Appendix B

Compilation of mitigation measures

Appendix B – Compilation of mitigation measures

Table 1 provides a compilation of the mitigation measures in the Modification Report.

Table 1 Compilation of mitigation measures

Impact	ID	Mitigation measure	Responsibility	Timing
Traffic and transport				
Construction related traffic	T1	A Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Construction Environmental Management Plan (CEMP) in consultation with Transport, relevant local councils and in accordance with relevant guidelines including consideration for: • Staggering shift times to minimise the hourly traffic generation • Encouraging the use of alternative transport modes, carpooling, measures that minimise traffic generation associated with worker arrival, departures, and movements between sites • Using shuttle buses to move workers between sites • Minimising road closures that would likely have large impacts to the network • Pedestrian and cyclist access management plan • Parking and access management plan.	Construction contractor	Construction
	T2	Temporary changes to bus routes and bus stops will be implemented in consultation with Transport, local councils, and bus operators. These will consider measures to minimise impacts to buses such as delaying road closures to avoid bus detours, if possible.	Construction contractor	Detailed design Construction
	T3	Movements of haulage vehicles will be planned to minimise movements on the road network during the AM and PM peak periods where practicable.	Construction contractor	Detailed design Construction
	T4	An active transport strategy will be developed to document planned shared path detours and recommend upgrades to these facilities to safely accommodate shared path users.	Construction contractor Transport	Detailed design Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Operational capacity	T5	Potential impacts to vehicle speeds outside the proposed modification extents should be investigated.	Transport	Detailed design
	T6	Solutions should be investigated to cater for forecast traffic volumes associated with population and employment growth and to some degree the proposed modification, at the following locations: • Bernera Road • Cowpasture Road • The Horsley Drive • Great Western Highway • Old Wallgrove • Rooty Hill Road • Richmond Road.	Transport	Detailed design
Noise				
Construction noise and vibration	NV1	A Construction Noise and Vibration Management Plan (CNVMP) will be prepared and include the following standard and specific actions and mitigation measures: • Identify relevant performance criteria in relation to noise and vibration • Identify noise and vibration sensitive receptors and features in the vicinity of the proposed modification • Include standard and additional mitigation measures from the *Construction Noise and Vibration Guideline (CNVG)* (Roads and Maritime Services, 2016b) and details about when each will be applied • Describe the process(es) that will be adopted for carrying out location and activity specific noise and vibration impact assessments to assist with the selection of appropriate mitigation measures • Consider cumulative construction noise impacts and construction noise fatigue	Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		• Include protocols that will be adopted to manage works required outside standard construction hours, in accordance with relevant guidelines including for management of respite periods • Detailed monitoring that will be carried out to confirm proposed modification performance in relation to noise and vibration performance criteria. The cumulative noise impacts of relevant nearby major projects should be further considered by the contractor when a detailed construction schedule becomes available for the proposed modification. Consultation should be undertaken with the relevant contractors to manage cumulative impacts on sensitive receivers within common areas. Feasible and reasonable mitigation measures should be detailed in the CNVMP at sensitive receivers and areas where construction fatigue could occur. Consultation with the affected community will also occur prior to and during construction.		
Community consultation and complaints handling	NV2	All residents affected by noise from the proposed modification which are expected to experience an exceedance of the construction noise management levels should be consulted about the proposed modification prior to the commencement of the particular activity, with the highest consideration given to those that are predicted to be most affected as a result of the works. The information provided to the residents should include: • Programmed times and locations of construction work • The hours of the proposed modification works • Construction noise and vibration impact predictions • Construction noise and vibration mitigation measures being implemented on site. Community consultation regarding construction noise and vibration will be detailed in the Community Involvement Plan for the construction of the proposed modification and will include a 24 hour hotline and complaints management process. Consultation will also be undertaken with all schools likely to be affected.	Transport Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		For out of hours works, consultation will take place with consideration to Practice note vii of the *Environmental Noise Management Manual* (RTA, 2001) and Strategy 2 of the *Interim Construction Noise Guidelines* (DECC, 2009).		
Construction noise and vibration	NV3	Induction and training will be provided to relevant staff and sub-contractors outlining their responsibilities with regards to noise and vibration.	Construction contractor	Construction
Noisy works, construction hours and scheduling	NV4	Details of all out of hours work required will form part of the CNVMP. Noisy work will be scheduled to be undertaken during the standard hours as far as possible. Noisy activities that cannot be undertaken during standard construction hours are to be scheduled as early as possible during the evening and/or night-time periods. Particularly noisy activities such as the use of impact piling rigs, road and concrete saws, rock hammers, should be scheduled where feasible and reasonable around times of high background noise to provide masking. Deliveries will be carried out during standard construction hours where feasible and reasonable.	Construction contractor	Prior to construction Construction
Construction noise (continuous)	NV5	A protocol, formed as part of the CNVMP, will be developed to identify the need for and provision of respite measures for residential receivers in accordance with the ICNG. Respite measures may include the restriction to the hours of construction activities resulting in impulsive or tonal noise (such as rock hammering, pile driving), or other appropriate measures agreed between the contractor and residential receiver such as alternative accommodation.	Transport Construction contractor	Construction
Construction noise	NV6	Where properties have been identified for architectural treatment and these properties will be impacted by noise from construction works, Transport will consult with those property owners on the early installation of treatments to provide noise mitigation during the construction of the proposed modification. This approach will assist in managing noise through all phases of the proposed modification.	Transport	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Construction traffic	NV7	• Truck drivers will be advised of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices (i.e. minimising the use of engine brakes, and no extended periods of engine idling). Vehicle routes should be reviewed, and final selections should consider noise impacts on noise sensitive receivers. • Site access and egress points will be located away from residences and other sensitive land uses, where feasible and reasonable • Deliveries and spoil removal will be planned to avoid queuing of trucks on or around the construction ancillary facilities • Construction sites will be arranged to limit the need for reversing associated with regular / repeatable movements (e.g. trucks transporting spoil) to minimise the use of reversing alarms • Where feasible and reasonable, non-tonal reversing alarms will be used, taking into account the requirements of the Workplace Health and Safety legislation. • Spoil will be moved during the day where practical, and feasible and reasonable management strategies will be investigated in consultation with the NSW EPA to minimise the volume of heavy vehicle movements at night. Mitigation measures for vehicle movements outside of standard construction hours will be included in the CNVMP.	Construction contractor	Prior to construction Construction
Construction noise at ancillary facilities	NV8	The noise associated with the operation of construction ancillary facilities will primarily result from the operation of fixed and mobile plant and truck movements. Consideration will be given to the layout of the site to maximise distance and shielding to nearby receivers.	Construction contractor	Prior to construction Construction
Noise emissions from construction plant and equipment	NV9	The selection of plant and equipment can have a significant impact on construction noise levels. Appropriate plant will be selected for each task to minimise the noise contributions. Alternative works methods such as use of hydraulic or electric-controlled units in place of diesel units will be considered and implemented where feasible and reasonable. The use of alternative machines that perform the same function (such as rubber wheeled plant) will be considered in place of steel tracked plant.	Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		Equipment will be regularly inspected and maintained to ensure it is in good working order. Plant should be located on site with as much distance as possible between the plant and noise sensitive receivers. Noisy equipment will be orientated away from residential receivers where feasible and reasonable.		
