



Planning &
Environment

**MODIFICATION REQUEST:
WestConnex M4 East**

***Modification to SSI Boundary
SSI 6307 (MOD 2)***



Secretary's Environmental Assessment Report
Section 115ZI of the
Environmental Planning and Assessment Act 1979

January 2017

Cover Photo — Iron Cove Creek Canal (Dobroyd Canal)

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Appendix A – Modification Request

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1. BACKGROUND

The Roads and Maritime Services (RMS – the Proponent) has submitted a request to modify the M4 East State significant infrastructure approval (SSI 6307). The project was approved in February 2016 by the Minister for Planning under Section 115ZB of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The M4 East is the second part of the first stage of the 33 kilometre long WestConnex motorway to be constructed between Parramatta and Beverly Hills via the inner western and inner southern suburbs of Sydney. The project involves the upgrade and extension of the M4 Motorway from Homebush Bay Drive at Homebush to Parramatta Road and Wattle Street at Haberfield. It includes the construction of twin tunnels of approximately 5.5 kilometres in length and the construction of new interchanges at Wattle Street at Haberfield, Parramatta Road at Ashfield and at Concord Road, North Strathfield. Construction of the project commenced in March 2016 and is expected to be completed by 2019.

On 15 December 2016, the Director, Transport Assessments, approved a modification request (SSI 6307 MOD 1) (under delegation) to amend condition D38 of the State significant infrastructure approval so that the preparation of an Archaeological Relics Management Plan is limited to unexpected items of State heritage significance.

2. PROPOSED MODIFICATION

The Environmental Impact Statement (EIS) and Submissions Report addressed the need to upgrade the existing stormwater drainage system in the vicinity of the proposed Wattle Street Interchange. The scope of works included the provision of new stormwater drainage outlets into the Dobroyd Canal Stormwater Channel No.53 (Dobroyd Canal) which is listed as a local heritage item on the Sydney Water Heritage and Conservation Register (pursuant to Section 170 of the *Heritage Act 1977*). Potential stormwater outlets into Dobroyd Canal were illustrated in the EIS. However, the section of Dobroyd Canal into which stormwater drainage pipes would connect and discharge into the canal was mistakenly shown as lying outside of the project boundary.

Condition B23 prevents the Proponent from physically affecting any heritage items outside of the project footprint (i.e. the area within the project boundary as defined in the documents in condition A2 of the infrastructure approval). Consequently, RMS has submitted a request to amend the project boundary to facilitate the installation of stormwater drainage outlets into Dobroyd Canal (refer Figure 1). The change to the boundary would be achieved by amending condition A2 to include the document *Modification Report, State Significant Infrastructure Approval (SSI_6307), Modification of existing SSI boundary to include the expanded construction footprint to facilitate two stormwater outlets into Iron Cove Creek*.

The modification also includes minor administrative changes to conditions A3, B18 and E46 consequent to the amendment of condition A2.

3. PROPOSED STORMWATER DRAINAGE OUTLETS

The proposed stormwater drainage works along Dobroyd Canal include:

- capping of the existing Sydney Water box culvert and two other outlets as illustrated in Figure 1;
- installation of a twin cell 2.7 metre wide by 1.2 metre high box culvert approximately 14 metres upstream of the existing box culvert; and
- installation of a single 1050 millimetre diameter pipe culvert upstream of the proposed box culvert comprising two 900 millimetre stormwater pipes connecting into Dobroyd Canal, and a gross pollutant trap.

The approximate location of the proposed outlets is shown in Figure 1 and will be confirmed following exposure of the canal wall.

4. STATUTORY CONTEXT

4.1 Modification of the Minister's Approval

In accordance with Section 115ZI of the EP&A Act, a Proponent may request the Minister to modify the Minister's approval for State significant infrastructure. The Minister's approval for a modification is not required if the infrastructure as modified will be consistent with the existing approval. The proposed stormwater drainage works in Dobroyd Canal are not consistent with the existing approval. Consequently, modification of the Minister's approval under Section 115ZI of the EP&A Act is required.

