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7.0 Environmental assessment

7.16 Waste

This section provides an assessment of the potential waste that would be generated by the proposed modification during construction and operation. The various waste streams expected to be generated during construction and operation have been identified and classified, and management measures have been proposed for the effective storage, re-use/recovery, treatment and/or disposal of waste in accordance with applicable regulatory requirements and government policy.

7.16.1 Introduction

Table 7-111 sets out the SEARs relevant to waste and resources and identifies where the requirements have been addressed in this section.

Desired performance outcome	SEAR	Where addressed within the modification report
Other Issues	 An assessment of the following issues must be undertaken in accordance with the commitments in Attachment 2 of the M7 Motorway (SSI 663) – Project Modification letter dated 9 May 2022 (via Major Projects Portal): Waste Extract from Attachment 2 of the M7 Motorway (SSI 663) – Project Modification letter submitted 9 May 2022: 	This chapter provides an assessment of waste associated with the proposed modification
	Assess predicted waste generated from the proposed modification during construction and operation, including:	
	 classification of the waste in accordance with the current guidelines 	Section 7.16.4
	 b. estimates / details of the quantity of each classification of waste to be generated during the construction of the proposed modification, including bulk earthworks and spoil balance 	Section 7.16.4
	 handling of waste including measures to facilitate segregation and prevent cross contamination 	Section 7.16.5
	d. management of waste including estimated location and volume of stockpiles	Section 7.16.4 and 7.16.5
	e. waste minimisation and reuse	Section 7.16.5
	f. lawful disposal or recycling locations for each type of waste	Table 7-113
	g. contingencies for the above, including managing unexpected waste volumes.	Table 7-113 and Table 7-117

Table 7-111 SEARs – Waste

Desired performance outcome	SEAR	Where addressed within the modification report
	Assess potential environmental impacts from the excavation, handling, storage on site and transport of the waste particularly with relation to sediment/leachate control, noise and dust.	Refer Chapter 7.11 (Soils and contamination) and Chapter 7.2 (Noise and vibration) and Chapter 7.3 (Air quality).

7.16.2 Method of assessment

The assessment was undertaken with respect to the following relevant legislation and guidelines:

- Waste Avoidance and Resource Recovery Act 2001 (NSW), which promotes waste avoidance and resource recovery, and waste disposal as a last resort
- Protection of the Environment Operations Act 1997 (NSW) (POEO Act), which is the primary legislation for waste management and recycling in NSW. The POEO Act establishes the procedures for environmental pollution control, contains definitions of waste classifications, and for issuing environmental protection licences covering issues such as waste
- Protection of the Environment Operations (Waste) Regulation 2014 (NSW), which regulates matters such as the obligations of consignors (producers and agents), transporters, and receivers of waste, in relation to waste transport licensing and tracking requirements
- Environmentally Hazardous Chemicals Act 1985 (NSW), which provides the NSW EPA with the authority to make Chemical Control Orders for chemical waste to manage the potential risk to human and environmental health; and to require a licence for certain activities relating to environmentally hazardous chemicals or a declared chemical waste
- NSW Environmental Protection Authority (EPA)'s Waste Classification Guidelines: Part 1 Classifying Waste (NSW EPA, 2014) (EPA Waste Classification Guidelines), which prescribes the process for the classification of waste into groups that pose similar risks to the environment and human health
- Sustainable Design Guidelines Version 4.0 (Transport, 2017), which includes targets to achieve waste diversion in accordance with the waste management hierarchy
- Managing Urban Stormwater: Soils and Construction Volume 1 (DPIE, 2004) and Volume 2 (A. Installation of Services; B. Waste Landfills; C. Unsealed Roads; D. Main Roads; E. Mines and Quarries) (DECC, 2008) (the 'Blue Book'), which describes methods and management controls to control stormwater, erosion and sedimentation
- *Technical Guide: Management of Road Construction and Maintenance Wastes* (Roads and Maritime Services, 2016c), which identifies typical waste types produced during the construction of roads and measures to manage these waste types.

