Modification of Development Consent

Section 96(1A) of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister for Planning, under delegation executed on 16 February 2015, I approve the modification of the development consent referred to in Schedule 1, subject to the conditions outlined in Schedule 2.

Chris Ritchie
Director
Industry Assessments

Sydney 6 MARCH 2017

SCHEDULE 1

Application No:	SSD 7264
Applicant:	TQ Holdings Australia Pty Ltd
Consent Authority:	Minister for Planning
Development:	Construction and operation of a bulk liquids fuel terminal including berth infrastructure
Date of Original Consent:	9 September 2016
Modification:	SSD 7264 MOD 1 – Amendments to staging and equipment locations

SCHEDULE 2

This consent is modified as follows:

1. Delete the definition for NSW Ports and insert the following definition in alphabetical order:

   NSW Ports Port Kembla Operations Pty Limited as trustee for the Port Kembla Unit Trust

2. Insert the following definition in alphabetical order:

   MOD 1 Modification Application SSD 7264 MOD 1, including supporting documentation titled, *State Significant Development Modification (MOD 1): Port Kembla Bulk Liquids Terminal (SSD 7264)*, prepared by Cardno (NSW/ACT) Pty Ltd, dated 21 November 2016

In Part A: Administrative Conditions

3. In Condition A2(e), delete the word “and” after the semicolon.

4. In Condition A2(f), delete the period after the number “3” and replace with “; and”.

5. Insert new Condition A2(g) as follows:

   (g) MOD 1.

In Part B: Environmental Performance

6. Insert new Condition B3A after Condition B3:

   B3A. The Applicant shall ensure that the storage and handling of Dangerous Goods is undertaken in accordance with the requirements of all relevant Australian Standards, Codes and Regulations.

