Prepared for
Ampol Australia Petroleum Pty Ltd
ABN: 17 000 032 128

AECOM

Kurnell Terminal SSD-5544 MOD-7

Appendix O - Social Impact Assessment

12 May 2025

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Client: Ampol Australia Petroleum Pty Ltd

ABN: 17 000 032 128

Prepared by

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Executive summary

The Kurnell Terminal ('the Site') is located on the southern side of Botany Bay, in Kurnell, New South Wales (NSW). In 2012, Ampol Refineries (NSW) Pty Ltd (Ampol) announced that the oil refinery and fuel terminal would be converted to a finished product terminal (the 'approved project'), ceasing refinery operations in 2014. Development consent was received to complete the approved project under State Significant Development (SSD) application reference 5544 (SSD-5544). Ampol has since modified SSD-5544 six times to complete the conversion and demolition works.

Ampol intends to consolidate operational infrastructure, remove redundant assets, and undertake remediation and grading. Completion of these works (the 'proposed modification', MOD-7) would continue the safe, viable, and reliable operation of the Kurnell Terminal, whilst preparing the land for future uses. The location within the Site that these works would occur is referred to as the 'Project Area.' These efforts not only align with industry best practices, but also contribute to the economic vitality of the Kurnell Peninsula and the broader community.

This Social Impact Assessment (SIA) has been prepared to support a modification to the existing state significant development consent (SSD-5544). The purpose of this SIA is to assess potential social benefits and adverse impacts of the proposed modification. This SIA has been prepared in line with the *Social Impact Assessment Guideline for State Significant projects* (DPIE, 2023a) (the 'SIA Guideline') and the *Technical Supplement – Social Impact Assessment Guideline for State Significant Projects* (DPIE, 2023b) (Technical Supplement).

Social locality

The social locality for the SIA has been defined using Australian Bureau of Statistics (ABS) suburb boundaries. The following suburbs were selected as they overlap with the Project Area and its surrounding area: Kurnell; Greenhills Beach; Cronulla; and Woolooware.

The social locality was developed based on likely direct and indirect areas of influence during construction and operation of the proposed modification. Two sub-areas have also been considered: the primary impact area (the suburb of Kurnell) and the secondary impact area (the remainder of the social locality).

Potential impacts and benefits

Key potential social impacts of the proposed modification during construction would include:

- Effects on local amenity, such as noise and vibration, air quality, and visual amenity
- Economic benefits from greater employment opportunities and increased spending with local businesses
- Cumulative social impacts due to concurrent construction of the proposed modification and other nearby projects, as well as potential operational cumulative noise impacts.

Once the proposed modification works are complete, the Site would continue to operate as described in the approval documentation for the approved project. Minimal ongoing operational adverse impacts are anticipated, with benefits including the consolidation of operational infrastructure to continue the safe, viable, and reliable operation of the Site.

Mitigation and management measures

Potential social impacts, such as noise and vibration, air quality, visual impacts, and traffic during construction would be largely managed through a Construction Environmental Management Plan (CEMP) that would be prepared for the proposed modification. The CEMP would detail the proposed approach to environmental management, monitoring, and reporting during construction.

In addition, the following mitigation measures would be applied to the proposed modification:

- Ampol would seek to employ construction workers from the local area, where possible
- Stakeholder engagement activities carried out during construction would be made accessible to a range of groups (such as residents and businesses) in the community.

1.0 Introduction

1.1 Overview

The Kurnell Terminal ('the Site') is located on the southern side of Botany Bay, in Kurnell, New South Wales (NSW) (Figure 1-1). In 2012, Ampol Refineries (NSW) Pty Ltd (Ampol) announced that the oil refinery and fuel terminal would be converted to a finished product terminal (the 'approved project'), ceasing refinery operations in 2014.

Development consent was received to complete the approved project under State Significant Development (SSD) application reference 5544 (SSD-5544). Ampol has modified SSD-5544 six times to complete the conversion and demolition works.

Currently, the operational infrastructure is primarily located in the northern part of the Site (Zones 1 and 1A, as shown in Figure 1-1). Other parts of Ampol's landholdings at Kurnell include largely vacant areas of previously developed land (Zones 2 and 3) and areas of undeveloped land containing extensive native vegetation (Zones 4 and 5).

Ampol intends to consolidate operational infrastructure, remove redundant assets, and undertake remediation and grading. Completion of these works (the 'proposed modification', MOD-7) would continue the safe, viable, and reliable operation of the Kurnell Terminal, whilst preparing the land for future uses. The location within the Site that these works would occur is referred to as the 'Project Area.'

A Modification Report has been prepared to support a modification application to SSD-5544. This *Technical report – Social impact assessment* is one of a number of technical documents that forms part of the Modification Report. In line with the requirements of Section 4.55 of the *Environmental Planning & Assessment Act 1979* (EP&A Act), the Modification Report provides the information required by Section 100 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).

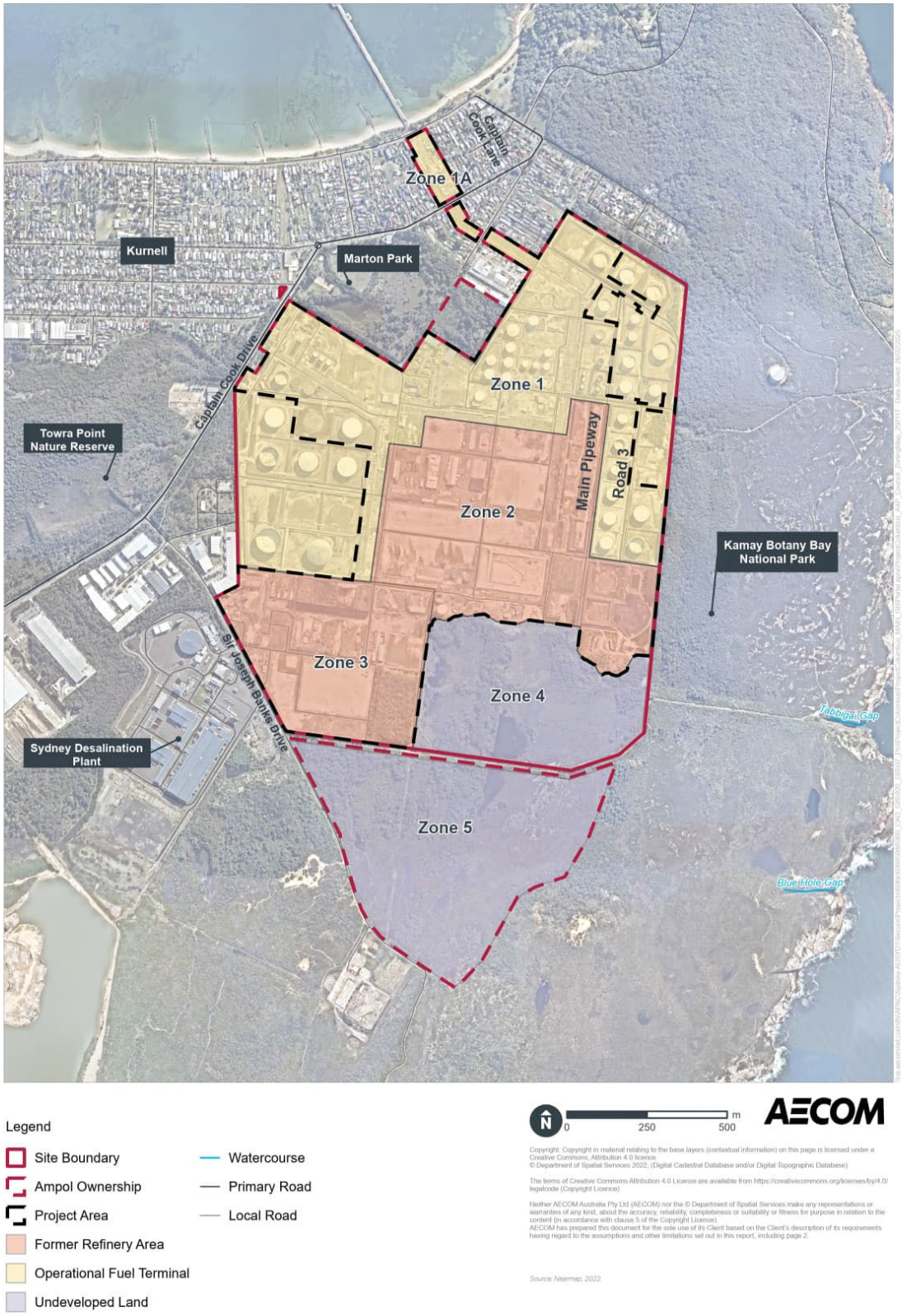

Figure 1-1 Ampol Kurnell Terminal (the Site)

1.2 The proposed modification

1.2.1 Key elements of the proposed modification

To support the continued safe, viable, and reliable operation of the Site and to facilitate the future use of the Site, the proposed modification works involve:

- **Stage 1 – Preparation works**: Preparing the Project Area for proposed modification works.
- **Stage 2 – Removal, relocation and/or augmentation of infrastructure**, including:
  - Relocation and/ or augmentation of firewater systems (FWS) and oily water sewer (OWS) systems and construction of new operational facilities, including replacement warehouses
  - Decommissioning and removal of non-operational assets, redundant structures and electrical assets
- **Stage 3 – Remediation**: Addressing legacy ground contamination, including asbestos-contaminated soil (ACS)
- **Stage 4 – Grading**: Landforming the Project Area following removal of infrastructure and ground remediation activities and preparing Zones 2 and 3 for future use
- **Stage 5 – Demobilisation**: Demobilisation of construction and remediation equipment.

These stages may occur sequentially or concurrently, depending on site requirements.

A summary of project elements requiring modification and how they relate to the approved project is provided in Table 1-1. The proposed modification works would be undertaken within the Project Area shown on Figure 1-2. All activities would adhere to the Kurnell Terminal permit to work system to ensure compliance with environmental and safety protocols.

Table 1-1 Modified project summary table

Stage	Element	Approved project	Modified project
Stage 1	Project Area	Project Area delineation	• Prepare the Project Area for the proposed modification works required under Stages 2, 3 and 4 and exclude other parts of the Site from proposed modification works.
Stage 2	Oily water sewer (OWS)	Maintain location in Zones 2 and 3	• Divert surface water runoff from potentially contaminated areas in Zone 2 to Zone 1 via new OWS interception pits/ lines until Stage 3 remediation is complete. • Divert potential leachate from ACS containment cell in Zone 2 to Zone 1 OWS system. • Remove all redundant OWS infrastructure.
	Fire-water systems (FWS)	Maintain location in Zone 2 and 3	• Augment or remove FWS infrastructure from Zones 2 and 3. • If removed from Zone 2, augment existing FWS in Zone 1 with a new firewater tank and pipework to service the terminal infrastructure. • Locate the new firewater tank and pumphouse within the FWS Relocation Area (specific siting selected during detailed design).
	Electrical assets	Maintain location in Zone 2 and 3	• Remove redundant electrical assets in Zones 2 and 3, including five substations.

Stage	Element	Approved project	Modified project
	Structures	Maintain location in Zone 2 and 3	• Demolish remaining structures in Zones 2 and 3. • Construct new 'fit for purpose' warehouse and oil spill equipment storeroom within Zone 1. • Construct new storage shed in Zone 1A.
Stage 3	Remediation	Removal of ACS from pipeways and either containment onsite or offsite disposal	• Remediate land in Zones 2 and 3 as necessary. • Remediate land in Zone 1 where infrastructure is relocated and/ or augmented as necessary. • Conduct remediation to a commercial/ industrial land use under the ASC NEPM (2013).
Stage 4	OWS	Maintain location in Zones 2 and 3	• Disconnect and remove remaining underground OWS lines from Zones 2 and 3, except for lines connecting to the ACS Containment Cell. • Install a new pump adjacent to the ACS containment cell. Two site options have been identified (specific siting selected during detailed design).
Stage 4	Grading	Grading following demolition of structures and removal of infrastructure across the Site and relevant Project Areas	• Construct new onsite detention (OSD) basins in Zone 3 to attenuate runoff and maintain pre-construction surface water flow rates. • Grade Zone 2 following Stage 2 and Stage 3 activities to manage stormwater and prepare for future land uses. • Grade Zones 1 and 3 as necessary.
Stage 5	Demobilisation	Demobilisation of construction equipment.	• Demobilisation of construction equipment.

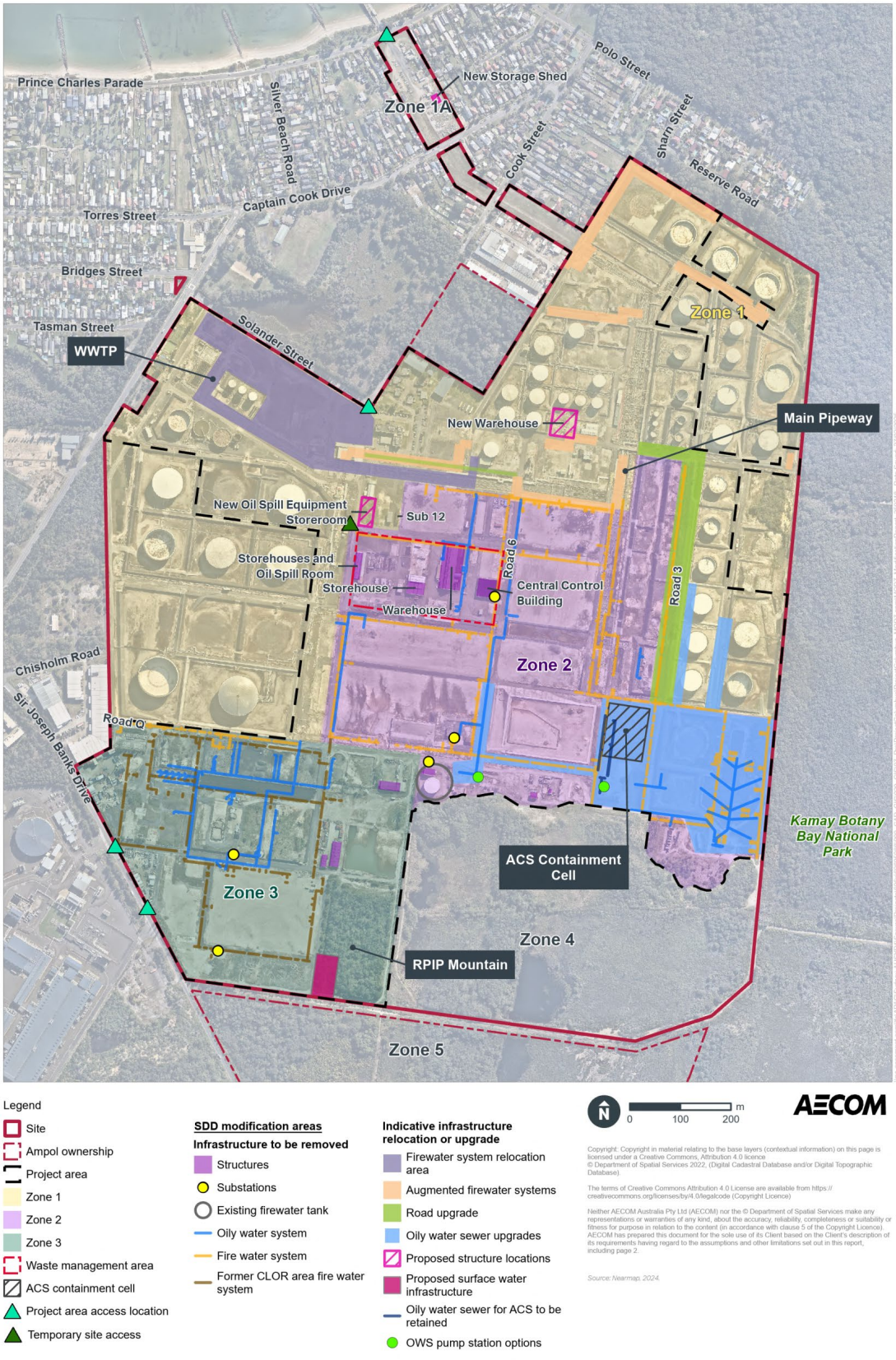

Figure 1-2 The proposed modification

Once the modification works are complete, the Site would continue to operate as described in the approval documentation for the approved project and would be consistent with the development consent for SSD-5544.