The waste assessment involved a review of the design and scope of the proposed modification to identify the likely waste streams and quantities that would arise from construction and operation. The assessment has been completed using information provided by the current maintenance operators of the Westlink M7 (WSO Co) and a constructability specialist (CJC Management), as well as reviewing relevant guidelines.

The scope of the assessment included the following:

1. Identification of the existing waste generated by the approved project and existing waste management measures

- 2. Assessment of the predicted waste generated from the proposed modification during construction and operation, including:
 - Identification of waste streams and classification of the waste in accordance with the current guidelines
 - Providing estimates/details of the quantity of each waste type, stockpile locations and volume estimates
 - Identification of waste management strategies and measures to minimise the waste generated, re-use waste, or to lawfully recycle or dispose of waste
 - Contingency for managing unexpected waste volumes including waste handling measures such as segregation of waste types and prevention of cross contamination
- 3. Assessment of the potential environmental impacts from the excavation, handling, storage on site and transport of the waste.

Potential environmental impacts due to sediment control, noise and dust and associated management measures are discussed in **Section 7.11** (Soils and contamination), **Section 7.2** (Noise and vibration) and **Section 7.3** (Air quality) respectively.

7.16.3 Existing environment

Waste currently generated from the operation of the Westlink M7 is mainly limited to waste from maintenance activities. This comprises litter collection including street sweeping, debris removal, and removal of sediment from onsite detention basins. Other operational waste generating activities include disposal of materials from replacing electronic items such as light fittings and redundant IT equipment. The operation of the Westlink M7 may also generate waste from periodic activities such as replanting and road re-surfacing. General operational waste management measures for the Westlink M7 include recording waste and recycling volumes monthly.

Operational waste is currently managed through the Westlink Operations and Maintenance Waste Management Sub-Plan (Westlink Services, 2020). Table 7-112 summarises the current waste management practices for waste generated from the operation of the Westlink M7.

Waste stream	Management approach (e.g. treated onsite, re used/ recycled, or disposal location)
Waste from maintenance activities such as filling potholes, re-paving, re- painting and line marking, traffic light maintenance, and replacement or repair of utilities. Waste from maintenance activities includes asphalt, soil/aggregate, steel off- cuts, pipe cut-offs, formwork, painting and sandbags	Existing management approaches for this waste stream include re- use, recycling, and disposal practices. Roadside litter is collected by regular maintenance practices including regular servicing of bins and litter collection and street sweepers. Scrap metal, concrete and asphalt unable to be re-used are kept in an onsite storage bay before being disposed offsite by a licensed transporter to approved crushing and recycling plants. Materials for electrical maintenance (including light globes, lighting fittings, redundant IT equipment and batteries) are disposed offsite by a licensed transporter to approved recycling plants. Cables, non- ferrous metals and steel are stored for collection by a licensed waste transporter. Tyres are stockpiled safely and away from potential hazard areas and are removed by a licensed waste transporter. Potentially contaminated waste that is suspected asbestos is sampled <i>in situ</i> by a suitably qualified consultant and disposed offsite at a waste facility approved by the EPA.

