

ASSESSMENT REPORT

Section 96(1A) Modification Port Kembla Bulk Liquids Terminal (SSD 7264 MOD 1)

1. INTRODUCTION

This report assesses a modification application by TQ Holdings Australia Pty Ltd (the Applicant) to amend the construction staging, equipment locations and storage capacity of the proposed Port Kembla Bulk Liquids Terminal. The application has been lodged pursuant to section 96(1A) of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

2. BACKGROUND

The subject site is located on Tom Thumb Road in Port Kembla, approximately 70 kilometres (km) south of Sydney and 3 km south of Wollongong City Centre (see **Figure 1**). The Port itself is located on a highly modified estuary at the mouth of Allens Creek and the Gurungaty Waterway.



Figure 1: Regional Context (development outlined in red)

The subject site consists of four separate lots, with a total area of 7.22 hectares (ha) (see **Table 1**).

Table 1: Development Lot Details

Site	Lot	Deposited Plan	Size (ha)
Site 1	3	1125445	1.8
Site 2	301	1148391	4.139
Site 3	11	1182111	0.367
Berth 104	70	1182824	0.91

The site is connected to Wollongong via Springhill Road and to Sydney via the Princes Highway. Vehicles exiting the site would travel via Tom Thumb Road (Sites 1 and 3) or Morton Way (Site 2). A number of industrial and port-related uses operate in the vicinity of the site, including the Port Kembla Coal Terminals, BlueScope Steelworks, Autonexus, Australian Amalgamated Terminals (AAT) and GrainCorp Terminal (refer to **Figure 2**). Berth 104 is currently used by the GrainCorp Terminal (a grain and bulk liquids storage facility adjacent to the subject site).

The nearest residential areas are located around 1.3 km north and north-west of the site in the suburbs of Wollongong and Coniston (see **Figure 1**).