In line with Figure 1-2, relocated equipment would operate in their new locations.

1.2.2 Construction timeline and equipment

Works are planned to commence in August 2025 and would continue for about 12 months for infrastructure removal scopes and up to four years for remediation works in accordance with the schedule in Table 1-2.

In line with Condition C18 of SSD-5544, construction works would comply with following hours:

- Monday to Sunday – 7am to 10pm.

High noise generating construction works, including works within the Eastern Right of Way (Zone 1A), would be confined to less sensitive times of the day and not undertaken on Sundays, public holidays, or outside of the hours 7am and 6pm Monday to Saturday (in line with Condition C19).

Construction works outside of the work hours identified above would only be undertaken in the following circumstances (in line with Condition C20):

- Works that are inaudible at nearest sensitive land receivers
- Works that are consistent with Ampol's existing maintenance procedures and are in accordance with the existing Environmental Protection Licence (No. 837) (EPL)
- Works agreed to in writing by the Environment Protection Authority (EPA) or the Department of Planning, Housing, and Infrastructure (DPHI)
- For the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons
- Where it is required in an emergency to avoid the loss of lives, property and/ or to prevent environmental harm.

Biopiling blowers may operate on a 24 hour basis in identified Biopiling and Stabilisation Areas (see Figure 4-2 of the Modification Report). Given their location within the Site, noise from the blowers would be inaudible at the nearest noise sensitive receivers.

Table 1-2 Proposed modification program

Stage	Timeframe
Stage 1 – Preparation works	August 2025
Stage 2 – Removal and/or relocation of infrastructure[1]	August 2025 – August 2026
Stage 3 – Remediation	August 2025 – July 2029
Stage 4 – Grading	Zone 2: August 2026 – December 2026 Zone 3: up to July 2029
Stage 5 – Demobilisation	September 2026 (for all works except remediation)
[1] Construction in Zone 1A expected to last 3 months.	

Plant and equipment that would be used to deliver the modification works is shown in Table 1-3.

Table 1-3 Indicative plant and equipment

Plant/equipment	Maximum number required per day (all stages except Stage 3)	Maximum number required per day (Stage 3)
Front end loader	6	6
20 t excavator	6	6
Dump truck	6	6
Grader (up to 7 m blade)	-	4
Large crane (60 t)	4	-
Elevated work platform	6	-
Franna crane (30 t)	6	-
Cement truck	6	-
Bobcat	6	2
Water cart	6	6
Concrete crusher	2	-
Telehandler	6	-
Truck and dog (offsite disposal)	6	6
Truck and dog (imported fill)	-	12
Generator	2	2
Biopiling blower	-	8

1.2.3 Other relevant elements of the proposed modification

Operational activities

The FWS would be relocated within the FWS Relocation Area in Zone 1, including a new firewater tank and pipework to allow it to service the terminal infrastructure, with specific siting selected during detailed design.

For the purpose of assessment in this Social Impact Assessment (SIA), two indicative locations have been considered for the relocation of the FWS, which have been selected based on optioneering completed in the concept design phase in consultation with key stakeholders, including firewater and process safety subject matter experts. The location of each option is shown Figure 1-3.

Figure 1-3 Relocated FWS – Indicative locations

Operation and maintenance of the relocated FWS would be consistent with existing operations. The FWS would include three diesel engines used to operate FWS pumps housed within an enclosed area. Regular maintenance testing of the pumps would include:

- Operation of all three pumps simultaneously for approximately half an hour once a month
- One annual maintenance test conducted over a two hour period once per year.

1.3 Purpose of this report

This SIA is one of a number of technical documents that forms part of the Modification Report. The purpose of this report is to understand potential impacts of the proposed modification upon social receptors.

2.0 Assessment methodology

2.1 Relevant legislation and guidelines

2.1.1 Legislative context

The assessment of social impacts is a key element of environmental impact assessment under both Commonwealth and NSW environmental planning legislation. In this context, 'Environment' is defined to include the social environment.

The statutory definition of the environment at both Commonwealth and State level is provided in the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) respectively. Section 528 of the EPBC Act defines the environment as including:

*a. ecosystems and their constituent parts, including **people and communities**; and*

b. natural and physical resources; and

c. the qualities and characteristics of locations, places and areas; and

d. heritage values of places; and

*e. the **social**, economic and cultural aspects of a thing mentioned in paragraph (a), (b), (c) or (d).*

Similarly, Part 1 of Section 1.4 of the EP&A Act defines the environment as "*all aspects of the surroundings of humans, whether affecting any human as an individual or in his or her social groupings*."

Direct and indirect social impacts of the proposed modification, including those relating to amenity, the aesthetic qualities of the local environment, and local heritage values, are assessed in Section 5.0 (Assessment of construction impacts) and Section 6.0 (Assessment of operational impacts) of this SIA.

2.1.2 Relevant guidelines

The *Social Impact Assessment Guideline for State Significant projects* (DPIE, 2023a) (the 'SIA Guideline') seeks to provide a consistent framework and approach to the assessment of social impacts of state-significant projects in NSW. This report has been prepared referencing the principles outlined in the SIA Guideline, and is aligned with the SIA Guideline's main categories of social impact consideration:

- **Way of life**, including how people live, how they get around, how they work, how they play, and how they interact each day
- **Community**, including composition, cohesion, character, how the community functions, resilience, and people's sense of place
- **Accessibility**, including how people access and use infrastructure, services and facilities, whether provided by a public, private, or not-for-profit organisation
- **Culture**, both Aboriginal and non-Aboriginal, including shared beliefs, customs, practices, obligations, values and stories, and connections to Country, land, waterways, places, and buildings
- **Health and wellbeing**, including physical and mental health, especially for people vulnerable to social exclusion or substantial change, psychological stress resulting from financial or other pressures, access to open space, and effects on public health
- **Surroundings**, including ecosystem services such as shade, pollution control, erosion control, public safety and security, access to and use of the natural and built environment, and aesthetic value and amenity
- **Livelihoods**, including people's capacity to sustain themselves through employment or business
- **Decision-making systems**, including the extent to which people can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms.

The SIA Guideline also sets out principles to guide an evidence-based approach to SIA. An overview of these principles and how they have been considered in this SIA is provided in Table 2-1.

Table 2-1 Principles to guide the SIA (identified in the SIA Guideline)

Principle and description	Consideration in this SIA
Action-oriented – Defines specific actions to deliver practical, achievable, and effective outcomes for people	Section 8.0 (Management of impacts) of this SIA identifies the mitigation and management measures proposed to address potential social impacts of the proposed modification. These measures have been developed to be action-oriented, consistent with best practice, and achievable.
Adaptive – Establishes systems to respond to new or different circumstances to support continuous improvement	The mitigation and management measures proposed in Section 8.0 (Management of impacts) have been developed to respond to differing circumstances as the proposed modification progresses, and to support continuous improvement in community outcomes.
Culturally responsive – Develops culturally informed approaches and methodologies to ensure Aboriginal and culturally diverse communities are engaged appropriately, and their perspectives, insights, and feedback are valued	This SIA has assessed potential social impacts in relation to the connection and value placed on the land by local Aboriginal people in Section 5.4 and Section 6.4.
Distributive equity – Considers how different groups will experience social impacts differently (particularly vulnerable and marginalised groups, future generations compared with current generations, and differences by gender, age, and cultural group)	Secondary research and the assessment of impacts in this SIA has been undertaken to understand and properly consider people from a broad range of backgrounds. Potentially vulnerable and marginalised groups have been identified and considered as part of this assessment (refer to Section 4.1.2.)
Impartial – Uses fair, unbiased research methods, and follows relevant ethical standards	The methodology and execution of secondary research and impact assessment has been undertaken to meet the requirements of the SIA Guideline. This report has been prepared by appropriately qualified environmental impact assessment and SIA practitioners (see Annexure C: Assessment review questions).
Inclusive – Seeks to hear, understand, respect and document the perspectives of all likely affected people. Uses respectful, meaningful and effective engagement activities tailored to the needs of those being engaged (e.g. being culturally sensitive and accessible)	The exhibition of the Modification Report would allow for people to express their support or objection, by providing comments on the proposed modification and how it impacts on their lives. Submissions from the community would be responded to within the Submissions Report and considered by DPHI in its assessment of the proposed modification.
Integrated – Uses and references relevant information and analysis from other assessments to avoid duplication. Supports effective integration of social, economic, and environmental considerations in decision-making	The SIA has referenced inputs from technical assessments prepared for other parts of the Modification Report, as well as relevant data and information from the Australian Bureau of Statistics (ABS) to identify and assess social impacts of the proposed modification (refer to Section 4.0).
Life-cycle focus – Seeks to understand likely impacts (including cumulative impacts) at all stages, from pre-construction to operation commencement and post closure	Relevant social impacts have been assessed for construction and operational phases of the proposed modification. The assessment has also included consideration of cumulative impacts (refer to Section 7.0).

Principle and description	Consideration in this SIA
Material – Identifies which likely social impacts matter the most for people and/ or pose the greatest risk/ opportunity to those expected to be affected	The impact assessment presented in this SIA has used the methodology specified by the SIA Guideline to consider their likelihood and magnitude. By definition, only impacts that are likely to occur (and hence are material and/ or pose the greatest risk/ opportunity) have been included in the assessment.
Precautionary – If there are risks of serious or irreversible environmental damage (including harm to people), avoids using any limits on full scientific certainty as a reason for postponing measures to prevent environmental (including social) degradation	Section 8.0 identifies the mitigation and management measures proposed to address the potential social impacts of the proposed modification. These measures have been developed to be precautionary based on the technical assessment presented and are consistent with current best practice measures for similar projects.
Proportionate – Ensures the scope and scale of the SIA corresponds to the scope and scale of the likely social impacts	This SIA has been prepared as a 'minor' scale assessment, in accordance with the SIA Guideline. This is based upon the relatively minor scope of the proposed modification, as well as its potential to result in minor social impacts, positive and negative, both within and beyond the social locality (refer to Section 2.4 for discussion on social locality).
Rigorous – Uses appropriate, accepted social science methods and robust evidence from authoritative and trustworthy sources	This SIA has been prepared using data from the ABS. Data has been gathered from this source using accepted social science methods. Additional inputs have been derived from other technical assessments within the Modification Report. All of these sources are considered to be trustworthy and authoritative.
Transparent – Explains, justifies, and makes available information, methods, and assumptions so that people can see how their input has been considered	The impact assessment methodology, baseline data, and other information sources considered in the SIA have been clearly detailed in Section 2.0 (Assessment methodology) and Section 4.0 (Existing environment) with impacts discussed in detail in Section 5.0 (Assessment of construction impacts) and Section 6.0 (Assessment of operational impacts).

2.1.3 Strategic context

The proposed modification is consistent with a number of national, state, and local strategic plans that provide support for the proposed modification. These strategies, policies, and plans have informed and influenced the objectives and design development of the proposed modification since its inception.

Section 2 (Strategic context) and Section 4 (Statutory context) of the Modification Report outline the strategic and statutory context of the proposed modification, except for consideration of the Community Strategic Plan (CSP) for the Sutherland Shire Council Local Government Area (LGA). This plan is considered below.

Sutherland Shire Council CSP 2022 to 2032 (Sutherland Shire Council, 2022) considers the changing needs for the LGA in four key objectives that holistically set out the strategic plan for the community moving into the future. These include their social, economic, and environmental objectives as well as demonstrating a robust civic leadership.

Within the environmental objectives identified by Sutherland Shire Council in the CSP, individual goals have been identified which aim to address climate change, protect the natural environment, and promote sustainability. The proposed modification would generally be consistent with the objectives of the CSP by:

- Optimising safe and sustainable operations at the Site

- Providing employment opportunities in the growing industries
- Retaining industrial land uses at the Site
- Facilitating future land uses at the Site.

2.2 Key assumptions

Key assumptions applied to this SIA include the following:

- Socio-economic data available for each suburb within the social locality (refer to Section 2.4) accurately reflect the community's demographic profile
- The assessment relies on the findings of other technical studies in the Modification Report
- The SIA has been informed by broad stakeholder engagement relating to the proposed modification, and the engagement is reflective the of the community's views.

2.3 Methodology

This SIA has been prepared to understand the social environment and context within and around the proposed modification's social locality (refer to Section 2.4), and considers its impacts in a broad, inclusive, and culturally sensitive manner. In doing so, the requirements of the SIA Guideline have been closely integrated throughout. The main phases of the assessment and their constituent components are outlined below:

- Phase 1: Scoping and initial assessment, which involved:
  - Defining the social locality of the proposed modification and gaining an understanding of the characteristics of the communities within (refer to Section 2.4)
  - Undertaking an initial scoping assessment to identify the key social impacts to be considered in the SIA, and the appropriate level of assessment (refer to Section 2.5)
- Phase 2: Social impact assessment, which involved:
  - Completion of a baseline study to understand the social context of the area without the proposed modification, based on the ABS 2021 Census and other relevant data (refer to Section 2.5.2)
  - Predicting and analysing potential social impacts and benefits of the proposed modification, within each relevant social impact category of the SIA Guideline (refer to Section 2.1.2 for an overview of these categories). This has been informed by other technical assessments including traffic and transport, noise and vibration, heritage, and air quality
  - Evaluating the potential significance of social impacts through a risk-based assessment which defines the likelihood and magnitude of each impact (refer to Section 2.7)
  - Identification and assessment of potential cumulative social impacts
  - Development of mitigation measures for identified negative social impacts, and opportunities to enhance social benefits
  - Evaluation of the potential residual social impacts, following the application of proposed mitigation measures.

