

14 February 2023

TfNSW Reference: SYD20/1175/07
DPE Reference: SSD-9978934

Mr Michael Cassel
Secretary
Department of Planning and Environment
Locked Bag 5022
Parramatta NSW 2124

Attention: David Glasgow

**RESPONSE TO SUBMISSION
STAGE TWO COCKLE BAY WHARF REDEVELOPMENT (SSD-9978934)
249 WHEAT ROAD, COCKLE BAY**

Dear Mr Cassel,

Thank you for the Department's correspondence via the Major Projects Portal on 23 December 2022, requesting Transport for NSW (TfNSW) to review and comment on the Response to Submissions (RtS) for the 'Stage Two Cockle Bay Wharf Redevelopment'.

TfNSW has reviewed the submitted application and provides the Department, in **TAB A**, suggested conditions of consent, for any determination issued.

It should be noted that the Applicant, separate to this application, will require TfNSW approval and concurrence under section 138 of the *Roads Act, 1993* for various works as TfNSW is the roads authority for the Western Distributor motorway. Details of TfNSW preliminary requirements are provided in **TAB B**.

The Applicant has worked closely with TfNSW to address several prior comments regarding this development and TfNSW would welcome continued discussion to address the outstanding matters raised in **TAB A** and **TAB B**.

Should you have any further inquiries in relation to this matter, please do not hesitate to contact Rachel Cumming, Director Land Use, on 0428 411 723 or by email at development.sydney@transport.nsw.gov.au.

Yours sincerely,



Graham Richardson
Director Land Use, Networks, and Place Planning
Planning and Programs, Greater Sydney Division

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TAB A – Suggested conditions of consent

Roads Act 1993

Comment:

TfNSW concurrence under section 138 of the Roads Act, 1993 is separately required for the following works:

- Structure over the Western Distributor motorway
- Road works on Wheat Road and Harbour Street
- Proposed vehicular access on Harbour Street

The Agency advises that separate conditions and requirements will be provided to the Applicant. **TAB B** is provided to inform the Applicant of TfNSW preliminary requirements.

Recommendation:

To address the above comments relating to TfNSW concurrence under section 138, Road Act 1993, the following condition is recommended to be included in the Development Consent:

- The Applicant will need to obtain TfNSW concurrence under section 138 of the *Roads Act, 1993* prior to the issuing of a construction certificate for the following works:
 - Structure over the Western Distributor motorway
 - Road works on Harbour Street and Wheat Road (including porte-cochere)
 - Proposed vehicular access on Harbour Street
- The Applicant is to initiate this process by contacting TfNSW (via email development.sydney@transport.nsw.gov.au) with the approved stamped plans and conditions of consent, following which the agency will commence the *Roads Act 1993* approval process.

Protection of CBD Rail Link (CBDRL) Corridor

Comment:

TfNSW has reviewed the RtS (Section 5.1, 18 K - Noise and Vibration Impact Assessment 211222 and Appendix U - 29 U - Memorandum: CBP Market St Footbridge Structural Design, Enstruct 20/07/2021) documents and the Agency provided comments and requirements in response to the assessments (Appendix A – Memorandum, Enstruct).

In addition, it is also advised that an electrolysis report is also required as the piers of the new footbridge must be protected from the effects of possible stray current.

Recommendation:

To address the above comments relating to protection of the CBDRL Corridor, the following conditions are recommended to be included in the Development Consent:

General Conditions

- All structures which are proposed for construction or installation, or which are constructed or installed, in connection with the approved development that have a potential impact on the CBD Rail Link (CBDRL) must be designed, constructed, and maintained in accordance with design criteria specified by TfNSW.
- The design and construction of the bridge foundations and ground anchors for the approved development are to be completed to the satisfaction of TfNSW.
- The applicant must make allowances that are to be agreed with TfNSW in the design, construction, and maintenance of the approved development for the future operation of railway tunnels in the vicinity of the approved development, especially in relation to vibration, stray currents, electromagnetic fields, and fire safety.
- The design and construction of the foundations and ground anchors (if any) for the approved development are to be completed to the satisfaction of TfNSW. An accurate plan/CAD model should be included for the proposed foundations, to enable verification against the CBDRL alignment model. The foundation design and any encroachment into Exclusion Zone 4 and beyond must comply with the limitations of the Structure Exclusion Zones as required by TfNSW.
- No modifications may be made to the approved design without the consent of TfNSW.
- The applicant must provide access by representatives of TfNSW upon request to the site of the approved development and all structures on that site during all stages of the development.