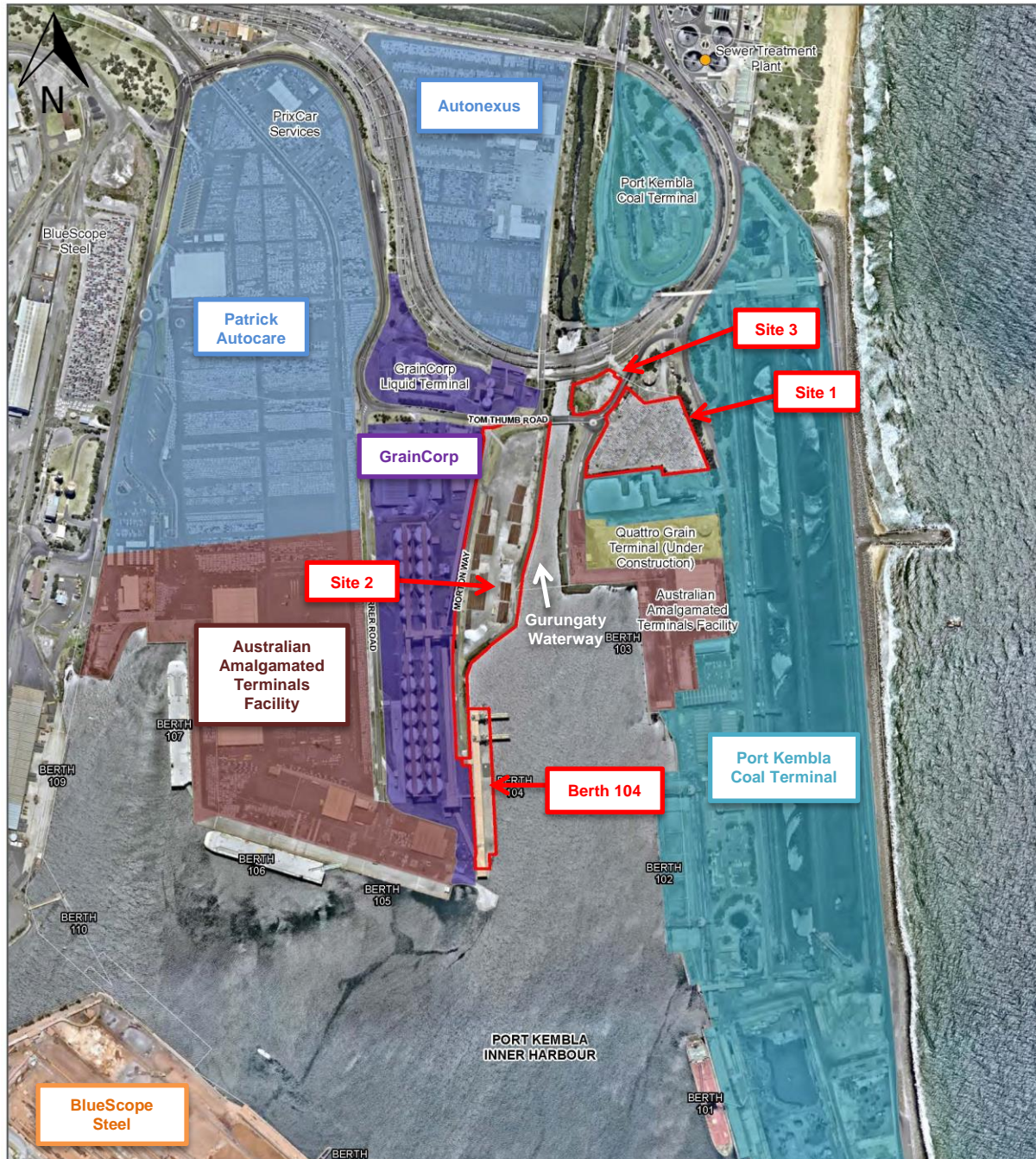


Figure 2: Development Sites 1, 2, 3, Berth 104 and Surrounding Land Uses (TQ Holdings, 2016)

3. APPROVAL HISTORY

On 9 September 2016, development consent was granted under delegation by the then Acting Executive Director, Key Sites and Industry Assessments, for the development of the Port Kembla Bulk Liquids Terminal (SSD 7264). The development consent permits the construction and operation of:

- 23 tanks for the storage of up to 288 mega litres (ML) at any one time of combustible and flammable liquids;
- truck unloading and loading equipment;
- 13 waste (slops) tanks and 2 firewater tanks;
- piping and pumping equipment for fuel transfer and firefighting; and
- a control room, offices and amenities.

4. PROPOSED MODIFICATION

The Applicant has lodged a modification application under section 96(1A) of the EP&A Act to modify the construction staging, equipment locations and storage capacity of the proposed Port Kembla Bulk Liquids Terminal. The modification would involve:

- consolidation of the development's staging from three stages to two;
- a reduction in total storage capacity from 288 ML to 275 ML;
- minor adjustments to the configuration and layout of Site 2;
- relocation and separation of key equipment on Site 2; and
- amendments to the bund wall system, including an increase in bund height from 1.8 to 3.9 metres (m).

A detailed overview of the proposed modification is provided in **Table 2** overleaf.

The Applicant has advised the proposed modification would simplify the development's staging, and consequently allow for a safer, more efficient construction strategy to be implemented. The proposed amendments to the site's layout and equipment locations would also work to minimise the development's potential impacts, by assisting with:

- the enhancement of firefighting security;
- a reduction in overall hazard and off-site risk propagation; and
- the implementation of several design efficiencies and improvements.

The modification is described in full in the documentation included in **Appendix B**, and an overview of the proposed site layout is illustrated in **Figure 3** and **Figure 4**.