Further detail on key aspects of the methodology is provided in the following sections.

This SIA has been prepared considering the multiple demographic, cultural and social groups which exist within the social locality (refer to Section 2.4). The impact assessment has been informed by secondary data from the ABS 2021 Census and community consultation for the proposed modification (detailed in Section 3.0 (Consultation)). The potential for different groups to experience different impacts has been considered throughout.

2.4 Social locality

The social locality for the proposed modification has been developed with a view to the likely direct and indirect areas of influence associated with the construction and operation of the proposed modification.

Noting the potential for multiple and/or overlapping impacts, this assessment has considered the following sub-categories of the social locality:

- **Primary impact area**: The area immediate to the Project Area. This area would be most likely to experience the strongest and/ or greatest number of impacts (see Figure 2-2)
- **Secondary impact areas**: These are places surrounding the primary impact area that would be expected to experience some degree of social impact (see Figure 2-2)
- **Region**: This is defined by the overall social locality for this report and represents the place where some of the broader social and economic impacts of the proposed modification are likely to be experienced (see Figure 2-1). Although this area would experience fewer direct impacts when compared to the primary and secondary impact area, the Region is still likely to experience some direct and indirect impacts from the proposed modification. For this report, the Region includes the four ABS State Suburbs nearest to the Site: Kurnell, Greenhills Beach, Cronulla, and Woolooware. These suburbs are all located in the Sutherland Shire Council LGA.

Data for the social locality have been collected at the level of ABS suburb. This was done to allow for the assessment to target the communities mostly likely to be directly affected by the proposed modification. Demographic data for NSW as a whole have also been provided for context. Annexure B (Social baseline data) presents the data used.

Despite the limits of the defined social locality, data for social infrastructure (see Section 4.3) have been collated from within a 2 km radius of the Project Area.

Figure 2-1 Region and suburbs in the proposed modification's social locality

Figure 2-2 Primary and secondary impact area

2.5 Scoping and initial assessment

2.5.1 Issued scoped into the SIA

An initial scoping assessment was undertaken to identify the key social impacts to be considered in the SIA, and the key methods and data sources to investigate these impacts. This also involved determining the level of assessment required against the SIA Guideline.

Identification of the potential social impacts involved:

- A review of the environmental scoping assessment (Section 7.1 of the Modification Report), which outlined the proposed modification's expected social impacts
- Identification of the activities during construction and operation of the proposed modification that would have the potential to result in social impacts.

Given the minor scale of the proposed modification and its potential to result in a small range of social impacts, a 'minor' scale SIA report was identified as being required.

Key impacts and research methods identified through the scoping process are outlined in Table 2-2.

Opportunities for refinements to avoid and minimise potential environmental impacts, including social impacts, have also been identified during design development.

Table 2-2 Key impacts identified for further assessment in the SIA

Key activities with potential to produce social impacts	Key scoped impacts (positive and negative)	Proposed methods and data sources to investigate impacts
Construction		
• Construction works, including: - Stage 1 – Preparation works - Stage 2 – Removal and/or relocation of infrastructure - Stage 3 – Remediation - Stage 4 – Grading - Stage 5 – Demobilisation • Presence of construction traffic (heavy and light vehicles) • Presence of construction workforce.	**Way of life** • Temporary disruptions to the way in which residents, visitors, and road users travel within the local area, generally associated with increased number of construction vehicles in the local road networks (negative) **Community** • Potential impacts to the makeup and identity of the local community may arise from the introduction of significant numbers of new construction workers to the social locality, which may be of concern to existing residents (negative) • Presence of construction vehicles, equipment, and workers affecting people's sense of place within their social locality (negative) **Surroundings** • Adverse impact to the way in which residents and visitors experience their surroundings due to temporary reductions in local amenity (traffic, noise and vibration, air quality, and landscape and visual impacts) (negative) **Culture** • Potential impacts to elements of the landscape which are valued by Aboriginal communities, which could lead to cultural or spiritual loss for these communities (negative) • Removal of buildings within the local heritage listing on the Site (Australian Oil Refinery, A2524), resulting in impacts to cultural elements which are valued by the community (negative) **Livelihoods** • Adverse impacts to business amenity which could disrupt business practices and/or make some businesses less attractive for customers to businesses (negative)	• Use of secondary data, including ABS Census data for key social indicators, NSW Department of Planning and Environment (DPE) population growth data to inform the social baseline for the proposed modification (refer to Section 2.5.2) • Use of consultation outcomes (refer to Section 3.0).

Key activities with potential to produce social impacts	Key scoped impacts (positive and negative)	Proposed methods and data sources to investigate impacts
	• Benefits to retail and construction-related businesses associated with the presence of construction workers and activities, improving the livelihoods of these businesses (positive) • Economic benefits to the social locality during construction associated with increased expenditure at local businesses and employment opportunities, resulting in benefits to livelihoods for local businesses and their employees (positive) **Cumulative impacts** • Potential for combined and/or consecutive social impacts on the community in relation to the construction of other nearby projects (negative)	
Operation		
Consolidation of operational infrastructure in Zone 1 to support continued operations of the Kurnell Terminal.	**Way of life** • Changes to the way people go about their daily lives following completion of the proposed modification (negative) **Surroundings** • Adverse changes in surroundings associated with the operation of the proposed modification (negative) **Culture** • Potential impacts to elements of the landscape which are valued by Aboriginal communities (negative) • Potential impacts to elements of historic heritage significance (negative) **Livelihoods** • The broader economic benefits of the proposed modification would likely result in flow on effects for livelihoods within the social locality (positive) • Economic benefits to the social locality during construction associated with increased expenditure at local businesses and employment opportunities, resulting in benefits to livelihoods for local businesses and their employees (positive)	• Use of secondary data, including ABS Census data for key social indicators, NSW Department of Planning and Environment (DPE) population growth data to inform the social baseline for the proposed modification (refer to Section 2.5.2) • Use of consultation outcomes (refer to Section 3.0).

Key activities with potential to produce social impacts	Key scoped impacts (positive and negative)	Proposed methods and data sources to investigate impacts
	Cumulative impacts • Potential for combined and/or consecutive social impacts on the community in relation to the operation of other nearby projects (negative)	

2.5.2 Issues scoped out of the SIA

Given the discrete physical extent and somewhat isolated nature of the proposed modification on the Kurnell Peninsula, as well as the existing industrial context and historic disturbance, the following categories have been excluded from the SIA.

Health and wellbeing

As shown in Figure 1-1, the Project Area is bordered by Kamay Botany Bay National Park to the south and east, Captain Cook Drive to the north-west, and St Joseph Banks Drive to the south west. Marton Park, located adjacent to the northern boundary of the Site, includes both a recreational park and a wetland.

Sensitive receivers such as schools may experience noise and dust emissions during construction, and affect user's health and wellbeing. Kurnell Public School is located around 500 m north west of the Site. It is separated from the proposed modification by homes and businesses. Given the distance and nature of the industrial activities that currently operate between the Site and Kurnell Public School, no changes to health and wellbeing are anticipated. The proposed modification would not affect access into, or out of, Kurnell Public School and is not anticipated to result in broader economic impact.

Nearby residents may experience noise, traffic, and dust emissions, which may impact on people's wellbeing. Noise mitigation would be required to address noise impacts, where exceedances are identified, as per the Noise and Vibration Impact Assessment (Appendix N of the Modification Report). Residential receivers that are predicted to be 'highly affected' would be eligible for additional mitigation measures (refer to Section 6.0 (Management of Impacts) of the Modification Report).

An assessment of impacts upon the road network is provided in the Traffic and Transport Impact Assessment (Appendix L of the Modification Report). The construction works would not affect access to health services, including emergency access.

The surrounding landscape along Captain Cook Drive is subject to existing noise, traffic, and dust emissions. Given this context and the nature of the proposed modification, the construction and operation of the proposed modification is not expected to result in additional health and wellbeing impacts above those currently experienced.

Property

The Project Area is located within Kurnell Terminal, which is wholly owned by Ampol. The allotments within the Project Area are listed in Table 2-3.

Table 2-3 Allotments within the Project Area

Zone	Lots/ DP
Zone 1 (operational fuel terminal)	Lot 25 (DP 776328), Lots 56, 57, and 62 (DP 908), Lot 1 (DP 1044690), Lots 283 and 570 (DP 752064), Lot 1 (DP 132055)
Zone 1A (eastern right of way)	Lots H, J, and K (DP 362655), Lot D, F, and G (DP 361103), Lots 43-46, 77-79, 122-125 (DP 8135), Lot B (DP 338897)
Zone 2 (former refinery process areas)	Lot 25 (DP 776328), Lots 56, 57, and 62 (DP 908), Lot 283 (DP 752064)
Zone 3 (former Caltex lubrication oil refinery)	Lot 1 (DP 215819), Lots 1 and 2 (DP 126647), Lots 1 and 2 (DP 215818)

There would be no property acquisition or direct impacts to public or private property from the construction of the proposed modification.

Crime, safety, and security

The Project Area is already wholly secured with fencing and access is restricted and controlled by 24 hour security monitoring. No changes to crime in the local area, the safety of workers within the Site and the local area, or the overall security of the Site would be expected during construction or operation of the proposed modification.

Utilities and digital access

Residents and businesses are dependent on public utilities, particularly the supply of electricity, telecommunications, water, and sewage infrastructure, for the conduct of a wide variety of daily activities. Temporary disruptions to utilities, whether planned or unplanned, have the potential to adversely affect the ability of the community to access and use infrastructure. Section 2.2.2 of the Modification Report outlines the existing utilities connected to the Site. In summary, the Site is services via potable water mains and underground electricity transmission connections, and surface water flows are managed through onsite facilities.

Public utilities are not anticipated to be affected during the proposed modification. Services would be connected for construction, and portable generators would be used where this is not available. Prior to any intrusive works, service locating would be undertaken across the Project Area to confirm the location of and identify active services. If necessary additional service investigations would be completed ahead of ground disturbance works commencing alongside consultation with utility companies and Ampol staff. The Surface Water and Flooding Impact Assessment (Appendix J of the Modification Report) outlines the capacity of the local network to take in additional surface water.

Decision making systems

A Community and Stakeholder Engagement Plan (CSEP) has been prepared for the wider Kurnell Land Development Project, which includes the proposed modification. The proposed modification would be located on land that is not accessible to the public. Its presence would be consistent with the industrial nature of the surrounding area and would not affect the ability of the community to have input into decisions and matters that affect them.

In alignment with Ampol's strategy and overall transition of the Site, clear and consistent communication with the local community is paramount in valuing the needs of the community and their connection with the surrounding environment. Providing this is maintained, no impacts to decision making systems are expected.

Access to accommodation

Access to accommodation refers to short-term accommodation availability for tourists and visitors to the area, and long-term rental accommodation availability for residents.

A review of the existing construction skillsets in the social locality and surrounding commutable area was undertaken for this SIA and is described in full in Section 4.6 (Construction workforce and industry). The review indicated that there is a strong presence of existing skills and capabilities located within a 'reasonable commutable distance' that could be used to deliver the proposed modification, most notably within the Sutherland Shire LGA.

The proposed modification is expected to support an indicative peak construction workforce of up to 100 full time equivalent jobs (direct employment). The construction workforce would likely be sourced from across the local area and broader region, with a preference for local employees, where practicable. As such, it is not expected that any construction workers would relocate to the area, and there would be no impact on access to accommodation (rentals, short stay or hotels). On the worst-case basis that a small number of workers relocate to the region, it is considered that there is sufficient capacity of existing short-term and long-term rentals available within a 'reasonable commutable distance.'

Community (operational assessment only)

Community refers to both community cohesion and community values and sense of place. Community cohesion refers to the connections and relationships between individuals and their neighbourhoods. Infrastructure that creates a physical or psychological barrier between communities may produce a real or perceived barrier, reducing the capacity for community cohesion, including social and economic interaction. The values of a community contribute directly to their sense of place and belonging. These values can change over time due to numerous internal or external influences, including changes in amenity or access, amongst others.

The operation of the proposed modification is not anticipated to result in a change to the demographic profile of the social locality, as the operation of the proposed modification would not require changes to operational staff numbers at the Site. The proposed modification would not enable other changes that may induce substantial demographic changes. The proposed modification is not expected to affect social cohesion or the community's sense of place as it is located within an existing and long running industrial area and would be highly consistent with the existing industrial nature of the terminal site.

2.6 Social baseline study

The social baseline describes the social context without the proposed modification. It profiles the existing social characteristics, conditions, and relevant trends, such as local demographics, potentially vulnerable and marginalised groups, social infrastructure, business and transport services, and community values within the social locality.

Preparation of the social baseline study involved the following:

- Establishing the strategic context of the social locality, as set out in relevant plans and strategies (refer to Section 2.1.3)
- Collating ABS data for relevant social indicators from the 2021 Census. These have been analysed at the suburb level and compared to statistics at a state level, where relevant
- Consideration of accommodation in relation to the anticipated construction workforce within the social locality
- Identification of potentially vulnerable groups in the community based on ABS data
- Review of existing construction skillsets in the social locality and surrounding commutable area, and local construction workforce outcomes on other regional infrastructure projects.

2.7 Evaluation of the significance of social impacts

The social impacts of the proposed modification are likely to vary broadly depending on the characteristics of the receptor and the nature of the impact. The significance of each potential social impact has been assessed as a function of the magnitude of the impact and the likelihood of the impact occurring. This approach has been used in this SIA to align with the SIA Guideline.

The potential magnitude and likelihood of each impact has been determined based on the definitions in Table 2-4 and Table 2-5. In determining the magnitude, the following have been considered:

- Extent – Who specifically is expected to be affected (directly, indirectly, and/or cumulatively), including any vulnerable people? Which location(s) and people are affected? (e.g. near neighbours, local, regional, future generations).
- Duration – When is the social impact expected to occur? Would it be time-limited (e.g. over particular proposed modification phases) or permanent?
- Severity or scale – What is the likely scale or degree of change? (e.g. mild, moderate, severe)
- Sensitivity or importance – How sensitive/ vulnerable (or how adaptable/ resilient) are affected people to the impact, or (for positive impacts) how important is it to them? This might depend on the value they attach to the matter; whether it is rare/unique or replaceable; the extent to which it is tied to their identity; and their capacity to cope with or adapt to change.
- Level of concern/ interest – How concerned/ interested are people? Sometimes, concerns may be disproportionate to findings from technical assessments of likelihood, duration and/ or intensity.

