CHAPTER E03 - CAR PARKING ACCESS SERVICING LOADING FACILITIES

Control	Response
7.1 Car Parking, Motor Cycle, Bicycle Requirements and Delivery / Servicing Vehicle Requirements	
1. *The car parking, motorcycle and bicycle requirements for specific land uses / developments are contained in Schedule 1 to this chapter of the DCP.*	Under the DCP for a warehouse/distribution land use car parking requires 2 car spaces and for an office land use car parking requires 5 car spaces therefore seven car spaces are required to serve the proposed development. The proposed site plans allocate 8 parking spaces. Under the DCP for a warehouse/distribution land use, 1 bicycle space is required, and for an office land use, 2 bicycle spaces are required, therefore 3 bicycle spaces are required to serve the proposed development. These will be installed accordingly.
2. *Where development proposals contain uses that fall into a number of different land use categories the parking requirements will be calculated by adding up the quantum of car parking, motorcycle and bicycle required for each land use component. Where a formula in the table results in fractions, numbers are to be rounded up to the nearest whole number. If a number of uses are present on the same development site the rounding off is to take place after the requirements for all uses have been summed together.*	The proposed site plans allocate 8 car parking spaces and 3 bicycle spaces in accordance with the DCP requirements.
3. *Requirements relating to staff parking refer to the maximum number of staff concurrently present on the site at any time.*	The proposed site plans allocate 8 car parking spaces in accordance with the DCP requirements.
4. *In the circumstances where the car parking and / or other requirements are not defined by this chapter in the DCP for a particular land use or in the RTA Guide to Traffic Generating Developments, a detailed Car Parking and Traffic Impact Assessment Study will be required to be prepared for the proposed development.*	The proposed site plans allocate 8 car parking spaces in accordance with the DCP requirements.
5. *The car parking component of the study must include:* *(a) A detailed car parking survey of similar development located in localities which demonstrate similar traffic and parking demand characteristics;* *(b) Assessment of the current traffic flow conditions in the local road network and performance of key intersections in the locality;* *(c) Assessment of existing on-street car parking and whether the locality is experiencing traffic and on-street parking congestion issues;* *(d) Anticipated traffic generation rate for the development;* *(e) Assessment as to likely impact of the development on traffic flows and traffic safety within the local road network and the demand*	The proposed site plans allocate 8 car parking spaces which is suited to the traffic and parking demand of the sites uses. The estimated vehicle movements within the transport impact assessment report indicates that there will be a total of three trucks per hour and eight vehicle movements per hour. The proposed development is not expected to impact the surrounding traffic network. Refer to Transport Impact Assessment and Construction Traffic Management Plan.

Control	Response
for on-street parking in the future as a result of the proposed development; and *(f) Assessment of the on-site car parking requirements based on the detailed car parking survey of other similar developments and localities.*	
7.2 Disabled Access and Parking	
1. Disabled access and parking facilities are to be provided in accordance with AS2890.6 (2009), Building Code of Australia and the Commonwealth Disability Discrimination Act 1992. The car parking rates for accessible car parking spaces are contained in Schedule 2 below (Table D3.5 of the BCA).	In accordance with Port Kembla Development Code 2016 and the Wollongong City Council DCP 2009, one accessible space is required and will be provided.
2. Each disabled person's parking space must be designed in accordance with the minimum dimensions as contained in the AS2890.6 (2009). This shall be reflected on the relevant DA car parking layout plans. The disabled car parking spaces shall be clearly marked and signposted and located adjacent to the entrance exit with a minimum 2.5 metre head clearance in accordance with AS2890.6 (2009).	The accessible space shall be designed as a 2.4m wide by 5.4m long space, with an adjacent shared space of the same dimensions, as per AS2890.6:2009 design requirements.
3. The designated car parking spaces for people with a disability must be positioned directly adjacent to main lift lobby or access points servicing the development. In this regard, a continuous accessible path of travel must be provided to all levels within the subject building and all facilities in accordance with AS 1428.1 and the Access for People with a Disability chapter contained in Part E of this DCP.	The accessible space will be located closest to the office space.
4. The continuous accessible path of travel must be: *(a) From accessible parking spaces and passenger drop off points to entrances of buildings;* *(b) To connect buildings, facilities and spaces that are on the same block or part of the same, complex, where topographically possible;* *(c) To connect accessible entrances of a building to all accessible spaces and facilities within the building;* *(d) To minimise distances travelled between accessible elements of buildings and facilities; and* *(e) Provided between public domain areas to building entrances.*	The accessible path of travel will be defined during construction and will connect the parking space to the office building and aim to provide access to the storage tanks if within the design standards of the storage facility.
5. A continuous path of travel should be the most commonly used and direct path of travel. If for any reason this is not possible, clear signage indicating an alternative route must be provided.	Not applicable
6. The designated car parking spaces for people with a disability must be appropriately signposted and line marked. The details of such	The accessible parking spaces will be appropriately marked.

Control	Response
car parking spaces for people with a disability shall be reflected on the architectural plans submitted with the Development Application.	
7. *The main entry point to the building shall be in accordance with the current relevant Australian Standard 1428.1 - 2001 Design for Access and Mobility - Part 1 General Requirements for Access - Buildings. The proposed pedestrian ramps within the car parking areas shall incorporate gradients (with suitable landing intervals) in accordance with the current Australian Standard.*	Compliance with the Disability Discrimination Act and the NCC will be ensured as part of formal building certification.
7.3 Bicycle Parking / Storage Facilities and Shower and Change Facilities	
1. *Developments are to be designed to provide suitable bicycle parking facilities. The provision of bicycle parking for a particular land use / development shall be in accordance with Schedule 1.*	Under the DCP for a warehouse/distribution land use, 1 bicycle space is required and for an office land use, 2 bicycle spaces are required therefore 3 bicycle spaces are required to serve the proposed development. These will be installed accordingly.
2. *For commercial office / business premises and retail centres, suitable bicycle parking facilities should be provided for both tenants / workers as well as bicycle couriers.*	3 bicycle parking spaces are required to serve the proposed development.
3. *Provision for access by vehicles and vehicle parking is not to compromise the equity and amenity of bicycle access and parking.*	Bicycle parking will be integrated into the development appropriately.
4. *Bicycle parking is to be designed and constructed in accordance with AS 2890.3, Parking Facilities Part 3: Bicycle Parking Facilities OR Austroads: "Guide to Traffic Management, Part 14: Bicycles (1995)".*	Bicycle parking will be constructed in accordance with the appropriate design standards.
5. *Bicycle parking facilities are to be provided in accordance with AS 2890.3, Table 1.1 for all user classes exempting class 4.*	Bicycle parking facilities will be provided in accordance with AS2890.3.
6. *Shower, change facilities and personal lockers shall be provided in accordance with Table 1 below.*	As the proposed development requires less than 5 bicycle spaces, no end of trip facilities are considered to be warranted for the proposed development.
7. *Bicycle parking devices should be designed to enable the wheels and frame to be locked to the device without damaging the bicycle. The parking device should be easily accessible to / from a public road. The bicycle parking device should not encroach into any pedestrian thoroughfare but should be positioned in full public view, wherever practicable.*	Bicycle parking will be designed to be secure and not encroach pedestrian thorough fares. It will be implemented closer to the finalisation of development.
8. *The bicycle parking area should be designed to be protected from damage arising from the manoeuvring of motor vehicles and the opening of vehicle doors.*	The bicycle parking area will be positioned in a safe and secure location away from vehicles.
9. *The bicycle parking area is to be well lit by appropriate existing or new lighting as per AS 1680.2 Table E1 or higher, if required for monitoring of the car park and access points by closed circuit television (CCTV).*	The bicycle parking area will be positioned in a safe and secure location and be will lit.