Table 2: Proposed Modification Components

Description	Proposed Modification
<i>Staging Plan</i>	<p>The development would be undertaken in two stages (see Figure 3).</p> <p>Stage 1 would occur on Sites 2 and 3, and the timing of its construction would be completed to allow for the commencement of operations in 2018. This stage would involve the construction of:</p> <ul style="list-style-type: none"> • 8 flammable bulk liquid storage tanks, four combustible liquid storage tanks and 8 small flammable tanks for the storage of slops and additives on Site 2; • four truck loading bays on Site 2; • vessel unloading equipment and associated infrastructure on Berth 104; • bund walls surrounding tanks on Site 2; • supporting infrastructure and utilities on Site 2; • an office building and car parking on Site 3; and • associated paving, fencing and landscaping. <p>Stage 2 would occur on Site 1, and the timing of its construction would be determined by market demand. This stage would involve the construction of:</p> <ul style="list-style-type: none"> • 7 combustible liquid storage tanks and five flammable liquid storage tanks; • two additional truck loading bays on Site 2; • bund walls surrounding tanks on Site 1; • a service bridge between Site 2 and Site 1; • supporting infrastructure and utilities on Site 1; and • associated paving and fencing.
<i>Bulk Liquid Storage Tanks</i>	<p>The proposed modification would involve a number of minor amendments to the design and layout of bulk liquid storage tanks across the site (see Figure 4). This includes the:</p> <ul style="list-style-type: none"> • removal of one 18 ML flammable bulk liquids storage tank on Site 2; • addition of two 1.5 ML flammable bulk liquids storage tanks on Site 2; • relocation of two 1.5 ML and two 0.03 ML flammable bulk liquids storage tanks within Site 2; • increase in capacity of two small flammable storage tanks from 0.03 ML to 0.05 ML; and • minor adjustments to the location of each 18 ML flammable bulk liquids storage tank on Site 2.
<i>Bund Design and Layout</i>	<p>The proposed modification would involve the separation of bulk liquids storage tanks on Site 2 into two bund areas (north and south bund, see Figure 4). The height of the bund wall would also increase from 1.8 to 3.9 m, to allow the development to comply with potential amendments to <i>AS1940-2004 – The storage and handling of flammable and combustible liquids</i>.</p>
<i>Fire water system</i>	<p>The proposed modification also seeks to separate the fire water tanks and pumps located on Site 2, as a result of further consultation undertaken between the Applicant and Fire and Rescue NSW (see Figure 4). One set of equipment would be located in the north eastern corner of Site 2, whilst the other would be in the north western corner of the site.</p>
<i>Relocation of Site 2 Equipment</i>	<p>The proposed modification would involve the relocation of several pieces of equipment on Site 2 (see Figure 4), including the:</p> <ul style="list-style-type: none"> • vapour recovery unit; • additive and slops tanks; and • pump bay.
<i>Relocation of Site 3 Equipment to Site 2</i>	<p>The proposed modification would involve the relocation of several pieces of equipment from Site 3 to Site 2 (see Figure 4), including the:</p> <ul style="list-style-type: none"> • oil separator; • nitrogen vacuum insulated evaporator; and • air compressors.

