and characterise) the ASS risk ranking of the proposed disturbance site.</li> <li>• If excavation over a total of 100m<sup>3</sup> and/or dewatering is required in areas of moderate or high ASS risk, an ASS investigation will be undertaken prior to conducting the works.</li> <li>• If there are potential ASS and/or actual ASS within the project footprint, prepare and implement an ASS Management Plan.</li> </ul>
Native Vegetation	<ul style="list-style-type: none"> <li>• Flowline section locations are selected to avoid conservation significant flora and ecological communities.</li> <li>• Flowline section routes and laydown location have been selected to minimise impacts on riparian and native vegetation and restricted to the maximum flowline corridor width of 30 m.</li> <li>• The flowline sections will be buried allowing the natural regeneration of reinstated areas within the corridor not required for TGS operational activities.</li> <li>• Delineation of the clearing boundaries by pegging and use of GPS navigation.</li> <li>• All clearing is managed through the internal EGDP process which facilitates pre-clearing checks.</li> <li>• All personnel involved in the activities under this EP complete the TGS Flowlines (Construction) Induction, which includes requirements such as vehicle movements limited to the existing tracks / approved areas.</li> <li>• Areas disturbed that are not required for operational use shall be reinstated / rehabilitated.</li> </ul>
Weeds and Pathogens	<ul style="list-style-type: none"> <li>• Flowline section construction areas have no presence of declared weeds or WoNS.</li> <li>• Use of existing access tracks for the journey to site.</li> <li>• As part of the EGDP process - presence of weeds (including Mesquite) will be assessed at each flowline section construction site.</li> <li>• All personnel follow the Clean on Entry Procedure.</li> <li>• Projects ensure all weed and seed requirements are implemented</li> </ul>
Fire	<ul style="list-style-type: none"> <li>• All activities are conducted in accordance with relevant fire restrictions (local, state), notifications and Permit to Work requirements</li> </ul>

	<ul style="list-style-type: none"> <li>In the event of fire, response will be conducted in accordance with the TGS Emergency Response Plan (TGS-Z-PRO-011-01), including escalation to the Incident Management Team (IMT).</li> <li>A 25A Exemption to flare during Total Fire Bans (TFB) will be obtained from the DFES when required.</li> </ul>
Fauna	<ul style="list-style-type: none"> <li>Delineation (pegging) of approved area prior to clear and grade where required.</li> <li>All bins will be covered to prevent fauna access.</li> <li>Installation of fauna egress from trenches (i.e. exit ramps every 500m of trench at a minimum).</li> <li>Installation of fauna shelters every 100m if trench is &gt;500m in length.</li> <li>Pipe end-caps</li> <li>AGIT shall implement the Native Vegetation Clearance Procedure (E-PRO-002)</li> <li>All clearing is managed through the internal EGD process which facilitates pre-clearing checks.</li> <li>Completion of daily trench inspections within 3 hours of sunrise and an additional inspection at end of day for an open trench &gt;1 km in length.</li> <li>Completion of a fauna inspection within 30 mins prior to lowering in/backfill operations commencing.</li> <li>Reduce speeds / minimise travel at dawn and dusk.</li> </ul>
Cultural Heritage and Stakeholder Engagement	<ul style="list-style-type: none"> <li>All clearing is managed through the EGD process which facilitates pre-clearing checks by the Senior Environmental Advisor or equivalent.</li> <li>All relevant personnel shall complete the TGS Flowlines (Construction) Induction, which includes requirements working on or near an Aboriginal heritage site</li> <li>All relevant personnel working on or near an Aboriginal site shall be made aware of their responsibilities under the <i>Aboriginal Heritage Act 1972</i></li> <li>Consultation with stakeholders including local land users will be undertaken with regular notice / updates prior to commencement and until completion of the TGS -related activities.</li> <li>Landholders are communicated with at least annually and complaints responded to within 14 days.</li> <li>Consultation with relevant utility authorities will be undertaken to identify location of existing buried cables, lines, pipes, roads, water mains and other infrastructure prior to commencement of activities, if required.</li> </ul>
Emissions – Atmospheric (GHG), Dust and Noise/Vibration	<ul style="list-style-type: none"> <li>Where excessive airborne dust is generated or a substantiated landholder complaint is received, a combination of one or more engineering controls to manage dust emissions will be implemented as required:</li> <li>Where excessive airborne dust is generated or a substantiated landholder complaint is received, a combination of one or more engineering controls to manage dust emissions will be implemented as required: <ul style="list-style-type: none"> <li>the application of water or stabilisers via water trucks and sprayers to dampen down soil and stockpiles. No run-off should be generated from application. Applications shall be frequent enough to provide persistent dust suppression.</li> <li>ensuring vehicles with dust emitting loads must be covered (except when loading and unloading).</li> </ul> </li> <li>All GHG emissions shall be monitored and reported.</li> <li>Reduced speed limits on unsealed roads and right of way.</li> <li>SWMS / JHA to identify dust risk at time of activity and apply controls (i.e. water cart/truck).</li> </ul>

