

Port Botany Development Code 2013 Checklist

This checklist is a summarised version of the Development Code and is to be completed as part of any environmental assessment for development proposed in Port Botany. Please refer to Development Code for further information and detail.

Section 2	Visual Amenity	Compliance / Comment
Criteria 1	The maximum height of all building structures and tanks is not to exceed the maximum building heights illustrated at Figure 1 . The maximum height is measured to the highest point of a building from Zero Fort Denison Tide Gauge (ZFDTG). Height of the building structures and tanks includes plant and lift overruns, but excludes communication devices, antennae, satellite dishes, flagpoles and the like.	Complies. The proposed height of the additional tanks is less than 32.5m ZFDTG as the proposed height is approximately 17.5m.
Criteria 2	The maximum heights at Figure 1 do not apply to port terminal operating equipment such as cranes. These elements may be any height to achieve efficient operational capability, subject to obtaining relevant approvals including approvals under the <i>Commonwealth Airports Act 1996</i> and <i>Civil Aviation Act 1988</i> .	Noted.
Criteria 3	Container stacks are not to exceed a height of 6 containers.	N/A. No containers are proposed.
Criteria 4	Air-conditioning units, telecommunications equipment or mechanical plant are to be concealed within screened enclosures or positioned behind the roofline to minimise their visibility from main port road frontages.	The existing mechanical plant/equipment is proposed to be used and is appropriately screened from the road frontages.
Criteria 5	Buildings shall be oriented towards the primary street frontage. The office component of a building is to address the street so as to provide an attractive frontage, easily identifiable building entry and the potential for surveillance of the street.	N/A– no office buildings.
Criteria 6	Buildings should be designed so as to mitigate the perception of bulk and scale from main port road frontages by: - the articulation of building facades where buildings front a main port road frontage; - varying façade alignments and height; - breaking up of facades with windows and the use of decorative features, cantilevered elements and the like; and - varying materials and colours used (see Specific Criteria 2.2.2).	N/A – no office buildings.

Section 2	Visual Amenity	Compliance / Comment
Criteria 7	An indicative palette of colours for building structures is shown at Figure 2 .	N/A – no office buildings.
Criteria 8	Buildings, in particular large buildings, are to comprise external materials incorporating muted recessive colours with material and / or tonal colour variation used to break the mass of buildings and walls. Lighter shades should be used for larger wall areas and structures, with darker shades used as highlights. Highlight colours (i.e. red, yellow and orange tones) should be used to articulate architectural features and the like.	No office buildings. The proposed thermal oxidiser will be white, consistent with the adjacent thermal oxidiser on site.
Criteria 9	Materials and colours for buildings and roofs are to minimise reflectivity. All glazing is to have a reflectivity coefficient of less than 20%.	N/A – no buildings.
Criteria 10	Lighter colours on light poles greater than 15 metres in height should be avoided in favour of darker, less reflective colours.	Complies - no light poles are proposed.
Criteria 11	All tanks are to be painted white or light grey.	N/A - no tanks are proposed.
Criteria 12	The visibility of mobile elements such as cranes and rail mounted gantries is to be reinforced through colour. The colour selected by the terminal operator is to be submitted as part of the application for development.	N/A.

Section 3	Sustainable Development	Compliance / Comments
Criteria 1	All development should incorporate as many of the suggested measures contained in the <i>Green Port Guidelines</i> as practicable. As a minimum, all development proposals are to be accompanied by a completed <i>Green Port Guidelines</i> checklist.	Complies. A Green Port Checklist has been reviewed in light of the proposed modification.
Criteria 2	All buildings are to achieve a minimum 4 Star Green Star rating (or the equivalent) for the latest applicable version. This applies to buildings where Green Star rating tools are applicable.	N/A.
Criteria 3	Buildings (including sheds and workshops) are to be designed and constructed to maximise the use of natural ventilation and natural lighting, and to minimise energy consumption associated with heating, cooling and lighting.	N/A – no office buildings.
Criteria 4	Development is to collect sufficient rainwater for reuse on site, such as for use in container wash down facilities and the like, grey water flushing of sanitary fixtures and irrigation of landscaping.	N/A. No landscaping as project is integrated into existing infrastructure and internalised on the site.
Criteria 5	Low maintenance and robust materials are to be used.	Will comply.
Criteria 6	All sites are to provide a dedicated storage area for the separation, collection and recycling of waste with adequate access for waste collection.	Complies as part of existing infrastructure & waste recycling management.
Criteria 7	A climate change risk assessment is to be provided as part of an application for all new developments in accordance with the most current <i>New South Wales Sea Level Rise Policy Statement</i> .	The NSW climate change guidelines have been reviewed and this area is not threatened by sea level rise. This not a new development. It is a modification to improve environmental management.
Criteria 8	All development is to incorporate measures to minimise greenhouse gas emissions.	This is an air quality measure that provides security of licence compliance. However, oxygen trim is provided that avoids unnecessary combustion.