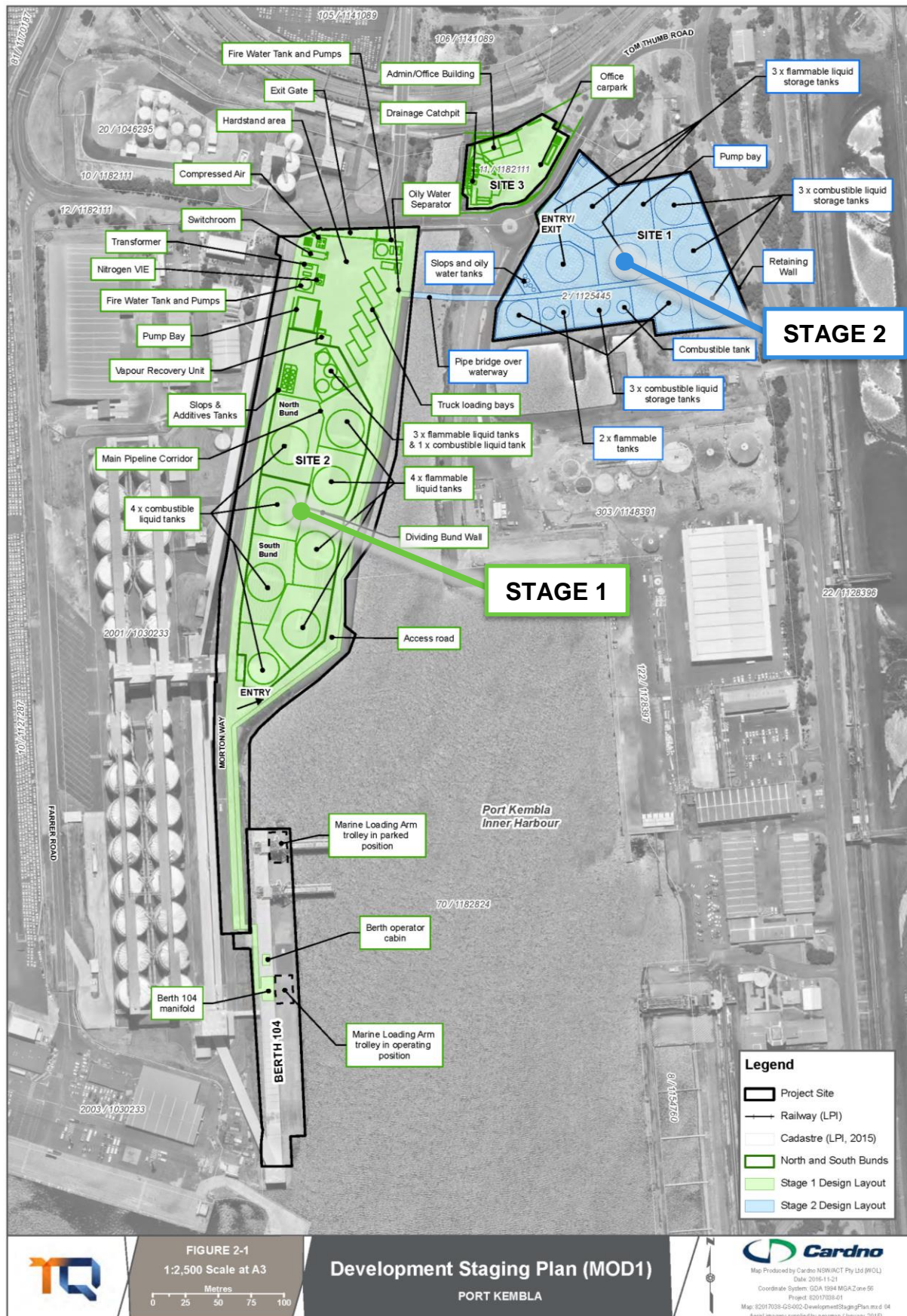


Figure 3: Proposed Development Staging Plan (TQ Holdings, 2016).

