

CHAPTER 12 - HERITAGE



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12. Heritage

This chapter provides a summary of the potential heritage impacts of the project. As no non-Aboriginal heritage items or places were identified within or near the project site, the chapter focuses on the potential impacts on Aboriginal cultural heritage and values. The chapter summarises the results of the Aboriginal cultural heritage assessment, describing the existing environment, identifying potential impacts, and providing measures to mitigate and manage the impacts identified.

The disturbance footprint has been refined to avoid most Aboriginal sites, including those located within and close to the disturbance footprint, which will be protected from inadvertent damage during construction. Construction activities would fully impact two Aboriginal heritage sites and partially affect four others. Measures are provided to manage the identified impacts.

Further information is provided in Technical Report 8 (Aboriginal cultural heritage assessment report).

12.1 Approach

12.1.1 Overview

Construction activities such as clearing, grading, and movement of construction vehicles and machinery, have the highest potential to impact heritage values within and in close proximity to the disturbance footprint.

An Aboriginal cultural heritage assessment has been carried out to assess the potential impacts in accordance with the SEARs and key guidelines and codes relevant to Aboriginal heritage assessments in NSW, including:

- *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011)
- *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW, 2010a)
- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010b).

A review of non-Aboriginal (historic) heritage was also undertaken to identify any non-Aboriginal heritage items with the potential to be impacted by the project.

An overview of the approach to the assessments is provided below. Further information on the methodology for the Aboriginal cultural heritage assessment is provided in sections 3 and 4 of Technical Report 8 (Aboriginal cultural heritage assessment report).

12.1.2 Methodology

Study area

The study area for the heritage assessments generally encompassed a 100-metre radius around the disturbance footprint. The study area did not include areas within the project site that are already approved for disturbance by the Narrabri Gas Project or the Hunter Gas Pipeline. Heritage assessments for these areas would be undertaken in accordance with the approval requirements for these projects.

The study area for the Aboriginal cultural heritage assessment is shown on Figures 1.6 and 1.7 in Technical Report 8. This area includes land currently subject to Native Title Claim (NC2011/006, NSD37/2019, Gomeroi People).

Key tasks – Aboriginal heritage assessment

The assessment involved:

- background research on the Aboriginal archaeological and historical context of the study area, including reviewing previous studies/investigations and searching the NSW Aboriginal Heritage Information Management System (AHIMS) database to identify existing registered Aboriginal sites
- a field survey involving surface ground inspections within the study area to confirm the presence of existing registered sites and identify any new sites, undertaken with representatives of the Gomerai Applicant and the Narrabri and Red Chief LALCs in March and September 2024, and January 2025
- consultation with the Aboriginal community (see below)
- assessing the potential for direct, indirect and cumulative impacts on Aboriginal heritage
- identifying measures to minimise impacts on Aboriginal heritage.

No test excavations have been undertaken within the study area as the disturbance footprint is generally assessed to have low potential for subsurface archaeological deposits. At this stage of construction planning, the disturbance footprint has avoided the two identified potential artefact deposits (PADs) (see section 12.2.1). The remainder of the study area was assessed to have low potential for subsurface archaeological deposits due to disturbances associated with existing land uses.

Aboriginal consultation

Consultation was undertaken in accordance with *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* and included:

- identifying RAPs
- providing project information and the proposed assessment methodology to the RAPs for review and comment in May 2023
- amending the assessment methodology, where appropriate, following responses received from the RAPs and providing a revised methodology in November 2023
- providing the draft Aboriginal cultural heritage assessment report to the RAPs for comment in May 2025 –
- holding a focus group meeting with RAPs to discuss and review the draft report and visit select Aboriginal heritage sites in May 2025.

Further information about consultation with Aboriginal stakeholders, such as the Native Title applicants and local Aboriginal land councils, is provided in chapter 5 (Engagement).