Table 2-4 Magnitude level definitions (DPIE, 2023b)

Magnitude level	Meaning
Transformational	Substantial change experienced in community wellbeing, livelihood, infrastructure, services, health, and/or heritage values; permanent displacement or addition of at least 20% of a community.
Major	Substantial deterioration/ improvement to something that people value highly, either lasting for an indefinite time, or affecting many people in a widespread area.
Moderate	Noticeable deterioration/ improvement to something that people value highly, either lasting for an extensive time, or affecting a group of people.
Minor	Mild deterioration/ improvement, for a reasonably short time, for a small number of people who are generally adaptable and not vulnerable.
Minimal	Little noticeable change experienced by people in the locality.

Table 2-5 Likelihood level definitions (DPIE, 2023b)

Magnitude level	Meaning
Almost certain	Definite or almost definitely expected (e.g., has happened on similar projects)
Likely	High probability
Possible	Medium probability
Unlikely	Low probability
Very unlikely	Improbable or remote probability

The assessment matrix in Table 2-6 has been used to determine the significance of each social impact, as a function of the potential likelihood and magnitude levels.

Table 2-6 Social impact significance matrix (DPIE, 2023b)

		Magnitude level				
		Minimal	Minor	Moderate	Major	Transformational
Likelihood	Almost certain	Low	Medium	High	Very high	Very high
	Likely	Low	Medium	High	High	Very high
	Possible	Low	Medium	Medium	High	High
	Unlikely	Low	Low	Medium	Medium	High
	Very unlikely	Low	Low	Low	Medium	Medium

3.0 Consultation

Ampol has carried out various consultation activities to inform the proposed modification. A Community and Stakeholder Engagement Plan (CSEP) has been developed for the wider Kurnell Land Development Project, which includes the proposed modification. The CSEP outlines the stakeholders, engagement risks and mitigation measures, tools, and activities to implement a streamlined engagement approach across the multiple developments.

Details of engagement activities, and ongoing and planned consultation activities, are detailed in Section 6.0 (Engagement) of the modification report.

3.1 Consultation undertaken during preparation of the modification report

3.1.1 Community and stakeholder consultation

Consultation between the Ampol Terminal Management team and various stakeholders including residents, regulators and the Sutherland Shire Council is an ongoing process. Ampol maintains an open dialogue between the personnel responsible for the Site and those residents with whom it shares the Kurnell Peninsula. Stakeholders were engaged using a range of tools and techniques, including regular community meetings, announcements and feedback sessions.

Ampol issues a regular community newsletter, distributed by email and letterbox drop to residents of Kurnell. These provide updates on operations at the terminal including upgrades or work being undertaken, proposed developments at the Site, and what Ampol has being doing in the community.

Details of the consultation activities conducted with the relevant government and non-government stakeholders is summarised in Section 6.2 (Consultation undertaken to date) of the Modification Report. The results of these consultation activities have been used to inform the development of this SIA.

3.1.2 Aboriginal Community Engagement

To inform the Aboriginal Cultural Heritage Assessment Report (ACHAR), Aboriginal community consultation was undertaken in accordance with Heritage NSW's *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (2010). Further details of consultation can be found in Appendix K (Aboriginal cultural heritage assessment report) of the Modification Report. This consultation has been used to inform the SIA where relevant.

3.2 Key issues raised during consultation

The proposed modification works were discussed in the April and October 2024, and February 2025 newsletters. No direct feedback was received in response.

4.0 Existing environment

This section presents the social baseline for the assessment. The social baseline describes the social context without the proposed modification, i.e. prior to construction or operation. It documents the existing social environment, conditions, and trends relevant to the social locality and to the potential social impacts of the proposed modification.

Data for Kurnell is generally considered to be representative of the social context for the 'primary impact area' within the social locality (refer to Section 2.4), being the area that is likely to experience the greatest impacts during construction and operation as well as the 'secondary impact area' which is the area that is likely to experience some degree of social impact.

Data has also been collated for the four suburbs of Kurnell, Greenhills Beach, Cronulla and Woolooware which has been identified in Section 2.4 as the Region. Data for all four suburbs has been collected as residents of the suburbs are likely to use the commercial and residential areas and social infrastructure identified as part of their daily routine.

4.1 Socio-economic profile

4.1.1 Key demographic data

Key demographic indicators of relevance to the proposed modification, as derived from ABS 2021 Census data, are provided in Table 4-1. Demographic data for all of NSW have also been provided to allow for comparison with the selected demographic indicators within the social locality.

Table 4-1 Demographic information for social locality and NSW (ABS, 2021)

Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Population					
Population	2,528	1,375	17,899	5,060	8,072,163
Median Age	38	37	43	39	39
Aboriginal or Torres Strait Islander population	4%	1.2%	1.5%	1.6%	3.4%
Speaks only English at home	90.3%	86.3%	85.9%	87.3%	67.6%
Labour force and employment					
Employed full time	50.7%	56.1%	57.3%	56.3%	55.2%
Employed part time	32.5%	32.5%	29.3%	29.7%	27.7%
Unemployed	2.9%	1.8%	3.2%	2.6%	4.9%
Top three employment industries	• Hospitals (except Psychiatric Hospitals) • Primary Education • Plumbing Services	• Banking • Hospitals (except Psychiatric Hospitals) • Computer Systems Design and Related Services	• Hospitals (except Psychiatric Hospitals) • Primary Education • Real Estate Services	• Hospitals (except Psychiatric Hospitals) • Primary Education • Air and Space Transport	• Hospitals (except Psychiatric Hospitals) • Supermarket and Grocery Stores • Other Social Assistance Services
Dwellings					
Separate house	91.0%	100%	18.1%	40.7	65.6%
Semi-detached, townhouse, terrace house, etc	2.6%	0%	5.4%	15.3%	11.7%
Flat or apartment	0.4%	0%	64.3%	35.6%	21.7%
Other	1.0%	0%	0.1%	0%	0.7%

Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Home ownership					
Owned outright	33.6%	29.3%	33.4%	33.2%	31.5%
Owned with a mortgage	47.2%	62.8%	23.5%	38.2%	32.5%
Rented	16.5%	4.9%	41.1%	26.5%	32.6%
Other tenure type	1.1%	0%	1.0%	0.8%	1.9%
Tenure type not stated	1.4%	1.6%	0.9%	1.2%	1.5%
Household structure					
Family household	82.1%	95.4%	60.5%	68.6%	71.2%
Single (or lone)	15.8%	4.6%	34.8%	29.3%	25.0%
Group household	2.0%	0%	4.7%	2.1%	3.8%
Journey to work and vehicle ownership					
Top transport method to work	Car (driver)	Car (driver)	Car (driver)	Car (driver)	Car (driver)
No motor vehicle	1.9%	0%	8.1%	4.6%	9.0%
One motor vehicle	22.7%	6.8%	45.0%	40.8%	37.8%
Two motor vehicle	41.1%	50.5%	34.5%	36.7%	24.1%
Three or more motor vehicles	14.0%	41.6%	15.2%	23.5%	17.5%

Notes:

- *Percentages may not add to 100 per cent due to rounding*
- *Census data have been subject to perturbation to protect the confidentiality of individuals.*

4.1.2 Vulnerable communities

Population groups within the social locality which are potentially vulnerable or marginalised have been identified using ABS Census data and are discussed in Table 4-2. This table also outlines relevant considerations applied in assessing the potential social impacts of the proposed modification to these groups.

Table 4-2 Potentially vulnerable communities in the social locality

Group	Overview
Older and elderly people	Elderly people can represent potentially vulnerable groups within the community. As of 2021, 15.7% of the population within the social locality were aged 65 years and older, compared to 17.7% in NSW. Given the relatively large proportion of residents within this group, this group is considered to be one of the largest potentially vulnerable groups within the social locality. Of the suburbs within the social locality, in 2021 Cronulla had the highest percentage of the population aged 65 years or older (24.6%), followed by Woolooware (18.8%). Considerations for this group in preparing the SIA and proposed mitigation measures include a need for clear communication of proposed activities through diverse engagement materials (for example, less reliance on online materials); consideration of impacts across different times of the day and week (for example, members of this group, if retired, may be more likely to be at home during daytime hours); maintaining easy and safe access to properties and local businesses. Impacts which involve changes to the local area may also be more relevant for members of this group where they have been long-term residents in the area.
Need for assistance	Core activity need for assistance data measures the number of people who need assistance in their day to day lives with any or all core activities, including self-care, mobility, or communication because of a variety of reasons including disability, long term health condition (lasting six months or more) or old age. In 2021, an average of 8.5% of people within the suburbs of social locality were identified as needing assistance with a core activity, which is higher than the NSW average (5.8%). Of the suburbs within the social locality, Kurnell had the highest percentage of the population needing help or assistance with a core activity (24.9%), followed by Cronulla (3.5%), then Woolooware (3.1%). Considerations for this group in preparing the SIA and proposed mitigation measures include a need for clear communication of proposed activities through diverse engagement materials and maintaining easy and safe access to properties and local businesses for those requiring assistance.
Socio-economic disadvantage	The Socio-Economic Index for Areas (SEIFA) (ABS, 2021) is a set of four indexes produced by the ABS as an indicator of relative socio-economic advantage and disadvantage. SEIFA broadly defines relative socio-economic advantage and/or disadvantage in terms of people's access to material and social resources, and their ability to participate in society. The Index of Relative Socio-economic Advantage and Disadvantage (IRSAD) has been used for this assessment, based on 2021 Census data. The IRSAD assesses the socio-economic conditions of people and households within an area, including both relative advantage and disadvantage measures. A decile of one (1) indicates high levels of disadvantage and low levels of advantage (representing the bottom 10% of areas). A decile of 10 indicates high levels of advantage and low levels of disadvantage (representing the top 10% of areas).

Group	Overview
	The IRSAD indicates the following for each suburb within the social locality: • Kurnell – A decile of eight for the suburbs ranking within Australia and a decile of 10 within the LGA ranking • Greenhills Beach – A decile of 10 for the suburbs ranking within Australia and a decile of 10 within the LGA ranking • Cronulla – A decile of 10 for the suburbs ranking within Australia and a decile of 10 within the LGA ranking • Woolooware – A decile of 10 for the suburbs ranking within Australia and a decile of 10 within the LGA ranking. Overall, Kurnell, Greenhills, Cronulla and Woolooware are reported to experience higher levels of socio-economic advantage compared to other suburbs within NSW, Australia and the social locality. Income levels can also provide an indicator of socio-economic advantage or disadvantage. Within the social locality of Kurnell, 2021 Census data indicates a range of median weekly household income from $811 to $2,299. The NSW median weekly household income is $1,829. All suburbs in the social locality have a higher median weekly household income than NSW. Key considerations for groups that may experience socio-economic disadvantage in the social locality include the capability of this group to respond to potential business or amenity impacts.
Cultural and linguistic diversity	Culturally and linguistically diverse groups represent a small proportion of the social locality, particularly relative to NSW as a whole. Census results for 2021 indicate that 90.3% of residents within the social locality of Kurnell speak only English at home, compared to 67.6% of residents in NSW. Key considerations for culturally and linguistically diverse groups include the capability of this group to engage with communications and engagement activities undertaken for the proposed modification. Translated communication materials about the proposed modification during construction and operation would be made available if required.

4.2 Aboriginal culture and values

Historical land use activities have resulted in radical changes to the natural topography of the Project Area. Nonetheless, available archaeological data contain evidence of Aboriginal peoples' use of the Kurnell Peninsula and possible presence of cultural deposits occurring at depth under fill layers within the Project Area. Searches carried out as part of the ACHAR (Appendix K of the Modification Report) from the Aboriginal Heritage Information Management System (AHIMS) database indicate that there are no previously recorded Aboriginal sites located within the Project Area.

However, consultation with registered aboriginal parties (RAPs) has indicated that in pre- and early-post European settlement times, sand dunes within and surrounding the Project Area would have been prime locations for campsites, with locally occurring freshwater swamps and lagoons, as well as Botany Bay, offering a rich suite of economic resources and facilitating intensive occupation over thousands of years. In addition, though highly disturbed on the surface, archaeological evidence from other parts of the greater Kurnell area suggest that cultural deposits may be present within the Project Area, occurring at depth under fill layers. Refer to the ACHAR (Appendix K of the Modification Report) for further details.

4.3 Social infrastructure

Social infrastructure comprises social services or facilities that are used for the physical, social, cultural, or intellectual development or welfare of the community. Social infrastructure includes educational facilities, childcare centres, hospital and medical facilities, aged care, sporting and recreational facilities, community halls, clubs, and libraries, as well as the services, activities and programs that operate within these facilities. Open spaces, parks, and sporting fields that support sport, recreational, and leisure activities are also identified as social infrastructure.

Social infrastructure facilities generally operate at a local, district, and/or regional level and are defined by the scale of the population catchment they serve. Social infrastructure can be classified as a sensitive receiver and may be directly or indirectly affected by the proposed modification.

Social infrastructure within a two-kilometre radius of the Project Area includes:

- Kurnell Recreation Club, located at 160 Captain Cook Drive, Kurnell
- Kurnell Public School, located at 13-31 Dampier Street, Kurnell
- Calverley P General Practitioner, located at 8 Torres Street, Kurnell
- LN & Sk Liow Doctor, located at 3/12 Torres Street, Kurnell
- Marton Park, located directly adjacent to the Site, north of Solander Street, Kurnell
- Kurnell Depot – NSW National Parks and Wildlife Service, located at 34 Polo Street, Kurnell
- Kamay Botany Bay National Park, located to the east of the Site
- Banks-Solander track, located north-east of the Site
- Muru and Yena tracks, located north-east of the Site
- The Leap track, located north-east of the Site
- Yena Picnic Area, located east of the Site
- Cape Baily Track, located east of the Site
- Captain Cook’s Landing Place, located east of the Site
- Kurnell Visitor Centre, located east of the Site
- Commemoration Flat Picnic Area, located east of the Site
- Burrawang Walk, located east of the Site
- Bonna Point Reserve, located at 310-312 Prince Charles Parade, Kurnell
- Bonna Point Boat Ramp, located at 312 Prince Charles Parade, Kurnell
- Silver Beach, located to the north of the Site
- Kurnell Beach, located to the north-west of the Site
- Kurnell Dog Beach, located at 312 Prince Charles Parade, Kurnell.

The audit of social infrastructure facilities listed in this section is based on the data available at the time of preparing this report. The audit has been prepared based on desktop research, including Google Maps and local council social infrastructure lists. The social infrastructure is shown on Figure 4-1.

Figure 4-1 Social infrastructure

4.4 Economic characteristics

4.4.1 Local businesses/ employment centres

Kurnell, Greenhills Beach, Woolooware, and Cronulla all serve as local centres and contain the required services and facilities to support surrounding residential areas. Kurnell is comprised of residential, recreational, commercial and industrial areas.