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10. *The bicycle parking area should also be protected from the weather, as far as practicable.*	If possible, the bicycle parking area will be undercover.
7.4 Waiver or Reduction of Parking Spaces	No reduction of parking is required, and the site can provide the required parking spaces as per the transport report
7.5 Car Parking Credits for Existing Development	The transport assessment report details the car parking requirements, and a Car Parking Impact Assessment study is not required
7.6 Monetary Contributions for Off Site Car Parking Provision	The provision of car parking on site is in accordance with Schedule 1 and is not considered to be impractical or undesirable
Car Parking Layout and Design	
1. *The parking dimensions, internal circulation, aisle widths, kerb splay corners, head clearance heights, ramp widths and grades of the car parking areas are to be in conformity with the current relevant Australian Standard AS2890.1 (2004). No sprinklers or other services shall encroach within the clear head clearance height requirement.*	The car parking layout and design has been designed and will be implemented accordingly with the current Australian Standard.
2. *The layout of all car parking areas shall be in strictly accordance with Australian Standard AS2890 and the following additional requirements:* *(a) Parking areas must be designed so any vehicle which uses the area will be able to enter and leave the site in a forward direction without the need to make more than a three point turn.* *(b) Stacked parking may be permitted in the following circumstances:* *i. The applicant must demonstrate that there is a need for stacked parking and that the provision of stacked parking will not adversely affect the safe, efficient and effective use of the site;* *ii. No more than two cars are parked in a stacked arrangement, so that no more than one vehicle has to move to allow egress of another;* *iii. Provision shall be made on site for shifting cars without the movement of vehicles onto public streets;* *iv. Residential: only permitted where both spaces are utilised by the same dwelling and such spaces do not interfere with common manoeuvring areas; and* *v. Business or Industrial: only permitted for staff spaces, provided the spaces are used by the occupants of one tenancy.*	The suitability of the access and manoeuvring of the subject premises is reviewed within the Traffic Impact Assessment provided as part of the EIS.
3. *Small car spaces will only be permitted where the total quantum of required standard sized car parking spaces has already been provided. Small car parking spaces must be designed in accordance with AS 2890.1, Clause 2.4 – Design of Parking Modules.*	Not Applicable

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4. Car parking areas should be designed to ensure that through traffic is excluded or appropriately managed.	The proposed development does not permit through traffic.
5. Pedestrian entrances / exits are to be separated from vehicular entry / exit points.	No pedestrian exit/access points are proposed.
6. Developments with high pedestrian movements throughout the car parking area(s) such as major retail shopping centres, commercial offices and major entertainment / recreational facilities must incorporate clear and convenient pedestrian routes. The pedestrian routes within the car parking areas must take into account pedestrian desire lines and minimise potential vehicular / pedestrian conflict points. Pedestrian routes must be well lit and sited to maximise pedestrian visibility.	Not Applicable
7. Car parking areas should incorporate traffic calming and pedestrian crossing facilities such as speed humps, raised thresholds, marked pedestrian crossing points and clear directional signage to pedestrian access points within the development. These must be provided within the car park in order to reduce speed and enhance pedestrian safety and accessibility in accordance with AS2890.1.	Compliance with AS2890 will be ensured to be achieved for the purpose of the proposed car parking area.
8. Gradients of ramps and access driveways shall be provided in accordance with Australian Standard AS2890.1 (2004) - Off Street Car Parking.	Access driveways will comply with the maximum grades under AS2890.
9. Wheel stops must be designed and installed in accordance with AS2890.1.	Wheel stops will be installed in accordance with AS2890.
10. The provision of suitable barriers, line-marking and painted signage delineating vehicular flow movements within the car parking areas is also required, in order to improve traffic circulation within the car parking area.	Appropriate line marking will be established within the carparking area to ensure proper vehicle flow.
7.8 Basement Car Parking	No basement car parking is proposed
7.9 Mechanical Parking Systems	No Mechanical Parking systems are proposed
7.10 Allocation of Car Parking within a Strata titled Development	Not applicable
7.11 Public Car Parks	Not applicable
7.12 Electronic Parking Vacancy Signs	Not applicable
7.13 Car Parking & Access Construction Requirements	
1. All car parking areas and internal roads must be constructed of a hard-standing all-weather material (ie concrete or asphalt bitumen), which must be maintained to the satisfaction of Council, at all times.	Carparking areas will be constructed of hardstand material.
2. The pavement construction shall be in accordance with the Subdivision Code and Council's Development Design and Construction Specifications requirements.	All pavement will be designed in accordance with council standard drawings.
3. For large industrial or commercial office developments or major retail shopping centres, car parking areas should be designed to include water sensitive urban design treatment	Please refer Stormwater Management Plan prepared for the proposed development.

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measures, in order to encourage infiltration of stormwater run-off rather than direct discharge of stormwater run-off into the piped drainage system.	
4. *Alternatively car parking areas may be sealed with an all-weather surface and high flows managed by detention storage and pollutants removed by suitably designed, installed and maintained devices (GPT, grass swales etc). Minimum trafficked area surface standards in this case are:*	Please Refer Site based Stormwater Management Plan.
5. *Low parking turnover (<50 movements) - flush seal (ie. two coat bitumen spray).*	Proposed parking area is to be fully sealed.
6. *High parking turnover (>50 movements) - asphalt concrete.*	Not Applicable
7.14 Directional Signage for Car Parking Areas	
1. *All car parking areas shall be provided with appropriate entry and exit advisory signage to direct vehicles into / from the carpark and to minimise potential vehicular conflicts. The details of the proposed entry / exit signage shall be reflected on the architectural plans submitted with the Development Application.*	Appropriate signage and line marking will be established within the parking and circulation areas to ensure proper traffic flow.
2. *Where a one-way traffic circulation flow is proposed, all internal roads within car parking area shall be appropriately line marked with directional (arrow) signage to clearly indicate the direction of traffic circulation and to minimise potential vehicular conflicts. This requirement shall be reflected on the architectural plans (ie car parking layout plans) to be submitted with the Development Application.*	Appropriate signage and line marking will be established within the parking and circulation areas to ensure proper traffic flow.
3. *All advisory signage and pavement marking is to be provided in accordance with AS 2890.1, Section 4.*	Signage and line marking will be established in accordance with AS2890.
7.15 Green Travel Plans	The site is not a larger residential development, office, recreation facility or business and retail premise in the Wollongong City Centre so Green travel Plans are not required. The Transport Impact Assessment and Construction Traffic Management Plan addresses public transport options and bicycle routes.
VEHICULAR ACCESS	
1. *Access to off-street parking areas must comply with Council's Standard Vehicle Entrance Designs, with any works within the footpath and road reserve subject to a section 138 Roads Act 1993 approval.*	Please refer roads Act consent provided within the EIS.
2. *Sight distances to be used for assessment and determination of a suitable driveway location shall be obtained from Australian Standard AS2890.1 (2004) for car use and Australian Standard AS2890.2 (2002) for any access to be used by a commercial vehicle.*	Appropriate sight distances will be ensured for the proposed development in accordance with AS2890.

Control	Response
3. *Driveway grades, vehicular ramp width/grades and passing bays must be in accordance with AS2890.1.*	The construction of cross overs will be in accordance with AS2890.1.
4. *Generally, direct access to arterial or sub-arterial roads will not be permitted, except where no legal alternative access is available.*	Not Applicable
5. *Where a development site has dual frontage to a classified road and a secondary road, all driveway crossings (ie entry and exit points) are to be provided via the secondary road unless it can be demonstrated that this arrangement will have an unacceptable impact on road safety and traffic efficiency. This must be justified with suitable studies or modelling.*	Not Applicable
6. *In cases where an access to a classified road is permitted, a deceleration lane may be required, in order to maintain traffic flow movements along the classified road and to minimise potential rear end vehicular accidents which may otherwise occur where vehicles turn into the site from a trafficable lane.*	Not Applicable
7. *The area required for any deceleration lane must be provided within the development site itself with this portion of the land being dedicated as public road at no cost to the RTA or Council. Any necessary relocation of public infrastructure required due to a deceleration lane must be detailed in the architectural / section plans lodged with the Development Application with the costs of any such relocation, being fully borne by the developer.*	Not Applicable
9 LOADING / UNLOADING FACILITIES AND SERVICE VEHICLE MANOEUVRING	
1. *Site design must allocate adequate space for the loading, unloading, parking and manoeuvring of delivery and service vehicles within the subject property. Design of these areas shall comply with AS 2890.2.*	As part of the proposed development, two driveways are to be constructed off Foreshore Road. The eastern driveway will be utilised for ingress movements and the western driveway will be utilised for egress movements. Vehicle access has been designed to facilitate vehicles up to and including a 25m B-double and a 33m A-double dedicated to ethanol transport.
2. *Loading /unloading facilities shall be provided for the following land uses:* *(a) Retail shopping centres / specialty retail shops,* *(b) Commercial Offices / Business Development,* *(c) Bulky good premises,* *(d) Factory,* *(e) Warehouse distribution centre,* *(f) Light industrial retail outlets,* *(g) Landscape supplies establishment,* *(h) Retail or Wholesale Nursery,* *(i) Residential flat building/Multi-dwelling housing/Shop top housing,* *(j) Seniors housing (including housing for people with a disability),* *(k) Take away food premises,* *(l) Food and drink premises,* *(m) Kiosk,*	Loading and unloading for the proposed development has been provided for the largest expected vehicle types accessing the subject premises.