Section 4	Access, Parking and Loading	Compliance / Comments
Criteria 1	All development proposals are to assess both on and off-site traffic impacts and are to be accompanied by a Traffic Management Plan, prepared in accordance with the <i>Traffic Management Plan Guidelines 2007</i> where required.	Complies. The proposal will result in a comparable or reduced amount of traffic to Friendship Road over a week period. Given there is no additional impact, a TMP is not required.
Criteria 2	All site vehicular access points and paths are to be located and designed to avoid conflicts between pedestrians, light vehicles and truck movements.	Complies. The proposal will utilise the existing Friendship Road entrance/exit gates.
Criteria 3	Container facilities are to provide separate access points to an adjoining roadway for light vehicles and trucks.	N/A
Criteria 4	Designated pedestrian paths should be clearly delineated from the site's internal vehicular roads and parking areas, by means of a perceivable change in material and/or colour.	Pedestrian movements will be limited to marked pedestrian paths. Also parking spaces and paths will be clearly marked, as existing.
Criteria 5	All employee and visitor parking is to be accommodated within the leased area. Car parking areas (i.e., parking bays and loading areas) are to: - be designed in accordance with <i>Australian Standard AS 1428:1-4 Design for Access and Mobility</i>, <i>Australian Standard AS 2890.1 Car Parking Facilities</i> and <i>Australian Standard AS 2890.2 Commercial Vehicle Facilities</i>; - provide a minimum rate of one (1) parking space per staff member and contractor plus 10% (calculation to be based on the maximum number of staff members and / or contractors on site at any one time); - provide for at least two (2) visitor parking spaces however for those sites with less than 10 staff members and contractors provide at least one(1) visitor parking space; - provide for at least one (1) mobility impaired parking space, to be located adjacent to building entries and clearly delineated; - be paved with concrete or bituminous surfacing designed and drained to the approved stormwater drainage system; and	Complies as existing. No additional operating staff are required as part of this modification.

Section 4	Access, Parking and Loading	Compliance / Comments
	- incorporate landscaping to provide visual screening to reduce the visual impact particularly from external roadways (Figure 4).	
Criteria 6	For sites with less than 20 car spaces, screen planting to the perimeter of the car park is to be provided. For sites with more than 20 car spaces, additional tree bays (1.2 x 3m minimum) are to be incorporated at a rate of one (1) bay for every 10 spaces, except where bays abut rear or side walls of buildings (Figure 5). The suggested planting palette is set out at Appendix A.	The proposal does not increase the demand for car parking. Car parking areas are as per the existing situation with tree screening partition.
Criteria 7	The site layout shall ensure that all vehicles being loaded and/or unloaded (or awaiting loading and / or unloading) are able to stand entirely within the leased area to avoid queuing of vehicles outside of leased areas.	Not applicable. This change does not impact existing truck movements although there will be a reduction in waste trucks.
Criteria 8	Garbage bins and waste recycling areas shall be accommodated on site, appropriately screened and accessible to the users of the building and service vehicles.	Complies. The existing arrangement for waste will incorporate the proposed works associated with the Modification.
Criteria 9	Bicycle parking must be provided at a rate of at least two (2) bicycle parking spaces plus 5% of the total number of required car parking spaces. Bicycle parking facilities should be located in highly visible, illuminated areas and securely anchored to the site surface to prevent removal and shall be of sufficient strength to resist vandalism and theft.	Complies. No additional people or car spaces are required or envisaged.