Noise from construction ancillary facilities	NV10	Detailed noise assessments will be carried out for all ancillary facilities required for construction of the proposed modification. The requirement for temporary noise walls within ancillary facilities and adjacent to construction works, and the requirement for other appropriate noise management measures, is to be assessed and implemented prior to the commencement of activities which have the potential to cause noise or vibration impacts.	Transport Construction contractor	Prior to construction Construction
Construction noise – Requirement for additional mitigation measures	NV11	Additional mitigation measures are provided in CNVG. These measures are applied after standard noise mitigation measures have been applied and where the noise levels are still exceeding the noise management levels. Additional mitigation measures include: • Notification (letterbox drop or equivalent) to give advanced warning of works • Specific notifications to identified stakeholders • Phone calls • Individual briefings • Respite offers, to be considered where there are high noise and vibration generating activities near receivers • Respire Period One where there is out of hours construction noise • Respite Period Two where there is nigh time construction noise • Duration respite where long periods of noise and vibration will be generated • Alternative accommodation for residents where there are highly intrusive noise levels • Verification, such as noise monitoring.	Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Construction vibration impacts	NV12	Equipment size will be selected taking into account the minimum working distances and the distance between the area of construction and the most affected sensitive receiver. The use of less vibration intensive methods of construction or equipment will be considered where feasible and reasonable when working in proximity to existing structures. Equipment will be maintained and operated in an efficient manner, in accordance with manufacturer's specifications, to reduce the potential for adverse vibration impacts.	Construction contractor	Prior to construction Construction
Construction vibration impacts	NV13	If the use of vibration intensive plant cannot be avoided within the minimum working distance for cosmetic damage the following procedure will occur as a minimum: • Notification of the works to the affected residents and community. • Works will not proceed until attended vibration measurements are undertaken. Vibration monitors are to provide real-time notification of exceedances of levels approaching cosmetic damage criteria. • If ongoing works are required, a temporary relocatable vibration monitoring system will be installed, to warn operators (via flashing light, audible alarm, short message service (SMS) etc) when vibration levels are approaching the cosmetic damage objective.	Construction contractor	Prior to construction Construction
Construction vibrational impacts to heritage and other sensitive structures	NV14	A detailed survey will be undertaken prior to vibration intensive construction commencing to identify all nearby vibration sensitive buildings. Applicable vibration criteria and construction strategies will need to be included in the CNVMP for each of the identified locations, ensuring that the works' impacts will be appropriately controlled.	Construction contractor	Prior to construction Construction
Detour road traffic noise	NV15	To minimise the traffic noise impact from the diversions, works requiring diversions will be limited as follows: • No more than two consecutive evenings and/ or nights • No more than three evenings and/ or night per week • No more than 10 evenings and/ or night per month.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
	NV16	The Contractor must conduct a detailed construction noise and vibration assessment and implement reasonable and feasible mitigation measures in accordance with the Roads and Maritime Services *Construction Noise and Vibration Guideline* (2016b). Mitigation measure that may be implemented include the following: • Traffic diversions limited in duration as noted above • Notification (letterbox drop or equivalent) • Specific notifications Individual briefings and/or community consultations.	Construction contractor	Prior to construction Construction
Operational noise	NV17	The hierarchy of noise mitigation is firstly to consider at-source noise mitigation measures such as road design and traffic management, then the use of quieter pavements. A quieter pavement, open graded asphalt, will be used in the proposed modification. If these measures cannot be designed to meet the noise criteria the use of 'in corridor' mitigation measures should be considered, which are generally noise barriers and mounds. Finally, if the applicable noise criteria cannot be met by using a combination of all these methods, at-receiver mitigation measures can be considered such as architectural treatments and property boundary walls. **Appendix E** (Noise and vibration assessment) identified noise barriers required and receivers that should receive at-receiver architectural treatment. During detailed design, the noise barriers and at-receiver architectural treatments required will be confirmed, prior to installing during construction.	Transport Construction contractor Westlink M7 Operator	Detailed design Construction Operation
	NV18	Operational traffic noise will be monitored at sensitive receivers between six months and one year after opening. If the traffic noise levels are above the levels as predicted during detailed design, consideration of additional feasible and reasonable mitigation measures will be undertaken.	Westlink M7 Operator	Operation
Air quality				
Complaints	AQ1	A communications plan will be displayed at each construction zone, including a duty phone number so stakeholders and community members can get in contact regarding the construction activities. All complaints will be recorded and investigated, and measures taken in response.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Cumulative impacts with other projects	AQ2	On a regular basis, the stages of other major constructions within 500 metres of the proposed modification will be assessed, to determine any cumulative impacts. The possibility of co-ordinating activities between sites will be assessed to avoid potentially high impact activities occurring at the same time.	Construction contractor	Construction
Combustion emissions	AQ3	Use of diesel- or petrol-powered generators will be avoided where practicable and mains electricity or battery powered equipment will be used where practicable.	Construction contractor	Construction
	AQ4	All vehicles and plant will be switched off engines when stationary and not be allowed to idle.	Construction contractor	Construction
Dust emissions	AQ5	During periods of high potential for increased air quality impacts and/or prolonged dry or windy conditions the frequency of site inspections will be increased by the person accountable for air quality and dust issues.	Construction contractor	Construction
	AQ6	At each construction zone, the site arrangement will be planned so that dust generating activities are undertaken to minimise dust at nearby receptors. Measures may include stockpiles located as far away from receptors as possible; dust barriers being erected around dusty activities/ site boundary, or similar.	Construction contractor	Construction
	AQ7	A maximum speed limit of 15 km/h on unsurfaced roads and construction work areas will be imposed and signposted.	Construction contractor	Construction
	AQ8	Adequate water supply will be provided on the site for effective dust/ particulate matter suppression/ mitigation, using non-potable water where possible and appropriate.	Construction contractor	Construction
	AQ9	Earthworks and exposed areas/ soil stockpiles will be re-vegetated or stabilised as soon as practicable.	Construction contractor	Construction