7. Insert new Condition B6A after Condition B6:

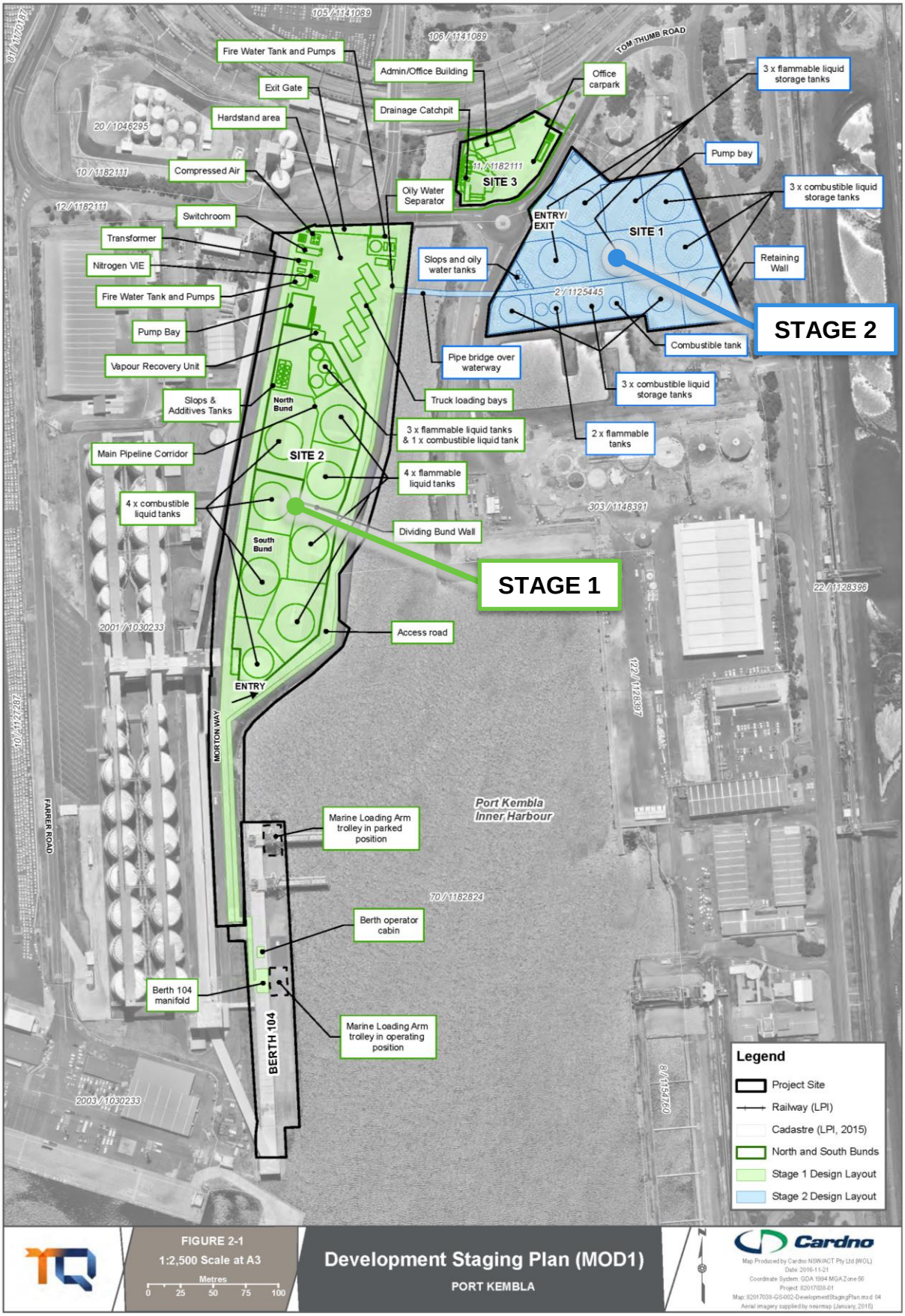
   Post-startup

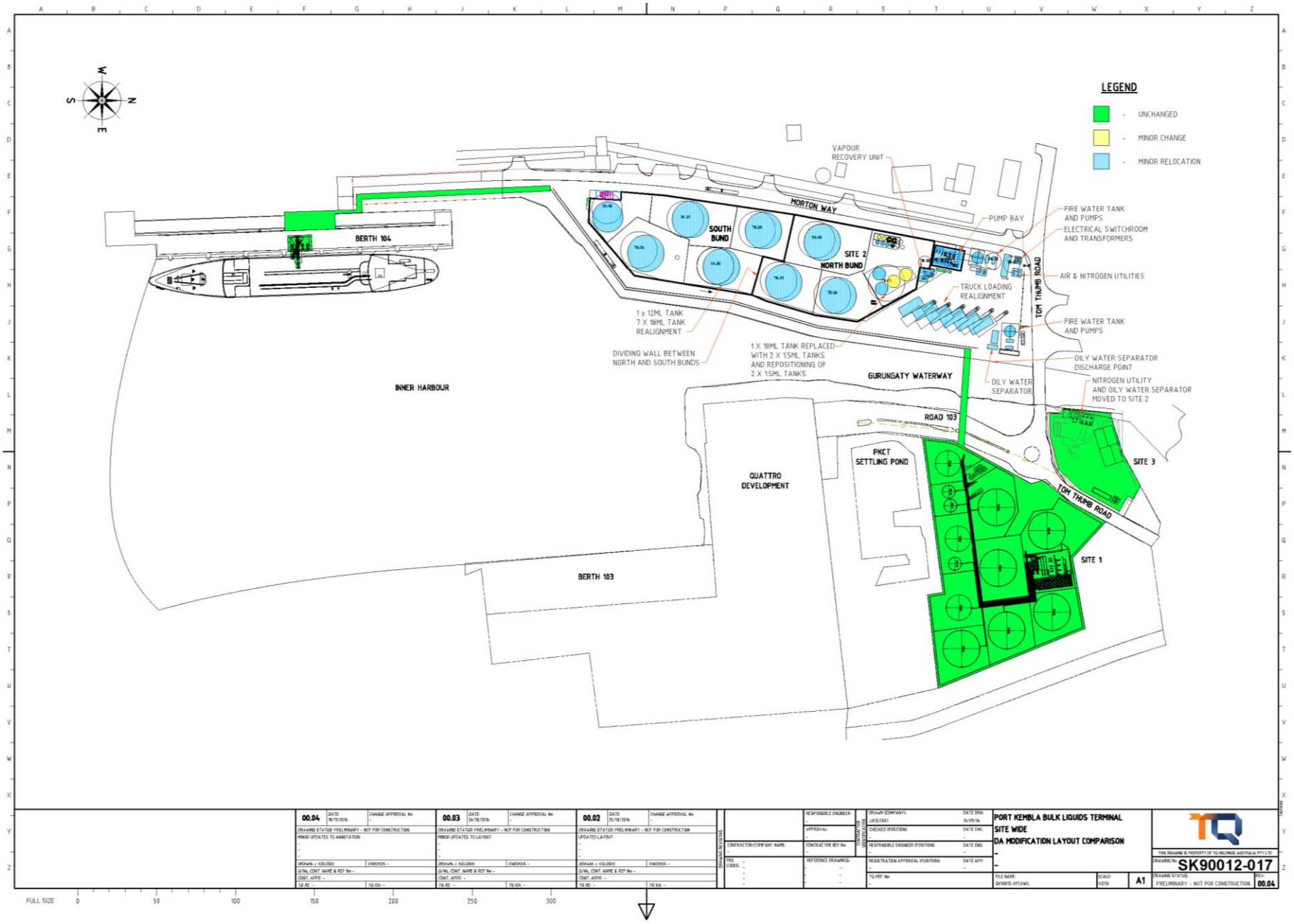
   B6A. No later than six months after the commencement of operation of the Development, the Applicant shall submit to the Secretary, a Post-Startup Compliance Report verifying that:
   (a) transport routes specified under condition B5(a) are being followed;
   (b) the Emergency Plan required under condition B5(b) is effectively in place and that at least one emergency exercise has been conducted; and
   (c) the Safety Management System required under condition B5(c) has been fully implemented and that records required by the system are being kept.