4.2 Delegated Authority

Under the Instrument of Delegation dated 16 February 2015, the functions and powers of the Minister for Planning to determine a modification of the Minister's approval may be delegated to the Director, Transport Assessments, whereby:

- the relevant local council has not made an objection;
- a political disclosure statement has not been made; and
- there are no public submissions in the nature of objections.

A political disclosure statement has not been made, the relevant local council has not made an objection and no public submissions in the nature of objections were received. Accordingly, the Director, Transport Assessments, is delegated the authority to determine the modification request.

5. CONSULTATION AND SUBMISSIONS

5.1 Public Notification

Under Section 115ZL(1)(g) of the EP&A Act, the Secretary is required to make requests for modification of approvals given by the Minister publicly available. Accordingly, the Department provided a copy of the modification request on its website.

No submissions were received from the public.

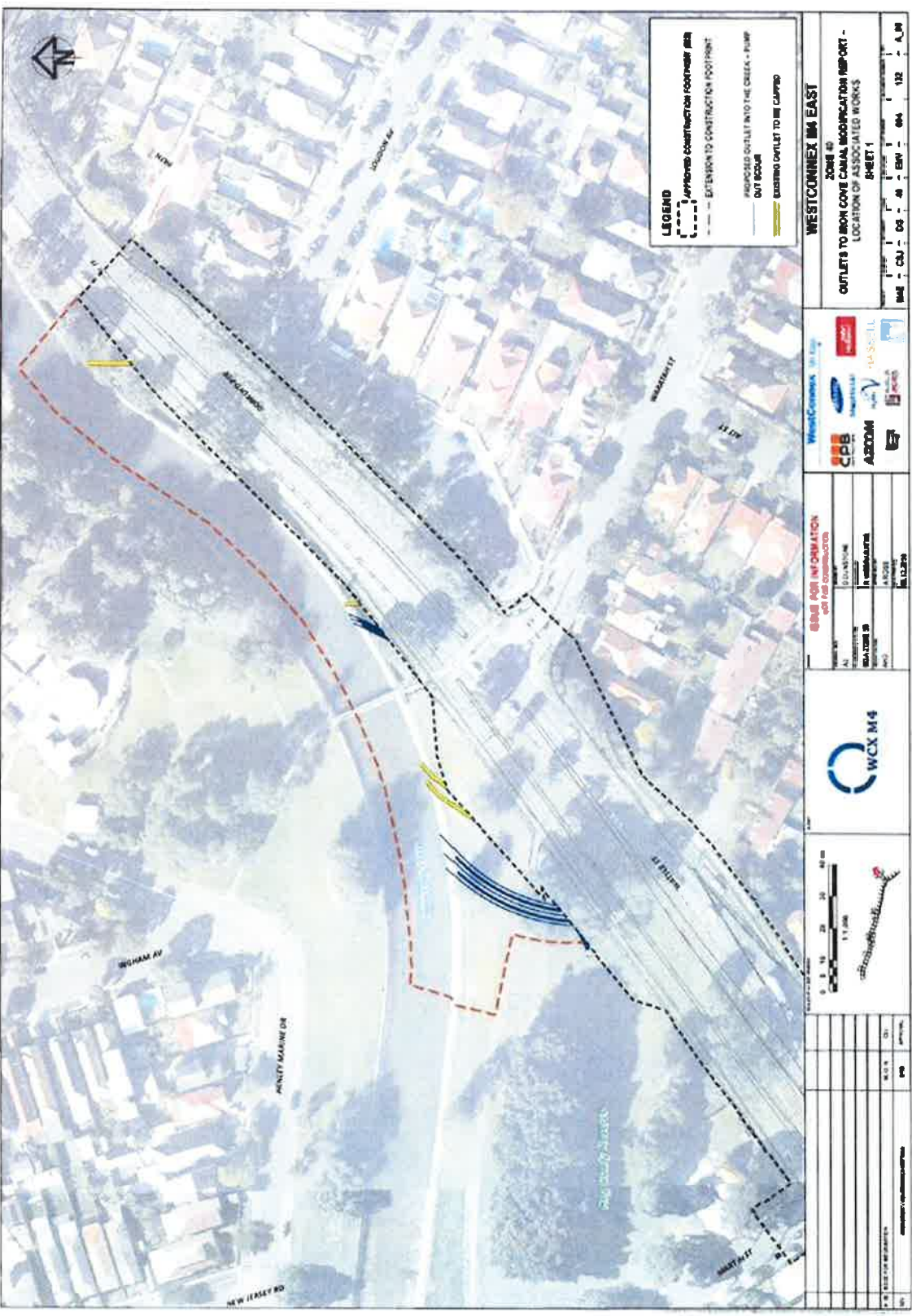


Figure 1: Approximate location of proposed stormwater outlets into Dobroyd Canal

5.2 Consultation with Government Authorities

The modification request was referred to the NSW Office of Environment and Heritage, NSW Heritage Council, Sydney Water and the Environment Protection Authority (EPA) who are the relevant authorities in regards to the proposed modification.

No objections to the modification request were received.

6. ASSESSMENT

6.1 Heritage

As noted in Section 2, the proposed stormwater drainage works include the installation of a twin box culvert outlet and single pipe culvert with two stormwater pipes connecting into Dobroyd Canal. The canal is listed as a local heritage item on the Sydney Water Heritage & Conservation Register (Section 170). It is not listed on any other heritage lists or registers.

The Proponent has undertaken a heritage impact assessment for the construction of the proposed stormwater drainage works. The assessment indicates that although installation of the drainage works will result in loss of the original fabric of the canal, the integrity of the canal's function would continue. Further, the assessment concludes that the works would not adversely affect the historic, aesthetic and social significance of the canal nor would there be an adverse effect on the rarity or representativeness of the canal.

Neither the NSW Heritage Council/Office of Environment and Heritage nor Sydney Water raised any concerns regarding the potential impact of the proposed stormwater drainage works on Dobroyd Canal.