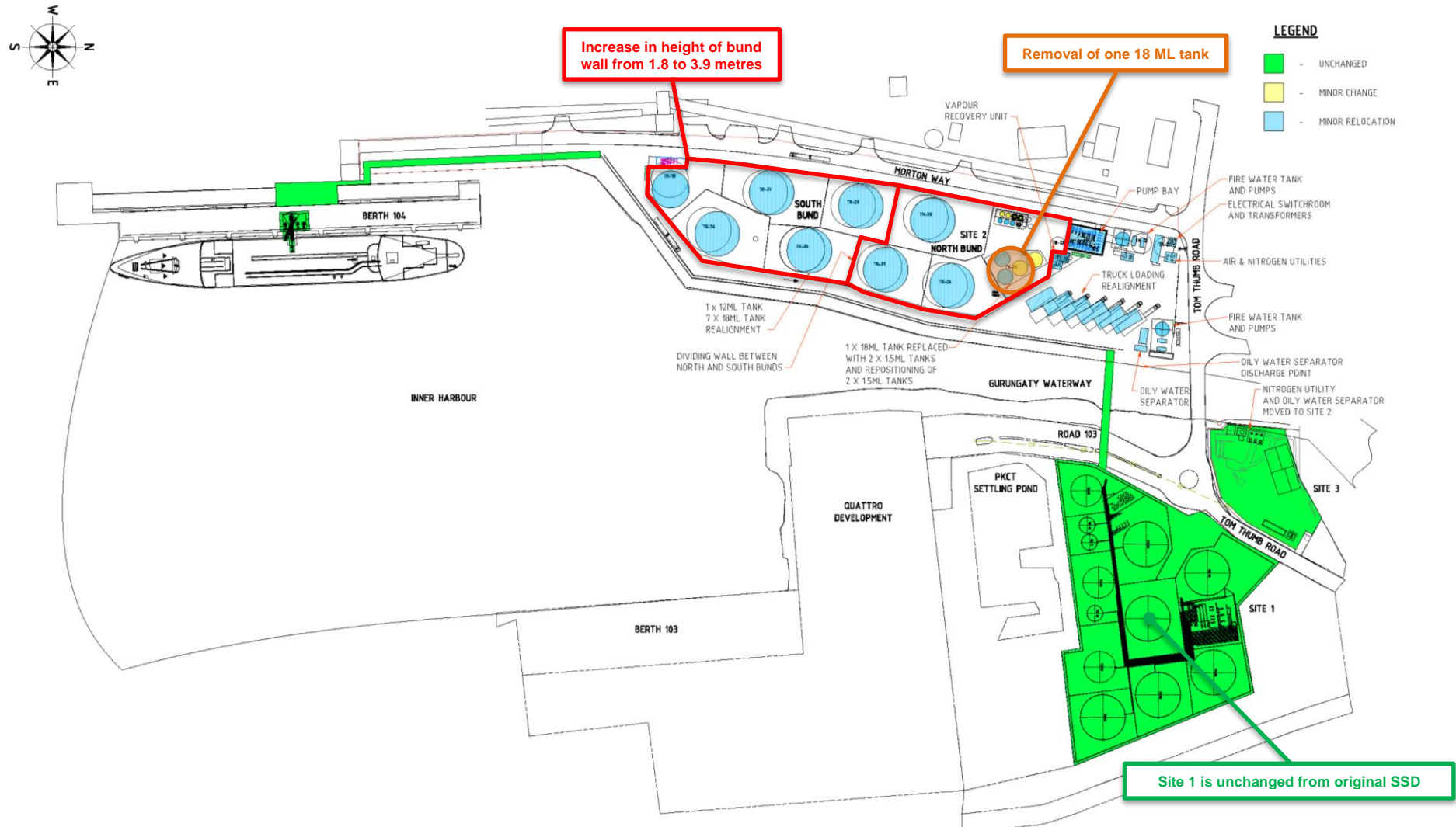


Figure 4: Overview of proposed tank and equipment relocations (TQ Holdings, 2016).

5. STATUTORY CONTEXT

5.1 Consent Authority

The Minister for Planning is the consent authority for the application. Under the Minister's delegation of 16 February 2015, the Director, Industry Assessments, may determine the application under delegation as:

- the relevant local council has not made an objection; and
- a political disclosure statement has not been made; and
- there are no public submissions in the nature of objections.

5.2 Section 96(1A)

The Department has reviewed the scope of the modification application and is satisfied the proposed modification would result in minimal environmental impacts, and relates to substantially the same development as the original development consent on the basis that:

- the primary function and purpose of the approved development would not change as a result of the proposed modification;
- the modification is of a scale that warrants the use of section 96(1A) of the EP&A Act;
- the approved capacity of the development would be slightly reduced as a result of the proposed modification; and
- any potential environmental impacts would be minimal and appropriately managed through the existing or modified conditions of approval.

Accordingly, the Department considers that the application should be assessed and determined under section 96(1A) of the EP&A Act rather than requiring a new development application to be lodged.

6. CONSULTATION

Clause 117(3B) of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) specifies the notification requirements of the EP&A Regulation do not apply to State significant developments. However, the modification application was made publicly available on the Department's website from 30 November 2016 until 14 December 2016. The Department also referred the application to Wollongong City Council (Council), SafeWork NSW, the Environment Protection Authority (EPA), Roads and Maritime Services (RMS), Fire and Rescue NSW (FRNSW), and NSW Health for comment. The Department also notified previous submitters and landowners in the vicinity of the development by letter.

The Department received submissions from SafeWork NSW, the EPA, RMS, FRNSW and two public submissions. These submissions are summarised below. Council and NSW Health advised they did not have any comments regarding the modification.

SafeWork NSW did not object to the modification, but noted the proposed changes need to be taken into account when the Applicant prepares the Safety Case required under the Work Health and Safety Regulations. SafeWork NSW's main concern related to a potential pipe rupture scenario near the berth during ship importing and suggest the scenario is considered during design.

The **EPA** did not object to the modification, and noted that the Applicant had previously consulted with the authority regarding the change in staging for the development and minor amendments to the tank locations.

RMS did not object to the modification, and noted that the proposed changes are minor, and unlikely to impact the classified road network.

FRNSW did not object to the modification, and noted that it would be required to provide an assessment and determination on the development's Fire Safety Study, as part of its pre-construction requirements.

The Department received two public submissions, one from GrainCorp and one from NSW Ports. These submissions are summarised below.

GrainCorp did not object to the modification, but raised several concerns regarding the development's impact upon its future development options along the western site boundary, and the impact of the new loading arm upon its operations on Berth 104.