In the Appendices

8. Delete Appendices 1 and 3 and replace with the following:

APPENDIX 1: DEVELOPMENT LAYOUT PLANS




LEGEND
UNCHANGED
MINOR CHANGE
MINOR RELOCATION
VAPOUR RECOVERY UNIT
MORTON WAY
PUMP BAY
FIRE WATER TANK AND PUMPS
ELECTRICAL SWITCHROOM AND TRANSFORMERS
BERTH 104
SOUTH BUND
SITE 2
NORTH BUND
TOM THUMB ROAD
AIR & NITROGEN UTILITIES
TRUCK LOADING REALIGNMENT
1 x 12ML TANK 7 X 18ML TANK REALIGNMENT
FIRE WATER TANK AND PUMPS
DIVIDING WALL BETWEEN NORTH AND SOUTH BUNDS
1 X 18ML TANK REPLACED WITH 2 X 15ML TANKS AND REPOSITIONING OF 2 X 15ML TANKS
OILY WATER SEPARATOR DISCHARGE POINT
INNER HARBOUR
GURUNGATY WATERWAY
OILY WATER SEPARATOR
NITROGEN UTILITY AND OILY WATER SEPARATOR MOVED TO SITE 2
ROAD 103
PKCT SETTLING POND
SITE 3
QUATTRO DEVELOPMENT
TOM THUMB ROAD
SITE 1
BERTH 103
PORT KEMBLA BULK LIQUIDS TERMINAL
SITE WIDE
DA MODIFICATION LAYOUT COMPARISON
SK90012-017
A1
00.04
00.03
00.02
FULL SIZE

APPENDIX 3: MANAGEMENT AND MITIGATION MEASURES

	Parameter	Discussion	Mitigation Measures
1	**Hazards and Risk**	Materials to be handled at the PK BLT include biofuels as well as petroleum based hydrocarbons and small quantities of additives with similar properties to fuels. Due to fencing and natural barriers such as waterways, there will not be a constant presence of people within these areas. This coupled with an absence of flammable and combustible material in these areas results in the offsite fatality risk due to PK BLT operations identified by the PHA as tolerable.	▪ Ongoing consultation with PKCT is recommended to ensure that fatality and escalation risks are minimised and agreed measures are developed ▪ To apply the relevant recommendations arising from the final Buncefield Investigation to PK BLT site as detailed in Appendix G of the PHA (see **Appendix B** of the MOD 1 report). ▪ Include in a surge analysis study during detailed design, the scenarios of high surge pressures if the ship's pumps stop working during a power failure and activation of the MLA emergency release coupling while unloading a ship. ▪ An Emergency Plan will be developed for the PK BLT. This plan should include the associated hazards arising from ships close to shore.
2	**Air Quality**	There are no privately owned receptors, recreation areas or on-site locations predicted to exceed the NSW EPA's average criteria for the air quality metrics assessed or the NSW EPA's nose-response criteria for odour. The results indicate that the operation of the bulk liquids terminal will have negligible impact on the air quality in Port Kembla and surrounding townships.	**Construction** ▪ An Air Quality Management Plan will be developed as part of the CEMP including: ▪ Methods to monitor the effects of construction activities ▪ Measures required to minimize dust and vehicle emissions during the construction of the project. ▪ The number and sizes of stockpiles will be kept to a minimum. ▪ Dust suppression shall be undertaken during construction and clearing activities, particularly during high wind conditions. Haul roads and other unsealed areas may be watered to suppress dust. ▪ Ensure that all vehicles and machinery are fitted with appropriate emission control equipment, maintained frequently and serviced to the manufacturers' specification. ▪ Minimise construction equipment idling time. **Operations** ▪ Each shore line will be equipped with a pig launcher and receiver in order to clear fuel product into the tank and leave the line clear for the next product. Pig propulsion will be via nitrogen pressure using a reticulation system from the terminal nitrogen tank. ▪ The pigging facilities will be equipped with containment and sump for hydrocarbon pump out. Once pigged clear, the line is depressurised into a cyclone column that separates hydrocarbon droplets and vapours vented from the shore lines. The collected liquid is then pumped across to the slops tank, and the vapour fed into the Vapour Recovery Unit to recover the remaining hydrocarbon vapours. ▪ When the vessel has finished pumping and the surveyor has confirmed the ship's tank is empty and dry, the ships manifold valve is closed and the MLA cleared by draining and pumping in a closed system. The shore pipeline is then pigged to

Parameter	Discussion	Mitigation Measures
		the tank, the line depressurised (as detailed above), pig removed from the receiver and the line left in nitrogen at atmospheric pressure. ▪ These processes are included to mitigate against potential emissions from product unloading. The pigging operations and vapour recovery underlie the assumption of not including this phase of the operational process in the emissions estimation. ▪ The piping design will minimise the potential for surge overpressure via the provision of expansion loops, valve closure times, check valves in tanks and product piping. Product pumps will have variable speed drives with soft start up and shut down to prevent surging. ▪ Pipework which is normally full with product that has closed sections will be protected by thermal relief around isolation valves. This will ensure that no product (and emissions) is lost to the environment. ▪ Bunds will be utilised to ensure that in the unlikely case of leakages, fuel products will not seep into groundwater and leave the site. Bunds containing pipework and equipment that is normally full with product will include level detection and hydrocarbon detection so that any leakage can be readily detected, in addition to routine inspections by operators. These site bunds will incorporate a pump out system to drain any spilled product to a closed slops handling system. ▪ Full contact internal floating roofs will be installed on all bulk storage tanks with flammable liquids to effectively mitigate against vapour headspace emissions during tank filling operations. ▪ PK BLT will utilise a vapour recovery unit to recover vapours and minimise emissions associated with the loading of fuels into road tankers. The vapour recovery unit will be located near the truck loading gantry. The recovered product will be pumped into a nominated bulk tank. ▪ Product will be recovered by carbon absorption in either one of two absorption vessels, which are regenerated by vacuum. At any one time, it is expected that one vessel is being desorbed while the other is on the line. ▪ Vapours from the vacuum process will be passed through a liquid vapour separator vessel then into a packed absorption tower which is supplied by a cold gasoline stream from the duty gasoline tank. The gasoline absorbs the vapours within the tower and the gasoline is returned to the duty gasoline tank. Residual vapours are repassed through the active absorption vessel to recover the remaining product. ▪ Requirements outlined in Clause 63 of the Clean Air Regulation for control equipment for large storage tanks will be implemented. The following control equipment is required: ▪ A drainage system comprising of a small sump or tundish fitted under each water draw-off valve and connected to a totally enclosed drain, or ▪ For volatile organic liquid stored in a tank with a vapour pressure ≤75 kPa the tank must have either a floating metal roof, a floating cover constructed of