	AQ10	Water-assisted dust sweeper(s) will be used on access and local roads, to remove, as necessary, any material tracked out of the site.	Construction contractor	Construction
	AQ11	Vehicles entering and leaving sites will be covered to prevent escape of materials during transport.	Construction contractor	Construction
	AQ12	A wheel washing system will be implemented at relevant construction ancillary facilities (with rumble grids to dislodge accumulated dust and mud prior to leaving the site), where reasonably practicable.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Odour	AQ13	Any acid sulphate soils encountered during earthworks will be managed in accordance with the with the *Acid Sulfate Soils Manual* (Acid Sulfate Soil Management Advisory Committee, 1998) and *Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze* (NSW Roads and Traffic Authority, 2005b).	Construction contractor	Construction
Hydrology and flooding				
Flood management	FL1	A Flood Management Plan will be prepared as part of the CEMP for the proposed modification and will detail the processes for flood preparedness, materials management, weather monitoring, site management, and flood incident management. The flood management plan will be developed in accordance with relevant guidelines.	Construction contractor Westlink M7 Operator	Prior to construction Construction Operation
Impacts on existing drainage systems	FL2	Activities that may affect existing drainage systems during construction will be carried out so that existing hydraulic capacity of these systems is maintained where practicable.	Construction contractor	Construction
Detailed construction planning	FL3	Detailed construction planning is required to consider flood risk at construction sites and construction support sites. This will include: • A review of site layout and construction activity staging to avoid or minimise obstruction of overland flow paths and limit the extent of flow diversion required • Identification of measures to not worsen flood impacts on the community and on other property and infrastructure during construction up to and including the 1% AEP flood event, where reasonable and feasible • Measures to mitigate alterations to local runoff conditions due to construction activities.	Construction contractor	Detailed design Prior to construction
Impacts related to siting of spoil stockpiles	FL4	Spoil stockpiles are to be located in areas not subject to frequent inundation by floodwater, and outside the 10% AEP flood extent. The exact level of flood risk accepted at stockpile sites will depend on the duration of stockpiling operations, the type of material stored, the nature of the receiving drainage lines and also the extent to which it would impact flooding conditions in adjacent development.	Construction contractor	Detailed design Construction planning

Impact	ID	Mitigation measure	Responsibility	Timing
Impacts related to locations of construction ancillary facilities	FL5	Construction ancillary facilities are to be located outside high flood hazard areas based on a 1% AEP flood.	Construction contractor	Detailed design Construction planning
Flood emergency management	FL6	Flood emergency management measures during construction are to be prepared and incorporated into relevant environmental and/or safety management documentation in consultation with NSW State Emergency Services (SES) and relevant local councils.	Construction contractor	Detailed design Prior to construction
Flooding behaviour related impacts	FL7	The operational impact of the proposed modification on flood behaviour is to be confirmed during detailed design and include consideration of future climate change and a partial blockage of the stormwater drainage system.	Transport	Detailed design Prior to construction
Flood hazard impacts to surrounding environment	FL8	The proposed modification is to be designed and further refinements made (as required) to avoid adverse impacts on: • Residential, commercial, and/ or industrial development during a 1% AEP event, or • Critical infrastructure, vulnerable development or increases in risk to life due to a significant increase in flood hazard for floods up to the PMF. Where the above cannot be achieved, alternative flood levels or mitigation measures may be agreed to with the affected landowner.	Transport	Detailed design Prior to construction
Flood velocity leading to scour	FL9	Localised increases in flow velocities at drainage outlets that would control runoff from the proposed modification are to be mitigated through the provision of scour protection and energy dissipation measures.	Construction contractor Westlink M7 Operator	Detailed design Construction Operation
Impacts to flood emergency management	FL10	The function of the widened Westlink M7 in flood emergency management measures shall be prepared in consultation with NSW SES and relevant local councils.	Transport Westlink M7 Operator	Detailed design Construction Operation
Surface and groundwater				
Soil, surface water, and groundwater	SW1	A Soil and Water Management Plan (SWMP) will be prepared as part of the proposed modification. The plan will outline measures to manage soil and water impacts associated with the construction works, including contaminated land. The SWMP will include:	Construction Contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		• Measures to minimise/manage erosion and sediment transport both within the construction footprint and offsite, including requirements for the preparation of erosion and sediment control plans (ESCP) for all progressive stages of construction • Measures to manage runoff from spoil and waste storage areas • Procedures to manage unexpected or previously unidentified contaminants • Measures to manage stockpiles, including locations, separation of waste types, sediment controls and stabilisation • Groundwater management measures to limit the risk of exposure to contaminated groundwater • Controls to manage the risk posed to workers from exposure to contaminated groundwater (if encountered) • Processes for dewatering of water that has accumulated on site and from sediment basins, including relevant discharge criteria • Measures to manage potential tannin leachate • Measures to manage accidental spills, including the requirement to maintain materials such as spill kits • Measures to manage potential saline soils • Details of surface water and groundwater quality monitoring to be undertaken prior to, throughout, and following construction • Erosion and sediment control measures will be implemented and maintained at all work sites in accordance with the principles and requirements in *Managing Urban Stormwater – Soils and Construction, Volume 1* (DPIE, 2004) and *Volume 2D* (DECC, 2008a), commonly referred to as the 'Blue Book,' as well as relevant Transport Guidelines.		
	SW2	A dewatering management plan will be prepared and included in the SWMP that sets out the procedures for the discharge of surface water runoff that is retained in sediment controls and exposed excavations. The dewatering management plan will be prepared in accordance with the *Technical*	Construction Contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
		Guideline – Environmental Management of Construction Site Dewatering (Transport, 2011) and will include consideration of the following: • Identification of water quality criteria for the discharge of on-site water and the treatment techniques required to meet these criteria • Methods for achieving the WQOs for any site discharge through best practice erosion and sediment control measures and/or treatment of water through flocculation prior to discharge from sediment retention sumps • Reuse of stormwater where feasible within the scope of construction activities • Selection of suitable locations for the discharge of captured runoff utilising existing drainage paths where it cannot be reused on site • Procedures for the rectification of sediment controls or site practices should the water quality parameters experience exceedances.		