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(n) Function, *(o) Function centre,* *(p) Medical centre /health consulting room,* *(q) Pub / Registered Club,* *(r) Funeral home / Funeral chapel* *(s) Other developed requiring loading or unloading facilities.*	
3. Schedule 1 identifies the various types of service vehicles to be catered for within the various development types. Special vehicles such as buses, garbage trucks and ambulances may have particular access, manoeuvring and operating conditions. The designer or applicant should refer to AS 2890.2 Off-street parking (Part 2: Commercial vehicle facilities) and Roads and Traffic Authority, 1993: "Guide to Traffic Generating Developments".	Loading and unloading for the proposed development has been provided for the largest expected vehicle types accessing the subject premises.
4. Table 3 provides the minimum parking / service bay and manoeuvring requirements for delivery and service trucks	Loading and unloading for the proposed development has been provided for the largest expected vehicle types accessing the subject premises.
9.1 Loading / Unloading and Manoeuvring Area Requirements	
1. All small rigid trucks through to large rigid trucks and articulated heavy vehicles (semi-trailers) must be able to manoeuvre entirely on-site and enter and leave the site in a forward direction. All truck turning or manoeuvring areas must be separate from areas of normal pedestrian or vehicular traffic.	A swept path assessment was undertaken which indicates that there is sufficient space to accommodate the manoeuvring movement of a 25m B-Double and a 33 A-double truck into and out of the site and loading spaces. All vehicles will enter and exit the site in a forward direction at all times. Servicing of the site would operate as a one-way system, with vehicles entering the site using the ingress driveway (eastern driveway) to access the loading bays before exiting via the egress driveway (western driveway) off Foreshore Road.
2. All loading and unloading activities shall take place wholly within the loading bay, at all times. No loading or unloading activity shall take place within any car parking area, landscaping area, pedestrian footway or any public road reserve.	It is proposed to provide two loading docks to service the proposed development. These loading docks have been designed to cater for vehicles up to and including a 25m B-double truck and a 33m A-double truck.
3. The designated loading / unloading area shall be kept free for that purpose, at all times.	No vehicles other than associated loading vehicles will be located within the identified loading areas.
4. Loading / unloading facilities shall be located so they are not visible from any adjoining residential area and do not transmit excessive noise onto any adjoining residential area.	Site is not located within proximity to residential land uses.
5. All loading dock facilities must guarantee satisfactory on-site manoeuvring areas for trucks in accordance with the Australian Standard AS 2890.2 Design Vehicular and Turning templates.	All loading facilities are to be efficiently manoeuvred, as demonstrated by the provided turn path assessment.
6. Council will assess the adequacy of proposed manoeuvring areas provided for on-site truck manoeuvring with reference to the standard vehicle turning templates as per the Australian Standard AS 2890.2 Design Vehicular and Turning templates.	Understood

Control	Response
7. *All developments must be designed to ensure that the standard truck for each development as per Table 3 is able to complete a semi-circular turn on the site, in order to guarantee that all truck movements into / from the site are in a forward direction.*	The proposed development is designed to allow all service vehicles to access and exit the site in a forward direction, as demonstrated by the provided turn path analysis.
8. *Truck turning circles shall not encroach upon any building, car parking space or landscaped area.*	The proposed turn paths do not intrude upon buildings, landscaping or parking areas.
9. *Access arrangements should be designed in accordance with the NSW Roads & Traffic Authority's Traffic Generating Guidelines and Australian Standard AS 2890.1 (2004). However, it is desirable that separate access arrangements be made available for standard passenger vehicles and trucks upon the development site, in order to minimise potential vehicular conflicts.*	Proposed development is designed to separate passenger and heavy vehicle access points where possible. In general, it is determined that the interface between light and heavy vehicles will be appropriately manage, given the context of the proposed development.
10. *All internal two-way access roads shall have a minimum width of 7 metres. Lesser widths may be provided if the internal road system is designed to a single one-way circulation arrangement within the site including any loading dock facilities. Directional signage shall be shown on all internal roadways (where required) to facilitate the orderly movement of trucks and other vehicles within the site.*	Not Applicable
11. *As per the provisions of C2.4 of the Building Code of Australia, emergency vehicular access must be provided from a public road. In this respect, the internal access road must have an unobstructed 6 metre width with no part of the building being more than 18 metres away from the access road. The minimum 6 metre wide access road shall be reserved for vehicular and pedestrian access only and not built upon or used for any other purpose.*	The proposed development is provided with sufficient internal emergency vehicle circulation, with access able to be provided via the public road network.
12. *Loading docks should also be positioned wherever possible, away from the street frontage. Where such facilities can only be provided to the street frontage, appropriate landscaping will be required in front of the loading facility to adequately screen the development.*	The proposed development is provided with sufficient landscaping adjacent to the frontage to sufficiently screen loading areas from the frontage of the premises.
13. *All loading / unloading and manoeuvring areas should be located as far as practicable away from any abutting residential or other sensitive development. Where these activities are likely to result in loss of amenity in nearby residential areas, visual and acoustic screening approved by Council may be required to minimise the potential loss of amenity to adjoining residential or other sensitive development.*	Subject site is not located within proximity to residential or other sensitive land uses.
14. *Queuing associated with the loading dock must not impact the operation of adjacent car parking areas, pedestrian paths, internal circulation roadways or public roads.*	The expected vehicle access and loading on the site is designed to minimise the potential for queuing within the road reserve.

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9.2 Noise Impact Assessment associated with Loading / Unloading Facilities	
1. *The submission of a noise impact assessment report may be required with a Development Application where loading dock facilities are proposed to be positioned in proximity to any adjoining noise sensitive land uses such as residential dwellings, Senior Living developments and educational establishments etc. This requirement will be at the discretion of Council.*	Please refer noise impact assessment provided as part of the EIS.
2. *The NSW Department of Environment and Climate Change's 'Environmental Criteria for Road Traffic Noise' policy is to be used for the assessment of potential traffic noise impacts from the site.*	Please refer noise impact assessment provided as part of the EIS.
3. *The noise impact assessment report will be required to address the existing LA90 background & LAeq abient noise levels at the boundary to the nearest residential land uses during the daytime, evening and night-time periods. The noise impact assessment report must also address the predicted LA1 (maximum noise level) and LA10 average maximum noise level of the development, particularly in respect to the loading and unloading activities conducted within the loading dock facility of the development. The noise impact assessment report should also apply the NSW Department of Environment and Climate Change's 'Industrial Noise Policy' sleep intrusiveness noise criteria and the amenity criteria in determining the noise impact upon sensitive residential land uses. The policy prescribes a sleep disturbance criterion of LA1(1 minute) < LA90(15 minutes) + 15DB(A).*	Please refer noise impact assessment provided as part of the EIS.
4. *Any noise impact assessment report shall also provide recommendations on acoustic attenuation measures required to be provided to improve the acoustic performance of the loading dock facility and / or other operational restrictions (i.e. restricted delivery times for delivery trucks), bearing in mind the nature and frequency of proposed truck deliveries to / from the site and the predicted noise impacts arising from loading / unloading activities.*	Please refer noise impact assessment provided as part of the EIS.
10 PEDESTRIAN ACCESS	New driveway crossings are constructed to facilitate access for pedestrians and disabled persons to and from the site. Footpaths are provided for pedestrians to move from adjacent streets and footpaths onto the site. Provision for access by vehicles and vehicle parking does not compromise the equity and amenity of pedestrian access and is designed appropriately.
11 SAFETY & SECURITY (CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN) MEASURES FOR CAR PARKING AREAS	The proposed development and associated officespace is considered to be predominately unmanned for the purpose of the development. However, when the office space is occupied, it is considered that the parking space would present CPTED through there being clear sigh lines

Control	Response
	between the office and carparking area. Further, the carparking area is not to be publicly accessible, therefore reducing potential conflicts between workers and the public.
12 LANDSCAPING REQUIREMENTS FOR AT-GRADE CAR PARKING AREAS	Not required
13 STORMWATER DRAINAGE / WATER SENSITIVE URBAN DESIGN	
1. *Refer to the Stormwater Management chapter contained in Part E of this DCP for stormwater drainage and on-site stormwater detention requirements for off-street car parking and access areas.*	Chapter E14 - Stormwater Management has been assessed as part of this development application
2. *For certain developments, the Water Sensitive Urban Design treatment measures may also be required for car parking and access areas in accordance with the requirements of the Water Sensitive Urban Design chapter in Part E of the DCP.*	Chapter E14 - Stormwater Management has been assessed as part of this development application