Section 5	Security	Compliance / Comments
Criteria 1	All leased areas are to be appropriately fenced for security purposes. All fencing is to be chain wire fencing with optional 3-strand barbed wire along the top portion of the fence (Figure 6). The maximum fence height permitted is 3.5m (inclusive of the barbed wire portion).	Complies. The site is secured and employs good security management practices and procedures. Fencing exists and is not proposed to change.
Criteria 2	All chain wire fencing, posts and rails and gates that are visible from the water and main port roads (excluding roads within leased areas) are required to be black in colour (i.e., black PVC, powder coated or the like). Fencing in other locations may comprise a metallic finish.	Complies. No fencing changes are required as part of this modification.
Criteria 3	All access points to leased areas are to be secured with durable gates, and checkpoint facilities, where appropriate. Gates are to comprise either chain wire fencing set within a framed rim (with optional 3-strand barbed wire on top), or palisade gates (with optional spikes or barbed wire on top) - (Figure 6).	Complies. The site is secured and employs good security management practices and procedures. Fencing meets the criteria and is existing.
Criteria 4	Truck entry to a site must be set back as a minimum 65m from the lease boundary for container facilities and 30m for non-container facilities (Figure 7).	Complies. Truck entry is not changing.

Section 6	Landscaping	Compliance / Comments
General Criteria		
Criteria 1	Landscaping is to be provided in front of fences that face roads external to the lease area and to non-active waterfronts.	Landscaping is not proposed to change with this proposal.
Criteria 2	Landscaped areas are to be planted to achieve a minimum of 75% planting density once fully matured.	Landscaping is not proposed to change with this proposal.
Criteria 3	Only suitable native plant species are to be used and, where possible and practical, locally sourced provenance stock should be used. The minimum plant container sizes are to be as follows: - Trees – 25 litres; - Accents – 5 litres; and - Groundcovers – 100mm.	N/A. No additional landscaping.
Criteria 4	All landscaping, in particular within car parks and along pedestrian paths, is to take into account the need to maintain passive surveillance.	N/A. No landscaping envisaged within the car park area.
Criteria 5	Where landscaping is provided within internal boundaries, the trunks of trees on internal boundaries must not be closer than 2.5m to the perimeter fence and no part of the tree is to overhang the adjoining premises.	No additional landscaping proposed.
Criteria 6	Landscaped areas are to be irrigated for a minimum of 12 months to ensure vegetation establishment, preferably with captured stormwater runoff / rainwater. Irrigation systems are to consist of an automated drip irrigation system with approved back flow prevention devices, controllers (in vandal resistant boxes), and appropriate zoning.	No additional landscaping proposed.
Criteria 7	Mown grassed verges, adjoining landscaping strips or otherwise, are to comply with the requirements at Appendix A .	No additional landscaping proposed.
Specific Criteria	Road Reserve Landscape Areas	
Criteria 8	Establish a 5m landscaped buffer strip within the lease area, facing the external roadway. The buffer strip is to have flush timber edging with the security fencing located behind the landscaping(Figure 8).	Complies. No additional landscaping proposed.
Criteria 9	Develop and maintain a consistent pattern of selected native planting including:	As above.

Section 6	Landscaping	Compliance / Comments
	- layered and banded ground stratum planting (up to 0.5 – 0.7m high), - accent planting with large perennials (up to 1.4m high), - clustered and individual small to medium tree planting up to 8 – 12m in height, and - clusters to have a maximum spacing of 15m between groups	
Criteria 10	Ensure a high level of security and passive surveillance: - no dense, mid-stratum shrub planting (i.e., up to 3m in height), - no tree planting within 2.5m of fence line, and - underprune trees to minimum 2.5m above ground level and maintain adequate branch clearance from the security fencing	As above.
Criteria 11	Existing landscape areas that do not comply with the above controls should be removed and replaced with landscaping that complies with the above controls.	As above
Criteria 12	The suggested planting palette for this area is set out at Appendix A .	As above
Specific Criteria	Potential fire risk landscaped areas / non-active water front landscaped areas	
Criteria 13	Establish a 5m landscaped buffer strip within the lease area, facing the roadway external to the lease area / non-active water front. The buffer strip is to have flush timber edging with the security fencing located behind the landscaping (Figure 9).	As above.
Criteria 14	Continue repetition of form, texture and colour to create a strong multi-layered, rhythmic pattern in the landscape as follows: - layered and banded ground stratum planting (0.4 – 0.7m high), and - introduce highlights within the landscape buffer strip using grouped accent planting with large perennials (up to 1.4m high)	As above.
Criteria 15	Develop layered bedding pattern with a progression from smaller species at the front edge to larger species at the back (near the fence line).	As above.