The Applicant provided a response to this submission, noting a Preliminary Hazard Analysis (PHA) had been prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 4 – Risk Criteria for Land Use Safety Planning* (HIPAP No. 4). The Applicant also outlined the consultation undertaken with GrainCorp to date regarding Berth 104, and clarified they will be installing a new fire system on Berth 104 and new power supply assets to accommodate the development.

NSW Ports did not object to the modification, but advised its definition within the development consent should be updated to: “Port Kembla Operations Pty Limited as trustee for the Port Kembla Unit Trust”. This amendment has been reflected in the recommended notice of modification.

The Department has considered the issues raised in these submissions in its assessment of the modification application.

7. ASSESSMENT

The Department has assessed the merits of the proposed modification. During this assessment, the Department has considered the:

- the documentation provided to support the proposed modification (see **Appendix B**);
- the assessment report for the original development application;
- submissions from the public, State government authorities and Council (**Appendix C**);
- relevant environmental planning instruments, policies and guidelines; and
- requirements of the EP&A Act, including the objects of the EP&A Act.

The Department considers the key assessment issues are:

- hazards and risk; and
- construction access and parking.

The Department has also considered minor administrative changes to accommodate the proposed modification within **Section 7.3**.

7.1 Hazards and Risk

The proposed modification would involve:

- relocation of bulk and minor storage tanks on site 2;
- changes to the firewater system and site utilities;
- changes to the design and configuration of bund walls, including an increase in bund height from 1.8 to 3.9 m; and
- reduction in total storage quantity from 288 ML to 275 ML.

The development is identified as a Major Hazard Facility under the *Work Health and Safety Act 2011* and is deemed a ‘potentially hazardous industry’ under the provisions of *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*. Therefore, a detailed risk assessment of the proposed modification was undertaken as part of the application.

Sherpa Consulting prepared a PHA as part of the modification application to assess the potential risk to people, property and the environment as a result of the revised development layout. The PHA was carried out in accordance with the Department’s *Hazardous Industry Planning Advisory Paper No. 6 – Hazard Analysis* (HIPAP No. 6).

The purpose of the PHA is to identify potential hazards, analyse consequences and the likelihood of occurrence, then estimate the resultant risk to surrounding land uses. The risks are then compared with the relevant land use safety criteria defined in HIPAP No. 4 to determine whether the development would pose an unacceptable risk to surrounding land uses.

The PHA stated there would be no significant change to the design, layout and storage capacity of the facility, and concluded the proposed modification would be largely the same as the one approved. The PHA identified the major hazardous materials with the potential for off-site safety or environmental effects to be gasoline, ethanol and diesel.

The PHA also considered the likelihood of hazardous incidents (frequency) occurring and the potential consequences of these incidents. A number of safeguards were identified to address the identified hazards.

The Department considers the appropriate techniques were used to analyse the potential consequence and frequency of each identified hazardous scenario and is satisfied it is consistent with HIPAP No. 6.

The risk assessment found the proposed modification complies with the Department's HIPAP No. 4, for individual fatality risk criteria for sensitive, residential, commercial and open space land uses.

However, the PHA indicates the individual fatality risk contour for industrial land uses (50 per million per year) would extend off-site by around 10 m into the Gurungaty Waterway (see **Figure 5**, blue contour). The Department notes this exceedance was previously addressed in the original SSD application, in which the industrial risk contour extended off-site by around 20 m into the Gurungaty Waterway. Given it was unlikely personnel or the public would be present within the Gurungaty Waterway at any time, the Department's original assessment concluded the 20 m exceedance would not pose a significant risk to nearby industrial land uses. Accordingly, the Department considers the 10 m exceedance would result in a slight improvement upon what was assessed as part of the original SSD application. This improvement in risk can be attributed to the reduction in total storage quantity and change in design layout of the development.

The Department also notes the risk contours on Site 1 would not change as a result of the proposed modification.