	<ul style="list-style-type: none"> <li>• Maintenance activities are implemented in accordance with the TGS Asset Management Plan (TGS-Z-PLN-004-01) to avoid significant unplanned gas release.</li> <li>• In the event of significant unplanned gas (including odorant Mercaptan) emissions, the TGS Emergency Response Procedure (TGS-Z-PRO-011-01) is initiated.</li> <li>• All fuel use is monitored and recorded.</li> <li>• A notification is provided to land users / stakeholders prior to commencement of potentially loud activities.</li> </ul>
Surface and Groundwater	<ul style="list-style-type: none"> <li>• Water flow monitoring installed on all active bores or pumps or measured through water tanker use.</li> <li>• AGIT shall ensure all activities minimise the risk of surface and groundwater contamination through the maintenance of wastewater systems, approval for any water discharge offsite and contained storage of waste liquids.</li> <li>• The Waterway Crossing Procedure (E-PRO-017) will be implemented, which contain requirements to ensure: <ul style="list-style-type: none"> <li>- All approvals are in place prior to any impact to beds and banks.</li> <li>- Water crossings are maintained in a stable condition.</li> <li>- Erosion controls are installed to prevent sedimentation into waterways.</li> </ul> </li> <li>• AGIG/DBP shall monitor and comply with the conditions of all groundwater licenses, including volume allocations.</li> <li>• Dewatering managed as per guidelines or license (permit) to ensure volume controls in place.</li> </ul>
Hazardous Materials Storage and Handling; Spill Response	<ul style="list-style-type: none"> <li>• Minimal amount of chemicals (including hydrocarbons) stored on site; refuelling areas restricted to flowlines and access tracks.</li> <li>• Appropriate containment (bundling/self-containment) and storage of chemicals in line with AS1940 (including alarms where possible).</li> <li>• Appropriate spill response equipment, including containment and recovery equipment, shall be available on site and in vehicles undertaking work where there is the potential for fuel or chemical spillage.</li> <li>• Training and induction; following the relevant procedures as listed in the Systems and Procedures section below (including the EPS for refuelling and the OSCP).</li> <li>• Daily inspection of bunded liners at the Ashburton River.</li> <li>• All chemicals management shall comply with S-PRO-016 Hazardous Materials Storage and Handling Procedure.</li> <li>• Any vehicle/machinery refuelling shall comply with the Refuelling Procedure.</li> <li>• Personnel shall be aware of and abide by requirements of the TGS Wells and Flowline Construction Oil Spill Contingency Plan E-PLN-075</li> </ul>
Waste	<ul style="list-style-type: none"> <li>• All waste will be segregated where possible, placed in appropriate containers for storage and handling prior to disposal.</li> <li>• AGIT will ensure maintenance of the sewage treatment system are carried out regularly.</li> <li>• Sewage shall be treated onsite prior to disposal either via water treatment system or pumped to a septic or portable tank where sludge is retained for collection and offsite disposal by a licenced contractor.</li> <li>• All personnel will complete the TGS Flowlines (Construction) Induction, which includes waste management requirements</li> <li>• All personnel shall abide by the Waste Management Procedure (E-PRO-015).</li> </ul>

