



30 January 2018

RMS Reference: SYD16/00625/08

DP&E Reference: SSD7684

Team Leader Key Sites Assessments
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Chris King

Dear Chris,

AMENDED CONCEPT PROPOSAL SSD7684 - STAGED REDEVELOPMENT OF COCKLE BAY WHARF - 241 – 249 WHEAT ROAD, COCKLE BAY DARLING HARBOUR

Reference is made to the Department of Planning and Environment (the Department) correspondence dated 14 November 2017, regarding the amended concept proposal for development application SSD7684 (the **DA**), referred to Roads and Maritime Services (Roads and Maritime) for further consideration and comment.

It is noted that the staged development involves the construction of new buildings comprising retail, bars and restaurants, commercial offices and upgrades to public areas (**Project**). The detailed design and construction of the Project will be the subject of separate, future development applications (Stage 2 DA).

The Project involves development over and around part of the Western Distributor adjacent to 241 – 249 Wheat Road, Cockle Bay. The area of land comprising the Western Distributor is managed by Roads and Maritime. The development includes the construction of a large 'land bridge', being a concrete podium structure (**Podium**), to be built over the Western Distributor. The structure will need to be supported with piers located within or adjacent to the area of the Western Distributor.

The Western Distributor is used by a significant number of vehicles and provides one of the main road arteries through the Sydney CBD. It is an essential and significant component of Sydney's transport infrastructure. It is essential that, if the Minister grants consent to the DA, the construction, operation and maintenance of the Project does not compromise the safety, efficiency or structural integrity of the Western Distributor or the ability of Roads and Maritime to access and maintain or upgrade the engineering structures forming the Western Distributor.

As previously advised, Roads and Maritime has reviewed the DA and has identified a number of issues with the potential for the Project to impact on the structural integrity of the Western Distributor, the safety of the surrounding road infrastructure and the ability of Roads and Maritime to have sufficient access for ongoing maintenance, repairs, upgrades and, if necessary, replacement of the Western Distributor.

Roads and Maritime has reviewed the amended concept proposal and supporting documentation submitted by the Proponent and identifies the following outstanding issues which will require consideration as part of the determination of the DA and, if granted, further consideration, assessment and resolution in the preparation of any Stage 2 DA:

1. **Construction Traffic Management Plan (CTMP) and Maintenance Traffic Management Plan (MTMP)** - The Western Distributor is critical transport infrastructure. Roads and Maritime would not permit full closure of the Western Distributor during construction and maintenance activities.

The proponent will need to properly demonstrate how the Project can be safely and efficiently constructed and maintained without requiring full closure of the Western Distributor or adverse impacts to traffic flows, to the satisfaction of Transport for NSW (TfNSW) Sydney Coordination Office (SCO), Transport Management Centre (TMC) and Roads and Maritime.

Roads and Maritime, TMC and TfNSW would need to be consulted with regard to any proposed partial closure of the Western Distributor to enable the construction and maintenance of the Project including the Podium over the Western Distributor.

A concept CTMP and MTMP detailing construction/maintenance vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be submitted to Roads and Maritime, the TMC and TfNSW SCO for review as part of any Stage 2 DA. The CTMP and MTMP should consider:

- The impact on Roads and Maritime's asset maintenance program during construction, operation and maintenance and coordination with this program.
 - Management of the impacts to pedestrian and cyclist movements during construction, operation and maintenance.
 - The cumulative impacts of other known developments and major infrastructure projects impacting the Western Distributor and surrounding road network.
2. **Fire Safety** – the Project will have the effect of creating a tunnel like situation underneath the Podium. The Proponent will need to demonstrate that there is adequate provision for fire safety underneath the podium having regard to the traffic flow. This provision may, for example, include fire sprinklers and other infrastructure installed as part of the Project. A qualified fire consultant is to be engaged to carry out necessary fire analysis and design to the satisfaction of RMS.
 3. **Lighting** – the proponent will need to demonstrate that there is adequate provision of lighting. A qualified lighting consultant is to be engaged to carry out necessary lighting analysis and design to the satisfaction of RMS.
 4. **External Façade and Reflectivity** – the proponent will need to demonstrate that the reflectivity requirements are adequately addressed in accordance with relevant Australian Standard.
 5. **Air Quality** – the proponent will need to demonstrate that the air quality is not adversely impacted over and in the vicinity of the WD.
 6. **Prevention of Falling Objects** – the proponent will need to take necessary measures to prevent any objects falling on to the WD during construction and operation.