CHAPTER E07 - WASTE MANAGEMENT

Control	Response
5.1 Demolition	Demolition work will be undertaken with a licensed construction company who will disposed of the waste appropriately.
5.2 Construction of Buildings or Structures	
1. *A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.*	Waste management has been addressed under the EIS.
2. *Estimate volumes of materials to be used and incorporate these volumes into a purchasing policy so that the correct quantities are purchased. For small-scale building projects see the rates in Appendix 2 Waste/Recycling Generation Rates for a guide.*	The expected waste generating elements of the proposed development are determined to be best classified as 'office' and 'takeaway food shop' under Appendix 2. While the proposed development is not expected to generate waste 7 days per week, were the development to operate 7 days per week it is estimated to generate 261.8L of general waste and recycling per week. Accordingly, the proposed development is determined to be appropriately serviced by 4 x 240L waste receptacles.
3. *Identify potential reuse/recycling opportunities for excess construction materials.*	Where applicable and possible, the reuse and recycling of excess construction material will be prioritised.
4. *Incorporate the use of prefabricated components and recycled materials.*	Where applicable, the use of prefabricated components and recycled materials will be incorporated.
5. *Arrange for the delivery of materials so that materials are delivered 'as needed' to prevent the degradation of materials through weathering and moisture damage.*	The delivery of materials will be structured in accordance with designated time frames set out for the sites development to ensure the quality of the products is of the highest potential and to prevent the degradation of materials.
6. *Consider organising the return of excess materials to the supplier or manufacturer.*	The sites development will be well organised to ensure products are not in excess. Where products are in excess, they will be arranged to be used elsewhere if possible.
7. *Allocate an area for the storage of materials for use, recycling and disposal (considering slope, drainage, location of waterways, stormwater outlets and vegetation).*	As shown in the drawings the proposed waste storage area is to be established adjacent to the internal circulation area associated with the primary carparking area. The area comprises approximate dimensions of 2m x 1.8m, which is determined to be sufficient to house the required waste receptacles.
8. *Arrange contractors for the transport, processing and disposal of waste and recycling. Ensure that all contractors are aware of the legal requirements for disposing of waste.*	Waste generated will be collected by waste collection personnel and will be arranged to lawfully dispose of the waste.
9. *Promote separate collection bins or areas for the storage of residual waste.*	Residual waste will be disposed of accordingly in separate collection bins.
10. *Clearly signpost the purpose and content of the bins and storage areas.*	proposed waste storage area is to be established adjacent to the internal circulation area associated with the primary carparking area. It will be signed to clearly identify where the

Control	Response
11. Implement measures to prevent damage by the elements, odour and health risks, and windborne litter.	The waste area will be designed to appropriate standards with waste enclosed in bins and within a designated area to ensure there will be no odour and health risks or windborne litter.
12. Minimise site disturbance and limit unnecessary excavation.	Site disturbance and excavation will be minimized and only required to be executed where necessary.
13. Ensure that all waste is transported to a place that can lawfully be used as a waste facility.	The waste will be collected by waste collection personnel and transported to lawful waste facilities.
14. Retain all records demonstrating lawful disposal of waste and keep them readily accessible for inspection by regulatory authorities such as council, DECC or NSW WorkCover Authority.	The collection of waste will be tracked for a period to demonstrate the lawful collection and disposal of waste in place at the site.
5.3 Dwelling Houses, Dual Occupancies, Secondary Dwellings and Integrated Housing	No Residential Development is proposed
5.4 Multi-Dwelling Housing (Villas and Townhouses)	No Residential Development is proposed
5.5 Residential Flat Buildings	No Residential Development is proposed
5.6 Mixed Use Development	No Mixed-Use Development is proposed
5.7 Commercial Development and Change of Use (Shops, Offices, Food Premises, Hotels, Motels, Licensed Clubs, Education Establishments, Entertainment Facilities and Hospitals)	Not Applicable – While the proposed development comprises and office element, it is determined to be ancillary to the greater industrial land use.
5.8 Industrial Development	
1. *A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the Development Application.*	Waste management has been addressed under the EIS.
2. The plans submitted with the application must show: *(a) The proposed location of the waste and recycling storage area to meet the requirements of the industrial development; and* *(b) The proposed on-site path of travel and manoeuvring of waste collection trucks servicing the development.*	The plans indicate the area for the waste storage area.
3. The industrial development must include a designated general waste and recycling storage area in accordance with Appendix 5 to this chapter.	The proposed waste storage is determined to comply with appendix 6 on the following grounds: • Waste/recycling storage area will be constructed in accordance with the BCA; • The waste storage area is generally integrated into the design of the premises and is located away from neighbouring properties; • The waste storage area is considered to be sufficiently sized to allow for the storage of the expected receptacle types; • The waste storage are is located within an area that is serviceable by waste contractors; • The waste storage area will be appropriately signed;

Control	Response
	• The waste storage area will be provided with a hose connection and drainage to permit the washing of receptacles
4. *All industrial organisations must keep written evidence on-site of a valid contract with a licensed waste contractor.*	A waste contractor will be nominated by the applicant for the purpose of the proposed development.
5. *The type and number of containers used to hold waste and recyclable materials must be compatible with the collection practices of the nominated waste contractor.*	Confirmation of the type and number of receptacles will be determined upon nomination of a waste contractor.
6. *Arrangements must be in place regarding the regular maintenance and cleaning of waste management facilities.*	A regular cleaning/maintenance program will be established for emptying of rubbish bins located around the site removal of general litter from the site, inspection. The waste storage area will be fitted with a tap and will drain to sewer as to enable the periodic washing of waste receptacles.
7. *Premises that discharge trade wastewater must do so only in accordance with a written agreement from the local sewer authority. In the Sydney Metropolitan Area this is Sydney Water. Sydney Water defines trade wastewater as 'any liquid, and any substance contained in it, which may be produced at the premises in an industrial and commercial activity, but does not include domestic wastewater (e.g. from hand-basins, showers and toilets).'*	A trade waste agreement will be sought from Sydney Water to permit the discharge of drainage from the waste storage area to sewer.

CHAPTER E10 - ABORIGINAL HERITAGE

Control	Response
1. *As a pre-cautionary approach, Council will require an appropriate Aboriginal archaeological and cultural heritage assessment to be undertaken for any new land use activity or development upon the following land (except where that portion of land previously had an Aboriginal archaeological / cultural heritage significance assessment carried out, as part of a previous rezoning or development stage and in which identified that no Aboriginal heritage issues apply to the site):* *(a) Any beach or coastal foredune area (ie both primary and secondary dunal areas) (excluding any portion of land subject to past development disturbance).* *(b) Land within 40 metres from top of bank of any watercourse / riparian land (excluding any portion of land subject to past development disturbance).* *(c) Land within 40 metres from the mean high water mark (MHWM) of any estuary or tidal inlet (excluding any portion of land subject to past development disturbance).* *(d) Any land zoned Environmental Protection zone within the Illawarra Escarpment (excluding any portion of land which has been subject to past development disturbance).* *(e) Lands zoned Rural / Non-urban (excluding any portion of land which has been subject to past development disturbance).* *(f) Land within new 'greenfield' release areas (excluding any portion of land where a detailed Aboriginal archeological / cultural heritage impact assessment has been undertaken at the rezoning stage or where Development Consent has been previously granted for subdivision or development of that portion of the land).* *(g) All known sites containing either Aboriginal objects and / or places of Aboriginal cultural heritage significance.* *Note[1]: The NSW DECCW Aboriginal Heritage Information Management System (AHIMS) database provides a list of recorded sites containing Aboriginal objects or Aboriginal places of cultural heritage significance.* *Note[2]: Council has a number of previous Aboriginal heritage studies which also identify certain known Aboriginal sites or places of cultural heritage significance to the Aboriginal community. In this regard, prospective applicants are encouraged to contact Council's Heritage Officer to determine whether any such previous study may assist in the assessment of Aboriginal heritage matters.*	Refer to Aboriginal Consultation report. It has been determined there are no previously registered Aboriginal sites within the study area. Given the level of disturbance already present within the study area, the proposed development is considered unlikely to impact on the cultural values of the wider landscape.
2. *All prospective applicants are encouraged to undertake a search of the NSW Department of*	Refer to Aboriginal Consultation report.

Control	Response
Environment, Climate Change and Water's (DECCW) Aboriginal Heritage Information Management System (AHIMS) database, in order to clarify as to whether the subject site contains any recorded Aboriginal object and / or is a place of cultural heritage significance. However, it should be noted that the AHIMS database may not represent a complete list of all Aboriginal sites or Aboriginal places of cultural heritage significance in a particular locality. The database only lists known recorded sites and hence, a locality may contain a number of undiscovered and / or unreported Aboriginal objects or sites.	
3. *All prospective applicants are reminded of the requirements of sections 86 - 91 of the National Parks and Wildlife Act 1974, and in particular, the requirement that any disturbance (ie excavation or construction work) to a site containing an Aboriginal object or human remains must immediately cease. Further, any person who discovers an Aboriginal object or human remains must immediately contact the Planning and Aboriginal Heritage Metropolitan Branch of DECCW as to the existence of the site.*	Refer to Aboriginal Consultation report.