Section 6	Landscaping	Compliance / Comments
Criteria 16	Existing landscape areas that do not comply with the above controls should be removed and replaced with landscaping that complies with the above controls.	As above.
Criteria 17	Use hardy native or indigenous plant species suited to site-specific environmental conditions with a low fire risk (ie. low combustion or fire retardant properties). The suggested planting palette for this area is set out at Appendix A .	As above.

Section 7	Signage	Compliance / Comment
Criteria 1	All directional signage outside or on the lease area fence (Figure 10) and public notice signage (i.e. a sign which contains warning, safety, security or instructive information that is only erectable by a public authority), excluding the relevant road authority's street signage: - is to be located in a prominent position and clearly visible; - is not to be located above a roadway; - is to be of a size and location so as to not obscure vehicle sightlines; - is to be positioned where it does not obstruct walkways and pathways; - is to consist of similar colours to that of the NSW Ports colour scheme comprising dark blue, orange, red, white, black and grey, or is to be consistent with colours of typical safety / warning signage (i.e., to comply with applicable Australian Standards); - blade signage at the port is to be consistent with Figure 12, - may incorporate the lessee logo where it is located for directional purposes at the entrance to a leased area. The colours of the logo are to be lessee corporate colours, and - for car parking areas, loading and delivery areas and the like, is to be located close to the main access of a site.	Complies. No additional signage required or envisaged.
Criteria 2	No advertising signs shall be erected within the port estate upon the buildings, structures or tanks other than business identification signage.	N/A. No advertising signage is proposed as part of this application.
Criteria 3	Business identification signage (Figure 11): - is to be located outside the lease area fence and located on NSW Ports' standard Blade Sign and is to be consistent with Figure 12; - should not obscure vehicle sightlines or control signs; - is permitted on one elevation of the primary building, except where a site has two main road frontages or where there are multiple occupants within a building;	Complies. No additional signage envisaged.

Section 7	Signage	Compliance / Comment
	- may comprise text, illustrations, and/or both, to ensure clear identification of the sign and its intent; - is not to be illuminated or comprise any form of moving or flashing signage; - is not to occupy more than 10% of any facade or elevation of a building; and - is to identify visitor entrance points to lease areas.	
Criteria 4	Business identification signage on the side of tanks is limited to one sign per leased area or site (in the case of multiple lease areas being operated as a single site). The sign should be subordinate to the elevation of the tank.	No additional signage is required or envisaged.

Section 8	Lighting	Compliance / Comments
Criteria 1	Lighting levels are to be provided in a manner just sufficient to meet operational requirements and to the relevant Australian Standards.	Complies. Task lighting is required and will meet the relevant AS.
Criteria 2	All lighting is to meet Civil Aviation Safety Authority (CASA) / Air Services Australia (ASA) requirements. Note: Refer to the <i>CASA Manual of Standards Part 139 – Aerodromes</i> .	Complies.
Criteria 3	Appropriate lighting should be provided at key locations such as pedestrian paths, driveways, parking areas and building entries, so as to identify and provide safe access routes for both employees and visitors.	Complies. No additional lighting proposed in these areas.
Criteria 4	Lighting is to be positioned so as to not cause distraction to vehicle drivers on internal or external roads or the occupants of adjoining sites.	Complies.
Criteria 5	Light spill outside the site boundary and sky lighting is to be avoided through the adoption of measures such as: - Focussing lights downwards; - Installing cut-offs or shields on lights; - Minimising the light mast height; and - Using low mounting height poles to light non terminal operational areas, including access / egress routes.	Complies.
Specific Criteria	Lighting for areas adjacent to Penrhyn Estuary	
Criteria 6	No fixed light is to result in light spill into Penrhyn Estuary or the Estuary flushing channel (Figure 17).	Complies. The site is distanced by more than 1000m from the Penrhyn Estuary.
Criteria 7	Low mounting height poles are to be used adjacent to the Estuary.	Complies. The site is distanced by more than 1000m from the Penrhyn Estuary.
Criteria 8	Moving lights, such as vehicle headlights are to be screened, so they do not shine into Penrhyn Estuary.	Complies. The site is distanced by more than 1000m from the Penrhyn Estuary.
Criteria 9	High level lighting on operational equipment is not to shine into Penrhyn Estuary.	Complies. The site is distanced by more than 1000m from the Penrhyn Estuary.