- TfNSW, and persons authorised by it for this purpose, are entitled to inspect the site of the approved development and all structures to enable it to consider whether those structures on that site have been or are being constructed and maintained in accordance with these conditions of consent, on giving reasonable notice to the principal contractor for the approved development or the owner or occupier of the part of the site to which access is sought.
- Copies of any certificates, drawings or approvals given to or issued by TfNSW must be delivered to DPE for its records; and
- All TfNSW costs associated with review of plans, designs and legal must be borne by the applicant.

Prior to Issue of construction certificate

- The Applicant should consult with TfNSW to confirm the timing of construction certificate and associated documentation and activities prior to preparation of requested documentation. The Applicant should provide the information to TfNSW for review and endorsement. The Principal Certifying Authority (PCA) is not to issue the construction certificate until written confirmation from TfNSW that the following conditions have been complied with.
- The Applicant should address the adverse effects of the approved development on the CBD Rail Link (CBDRL) identified in State Environmental Planning Policy (Transport & Infrastructure) 2021. The Applicant must:
 - Provide the following for TfNSW review and endorsement:
 - Geotechnical Report – An updated Geotechnical Report needs to include the following:
 - Ground Information and the geological sections at the proposed foundation locations.
 - An engineering assessment of the ground/structure interaction, associated with the future tunnel construction.
 - Details of the bridge foundation design in Zone 4 to accommodate movement due to future CBDRL works.
 - Details of the loads of a dynamic nature (such as from wind) on the tunnel support including sandstone bedding planes and rock bolt design and
 - A detailed geotechnical and hydrological analysis to the satisfaction of TfNSW to demonstrate likely movements of the ground due to the future CBDRL.
 - Structural Assessment - Structural Report should be updated with final structural foundation design and associated drawings and to confirm the appropriate consideration of the future CBDRL to enable verification of compliance to TfNSW requirements in relation to the foundation loadings and layout, bearing pressures, settlement value allowance, soil /structure interaction stresses and movements in the protection zone. Structural drawings should show offsets to the CBDRL including protection zones in both plan and elevation sections; and
 - Electrolysis Report - All Structures must be designed, constructed, and maintained so as to avoid any damage or other interference, which may occur as a result of stray electrical currents, electromagnetic effects and the like from future railway operations. An Electrolysis Report should be submitted to TfNSW demonstrating the Electrolysis Risk to the development. The Applicant must incorporate in the development all the measures recommended in the report to control that risk.
 - Make allowances that are to be agreed with TfNSW in the design for the future construction of railway tunnels in the vicinity of the approved development.
 - Consult with TfNSW including preparation of a detailed regime for consultation with and approval by, TfNSW for the excavation of the site and the construction of the building foundations (including ground anchors) for the approved development, which may include geotechnical and structural certification in the form required by TfNSW.
 - Provide detailed survey information to TfNSW, to confirm the property boundaries are consistent with the setting out on the CBDRL drawings.
 - Provide to TfNSW drawings, reports and other information related to the design, construction, and maintenance of the approved development; and
 - Address such other matters that TfNSW considers is appropriate.

Prior to the Issue of the occupation certificate

- As-built drawings certified by a Registered Surveyor should be submitted to TfNSW and DPE by the Applicant. The Principal Certifying Authority is not to issue the occupation certificate until the written confirmation received from TfNSW that this condition has been satisfied.

Please send documentation to TfNSW - Corridor and Network Protection (via email: development.corridors@transport.nsw.gov.au).

Harbour Street access driveway and internal service road operations

Comment:

TfNSW has reviewed the RtS documents (Appendix T - Technical Note-Respond to RTS Comments on Cockle Bay Redevelopment TIA, Aurecon 17/8/2022, Appendix V - Wheat Road Site Works Plan, Appendix W – Swept Paths and Appendix X – Sight Line Drawings) which shows a revised access arrangement that separates the ingress access driveway for the subject development from the ingress driveway of the neighbouring property at 31 Wheat Road.