CHAPTER E11 - HERITAGE CONSERVATION

Control	Response
11 Subdivision	No subdivision is proposed
12 Alteration and Additional to Heritage Listed Buildings or Buildings within Heritage Conservation Areas	Proposed development site does not comprise any heritage building that would be impacted by the proposed works.
13 Infill Development	Proposed development site does not comprise any identified heritage buildings.
14 Development in the Vicinity of a Heritage Site	
1. Development on land adjacent to or within the vicinity of a heritage item or a heritage conservation area should not detract from the identified significance or setting of the heritage building or the heritage conservation area.	Please refer cultural Heritage Assessment prepared with regards to the proposed development.
2. Where development is proposed adjacent to or within the vicinity of a heritage site or heritage conservation area, the following matters must be taken into consideration:- *(a) The character, siting, bulk, scale, height and external appearance of the development;* *(b) The visual relationship between the proposed development and the heritage item or heritage conservation area;* *(c) The potential for overshadowing of the adjoining heritage item or any building within a heritage conservation area;* *(d) The colours and textures of materials proposed to be used in the development;* *(e) The landscaping and fencing of the proposed development;* *(f) The location of car parking spaces and access ways into the development;* *(g) The impact of any proposed advertising signs or structures;* *(h) the maintenance of the existing streetscape, where the particular streetscape has significance to the heritage site;* *(i) The impact the proposed use would have on the amenity of the heritage site; and* *(j) The effect the construction phase will have on the well being of a heritage building.*	Please refer cultural Heritage Assessment prepared with regards to the proposed development.
3. Development in the vicinity of a heritage item should give strong regard to any significant views to and from the heritage item or heritage conservation area and any public domain area.	Please refer cultural Heritage Assessment prepared with regards to the proposed development.
4. Where subdivision is proposed in the vicinity of a heritage item, the impact of future development of the lots should be considered.	Not Applicable

Control	Response
15 Adaptive Re-Use of a Heritage Buildings	Proposed development site does not comprise any heritage building that would be impacted by the proposed works.
16 Demolition or Relocation of a Heritage Building or Item	Proposed development site does not comprise any heritage building that would be impacted by the proposed works.
17 Gardens Landscaping and Fencing	Proposed development site does not comprise any heritage building that would be impacted by the proposed works.
18 Signage	Proposed development site does not comprise any heritage building that would be impacted by the proposed works.
19 Development of Historical (Post-European Settlement) Archaeological Sites	Subject site is not an identified archaeological site.
20 Heritage Conservation Areas	Subject Site Does not form part of a Heritage Conservation Area

CHAPTER E12 - GEOTECHNICAL ASSESSMENT OF SLOPE INSTABILITY

Control	Response
5.2 Requirements for the preparation of geotechnical impact assessment reports	
1. For developments to which this policy applies, Council will require the submission of a geotechnical impact assessment report with the Development Application which includes (but not is necessarily limited to) the following matters: *(a) A review of readily available history of slope instability upon the site or related land.* *(b) A site plan and cross-section plans of the site and related land from survey and field measurements with existing contours and proposed finished contours (i.e. at 1 metre intervals) and key features identified.* *The site plan and section plans should show the locations of the proposed development, buildings/structures on both the subject site and adjoining sites as well as the identification of all services such as stormwater drainage, sub-surface drainage, effluent disposal systems, water supply and sewerage pipelines, trees and other identifiable geotechnical hazards.* *(c) A geotechnical model including:* *i. Details determined from site inspections (a site inspection is required in all cases);* *ii. Site investigations (site investigation will require site mapping, delineation of different site conditions and may involve sub surface investigation to determine soil/rock parameters and groundwater conditions. Boreholes and/or test pit excavations or other methods necessary to adequately assess the geotechnical/geological model for the site also need to be detailed); and* *iii. Any other information used in preparation of the geotechnical report.* *(d) Photographs and/or drawings of the site and related land adequately illustrating all geotechnical features referred to in the geotechnical report.* *(e) An assessment of the risk posed by all reasonably identifiable geotechnical hazards which have the potential to either individually or cumulatively impact upon people or property upon the site or related land or surrounding sites to the proposed*	A preliminary Geotechnical and Contamination Investigation has been provided as part of this application (Appendix G) responding to the Wollongong Council controls – Chapter E12 – Geotechnical Assessment of Slope Instability. When considering the requirements of the assessment report the following points are made. • The geotechnical assessment recognises that the site is mostly flat and the preliminary Geotechnical and Contamination Investigation addresses the sites subsurface conditions, property of soil, bearing capacity and recommended footing options for the design of storage tanks and bridge abutment footing and pavement subgrade conditions. • A separate storm water management plan addresses the stormwater drainage and OSD systems. • The report provides field investigation observations with photographs and laboratory results from samples taken. • Assessment of risks are provided within the report. • Due to the subsurface profile comprising uncontrolled filling (to depths of 2.4 m), the Site would be classified as Class P in accordance with the requirements of AS 2870-2011 'Residential Slabs and Footings'. • The further investigations that are recommended by the geotechnical impact assessment report have been provided including an Acid Sulphate Soils Management Plan and Groundwater Assessment and Management Report.

Control	Response
development in accordance with the AGS 2007 guidelines. *(f) Classification of the building site in accordance with the current edition of AS 2870 - Residential Slabs and Footings.* *(g) A conclusion as to whether the site is suitable for the development proposed to be carried out either conditionally or unconditionally. This must be in the form of a specific statement that the site is suitable for the development proposed to be carried out with an acceptable risk in accordance with the measures and methods to be applied to the site including but not limited to recommendations on:* *i. Selection and construction of footing systems;* *ii. Earthworks;* *iii. Surface and sub surface drainage;* *iv. Recommendations for the selection of structural systems consistent with the geotechnical assessment of the risk;* *v. Any conditions that may be required for the ongoing mitigation and maintenance of the site and the proposal, from a geotechnical viewpoint; and* *vi. Highlighting and detailing the geotechnical inspection regime to provide the PCA and builder with adequate notification for all necessary inspections.* *(h) The geotechnical impact assessment report must be accompanied by form M11 or M13 (for subdivisions only) as applicable in Appendix 1 of this policy bearing the original signature of the engineering geologist or geotechnical engineer, who has either prepared or technically verified the geotechnical report certifying that it has been prepared in accordance with this policy and AGS 2007 guidelines as amended.* *(i) Where a geotechnical impact assessment report prepared for a site identifies engineering techniques to enable development on a site previously restricted from development because the slope instability identified the risk to property and/or life posed by the slope instability as greater than the level of acceptable risk, the geotechnical report must also take into consideration any impacts as a result of remedial works on surrounding sites and related land.*	

Control	Response
(j) Where a geotechnical impact assessment report contains a recommendation for a separate analysis of the site to be carried out by another consultant, (e.g. a flood study to be compiled by a hydrological consultant), this recommendation is to be highlighted to the applicant to enable the applicant to engage the required consultant and obtain the necessary report prior to the lodgement of the application.	

CHAPTER E13 - FLOODPLAIN MANAGEMENT

Control	Response
SCHEDULE 4: PRESCRIPTIVE CONTROLS – ALLANS CREEK FLOODPLAIN	
The following planning provisions are relevant to commercial and industrial uses within the Medium Flood Risk Precinct, applicable to the site.	
Floor Level	
1. *For industrial land use only – All Floor Levels to be equal to or greater than the 1% AEP flood unless justified by site specific assessment.*	The site will be raised/filled to ensure that all buildings including offices load in/out gantry, wash bund, etc. have finished surface levels above the 1% AEP flood level (3.00m AHD/ 3.87m PKHD minimum) thereby protecting major equipment and buildings and achieving an adequate degree of flood immunity.
2. *Habitable floor levels to be equal to or greater than the 1% AEP flood level plus 0.5m (freeboard).*	All buildings will have finished surface levels above the 1% AEP flood level.
3. *All Floor Levels to be equal to or greater than the PMF flood level plus 0.5m (freeboard).*	Not Applicable
4. *Floor levels to be as close to the flood planning level as practical & no lower than the existing floor level when undertaking alterations or additions.*	Not Applicable
5. *Floor levels of shops to be as close to the flood planning level as practical. Where below the flood planning level, more than 30% of the floor area to be above the flood planning level or premises to be flood proofed below the flood planning level.*	Not applicable, the proposed use does not involve shops.
6. *Garage and all other non-habitable internal floor levels to be no lower than the 1% AEP flood level minus 300mm or 300mm above finished adjacent ground (whichever is the greater).*	Not Applicable
Building Components & Method	
1. *All structures to have flood compatible building components below or at the 1% AEP flood level plus 0.5m (freeboard).*	The site will be raised/filled to ensure that all buildings including offices load in/out gantry, wash bund, etc. have finished surface levels above the 1% AEP flood level (3.00m AHD/ 3.87m PKHD minimum) thereby protecting major equipment and buildings and achieving an adequate degree of flood immunity. The structures will use flood compatible building components where required and will use high quality building materials regardless.
2. *All structures to have flood compatible building components below or at the PMF level plus 0.5m (freeboard).*	Not Applicable
Structural Soundness	
1. *Engineer's report to certify that any structure can withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus freeboard.*	Not Applicable
2. *Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and*	The site will be raised/filled to ensure that all buildings including offices load in/out gantry, wash bund, etc. have