Key tasks – non-Aboriginal heritage

The assessment involved:

- desktop review to identify historic heritage items or areas present or likely to be present within the study area
- a field survey in March 2024 to determine the likelihood of historic heritage being present within the study area
- assessing the potential to impact historic heritage items or areas.

12.2 Existing environment

12.2.1 Aboriginal heritage

Aboriginal historical and landscape context

The study area is located within the traditional Country of the Kamilaroi (Gomerai) People, which extends from the northern end of Hunter Valley through the Brigalow Belt to Mungindi and the northern reaches of the Barwon River. The study area is also located within land subject to a native title claim by the Kamilaroi (Gomerai) People.

Use of the land in the study area by the Kamilaroi (Gomeri) People appears to have been balanced between cultivation (such as seed and tuber planting and harvesting, and controlled burning to replenish resources) and hunting of game, with a preference for the latter.

The flat to gently sloping landforms within and around the study area would have been hospitable to the Kamilaroi (Gomeri) People. The open forests and woodlands would have also provided some resources for Kamilaroi (Gomeri) People. However, due to the ephemeral nature of the watercourses, occupation may have been seasonal and limited to periods of increased rainfall. Larger, more consistent Aboriginal populations would have been present closer to the banks of more permanent water sources, such as the Namoi River.

Further information on the Aboriginal historical context is provided in sections 6.1 and 6.2 of Technical Report 8.

Aboriginal sites and places

Previously listed sites

The results of the AHIMS search identified five registered sites within the study area. Of these sites, four are located within the disturbance footprint, and one is located in close proximity (about three metres from) the disturbance footprint. These consist of artefact scatters and isolated finds (see Table 12.1).

Sites identified during the field survey

A total of 21 sites were identified within the study area during surveys. These include 15 new sites, five sites that were previously listed as noted above, and one isolated flake identified in a previous archaeological investigation at the Leewood facility.

The new sites, which include isolated finds and two artefact scatters with PADs, were mainly identified near drainage channels and on flat and gently sloping landforms. All sites were located within 500 metres of a watercourse with the exception of the isolated flake at the Leewood facility.

Eight of the identified sites are located within the disturbance footprint, and six are close to it – within 20 metres or less (see Table 12.1). One of the identified sites is located within the Pilliga East State Forest.

Table 12.1 Aboriginal sites within and close to (20 metres or less) the disturbance footprint

Site name	AHIMS ID	Site type	Location in relation to the disturbance footprint	Observed characteristics of Aboriginal sites within and close to the disturbance footprint
Previously listed sites				
Nindethana AS4	19-6-0260	Artefact scatter	Within the disturbance footprint	The previously recorded site was located; however, no artefacts were observed due to presence of grasses.
Nindethana AS6	19-6-0262	Artefact scatter	Within the disturbance footprint	An additional 16 artefacts were identified, including flaked pieces, cores and debitage. Materials included quartz, mudstone, chert, and chalcedony.
Nindethana IA6	19-6-0270	Isolated find	Within the disturbance footprint	One isolated flake manufactured of chert was observed within the fenced site extent.
Nindethana IA7	19-6-0271	Isolated find	Within the disturbance footprint	An additional 10 artefacts were identified, including artefacts manufactured of chert, quartz, mudstone, and volcanic materials.
Nindethana IA10	19-6-0274	Isolated find	3 m south	One isolated mudstone flake was observed within the fenced site extent.