 Table 7-112
 Existing waste management approaches for the Westlink M7

Waste stream	Management approach (e.g. treated onsite, re used/ recycled, or disposal location)
Waste from maintenance vehicles and machinery required to perform maintenance activities including adhesives, lubricants, waste fuels, cleaning products and chemicals, oils, engine coolant, batteries, hoses and tyres	Existing management approaches for this waste stream include storage, recycling, and disposal practices. Liquid wastes including fuels and chemicals are stored onsite in containers on bunded pallets capable of holding at least 110% capacity of the largest tank in the store at a level above the 1:100 year flood. Hazardous waste including air / oil filters rags, pesticides, paints and other chemicals are labelled and stored in sealed containers within bunded areas. This material is disposed offsite at a waste facility approved by the EPA. Used lead acid batteries are stored in covered bunded storage units and recycled offsite as required. Waste tyres are stockpiled safely and away from potential hazard areas removed by a licensed waste transporter for recycling.
Waste from landscaping and vegetation maintenance, including the pruning/maintenance of trees, shrubs and ground cover	Existing management approaches for this waste stream include re- use, storage and disposal practices. Material from pruning or vegetation removal is used on site or mulched for re-use in accordance with the Roads and Traffic Authority <i>Biodiversity Guideline</i> (2011) as well as the EPA order and exemption for mulch under part 9, clauses 91 and 92 of the <i>Protection of the</i> <i>Environment Operations (Waste) Regulation 2014.</i> Where re-use is not possible, topsoil and mulch are kept in storage bays and disposed of at licensed waste facilities. Weed materials that cannot be re-used are disposed as general waste. Triple rinsing procedures are undertaken in accordance with the EPA Waste Classification Guidelines for cleaning and re-using empty chemical containers used for landscape management activities. This reduces the overall hazardous waste disposal and increases container recycling.
Waste from the Westlink M7 including grit, soil and stormwater run-off captured within water quality basins, and other drainage infrastructure	Existing management approaches for this waste stream include re-use and disposal practices. All water quality basins are inspected and maintained regularly. Sediment and vegetation are removed if they impede the function of the motorway and/or drainage, or for safety reasons, and are subsequently disposed offsite at a licensed facility. If a basin's valve has been closed due to potential contamination, water is discharged after appropriate treatment and water quality testing has been conducted and water quality parameters are within applicable limits. Soil samples from sediment basins are also taken by a consultant in the occurrence of a spill along the Westlink M7. Sediment recovered from erosion and sediment control devices (such as basins) that is suitable for re-use is used as general fill material or incorporation in landscaping materials where possible, in accordance with the NSW EPA's Excavated Public Road Material Exemption. Any excess materials (if any) are sent to landfill. Gross Pollutant Traps are checked during regular inspections and material captured is removed and disposed offsite at a licensed facility as required.

7.16.4 Impact assessment

This section assesses the expected waste impacts of the proposed modification during construction and operation, including identification of waste management strategies.

Potential environmental impacts due to sediment control, noise and dust and associated management measures are discussed in **Section 7.11** (Soils and contamination), **Section 7.2** (Noise and vibration) and **Section 7.3** (Air quality) respectively.

Construction

Waste generation

As described in **Section 4.3**, the proposed modification would generate several waste streams during construction including excavated material/spoil, demolition waste, packaging materials, construction material waste, liquid waste, green waste and general waste (e.g. from site offices and kitchens). The types of waste expected to be generated during construction and associated classifications under the *EPA Waste Classification Guidelines* are provided in Table 7-113.

Activity	Potential waste stream produced	Expected waste classification (EPA, 2014)
Site establishment and enabling works (including establishment of construction ancillary facilities, including areas for steel fabrication)	Surplus materials from construction including cement/concrete waste, steel cut offs, rock, and soil, timber and sandbags and packaging waste	 General solid waste (putrescible) General solid waste (non-putrescible) Hazardous waste
Earthworks and drainage works (including topsoil stripping, cut and fill work	Excavated contaminated material	Hazardous wasteSpecial waste
construction of retaining walls, preparation of sites for bridge and road pavement	Excavated non-contaminated material	General solid waste (non-putrescible)
widening, and installation of road drainage)	Green waste (e.g. from cleared vegetation)	General solid waste (putrescible)
	Contaminated water (e.g. generated by a spill, or stormwater captured from a contaminated source)	Liquid waste
Demolition of existing infrastructure (bridge pavement and roadway infrastructure including utilities and other ancillary materials)	Demolition materials including bridge removal materials, kerbs and road surfaces. May also include asbestos	 General solid waste (non-putrescible) Special waste Hazardous waste