Control	Response
buoyancy up to and including a 1% AEP flood plus freeboard, or a PMF plus freeboard if required to satisfy evacuation criteria (see below).	finished surface levels above the 1% AEP flood level (3.00m AHD/ 3.87m PKHD minimum) thereby protecting major equipment and buildings and achieving an adequate degree of flood immunity.
3. *Applicant to demonstrate that any structure can withstand the forces of floodwater, debris and buoyancy up to and including a PMF flood plus freeboard.*	Not Applicable
Flood Affectation	
1. *Engineers report required to certify that the development will not increase flood affectation elsewhere, includes medium and high density residential proposals.*	A Site Based Stormwater Management Plan addressing flooding which shows that the development will not adversely affect surrounding sites in the event of a flooding event. Surrounding driveways and landscape areas within the site may experience minor inundation (e.g., up to 300mm flood depth) during a 1% AEP flood event, however, it should be noted that in such case, the site will be potentially inaccessible given all adjacent roads will be flooded and therefore all operations within the site likely to be shut down.
2. *The impact of the development on flooding elsewhere to be considered, includes low density residential.*	Not Applicable
Evacuation	
1. *Reliable access or refuge required during a 1% AEP flood.*	Some overland flow during a 1% AEP flood event will traverse the site with the majority of the overland flow continuing to travel along the external roadways. Most of the site is not affected and provides reliable refuge in the event of a flooding event.
2. *Reliable access for pedestrians and vehicles required during a PMF flood.*	It is not expected that personnel would be located at the premises during a PMF flood event, given the unmanned nature of the facility. However, it should be noted that in such case, the site will be potentially inaccessible given all adjacent roads will be flooded and therefore all operations within the site likely to be shut down.
3. *Reliable access for pedestrians or vehicles is required from the building, commencing at a minimum level equal to the lowest habitable floor level to an area of refuge above the PMF level, or a minimum of 20sqm of the dwelling/premises to be above the PMF level.*	Not Applicable
4. *The development is to be consistent with any relevant flood evacuation strategy or similar plan.*	Not Applicable
5. *Applicant to demonstrate that evacuation of potential development as a consequence of a subdivision proposal can be undertaken in accord with this Plan.*	Not Applicable
Management and Design	
1. *Applicant to demonstrate that potential development as a consequence of a subdivision proposal can be undertaken in accordance with this chapter.*	Not Applicable

Control	Response
2. *Site Emergency Response Flood plan required (except for single dwelling-houses) where floor levels are below the PMF.*	Given the infrequency of the PMF, the proposed development has not been designed to achieve PMF immunity. Given that the premises is expected to be unmanned, with personnel largely expecting to access the site for ethanol deliveries. Accordingly, a flood emergency response plan is not considered to be warranted. In any case, it is expected that during a PMF event that personnel would not be accessing the site due to hazardous weather and limited access due to the surrounding road corridor likely being flooded.
3. *Applicant to demonstrate that area is available to store goods above the 1% AEP flood level plus 0.5m (freeboard).*	Proposed surface levels across the site will vary between RL 2.45m AHD (3.32m PKHD) and RL 3.00m AHD (3.87m PKHD) approximately and therefore flood depths are likely to reach up to 1.55m approximately during a PMF event.
4. *Applicant to demonstrate that area is available to store goods above the PMF plus 0.5m (freeboard).*	It should be noted that it is difficult to define a meaningful Annual Exceedance Probability for the PMF, but it is commonly assumed to be of the order of 104 to 107 (once in 10,000 to 10,000,000 years) consequently, it is not considered practical to design the site to achieve such level of immunity. Notwithstanding this, the main tank compound will be also protected from the PMF waters due to the presence of the proposed 1.8m high bund wall.
5. *No external storage of materials below the flood planning level which may cause pollution or be potentially hazardous during any flood.*	The main tank compound floor will be protected by the proposed 1.8m high bund wall which will prevent any flood waters from entering the tank compound. In addition, the tanks' base floor level will be set to RL 3.00m AHD (3.87 PKHD) minimum.

CHAPTER E14 - STORMWATER MANAGEMENT

Control	Response
10.2 Design requirements	
1. *All of the developing site's impervious area is to drain to the OSD system. The minimum level of impervious surface to be used in the calculation of SSR for the post development land use is that provided in Table 4 below, unless detail plans for the proposed development are available from which actual impervious surface levels can be calculated. (Extract: Industrial area – 100%)*	No on-site stormwater detention is proposed for the purpose of the proposed development, given that the site is at the bottom of the catchment and therefore is not expected to impact upon the operability of the stormwater network. This is consistent with the expectations of NSW ports, as outlined with Port Kembla Development Code.
2. *Natural catchment boundaries are to remain unaltered. In situations where proposed impervious areas straddle natural catchment boundaries, multiple separate OSD systems shall be provided. Runoff from pervious areas that do not naturally drain to the OSD storage should, wherever possible, be designed to bypass the OSD system.*	Please refer to provided stormwater management plan.
3. *OSD needs to be considered and incorporated into a development as early as possible to ensure a holistic and economical design. The entire site drainage system needs to be considered during the design of a development to ensure that all runoff from impervious surfaces (roofs, gutters, paved yard areas and driveways, etc) is designed to flow into the OSD facility. In addition, a deliberate overland flow path must be created to convey these flows to the facility in the event of blockage or overload, free of obstructions such as fences, buildings, etc.*	No on-site stormwater detention is proposed for the purpose of the proposed development, given that the site is at the bottom of the catchment and therefore is not expected to impact upon the operability of the stormwater network. This is consistent with the expectations of NSW ports, as outlined with Port Kembla Development Code.
4. *Detention storage is to be located at a level that is above the 5Yr ARI flood level. OSD systems are to be designed using a catchment wide approach, with a Permissible Site Discharge (PSD) and Site Storage Requirement (SSR) calculated in accordance with the procedures set out in this document.*	No on-site stormwater detention is proposed for the purpose of the proposed development, given that the site is at the bottom of the catchment and therefore is not expected to impact upon the operability of the stormwater network. This is consistent with the expectations of NSW ports, as outlined with Port Kembla Development Code. As outlined within stormwater management plan, the proposed stormwater management plan, the proposed stormwater design is expected to cater for up to a 20 year ARI event.
5. *Designs shall be prepared by a suitably qualified Civil Engineer in accordance with these requirements. The OSD system should be designed to take into account principles of good aesthetics and landscaping. Long term viability and maintenance of the storage area must also be considered.*	The proposed stormwater management plan and associated designs have been prepared by a suitably qualified civil engineer.

CHAPTER E16 - BUSHFIRE MANAGEMENT

Control	Response
1. *If any part of a proposed development falls within an area that has been mapped as bush fire prone (Category 1, 2 or buffer), then the applicant must consider bush fire risk as part of the Development Application process.*	The proposed development area is not within a bushfire prone area.
2. *The application must be accompanied by a Bush Fire Risk Assessment report.*	Not applicable – The site is not within a bushfire prone area
3. *The Bush Fire Risk Assessment report must be in accordance with the requirements of the Planning for Bushfire Protection 2006 guidelines.*	Not applicable – The site is not within a bushfire prone area
4. *Australian Standard AS3959 – 2009 Construction of Buildings in Bush Fire-prone Areas and the NSW Rural Fire Service publication Building in Bush Fire Prone Areas – Guidelines for Single Dwellings Applications should be used for any detached dwelling-house or alterations and additions to a dwelling-house.*	Not applicable – The site is not within a bushfire prone area
5. *Developments that meet the acceptable solutions of the Planning for Bush Fire Protection 2006 guidelines can be determined by the consent authority (i.e. Council).*	Not applicable – The site is not within a bushfire prone area
6. *Applications should include buildings that are sited and designed to minimise the risk of bush fire attack which discourages the requirement to build at BAL–Flame Zone and BAL–40. If an alternate solution is proposed or the application can not comply with the Planning for Bushfire Protection 2006 guidelines, the application will be referred to the Rural Fire Service Fire Control Centre for comment prior to the determination of the application by Council.*	Not applicable – The site is not within a bushfire prone area
7. *Any proposed modification to a development consent granted for a development upon bush fire prone land must comply with the requirements of the Planning for Bush Fire Protection 2006 guidelines and Australian Standards AS3959 – 2009 Construction of Buildings in Bushfire-prone Areas.*	Not applicable – The site is not within a bushfire prone area
8. *Any landscape plan must be prepared in accordance with Appendix 5 of the Planning for Bush Fire Protection 2006 guidelines.*	Not applicable – The site is not within a bushfire prone area
9. *The landscape plan must identify the following:* a. *Location and species type of all existing and proposed trees and shrubs within the proposed asset protection zone(s).* b. *Proposed trees and shrubs to be removed as part of the asset protection zone (APZ).* c. *Proposed trees and shrubs to be retained as part of the asset protection zone (APZ).*	Not applicable – The site is not within a bushfire prone area