Section 9	Heritage	Compliance / Comments
Criteria 1	The Revetment Wall along Prince of Wales Drive, the Bunnerong Canal, Bunnerong Canal Rail Bridge and the Old Government Wharf Remains are listed as heritage items on NSW Ports' Section 170 Heritage and Conservation Register (see Figure 13). Any development proposal which has the potential to impact on these items or their heritage significance is to be accompanied by a heritage impact statement.	Complies. The proposed modification is located within a developed section of the existing site. The broader site is located adjacent to the Port Botany Revetment Wall to the south. The proposal will not impact upon the heritage significance of the wall in that the proposed thermal oxidiser will be located wholly on the northern side of the site, substantially setback from this wall.
Criteria 2	Development in the vicinity of a heritage item is to be designed to respect and complement the heritage item.	Complies. The proposed combustor will complement the existing approved development on site and will not alter the significance of the wall.

Section 10	Land Use Safety and Hazard Management	Compliance / Comments
General Criteria	Including non-hazardous facilities	
Criteria 1	All new development in Port Botany is required to undergo a risk assessment to demonstrate the development: - will not contribute to any increase in cumulative risk as shown in Figure 2 of the Port Botany Land Use Safety Study Overview Report 1996 (Overview Report); - will not result in any propagation of risks to neighbouring facilities; - will not result in a significant increase in the number of people (including both construction and operational staff) exposed to risk inside the residential contour as shown in Figure 2 of the Overview Report; and - will identify and implement risk reduction and safety management measures as required. This risk assessment is to be submitted as part of the application for development.	Complies. This is not a new development but the addition of a second thermal oxidiser to control emissions. No new hazardous inventories are being provided, it does not impact cumulative risk. A Hazard Operability (HAZOP) Study is provided with the submission assessing the relevant requirements and criteria and accompanies this assessment.
Specific Criteria	Hazardous Facilities	
Criteria 2	All proposals for new or expanded potentially hazardous developments are required to undergo a Risk Assessment. The Risk Assessment is to be submitted as part of the application for development and is to include the implementation, operation and maintenance phases. The assessment is to demonstrate: - that all foreseeable hazards that may arise from a development, that have a potential to harm the health and safety of any person, the environment, or impact the safety of buildings, equipment, plant and facilities have been clearly identified; - that potential for propagation of hazardous incidents to the neighbouring facilities is identified and is, in accordance with the "As Low As Reasonably Practicable" (ALARP) principle; - that the risks associated with the identified hazards at the development have been appropriately analysed and assessed;	Not applicable. This is no expansion of hazardous developments (flammable inventory). Regardless a Hazard Operability (HAZOP) Study is provided with the submission assessing any potential hazards and to ensure that any risk is controlled "As Low As Reasonably Practicable" (ALARP)

Section 10	Land Use Safety and Hazard Management	Compliance / Comments
	- that the proposed development will not contribute to any increase in the cumulative risk (individual and societal risk) beyond the levels shown in Figures 2 and 9 of the Port Botany Land Use Safety Study Overview Report 1996; - that the assessed risks comply with the relevant risk criteria published by the regulatory authorities; - that all identified risks will be controlled and minimised by protection and mitigation; and - that incidents at hazardous facilities will not impact on the use or operation of adjacent land, including NSW Ports' common areas (e.g. roadways and pipeline corridors). The Risk Assessment for the proposed development is to include the quantitative analysis of incident impacts relating to consequence severity and risk and include risk contours. The impacts are not to exceed acceptable published risk criteria.	
Criteria 3	Minimum separation distances required to 'protected places' under the relevant Australian Standard must be complied with.	Complies with AS 1940 separation distances to 'protected places'.
Criteria 4	The industrial premises risk contour for the development (including existing site development) must remain within the lease boundary.	Complies. The risk contour for the development does not change as a result of this development.
Specific Criteria	Bulk Liquid Storage Facilities	
Criteria 5	Separation distances within and between bulk liquid storage hazardous facilities (i.e. separation distances between facilities on the subject site or adjoining sites) is to be provided in accordance with the relevant Australian Standard(s) or the criteria listed in this section of the Code, whichever is the greater.	Complies - although the proposal does not seek any new bulk liquid storage tanks. The proposed thermal oxidiser is located within the existing site and affords appropriate separation from adjoining sites and internally; i.e. meets AS1940 criteria for C1 combustible liquids.
Criteria 6	A perimeter roadway is to be provided around all bulk liquid storage areas. A bulk liquid storage area consists of bulk liquid tanks contained within a bunded area. Figure 14 shows the minimum acceptable roadway layout around a bulk liquids storage area.	The existing site and arrangement complies. There are no new bulk liquid storage tanks proposed on site as part of the Modification. The existing tanks are located within an approved bunded area, which