Table 7-113 Construction waste types and classification

Activity	Potential waste stream produced	Expected waste classification (EPA, 2014)
Construction activities including minor on site steel fabrication, pavement and bridge widening works including finishing works (such as line marking, installation of roadside	General construction waste including cement, wastewater, steel cut offs, timber formwork, scrap metal, steel, concrete, plasterboards, and packaging material (crates, pallets, cartons, plastics and wrapping material).	 General solid waste (non-putrescible) Liquid waste
furniture/signs, landscaping and demobilisation and rehabilitation of construction ancillary facilities and disturbed areas)	Surplus construction material including fencing, sediment, crushed rock, asphalt, concrete, steel, aggregate, formwork, landscaping material and sand bags.	 General solid waste (non-putrescible)
Temporary work including the construction of work platforms, hard-stand areas, and erosion and sediment controls	General construction waste including timber formwork, scrap metal, steel, concrete, plasterboards and packaging material (crates, pallets, cartons, plastics and wrapping material)	 General solid waste (non-putrescible)
	Sediment and sludge within operational water quality and detention basins and temporary sediment and erosion controls	 General solid waste (non-putrescible) Liquid waste Hazardous waste
Activities at construction ancillary facility site offices and secondary offices	General waste from site offices and amenities including putrescibles, paper, cardboard, e-waste plastics, glass, site litter, cigarette butts, printer cartridges, sewage waste and grey water	 General solid waste (putrescible) General solid waste (non-putrescible) Liquid waste
Operation of construction plant and equipment	Waste from operation and maintenance of construction vehicles and machinery including adhesives, lubricants, waste fuels, cleaning products and chemicals, and oils, engine coolant, batteries, hoses and tyres	 Hazardous waste Special waste Liquid waste
	Clean up waste in the event of an accidental spill of fuel or chemicals	Hazardous wasteLiquid waste

The types and quantities of construction waste generated by the proposed modification would vary throughout construction. The quantities and classifications of all waste streams would be confirmed following finalisation of the detailed design and appointment of the construction contractor. As an initial step, spoil and material volumes for the proposed modification have been estimated. Table 7-114 shows estimated spoil and materials that would be required for the proposed modification.

Type of material	Estimated quantity (m ³)
Potential acid sulfate soils	<10
Total fill material required	30,000
Total cut material to be excavated	204,000
Total net spoil to be exported offsite	174,000
Mulch	<10

Table 7-114	Estimated spoil and other waste during construction
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As indicated in Table 7-114, around 30,000 cubic metres of fill would be likely to require stockpiling. Potential spoil for re-use would be confirmed during detailed design, however, is expected to be limited.

Figures 4-8 to 4-12 show the location of construction ancillary facilities which could be used for stockpiling purposes. The final type, use, location and number of construction ancillary facilities and stockpiling locations would be determined by the construction contractor and identified in a site establishment management plan and/or CEMP.

Waste management

Likely waste management approaches have been formulated against the *Waste Avoidance and Resource Recovery Act 2001* (NSW) and as such, regard has been given firstly avoid generation of waste,, then consider potential for re-use, re-processing or recycling waste, followed by waste disposal as a last resort. Where disposal is required, this is required to be in accordance with Section 143 of the POEO Act to a place that can lawfully accept it.

There are a variety of NSW EPA Resource Recovery Orders that exist for specific waste material. The opportunity to re-use the waste under the Order would be addressed in the development of a Construction Waste and Resource Management Plan (CWRMP). Relevant Orders include, but are not limited, those for the following waste types:

- Excavated natural material and excavated public road material
- Food waste (liquid) and food waste (solid)
- Mulch and organic
- Recovered aggregate
- Reclaimed asphalt pavement
- Slag (stony waste matter)
- Stormwater
- Treated drilling mud
- Treated grease trap waste
- Tyres.

The management strategies identified in Table 7-115 have been incorporated into the environmental mitigation measures provided in Table 7-117. Waste streams would be segregated onsite to minimise waste going to landfill and ensure reuse and/or disposal at appropriate facilities. Potential waste and recycling facilities located near the proposed modification which could be considered for use during construction are listed in Table 7-116.