The installation of the stormwater drainage outlets into Dobroyd Canal is necessary to ensure the effective drainage of runoff from the Wattle Street Interchange. Without such drainage, there is the potential for increased localised flooding. The Department acknowledges that the works will require the removal of large sections of the 1920s and 1930s phases of the canal fabric. However, it accepts the conclusions of the heritage assessment that the loss of fabric will only have a minor adverse impact on the heritage significance of the canal in its entirety. In addition, the canal will maintain its functionality and the proposed works are consistent with its function of channelling stormwater from the surrounding catchment areas into Iron Cove Bay.

The infrastructure approval for the project includes a number of conditions to protect and manage and/or mitigate impacts to heritage items. These include:

- condition B27 – impacts to heritage items must be minimised during design and construction;
- condition B32 – preparation of a Heritage Interpretation Plan which identifies and interprets key heritage values and stories of heritage items impacted by the SSI;
- condition D35 – preparation of archival recordings (including photographic recordings) of heritage items prior to commencement of construction in proximity to, or affecting, a heritage item; and
- condition D57(c) – preparation of a Construction Heritage Management Plan which details the management measures to be implemented to prevent and minimise impacts on heritage items.

The Department considers that application of the condition requirements, and environmental management measures committed to by the Proponent in the Submissions Report in regards to heritage, would minimise the heritage impacts of the works.

Notwithstanding, and in accordance with the recommendations of the heritage impact assessment, the Department is of the opinion that any works on Dobroyd Canal should be undertaken in consultation with a suitably qualified and experienced heritage consultant and Sydney Water's Lead Heritage Advisor. Further, all reasonable steps should be undertaken to ensure that the lateral extent and degree of impact to the canal fabric is minimised. A condition to this effect has been recommended.

6.2 Water Quality and Hydrology

Installation of the proposed stormwater drainage works will require construction activities within and adjacent to the canal and consequently has the potential to impact on water quality within the canal. The Proponent has committed to installing sediment control measures, including a coffer dam and silt curtain to prevent construction-related wastes and sediment entering the canal during the construction of the outlets, concrete wash out basins, sediment fencing and sand bags. The Department considers that these measures and the environmental management measures identified in the Construction Soil and Water Management Plan (prepared in accordance with condition D57(f)) would minimise the potential for adverse water quality impacts within the canal during construction.