The updated access arrangement reduces the number of conflict points for vehicles entering and exiting the internal service road. However, the following road safety concerns are still raised which needs further review and investigation:

- Sight distance assessment should be based on a formalised Safe Intersection Sight Distance (SISD) checks and demonstrated in the vertical plane as well as horizontal plane. The vertical plane is particularly important due to the proposed F Type barrier.
- Appendix W – Swept Path analysis indicates HRV as the largest vehicle. However, 14.4m buses will be entering and exiting the internal service road. Swept path analysis should be updated showing the 14.4m bus traversing through the internal service driveway and egress driveway on Harbour Street.
- Concern is raised with delays and queuing from vehicles exiting the egress driveway on Harbour Street which may block access to the loading dock. This is a particular concern for:
 - MRV vehicles and Buses due to the swept path constraints at the Harbour Street intersection and access is unrestricted during peak periods.

A Road Safety Audit and Assessment is recommended to identify mitigating measures to manage safety issues relating to the loading dock access, internal service road and the access driveway on Harbour Street.

Recommendation:

To manage and mitigate the issues relating to Harbour Street access and internal service road the following conditions are recommended to be included in the development consent:

- Swept path analysis should be updated to include 14.4m bus accessing the internal service road and Harbour Street access points. Designs of the internal service road and access driveways should be updated accordingly.
- An assessment of the operation of the Harbour Street egress driveway should be undertaken to the satisfaction of TfNSW. Measures to minimise delays and queuing on the egress driveway that block access to the loading dock should be identified and incorporated in the designs and operational management plan.
- A Stage 2 (Concept Design) Road Safety Audit should be undertaken by TfNSW accredited independent auditors for the design and operation of vehicular access on Harbour Street and services areas including the loading dock and internal road network, including links to the neighbouring property (31 Wheat Road). The Road Safety Audit Report should be submitted to TfNSW for endorsement prior to issue of a Construction Certificate.
- All recommendations of the Road Safety Audit should be included in the design and operational management plan. The plan should be submitted to TfNSW for review / comment prior to the issue of the construction certificate. A review of the plan should be undertaken at 12 months and 36 months after occupation of the development. The review is to consider whether any amendments are required to the plan or if any additional measures are required.

Porte Cochere Operation (Point-to-point transport and coaches)

Comment:

TfNSW has reviewed the RtS documents (Appendix T - Technical Note-Respond to RTS Comments on Cockle Bay Redevelopment TIA, Aurecon 17/8/2022, Appendix V - Wheat Road Site Works Plan, Appendix W – Swept Paths and Appendix X – Sight Line Drawings as well as EIS documents) and the following comments are provided regarding the porte-cochere operation:

- An assessment of the forecast demand for the porte-cochere was undertaken for the AM peak only. The demand in the PM will be generated by both the commercial and retail land uses.
- In addition, justification for the development not generating or attracting private buses or coaches has been provided. It is considered likely the retail and public domain land uses will generate some private bus or coach trips.
- Queuing assessment of the porte-cochere has been undertaken however, there could be instances where queue will overflow. This needs to be reviewed to identify measures that would ensure road safety and operational issues do not occur on Wheat Road.

Recommendation:

To manage and mitigate the issues relating to point-to-point transport and coaches, the following conditions are recommended to be included in the development consent:

- An assessment of the forecast demands generated by both the commercial and retail components during the PM peak should be provided to the satisfaction of TfNSW. Details on how this can be accommodated within the porte-cochere should be provided.
- The Applicant should prepare a detailed porte-cochere management plan and submit it for endorsement by TfNSW prior to issuing the construction certificate. The management plans are required to include the following (not limited to):
 - Location of vehicle stopping/parking area for valet parking vehicles, taxi and pick and drop off facilities.
 - Details of the types and frequency of vehicles accessing the porte-cochere and updated swept path analysis based on the largest vehicles.
 - Details of alternate car parking locations and pick and drop off locations to redirect vehicles due to extensive queuing at the access to the porte-cochere; and
 - Management of incidents at the access to the porte-cochere

Active Transport Access Network

Comment:

TfNSW has reviewed the RtS (Appendix O – Precinct Cycle Study, Arup and Architectus) documents and the following comments are provided:

- The NSW Government vision is to provide a safe and connected cycleway network across Greater Sydney to enable more people to safely ride their bicycle as part of their everyday travel.
- Strategic documents have been developed that outlines the planned cycle network that would service the area. This includes Strategic Cycleway Corridors, Eastern Harbour City Overview, TfNSW 4/2022 and Cycling Strategy and Action Plan, City of Sydney 12/11/.
- In line with these strategic documents various cycling improvements are being investigated and implemented by Council and TfNSW.
- It is important that the Applicant continues to consult with Council and TfNSW to enable the development to incorporate appropriate cycle enhancement and ensure future cycle improvements are not precluded by the development.
- This includes provisions for wayfinding and the suitable design for ramps, staircases and lift to ensure safe and efficient passage for pedestrians and cyclists.

Recommendation:

To manage the issues relating to active transport access following conditions are recommended to be included in the Development Consent:

- The Applicant continues to consult with Council and TfNSW throughout design and delivery of the Cockle Bay Project to ensure current and future cycle projects are further considered.
- Measures to ensure safe and efficient access for cyclists should be developed in consultation with Council and incorporated in the designs. This includes waiting/queuing areas provisions and suitability of access to different levels (i.e., ramps, lifts, bicycle staircase ramps, etc).
- Wayfinding strategies should be prepared in consultation with Council to assist with the increasing mode share of walking and cycling. This should include signage to other destinations external to the site including transport nodes and tourist destinations.

Freight and Servicing

Comment:

TfNSW has reviewed the RtS documents (Appendix T - Technical Note-Respond to RTS Comments on Cockle Bay Redevelopment TIA, Aurecon 17/8/2022, Appendix V - Wheat Road Site Works Plan and Appendix W – Swept Paths) provides further information on freight and servicing including the operation of the loading dock and the following comments are provided:

- An assessment utilising TfNSW's Urban Freight Forecasting Model indicated that during peak times, the loading dock demand is likely to exceed the loading bays provided for the proposed land use composition. In addition, there may be instances where a delivery vehicle arrives outside of the allocated loading time slot or incidents and delays with service vehicles.

- Vehicle access to the compactors is only possible if the adjacent five spaces are unoccupied. Management of the utilisation of spaces in the loading dock is required to ensure access to the compactors is possible when required to ensure queuing does not occur.
- Management measures should be developed to mitigate any impacts on the operation of the loading dock and internal service road.

Recommendation:

To ensure the concerns relating to freight and servicing are managed, it is recommended that the following conditions are to be included in the development consent:

- The Applicant should follow the methodology described in the Delivery and Servicing Plan Guidance (<https://www.transport.nsw.gov.au/system/files/media/documents/2022/delivery-and-servicing-plan-guidance.pdf>) to develop an approach for ideal management of freight and servicing activity that will result in it being adequately contained, well managed and minimal impact on the surrounding areas. While the process should start in the building design phase, the “Development Application Phase” should adequately be concluded prior to an occupancy certificate being issued. The Applicant should prepare the detailed Delivery and Servicing Plan (DSP) in consultation with TfNSW - Urban Freight (via email: michael.stokoe@transport.nsw.gov.au). The DSP should ensure that any potential traffic and safety impacts associated with the loading dock operation are mitigated. The Applicant should submit a copy of the final plan to TfNSW for endorsement. The DSP should specify, but not be limited to, the following:
 - Updated details of the development’s loading and servicing profile, including the forecast loading and servicing traffic volumes by vehicle size, frequency, time of day and duration of stay based on survey of similar sites.
 - Details of managerial approaches to ensure all freight and servicing traffic generation will be managed to the building.
 - This should address specific concerns including:
 - Traffic management does not result in delivery vehicles excessively queueing on the driveway or unnecessarily occupy public road space as they wait for the allocated loading time slot to enter the loading dock.
 - Details of measures to manage any potential traffic and safety impacts of the loading dock operation
 - Management of conflicts between vehicles on the internal service road and vehicle movements to/from loading bays.
 - Proposed approaches for ongoing measurement of performance and governance
 - Proposed approaches for continuous improvement in commercial vehicle traffic management to the site
- The DSP should be implemented by the Applicant following the issue of the occupation certificate.

Green Travel Plan

Comment:

The Green Travel Plan and Travel Access Guide is key to promote the use of active and sustainable transport modes.

Recommendation:

To ensure the active and sustainable transport modes are promoted, it is recommended that the following conditions are to be included in the development consent.