Site name	AHIMS ID	Site type	Location in relation to the disturbance footprint	Observed characteristics of Aboriginal sites within and close to the disturbance footprint
New sites identified during the field survey				
NLP IF-1	19-6-0300	Isolated find	15 m north	Consists of a single flake made of chert.
NLP IF-2	19-6-0299	Isolated find	Within the disturbance footprint	Consists of a single piece of shatter made of mudstone.
NLP IF-3	19-6-0298	Isolated find	5 m south-east	Consists of a single flake made of chert.
NLP IF-7	19-6-0310	Isolated find	Within the disturbance footprint	Consists of a single flake made of mudstone.
NLP IF-9	19-6-0307	Isolated find	1 m south	Consists of a single chalcedony flake.
NLP IF-11	20-4-1193	Isolated find	Within the disturbance footprint	Consists of a single flake made of chert.
NLP OS-1	19-6-0294	Artefact scatter	Within the disturbance footprint	Consists of two proximal flake fragments made of chert and quartz.
NLP OS-2	19-6-0293	Artefact scatter with PAD	10 m south	Consists of more than 20 stone artefacts made of chert, quartz, chalcedony, mudstone and rhyolite.
NLP OS-3	19-6-0292	Artefact scatter with PAD	2 m west	Consists of eight stone artefacts, predominately made of quartz, with mudstone and quartzite also present.

Significance of identified sites

The Burra Charter (Australia ICOMOS, 2013) defines significance in terms of social or cultural, archaeological/scientific, aesthetic and historic values. The assessment of significance provides a guide for determining appropriate mitigation and management strategies.

Sites within the disturbance footprint were identified to have the following values as per the Burra Charter and the guidelines set out in the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH, 2011), as well as in consultation with RAPs:

- Social or cultural values – all sites have been provisionally assessed as having high cultural significance.
- Archaeological/scientific values – two areas of PADs at sites NLP OS-2 and NLP OS-3 have been provisionally identified as having moderate to high archaeological/scientific value. The sites are situated in elevated positions above ephemeral creek lines and have some potential to contain subsurface archaeological deposits. All other sites are identified as representative of artefact sites recorded elsewhere in the region and offer limited research potential. As such, they were assessed to have a low archaeological/scientific value.
- Aesthetic values – all sites consist of unremarkable stone artefacts scattered on the ground and are assessed as having low aesthetic values. Sites of this nature do not manifest themselves in the landscape and can be difficult for the layperson to interpret and understand.
- Historic values – all sites were identified as having no historic values as they are not associated with historically important persons, places or events.

Archaeological potential

The study area is considered to have a moderate to high archaeological potential (potential for Aboriginal sites to be present) in flat or very gently sloping landforms and close to watercourses. The likelihood of Aboriginal heritage sites occurring is influenced by a range of factors, including landform, presence of a water source, durability of the material evidence, and the level of disturbance.

There is reduced potential for long-term occupation distant from permanent water sources. However, higher order ephemeral streams such as Bibblewindi Creek may have attracted seasonal occupation. The previously recorded sites indicate that despite the distance from permanent water sources, low density artefact sites may still be present.

As noted above, the PADs at sites NLP OS-2 and NLP OS-3 have been provisionally identified as having moderate to high archaeological value. The proposed disturbance footprint has avoided these sites.

Other areas of the disturbance footprint were assessed to have low potential for subsurface archaeological deposits. This is attributed to existing disturbances associated with agricultural land uses.

Aboriginal places

No Aboriginal places declared under section 84 of the *National Parks and Wildlife Act 1974* (NSW), or Aboriginal places of heritage significance defined by the Standard Instrument - Principal Local Environmental Plan, are located within or near the disturbance footprint or project site.

Aboriginal cultural values

The Pilliga is culturally important to the Kamilaroi (Gomeri) People. The cultural values are associated with landscape, bush and medicine, as well as stories and the transfer of knowledge. The key to the understanding of cultural values of the Pilliga is the idea of the Pilliga as a living, breathing entity, defined not by the reaches of the forest itself but by the landforms and waterways associated with it. The Pilliga is seen as an extension of the stories and memories of the Aboriginal people that inhabited it.

The flora and fauna within the Pilliga hold great cultural importance to the Kamilaroi (Gomeri) People, being the source of life through the procurement of foods, medicines and materials. The cultural values of the Pilliga are largely centred around the life-giving properties of the forests, with water being the lifeblood of the land and the Kamilaroi (Gomeri) People. Landforms adjacent to water sources represent areas where intangible cultural heritage values, such as songlines, often exist.