Sediment Control	SW3	A soil conservation specialist will be engaged for the duration of construction of the proposed modification to provide advice on the planning and implementation of erosion and sediment control measures, including review of Erosion and Sediment Control Plans ESCPs.	Construction Contractor	Prior to construction Construction
	SW4	Stockpiles will be managed to minimise the potential for mobilisation and transport of dust and sediment in runoff in accordance with *Stockpile Site Management Guideline* (Roads and Maritime Services, 2015d). This will include: • Minimising the number of stockpiles, the area used for stockpiles and the time that they are left exposed • Locating stockpiles away from drainage lines, waterways and areas where they may be susceptible to wind erosion • Stabilising stockpiles, establishing appropriate sediment controls and suppressing dust as required.	Construction Contractor	Construction
Water Quality	SW5	Updated water quality assessment will be undertaken during detailed design to inform site specific discharge criteria to meet the objective of maintaining existing water quality in the receiving watercourses during operation.	Construction Contractor	Detailed design

Impact	ID	Mitigation measure	Responsibility	Timing
	SW6	A water reuse strategy will be developed for the construction of the proposed modification to reduce reliance on potable water. This strategy will be prepared during the detailed design stage and will outline the construction water requirements and potential water sources to supply the water demand in consultation with Sydney Water. Alternative water supply options to potable water will also be investigated, with the aim of reusing water using recycled water where feasible. This includes sourcing non-potable water from construction sediment sumps where it is feasible to reuse.	Construction Contractor	Prior to construction Construction
	SW7	The following measures will be undertaken to manage activities within watercourses, especially works to widen of bridges: • Disturbance of banks and extent of vegetation removal will be minimised • Implementing bank stabilisation, channel reshaping and scour protection where required to mitigate the impact of additional bridge piers on scour and stability of the bed and banks of watercourses • Maintenance of minimum surface water flows to assist in maintaining the viability of aquatic communities and preventing barriers to fish passage • Construction of temporary creek crossings during low flows and design so that drainage of these crossings does not contribute sediment load to the stream • Taking into consideration the former NSW Department of Industry's *Guidelines for controlled activities on waterfront land* (2018) in the design and construction of works within watercourses	Construction Contractor	Prior to construction Construction
	SW8	The performance of the stormwater quality controls that are set out in the Modification Report (comprising the existing stormwater quality control basins and gross pollutant traps along the Westlink M7 corridor) will be verified at detailed design stage to ensure that for waterways that receive runoff from the proposed modification, and to the extent that the proposed modification can influence: • The WQOs continue to be met at waterways where they are currently being achieved, or • Existing water quality is improved at waterways where the WQOs are not being met.	Construction Contractor, Westlink M7 Operator	Prior to construction Construction Operation

Impact	ID	Mitigation measure	Responsibility	Timing
		In the instance during detailed design that it cannot be demonstrated that the water quality controls are effective in mitigating potential impacts in accordance with the above requirements, a review of measures will be undertaken to improve water quality outputs from the Westlink M7 over time, including an assessment of the potential benefits and feasibility or reasonableness of converting a select number of existing water quality control ponds to bioretention basins, in consultation with NSW EPA.		
	SW9	A construction water quality monitoring program will be developed and included in the SWMP for the proposed modification to establish baseline conditions, observe any changes in surface water and groundwater during construction, and inform appropriate management responses. Baseline monitoring will be undertaken monthly for a minimum of 12 months prior to the commencement of construction, inclusive of the monitoring that is presented in **Section 5.6** of **Appendix G** (Surface water and flooding assessment). As a minimum, this will include three wet weather sampling events over six months where feasible. Sampling locations and monitoring methodology to be undertaken during construction will be further developed in detailed design in accordance with the *Guidelines for Construction Water Quality Monitoring* (RTA, 2003) and the *ANZECC Water Quality Guidelines* (ANZECC/ ARMCANZ, 2000). The monitoring will include collection of samples for analysis from sedimentation control discharge points, visual monitoring of other points of release of construction waters and monitoring of downstream waterways. The frequency of monitoring will be confirmed during detailed design and will be a minimum of once every month at all sites, as well as additional monitoring following wet weather events. Should the results of monitoring identify that the water quality management measures are not effective in adequately mitigating water quality impacts, additional mitigation measures will be identified and implemented as required.	Construction Contractor	Prior to construction Construction
	SW10	Further water quality assessment will be undertaken during detailed design to determine whether additional site-specific discharge criteria are required to meet the objective of maintaining existing water quality in the receiving watercourses.	Construction Contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
Spills	SW11	The adequacy of the existing spill containment measures along the Westlink M7 corridor, will be verified during the detailed design of the proposed modification to ensure that they are suitable for the capture of spills from the widened road pavement. In the instance during detailed design that it cannot be demonstrated that spill control from the widened road pavement cannot be achieved with existing spill containment measures, then additional spill containment mitigation measures will be identified, implemented and incorporated into existing maintenance procedures.	Westlink M7 Operator	Operation
Biodiversity				
Identified biodiversity values	B1	A Biodiversity Management Plan will be developed to include, but not be limited to, the following: • A Microbat Management Plan by a microbat specialist to be created (prior to construction) • Environmental site inductions • Demarcation of clearing areas and 'No Go' zones through fencing and inclusion in the Construction Environmental Management Plan (CEMP), in accordance with *Guide 2: Exclusion zones* of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011) • Methods of vegetation removal • Protocols for tree clearing including pre-clearing surveys and mitigation measures for any fauna encountered • Erosion and sediment controls including dust suppression and minimisation of dust generation • Rehabilitation methods including management of native and riparian vegetation, weeds, fauna habitat • Weed prevention measures and management of priority weeds within the study area in accordance with *Guide 6: Weed management* of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011)	Construction contractor Westlink M7 operator	Prior to construction Construction Operation

Impact	ID	Mitigation measure	Responsibility	Timing