7. **Security** – the proponent will need to demonstrate to Roads and Maritime's satisfaction that the Project does not pose an unacceptable security risk. Significant day and night lighting would be required for Western Distributor and Wheat Road as they would be covered by the overhead structures.

In addition, the design of the Project, CTMP and MTMP and Emergency Response Plan will need to address the following:

- A significant risk of potential "vehicle as a weapon" is presented during the construction phase. Currently there are existing mitigation measures preventing this in the area. The construction of the Project may open the access to the pedestrian area for the precinct which could be exploited. It is noted that the Western Pedestrian Bridge is to remain open during the construction and this may open access to the pedestrian bridge (that does not currently exist) that may be exploited.
- There is no reference to security processes or hostile vehicle mitigations in either the traffic assessment or construction traffic assessment. The Stage 2 DA documentation will need to give details of proposed mitigation measures and security processes to prevent unauthorised pedestrian and vehicle access during both construction and operational phases.
- The Project is to include hostile vehicle barriers and pedestrian refuge areas to strengthen protection measures in the area.

8. **Transport of Dangerous Goods** - Currently the Western Distributor does not preclude access for vehicles transporting Dangerous Goods operating under general access conditions (ie for vehicles that do not exceed 19m and are under 50 tonnes). Dangerous Goods vehicles, regardless of size, are prohibited from operating in any tunnels on the Sydney road network. If the Project creates a tunnel, the impact to Dangerous Goods operators using the route would need to be assessed and, if necessary, an alternate Dangerous Goods route identified. Consultation with relevant industry groups and agencies that may be impacted by the structure and any restrictions on the movement of dangerous goods will be the full responsibility of the developer.

9. **Pier Options** – Roads and Maritime is currently undertaking planning and feasibility assessments for the implementation of smart technologies and associated infrastructure upgrades within this corridor. In order to not limit the development of workable design options, it is imperative that the existing road corridor width (between existing barriers and kerbs) beneath the Project is maintained.

Roads and Maritime previously requested the proponent to identify where the piers for the Podium are proposed to be located in relation to the Western Distributor, including a "no piers" in addition to the proposed "piers" option. To ensure that the Project will not preclude future infrastructure upgrades in the subject corridor, Roads and Maritime requires that the existing road corridor width (between existing barriers and kerbs) beneath the Project is maintained. In this regard:

1. No piers are to be located within the road reserve of the Western Distributor, Wheat Road or Harbour Street.
2. Proposed structures within Zone B, Zone G and Zone H would not be supported.
3. Vehicle roll allowance clearances must be provided when positioning piers.
4. All existing signage impacted by the proposed works would need to be maintained/reinstated.

5. Minimum headroom clearances and fixity of electronic signage (and other ITS equipment) must be provided to new overhead structures.

Note: The abovementioned zones are as defined in 'CBW Land Bridge and Options Strategy – 170619'.

10. **Access for Maintenance and Repair** – the proponent will need to be able to demonstrate to Roads and Maritime satisfaction that the Podium will not unreasonably interfere with Roads and Maritime's ongoing ability to access the Western Distributor (and its surrounds) for the purposes of maintenance, repair, augmentation and, if ever necessary, replacement of the Western Distributor. The design of the Podium is to be developed with consideration to serviceability and durability impacts on Western Distributor structure.

As the proposed development would cover significant areas of the existing bridges, the level of risk to the maintenance of the bridges needs to be assessed. The current proposal is likely to obstruct Roads and Maritime's major maintenance works on Western Distributor bridges B 6794 and B 8565. In this regard, a demolition and reconstruction plan is required.