4.5 Access and connectivity

4.5.1 Road and freight network

The road network in the immediate vicinity of the Site includes Captain Cook Drive, Solander Street, and Sir Joseph Banks Drive, which are all local/ regional roads managed by Sutherland Shire Council. Connecting to Captain Cook Drive is The Boulevarde, which is also a regional road and provides important east-west connectivity across the Sutherland Shire region. The nearest classified roads of note to this study are Taren Point Road and Port Hacking Road. Further information about the road network can be found in the Traffic and Transport Impact Assessment (TTIA) (Appendix M of the Modification Report).

4.5.2 Public transport

The bus route servicing the Site is the 987 Cronulla to Kurnell service, which provides roughly one service per hour on weekdays, and eight services on Saturdays. The nearest train stations are Cronulla Station (about 9.4 km) and Woolooware Station (9.6 km), allowing rail access to the Illawarra in the south, and to Sydney CBD, and to Bondi Junction in the eastern suburbs to the north.

The NSW Government is building wharves to create a connection between La Perouse and Kurnell. Ferry operations commenced in February 2025 and as such, construction would not overlap with the construction of the proposed modification At this stage, the operations of the ferry service have not been determined.

4.5.3 Active transport (walking and cycling)

On Captain Cook Drive, east of Gannons Road, there is a cycle lane in the eastbound direction; in the westbound direction, there is a cycle lane and a shared path. From Trinity Street to Torres Street, there are cycle lanes in both directions.

On Torres Street, Captain Cook Drive east of Torres Street, and Cape Solander Drive cyclists are mixed with traffic on general road space. Along Prince Charles Parade lies a shared user path.

4.6 Construction workforce and industry

To inform the assessment of social impacts associated with the influx of construction workers into the area (for example, on community composition), a review of the existing construction skillsets in the social locality and surrounding commutable area was undertaken. The aim of the review is to understand the likely proportion of the construction workforce that would be employed locally, and the proportion which would be required to relocate from another area.

For the purposes of this assessment a ‘reasonable commutable distance’ has been considered to be one hour from the Site. The review construction workforce and industry identified that a large amount of construction workers exist within a commutable distance from the Site, and it is likely that the vast majority of construction workers would not be required to relocate for the proposed modification. The following LGAs have been identified as being majority located a reasonable commutable distance to the proposed modification:

- Sutherland Shire Council – including the four suburbs as being identified as being within the social locality
- Georges River Council
- Woollahra Council
- Waverley Council

- Randwick Council
- Canterbury-Bankstown Council.

A substantial proportion of the existing workforce in each of these LGAs are employed in the construction industry, ranging from 4.3 per cent to 11.3 per cent (as outlined in Table 4-3). This represents a total of 38,488 persons. This indicates there is a strong presence of existing skills and capabilities in the region that could be used to deliver the proposed modification, most notably within the Sutherland Shire LGA. Noting the number of people employed in the construction sector within the reasonable commutable distance, it is highly likely that the construction workforce may be partially drawn from the LGA, and would not need to relocate to Kurnell for the proposed modification.

Table 4-3 Employment in the construction industry within a reasonable commutable distance

LGA	Number of persons employed in construction	Total workforce	Percentage of workforce employed in construction
Sutherland Shire Council	13,294	117,444	11.3%
Georges River Council	4,804	70,462	6.8%
Woollahra Council	1,214	28,230	4.3%
Waverley Council	2,567	38,229	6.7%
Randwick Council	5,684	69,077	8.2%
Canterbury-Bankstown Council	10,925	133,597	8.2%

5.0 Assessment of construction impacts

This section assesses the potential social impacts resulting from the construction of the proposed modification. Measures have been identified to mitigate or avoid the potential negative impacts discussed in this section. These mitigation measures and the expected residual impacts following their application are presented in Section 8.0 (Management of impacts).

5.1 Way of life

5.1.1 Changes to how people move around

Temporary disruptions in access to work, recreation, local shops, community facilities, and essential services may occur due to temporary traffic disruptions during construction. Census data (ABS 2021) identified a high reliance on private vehicle transport within the social locality. Due to its location on a peninsula, both residents in the primary and secondary impact area and construction vehicles, deliveries, and workers would use Captain Cook Drive.

The Traffic and Transport Impact Assessment (TTIA) (Appendix M of the Modification Report) identified that the proposed modification would cause a temporary increase in traffic generation on the surrounding key roads during construction due to delivery of materials and equipment, and offsite disposal of excavated materials. Further traffic generation would occur as a result of construction workers travelling to the Project Area. This short-term increase in the traffic generation during the construction period would not negatively affect the operational performance of the local road network.

Given that potential impacts to movement would be generally limited, the magnitude of impact to different user groups (including pedestrians, cyclists, and vehicle users across different age groups) would be **minimal**. These impacts would be **unlikely** to occur. As such, the overall significance of the impact would be **low** (negative).

Impacts arising in this respect would be managed through the development of a Construction Traffic Management Plan (CTMP) for the proposed modification. The CTMP would seek to avoid and reduce transport and traffic impacts (and subsequently social impacts).

5.2 Community

5.2.1 Demographics and community composition

Construction of the proposed modification may influence the demographic profile of the social locality, primarily through employment.

The size of the workforce would vary throughout the construction period depending on the activities being undertaken. The proposed modification is expected to support an indicative peak construction workforce of up to 100 full time equivalent jobs (direct employment). The construction workforce would comprise trades and construction personnel, and engineering, functional, and administrative staff, and would be sourced from across the local area and broader region, with a preference for local employees where practicable.

Kurnell is a small community, and as such the presence of construction workers at the Site would result in increases in the daytime population, which may be a potential cause of conflict and dissatisfaction from some local residents. However, considering the long-standing presence of the Kurnell Terminal and its workers , the presence of construction would not be unusual. Relevant construction worker behaviour codes would be implemented to help promote respectful and appropriate behaviours in the community, thereby limiting the potential for this impact to occur during construction.

The magnitude of this impact is considered **minimal**. The likelihood of the proposed modification resulting in broader demographic changes during construction would be **very unlikely**. As such the overall significance of the impact would be **low** (negative).

5.2.2 Social cohesion and sense of place

Social cohesion refers to the connections and relationships between individuals and their community. Activities that create a physical or psychological barrier between communities can affect social and/or economic interaction, potentially resulting in social isolation and an erosion of the sense of community.

The presence of construction traffic on the key roads surrounding the Project Area has the potential to limit people's opportunity to socialise within the community or access key community hubs. For the proposed modification, this effect is likely to be negligible, taking into consideration the small traffic volumes associated with the proposed modification and the existing traffic volumes surrounding the Project Area, and that construction vehicles would be parked within the Site only.

Construction of the proposed modification could also result in minor changes to local amenity. This would be due to increases in noise levels, dust, or reduced visual amenity as a result of construction hoarding (refer to Section 5.3.1 for detail on local amenity impacts). These changes would, however, generally result in limited changes to social cohesion and sense of place given the distance the proposed modification is located from town centres, thereby limiting direct amenity impacts.

Vulnerable groups in the community may have an increased sensitivity to changes in access and amenity which may lead to a degree of self-exclusion from the community.

The magnitude of this impact is considered to be **minimal** for groups within the social locality (including vulnerable groups) given that changes to access are not expected and the Project Area is located a distance away from community centres. Overall, the likelihood of this impact occurring would be **very unlikely**. As such the overall social significance in relation to community cohesion and sense of place would be a **low** (negative) impact.

5.3 Surroundings

5.3.1 Local amenity

Amenity refers to the quality of a place, its appearance, feel and sound, and the way the community experiences the place. Amenity contributes to a community's identity and its sense of place. Aesthetic qualities are an important part of amenity, but the broader concept of amenity is also determined by the physical design of a place and the human activity that takes place within it. A place that has 'amenity' is regarded as pleasant and attractive, as well as convenient and comfortable.

Impacts upon amenity include factors that affect the ability of a resident or visitor to enjoy their home and daily activities. For example, noise, vibration, changes to air quality, or changes to views would be considered amenity impacts. Changes in amenity may also conflict with community values, contributing to a loss of or change in a community's sense of place, and subsequently a community's perceived identity.

Construction of the proposed modification has the potential to affect amenity due to changes to traffic, noise and vibration, air quality, and visual amenity. A summary of the anticipated impacts and their impact upon social receivers are addressed below.

Traffic and access

To assess the potential impact from the proposed modification on traffic and access, a TTIA has been prepared (Appendix M and Section 7.7 of the Modification Report). The report provides mitigation measures to be implemented to minimise impacts upon the local road network and its users. This section considers the social implications of potential traffic and access impacts.

Temporary increase in traffic on surrounding roads would occur during construction. This would mainly be associated with the delivery of materials and equipment, and offsite disposal of excavated materials. The presence of construction vehicles accessing the Project Area may adversely affect local amenity; however, this is not expected to substantially differ from the existing environment, as the key roads surrounding the Project Area currently accommodates relatively high volumes of traffic, particularly heavy vehicles.

Noise and vibration

To assess the potential impact from the proposed modification on noise and vibration, a Noise and Vibration Impact Assessment (NVIA), has been prepared (Appendix N and Section 7.8 of the Modification Report). This section considers the social implications of potential noise and vibration impacts.

Exposure to noise and vibration has the potential to create nuisance, intrude on daily activities or the enjoyment of activities, interfere with conversation and memory, disrupt sleep and rest patterns, and create or exacerbate health concerns.

The background noise levels in proximity to the Project Area are characterised by existing operational equipment, such as pumps and outlets. An existing noise wall is present along the boundary of the Site near Captain Cook Drive, to limit noise impacts upon Kurnell Recreation Club.

The NVIA presented a summary of predicted construction noise levels. This assessment concluded that there would be exceedances of the construction noise management levels at noise sensitive receivers, with levels expecting to exceed the 'highly noise affected' level of 75 dB(A) in some cases. This is primarily due to works occurring in close proximity to residents and recreational areas (i.e. Zone 1A and along the northern boundaries of Zone 1). Works in Zone 1A are expected to be relatively short in duration (three months), and noise-intensive activities within the Site would only occur intermittently.

Biopiling blowers may operate on a 24 hour basis in identified Biopiling and Stabilisation Areas (see Figure 4-2 in the Modification Report). Given their location within the Site, noise from the blowers would be inaudible at the nearest noise sensitive receivers. As such, sleep patterns at night would not be affected.

Construction traffic noise generated by the proposed modification along Captain Cook Drive would be minimal and would contribute less than 2 dB(A) increase during the peak construction periods.

Minimal vibration intensive works are expected to take place, but, with minimum safe working distances adhered to, no adverse impacts from vibration intensive works are likely in terms of human response.

Air quality

Construction activities, such as demolition, earthworks, construction of new infrastructure, and trackout, have the capacity to increase airborne emissions, such as dust, vehicle emissions and odour. This has the potential to reduce the amenity of an area as well as result in adverse human health impacts.

An Air Quality Impact Assessment (AQIA) has been prepared to assess the risk of air quality impacts upon local receivers (Appendix O and Section 7.10 of the Modification Report). This section considers the social implications of potential air quality impacts.

The AQIA determined that, with standard construction mitigation measures, impacts at neighbouring sensitive receptors would be negligible. On this basis, the resulting social impact of air quality changes is also considered to be negligible.

Visual amenity

The impact of the proposal modification upon visual amenity has been considered in Section 7.13 (Other impacts) of the Modification Report. This section considers the social implications of potential visual amenity impacts.

The Project Area is located within the Kurnell Terminal, comprised entirely of an industrial landscape character zone.

Visual impacts would arise primarily from the presence of construction equipment, and plant/ machinery. Construction works in the main part of the Project Area (Zones 1 to 3) would be largely obscured from view of the public across the Site due to presence of existing screening on the Site boundary. Zone 1A lies directly adjacent to residential receivers and limited screening is present. Visual impacts in this location are not expected to be substantial given the existing industrial uses of Zone 1A, the nature of the proposed construction (new shed only, being somewhat consistent with the surrounding residential development), and the relatively short duration of works in this location (up to three months).

Visual impacts to passing pedestrian and motorists and recreational users would be minor given the presence of existing screening, the shorter duration of these views and the relatively short duration of construction.

Based on the above, the social impact arising from visual changes associated with the proposed modification are expected to be minimal.

Overall impact to local amenity

Overall, there would be minimal changes to existing amenity (traffic, air quality, and visual) in the social locality during the construction of the proposed modification. Due to increases in noise in the local area, though short-term, changes to amenity are considered to be of **minor** magnitude. The likelihood of this impact would be **possible**. The overall significance of the social impact would therefore be **medium** (negative).

5.4 Culture

5.4.1 Aboriginal culture and heritage

The Project Area has been subject to a substantial amount of disturbance since the 1950s, suggesting Aboriginal items in this location would have been subject to historic disturbance or destruction. No specific Aboriginal heritage sites or cultural values were identified through database searches or discussions with Registered Aboriginal Parties (RAPs) as part of the ACHAR (Appendix K of the Modification Report). The closest Potential Archaeological Deposit (PAD) was identified 80 metres to the west of the Site, along Captain Cook Drive.

Despite this, the majority of the land of which the Project Area is situated on retains moderate potential for the preservation of subsurface Aboriginal archaeological deposits. Construction of the proposed modification has the potential to impact items of Aboriginal heritage during the proposed modification where subsurface intrusive works are required. Should any such deposits ben unexpectedly identified during construction, management measures outlined in the ACHAR would be implemented. This may include having a RAP present to advise during excavation works.

Aboriginal community consultation for the ACHAR, inclusive of proposed management and mitigation measures, indicated that the community supported the proposed measures.

On this basis, the magnitude of potential social impacts associated with impacts to Aboriginal heritage are considered **minimal**. The likelihood of these impacts occurring would be **possible**. As such the overall significance of impact would be a **low** (negative) impact.

5.4.2 Non-Aboriginal heritage

The history and heritage (including non-Aboriginal heritage) of an area can influence the identity of the community who live amongst it.

The Site is part of an archaeological item of local heritage significance in the *Sutherland Shire Local Environmental Plan 2015*, as “Australian Oil Refinery” (A2524). A number of buildings to be demolished as part of the proposed modification retain historic significance under this listing as they were constructed for the original refinery. Another locally listed item, “Four Wheel Drive Track,” also passes through the Site (A2523). The Heritage Impact Assessment (HIA) prepared fof the proposed modification concluded that the remnant refinery buildings have become isolated from the rest of the Terminal and their original uses. Their significance centres on their intangible characteristics related to their role in the operations of the former refinery, rather than their existing tangible characteristics. The buildings would be demolished as they are unable to be adaptively reused by Ampol or a third party, and the cost of maintenance outweighs their retention. Ultimately, the HIA deems this demolition to be a moderate impact to the built heritage of the former refinery.

On this basis, the magnitude of potential social impacts associated with impacts to non-Aboriginal heritage are considered **moderate**. The likelihood of these impacts occurring would be **very unlikely**. As such the overall significance of impact would be a **low** (negative) impact.