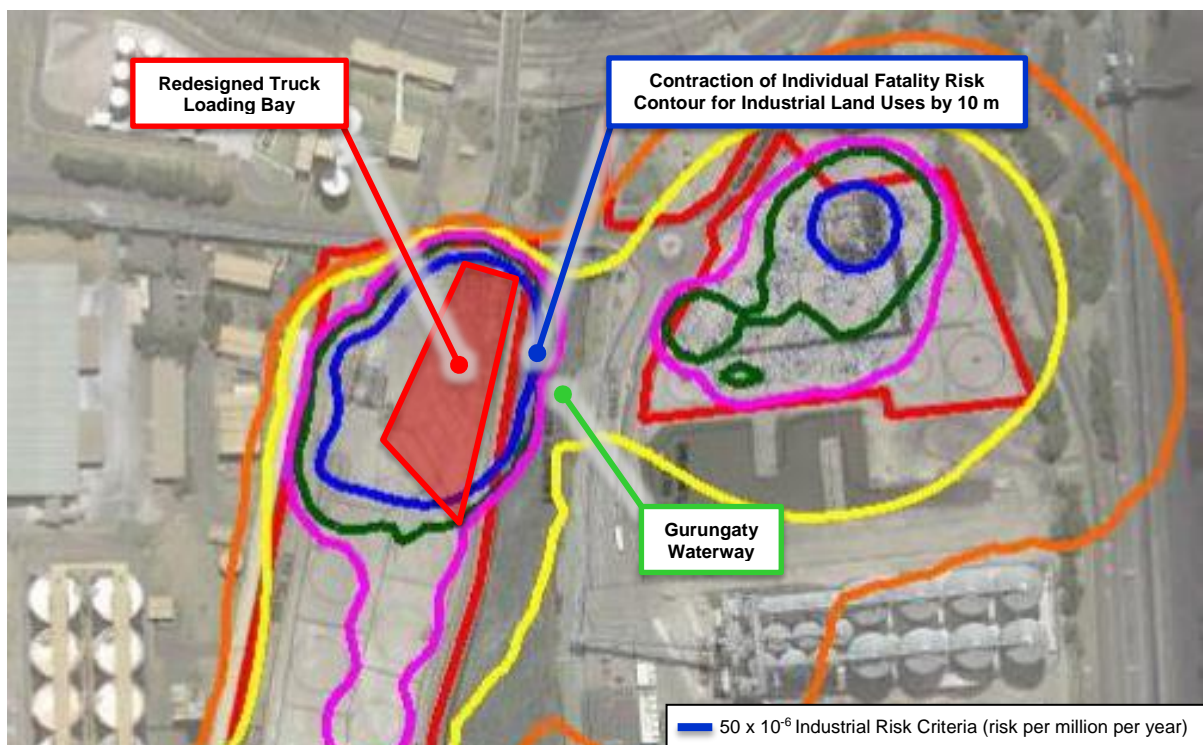


Figure 5: MOD 1 Individual Fatality 50E-06 per Year Risk Contour (Sherpa Consulting, 2016).

The Applicant also proposes to increase the bund wall height from 1.8 to 3.9 m. The Department requested further information regarding the integrity of the wall, the potential for leakage, and how it would comply with the relevant Australian Standards. The Applicant confirmed the bund wall would be constructed of reinforced concrete, and would be designed for the ground bearing pressures considered as part of the original geotechnical investigation prepared for the site. The Applicant also highlighted that any ground improvements required to prevent subsidence of the bund walls would be carried out during the detailed design and construction stages. The Department is satisfied that the bund wall would be designed to ensure compliance with the relevant Standards, and its integrity would not be compromised by the increase in height.

The Department also notes the increase in bund wall height would not significantly increase the visual impacts of the development beyond those assessed as part of the original SSD application, given that the development is located within an established port area and would be designed to blend in with the existing industrial environment.

SafeWork NSW did not object to the proposal, but raised issues relating to a loss of containment scenario due to a pipe rupture close to the berth. SafeWork NSW noted its issues would be addressed during the detailed design of the development however, provided that the Applicant consults with SafeWork NSW throughout this process. In its response, the Applicant acknowledged the potential for higher flowrates and reverse flow, and noted this possibility would be considered during detailed design and in preparation of the Safety Case for the development. The Applicant also highlighted it has regularly engaged with SafeWork NSW throughout the approval process, and plans to continue this engagement as the development is constructed. SafeWork NSW indicated it was satisfied with the commitments made by the Applicant. Notwithstanding, the Department notes Condition B3 of the original development consent would require the Applicant to consult with SafeWork NSW during the detailed design of the development, and considers this condition would ensure the issues raised by SafeWork NSW are appropriately addressed.