The Applicant is to be conditioned to prepare and submit a Green Travel Plan (GTP) and Travel Access Guide (TAG) prior to the commencement of first occupation, to promote the use of active and sustainable transport modes. The GTP and TAG must:

- a. be prepared by a suitably qualified traffic consultant in consultation with TfNSW and Council.
- b. include objectives and modes share targets (i.e., site and land use specific, measurable, and achievable and timeframes for implementation) to define the direction and purpose of the GTP.
- c. include specific tools to manage travel demand and mitigate any queueing and delays that may result from vehicles exiting the site during peak periods.
- d. include specific tools and actions to help achieve the objectives and mode share targets.
- e. include measures to promote and support the implementation of the plan.
- f. identification of a responsible party (or Committee) for the ongoing implementation of the Travel Plan and its initiatives.
- g. confirmation of extent and nature of end of trip facilities and bike parking and how they will be promoted to visitors and employees.
- h. consideration of car parking management strategies that may be required to encourage sustainable transport use / mode share targets.

- i. include a Transport Access Guide that provides information to visitors and employees about the range of travel modes, access arrangements and supporting facilities that service the site; and identification of a communications strategy for conveying Travel Plan information to visitors and employees, including for the Travel Access Guide.
- j. The Transport Access Guide is to include (but not be limited to) the following:
 - i. Information regarding lack of off-streetcar parking and passenger pick-up and set-down areas at the development site.
 - ii. Suitable nearby drop-off/pick-up locations.
 - iii. Identify areas where drop-off/pick-up is prohibited and instruct visitors to avoid use of these areas; and
 - iv. Suitable nearby Taxi Zones.
- k. The Green Travel Plan and Travel Access Guide should be reviewed and endorsed by TfNSW
- l. The Green Travel Plan and Travel Access Guide should be reviewed and updated annually in consultation with the key stakeholders and provide an Implementation Strategy that commits to specific management actions, including operational procedures to be implemented along with timeframes.
- m. The Green Travel Plan and Travel Access Guide (as reviewed and updated annually) should be implemented by the Applicant for the life of the development.
- n. The Applicant should submit a copy of the final plan for TfNSW for endorsement.

Construction Pedestrian and Traffic Management Plan (CPTMP)

Comment:

The CTPM is required to manage operation and road safety during the construction period.

Recommendation:

To ensure the CTMP is prepared it is recommended that the following conditions are included in the development consent:

- Prior to the issue of any construction certificate or any preparatory, demolition or excavation works, whichever is the earlier, the Applicant should:
 - Prepare a Construction Pedestrian and Traffic Management Plan (CPTMP) in consultation with TfNSW (via email: development.ctmp.cjp@transport.nsw.gov.au). The CPTMP needs to specify matters including, but not limited to, the following:
 - A description of the development.
 - Location of any proposed work zone(s).
 - Details of crane arrangements including location of any crane(s) and crane movement plan.
 - Haulage routes.
 - Proposed construction hours.
 - Predicted number of construction vehicle movements, detail of vehicle types and demonstrate that proposed construction vehicle movements can work within the context of road changes in the surrounding area, noting that construction vehicle movements are to be minimised during peak periods.
 - Construction vehicle access arrangements.
 - Construction program and construction methodology, including any construction staging.
 - A detailed plan of any proposed hoarding and/or scaffolding.
 - Measures to avoid construction worker vehicle movements within the Parramatta Precinct.
 - Consultation strategy for liaison with surrounding stakeholders, including other nearby developments
 - Identify any potential impacts to general traffic, cyclists, pedestrians, bus services and any light rail within the vicinity of the site from construction vehicles during the construction of the proposed works. Proposed mitigation measures should be clearly identified and included in the CPTMP; and
 - Identify the cumulative construction activities of the development and other projects within or around the development site, including infrastructure projects and private development. Proposed measures to minimise the cumulative impacts on the surrounding road network should be clearly identified and included in the CPTMP.
 - Submit a copy of the final plan to TfNSW for endorsement.
 - Provide the builder's direct contact number to small businesses adjoining or impacted by the construction work and TfNSW to resolve issues relating to traffic, public transport, freight, servicing and pedestrian access during construction in real time. The Applicant is responsible for ensuring the builder's direct contact number is current during construction.
- Prior to issue of a construction certificate, a Road Occupancy Licence (ROL) should be obtained from Transport Management Centre (TMC) for any works that may impact on traffic flows on Western Distributor, Harbour Street, and Wheat Road during construction activities. A ROL can be obtained through <https://myrta.com/oplinc2/pages/security/oplincLogin.jsf>.