5.5 Livelihoods

5.5.1 Business impacts

Businesses across the social locality could be affected during construction by temporary changes in passing trade, access, and travel time (for employees, customers, and deliveries), changes to parking, and impacts to local amenity. Potential impacts to the operation and viability of businesses can in turn affect people's livelihoods, including their ability to sustain themselves through employment or business opportunities.

The proposed modification is located within a well-established industrial area, where there is an existing concentration of businesses. The majority of these are industrial in nature, though there are a small number of cafes and a recreation club in the primary impact area. These businesses may experience temporary amenity impacts associated with increases in noise levels or traffic, or changes to air quality or the visual environment. Noise levels could disrupt focus and interfere with some business practices, depending on the business type. Amenity impacts, including changes in noise and to traffic conditions, could also make some businesses, such as cafes, and recreational businesses, less attractive for people to visit and spend time in.

Given the relatively minor construction impacts associated with noise, air quality, traffic and visual amenity, the potential for the proposed modification to result in adverse business impacts is considered to be **minor**. The likelihood of these impacts being experienced within the social locality would be **possible**, resulting in a **medium** (negative) social impact.

Retail, food and beverage businesses would likely experience a temporary uplift in revenues of retail businesses in the social locality, due to an increase in passing trade associated with the presence of construction workers in the area. Local and regional construction contractors and businesses that service or supply goods to the construction industry would also be expected to experience an increase in trade.

These changes would benefit livelihoods by generating revenue at existing businesses within the social locality, as well as potentially providing further employment opportunities within these businesses.

The overall magnitude of benefits to businesses associated with increased expenditure in the social locality would be considered **minor**. The likelihood of these impacts being experienced within the social locality would be **possible**, resulting in a **medium** (positive) social impact.

5.5.2 Economic impacts

Construction activity can benefit the economy by injecting money into the local, regional and state economies. This can result in employment and business opportunities for people.

The economic benefits of construction can include:

- Increased expenditure at local and regional businesses through purchases by construction workers
- Direct employment through onsite construction activities
- Direct expenditure associated with onsite construction activities
- Indirect employment and expenditure through the provision of goods and services required for construction.

The capital expenditure required for the proposed modification would create increased opportunities for both businesses and workers associated with construction, while also resulting in substantial flow-on impacts to other parts of the local economy, including for local businesses and the local workforce within the social locality. It is estimated that the proposed modification would support up to 100 Full Time Equivalent (FTE) jobs in the peak construction year.

Construction businesses, industries, and skilled workers in the social locality would also experience these benefits. These may include local construction contractors, businesses that service or supply goods to the construction industry such as food and beverage retailers, and other retail outlets that cater to the day-to-day needs of the construction workforce. This has the potential to benefit people's livelihoods through supporting local business and employment in these businesses.

The overall magnitude of economic benefits during construction in the social locality would be considered **minor**, given that the benefits would likely be dispersed across the broader region. The likelihood of these impacts being experienced within the social locality would be **possible**, resulting in a **medium** (positive) social impact.

5.6 Summary of social impacts during construction

A summary of the initial significance of social impacts during construction is provided in Table 5-1.

Table 5-1 Summary of social impacts – Construction

Potential impact category	Pre mitigation impact significance
Way of life	
Changes to how people move around	Minimal + unlikely = low (negative)
Community	
Demographics and community composition	Minimal + very unlikely = low (negative)
Social cohesion and sense of place	Minimal + very unlikely = low (negative)
Surroundings	
Local amenity	Minor + possible = medium (negative)
Culture	
Aboriginal culture and heritage	Minimal + possible = low (negative)
Non-Aboriginal heritage	Moderate + very unlikely = low (negative)
Livelihoods	
Business impacts (Amenity)	Minor + possible = medium (negative)
Business impacts (Expenditure)	Minor + possible = medium (positive)
Economic impacts	Minor + possible = medium (positive)

6.0 Assessment of operational impacts

This section assesses the potential social impacts resulting from the operation of the proposed modification. Measures have been identified to mitigate or avoid the potential negative impacts discussed in this section. These mitigation measures and the expected residual impacts following their application are presented in Section 8.0 (Management of impacts).

6.1 Way of life

Once the modification works are complete, the Site would continue to operate as described in the approval documentation for the approved project and would be consistent with the development consent for SSD-5544. As such, there would be no changes in traffic, number of FTEs employed onsite, or visual amenity.

As such, the proposed modification would not affect the way people move around their community or access social infrastructure following completion of the proposed modification.

Based on the above, the likelihood of impacts to way of life is considered to a **minimal** magnitude and would be **very unlikely**. As such the overall significance of impact would be a **low** (negative) impact.

6.2 Community

The operation of the proposed modification is not anticipated to result in a change to the demographic profile of the social locality, as the operation of the proposed modification would not require changes to operational staff numbers at the Site. The proposed modification would not enable other changes that may induce substantial demographic changes.

The proposed modification is in a location that is physically and visually separate from residents and community hubs within the social locality, with fencing and/or vegetation providing some level of screening. The Kurnell Recreation Club, originally built for workers of the former refinery, lies adjacent to the Site at the intersection of Captain Cook Drive and Solander Street, within Ampol's land ownership. A noise wall was previously installed to mitigate amenity impacts to the Club, specifically from the Waste Water Treatment Plant. The proposed modification is not expected to affect social cohesion or the community's sense of place as it is located within an industrial area and would be consistent with the existing environment of industrial businesses.

The overall magnitude of this impact is considered to be **minimal**. The likelihood of the proposed modification resulting in broader demographic changes or changes in social cohesion and sense of place during operation would be **very unlikely**. As such the overall significance of the impact would be **low** (negative).

6.3 Surroundings

6.3.1 Local amenity

Operation of the proposed modification has the potential to affect amenity due to changes to traffic, noise, air quality, and visual amenity. A summary of the anticipated impacts and their impact upon social receivers are addressed below.

Traffic and access

Once the modification works are complete, the Site would continue to operate as described in the approval documentation for the approved project and would be consistent with the development consent for SSD-5544. No changes in traffic are expected during operation of the proposed modification.

Noise and vibration

As described in Section 1.2, the Site would continue its normal operations, with relocated infrastructure operating in their new locations. This includes the relocated FWS. Two indicative locations are currently proposed for this system, both along Solander Street, with Option 1 lying within 110 m of residential dwellings on Bridge Street. Monthly and annual maintenance of the diesel pumps within the FWS would be undertaken, which has potential to create noise impacts that affect local amenity.

Modelling was undertaken for the new FWS in both location options, in addition to operational infrastructure that is currently present, for the monthly and annual testing scenarios, as presented in the NVIA (Appendix N and Section 7.8 of the Modification Report).

This indicated that the operational noise emissions from equipment in both location options would generally comply with the most stringent (night-time) operational noise criteria during monthly testing. Whilst exceedances of operational noise criteria were recorded, these would not be discernible.

During the annual testing, operational noise emissions from equipment in the Option 1 location may lead to non-compliance at some residential and recreation receivers. In noise enhancing conditions (i.e. rain, storms, and high winds), operational noise emissions from equipment in the Option 2 location would be expected to be discernible from recreational receivers. However, as testing only occurs once per year for a limited time, it was not considered reasonable to apply noise mitigation measures.

This would be further investigated during detailed design to minimise the impact to the local amenity.

Air quality

There would be no air quality impacts from the proposed modification during the typical operation of the proposed modification. If maintenance activities are required that may lead to airborne dust or other emissions, construction phase mitigation measures would be implemented.

A qualitative assessment of the relocated FWS was undertaken in the AQIA (Appendix O and Section 7.10 of the Modification Report). This determined that operation of the diesel engines that power the pumps during monthly and annual maintenance testing of the FWS pumps would result in combustion emissions.

In order to mitigate air quality impacts, measures would be applied to the engines and building housing the equipment. This would be further investigated during detail design to minimise the impact to the local amenity.

Visual amenity

Once the proposed modification works are completed, landscape character and visual amenity at the Site would be consistent with the existing condition. The majority of relocated infrastructure would not be visible from public viewpoints. The relocated FWS (if a location adjacent to the Captain Cook Drive/ Solander Street intersection is selected) and new storage shed in Zone 1A are likely to be visible, but their aesthetic would be in keeping with the rest of the Kurnell Terminal. Vegetation would be established in areas to mitigate changes to visual amenity.

Overall impact to local amenity

On the basis that noise and air quality mitigation would be applied if the Option 1 FWS location is selected, there would be no anticipated impacts to local amenity due to the operation of the proposed modification. The overall magnitude is considered to be **minimal**, with a likelihood of the impacts being **very unlikely**, resulting in a **low** (negative) social impact.

6.4 Culture

6.4.1 Aboriginal culture and heritage

There are no anticipated impacts to Aboriginal heritage associated with the operation of the proposed modification.

Based on the above, impacts to Aboriginal heritage and values are considered to a **minimal** magnitude and **very unlikely** in terms of likelihood. As such the overall significance of impact would be a **low** (negative) impact.

6.4.2 Non-Aboriginal heritage

There are no anticipated impacts to non-Aboriginal heritage associated with the operation of the proposed modification.

Based on the above, the likelihood of negative impacts to non-Aboriginal heritage and values is considered to a **minimal** magnitude and would be **very unlikely**. As such the overall significance of impact would be a **low** (negative) impact.

6.5 Livelihoods

There are no anticipated impacts to the livelihoods of business owners and/or the local economy associated with the operation of the proposed modification. Once the proposed modification works are complete, the consolidation of terminal infrastructure into Zones 1 and 1A would facilitate future benefits to businesses and the local economy through various potential future use options for vacant land in Zones 2 and 3. This change would also help maintain the safe, viable, and reliable operation of the Site.

Based on the above, the likelihood of negative impacts to livelihoods and values is considered to a **minimal** magnitude and would be **very unlikely**. As such the overall significance of impact would be a **low** (negative) impact.

6.6 Summary of social impacts during operation

A summary of the initial significance of social impacts during operation is provided in Table 6-1.

Table 6-1 Summary of social impacts – Operation

Potential impact category	Pre mitigation impact significance
Way of life	
Changes to how people move around	Minimal + very unlikely = low (negative)
Community	
Demographics and community composition	Minimal + very unlikely = low (negative)
Surroundings	
Local amenity	Minimal + very unlikely = low (negative)
Culture	
Aboriginal culture and heritage	Minimal + very unlikely = low (negative)
Non-Aboriginal heritage	Minimal + very unlikely = low (negative)
Livelihoods	
Business amenity impacts	Minimal + very unlikely = low (negative)

7.0 Assessment of cumulative impacts

Cumulative impacts have the potential to occur when benefits or impacts from a project overlap or interact with those of other projects, potentially resulting in a larger overall effect (positive or negative) on the environment or local communities. Cumulative impacts may occur when projects are constructed or operated concurrently or consecutively.

Projects were reviewed against the following screening criteria for this cumulative impact assessment:

- Spatially relevant (i.e., the development or activity overlaps with, is adjacent to or within two kilometres of the Project Area)
- Scale (i.e., large-scale major development or infrastructure projects that have the potential to result in cumulative impacts with the proposed modification, as listed on the NSW Government Major Projects website and on the relevant council websites)
- Timing (i.e. the expected timing of its construction and/or operation overlaps or occurs consecutively to construction and/or operation of the proposed modification)
- Status (i.e., projects in development with sufficient publicly available information to inform this environmental impact statement and with an adequate level of detail to assess the potential cumulative impacts).

Projects identified as contributing to potential cumulative impacts have met these criteria and include:

- Kamay Ferry Wharves
- Breen Resource Recovery Facility
- Kurnell Stormwater Separation Improvement Project
- Woolooware to Kurnell Tower Replacement Project
- Kurnell Planning Proposal.

The location of these projects is shown on Figure 7-1.

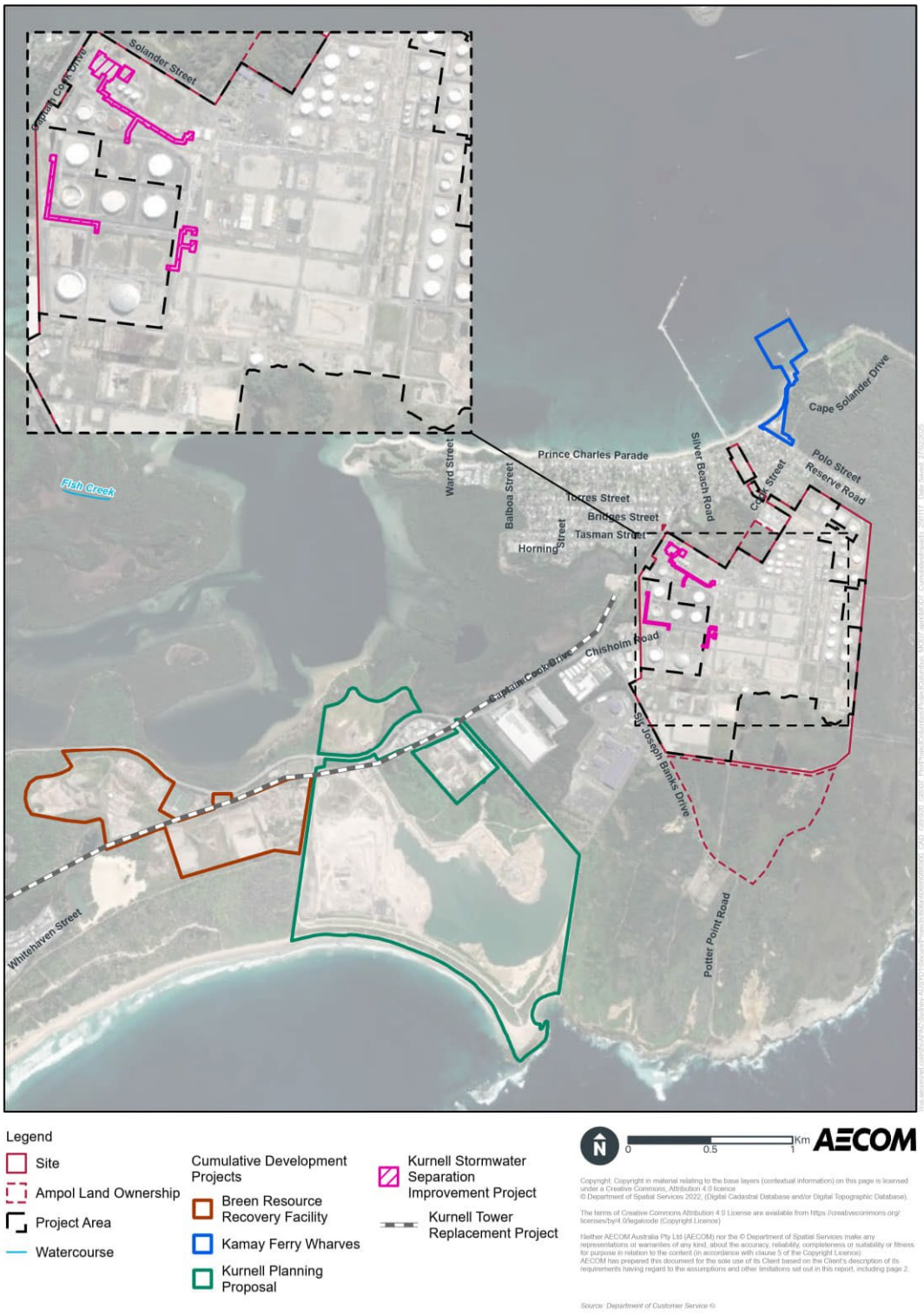

Figure 7-1 Cumulative development projects

7.1 Construction

Cumulative social impacts may arise from other projects occurring at the same time in the social locality. Potential cumulative social impacts during construction could include safety risks arising from increased traffic, increased amenity impacts as a result of noise, visual change, and dust emissions, and health and wellbeing impacts from construction fatigue. Cumulative traffic and access impacts leading to delays in travel time or difficulties accessing public transport during construction could also lead to indirect social impacts such as anxiety and concern during the construction period.