A submission was received from GrainCorp who raised concerns regarding the potential for the proposed development to encroach upon GrainCorp's future development options along the site boundary, adjacent to the eastern fence-line (west of Site 2, see **Figure 2**). This is due to the proximity of the development's flammable tanks and bunds to the GrainCorp facility. The Applicant provided a response to their concerns, noting this aspect of the design has been discussed with GrainCorp previously. The Applicant also confirmed the development would be designed in accordance with the relevant Australian Standards to ensure it would not encroach upon GrainCorp's lease boundary. The Department is satisfied with the Applicant's commitments, and has recommended it ensures the storage and handling of Dangerous Goods is undertaken in accordance with the requirements of all relevant Australian Standards, Codes and Regulations.

The Department has also recommended a condition requiring the Applicant undertake a Post-Startup Compliance Report no later than six months after the commencement of operation of the development. This condition has been included to align the original development consent with the Department's standard list of conditions for potentially hazardous industries.

Conclusion

The Department's assessment concludes the proposed modification will not increase the risk to surrounding land uses. It is anticipated the proposed modification would result in a reduction in the off-site risk of the development, provided all risk reduction measures and recommendations of the PHA are implemented and maintained. This improvement in overall risk can be attributed to the reduction in total storage quantity and changes to the tank and equipment layout of the development.

To ensure the development operates in a safe manner, a number of conditions have been identified to address concerns raised by SafeWork NSW and GrainCorp. The Department considers Condition B3 of the original development consent would ensure SafeWork NSW is appropriately consulted during the detailed design of the development, given that this process has not yet commenced. To address GrainCorp's concerns, the Department has also recommended a condition requiring the Applicant comply with all relevant Australian Standards, Codes and Regulations during the storage, handling and installation of Dangerous Goods.

7.2 Construction Access and Parking

As part of the original SSD application, the Department based its assessment upon the notion that no parking would be provided on-site for construction vehicles during the Stage 2 construction activities, as Site 1 would have already been constructed. Instead, it was anticipated off-site parking and transfer buses would be used to transport workers to the site. Given Stage 1 of the proposed modification would involve the full construction of Site 2 and no construction works on Site 1, the Department requested further information from the Applicant regarding the construction parking arrangements for this stage.

The Applicant noted the revised staging of the project would allow for Site 1 to be utilised for construction offices, laydown areas and possible parking areas during the Stage 1 construction activities. As these arrangements have not yet been finalised, the Applicant advised they would continue to liaise with NSW Ports regarding the parking and personnel transfer arrangements for the site during construction. These arrangements would then be confirmed and finalised as part of the Construction Traffic Management Plan required under Condition B20 of the original development consent.

The Department's assessment concludes the proposed modification will not adversely impact upon the potential traffic, access and parking impacts associated with the development. Condition B20 of the original development consent will ensure a strategy is put in place for transferring construction workers to the site during construction, and will require details of its location and compliance with the relevant Australian Standards.

7.3 Administrative Changes

As part of the proposed modification, the Applicant has also recommended a number of minor amendments to the management and mitigation measures included in the original development consent. The Applicant advised these amendments are required to facilitate several additional commitments arising from the proposed modification, and to clarify the outcome of a number of existing commitments.

The Department is satisfied the amendments proposed will continue to support the management and mitigation of the development's environmental impacts. Accordingly, these changes have been included within the recommended notice of modification.

8. CONCLUSION

The Department has assessed the proposed modification in accordance with the relevant requirements of the EP&A Act. The Department considers the proposed modification is appropriate on the basis that it would:

- result in minimal environmental impacts beyond the approved facility;
- not increase the hazardous risk to surrounding land uses; and
- not increase the traffic impacts of the development beyond those considered as part of the original SSD application.

The Department is satisfied that the modification should be approved, subject to conditions.

9. RECOMMENDATION

It is recommended that the Director, Industry Assessments:

- **consider** the findings and recommendations of this report;
- **approve** the modification application under section 96(1A) of the EP&A Act; and
- **sign** the attached notice of modification (**Appendix A**).

Patrick Copas
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APPENDIX A – NOTICE OF MODIFICATION

APPENDIX B – MODIFICATION APPLICATION

APPENDIX C – SUBMISSIONS

APPENDIX D – CONSOLIDATED CONSENT