TAB B – TfNSW Preliminary Requirements

As TfNSW approval and concurrence under section 138 of the Roads Act, 1993 for the following as TfNSW is the roads authority for the Western Distributor motorway.

- Structure over the Western Distributor motorway
- Road works on Wheat Road and Harbour Street
- Proposed vehicular access on Harbour Street

The developer will be required to enter a Works Authorisation Deed (WAD) for the abovementioned works. Please note that the WAD will need to be executed prior to TfNSW assessment of the detailed civil design plans.

It is iterated that the Applicant should initiate this process by contacting TfNSW (via email development.sydney@transport.nsw.gov.au) with the approved stamped plans and conditions of consent.

In the meantime, preliminary comments and requirements are provided below that are required to be addressed.

It is also noted that TfNSW projects are currently occurring or being investigated in the area which may be affected by the proposed development.

TfNSW welcomes continued collaboration with the Applicant to ensure issues and requirements can be addressed efficiently and TfNSW projects are considered accordingly.

Impact to Western Distributor

Comment:

TfNSW has reviewed the RtS documents (Appendix N Memorandum: CBP Market St Footbridge Structural Design, Enstruct 5 April 2022 and EIS documents Appendix KK_Western Distributor Impact Assessment and Attachment CC_Stormwater and Flood Management Report) and the following comments are provided:

- The Western Distributor is under the care and control of TfNSW. Support structures for the land bridge are within the minimum clearance to Western Distributor Structure at four locations which will result in maintenance issues for TfNSW.
- The Memorandum (Enstruct) indicates various measures to increase the durability of the affected structures to minimise the requirement for maintenance and repair.
- There will however be added complexity to the maintenance and repair process which adds significant cost over the life cycle of the structure.

Recommendation:

To address the above issues the following comments relating to Impact to Western Distributor assets, the following preliminary requirements are provided to assist the Applicant in preparation of plans and documentation to support an application for TfNSW approval and concurrence:

- No permanent infrastructure is to be constructed within the clearance requirement of the surface of any part of the Western Distributor structures other the four locations as outlined in Appendix N Memorandum: CBP Market St Footbridge Structural Design, Enstruct 5/4/2022. TfNSW is to be consulted prior to issue of a construction certificate to ensure that appropriate clearances from the Western Distributor structures are provided to allow for access for inspection and maintenance of those structures.
- Maintenance agreement between the Applicant and TfNSW: Separate TfNSW concurrence under section 138 of the *Roads Act 1993* will be required and interface agreement for the maintenance of the land bridge and Western Distributor is required so that both TfNSW and the developer can maintain their asset to ensure safety for the road users. This will include the development of Technical Maintenance Plan for the assets that will be maintained by TfNSW. The plan should also include measures outlined in the Memorandum (Enstruct) and details of contribution for the additional cost for maintenance and repairs.

In addition, the following requirements should be considered:

- Any activity that has the potential to affect an TfNSW maintained road and Western Distributor infrastructure, (which includes any support columns, footings, or piers), should be investigated for integrity and serviceability by a qualified practicing bridge structural and geotechnical engineer(s). These activities must comply with TfNSW Technical Direction (GTD 2020/001) – Excavation Adjacent to TfNSW Infrastructure. This will require the Applicant to submit geotechnical investigation reports, in ground structure design drawings to TfNSW for assessment prior to construction.
- If any new structures or footings are proposed near or adjacent to the existing deep raked piles and other foundations associated with the Western Distributor piers, then TfNSW approval must be obtained at the preliminary

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and detailed design stages. A copy of this Technical Direction can be downloaded via the following link:
<http://www.rta.nsw.gov.au/doingbusinesswithus/engineeringpolicies/technicaldirections.html>