Section 10	Land Use Safety and Hazard Management	Compliance / Comments
	The perimeter roadway is to be provided with the following: - 6m clear road width; - Corners designed to accommodate the turning of emergency vehicles / trucks; - Connected to the main roadway at the front of the site, either directly or by an internal site road no less than 6m wide; and - Unobstructed access along the full length of the road.	meets the Code's guidelines.
Criteria 7	Where a bulk liquid storage facility operates a road tanker filling area, the road tanker filling area shall be located wholly off any access road that passes the filling area. Figure 15 provides an example of a bulk liquids tanker filling area located adjacent to an access road. The filling area shall be located so that no part of a truck in the filling bay extends into the access road.	Complies, no changes as art of this Modification.
Specific Criteria	Pipelines	
Criteria 8	All pipelines proposed within the Port Botany Port precinct are to be located in the following manner: - Pipelines required to be installed external to the leased area are to be located within a Port Botany pipeline corridor (Figure 16); - Exposed above ground level or in an open culvert lined with impermeable material so as to prevent the percolation of any spilled materials through the paving into the underlying sand. The paving and any jointing materials to be used shall be resistant both to heat and the corrosive effects of the range of the products to be transported in the pipeline; - Underground pipelines are to be avoided unless absolutely necessary; - Where underground pipelines are used they are to be installed with a leak detection system (e.g. differential flow device, inventory measurement, etc.);	Complies, as per existing. No underground pipework is planning. All product pipelines are above ground and there are no underground product pipelines as part of this proposal.

Section 10	Land Use Safety and Hazard Management	Compliance / Comments
	- Underground pipelines are to be suitably protected against corrosion, considering (but not limited to) the following: - expected lifetime of the pipeline; - soil conditions; - potential acid sulfate soils; and - water table level Details of the leak detection system and corrosion protection are to be provided in the risk assessment documentation.	
Criteria 9	Any new valves at the Bulk Liquids Berth must include remote operated emergency shutdown valves with such valves to be located at the shore manifold. The locations of activation points for the remote operated valves must, as a minimum, be able to be activated from the operator's emergency shutdown system during ship discharges as well as from the Bulk Liquids Berth office.	Complies, no change.
Criteria 10	All above ground bolted flanged joints, associated with the pipeline outside the main storage bund area, are to be provided with the following: - A bunded pit to retain any product leaks; - Protection to prevent leaks from flanges and joints spraying beyond the confines of the pit; and - Leak detection within the pit and an alarm system to notify of potential flange/joint leaks. It is noted that the pit may require a cover to prevent the ingress of rain water causing false leak detection alarms.	No change to the existing arrangements to the bulk liquid storage tanks
Criteria	Areas where petroleum, petroleum products, petro-chemical and other liquid chemicals are handled or stored	
Criteria 11	Areas where petroleum, petroleum products, petro-chemicals and other liquid chemicals are handled or stored are required to be bunded in accordance with the relevant standards. Where pipeline or hose connections are made or broken for operational activities, these areas are also required to be bunded.	Complies, no change. The existing tanks are located within a bunded area of the subject site and meets all legislative requirements including AS1940 and EPA bunding guidelines.
Criteria 12	The area within all bunded enclosures is to be impervious so as to prevent the percolation of any spilled materials through the paving into	Complies, no change.