	Parameter	Discussion	Mitigation Measures
			material impervious to vapour that floats on the liquid surface inside a fixed roof, or a vapour disposal or recovery system that meets the requirements of the Clean Air Regulation. ▪ For volatile organic liquid stored in a tank with a vapour pressure >75 kPa the tank must have a vapour disposal or recovery system that meets the requirements of the Clean Air Regulations. ▪ An operational odour response management plan should be prepared within the OEMP, to address potential response requirements in the event that adverse odour events were to occur ▪ The efficiency of the VRU unit will be monitored through a prescribed regime consistent with test methods as per the *NSW Approved Methods for the Sampling and Analysis of Air Pollutants in NSW* (EPA, 2005). ▪ Transport companies shall have vehicles demonstrating they have 'Compliance Plate Approval' to ensure trucks meet the national standards covering safety and emission requirements known as the Australian Design Rules (ADRs). ▪ Procurement policies should consider companies that have a commitment to operational and environmental improvements.
3	**Noise and Vibration**	The majority of PK BLT related traffic is expected on Springhill Road and Masters Road. Increases in traffic noise during both construction and operation would be below the traffic noise increase criteria of 2 decibels. No significant operational vibration sources are anticipated to impact on the nearest residential areas from operations on the facility.	A noise and vibration management plan within the CEMP and OEMP is recommended for the ongoing monitoring and management of potential noise impacts resulting from the Proposal. *As a minimum the noise and vibration management* plan will consider: ▪ The nearby residences and other sensitive land uses. ▪ The noise management identified in this assessment. ▪ Vibration limits as identified in this assessment. ▪ Address the potential impact from the proposed construction methods. ▪ Develop reactive and proactive strategies for dealing with any noise and vibration complaints. ▪ Management of acoustic impacts from vessels. ▪ Identify a site contact person to follow up complaints. ▪ Construction noise management measures during piling should consider: consultation, noise monitoring, feasible and reasonable noise controls such as temporary acoustic screens, orientation of plant and lower noise generating methods such as pre boring ▪ Validation of piling impacts through use of vibration trials during the initial piling works. ▪ Vibration monitoring trials to confirm safe work distances and methods. ▪ Develop and implement a noise monitoring and/or auditing program within the Traffic Management Plan to confirm trucks achieve noise standards during the construction and operational phases. Noise management measures will include:

	Parameter	Discussion	Mitigation Measures
			▪ Selection of quiet plant and equipment, particularly Larger Excavators and Haulage Trucks. ▪ Limiting the times of operation for noisier plant items to the Daytime, or Evening period. ▪ Scheduling noisier activity to regular hours and less noisy activity to non-scheduled hours. ▪ Staff and contractor education and training of road traffic noise and appropriate driving behaviours. ▪ Measures to minimise noise outside standard working hours that may cause sleep disturbance and subsequent potential health impacts. ▪ Undertaking vibration trials during the initial piling works to ensure validation of the vibration modelling. ▪ Site inductions highlighting minimisation of noise outside standard working hours. ▪ Avoiding and minimising impact when loaded and unloading equipment. ▪ Minimising engine start-ups and excessive revving. ▪ Minimising the use of reversing alarms during works outside standard working hours. ▪ Reschedule to a day time period any works that can potential cause excessive impact noise and therefore sleep disturbance. Further noise reduction measures will be considered during the detailed design phase.
4	**Traffic and Transport**	There are no critical capacity issues arising during the Stage 1 Operation /Stage 2 Construction scenario. The traffic generated by the PK BLT (full development) scenario would result in a negligible increase in traffic generation across the local network.	**<u>Construction</u>** ▪ Develop a detailed Traffic Management Plan for the construction stages of the project in accordance with the Traffic Control at Worksites, version 4.0 (NSW Roads and Maritime Services, June 2010). The Traffic Management Plan would include: ▪ Hours of haulage, which do not impose on peak periods and school drop-off and pick-up times. ▪ Haulage routes, in accordance to the RMS restricted access to heavy vehicles. ▪ Designated areas within the site for heavy and light vehicles turning movements, parking, loading and unloading. ▪ Sequence for implementing traffic works and traffic management devices if required. ▪ Safety principles for construction activities, such as speed limits around the site and procedures for specific activities. ▪ Assessing the need for oversize/over mass vehicle and management of their movements. ▪ The internal access and parking areas will be designed such that all vehicles, including the largest design vehicle (25m B-Double) are able to easily drive through the sites to ensure safe turning manoeuvres without requiring excessive reversing.