		• Regular scheduled litter and waste removal from the study area • Implementation of an unexpected species find procedure, particularly in regard to bridge widenings and microbats • Habitat will be replaced or re-instated in accordance with *Guide 5: Re-use of woody debris and bushrock* and *Guide 8: Nest boxes* of the *Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects* (RTA, 2011) • Rehabilitation strategy for waterways after the removal of temporary waterway crossing and diversions, including erosion and sediment control, management of flow, stockpile management, stabilisation of bed and banks and revegetation • Any large woody debris to be retained within the retained portions of the study area to provide refuge habitat for invertebrates and reptiles (*Guide 5: Re-use of woody debris and bushrock*)		
	B2	An ecologist to inspect the study area, including drainage and creek lines and relocate any amphibians prior to and during vegetation clearing	Construction contractor	Prior to construction
	B3	Undertake field survey in accordance with the bat survey guidelines (OEH 2018), Appendix F of the *Microbat Management Guidelines* (Transport for NSW, 2021a) and the Threatened Biodiversity Data Collection (TBDC) to confirm whether Southern Myotis is using the Subject Land for its foraging purposes, and refine the offset obligation for this species, as required.	Westlink M7 operator	Prior to construction
	B4	Bridge works, as a potential habitat for microbat species, are to be undertaken in accordance with Appendix F of *Microbat Management Guidelines* (Transport for NSW, 2021a)	Construction contractor	Construction
	B3	If sediment/ erosion booms are used, they are placed so they do not obstruct fish passage, where possible	Construction contractor	Construction
	B6	Design of temporary waterway crossings and diversions are consistent with Managing *Urban Stormwater: Soils and construction – Volume 1 and 2D* (DPIE, 2004) and *Policy and Guidelines for Fish Habitat Conservation and Management* (DPI, 2013) and *Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings* (Fairfull, 2003)	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
	B7	Relocation of native fish by a trained aquatic ecologist if they become stranded as a result of waterway diversions, temporary crossings, or dewatering activities.	Construction contractor	Construction
	B8	A detailed water monitoring program will be implemented during construction, where site observations are recorded by a suitably qualified person, and will include: • Routine inspections of temporary waterway crossings, waterway diversions and dewatering activities • Rapid geomorphic survey, including aquatic macrophyte mapping, bank erosion, channel stability and sediment deposition • Stormwater discharges into the receiving watercourses, including an estimate of flows, visual appearance, and water quality (handheld meter) testing on an opportunistic basis • Visual and olfactory observation of pollution (e.g., oil sheens, coarse debris, odours) • Opportunistic observations of aquatic fauna (e.g. stranded fish).	Construction contractor	Construction
	B9	Landscaping to focus on utilising naturally occurring endemic tree and shrub species, in accordance with the updated Landscape Plan for the Westlink M7	Construction contractor	Construction
	B10	Monitoring and maintenance of all established erosion and sedimentation controls	Construction contractor	Construction Operation
	B11	Existing Westlink M7 Operational Environmental Management Plan to be consulted, updated, and utilised.	Westlink M7 Operator	Operation
Aboriginal heritage				
N/A – AHIMS database currency	AH1	Aboriginal Site Impact Recording (ASIR) forms will be submitted to the AHIMS Registrar for all Aboriginal sites known to have been destroyed or partially destroyed as a result of the approved project (as indicated in the final approved Indigenous Heritage Archaeology Management Sub Plan (IHMSP)).	Construction contractor's Aboriginal Cultural Heritage Advisor	Prior to construction
N/A – AHIMS database currency	AH2	An Aboriginal Site Impact Recording (ASIR) form will be submitted to the AHIMS Registrar for Aboriginal site 'MC-2' (45-5-0779), indicating that the site has been destroyed.	Construction contractor's	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
			Aboriginal Cultural Heritage Advisor	
Accidental construction-related impacts to known Aboriginal sites as well as unexpected finds	AH3	An Aboriginal Cultural Heritage Management Plan (ACHMP) shall be prepared prior to construction of the proposed modification and included in the Construction Environmental Management Plan (CEMP). An Unexpected Aboriginal Heritage Finds Procedure (UAHFP) will be included in the ACHMP to cover the unanticipated discovery of any actual or potential Aboriginal heritage items. The procedure will cover all Aboriginal objects (as defined by the *National Parks and Wildlife Act 1974*), including human skeletal remains.	Construction contractor	Prior to construction Construction
Accidental construction-related impacts to known Aboriginal sites as well as unexpected finds	AH4	All standard environment site inductions prepared for the proposed modification will include an Aboriginal heritage component. At a minimum, this will outline current protocols and responsibilities with respect to the management of Aboriginal heritage within the construction footprint (including unexpected finds) and provide an overview of the diagnostic features of potential Aboriginal site types/ objects.	Construction contractor	Prior to construction Construction
Avoidance of impacts to nearby Aboriginal sites during construction	AH5	Aboriginal sites located outside of the construction footprint, but directly adjacent to it, will be actively protected during construction via temporary fencing. Fencing is to be installed along relevant sections of the construction footprint and remain in place for the duration of construction works in the vicinity. Where fencing is to be installed along the construction footprint, individual fencing lengths will be determined by a qualified archaeologist on the basis of both a visual inspection of the registered AHIMS site location and critical review of relevant existing data sources (eg associated site cards and assessment reports). All relevant staff and contractors are to be made aware of the nature and locations of these sites as part of standard site inductions. All sites will be identified on relevant site plans.	Construction contractor	Construction
Avoidance of impacts to community, the environment, and Aboriginal sites	AH6	Stakeholder consultation will occur prior to construction in order to: • Identify key cultural values or features within the study area • Document stories that belong to the Deerubbin and Gandangara community and with permission, may be used educate Transport's personnel and contractors	Transport	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		• Inform an environmental impact assessment under the *Environmental Planning & Assessment Act 1979.*		
Non Aboriginal heritage				
Construction Heritage Management Plan	H1	A Construction Heritage Management Plan, to be included in the CEMP, shall be prepared prior to construction of the proposed modification. The CEMP should include the location of the known heritage items that are within the study area, including the Upper Canal System, details relating to vibration management measures for works in the vicinity of the Upper Canal, and a stop works procedure for unexpected finds.	Construction contractor	Construction
Upper Canal System	H2	Vibration recommendations contained in **Appendix E** (Noise and vibration assessment) will be adhered to during construction for minimising potential ground vibration impacts to the Upper Canal System tunnel.	Construction contractor	Construction
	H3	Consultation with WaterNSW detailing the proposed works in the vicinity of the Upper Canal System shall be undertaken prior to construction. A copy of this assessment shall be made available to WaterNSW prior to any consultation.	Transport	Construction