Further information about cultural values identified to date is provided in section 4.3 of Technical Report 8 (Aboriginal cultural heritage assessment report).

In response to consultation, Santos has engaged an anthropologist to undertake a further cultural values assessment to deepen the understanding of intangible cultural values in the study area.

12.2.2 Non-Aboriginal heritage

Historical context

The Narrabri and Pilliga area was first explored during John Oxley's second expedition in the 1820s, as he travelled up the Macquarie River, through the Macquarie Marshlands and circling back through the southern areas of the Pilliga.

In the 1830s, Thomas Mitchell further explored the region, including the Namoi River and the northern outskirts of the Pilliga. Following Mitchell's expedition, squatting activities commenced in 1834. An increase in demand for agricultural produce occurred in the 1850s due to the rapid development in NSW and Victoria, largely due to the discovery of goldfields. Narrabri and neighbouring regions began growing wheat. Due to the clearing of forests necessary for wheat fields, timber became a secondary but highly valuable industry in the area. The new industries and open lands saw the popularity of the region grow, leading to the development of settlements around Narrabri and improvement of transport routes.

The prolonged drought in the 1870s and 80s resulted in development of the timber industry. Most of the Pilliga became State forests by 1917. By 1937, 17 areas were designated national forest and granted further protections. The timber industry continued supplying its goods in a far more controlled fashion until approximately 3,000 square kilometres of the Pilliga was recognised as a national park in 2005.

Listed heritage items

There are no listed non-Aboriginal heritage items located within or in close proximity to the project site. The nearest listed site is the remnants of an old school, located about 100 metres from the project site at its closest point. The remnants include the standing remains of a brick chimney structure and possible foundational sandstone blocks.

Field surveys did not identify any potential items of non-Aboriginal heritage within or close to the project site. As there are no items present, the potential for impacts on non-Aboriginal heritage is not considered further.

12.3 Construction impacts

12.3.1 Recorded Aboriginal sites and places

Direct impacts on Aboriginal sites can occur through the following processes:

- Direct harm or disturbance to all surface and/or subsurface features, which would generally result in a total loss of heritage value.
- Partial direct harm or disturbance, where there could be direct impacts on some of the surface and/or subsurface features, generally resulting in a partial loss of value/impact
- Potential inadvertent direct harm or disturbance (total or partial), where construction takes place adjacent or close to an item.

Indirect impacts on Aboriginal sites can occur as a result of vibration from nearby construction and settlement, and impacts on views to and from a site or place.

Design development to date has included ongoing refinement to minimise impacts on Aboriginal heritage within the study area, including refining the alignment and disturbance footprint to avoid identified sites as far as practicable. The majority of sites within the study area are not located in the disturbance footprint. In addition, although sites Nindethana IA6 and NLP IF-2 are located within the disturbance footprint, they are located close to the edge of the footprint and impacts can be avoided by temporary demarcation.

Other sites within the disturbance footprint are located such that it would be difficult to avoid direct impacts. At this stage of construction planning, it is anticipated that construction would directly impact the entirety of two sites:

- NLP IF-7
- NLP IF-11.

Impacts from vegetation removal and earthworks would result in a total loss of value at these sites, which would be managed by salvage as described in section 12.6.

Part of the following four sites would also be impacted:

- Nindethana AS4
- Nindethana AS6
- Nindethana IA7
- NLP OS-1.

Impacts from vegetation removal and earthworks would result in a partial loss of value at these sites, which would be managed in accordance with the Aboriginal cultural heritage management plan (see section 12.6). This would include salvage of impacted areas, and protection of areas that can be avoided.

The potential for inadvertent impacts on other sites close to the disturbance footprint would be minimised by implementing the measures provided in in section 12.6.

No sites with the potential to be indirectly impacted (as a result of vibration, subsidence or visual impacts) have been identified.