	Parameter	Discussion	Mitigation Measures
			▪ Parking facilities will be provided in accordance with Australian Standards (AS2890 Series). **Operations** ▪ Design internal access and parking areas such that all vehicles, including the largest design vehicle (28m B-Double) are able to easily drive through the sites to ensure safe turning manoeuvres without requiring excessive reversing. ▪ Any site entry gates installed shall also be setback from the road to accommodate the longest vehicle accessing each site to allow free flow of internal and external vehicles. ▪ TQ will utilise a truck slot booking system to prevent queueing on internal and external roads. ▪ Provide parking facilities in accordance with Australian Standards (AS2890 Series). ▪ Risk management strategies should be considered when planning for the transportation of hazardous materials. ▪ Risk management strategies have several aspects, including: - choice of the best routes; - identification of the main risk contributors; - identification and implementation of risk reduction measures; - measures to avoid avoidable risk; - adoption of the most cost beneficial safeguards; and - ensuring appropriate and comprehensive emergency plans.
5	**Surface Water**	The Surface Water Assessment concluded that the Site is mostly free from constraints of flooding and stormwater. The Proposal is not likely to impact on the water quality of adjoining waterways and wastewater will be suitably managed to reduce any potential adverse impacts.	**Construction** ▪ Development of an Erosion and Sediment Control plan (ESCP) with measures to be in place prior to any works commencing at the site. The ESCP will would be prepared as part of the CEMP in accordance with the *Landcom Managing Urban Stormwater; Soils and Construction Manual 2004*. The ESCP would be maintained for the duration of construction, to prevent any polluted water and sediment entering receiving waterbodies. ▪ Installation of erosion and sedimentation control devices prior to commencement of any site works. Erosion controls would remain in place until the bare soils and surfaces are stabilised (by revegetation or other means) and removed when redundant. This needs to include the diversion of 'clean' water around the site in order to avoid treating it and also to avoid potential additional erosion from off-site sources. ▪ Appropriate erosion and sediment control devices would be placed down-slope of all excavation works, spoil stockpiles or works that would disturb the ground surface, down-slope of access roads that are highly utilised as well as in other areas as appropriate.

Parameter	Discussion	Mitigation Measures
		▪ Sedimentation is likely to be due to sheet flows occurring within the site. This type of sedimentation can be effectively controlled by using vegetated buffers (e.g. turf where appropriate), sediment barriers and sediment fences. ▪ Minimise the extent and duration of disturbance by means of work planning and staging. ▪ Disturbed areas would be restored (sealed or covered with pebbles/gravel or vegetated, as appropriate) upon the completion of the works in that area to ensure that the exposure of soils is minimised. ▪ Embankments and other areas subject to earthworks and grading would be revegetated with an appropriate cover crop or stabilised with other means as soon as possible following achievement of final levels. ▪ Where revegetation is required and where deemed feasible, locally indigenous plant species, including shrubs, grasses and other groundcovers, would be planted in appropriate locations to assist in soil stabilisation following completion of construction. Maintenance of these plantings would include regular watering and appropriate weed control to ensure the plants survive and continue to enhance the site. ▪ Daily visual inspections of erosion and sediment control devices to determine the condition and effectiveness of control measures. Immediate action would be taken to repair any control devices that have failed to work adequately. **Operations** ▪ All water which has been in contact with potentially hydrocarbon-soiled surfaces within the bunded area is contained and processed to Environmental Protection Agency (EPA) standard by using an Oil Water Separator (OWS) that will be strategically located on Site 2. ▪ Before an intermediate bund sump transfers water to the centralised OWS, the pump must be locally started so that inspection for potential oil spills can take place. If a spill is detected in an intermediate bund sump the spill can be redirected away from the centralised OWS for recovery. ▪ Bund walls (1.8m to 3.9m high) will be established around the storage tank areas on Site 1 and 2. In addition, separate intermediate bunds (0.6m high) will be constructed to contain most tanks individually. All product spillage and stormwater runoff would be contained inside the bunded area. Each intermediate bund has a sump that can be operated individually into a central OWS on Site 2 and then discharged from site in accordance with an EPA licence. ▪ Recovered hydrocarbons from the OWS system are directed to the waste oil decanter tank where they can be recovered or transferred to a waste collection vehicle for disposal. ▪ Hydrocarbon and waste collection piping will be designed to run above ground where practicable so that any potential leaks are visible and can be detected and repaired, rather than underground where a leak poses a potential ground contamination issue.