	H4	The Upper Canal System is subject to a Conservation Management Plan (CMP) (Government Architects Office, 2016). All work in the vicinity of this heritage item should have regard to the relevant policies included in this CMP, which are provided in Section 8.2 of **Appendix J** (Non-Aboriginal heritage assessment) of the Modification Report. These include but are not limited to: • Policy 3: All works within the vicinity of the No. 4 Shaft should avoid its original fabric and avoid adding new fabric. • Policy 40: An archival recording of No. 4 Shaft will be undertaken prior to construction.	Construction contractor Transport	Prior to construction Construction
Land use and property				
Temporary acquisition of properties (leases)	LUP1	A survey of all leased areas will be completed prior to leasing the land to document the pre-leased condition and share this survey with the landowner prior to construction commencing. The landowner will have the opportunity to comment on the survey and their comments will be documented within the survey report.	Construction contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
	LUP2	All areas leased for the modification will be rehabilitated upon completion of construction and restored to their existing condition, or as otherwise agreed with the landowner. This will occur within six months of completion of the construction phase.	Construction contractor	Construction Post-construction
	LUP3	Terms and conditions of private land use for construction access will be determined in consultation and agreement with relevant landowners.	Construction contractor	Prior to construction
Utility impacts	LUP4	Consultation with the relevant utility providers will be undertaken prior to construction to confirm the presence of utilities and refine potential utility adjustments and utility protection measures during detailed design.	Construction contractor	Prior to construction
	LUP5	The final construction methodology will consider measures required to protect utilities or avoid impacts on these services during construction.	Construction contractor	Construction
Landscape character, visual amenity, and urban design				
Unintentional impacts to trees to be retained	LV1	Establish tree protection zones (TPZs) around trees to be retained. Tree protection will be undertaken in accordance with *AS 4970-2009 Protection of Trees on Development Sites* and will include exclusion fencing of TPZs	Construction contractor	Construction
Visual impact from presence of construction	LV2	Provide well-presented and maintained construction hoarding and site fencing with shade cloth (or similar material) (where necessary) to minimise visual impacts during construction. Hoardings and site fencing will be removed following construction completion.	Construction contractor	Construction
	LV3	Provide cut-off or directed lighting within and outside of the construction site, with lighting location and direction considered to ensure glare and light spill is minimised.	Construction contractor	Construction
	LV4	Keep construction areas clean and tidy and place refuse in appropriate receptacles.	Construction contractor	Construction
Visual impact from removal of trees	LV5	The original intent surrounding the Light Horse Sculpture Parade will be safeguarded, with the design development process for the reinstatement of the artwork to be carried out in consultation with stakeholders including the Office of Veterans Affairs, the Returned & Services League (RSL) and the original artists (where appropriate). Potential hardening of the landscape and the memorial character of the fig planting should be mitigated by replacing trees to be removed, for example, in consultation with stakeholders, as above.	Transport Construction contractor	Detailed design Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
	LV6	While the replacement of trees within the Westlink M7 operational footprint may not be possible due to maintenance requirements, it is recommended to reinstate the visual markers of the creek corridors within the Westlink M7, by: • Planting of riparian tree species (such as Melaleuca and Casuarina) on the batters within the central median as they fall towards the lower area at either end of bridges • Planting of areas under bridges within riparian corridors with indigenous species within the Cumberland Plain Riverflat Forest community, including tall shrubs, grasses and groundcovers. Investigate opportunities for additional tree plantings.	Transport	Prior to operation
Visual impacts	LV7	Undertake seed collection prior to construction (e.g. within three months of construction contract award, where possible), to source seeds to be used in post-construction rehabilitation. Use native and endemic plant species in post-construction rehabilitation otherwise.	Construction contractor	Prior to construction
	LV8	Opportunity to enhance green infrastructure and tree planting through the areas adjacent to noise walls and other areas along the edges of the corridor to mitigate impacts from tree removal along the Westlink M7 median. This will be subject to detailed design and also the identification of existing verges/ batters within the Westlink M7 corridor that would be appropriate for tree planting completed as part of the works.	Transport	Detailed design
	LV9	Opportunity for Water Sensitive Urban Design to be considered when local drainage conditions are altered throughout the corridor where the gradient and widening conditions require further detail.	Transport	Detailed design
Soils and contamination				
Soil and water	C1	A Soil and Water Management Plan (SWMP) will be implemented during construction and incorporate the following measures: • Worker health and safety measures, waste management (including stockpiling) and tracking for contamination • Register of known or suspected areas of contamination (from site investigations) and areas requiring remediation	Construction contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		• An unexpected finds procedure to manage previously unidentified chemical or asbestos contamination • Asbestos Management Plan for areas where ACM and/or friable asbestos is likely to be encountered, with the plan including worker health and safety measures • Testing procedures to determine the actual presence of acid sulfate soils prior to ground disturbance activities • Testing procedures to determine the presence of saline soils prior to ground disturbance activities. • Process for testing, treating and discharging water from site to meet applicable water quality limits. • Site-specific Erosion and Sediment Control Plan which will identify detailed measures and controls, that are consistent with the practices and principles in the current guidelines, to be applied to minimise erosion and sediment control risks. These include, but not necessarily limited to: runoff, diversion and drainage points; use of sediment basins and sumps; scour protection; stabilising disturbed areas as soon as possible, check dams, fencing and swales; and staged implementation arrangements.		
Contamination	C2	A Sampling, Analysis and Quality Plan will be prepared ahead of detailed site investigations, focusing on potential source areas of potential contamination where the likelihood risk of contamination is moderate to high, and additional areas to give further understanding of potential contamination impacts. The results from the site investigations will be assessed against criteria contained within the *National Environment Protection (Assessment of Site Contamination) Measure* (2013) and other applicable NSW statutory guidelines to assess whether remediation is required or other management measures during construction.	Construction contractor	Prior to construction
	C3	Remediation will be undertaken where assessed as required based on the outcome of DSIs. Works will be performed in accordance with the hierarchy of preferred strategies in the *Guidelines for the NSW Site Auditor Scheme* (NSW EPA, 2017c) and CRC CARE Pty Ltd (CRC, CARE, 2020) National Remediation Framework. Where practical, remediation works will be	Construction contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		integrated with excavation and development works performed during construction and address requirements of SEPP 55.		