Table 7-115 Construction waste classification and management strategies

Expected Waste Classification (EPA, 2014)	Management strategies
(EPA, 2014) General solid waste (putrescible and non- putrescible)	 Avoidance/minimisation Management practices for road material waste would consider the NSW EPA's Excavated Public Road Material Order. Where possible, the amount of packaging waste would be minimised by avoiding the ordering of unnecessary or excess supplies and by buying in bulk. Excavation would be minimised through various measures including a consideration of construction ancillary facility locations that require minimal re-grading to provide a level surface. The extent of vegetation clearing required would be minimised through detailed design and construction planning. Re-use/recycling/recovery Where reasonable and feasible, cost-effective suppliers that use sustainable, recycled and/or recyclable material would be used. In the event of excess supplies due to accidental over-ordering or design changes, excess material would be re-used, returned to the supplier or recyclable would be sorted for recycling or disposal at an approved facility. The segregation of recyclables from the general waste stream would maximise resource recovery and minimise materials sent to landfill. Staff would be collected regularly by a contractor. Waste and recycling generated by the site offices would be source-separated into dedicated bins, such as: General waste Co-mingled recycling Paper/cardboard Toner/cartridges E-waste.
	• Material to be re-used on site would be stockpiled temporarily within the construction ancillary facilities and then transported to the receiving construction work site when required. Surplus construction materials that are not able to be used during construction would be stored/stockpiled by the construction contractor. This may be re-used in other Transport projects such as the M7/M12 Interchange which would be constructed concurrently with the proposed modification. Other measures following this approach

Expected Waste Classification (EPA, 2014)	Management strategies
	include transfer to approved Transport stockpile sites for re-use on a future project, in accordance with Roads and Maritime Stockpile Exemption 2015 and associated Stockpile Site Management Guideline, or transport offsite for re-use by a third party. Onsite assessment/treatment of surplus or waste construction materials, including visual assessment, separation and sorting, and appropriate storage/stockpiling, would facilitate the potential re-use of this material.
	 Sediment and sludge removed from temporary sediment and erosion controls would be de-watered and re-used onsite (for example in landscaping works) or in non-structural fill embankments where possible.
	 The reuse of asphalt would take into consideration the NSW EPA's Reclaimed Asphalt Pavement Order and Exemption. In consideration with this Exemption, aggregate materials could be re-used once they have been recovered.
	 Vegetation to be cleared would be mulched and re-used onsite for site reinstatement and landscaping where possible, including consideration of the NSW EPA's Mulch Resource Recovery Order and Mulch Exemption, and the Pasteurised Garden Organics Order and Exemption. Where re-use on site is not appropriate, the re-use of vegetation material and mulch on other Transport projects would also be considered, such as the use of timber for fauna habitat and root balls in the rehabilitation of waterways.
	 Remaining native vegetation waste that is not re-used onsite would be discussed with relevant council(s), Western Sydney Parklands Trust (as relevant) and Landcare groups and other relevant government agencies to determine if the salvaged items could be used by others in local habitat enhancement, beneficial re-use and rehabilitation work.
	Disposal
	 Where on site re-use is not a viable option, material would be transported offsite for potential re-use or disposal at a licenced receival facility. Disposal of surplus materials to landfill would be avoided where possible.
	 Native vegetation that cannot be re-used would be sent to a licensed facility. Weeds and weed containing material would be managed in accordance with the <i>Biosecurity Act 2015</i> (NSW) and relevant guidelines. Weed management is further described in Section 7.6.
Hazardous waste /	Avoidance/minimisation
restricted waste	 Erosion and sediment controls, appropriate bunding of chemicals and use of water quality control measures would be implemented (as described in Section 7.11) to minimise the potential risk of surface water contamination.
	Re-use/recycling/recovery
	• Onsite testing of high probability salinity areas, potential acid sulfate soil occurrence, and contaminated material would be undertaken. Sites would be selected according to a register of known or suspected areas for contamination from site investigations and an Asbestos Management Plan. Remediation practices would be undertaken as required based on the outcome of the detailed site surveys. An overview of the measures taken to minimise the impact of contaminated materials is provided in