12.3.2 Areas with Aboriginal archaeological potential

Implementation of appropriate measures in the Aboriginal cultural heritage management plan (such as temporary demarcation) (see section 12.6) would minimise the potential for inadvertent impacts on the two PAD sites (NLP OS-2 and NLP OS-3) located close to the disturbance footprint as a result of the movement of machinery and/or construction vehicles.

12.3.3 Aboriginal cultural values

Construction activities have the potential to affect both tangible and intangible cultural values. Impacts on identified Aboriginal heritage items/sites within the disturbance footprint (see section 12.3.1) may affect cultural values associated with the items/sites, some of which are noted to have provisionally high social or cultural value.

The further cultural values assessment (noted in section 12.2.1) will enable a deeper understanding of intangible cultural values in the study area and potential impacts on these values. Santos will continue to consult with relevant Aboriginal stakeholders, including the RAPs, about the project and its operations in the region, including potential impacts on the Pilliga forests and cultural heritage items and values. Ongoing consultation, and implementing the mitigation measures provided in sections 12.6 and 15.6, are expected to support avoiding and managing impacts on cultural heritage values for Aboriginal stakeholders.

12.3.4 Areas within 500 metres of Bohena Creek

Constructing and operating the Narrabri Lateral Pipeline and Narrabri Gas Project involve areas within the Pilliga forests.

On 19 May 2025, the National Native Title Tribunal made a future act determination under the *Native Title Act 1993*, which permits the granting of Petroleum Production Leases for the Narrabri Gas Project subject to conditions, one of which restricts Santos from undertaking ground or surface disturbing work on or within 500 metres of Yarrie Lake or Bohena Creek, without the prior written consent of the Gomeroi Applicant.

It is proposed that construction of the Narrabri Lateral Pipeline would involve some ground or surface disturbing work within 500 metres of Bohena Creek, and that ground or surface disturbing works would not be undertaken within this area without first obtaining the written consent of the Gomeroi Applicant, or otherwise in accordance with the terms of any applicable condition that might be ultimately imposed upon the grant of the Petroleum Production Leases for the Narrabri Gas Project. This will be addressed via ongoing and coordinated engagement with the Gomeroi People, including through participation in the Aboriginal Cultural Heritage Working Group that will be assisting in the implementation of the Aboriginal Cultural Heritage Management Plan.

12.4 Operation impacts

No further impacts on Aboriginal cultural heritage are expected during operation. Operational and maintenance works would be restricted to areas previously disturbed during construction. Santos maintains an internal system that governs all ground disturbing activities prior to their commencement.

12.5 Decommissioning impacts

At project closure, the pipeline would be decommissioned as described in section 3.8.

Only limited areas would be subject to surface disturbance as a result of decommissioning, including the location of surface facilities and sections where cutting, capping and filling of the pipeline would be required. These areas would have been subject to disturbance during construction, and no additional disturbance areas with the potential to affect Aboriginal heritage are anticipated.

Measures to manage the potential for Aboriginal heritage impacts during decommissioning would be detailed in the Aboriginal cultural heritage management plan included in the decommissioning environmental management plan, which will be adapted from the CEMP. Further information about the decommissioning environmental management plan is provided in section 20.4.

With the implementation of the above measures, no impacts on heritage are expected.

12.6 Mitigation and management

12.6.1 Approach to mitigation and management

The project site has been located such that impacts on the majority of Aboriginal sites in the study area have been avoided. Opportunities to further avoid or minimise impacts on Aboriginal cultural heritage will be considered during detailed design and construction planning. This will include continuing to refine the design and construction planning to minimise and avoid direct impacts on Aboriginal sites as far as reasonably practicable, salvage, and implementing appropriate measures in the Aboriginal cultural heritage management plan (such as marking sites) to minimise the potential for inadvertent impacts.

An Aboriginal cultural heritage management plan will be prepared to provide the framework for managing and mitigating potential impacts on Aboriginal cultural heritage prior to and throughout construction and will include measures for site conservation, as well as methods for the management of impacted sites. The plan will also include procedures for unanticipated finds, including skeletal remains.