	C4	Contamination within the Westlink M7 lease area will be managed in accordance with the existing or updated Operational Environmental Management Plan (OEMP). Pre-construction contamination condition surveys will be undertaken on all sites intended to be used as construction ancillary facilities. Post-construction contamination condition surveys will be undertaken on all ancillary facilities and any contamination caused by the use of the site as a construction ancillary facility remediated to a standard suitable for the identified land use. Remediation will be undertaken by the construction contractor prior to operation of the modification.	Construction contractor Weslink M7 Operator	Construction Prior to operation Operation
Acid sulfate soils	C5	Prior to ground disturbance in areas of potential inland acid sulfate soil occurrence, testing will be carried out to determine the actual presence of acid sulfate soils. This measure is especially appliable to areas on waterbodies where disturbance of sediments and surrounding soil is to occur. If acid sulfate soils are encountered, they will be managed in accordance with the *Acid Sulfate Soil Manual* (Acid Sulfate Soil Management Advisory Committee, 1998) and *Guidelines for the Management of Acid Sulfate Materials: Acid Sulfate Soils, Acid Sulfate Rock and Monosulfidic Black Ooze* (NSW Roads and Traffic Authority 2005b).	Construction contractor	Prior to construction
Salinity	C6	Prior to ground disturbance in high probability salinity areas, testing will be carried out to determine the presence of saline soils. If salinity is encountered, excavated soils will not be reused, and will be managed in accordance with *Book 4 Dryland Salinity: Productive Use of Saline Land and Water* (NSW DECC, 2008c). Erosion controls will be implemented in accordance with the *Managing Urban Stormwater: Soils and Construction Volume 1* (DPIE, 2004).	Construction contractor	Prior to construction
Ancillary facilities	C7	Post-construction contamination condition surveys will be undertaken on all ancillary facilities and may be required by lease agreements. Any contamination caused by the use of the site as a construction ancillary facility for the widening works will be remediated to a standard suitable for the identified land use. Remediation will be undertaken by the construction contractor prior to operation of the modification.	Construction contractor	Prior to operation

Impact	ID	Mitigation measure	Responsibility	Timing
Social				
Community and Stakeholder Engagement Plan	SE1	A Community and Stakeholder Engagement Plan will be implemented for the proposed modification. The plan will describe where information of the proposed modification is available, and contain a complaints management procedure, contact details for the person responsible for managing and resolving complaints, and non-English options.	Transport	Prior to construction Construction
Construction workers	SE2	Opportunities to source construction workers from the local community will be investigated.	Transport	Prior to construction
Sustainability				
Desired sustainability outcomes not met	SU1	A Sustainability Management Plan will be developed and implemented during detailed design, to give effect to the sustainability strategy for the proposed modification. The management plan will detail measures to meet the sustainability objectives and targets and IS rating tool credit requirements.	Construction contractor	Detailed design Construction Operation
	SU2	A Design rating level of 'Excellent' will be targeted under Version 1.2 of the *IS Rating Tool*.	Construction contractor	Detailed design Construction
Climate change				
Impacts related to increased rainfall and weather event intensities	CC1	Transport will clearly communicate to construction contractor/s that there is expected to be an increased likelihood of extreme rainfall and wind events occurring during construction. The ordering of materials for, and breadth and scope of implementation of mitigation measures proposed as part of this Modification Report will take this into account. The delivery schedule will allow contingency for potential delays associated with extreme rainfall.	Transport Construction contractor	Construction
Increasing temperatures and number of hot days	CC2	During detailed design, opportunities will be considered to provide additional shading for road users who may be exposed to high temperatures for prolonged periods (e.g. breakdown bays).	Transport	Detailed design
	CC3	Routine maintenance and inspections will be undertaken of key structural components. Maintenance programs will be augmented to account for extreme weather events. Construction planning will include consideration of extreme heat impacts and additional measures to implement.	Transport Construction contractor Weslink M7 Operator	Prior to construction planning Operation
	CC4	Resourcing and capacity of response crews will be reviewed ahead of expected extreme heat events.	Transport	Operation

Impact	ID	Mitigation measure	Responsibility	Timing
			Weslink M7 Operator	
	CC5	Appropriate landscape design will consider future climate impacts relating to drought (i.e. tolerant species) to provide ongoing shading along the operational footprint of the proposed modification.	Transport	Detailed design Construction
	CC6	During detailed design, options for implementing redundancy (e.g. batteries) into the Intelligent Transport Systems (ITS) will be considered.	Transport	Detailed design
	CC7	Implement use of energy efficient LED lighting and low power mode options for other electrical equipment to reduce to reduce energy demand.	Transport	Detailed design
Extreme rainfall and flooding	CC8	Drainage design should consider the projected flooding impacts from the climate change projections.	Transport	Detailed design
	CC9	To address erosion/ scour potential from increased rainfall intensity due to climate change, options for stabilising and/ or reducing the slope of embankments will be considered during detailed design.	Transport Westlink M7 Operator	Detailed design Operation
Storms	CC10	Ensure electrical equipment will be able to connect generators to roadside cabinets in the event of wider power outages. Lightning protection systems/ earth proofing to be installed on major electrical equipment.	Transport	Detailed design
Greenhouse gases				
Emissions from electricity consumption	GG1	GHG emissions will be reduced through the use of GreenPower and/or other renewable energy sources as part of the proposed modification electricity procurement. The proposed modification is targeting 100% renewable energy-sourced electricity for operations, and minimum 20% for construction	Construction contractor Weslink M7 Operator	Construction Operation
	GG2	Solar construction lighting and variable message signs will be utilised during construction	Construction contractor	Construction
Emissions from construction plant and materials	GG3	Opportunities to use low emission construction materials, such as recycled aggregates in road pavement and surfacing, and cement replacement materials will be investigated and incorporated where feasible and cost-effective	Construction contractor	Detailed design Construction
	GG4	Construction plant and equipment will be well maintained to allow for optimal fuel efficiency	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
	GG5	Raw materials will be managed to reduce energy requirements for their processing. For example, stockpiled materials will be covered or provided undercover storage where possible to reduce moisture content of materials, and therefore the process and handling requirements	Construction contractor	Construction
	GG6	Locally produced goods and services will be procured where feasible and cost effective, to reduce transport fuel emissions	Construction contractor	Construction
Emissions from fuel use	GG7	E10 bioethanol and B5 biodiesel will be utilised where feasible	Construction contractor	Construction
Emissions from maintenance (and construction) activities	GG8	Purchasing certificates to offset Scope 1 and 2 emissions for construction and maintenance activities will be considered	Transport Weslink M7 Operator	Construction Operation
Waste				
Waste and resources	W1	A construction waste and resource management plan (CWRMP) will be prepared prior to construction and outline appropriate management procedures to be implemented during construction. It shall include, but not be limited to: • A procurement strategy to minimise unnecessary consumption of materials and waste generation • Identification of the waste types and volumes that are likely to be generated • Adherence to the waste management hierarchy principles of avoid/ reduce/ re-use/ recycle/ dispose • Classification of waste in accordance with the *Waste Classification Guidelines* (NSW EPA, 2014) • Waste management procedures to manage the segregation, handling, storage and disposal of waste, including unsuitable material or unexpected waste volumes, identification of re-use options for surplus materials, and identification of licensed waste disposal facilities to be used	Contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