Parameter	Discussion	Mitigation Measures
		▪ Any underground stormwater pipes that may potentially be exposed to hydrocarbon contaminated water will be equipped with hydrocarbon compatible sealed joints to prevent infiltration into ground. ▪ In order to mitigate the impacts, runoff from external catchments will be captured and conveyed into the Inner Harbour via upgraded road drainage on Morton Way. This may include upsizing existing pipes and pits as well as installing new stormwater lines. The upgrade works will increase the total inlet capacity on Morton Way and reduce the risk of pit inlets becoming blocked by debris. ▪ An underground Gross Pollutant Trap (GPT) will be installed on Site 3 for the treatment of stormwater flows from the existing Tom Thumb Road drainage network prior to discharging the treated stormwater into Gurungaty Waterway (non- licenced discharge point). In addition to gross pollutants and sediments, the treatment system will be designed to capture oil and grease. The GPT treatment system will be sized for the full road catchment including the western extent of Tom Thumb Road connecting to Site 3 across the bridge. Runoff from the PK BLT sites will bypass the GPT and be directed to an OWS on Site 2 instead. ▪ The access road on the southern and eastern extent of Site 2 will be used as a truck staging area for empty trucks waiting for loading. Runoff from this area will be discharged directly into Inner Harbour via stormwater treatment system consisting of a GPT and oil capture system to collect oil and grease from runoff. In case of spill, a clean-up will also be initiated using spill kits. ▪ A designated overland flow path will be provided at the low point for flows in excess of the drainage system. ▪ Leakage, spillage and wash down water within the bunded truck loading bays will be collected in grated pits at each bay. The bunded area at each truck bay will be sized to contain the contents of a tanker compartment as well as normal wash down water. Any waste collected from the truck loading bay will be pumped to the above ground slops tank. ▪ A detailed Fire Safety Study and fire system design will be undertaken to determine optimal type and methods for collection and dewatering of foams within bunded areas. The study and design will include: - selection of the firefighting foams to be handled, stored or used (not containing perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA)); - justification for the foams selected; - characterisation of any potential discharges to surface or groundwater waters; - an assessment of the likely impacts in the event of any discharge of contaminated fire water; and - a description of all feasible and reasonable measures to minimise any discharge of contaminated fire water.

	Parameter	Discussion	Mitigation Measures
6	**Greenhouse Gas and Climate Change**	The GHG Assessment (Appendix E of the EIS) concluded that the proposed development would produce a very small portion of GHG. Consequently, the PK BLT design has been developed to address potential Climate Change impacts, with no adverse impacts anticipated.	▪ TQ will implement emission capture and abatement technology throughout the detailed engineering design and equipment procurement processes. This will include specification of floating roof tank designs, vapour recovery units and associated fuel emission capture and abatement technology to ensure the PK BLT is built to standard industry practices. ▪ It is also suggested by TQ that the form of transportation may incorporate rail once new infrastructure is developed to meet the demand criteria, thus reducing future greenhouse emissions from this process. ▪ TQ will attempt to utilise freight companies which commit to sourcing vehicles with Compliance Plate Approval. This ensures trucks meet the national standards covering safety and emission requirements known as the Australian Design Rules (ADRs). TQ will also attempt to utilise companies which have a commitment to operational and environmental improvements.
7	**Biodiversity**	Green and Golden Bell Frog (*Litoria aurea*) as the only species to have either a 'high' or 'moderate' potential to use the subject site. A Commonwealth Significant Impact Assessment and NSW Assessment of Significance found that there will be no significant impacts to Green and Golden Bell Frogs from the proposal, and a referral to the Commonwealth is therefore not required. An assessment in accordance with the Framework for Biodiversity Assessment (FBA) has been undertaken to determine the biodiversity offset requirements of the project. Mitigation measures are proposed to ensure there will be no significant impact on neighbouring aquatic ecology or habitat.	**Construction** ▪ A frog-exclusion fence should be put in place along the fence line to the rail corridor and around the western boundary of Site 3, limiting access for the frogs during this construction period. This fence should be consistent with the Green and Golden Bell Frog Best Practice Guidelines and the Green and Golden Bell Frog Survey (BEC 2015). It can be attached to the existing fence lines or the proposed retaining wall and should have a lip to ensure frogs do not jump over it. ▪ Pre-clearance surveys are recommended consistent with the Management Plan for the site (BES 2012). ▪ If extended periods occur between erection of the fence and construction work further pre- clearance survey is advised to clear any stranded frogs. ▪ During construction activities at Site 3 construction contractors should be made aware of the position of the mangrove seedling so as to reduce the potential to cause damage. ▪ Sediment control devices including silt curtains should be used during bank stabilisation works at Site 3 to prevent runoff causing increased turbidity within Gurungaty waterway and the greater port area. ▪ Remove and dispose of bitou bushes within the construction area via methods described within the Weeds of national Significance 'Bitou bush Current management and controls options for bitou bush (*Chrysanthemoides monilifera spp. rotundata*) in Australia' (Winkler et al., 2008). ▪ Appropriate hydrocarbon spill kits should be in the vicinity of construction activities to contain any spills. In the event that the spill kit is unable to control a spill and hydrocarbons enter the waterway an absorbent boom should be available to be deployed to reduce the spread of any such spill. ▪ Machinery and equipment associated with construction activities should be cleaned within a designated wash down area that ensures wastewater does not enter the waterway.