Section 10	Land Use Safety and Hazard Management	Compliance / Comments
	the underlying soil. The paving and any jointing materials to be used shall be resistant both to heat and the corrosive effects of the range of the products to be handled or stored.	The existing tanks are located within the existing bunded area and meet all legislative requirements.
Criteria 13	The surface of the paving in bunded areas shall be graded so as to permit the flow of surface water to a suitable drainage system. This surface shall be maintained to prevent ponding.	Complies, no change. The existing tanks are located within a bunded area, sloping away from the tanks such that the ground pumps will pump any surface water to an existing API separator. Meets all legislative requirements.
Criteria 14	All stormwater from bunded areas shall be directed through a separator system located outside the bunded area.	Complies, no change. The bunded areas slope to above ground drainage pumps that will pump any surface water to an existing API separator by operating valves outside the bunded area. Meets all legislative requirements.
Criteria 15	Areas used for loading of road tankers, refuelling or other handling operations are to have 'roll-over' bunding and impervious paving so as to prevent the release of any spilled materials into the stormwater and/or through the paving into the underlying soil. The paving and any jointing materials to be used shall be resistant both to heat and the corrosive effects of the range of the products to be handled. All drainage from these areas is to be directed to a drainage system via a treatment system.	Complies. This change does not include loading facilities or handling operations. However, the area is paved and will be collected in drainage system and handled accordingly should any leak of waste occur.

Section 11	Water Quality and Stormwater	Compliance / Comments
Criteria 1	The one in 20 year storm event (i.e. 5% Annual Exceedance Probability (AEP)) is to be accommodated within a piped stormwater system. Where the site does not drain directly to an adjacent waterway, the one in 100 year storm event is to be retained on site.	Complies. The existing stormwater system can accommodate a 1 in 20 year storm event.
Criteria 2	The design and layout of leased areas, including the siting of buildings and the positioning of bunded areas and container stacks, is to take into consideration the need to provide unobstructed stormwater overland flow paths.	Complies. The proposal does not alter the overall site arrangement and layout is not changed through the construction of the thermal oxidiser.
Criteria 3	The first flush ¹ from impervious areas is to be captured and treated to prevent pollutants from entering Botany Bay. Pollutants to be removed must include but are not limited to sediments, litter, rubbish, oils, greases and other chemicals used/stored onsite.	Complies. Impervious areas will be tested/treated to ensure pollutants do not leave the site. First flush pit system accommodates stormwater events.
Criteria 4	Stormwater leaving the site is not to create erosion within Penrhyn Estuary (Figure 17).	Complies. The proposal will apply the current stormwater management practices to the subject area and will not create erosion of the estuary.
Criteria 5	Measures to contain spills and prevent them from discharging through the stormwater system are to be identified and spill response procedures documented.	Complies. The proposal will apply the current stormwater management practices to the subject area.
Criteria 6	Emergency spill kits are to be available on-site and staff are to be trained in how to use them.	Complies. Absorbent emergency spill kits will be located near operational activities. Staff are currently trained in appropriate emergency procedures.

¹ 'First flush' refers to the initial stormwater runoff during rainfall that contains the highest initial pollutant load. This generally involves the first 10mm of rainfall.

Section 12	Air Quality	Compliance / Comments
Criteria 1	Site areas which are trafficked by vehicles and trucks are, as a minimum, to be sealed to minimise dust generation.	Complies. Areas trafficked by vehicles are sealed.
Criteria 2	Information regarding the products to be stored and/or handled on the premises is to be provided as well as the proposed storage area for such products. Products handled on site which have an offensive odour are to be handled in a closed circuit or sealed system.	Complies. The storage and handling of waste liquid will be done through existing tank, T-261. Waste liquid from T-261 will be pumped to the proposed second combustor for treatment. If this combustor is not available, the waste liquid can be transferred via the existing piping systems to a road tanker, or Waste Tanks 2 and/or 3.
Criteria 3	Vehicles, plant and equipment are to be maintained and operated in good working condition and are to be turned off when not in use to minimise emissions to air.	Complies. All equipment on site is appropriately maintained and pumps operate automatically when needed only.
Criteria 4	Building materials that may potentially contribute to poor internal air quality are to be avoided.	Complies. No office buildings.
Criteria 5	Air filters are to be installed in all ventilation systems to remove particulate contamination.	Complies. No office buildings.
Criteria 6	All development is to incorporate measures to minimise emissions that adversely impact on local air quality.	Complies. Commentary on air quality is contained in Statement of Environmental Effects (SEE) and accompanying air quality report.
Criteria 7	Any emissions of smoke, dust, particulate matter, steam or gas must meet Civil Aviation Safety Authority (CASA) / Air Services Australia (ASA) requirements.	Complies. Commentary on air quality is contained in Statement of Environmental Effects (SEE) and accompanying air quality report.