Cumulative social impacts arising from the proposed modification alongside the projects identified in the projects listed above include:

- Traffic and transport – There is potential for temporary increases in congestion in the local area due to construction vehicles from cumulative projects on the roads at the same time. This could cause increased stress for local populations. Noting the proposed construction start and duration for each, as well as their proximity, this impact is likely to be most felt by residents and businesses in Kurnell.
- Noise and vibration – It is possible that noisy construction activities for the Woolooware to Kurnell Tower Replacement Project and the Kurnell Planning Proposal may occur at the same time as the proposed modification. The prolonged exposure to noise can impact the health and wellbeing of residents and nearby businesses, such as disturbing focus and sleep
- Air quality – There is potential for cumulative air quality impacts to occur where construction activities (such as demolition, earthworks, use of construction vehicles and equipment, and waste management) occur at the same time as the proposed modification. This would include impacts from dust and air emissions from the Kamay Ferry Wharves project, the Breen Resource Recovery Facility, the Woolooware to Kurnell Tower Replacement Project, and the Kurnell Planning Proposal
- Construction fatigue – The proposed modification may be constructed at the same time as the Breen Resource Recovery Facility, the Woolooware to Kurnell Tower Replacement Project, and the Kurnell Planning Proposal. This could induce construction fatigue in people living and working in areas affected by both projects due to the combined impacts (e.g. traffic impacts from one project and noise impacts from another), or simply from the concurrent or consecutive nature of disruptions in the area. Noting the proposed construction start and duration for each, as well as their proximity, this impact is likely to be most felt by residents and businesses in Kurnell. Construction contractors would seek to address construction fatigue through the following means:
    - Coordination of construction – Communication with other projects to understand specific project timeframes and impacts, and seeking to avoid concurrent or immediately consecutive construction activities in close proximity, where feasible
    - Communication – Clear and frequent communication with the community, coordinated with other projects to ensure that similar projects retain consistent messaging and complaint mechanisms.

Overall, the magnitude of this effect is considered to be **minor**. The likelihood of these impacts occurring would be **unlikely**, due to the limited impacts anticipated from the construction of the proposed modification. As such, the overall social significance in relation to construction cumulative impacts would be a **low** (negative) impact.

7.2 Operation

During operation, adverse cumulative impacts would be limited to noise impacts from relocated equipment and other new projects operating onsite (specifically, the Kurnell Stormwater Separation Improvement Project).

Noise impacting local amenity would be limited for the Kurnell Stormwater Separation Improvement Project as the equipment would only function during periods of rainfall, where background noise levels would be heightened.

Operational noise from the proposed modification is expected to be minimal compared to that of the Kurnell Stormwater Separation Improvement Project; therefore, cumulative operational impact is expected to be insignificant. In addition, noise sensitive receivers most likely to be affected by noise from the proposed modification are different to those most likely to be affected by noise from the Kurnell BESS.

The magnitude of operational cumulative impacts is considered to be **minor**, with a likelihood of the impacts being **unlikely**, resulting in a **low** (negative) social impact.

7.3 Summary of cumulative impacts

A summary of the initial significance of social impacts during operation is provided in Table 7-1.

Table 7-1 Summary of social impacts – Cumulative

Potential impact category	Pre mitigation impact significance
Cumulative construction impacts	
Cumulative impacts	Minor + unlikely = low (negative)
Cumulative operation impacts	
Cumulative impacts	Minor + unlikely = low (negative)

8.0 Management of impacts

8.1 Management and mitigation measures

A construction environment management plan (CEMP) and an operational environmental management plan (OEMP) would be prepared for the proposed modification. The CEMP and OEMP would detail the proposed approach to environmental management, monitoring, and reporting during construction and operation. A number of sub-plans (and other supporting documentation, as required) would also be prepared as part of the CEMP and OEMP.

The management of other environmental impacts considered in the Modification Report (such as noise and vibration, traffic and transport, and other amenity-related impacts) would contribute to the management of social impacts, due to their interrelated nature. Other mitigation measures identified in other technical assessments that are relevant to the management of potential social impacts include:

- Measures in the Aboriginal Cultural Heritage Assessment Report (Appendix K of the Modification Report), specifically measures regarding unexpected Aboriginal objects
- Measures in the Heritage Impact Assessment (Appendix L of the Modification Report), specifically measures regarding to the demolition of the buildings within the Site
- Measures in the Traffic and Transport Impact Assessment (Appendix M of the Modification Report), specifically measures regarding the management of construction traffic volumes and safety during construction
- Measures in the Noise and Vibration Impact Assessment (Appendix N of the Modification Report), specifically measures to address potential exceedances of relevant noise criteria
- Measures in Air Quality Assessment Report (Appendix O of the Modification Report), specifically measures regarding odour and dust mitigation.

Additionally, the measures identified in Section 7.13 (Cumulative impacts) of the Modification Report would contribute to the management of cumulative social impacts.

Management and mitigation measures identified to manage potential social impacts and/ or enhance social benefits which arise from the proposed modification are outlined in Table 8-1. Additional and/ or modified environmental safeguards and management measures to those presented in the approved SSD-5544 are shown in **bold**. Deleted measures, or parts of measures, have been ~~struck out~~. Where approved measures have been consolidated to reduce duplication, previously agreed text that has been brought into existing or new measures has been <u>underlined</u>.

Table 8-1 Mitigation measures – Social impacts

ID	Mitigation measure	Timing
M1	**Construction workers for the proposed modification would be employed from the local area where possible to reduce the need for workers to relocate to the area during construction, and to contribute to local employment opportunities.**	**Construction**
M2	**Stakeholder engagement activities carried out during construction would be accessible to a range of groups (such as residents and businesses) in the community. This will include, at a minimum, a range of engagement methods (including options for physical copies of engagement materials). Material in relevant languages used in the local area should be made available if requested.**	**Construction**

8.2 Residual impacts

Residual social impacts are those that remain after mitigation measures are implemented. A summary of the potential residual social impacts is included in Table 8-2 (for construction related impacts) and Table 8-3 (for operational impacts). This has been presented to illustrate the effect of the proposed mitigation measures, and to align with the requirements of the SIA Guideline.

The majority of impacts have been assessed as having a low unmitigated impact. Following the implementation of standard mitigation and management measures or design refinement, the residual impact of these have been assessed as either being so small that they do not warrant further consideration or as having no residual impact.

Table 8-2 Residual social impact summary – Construction

Potential impact	Initial impact significance	Mitigation and monitoring approach	Residual impact significance
Way of life			
Temporary disruptions to the way in which residents, visitors, and road users travel within the local area, generally associated with increased number of construction vehicles in the local road networks.	Minimal + unlikely = low (negative)	• Implementation of the CEMP, which include measures that minimise impacts to road users (vehicle users, pedestrians and cyclists) and measures to safely manage any residual impacts, as well as other transport management measures identified in the Modification Report • Clear, frequent, and inclusive communication with the community and businesses.	No change
Community			
Potential impacts to the makeup and identity of the local community may arise from the introduction of new construction workers to the social locality, which may be of concern to existing residents.	Minimal + very unlikely = low (negative)	• The construction workforce would be sourced from the local area where possible, to manage the need for people to relocate to the area for the duration of construction, and to contribute to local employment opportunities • Construction workers would be briefed on respectful and appropriate behaviours in the community.	No change
Presence of construction vehicles, equipment, and workers affecting people's sense of place within their social locality.	Minimal + very unlikely = low (negative)	• The construction workforce would be sourced from the local area where possible, to manage the need for people to relocate to the area for the duration of construction, and to contribute to local employment opportunities • Construction workers would be briefed on respectful and appropriate behaviours in the community.	No change
Surroundings			
Adverse impact to the way in which residents and visitors experience their surroundings due to temporary reductions in local amenity (traffic, noise and vibration, air quality, and visual impacts).	Minor + possible = medium (negative)	• Implementation of the CEMP, sub-plans and mitigation measures identified in the Modification Report to address noise, traffic, air quality and landscape and visual impacts • Clear, frequent and inclusive communication with the community.	Minimal + possible = low (negative)

Potential impact	Initial impact significance	Mitigation and monitoring approach	Residual impact significance
Culture			
Potential impacts to elements of the landscape which are valued by Aboriginal communities, which could lead to cultural or spiritual loss for these communities.	Minimal + possible = low (negative)	• Implementation of the CEMP, sub-plans and mitigation measures identified in the Modification Report to address Aboriginal heritage impacts • Implementation of mitigation measures suggested in the ACHAR (refer to Appendix K (ACHAR) of the Modification Report) • Clear, frequent and inclusive communication with the community and registered Aboriginal parties.	No change
Removal of buildings within the local heritage listing on the Site (Australian Oil Refinery, A2524), resulting in impacts to cultural elements which are valued by the community	Moderate + very unlikely = low (negative)	• Implementation of the CEMP, sub-plans and mitigation measures identified in the Modification Report to address historic heritage impacts.	No change
Livelihoods			
Adverse impacts to business amenity which could disrupt business practices and/or make some businesses less attractive for customers to businesses.	Minor + possible = medium (negative)	• Implementation of the CEMP and mitigation measures identified in the Modification Report to address noise, traffic, air quality and landscape and visual impacts. • Clear, frequent, and inclusive communication with the community and businesses.	No change
Benefits to retail and construction-related businesses associated with the presence of construction workers and activities, improving the livelihoods of these businesses.	Minor + possible = medium (positive)	• Clear, frequent and inclusive communication with the community and businesses.	No change

Potential impact	Initial impact significance	Mitigation and monitoring approach	Residual impact significance
Economic benefits to the social locality during construction associated with increased expenditure at local businesses and employment opportunities, resulting in benefits to livelihoods for local businesses and their employees.	Minor + possible = medium (positive)	• The construction workforce would be preferentially sourced from the local area where possible • Clear, frequent and inclusive communication with the community and businesses.	No change

Table 8-3 Residual social impact summary – Operation

Potential impact	Initial impact significance	Mitigation and monitoring approach	Residual impact significance
Way of life			
Changes to the way people go about their daily lives following completion of the proposed modification	Minimal + very unlikely = low (negative)	• Not applicable	No change
Community			
Changes to the environment (noise, visual amenity, air quality) in community hubs following relocation of infrastructure	Minimal + very unlikely = low (negative)	• Post-construction noise monitoring to confirm that relevant targets are achieved • Community and stakeholder engagement throughout detailed design development.	No change
Surroundings			
Adverse changes in surroundings associated with the operation of the proposed modification	Minimal + very unlikely = low (negative)	• Post-construction noise monitoring to confirm that relevant targets are achieved • Community and stakeholder engagement throughout detailed design development.	No change
Culture			
Potential impacts to elements of the landscape which are valued by Aboriginal communities	Minimal + very unlikely = low (negative)	• Not applicable	No change

Potential impact	Initial impact significance	Mitigation and monitoring approach	Residual impact significance
Potential impacts to elements of historic heritage significance	Minimal + very unlikely = low (negative)	• Not applicable	No change
Livelihoods			
The broader economic benefits of the proposed modification would likely result in flow on effects for livelihoods within the social locality.	Minimal + very unlikely = low (negative)	• Not applicable	No change

Table 8-4 Residual social impact summary – Cumulative

Potential impact	Initial impact significance	Mitigation and monitoring approach	Residual impact significance
Construction			
Concurrent construction activities may result in cumulative social impacts to residents, visitors, and businesses in the social locality, such as disruptions to way of life or decrease in the quality of surroundings due to combined amenity related impacts near the Site. Communities closest to the Site may experience construction and consultation fatigue.	Minor + possible = medium (positive)	• Coordination between Ampol's projects at the Site to understand construction programs and potential conflicts, in order to plan construction activities. • Clear, frequent and inclusive communication with the community.	No change
Operation			
Noise and vibration impacts in the primary impact area due to the interface of the Site and nearby sensitive receivers.	Moderate + likely = medium (negative)	• Not applicable	No change

9.0 Conclusion

This SIA has been prepared to support a modification to SSD-5544. Specifically, this report has been prepared to assess the potential social impacts of the proposed modification and how it may affect residents, businesses, and other key stakeholders, and to identify appropriate mitigation and management measures to address the impacts identified and enhance potential benefits.

This SIA has identified a range of social impacts, both positive and negative, which may arise during construction and operation of the proposed modification. Appropriate forms of mitigation and management, identified in Section 8 of this report (Management of impacts) and in the Modification Report, would help ensure negative impacts of the proposed modification are suitably managed.

10.0 References

DPIE. (2023a). *Social Impact Assessment Guideline*. Retrieved from https://www.planningportal.nsw.gov.au/sites/default/files/documents/2023/GD1944%20SIA%20Guideline_NEW%20VI_14_02_23.pdf

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Glossary and abbreviations

Term	Description
Amenity	Refers to the quality of a place, its appearance, feel and sound, and the way the community experiences the place. Amenity contributes to a community's identity and its sense of place. Aesthetic qualities are an important part of amenity, but the broader concept of amenity is determined also by the physical design of a place and the human activity that takes place within it. A place that has 'amenity' is regarded as pleasant and attractive, as well as convenient and comfortable (Handy, 2002).
Cumulative impacts	Impacts that, when considered together, have different and/or more substantial impacts than a single impact assessed on its own
Residual impacts	Impacts of the proposed modification that remain after mitigation measures are implemented.
Social infrastructure	Infrastructure assets that deliver social services and other community uses, including schools, hospitals, childcare centres, libraries, and sport and recreation facilities. The term can also be used to broadly encompass the networks of facilities, places, spaces, programs, projects, and services that sustain a community's quality of life and wellbeing.
Statistical Area Level 2	Statistical Area Level 2, defined by the ABS, are medium-sized general purpose areas built up from whole Statistical Areas Level 1. Their purpose is to represent a community that interacts together socially and economically.