CHAPTER E17 - PRESERVATION AND MANAGEMENT OF TREES AND VEGETATION

Control	Response
7.2 Tree and Vegetation Management as part of a Development Proposal	
a) As part of the assessment of a Development Application for buildings where existing trees or other native vegetation are on the site, Council will determine if the trees should be retained, can be removed or if modifications need to be made to the layout of buildings and driveways. This will be determined using criteria for evaluation of significant trees and vegetation. The Development Application must be supported by an Arborist Report that complies with Council's requirements.	Please refer BDAR Waiver and Section 5.29 and 5.30 of the Transport and Infrastructure SEPP.
b) Generally for a tree to be retained reference must be made to Australian Standard AS4790-2009 Protection of Trees on Development Sites.	All tree retention will be undertaken in accordance with AS4790.
c) Where Council has issued a Development Consent for a structure or building, any tree with its base within 3 metres of that building or structure on the subject land may be removed without further application to Council, provided the Council's Tree Management Officer is satisfied before the tree is removed that its base is within the 3 metre limit.	Not Applicable
d) If it has been determined that a tree or trees are to be retained, a tree protection zone must be established. This will include a fenced off area which must be maintained throughout the construction period and shall be exclusive of any buildings, footings, excavation, retaining walls, materials storage, services, level changes or hard surfaces in the zone. Certification from a qualified arborist may also be required at the following stages of the development: *(a) Before commencement of construction;* *(b) At mid point of the construction phase; and* *(c) At completion of the construction phase.*	Any retained trees will be protected in accordance with this requirement.
e) Larger sites should use a Council approved Landscape Management Plan or a Vegetation Management Plan to maintain trees on regular basis. Where an approved Landscape Management Plan (detailing the proposed management methods) does not exist approval should be sought from Council as part of a development application. A Vegetation Management Plan may be required where there is significant vegetation present.	As deemed necessary, a landscape management plan may be adopted for the purpose of maintaining vegetation on the subject premises.

CHAPTER E18 - THREATENED SPECIES IMPACT ASSESSMENT

Control	Response
2 OBJECTIVES	
a) To ensure that threatened species, populations and endangered ecological communities are protected from the impacts generated by development. *b) To ensure that developments that have the potential to impact upon threatened species, populations or endangered ecological communities are assessed in accordance with legislative requirements.*	Please refer BDAR Waiver. It has been identified that the proposed development will not have adverse impacts on threatened species or ecological communities. The report has considered it unnecessary to undertake assessments of significance on any threatened ecological communities or species.

CHAPTER E19 – EARTHWORKS

Control	Response
4.1 Stormwater Management, Sediment Control and Land Stability	
1. *It is the responsibility of the developer undertaking earthworks to ensure such works do not adversely impact on stormwater drainage, groundwater, surface water quality or land stability. Note: It is an offence to pollute waters under the Protection of the Environment Operations Act 1997.*	Any earthworks undertaken on the premises is for the purpose of managing stormwater expected to be generated in association with the proposed development. The works will be undertaken with all supporting groundwater, geotechnical and stormwater management plans prepared for the proposed development.
2. *Erosion and Sediment control infrastructure must be installed as soon as practical and where possible at the onset of any earthworks.*	Refer to Erosion and Sediment control plan detailing site sediment control and infrastructure measures
3. *Areas of excavation must be suitably retained/battered so that uphill areas are stable and do not lose development potential.*	All excavation undertaken on the subject premises will be ensured to be appropriately retained, as to ensure suitable site stability.
4. *Filling must be suitably retained / battered so as to avoid slumping, or sediment entering into drainage systems or downstream properties.*	All filling undertaken on the subject premises will be ensured to be appropriately retained, as to ensure suitable site stability.
5. *An application involving earthworks must address impacts on the geotechnical stability, groundwater, acid sulphate soils, contamination and salinity of the site. Earthworks on steep slopes (i.e. land having a gradient of 15% or greater) and/or earthworks greater than 1 metre in height will generally be required to submit a geotechnical report stating the suitability of the land for development. This report shall comply with the requirements contained in the Geotechnical chapter in Part E of this DCP.*	The proposed development is supported by a geotechnical assessment, acid sulfate soils and groundwater management plans to support the development works at the subject premises.
6. *Any excavation within the zone of influence for any other structure or building requires a Dilapidation Report (prepared by a suitably qualified engineer) demonstrating the existing condition of neighbouring buildings and structures. The Dilapidation Report will be required to be submitted with the Development Application. Prior to works commencing a Structural Report may be necessary to propose measures that will protect the integrity of buildings and structures.*	Excavation is not undertaken within proximity to any retained buildings.
7. *The alteration of overland flow or local drainage shall not be permitted to adversely impact on adjoining or adjacent properties. No net loss of flood storage and /or conveyance will be permitted. In this regard, Council may require the developer to undertake a flood study to demonstrate the likely impacts and make recommendations for the design of the proposed earthworks.*	Please refer stormwater management plan.
8. *For exposed earthworks, a site management program incorporating sediment, dust and erosion control measures (e.g. cleaning of sediment traps, fences, access control, basins and maintenance of vegetative cover) must be implemented prior to the commencement of any works and maintained throughout the duration of the earthworks and until vegetation cover / suitable stabilisation is established*	The proposed earthworks will be undertaken in accordance with sediment, dust and erosion control measures.

Control	Response
(i.e. in accordance with the 'blue book' requirements for the stabilisation of materials).	
4.2 Imported Fill	
1. *Imported fill must be free from any soil contamination and accompanied by an appropriate waste classification prepared in accordance with the requirements of the NSW EPA Waste Classification Guidelines (2014) and with consideration of the Protection of the Environment Operations (Waste) Regulations (2014). All imported material must be classified as virgin excavated natural material (VENM). In restricted circumstances where deemed appropriate Excavated Natural Material (ENM) may also be accepted as long as it is in keeping with the requirements of any regulatory bodies and the proposed site use. Demolition or putrescibles waste cannot be buried ion site and is not permitted to remain on site in any circumstance.*	Any imported fil utilised on the premises will be ensured to be free of contamination.
2. *Where earthworks involve land known or suspected to be contaminated, the provisions of the Contaminated Land Management Chapter in Part E of this DCP will also apply.*	Assessment against the Contamination Land Management Chapter is undertaken for the proposed development.
4.3 Earthworks Planning, Design and Construction	
1. *All earthworks are to be planned, designed and constructed in accordance with Australian Standard AS3798 – Guidelines on earthworks for commercial and residential developments.*	Earthworks will be undertaken in accordance with AS3798.
2. *Batter cross-slopes should be restricted to a slope of 25% (1 vertical in 4 horizontal).*	Any battering will be ensured to be restricted to a slop of 25%.
3. *Excavation of hard bedrock in urban areas shall be undertaken in a manner that minimises amenity impacts on the surrounding neighbourhood. Methods of excavation are to be selected appropriate for the bedrock type such that noise and vibration nuisance generated by the works are within Department of Environment and Climate Change limits.*	Any excavation of bed rock will be undertaken in a manner that minimises amenity impacts to the surrounding area.
4. *All excavations and backfilling shall be executed safely and in accordance with appropriate professional standards and NSW Work Cover Authority requirements.*	
5. *Fill should not cover topsoil. Topsoil should be removed, stockpiled and replaced over the fill.*	As required, any topsoil will be removed, stockpiled and replaced over the fill.
4.4 Use of Coalwash as Fill Material	Not Applicable
4.5 Revegetation Requirements	Not Applicable