Parameter	Discussion	Mitigation Measures
		▪ Sediment control devices such as hay bales and geofabrics should be deployed throughout the construction area in the vicinity of storm water drains to reduce mobilised sediments entering the waterway. ▪ Follow the measures to be provided in the Pollution Incident Response Management Plan developed for the project as part of the Construction Environment Management Plan (CEMP). ▪ Ensure training and inductions for all personnel include Green and Golden Bell Frog awareness aspects and response requirements. Green and Golden Bell Frog management and response requirements need to be outlined within the Construction Environment Management Plan (CEMP). **Operations** ▪ Potential for frog migration through the site is most likely at night-time during the summer months after heavy rain. Staff and contractors should be made aware of the *Green and Golden Bell Frog Management Plan* prepared by BES (2012), which should be amended to reflect future operational risks and requirements prior to operations commencing. ▪ Bund and sump management procedures should consider the potential for Green and Golden Bell Frog breeding within bunds. ▪ Ensure training and inductions for all personnel include Green and Golden Bell Frog awareness aspects and response requirements. Green and Golden Bell Frog management and response requirements need to be outlined within the OEMP. ▪ The site manager should be made aware of any discoveries and contact an ecologist or the Wollongong Office of Environment and Heritage so that appropriate relocation of the frog/s can be undertaken if necessary. ▪ Ensure that appropriate hydrocarbon spill kits are placed at various locations throughout the site to contain any spills. In the event that the spill kit is unable to contain a spill and hydrocarbons enter the waterway an absorbent boom should be available to be deployed to reduce the spread of any such spill. ▪ Gross pollutant traps and hydrocarbon capture should be a priority for stormwater catchments which service areas accessed by tanker trucks. ▪ Implement a stormwater management plan that incorporates gross pollutant traps prior to waste water discharge. Employee and contractor induction should include a section dealing with the potential for gross pollutants to impact the site. ▪ Clean machinery and equipment associated with construction activities within a designated wash down area that ensures wastewater does not enter the waterway. ▪ Follow the measures to be provided in the Pollution Incident Response Management Plan developed for the project as part of the Operation Environment Management Plan (OEMP). ▪ Ensure that all vessels comply when appropriate with the International Maritime Organisation (IMO) Ballast Water Convention to reduce the potential of harmful

	Parameter	Discussion	Mitigation Measures
			aquatic organisms being discharged into Australian waters. The IMO Ballast Water Convention requires that all vessels must have and comply with a 'Ballast Water Management Plan'.
8	**Waste Management**	The proposed PK BLT facility will generate both solid and liquid waste during operation. With the implementation of the identified mitigation and management measures, the waste generated by the proposed PK BLT will not have a significant adverse impact on the environment. To minimise waste generation and promote recycling, a Waste Management Strategy (WMS) has been prepared in accordance with the aims, objectives and guidelines in the *NSW Waste Avoidance and Resource Recovery Strategy 2007* and *NSW Waste Avoidance and Resource Recovery Strategy 2014-2021*.	**Construction** ▪ No contaminated soil has been identified. If any is discovered during construction, it will be disposed of in accordance with the Unexpected Finds Protocol to be incorporated into the CEMP. ▪ All sewerage waste will be collected in a septic tank and trucked off site by licensed contractor until connection to existing rising main and agreement with Sydney Water has been established ▪ Timber formwork will be reused where possible. Any damaged or unusable timber will be recycled, or disposed at a licensed receiving facility. ▪ Steel will be collected and recycled. ▪ Standard timber pallets will be reused where possible. Any damaged or unusable timber will be recycled, or disposed at a licensed receiving facility. ▪ Plastics will be recycled where possible ▪ Excess cable will be collected and reused or recycled by the electrical installation contractor. **Operations** ▪ TQ will adopt a paperless document management system and actively seeks to reduce the need to print paper copies where possible ▪ Paper and cardboard materials will be separated and stockpiled in appropriate areas on site for collection and recycling ▪ Metals, plastic and timber will be separated and stockpiled in appropriate areas on site for collection and recycling ▪ All steel and metal strapping will be recycled ▪ Waste oil will be stored in appropriate container on site and removed from site by licensed contractor for re-processing, recycling or appropriate disposal. ▪ Fuel spills will be contained and collected in bunded areas or drip trays and transferred to slops tanks for product recovery. ▪ Remaining slops tank contents will be pumped to oily water separator for final treatment prior to clean water discharge or removed from site by a licenced contractor.
9	**Visual Amenity**	The proposed PK BLT is located in an existing industrial area of Port Kembla's Inner Harbour that operates 24 hours per day, seven days a week. The existing industrial development surrounding the proposal provides a visual environment which is not sensitive to change. Consequently, the	▪ Use of materials and paints to mimic the existing industrial development as far as reasonably practical. ▪ Design and implementation of lighting in accordance with: - AS 4282 - 1997 Control of the obtrusive effects of outdoor lighting; - AS 1940 The storage and handling of flammable and combustible liquids; and