		• Identification of reporting requirements and procedures for waste tracking required		
	W2	Wherever feasible and reasonable, construction materials will be sourced locally from within the Sydney region.	Contractor	Prior to construction Construction
Spoil	W3	A spoil management plan shall be prepared as part of, and in line with the CWRMP. The spoil management plan shall outline appropriate management procedures for the generation, management and importation of spoil. It shall include, but not be limited to: • Procedures for testing and classification of spoil • Identification of spoil re-use options • Spoil stockpile management procedures • Licensed spoil disposal and re-use locations • Imported spoil sources and estimated volumes.	Contractor	Prior to construction
Cumulative waste	W4	Where the construction of the M12 Motorway interchange coincides with the proposed modification, consultation will occur with the relevant M12 project team during detailed design, construction planning and during construction, to identify opportunities for waste avoidance and re-use, and other efficiencies. This may include for example coordinated construction planning, co-management of relevant construction areas, sharing of resources, and spoil management/re-using spoil from excavations as fill material.	Contractor	Prior to construction Construction
Vegetation waste	W5	Remaining vegetation that is not re-used onsite will be discussed with relevant council(s), Western Sydney Parklands Trust and Landcare groups and other relevant government agencies to determine if hollows, tree trunks, mulch, bush rock and root balls salvaged from native vegetation could be used by others in habitat enhancement, beneficial re-use and rehabilitation work, before pursuing other disposal options.	Contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Hazard and risk				
Hazards and risks during construction	HR1	A Work Health Safety Management Plan (WHSMP) will be prepared for the proposed modification. The WHSMP will include: • Details of the hazards and risks associated with construction activities • Risk management measures • Procedures to comply with legislative and industry standard requirements • Use of appropriate personal protective equipment • Contingency plans, as required • An incident response management plan • Training for all personnel (including subcontractors) including site inductions, the recognition and awareness of site hazards and the locations of relevant equipment to protect themselves and manage any spills. All staff will have the relevant training and certificates.	Construction contractor	Prior to construction Construction
Bushfire risk	HR2	Measures to mitigate and manage bushfire risk will be developed and included as part of site-specific hazard and risk management measures within the WHSMP. Measures will include the maintenance of ancillary facilities in a tidy and orderly manner and the storage and management of dangerous goods and hazardous materials in accordance with applicable legislation, policy, and Australian Standards.	Construction contractor	Prior to construction Construction
	HR3	A Bushfire Emergency Management and Evacuation Plan will be developed for the construction phase. The plan will outline stop work procedures and evacuation routes. The bushfire evacuation procedure within each plan will be completed in accordance with NSW RFS *Guide to Developing a Bushfire Emergency Management and Evacuation Plan* (2014).	Construction contractor	Prior to construction Construction
	HR4	Relevant works will be managed under a Hot Work and Fire Risk Work procedure. Where necessary essential hot works may be completed on a day declared to be a Total Fire Ban (TOBAN) providing it complies with the Hot Work and Fire Risk Work procedure exemption from the NSW RFS.	Construction contractor	Prior to construction Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Wildlife hazard	HR5	Design of water treatment basin upgrades (if required) and species selection for landscaping plants/trees will consider wildlife hazard (e.g. attracting birds), in relation to motorway use and the Western Sydney Airport. This includes the requirements of the *National Airports Safeguarding Framework* (NASF) (National Airports Safeguarding Advisory Group, n.d.), and specific requirements of the Western Sydney Airport (e.g. preferred landscaping species).	Construction contractor	Detailed design Construction
Incident response	HR6	An Incident Response Management Plan will be developed and implemented. The response to incidents within the road will be managed in accordance with the memorandum of understanding between Roads and Maritime and the NSW Police Service, NSW Rural Fire Service, NSW Fire Brigade and other emergency services.	Construction contractor	Prior to construction Construction
Utilities	HR7	Consultation with relevant utility providers will be undertaken to confirm the presence of utilities and refine potential utility adjustments and utility protection measures (with a view to avoiding impacts if possible and protecting or adjusting if required) during detailed design. The final construction methodology will consider any special measures required to avoid impacts on these services during construction, where possible.	Transport Construction contractor	Prior to construction Construction
Storage of dangerous goods and hazardous substances	HR8	Storage, handling and use of dangerous goods and hazardous substances will be in accordance with the *Work Health and Safety Act 2011* and the *Storage and Handling of Dangerous Goods Code of Practice* (WorkCover NSW, 2005).	Construction contractor	Construction
	HR9	Storage areas for oils, fuels and other hazardous liquids will be located outside of identified flood-prone areas identified in Section 6.2.1 of **Appendix G** (Surface water and flooding assessment). Secure, bunded areas will be provided around storage areas.	Construction contractor	Construction
	HR10	A register and inventory of dangerous goods and hazardous substances will be kept at each storage location. This register will be maintained as part of an incident response management plan developed for the proposed modification. The register will include Safety Data Sheets which will be obtained for dangerous goods and hazardous substances prior to their delivery onsite, and stored in an accessible place.	Construction contractor	Construction

Impact	ID	Mitigation measure	Responsibility	Timing
Contamination from transportation of hazardous goods	HR11	All hazardous substances will be transported in accordance with relevant legislation and codes, including the *Dangerous Goods (Road and Rail Transport) Regulation 2014* and the *'Australian Code for the Transport of Dangerous Goods by Road and Rail'* (National Transport Commission, 2020).	Construction contractor	Construction
Emergency vehicles	HR12	Suitable turning lanes for emergency vehicles will be provided across the median strip between access ramps enabling emergency vehicles to change direction without the need for travelling to the nearest access ramp.	Westlink M7 Operator	Operation
Cumulative				
Cumulative impacts	Cu1	Consultation with other project owners, operators, and/ or contractors to understand construction programmes and ensure that conflicting requirements for access, traffic lane closures, high noise and vibration generating activities, and nightworks are avoided or minimised as much as reasonably practical, in order to prevent construction fatigue for local sensitive receptors. Communication with other project owners, operators, and/ or contractors should be an iterative process and continue throughout the construction phase. These management measures to prevent construction fatigue should be captured in the Construction Environment Management Plan (CEMP). They should also be presented in the topic-specific environmental management plans, such as Construction Traffic and Access Management Plan (see Mitigation Measure T1) and Construction Noise and Vibration Management Plan (CNVMP) (see Mitigation Measure NV1).	Transport Construction Contractor	Prior to construction Construction
	Cu2	Clear communication will be undertaken with the community when required, which is coordinated with other projects so that similar projects retain consistent messaging and complaint mechanisms.	Transport Construction Contractor	Prior to construction Construction