The demolition and reconstruction plan will need to demonstrate that the demolition and reconstruction of the Roads and Maritime bridges at the end of service life will be possible within the available working envelope following the construction of the Podium. Reducing the size of the Podium land bridge may minimise the risk to Roads and Maritime's assets. This should be investigated in consultation with Roads and Maritime in the preparation of the Stage 2 DA.

11. **Structural Integrity** – the proponent will need to demonstrate that the Project will not impact on the structural integrity of the Western Distributor and will be designed to meet all relevant safety requirements for the Western Distributor including natural disasters. The proponent is to give consideration to the cumulative impacts of other known developments in the area impacting on the Western Distributor structure.
12. **Durability** – the proponent will need to demonstrate that the works (the Project) over and in the vicinity of the WD is designed to relevant durability requirements and the do not adversely impact on the durability of the WD.
13. **Minimum Clearance** – the proponent will need to demonstrate that the land bridge and other works built over and in the vicinity of the WD maintain clearance as per RMS requirements.
14. **Constructability** – the proponent will need to provide details of the methodology of how the Podium is to be constructed over the Western Distributor. In the development of the Stage 2 DA, the Proponent should submit the following for preliminary review by Roads and Maritime:
 - Details of the proposed structure around each Roads and Maritime structure, including plans and cross sections showing the existing Roads and Maritime structure and the proposed Podium structure.
 - Proposed clearance from the Podium to each part of the adjacent Roads and Maritime structure and road, including (but limited to) the deck, column, pile cap and other structures.
 - Details of the Podium structure including span length, material and other relevant drawings.
 - Details of any demolition adjacent to the Western Distributor and supporting structures.
 - It should be demonstrated how the demolition and reconstruction of the Podium will be undertaken, without detrimental operational impact to Western Distributor, at the end of service life or in the event of unforeseen natural disaster.
 - Methodology of construction and maintenance of the Podium structure in the vicinity of the Western Distributor and supporting structures.

- 15. Responsibility** – ownership, inspections and maintenance responsibility of the Project including the Podium shall be the responsibility of the Proponent. The proponent will need to demonstrate (to Roads and Maritime's satisfaction) that it will take long term responsibility for the elements of the Project which interface with Roads and Maritime infrastructure to ensure that the structural integrity, and Roads and Maritime ability to access the Western Distributor for maintenance, repair, augmentation and replacement, is not compromised.

Long-term maintainability of the Podium remains in doubt. An ongoing maintenance agreement will need to be developed. The proponent must develop and submit inspection and maintenance plans for Roads and Maritime's review.

- 16. Works Authorisation Deed** – the proponent would need to enter into a major works authorisation deed with Roads and Maritime relating to the construction of the project to ensure that the project is constructed consistently with Roads and Maritime's requirements and to Roads and Maritime's satisfaction. An independent Project Verifier (PV) will be required. A Proof Engineer will also need to be engaged by the proponent. Any required easements will need to be identified and easement plans submitted.

Roads and Maritime is of the view that no construction certificate for any part of the Project should be released until such time that the detailed design plans of the structures over the Western Distributor and construction methodology are submitted to and approved by Roads and Maritime and the WAD has been entered into to the satisfaction of Roads and Maritime

- 17. Wheat Road and Vehicle Access to the development site** - Roads and Maritime has a number of concerns with the proposed right turn on the western approach at the signalised intersection of Harbour Street and Blackwattle Place, shown in Option 2 of the Traffic Report dated September 2017. In this regard the following comments are provided:

- i. Harbour Street is a critical corridor that connects to both the Sydney Harbour Bridge and Western Distributor, which are major motorways of critical importance to both local and regional traffic. The transport efficiency of through traffic is of key importance.

In their current state the traffic signals at the intersection of Harbour Street and Blackwattle Place have almost no impact to traffic along this critical corridor. Adding an additional leg on the western approach will alter this scenario.