The Proponent has prepared and submitted to the Department a Stormwater Drainage Report in accordance with the requirements of condition B20 which assesses the impacts of stormwater drainage discharges during the operation of the project. Appendix C of the report specifically addresses the proposed stormwater drainage works into Dobroyd Canal including the existing drainage conditions, the post-upgrade conditions, peak flows, predicted impacts on drainage infrastructure, water quality impacts, and potential impacts on downstream aquatic ecology and riparian vegetation.

The Stormwater Drainage Report indicates that:

- there would be no significant impact on existing stormwater drainage infrastructure;
- only small changes in stormwater pollutant loads are predicted (1.5% increase in total phosphorus, and a 13.5% reduction in total suspended solids and 0.9% reduction in total nitrogen due to the installation of gross pollutant traps) and would be undetectable in Iron Cove Bay (the receiving environment);
- peak flows are predicted to increase by 0.5% and 1.5% for the 5 year average recurrence interval (ARI) and 100 year ARI events, respectively, in Dobroyd Canal;
- the predicted increase in total peak flow would be negligible (0.3%) for both the 5 year ARI and 100 year ARI in Iron Cove Bay; and
- stormwater drainage inflows into Iron Cove Bay would have no net impact on the aquatic ecology of the receiving environment.

The slight increase in the 5 year ARI and 100 year ARI events are predicted to be the result of the increased efficiency of the upgraded drainage system. Under existing conditions, a greater amount of catchment runoff would be conveyed as overland flow around the Wattle Street area due to surcharge of the local stormwater drainage system, thereby attenuating some of the peak flows. Under the upgraded drainage arrangements, the runoff will be conveyed into the stormwater network and canal. As Dobroyd Canal is concrete-lined in the location of the proposed outlets, minor changes to the flow regime at this location (five millimetres above existing flood levels) are not expected to adversely impact the existing canal infrastructure.

Flood modelling undertaken as part of the EIS indicated that flooding in the vicinity of Wattle Street would be exacerbated by the proposed road widening, connections to the M4 East tunnel, the cut and cover tunnel and noise walls. The Proponent has prepared and submitted to the Department a Flood Mitigation Strategy in accordance with condition B14 of the infrastructure approval. The proposed box culvert and single pipe culvert were

identified in the Flood Mitigation Strategy as necessary flood mitigation measures to mitigate potential flood impacts within the Wattle Street / Martin Street area. The strategy indicates that the 100 year ARI flood level would be reduced around Martin Street relative to existing conditions and that changes in the 100 year ARI flood level downstream of the stormwater drainage works would comply with the limits on flooding characteristics set out in condition 14(c).

On the basis of the information presented in the documents, the Department considers that operation of the proposed stormwater drainage outlets would not have a significant adverse impact on local flooding or water quality within the canal and Iron Cove Bay.

6.3 Visual Amenity

The proposed box culvert will comprise two 2.7 metre x 1.2 metre openings with the total width of the opening being approximately 12 metres, with wing walls extending out approximately five metres and mirroring the grade of the existing concrete banks. This is larger than the existing structure that it will replace which is a 2.6 metre wide by 1.4 metre high box culvert. The existing box culvert will be grouted closed following commissioning of the new connection.

The proposed new box culvert will be located approximately 14 metres downstream of the new culvert. The Department acknowledges that although the new box culvert will be lower than the existing box culvert, it will be twice the length and therefore have greater visibility along the canal wall. However, it would only be visible during low and mid tide to receivers standing on the northern side of the canal or those crossing the footbridge. In addition, the Department notes that culverts and stormwater connections are common in canals of this type. Therefore, the Department considers the visual impact acceptable.

The single pipe culvert with two 900 millimetre stormwater pipes connecting into the canal will have an opening width of approximately six metres at the canal surface. The pipe culvert would be similar in size to existing outlets along the canal. As such, the Department considers that the visual impact would be minor.

7. RECOMMENDATION

It is recommended that the Director, Transport Assessments, as delegate of the Secretary:

- note the information provided; and
- approve the modification request by signing the attached modifying instrument (Tab A).

Mary Garland
Team Leader, Transport Assessments

Approved by:



Glenn Snow
Director
Transport Assessments

APPENDIX A MODIFICATION REQUEST

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8142

APPENDIX B RECOMMENDED MODIFYING INSTRUMENT

See the Department's website at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8142