Abbreviations

Term	Description
ABS	Australian Bureau of Statistics
ACHAR	Aboriginal Cultural Heritage Assessment Report
ACS	Asbestos Contaminated Soil
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
CPTED	Crime Prevention Through Environmental Design
CTMP	Construction Traffic Management Plan
CSEP	Community and Stakeholder Engagement Plan
CSP	Community Strategic Plan
DPE	NSW Department of Planning and Environment
DPHI	NSW Department of Planning, Housing and Infrastructure
EP&A Act	Environmental Planning & Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
IRSAD	Index of Relative Socio-economic Advantage and Disadvantage

Term	Description
LGA	Local Government Area
OEMP	Operational Environmental Management Plan
OWS	Oily water sewer
PAD	Potential Archaeological Deposit
RAPs	Registered Aboriginal Parties
SA2	Statistical Area Level 2
SEARs	Secretary's Environmental Assessment Requirements
SEIFA	Socio-Economic Index for Areas
SIA	Social Impact Assessment
SSD	State Significant Development
SSD-5544	State Significant Development Consent No. 5544

Annexure A – Certification page

I, Jamie McMahon, certify that this social impact assessment contains all information relevant to the social impact assessment for this Project, and that the information is not false or misleading. The SIA Author's qualifications and experiences are listed below.

- Experience in social science methodologies and demonstrated social impact assessment skills in government and private settings. The author is a social impact specialist and has managed social impact assessments for numerous transport infrastructure, and energy projects in NSW, including State Significant Projects
- Bachelor of Environmental Science (Honours)
- Certified Environmental Practitioner – Impact Assessment Specialist (IA11004)
- Member of Environment Institute of Australia and New Zealand
- NSW Division Committee member, Environment Institute of Australia and New Zealand
- EIANZ Impact Assessment Special Interest Section committee member
- NSW Registered Environmental Assessment Practitioner.

Date: 31 March 2025

Signature:

Annexure B – Social baseline data

Table B-1 Key demographic characteristics of the social locality and NSW

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Total Resident Population (no. persons)	2,528	1,375	17,899	5,060	8,072,163
Median age	38	37	43	39	39
Population aged <15 (no. persons)	600 (23.7%)	347 (25.2%)	2,127 (11.9%)	808 (16%)	1,470,006 (18/2%)
Population aged 15+ (no. persons)	1939 (76.7%)	1,020 (74.2%)	15,778 (88.2%)	4,267 (84.3%)	5,178,009 (64.1%)
Population aged 65+ (no. persons)	362 (14.3%)	85 (6.2%)	3,852 (21.5%)	853 (16.9%)	1,240,246 (15.4%)
Population aged 85+ (no. persons)	35 (1.4%)	0 (0%)	559 (3.1%)	94 (1.9%)	183,895 (2.3%)
Aboriginal and Torres Strait Islander population (no. persons)	100 (4%)	16 (1.2%)	264 (1.5%)	80 (1.6%)	278,043 (3.4%)
Speaks only English at home (no. persons)	2,283 (90.3%)	1,186 (86.3%)	15,376 (85.9%)	4,416 (87.3%)	5,457,982 (67.6%)
Has a need for assistance (no. persons)	630 (24.9%)	21 (1.5%)	630 (3.5%)	159 (3.1%)	464,712 (5.8%)

Percentages may not add to 100 per cent due to rounding

Table B-2 Labour force characteristics of the social locality

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Total Labour Force	1,242	781	10,282	2,915	3,874,012
Employed full time (FT)	603 (50.7%)	438 (56.1%)	5,893 (57.3%)	1,642 (56.3%)	2,136,610 (55.2%)
Employed part time (PT)	404 (32.5%)	254 (32.5%)	3,013 (29.3%)	866 (29.7%)	1,151,660 (27.7%)
Employed away from work*	147 (11.7%)	79 (10.1%)	1,050 (10.2%)	338 (11.6%)	395,888 (10.2%)
Unemployed	36 (2.9%)	14 (1.8%)	328 (3.2%)	75 (2.6%)	189,852 (4.9%)

*Employed full time or part time, but away from work at the time of the 2021 Census

Percentages may not add to 100 per cent due to rounding

Table B-3 Residential dwelling characteristics (number of dwellings)

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Separate house	756 (91.0%)	368 (100%)	1,640 (18.1%)	893 (40.7%)	1,902,734 (65.6%)
Semi-detached, townhouse or terrace house	22 (2.6%)	0 (0%)	487 (5.4%)	336 (15.3%)	340,582 (11.7%)
Flat or apartment	3 (0.4%)	0 (0%)	5,815 (64.3%)	782 (35.6%)	630,030 (21.7%)
Other dwelling (caravan, cabin, tent, flat attached to a shop)	8 (1.0%)	0 (0%)	65 (0.1%)	0 (0%)	19,374 (0.7%)
Unoccupied private dwelling	38 (4.6%)	0 (0%)	1,024 (11.3%)	172 (7.8%)	299,524 (9.4%)

Percentages may not add to 100 per cent due to rounding

Table B-4 Home ownership and household structure

	Category	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Home ownership	Owned outright	267 (33.6%)	108 (29.3%)	2,681 (33.4%)	671 (33.2%)	914,537 (31.5%)
	Owned with a mortgage	375 (47.2%)	231 (62.8%)	1,887 (23.5%)	772 (38.2%)	942,804 (32.5%)
	Rented	131 (16.5)	18 (4.9%)	3,299 (41.1%)	536 (26.5%)	944,585 (32.6%)
	Other tenure type	9 (1.1%)	0 (0%)	80 (1.0%)	16 (0.8%)	55,931 (1.9%)
	Tenure type not stated	11 (1.4%)	6 (1.6%)	74 (0.9%)	24 (1.2%)	42,613 (1.5%)
Household structure	Family household	653 (82.1%)	350 (95.4%)	4,852 (60.5%)	1,386 (68.6%)	2,065,107 (71.2%)
	Single (or lone)	126 (15.8%)	17 (4.6%)	2,790 (34.8%)	592 (29.3%)	723,716 (25.0%)
	Group Household	16 (2.0%)	0 (0%)	378 (4.7%)	43 (2.1%)	111,646 (3.8%)

Percentages may not add to 100 per cent due to rounding

Table B-5 Employment by industry

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Agriculture, Forestry and Fishing	0 (0%)	6 (0.8%)	21 (0.2%)	0 (0%)	74,728 (2.0%)
Mining	3 (0.2%)	4 (0.5%)	21 (0.2%)	8 (0.3%)	35,406 (1.0%)
Manufacturing	69 (5.7%)	40 (5.2%)	438 (4.4%)	151 (5.3%)	201,654 (5.5%)
Electricity, Gas, Water and Waste Services	19 (1.6%)	5 (0.7%)	100 (1%)	22 (0.8%)	35,584 (1.0%)
Construction	218 18.1%)	88 (11.5%)	1,269 (12.7%)	325 (11.4%)	315,520 (8.6%)
Wholesale Trade	37 (3.1%)	24 (3.1%)	293 (2.9%)	87 (3.1%)	103,466 (2.8%)
Retail Trade	97 (8%)	54 (7%)	1679 (6.8%)	233 (8.2%)	331,486 (9.0%)
Accommodation and Food Services	74 (6.1%)	35 (4.6%)	461 (4.6%)	120 (4.2%)	227,466 (6.2%)
Transport, Postal and Warehousing	98 (8.1%)	29 (3.8%)	568 (5.7%)	170 (6%)	169,608 (4.6%)
Information Media and Telecommunications	10 (0.8%)	9 (1.2%)	191 (1.9%)	53 (1.9%)	68,068 (1.8%)
Financial and Insurance Services	35 (2.9%)	60 (7.8%)	536 (5.4%)	181 (6.4%)	193,679 (5.3%)
Rental, Hiring and Real Estate Services	16 (1.3%)	17 (2.2%)	296 (3%)	74 (2.6%)	62,633 (1.7%)
Professional, Scientific and Technical Services	54 (4.5%)	90 (11.7%)	21,025 (10.3%)	300 (10.6%)	326,595 (8.9%)
Administrative and Support Services	40 (3.3%)	23 (4.2%)	280 (2.8%)	71 (2.5%)	117,988 (3.2%)

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Public Administration and Safety	69 (5.7%)	42 (5.5%)	667 (6.7%)	216 (7.6%)	222,909 (6.1%)
Education and Training	96 (8%)	66 (8.6%)	957 (9.6%)	260 (9.2%)	322,236 (8.7%)
Health Care and Social Assistance	124 (10.3%)	82 (10.7%)	1,201 (12.1%)	309 (10.9%)	529,176 (14.4%)
Arts and Recreation Services	25 (2.1%)	20 (2.6%)	185 (1.9%)	51 (1.8%)	51,789 (1.4%)
Other services	62 (5.1%)	23 (3%)	325 (3.5%)	113 (4%)	125,380 (3.4%)
Inadequately described/not stated	58 (4.8%)	49 (6.4%)	407 (4.1%)	97 (3.4%)	168,787 (4.6%)
Total (no. of persons)	1,207	767	9,995	2,839	3,684,158

Percentages may not add to 100 per cent due to rounding

Table B-6 Journey to work (single Method only)

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
Train	3 (0.4%)	3 (0.9%)	231 (4.8%)	50 (3.7%)	62,460 (3.2%)
Bus	3 (0.4%)	0 (0%)	17 (0.4%)	7 (0.5%)	34,408 (1.7%)
Ferry	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1,189 (0.1%)
Tram (includes light rail)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1,351 (0.1%)
Taxi/ ride share services	0 (0%)	0 (0%)	8 (0.2%)	0 (0%)	4,775 (0.2%)
Car, as driver	624 (86.8%)	284 (89.3%)	3,910 (81%)	1,154 (85.1%)	1,587,613 (80.4%)
Car, as passenger	27 (3.8%)	17 (5.3%)	176 (3.6%)	72 (5.3%)	117,143 (5.9%)
Truck	18 (2.5%)	6 (1.9%)	52 (1.1%)	11 (0.8%)	26,390 (1.3%)
Motorbike/ scooter	5 (0.7%)	0 (0%)	48 (1%)	14 (1%)	14,917 (0.8%)
Bicycle	10 (1.4%)	0 (0%)	54 (1.1%)	11 (0.8%)	14,466 (0.7%)
Other	4 (0.06%)	3 (0.09%)	34 (0.7%)	3 (0.2%)	17,233 (0.9%)
Walked only	21 (2.9%)	8 (2.5%)	286 (5.9%)	38 (2.8%)	92,368 (4.7%)

Percentages may not add to 100 per cent due to rounding

Table B-7 Vehicle ownership count of private occupied dwellings

Key Demographic information	Kurnell	Greenhills Beach	Cronulla	Woolooware	NSW
No motor vehicles	15 (1.9%)	0 (0%)	652 (8.1%)	93 (4.6%)	262,031 (9.0%)
One motor vehicle	181 (22.8%)	25 (6.8%)	3,611 (45.0%)	824 (40.8%)	1,096,761 (37.8%)
Two motor vehicles	326 (41.1%)	186 (50.5%)	2,768 (34.5%)	741 (36.7%)	989,258 (24.1%)
Three motor vehicles	161 (20.3%)	90 (24.5%)	917 (11.4%)	226 (16.8%)	321,310 (11.1%)
Four motor vehicles	99 (12.6%)	62 (17.1%)	303 (3.8%)	113 (5.7%)	82,143 (7.8%)
Not stated	11 (1.4%)	0 (0%)	74 (0.9%)	16 (0.8%)	43,732 (1.5%)

Note on data quality: Tables of Census data are subject to perturbation to protect the confidentiality of individuals, in accordance with the Census and Statistics Act 1905 (ABS, 2017). Perturbation is a technique which has been developed to randomly adjust count values. When the technique is applied, counts and totals are slightly adjusted to prevent any identifiable data being exposed. These adjustments result in small introduced random errors. However, the information value of the table as a whole is not impaired. Due to this process, percentage calculations for statistics may not total to 100 per cent in some instances. Notwithstanding, the quality of the data is considered suitable for this assessment.

Annexure C – Assessment review questions

The following table has been extracted from Appendix C of the SIA Guideline (2021). These review questions are used to confirm that the requirements of the SIA Guideline (2021) have been fulfilled when considering the scale of social impacts of this proposed modification.

Review questions		Reference within this SIA
General		
1	Does the lead author meet the qualification and experience requirements?	Annexure A
2	Has the lead author provided a signed declaration?	Annexure A
3	Would a reasonable person judge the social impact assessment report to be impartial, transparent, and suitably rigorous given the nature of the proposed modification?	Annexure A
Project's social locality and social baseline		
4	Does the social impact assessment report identify and describe all the different social groups that may be affected by the proposed modification?	Section 3.0 Section 4.0
5	Does the social impact assessment report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Section 4.0
6	Does the social impact assessment report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this proposed modification and other major development projects?	Section 3.0 Section 4.0
7	Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the diversity of views and likely experiences?	Section 3.0 Section 4.0
8	Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Section 2.0 Section 3.0 Section 4.0
Identification and description of social impacts		
9	Does the social impact assessment report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of social impact assessment scoping and initial assessment, has the plan for the social impact assessment report been detailed?	Section 2.0 Section 5.0 Section 6.0
10	Does the social impact assessment report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	Section 5.0 Section 6.0
11	Does the social impact assessment report describe how the preliminary analysis influenced the design and engagement strategy for the proposed modification?	Section 1.0
Community engagement		
12	Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Section 3.0
13	How have the views, concerns, and insights of affected and interested people influenced both the proposed modification design and each element of the social impact assessment report?	Section 2.0 Section 3.0

Review questions		Reference within this SIA
Predicting and analysing social impacts		
14	Does the social impact assessment report impartially focus on the most important social impacts to people at all stages of the proposed modification, without any omissions or misrepresentations?	Section 5.0 Section 6.0
15	Does the social impact assessment report analyse the distribution of both positive and negative social impacts, and identify who would benefit and who would lose from the proposed modification?	Section 5.0 Section 6.0
16	Does the social impact assessment report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including 'worst-case' and 'no project' scenarios where relevant)	Section 5.0 Section 6.0
Evaluating significance		
17	Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the proposed modification, including any cumulative effects?	Section 5.0 Section 6.0 Section 7.0
18	Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Section 5.0 Section 6.0
Responses, monitoring and management		
19	Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the proposed modification, including any cumulative effects?	Section 5.0 Section 6.0
20	Are the evaluations of significance disaggregated to consider the likely different experiences for different people or groups, especially vulnerable groups?	Section 5.0 Section 6.0
21	Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the proposed modification, including any cumulative effects?	Section 5.0 Section 6.0