- ii. As shown in current reports prepared by the Proponent, traffic from the new approach is relatively light and well below Roads and Maritime traffic volume warrants for traffic signals. This raises questions of the necessity of installing a signalised right turn, particularly given the importance of the corridor and the fact that alternative options are available for traffic leaving the development and heading south via the Kings Wharf precinct.
- iii. The level of storage provided on the approach is relatively short. As taxis and point-to-point services accessing Darling Harbour may see this area as a convenient pick up/drop off location, traffic is likely to exceed predicted volumes. This may result in queueing on the approach back into the Ribbon development, possibly extending onto Harbour Street.

This is likely to lead to requests to extend the amount of green time given to the new approach. This may compound any impacts on the efficiency of Harbour Street and may in turn be ineffective if right turning vehicles cannot clear the intersection when southbound traffic on Harbour Street is queued back from Bathurst Street. This occurs in both network peaks but is particularly prevalent in the PM peak.

- iv. In addition, Roads and Maritime is currently investigating a Smart Motorway through this corridor and if approved is likely to necessitate Ramp Metering on Harbour Street. This will further complicate this heavily trafficked area.


- v. In light of the above, Roads and Maritime does not support the alteration of traffic signals on Harbour Street at Blackwattle Place to facilitate right turning vehicles exiting the development via a new western approach and would not grant consent to the works under Section 87 of the *Roads Act 1993*. Roads and Maritime would raise no objection to the addition of a priority left-turn only exit with Give Way control.
- vi. Improvements to the proposed access arrangements with the adjoining development should be investigated from a road safety perspective. The arrangement of entering from Harbour Street and vehicles turning from the Porte Cochere to go into the basement parking appears to show cars driving on the incorrect side of the road.
- vii. With relation to trucks servicing the site, only a 8.8m truck turning path accessing the loading dock area has been shown. Roads and Maritime would require swept paths for 12.5m trucks to be demonstrated.
- viii. Vehicles accessing the drop off zone will be in conflict with trucks and other vehicles exiting the loading docks to egress from the site. It is recommended that vehicles exiting the loading docks be held with a stop sign or give way at the location of vehicles entering the drop off zone from Wheat Road, to ensure vehicles entering the site to access the drop of zone have cleared the conflict area and will not result in other vehicles travelling behind them and crashes potentially occurring due to confusion of who is to give way.

Should the Minister decide to grant development consent for the Stage 1 DA including the Podium, Roads and Maritime submits that the conditions of consent set out in **Attachment A** of this letter should be imposed, which reiterates, adds to and replaces the conditions set out in previous Roads and Maritime correspondence dated 10 March 2017.

Roads and Maritime would appreciate the opportunity to meet with Department of Planning and Environment to discuss the proposed conditions of consent and their suitability in the circumstances.

If you have any questions, please contact Neil Forrest, Director Network Integration South East, on 8849 2933 or at development.sydney@rms.nsw.gov.au.

Yours sincerely,


Per Lara Kirchner
Director, South East Precinct
Sydney Division

SCHEDULE A – RECOMMENDED CONDITIONS

As previously advised, for the purposes of the DA and any consent the Minister grants to the DA, the Western Distributor should be defined as:

"the structure and all associated components of the road known as the Western Distributor located in, above, below and adjacent to the land required for the Project, including the footings, anchors, pylons, tie downs, disused deck known as the Stub, road deck, road surface and supporting structures".

DESIGN AND CONSTRUCTION OF THE PROJECT

1. The Proponent must consult Roads and Maritime Sydney Asset Manager at the preliminary and detailed design stages to ensure that the appropriate clearances from the Western Distributor structures are provided to allow for access for inspection and maintenance of those structures and to ensure that the Western Distributor is not adversely affected by the Project or any works undertaken in connection with its construction.
2. The Project must not be constructed within 3 metres of the Western Distributor.
3. The proposed design and construction of the Project must be investigated for integrity and serviceability by a qualified practicing bridge structural and geotechnical engineer(s) to Roads and Maritime's satisfaction.
4. The design and construction of the Project must comply with Roads and Maritime Technical Direction (GTD 2012/001) - Excavation Adjacent to Roads and Maritime Infrastructure. A copy of the Technical Direction can be downloaded via the following link: <http://www.rta.nsw.gov.au/doingbusinesswithus/engineeringpolicies/technicaldirections.html>
5. The Proponent must submit a geotechnical and structural investigation report, design drawings, and the methodology for the proposed construction of the Project to Roads and Maritime for assessment and approval. The Proponent must not commence construction of the Project unless and until Roads and Maritime has approved the geotechnical investigation and structural investigation report, design drawings and construction methodology. If any new structures or footings are proposed near or adjacent to the pylons for the Western Distributor, then Roads and Maritime approval must be obtained at the preliminary and detailed design stages.