	Parameter	Discussion	Mitigation Measures
		proposed PK BLT will have minimal visual impact on the amenity of the surrounding areas.	- AS/NZS 1680.5:2012 Australian and New Zealand Interior and workplace lighting, Part 5: outdoor workplace lighting.
10	**Heritage**	The PK BLT site is identified as a highly disturbed and highly modified environment. There are no sites of local, state or commonwealth heritage significance identified at the site or within three kilometres of the site. Due to this lack of sites and object of historic heritage a Statement of Heritage Impact is not required for the project as the project has a low potential to impact on objects or places of European heritage.	Include the following mitigation measures in the CEMP and OEMP: ▪ In the event that potential Aboriginal or European artefacts are discovered during the works, all works are to cease immediately within the direct area. TQ is to immediately inform NSW Ports, the NSW Office of Environment and Heritage and a member of the Illawarra Aboriginal Land Council (if in relation to an Aboriginal place or object). Coordinate appropriate management of the site with the relevant agencies.
11	**Soils and Groundwater**	During construction, the risk of onsite soil erosion will increase due to the works resulting in exposure of soils through earthworks. There is a potential for ASS to occur in material greater than 5m below the surface. Potential impacts to groundwater are unlikely given that the bulk of the works are above ground.	**Construction** ▪ Development of a CEMP including a Soil and Water Management Sub-plan to manage potential erosion, sediment and groundwater impacts during construction. ▪ Sediment and erosion control devices should be installed to minimise transport of sediment in accordance with *Managing Urban Stormwater, Soils & Construction, Volume 1* (Landcom, 2004). These devices should be inspected regularly and immediately after rainfall to ensure effectiveness over the duration of works. Any damage to erosion and sediment controls should be rectified immediately. ▪ Risks associated with the disturbance of any ASS encountered during construction would be managed through an expected finds protocol outlined in the Erosion and Sediment Control Plan within the CEMP. ▪ Construction of hardstand areas with appropriately sized bunding around fuel storage and refuelling areas. ▪ Construction of appropriate enclosed and separated clean and oily water drainage systems which shall include the installation and operation of an oil/water separator. ▪ If groundwater is encountered during excavation, a groundwater assessment will be undertaken to determine the volume and quality of the water to determine if appropriate permits are required. ▪ If groundwater is to be extracted, consultation with DPI Water is required prior to extraction. **Operations** ▪ Development of an OEMP to manage and monitor potential operational phase soil and groundwater impacts, such as spills and leakages. ▪ Maintenance of hardstand areas with appropriately sized bunding around fuel storage and refuelling areas.

	Parameter	Discussion	Mitigation Measures
			▪ Operation of appropriate enclosed and separated clean and oily water drainage systems which shall include the installation and operation of an oil/water separator. ▪ Implementation of regular maintenance inspections/audits during operation.
12	**Utilities**	The utility supply requirements for the PK BLT development will be designed to appropriate Australian Standards and relevant authority guidelines to consider the existing capacity and future performance of all utility servicing. The connection and augmentation of all utility works requirements will be designed, planned and carried out in a manner that will minimise impacts on the existing neighbouring operations.	**General** ▪ Continue consultation with NSW Ports and relevant service providers to discuss design, supply and access for the PK BLT utility connection requirements. ▪ Ensure all utilities are to be designed in accordance with appropriate standards and guidelines to consider the existing capacity and future performance of all utility servicing. **Construction** ▪ Prior to construction, all existing utilities and their locations will be confirmed to avoid any conflicts or damage during construction. ▪ Any associated servicing augmentation approvals and requirements will be arranged by TQ with the appropriate servicing authorities prior to construction commencing. ▪ The connection and augmentation of all utility works requirements will be designed, planned and carried out in a manner that will minimise impacts on the existing neighbouring operations. ▪ TQ will operate the PK BLT in accordance with any utility supply agreements.
13	**Socio Economic**	The nearest residence is located 1,200m from the proposed PK BLT project site. The surrounding area consists of a range of heavy industrial and port related operations situated within Port Kembla. A number of potential impacts associated with the social amenity of the area were identified. However, subject to the mitigation measures listed throughout Section 9 of this document, these impacts will not be significant.	**Construction** ▪ A Construction Environmental Management Plan (CEMP) will be prepared prior to construction commencing to ensure all environmental aspects associated with construction activities are appropriately managed to minimize impacts to neighbouring operators, sensitive receptors in the vicinity of the site as well as the broader community. **Operations** ▪ An Operational Environmental Management Plan (OEMP) will be prepared to ensure environmental aspects are appropriately managed to minimize impacts to neighbouring operators, sensitive receptors in the vicinity of the site as well as the broader community.
14	**Ecologically Sustainable Development**	The proposed development incorporates the principles of ESD through the implementation of the recommended mitigation measures detailed within the specific environmental assessments. Consequently, the proposal aligns with the ESD requirements identified within Clause 7(4) of Schedule 2 of the EP&A Regulation and would not create a significant environmental impact. The	**Construction** ▪ A CEMP will be prepared prior to construction and will contain procedures to address risks and incidents during construction, as well as operation. Procedures would be developed for incidents including product spills, flooding, excavation of contaminated material uncovering of heritage items or relics. **Operations**

	Parameter	Discussion	Mitigation Measures
		project does not present any significant impact on the local community.	▪ An OEMP, storm water drainage plan and WMS will be prepared to ensure environmental aspects associated with the capture and management of runoff and waste, air quality and noise are appropriately managed to minimize impacts to neighbouring operators, sensitive receptors in the vicinity of the site as well as the broader community. Where access to property is to be blocked temporarily, the contractor would advise the affected parties in advance of the work.
15	**Cumulative Impact Assessment**	The individual impact assessments demonstrate that the Proposal, in conjunction with existing and known future developments, would not have a significant level of impact. Based on the assessment provided, the works will have minor cumulative impacts on the existing environment during the course of construction.	▪ Works will be undertaken in accordance with the mitigation measures outlined in the EIS and the contractors CEMP and OEMP.