Section 13	Bird Management	Compliance / Comments
Criteria 1	An assessment of aspects of the proposed development which could attract bird species that may pose a hazard to airport operations is to be provided as part of the application for development. The assessment is to include any mitigation measures to be implemented. Aspects to be considered include potential for roosting on roofs, lights poles, site areas having low levels of activity, areas where water may pond, potential feeding areas for birds such as sediments, or rubbish collection areas, etc.	Complies. Existing measures for bird management will be applied to the proposal, where applicable.
Criteria 2	Height restrictions in Figure 1 are required to be complied with unless a shorebird impact assessment is undertaken which confirms that there is no adverse impact on shorebird access or use of Penrhyn Estuary.	Complies. The height of the tank complies with the code. Maximum height proposed is approximately 17.5m.
Criteria 3	No port operations (except for road access / egress) are permitted within 20m of the western edge of Penrhyn Estuary. Refer to Figure 1	Complies. The proposed works are within the leased area and are greater than 1,000m from the estuary.
Criteria 4	Container stacks, buildings and tanks are to be set back at least 100m from the western edge of Penrhyn Estuary and 64m from the southern edge of Penrhyn Estuary.	Complies. The proposed works are within the leased area of the site and are greater than 1,000m from the estuary.

Section 14	Noise and Vibration	Compliance / Comments
Criteria 1	For all new developments, proponents are to identify: - relevant noise criteria based on the Office of Environment and Heritage guidelines; - all sources of noise; - noise emission levels; and - proposed mitigation measures.	Complies. The proposal will comply with all relevant guidelines. Submission details the acoustic impact of the proposal are in the SEE.
Criteria 2	All buildings, equipment and operational processes are to be selected or designed to minimise the emission of noise.	Complies. The proposal will meet all operational noise goals and no mitigation measures were determined to be required.
Criteria 3	Noise reduction measures for mobile equipment, trucks, other vehicles and machinery are to be implemented, such as through insulation and 'engine off' policies. Audible movement alarms must not be used unless a safety risk assessment has been undertaken to recommend their use.	Complies. The proposal will meet all operational noise goals through appropriate on site management of machinery and trucks.
Criteria 4	Noisy plant and equipment should be located as far as possible from noise sensitive areas, optimising attenuation effects from topography, natural and purpose built barriers.	Complies. The proposal will meet all operational noise goals and no mitigation measures were determined to be required.
Criteria 5	Vibration transmitted outside the site during operations must be within acceptable limits based on Office of Environment and Heritage guidelines.	Complies. All relevant guidelines are complied with as per submission.

Section 15	Soil Contamination	Compliance / Comments
Criteria 1	For all development an assessment of potential and likelihood of soil and groundwater contamination is to be undertaken as part of the application for development. Where a contamination hazard is deemed possible, approved mitigation / remediation measures are to be undertaken. This is to be generally in accordance with the Office of Environment and Heritage guidelines made or approval under the <i>Contaminated Land Management Act 1997</i> .	Complies. The thermal oxidiser is to be installed on an impervious paved area. The waste tank is an existing tank in an impervious bunded area. No additional measures are required.
Criteria 2	For all development an assessment of potential acid sulfate soils present on site is to be undertaken as part of the application for development. Where acid sulfate soils could be encountered, mitigation measures are to be undertaken.	Complies. The extent of site excavation is anticipated to be minimal to allow for the stack foundation and accordingly the impact on acid sulfate soils is minimal.

Section 16	Groundwater Management Zone (Elgas Deed)	Compliance / Comments
Criteria 1	The Groundwater Management Zone (GMZ) associated with the Elgas LPG Storage Cavern(GMZ(A)) is illustrated at Figure 18. Any development within the area marked '(GMZ(A)' or 'GMZ(B)' is required to comply with the '<i>Groundwater Management Zone Deed</i>' between the Water Administration Ministerial Corporation, NSW Ports, Elgas Limited and the Marine Ministerial Holding Corporation (NSW Roads and Maritime Services). A copy of the Deed is available on request from NSW Ports. Specifically, any development proposed in the 'GMZ' is required to specify the proposed construction methods; assess the likely impact on the water table; and assess the likely impact on the Elgas LPG Storage Development.	Complies. The proposal will comply with the Groundwater Management Zone Deed as the site is located in GMZ (B) .