The information provided thus far shows some indicative clearances from Roads and Maritime structures (Western Distributor and supporting structures) and nearby road. A preliminary geotechnical analysis report must be submitted to assess the impact of the proposed foundation to Roads and Maritime structures and adjacent road to justify the clearance provided. Should the geotechnical analyses show unacceptable movement of the Roads and Maritime structures (including Western Distributor and roads) both at short term and in service, the proposed bridge foundation will need to be relocated. The preliminary analysis report shall be submitted with any Stage 2 DA.

6. The Proponent must provide Roads and Maritime with any-time access to the Project to enable Roads and Maritime to carry out inspection, repairs and maintenance of the Western Distributor and the Project must be designed to facilitate these works on an ongoing basis and after construction of the Project is complete.
7. The design of the Project must not prevent Roads and Maritime from undertaking future propping or jacking activities on the Western Distributor associated with joint or bearing repairs/replacement.

SCHEDULE A – RECOMMENDED CONDITIONS

8. The design of the Project over the Western Distributor must be based on a no piers/minimal piers option, and consider the potential impacts on road network efficiency and the safety of the land bridge in case of earthquake.

ROAD SAFETY

9. The Project is to be provided with a fire protection and exhaust system such that heat, smoke and exhaust from traffic on the Western Distributor do not endanger persons, the Podium or Roads and Maritime structures, or vehicles on the Western Distributor. A qualified Fire Engineer's Certificate shall be provided. Roads and Maritime is to be consulted prior to issue of a construction certificate for any of the structures adjacent to or over the Western Distributor to ensure that the appropriate systems are incorporated as per the relevant Australian Standards.
10. The Project is to be provided with an air quality assessment and plan that disperses vehicle emissions under the bridge to provide air quality that meets the requirements of the relevant Australian Standards.
11. The external facades of the Project must be designed to minimise damage from potential vandalism and debris impacts from passing traffic. Suitable protection screens should be installed on the Project where appropriate to ensure that access is prevented between the Western Distributor and the Project by vandals who may attempt to graffiti any part of the Western Distributor.
12. All external facades of the Project should be positioned and aligned to have a reflectivity that ensures that road users on the Western Distributor are not blinded or disabled from maintaining control of vehicles. To ensure compliance, assessment of the potential effects of the proposed façade of the Project on the reflectivity and glare environment in the surrounding area is to be undertaken and submitted for Roads and Maritime for review.
13. The Project is to be designed to prevent any falling object from impacting adversely on the Western Distributor or members of the public during construction and operation. In this regard, reference should be made to the Work Health & Safety requirement guidelines which can be provided upon request by Roads and Maritime.

ACCESS

14. Access is required to the Project area so that Roads and Maritime may carry out inspections, maintenance and rehabilitation works on the Western Distributor. The Project shall not preclude or restrict right of access to any part of the structure.
15. Parts of the project that are located below or adjacent to the Western Distributor may require additional strengthening to accommodate Roads and Maritime access and maintenance. As such, the relevant part of the structure of the Project needs to be able to carry a working load of not less than 2.5kPa. Access to these parts of the Project is required for Roads and Maritime 24 hours per day so that Roads and Maritime may carry out inspections, maintenance and rehabilitation works.
16. The Proponent must facilitate access to the substructure and superstructure of the Western Distributor, including access via the Project area for inspections, maintenance and rehabilitation works.