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## 5.1 Monitoring and Reporting

To monitor the effectiveness of control measures in the management of the environmental impacts and risks, targeted monitoring commitments have been specified where relevant. AGIT conducts regular surveillance of the flowline infrastructure to ensure that the integrity of the infrastructure is maintained. These patrols are conducted by 4WD, helicopter or fixed-wing aircraft and by foot with an objective to detect:

- Third party encroachments
- Impediments to and condition of access roads
- Erosion and changing landforms
- Security violations
- Damaged or missing signage
- Weed infestation
- Vegetation overgrowth and clearing
- Water quality and protection of natural flows
- Damaged or missing gates and fences
- Indications of gas leaks

The TGS Flowlines Construction EP is subject to an annual environmental compliance review to ensure that the systems and controls detailed within the EP are both adequate and implemented and also identify opportunities for improvement. AGIT also undertakes a HSE System Audit (and evaluation) program that assists in assessing compliance to the EP and associated procedural controls.

The routine external reporting requirements for the flowlines construction are summarised as below:

- Prestart and cessation notifications: inform the start and completion dates of activities.
  - Recordable Incident Report: details the cause, impacts and corrective actions associated with any incident arising from the activity that breaches a performance objective or standard identified in the EP;
  - Emissions and Discharge Report: details all emissions and discharges to any land, air, groundwater, sub-surface or inland water environment that occur during the activity;
  - Annual Environmental Report (AER): demonstrates environmental performance objectives and standards for the activity are being met;
  - Annual Compliance Assessment Report (ACAR): Details compliance against approvals issued under Part IV of the EP Act; and
  - Annual Works Approval – prescribed premises licence: details any licence and emissions monitoring and annual reporting.
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## 6. Consultation

AGIT is committed to ongoing consultation with all stakeholders that will be impacted by the activities associated with construction of the new flowline sections. The purpose of consultation is to:

- Keep key stakeholders up to date on the closure of actions from the implementation of the project during well construction operations
- Obtain appropriate input into the ongoing improvement of activities
- Ensure timely response to landholder issues (noting that AGIT is the Pastoral Lease holder)
- Maintain dialogue with regulatory authorities

### 6.1 Stakeholder Engagement Approach

AGIT has continually engaged with stakeholders since the well construction planning phase to facilitate a collaborative approach and to ensure that local knowledge is considered in the design and management. AGIT has identified a list of relevant stakeholders to be engaged throughout the well construction operation (**Table 6-1**).

Table 6-1: Relevant Stakeholders

Stakeholder Group	List of Stakeholders
State Government	<ul style="list-style-type: none"> <li>• Department of Water and Environmental Regulation (DWER)</li> <li>• Department of Mines, Petroleum and Exploration (DMPE)</li> <li>• Department of Biodiversity, Conservation and Attractions (DBCA)</li> </ul>
Local Government	<ul style="list-style-type: none"> <li>• Shire of Ashburton</li> </ul>
Corporate	<ul style="list-style-type: none"> <li>• Harvest Road (owner of Minderoo Station; sub-leaseholder of Urala Station)</li> </ul>
Community	<ul style="list-style-type: none"> <li>• Thalanyji Group (Buurabalayji Thalanyji Aboriginal Corporation (BTAC))</li> </ul>

Stakeholder engagement is conducted on a regular or need basis:

- When potential or actual change occurs associated with the construction activities and have potential impacts on one or more stakeholders.
- Annually with leaseholders for Minderoo Station.
- When required and outlined in the relevant Access Agreements and statutory approvals.
- On a regular basis to maintain ongoing relationship with stakeholders.

### 6.2 Ongoing Consultation

AGIT keeps records of all flowline construction stakeholder consultation and landowner communication ( e.g. date, stakeholder consulted and outcomes). Any significant stakeholder concerns or issues are reported to DMPE through the Annual Environmental Report.

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## 7. References

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