- The development is to be provided with fire protection and exhaust systems such that heat, smoke and exhaust from the proposed development do not endanger TfNSW structures and vehicles on the structure (a qualified Fire Engineer's Certificate is required). TfNSW is to be consulted prior to issue the construction certificate to ensure that the appropriate systems are incorporated as per the relevant Australian Standards.
- All external facades of the development should be positioned / lined to have a reflectivity that ensures that motorists on the Western Distributor viaduct should not be blinded or disabled from maintaining control of the vehicles being driven. To ensure compliance, assessment of the potential effects of the façade on the reflectivity and glare environment in the surrounding area is to be undertaken and submitted to TfNSW for review prior to construction.
- The land bridge is to be designed to prevent any falling object from impacting adversely onto the Western Distributor or members of the public from the development, during construction and in operation. Plans/details are to be approved prior to construction. Please also refer to Work Health & Safety (WHS) requirement guidelines which should be provided upon request from TfNSW.
- External facades should be designed to minimise damage from potential vandalism, including debris impacts from passing traffic. Plans/details are to be endorsed by TfNSW to construction.
- For TfNSW to carry out maintenance and rehabilitation works on the Western Distributor, including the soffit of the bridge deck, access is required. As such, the relevant part of the structure of the development needs to be able to carry a working load of not less than 2.5kPa. Plans/details are to be approved by the Certifying Authority prior to issue of a construction certificate.
- TfNSW require suitable protection screens to be installed in the building (where appropriate) to ensure that access is prevented between the Western Distributor and the development by vandals which may attempt to graffiti any part of the Western Distributor. Plans/details are to be endorsed by TfNSW prior to construction.
- As some parts of the Western Distributor structure's columns/piers and the superstructure are within and near the development, it is appropriate to carry out investigation and maintenance activities at the same time as the construction of the development. The maintenance activities will depend on the results of the investigation and would most likely involve applying a coating system to the bridge structure and/or cathodic protection to the bridge. This would benefit all parties, as this would reduce the need for future maintenance and associated inconveniences.
- The Applicant is to consult with TfNSW prior to construction regarding any maintenance activities to the Western Distributor structures prior construction.
- The Applicant will be required to enter a Works Authorisation Deed (WAD) for the works associated with the development prior to construction. Please note that the Works Authorisation Deed (WAD) will need to be executed prior to TfNSW assessment of any required detailed civil design plans.
- TfNSW fees for administration, plan checking, civil works inspections and project management should be paid by the Applicant prior to the commencement of works.
- Dangerous goods vehicles: All risk mitigation measures recommended in the DGV assessment should be provided by the Applicant including the routine maintenance cost and the periodic rehabilitation/upgrade cost for the implemented mitigation measures.
- Fire Protection and Sprinkler system: Both new land bridge and the impacted Western Distributor bridges will need to be made compliant to meet the minimum fire resistance level of the assessment.
- Fire Hydrants: Conforming fire hydrant system is required in Western Distributor under the land bridge to manage the tunnel fire. The Applicant will need to fund for the routine maintenance and rehabilitation / upgrade of the fire suppression system over the life of the asset.
- Air Quality: Conforming air quality monitoring system and the risk mitigation measures should be provided if the air quality issue arises during the service. The developer needs to pay for the routine maintenance of the air quality monitoring and the risk mitigation measures.
- Flood lighting on the bridge: Any form of flood lighting and other lighting should not dazzle the drivers on the motorway below.

- **Lighting:** Necessary tunnel lighting needs to be installed for the affected roads including Western Distributor under the land bridge. The Applicant will need to fund the routine maintenance and upgrade of the lighting system including any power supply cost.
- **Water:** Adequate water supply system should be installed to operate the fire suppression system. The Applicant needs to fund the cost for the periodic maintenance and upgrade of the water supply system.
- **Safety screens on the land bridge:** The proposed safety screen has vegetation on the inside of the wall and panels on the outside of the wall over the roadway, which can present road safety issue if the panel is dislodged.
- **Traffic / Security Cameras:** It is suggested that the Applicant install a traffic / security camera under the proposed bridge structure to monitor the asset, security, and transport network.