CHAPTER E20 - CONTAMINATED LAND MANAGEMENT

Control	Response
5 PROCEDURES FOR DEVELOPMENT APPLICATIONS & COMPLYING DEVELOPMENT CERTIFICATE APPLICATIONS	
1. Were land is contaminated or has the potential for contamination Council requires the following: *(a) A preliminary investigation report in accordance with the requirements of this policy and relevant legislation;* *(b) A Detailed Site Contamination Investigation Report is required where the preliminary investigation report reveals that the site is or was previously used by a potentially contaminating land use or soil and / or groundwater analysis reveals elevated contaminants above threshold levels;* *(c) Council may, as a matter of due diligence, request a Site Audit Statement to be provided from an accredited Site Auditor, in order to certify that the site is suitable for its intended use even if the Preliminary Investigation confirms that the site has no issues and the visual assessment of the site reveals no evidence of any contamination;* *(d) Where the Detailed Site Contamination Investigation Report indicates that the site is subject to soil strata, soil vapour and / or groundwater table contamination above threshold limits, a Remedial Action Plan will be required;* *(e) Contaminated land consultants who prepare preliminary investigation, detailed investigation, RAP's and validation reports must be accredited via one of the following:* o *the Site Contamination Practitioners Australia (SCPA) scheme;* o *the Environment Institute of Australia and New Zealand's (EIANZ) Contaminated Land Assessment Specialist Certified Environmental Practitioner (CLA Specialist CEnvP) scheme; or* o *the Soil Science Australia (SSA) Certified Professional Soil Scientist Contaminated Site Assessment and Management (CPSS CSAM) certification.* *(f) Council will not continue the assessment until satisfied with the information in the detailed report or RAP.*	A Preliminary Geotechnical and Contamination Investigation has been completed identifying the potential for contamination on the land. Further reports provided addressing potential for contamination include Acid Sulfate Soils Management Plan, Groundwater Assessment and Management Report and Erosion & Sediment Control Plan. Please refer to these plans addressing contaminated land management.

CHAPTER E22 - SOIL EROSION AND SEDIMENTATION

Control	Response
4.1 Site Preparation	
1. *Sediment and erosion control measures are to be implemented prior to the commencement of any construction works.*	Erosion and sediment control measures will be implemented prior to the commencement of works. Refer to Erosion and Sediment control plan.
2. *Where vegetation exits on the site, buffer zones of vegetation should be retained along the boundaries of the site, particularly those adjacent to creeks and street gutters.*	Not Applicable. Refer to Erosion and Sediment control plan.
4.2 Erosion Control Measures	
A range of erosion control measures may be used on building or subdivision sites to address potential soil erosion problems, including: 1. *Temporary waterway crossings;* 2. *Temporary channels / drains and inlet / outlet works, in order to divert water from cut or fill slopes and to intercept off-site run-on water and spring water, especially in areas with moderate or high hazards of land instability;* 3. *Temporary contour banks or cellular confinement systems, to minimise sheet erosion problems;* 4. *Rock check dams or other alternative channel linings, to help reduce the erosive energy levels of concentrated water in constructed stormwater drainage channels;* 5. *Temporary water diversion structures such as earth banks (low flows or high flows);* 6. *Energy dissipators and outlet protection measures, in order to reduce water velocities to minimise soil erosion problems around drains and outlets; and* 7. *Sub-sub soil drainage measures, in order to provide controlled water flows through the soil strata.*	Refer to provided Erosion and Sediment control plan.
4.3 Sediment Control Measures	
1. *Sediment fences should be constructed parallel to the contours of the site with appropriate checks in place to avoid creating concentrated flows.*	Sediment fences are to be established along the low side of the premises to minimise sediment flows into watercourses.
2. *A 150mm deep trench should be cut along the upslope line of the fence for the bottom of the geo-textile fabric of the sediment fence to be entrenched. Onsite mulch or other alternative materials may be used in preference to silt fencing if ESC outcomes can be maintained.*	Refer to provided Erosion and Sediment control plan detailing sediment fence and proposed mulch filter berm.
3. *The 1.5 metre long (40mm square) hardwood star pickets for the sediment fence shall be driven into the ground at 2.5 metre intervals (maximum) at the downslope edge of the trench. The star pickets should be fitted with safety caps.*	Refer to provided Erosion and Sediment control plan detailing 40mm square hardwood posts.
4. *The self-supporting geo-textile fabric shall be affixed to the upslope side of the star pickets and placed*	Refer to provided Erosion and Sediment control plan.

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within the toe of the trench. Only geo-textile fabric designed for the use of sediment fencing shall be used. The use of shade cloth for the purposes of sediment control fencing is not satisfactory.	
5. *The geo-textile fabric should be affixed to the star pickets by stapling or the use of wire ties. Wire tied sediment fences may be readily unhooked from their support posts during construction hours to allow the delivery of raw materials.* *Figure 1 in Appendix 2 shows the general construction requirements for sediment fences.* *Figure 2 in Appendix 2 shows the general construction requirements for straw bale filters.*	Refer to provided Erosion and Sediment control plan detailing geotextile fabric for sediment fences.
6. *Mesh and gravel inlet filter sediment traps are required to be provided in front of any stormwater drainage gutter inlet pits, in order to prevent coarse sediment entering the inlet pit.* 7. *Figures 3 and 4 in Appendix 2 give examples of acceptable inlet filter sediment traps.*	Refer to provided Erosion and Sediment control plan.
8. *The retention or planting of vegetated filter strips downslope of a construction site may help to trap coarse sediment which has escaped from a damaged section of a sediment barrier fence, especially during the majority of storm events.*	Refer to provided Erosion and Sediment control plan.
9. *Dense native grasses which reach a height of 150mm provide the best uniform dense groundcover for vegetated filter strips.*	Refer to provided Erosion and Sediment control plan.
10. *The installation of a minimum 400mm wide vegetated grass strip along the kerb line is recommended as the last sediment trap for coarse sediment together with geo-textile sediment barrier fences.*	Refer to provided Erosion and Sediment control plan.
11. *All ESC infrastructures must be maintained in good working order. The appropriateness and success of any plans must be revised if control measures become inefficient.*	Refer to provided Erosion and Sediment control plan.
12. *Water should not remain pooled within the site at any time. Water pooling (after periods of rain) is indicative of poor drainage or over capacity ESC infrastructure.*	Refer to provided Erosion and Sediment control plan.
4.4 Wash-out Areas	

Control	Response
A designated wash out area shall be set aside for waste water generating activities such as tile cutting and washing down concreting, paint and other trade equipment. This area shall be: 1. *Located away from drainage lines and the street gutter.* 2. *All run off from the waste area shall be intercepted by a sediment fence, straw hay bales or another suitable filter device to prevent stormwater pollution.* 3. *Where possible, the wash out area shall be located on a grassed area or be surrounded by a vegetation buffer zone.* 4. *Under no circumstances is sediment and chemically contaminated water (i.e. pollution) allowed to leave the site at any time.*	If required, washout areas can be established in accordance with the requirements under this criteria.
4.5 Stabilised Entry / Exit Points	
The main vehicular access point should be constructed with a 150-200mm deep pad of 40mm – 75mm crushed rock or recycled concrete. The access point should be at least 7 metres wide and 5 metres long.	Entry and exit points are to be stabilised through construction, as detailed by the proposed erosion and sediment control plan.
4.6 Air Pollution	
Stockpiles of sand and soil shall be located in a sheltered position where possible and covered or watered to prevent material from being blown off the site.	As required, stockpiles will be appropriately covered.
4.7 Early Roof Water Connection	
Temporary or permanent downpipes shall be installed prior to frame inspection.	As required, temporary or permanent down piping can be established prior to inspection.
4.8 Position of Stockpiles	
Loads of building materials shall be deposited entirely within the allotment boundaries and located to control runoff into a drain, gutter or watercourse. They may also be situated within closed compounds.	Stockpiles will be confined to the boundaries of the premises and covered when necessary.
4.9 Revegetation	
Sites shall be stabilised / revegetated as soon as possible to prevent soil erosion. Excavated top soil should be reused as it generally contains nutrients, seeds and rootstock. Planting low maintenance native species will minimise the water, fertilizers and maintenance required for long term survival. Erosion and sediment control infrastructure must not be removed until suitable stabilisation has occurred.	The site comprises no vegetation that would constitute revegetation of the premises.

CHAPTER E23 - RIPARIAN LAND MANAGEMENT

Control	Response
6.2 Riparian Corridor Width Requirements	
Any development (excluding new dwelling-houses, new dual occupancy developments or alterations and additions to existing dwelling-houses or dual occupancies) in, upon or adjacent to riparian land must be designed to achieve the minimum riparian corridor width requirement for the specific watercourse category as contained in Table 2 below. The riparian corridor width is measured from the top of a watercourse bank away from thewatercourse centreline.	The site triggers the Riparian Lands and Watercourse Map (Environmentally Sensitive Land) of the Wollongong Local Environmental Plan 2009. The site is located within Lot 6 DP1236743 which traverses the Port Kembla Harbour foreshore. The proposal is designated to proposed Lot 7 within Lot 6 in DP1236743 which encompasses a site area of 1.769ha. The identified environmentally sensitive land is located over 400m southeast from the site and under the proposed lot plan will not be triggered and therefore does not require assessment.