SCHEDULE A – RECOMMENDED CONDITIONS

17. Given that some parts of the Western Distributor's structures, including the columns and piers and the superstructure, are within close proximity to the Project, it may be appropriate for Roads and Maritime to carry out investigation and maintenance works at the same time as work is being undertaken to construct the Project. The maintenance activities will depend on the result of the investigations and would most likely involve applying a coating system to the bridge structure and/or cathodic protection to the bridge.

ADDITIONAL REQUIREMENTS

18. A concept CTMP and MTMP detailing construction/maintenance vehicle routes, number of trucks, hours of operation, access arrangements and traffic control should be prepared in consultation with, and submitted to Roads and Maritime, the NSW TMC and TfNSW SCO for review as part of any Stage 2 DA. The CTMP and MTMP should consider:
 - The impact on Roads and Maritime's asset maintenance program during construction, operation and maintenance and coordination with this program.
 - Management of the impacts to pedestrian and cyclist movements during construction, operation and maintenance.
 - The cumulative impacts of other known developments and major infrastructure projects impacting the Western Distributor and surrounding road network.
19. The Proponent must enter into a major Works Authorisation Deed (**WAD**) with Roads and Maritime for the works associated with the Project to the satisfaction of Roads and Maritime. The WAD must be executed prior to Roads and Maritime assessment of any required detailed civil design plans and prior to the commencement of construction of the Project. The WAD will include Roads and Maritime requirements for construction and operation of the Project within or near the Western Distributor, the maintenance requirements for the Project works on or near the Western Distributor and arrangements for Roads and Maritime to access and occupy land to inspect, repair, maintain and replace Roads and Maritime infrastructure. Roads and Maritime fees for administration, various design reviews including design plan checking, civil works inspections and project management must be paid by the Proponent prior to the commencement of any construction works.
20. Before commencing any construction works, the Proponent must commission reports to investigate and assess the impacts of the Project on the Western Distributor. Construction works for the Project may not be undertaken until Roads and Maritime has confirmed in writing that the Project's impacts are acceptable.
21. A dilapidation survey during and after construction will be required (with reports to be endorsed by a Chartered Engineer).
22. In constructing the Project, the Proponent must not:
 1. drill or undertake any works to any part of the Western Distributor or that will affect any part of the Western Distributor;
 2. damage any part of the Western Distributor; and
 3. adversely impact on the structural integrity of the Western Distributor.
23. During construction of the Project:
 1. the Proponent must consult with Roads and Maritime to give Roads and Maritime the opportunity to carry out investigation and maintenance activities at the same time as the work on the Project;

SCHEDULE A – RECOMMENDED CONDITIONS

2. the Proponent must ensure that the use of any cranes does not involve the carrying of any "loads" over or above the Western Distributor; and
3. all works associated with the Project must be at no cost to the Roads and Maritime.

Operation and Maintenance of the Project

24. The Proponent must prepare and submit an Emergency Response Plan to Roads and Maritime and the Minister for approval prior to the issue of a construction certificate in relation to the Project. The Emergency Response Plan must include standard operating procedures for managing construction, site emergencies and incidents associated with the Project and the Western Distributor so far as it relates to the Project. The proponent will need to demonstrate adequate vertical clearance will be provided to ensure access by cranes for any required heavy lifting/piling in the event of fires, ground settlements and major crashes.
25. During construction and operation of the Project, the Proponent must provide Roads and Maritime with access to the Project and the surrounding land at all times to enable Roads and Maritime to inspect, maintain and repair the Western Distributor. Roads and Maritime will provide at least 48 hours of notice to the Proponent before accessing the Project except where emergency inspection, maintenance or repair is required in which case Roads and Maritime may access the Project and surrounding land without notice. The Proponent must facilitate Roads and Maritime access to the Western Distributor including access within the Project structure and the removal of parts of the Project at the Proponent's cost as reasonably directed by Roads and Maritime. The Proponent must allow access by persons and all plant and equipment associated with the inspection, maintenance and repair of the Project.
26. Ownership, inspections and maintenance of the Project shall be the responsibility of the Proponent.

Alterations to or demolition of the Project

27. The Proponent must obtain prior approval from Roads and Maritime for any alterations or additions to the Project.