Harbour Street and Wheat Road

Comment:

TfNSW has reviewed the RtS documents (Appendix T - Technical Note-Respond to RTS Comments on Cockle Bay Redevelopment TIA, Aurecon 17/8/2022, Appendix V - Wheat Road Site Works Plan and Appendix W –Swept Paths 211222) outlines proposed road works on Harbour Street and Wheat Road (including the Harbour Street access driveway and the porte-cochere) was reviewed and the following comments are provided:

- The submitted plans require further details for TfNSW to undertake a more comprehensive review. It is recommended that the Applicant consult with TfNSW during the design process.
- The left turn lane in to the porte-cochere should be designed in accordance with Austroads. The current proposal uses a diverge length of 40m, however this assumes a design speed of 60km/h (same as the posted speed) and an exit speed of 30km/h. Current practice is for the design speed to be 10km/h above the speed limit and the bay should assume a stop condition if the porte-cochere is full and queued back to the left turn bay.
- The porte-cochere should be designed so the largest vehicle can enter and exit at the appropriate speed wholly within the road space. The swept path analysis shows a stretched limousine and other vehicles egressing the porte-cochere encroaching outside of the road space.
- The following comments related to design are also provided:
 - The Western Distributor Impact Assessment Report outlines that 'An additional horizontal clearance between the road edge and any vertical structure has been incorporated into the design at all new column locations' of 750mm. The working width for F Type Barrier in the Safety Barrier System Acceptance Conditions (which is based upon real life crash test data) exceeds the clearance provision. Due to the new works and taking into consideration above, it is recommended that 2m working width be provided. It is unknown if the building façade adjacent to Harbour Street is designed for collision loading or not, but at this location the taller F Type barrier (1100mm high) needs to be used and 2m working width (horizontal offset) be provided from the face of barrier to the building due to the serious outcome of crashes that could occur.
 - A length of linear drain is proposed at the development of the proposed left turn deceleration lane. The note on the plan states, 'ROAD EMERGENCY OVERFLOW ROUTE TO BE CAPTURED WITH LINEAR DRAINAGE ADJACENT TO JERSEY KERB'. It is recommended that the proposed linear drain should be replaced with conventional pit and pipe products unless there are constraints that can be justified. TfNSW's position is that linear drains are a last resort product due to their maintenance implications.
 - An assessment for widths of flow and aquaplaning for the proposed slip lane should be undertaken in accordance with Austroads and Australian Standards. The stormwater strategy makes no mention of widths of flow and aquaplaning.

Recommendation:

To manage and mitigate the issues relating to design and construction of works on Harbour Street and Wheat Road the following preliminary requirements are provided to assist in the preparation of plans and documentation to support an application for TfNSW approval and concurrence:

- The proposed works along Wheat Road and Harbour Street should be designed to meet TfNSW requirements and endorsed by a suitably qualified practitioner. The design requirements should be in accordance with AUSTRROADS and other Australian Codes of Practice. The certified copies of the civil design plans should be submitted to TfNSW for consideration and approval prior to the release of the construction certificate by the Principal Certifying Authority and commencement of road works. To ensure TfNSW requirement are met, consultation with the agency is required.
- Comments above in relation to clearance and drainage requirements for the proposed land bridge should be addressed in consultation with TfNSW.

- It is recommended that the Applicant consult with TfNSW during the development of the designs to ensure any concerns and requirements are identified early in the design process.
- The developer will be required to enter a Works Authorisation Deed (WAD) for the abovementioned works. Please note that the WAD will need to be executed prior to TfNSW assessment of the detailed civil design plans.
- TfNSW fees for administration, plan checking, civil works inspections and project management should be paid by the developer prior to the commencement of works.
- Any realignment boundary to facilitate a footway resulting from the proposed works must be dedicated as road at no cost to TfNSW.
- Redundant driveways to be removed and kerb and gutter reinstated
- The developer should be responsible for all public utility adjustment/relocation works, necessitated by the above work, and as required by the various public utility authorities and/or their agents.
- All works/regulatory signage associated with the proposed development are to be at no cost to TfNSW.
- A Stage 2 (Concept Design) Road Safety Audit should be undertaken by TfNSW accredited independent auditors for the design and operation of the proposed works on Wheat Road including porte-cochere. The Road Safety Audit Report should be submitted to TfNSW endorsement prior to certificate.
- All recommendations of the Road Safety Audit should be included in the design and/or operational management plans
- Any impacts that require a modification to the existing signalised traffic control facilities (including signage and line marking) requires separate approval under section 87 (4) of the *Roads Act 1993*. Traffic signal plans is to be submitted to TfNSW for review and in principle agreement.