12.6.2 List of mitigation measures

Measures that will be implemented to manage potential impacts on heritage are listed in Table 12.2.

Table 12.2 Heritage mitigation measures

Impact/issue	Ref	Mitigation measures	Timing
Avoiding and minimising impacts on Aboriginal heritage	HE1	Design and construction planning will continue to be refined to avoid direct impacts on identified items/sites of Aboriginal heritage significance as far as practicable.	Design, pre-construction
Managing Aboriginal heritage and minimising impacts during construction	HE2	An Aboriginal cultural heritage management plan will be prepared and implemented. The plan will include measures to minimise the potential for impacts on Aboriginal heritage and measures to manage impacted sites, including: <ul style="list-style-type: none"> defining the location of Aboriginal sites within and close to the disturbance footprint, and marking sites on plans that will not be impacted as 'no-go' areas (mitigation measure HE3) a salvage methodology for sites that would be impacted (mitigation measure HE4) an unexpected finds procedure (mitigation measure HE5) measures to manage potential impacts on cultural values, informed by the cultural values assessment cultural awareness training for site workers. The plan will be prepared in consultation with the relevant Registered Aboriginal Parties.	Pre-construction, construction
	HE3	The following Aboriginal sites or parts of sites located within and close to the disturbance footprint will be delineated on site using high-visibility temporary demarcation to avoid inadvertent harm: <ul style="list-style-type: none"> Sites located within the disturbance footprint that will be avoided in their entirety: <ul style="list-style-type: none"> Nindethana IA6 (AHIMS site 19-6-0270) NLP IF-2 (AHIMS site 19-6-0299). Sites partially within the disturbance footprint to delineate those areas of the sites located adjacent to the disturbance footprint that will not be impacted: <ul style="list-style-type: none"> Nindethana AS4 (AHIMS site 19-6-0260) Nindethana AS6 (AHIMS site 19-6-0262) Nindethana IA7 (AHIMS site 19-6-0271) NLP OS-1 (AHIMS site 19-6-0294). 	Construction

Impact/issue	Ref	Mitigation measures	Timing
		<ul style="list-style-type: none"> • Sites close to the disturbance footprint: <ul style="list-style-type: none"> – NLP IF-1 (AHIMS site 19-6-0300) – NLP IF-3 (AHIMS site 19-6-0298) – Nindethana IA10 (AHIMS site 19-6-0274) – NLP OS-2 (AHIMS site 19-6-0293) – NLP OS-3 (AHIMS site 19-6-0292) – NLP IF-9 (AHIMS site 19-6-0307). 	
	HE4	<p>A salvage methodology will be developed to guide surface collection (salvage) of the following sites prior to construction in accordance with the recommendations in section 10.2.1 of Technical Report 8 (Aboriginal cultural heritage assessment report):</p> <ul style="list-style-type: none"> • Nindethana AS4 (AHIMS site 19-6-0260) • Nindethana AS6 (AHIMS site 19-6-0262) • Nindethana IA7 (AHIMS site 19-6-0271) • NLP IF-7 (AHIMS site 19-6-0310) • NLP IF-11 (AHIMS site 20-4-1193) • NLP OS-1 (AHIMS site 19-6-0294). 	Pre-construction
Unexpected heritage finds and human remains	HE5	<p>An unexpected finds and human skeletal remains procedure will be developed and included in the Aboriginal cultural heritage management plan to provide a consistent method for managing any unexpected Aboriginal or non-Aboriginal heritage items or human skeletal remains.</p>	Pre-construction
Decommissioning impacts	HE6	<p>An Aboriginal cultural heritage management plan will be included in the decommissioning environmental management plan and implemented during decommissioning to minimise potential impacts on Aboriginal cultural heritage. The plan will include, but not be limited to:</p> <ul style="list-style-type: none"> • defining the location of any Aboriginal sites within and close to the disturbance footprint for decommissioning activities • an unexpected finds procedure • cultural awareness training for site workers. 	Decommissioning