Expected Waste Classification (EPA, 2014)	Management strategies	
	Section 7.11 and further detailed in Appendix L (Contamination Assessment Report). Although not expected, leachate/contamination from adjacent landfill sites may be encountered during construction. This risk and associated mitigation is addressed in Appendix L (Contamination Assessment Report) and Section 7.11 (Soils and contamination)	
	 The excavation, handling, storage, movement and disposal of contaminated waste material would be carried out in accordance with procedures described in the CWRMP and in accordance with the Work Health and Safety Regulation 2011 (NSW). Where appropriate, remediation works would be integrated with excavation and development works performed during construction and address requirements of <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> (specifically the requirements of the former SEPP 55, now incorporated into this SEPP). 	
	Disposal	
	 Waste from operation and maintenance of construction vehicles and machinery would be collected in specific contaminated waste bins, collected by a contractor and disposed of to a licensed facility. 	
	 Materials collected during spill clean-up would be collected in contaminated waste bins, collected by a contractor and disposed of at an appropriately licensed facility. 	
	 Unexpected contaminated material that is identified during construction is to be segregated from uncontaminated material onsite to prevent cross-contamination, and removed offsite to be disposed of a licensed disposal facility. 	
Special waste	Avoidance/minimisation	
-	• N/A	
	Re-use/recycling/recovery	
	 Tyres and batteries would be collected and taken to recycling facilities. The appropriate facilities would be confirmed during construction planning in consultation with the construction contractor. 	
	Disposal	
	 The management of tyres would be in consideration of the NSW EPA's Recovered Tyres Order (2014). 	
	 If asbestos or other special waste materials are identified, they are to be managed with procedures described in the CWRMP and in accordance with the Work Health and Safety Regulation 2011 (NSW). 	

Expected Waste Classification (EPA, 2014)	Management strategies	
Liquid waste	Avoidance/minimisation	
	• Erosion and sediment controls, appropriate bunding of any chemicals and use of water quality control measures would be implemented (as described in Section 7.11) to minimise potential risk of surface water contamination.	
	Re-use/recycling/recovery	
	Where contaminated water can be adequately treated, it may be re-used onsite for construction activities, such as dust suppression.	
	Disposal	
	• Liquid waste would be collected and transferred to a dedicated recycling facility where possible, to ensure diversion from landfill.	
	• Contaminated water quantities are anticipated to be negligible or minor and are to be collected and disposed of by a suitably licensed contractor.	
	• Sewage would also be collected regularly by a licensed contractor where temporary amenities are used (i.e. not connected to the town sewerage system).	
	Waste management practices in regard to stormwater would consider the NSW EPA's Stormwater Order.	

Potential waste and recycling facilities	Waste streams accepted		
St Marys Resource Recovery Facility	Construction and demolition wasteVENM, ENM and soils		
Cleanaway Erskine Park Resource Management Facility	 Construction and demolition waste VENM, ENM and soils General solid waste (non putrescible) Commercial and industrial 		
Boral Widemere Resource Recovery Facility, Wetherill Park	 General solid waste (non putrescible) Construction and demolition ENM Tiles and masonry Quarry products (> 20mm) Wet concrete batching plant stirrer waste (liquid) 		
Lucas Heights Resource Recovery Park	 Asbestos Construction and demolition waste E-waste Gas bottle Lead acid batteries Liquid waste Metal Mixed putrescible Non-putrescible Paper and cardboard Soil Tyres Organic waste Waste oil 		
St Marys Liquid Waste Facility	Liquids and hazardous waste		
SUEZ Wetherill Resource Recovery Facility/transfer station	 Asbestos Batteries Paper and cardboard E-waste Garden and food waste Gas bottles Hazardous waste Metal Mixed putrescible Non-putrescible Plastic White goods Wood waste 		
SUEZ Kemps Creek Resource Recovery Park	 Garden waste Mixed waste Biosolids from sewage plants 		

Table 7-116 Potential waste and recycling facilities located near the proposed modification

Potential waste and recycling facilities	Waste streams accepted	
Cleanaway Eastern Creek Solids Waste Services	 General waste and recycling Hazardous regulated waste Waste oil Construction demolition waste Liquid waste Organic waste Health and biohazardous waste E-waste recycling 	
Is Recycling at 9 Bentley Street, Wetherill Park	Expanded polystyrene	

The construction of the proposed modification would occur at the same time as the M12 Motorway. The M12 Motorway project was granted approval in April 2021 and would include an interchange with Westlink M7 near Elizabeth Drive at Cecil Park. This would bring about opportunities for waste minimisation at the proposed M12 interchange site with the proposed modification of the Westlink M7. For example, the Westlink M7 interchange works for the M12 Motorway requires extensive fill areas, which may allow material excavated from the proposed modification to be re-used rather than exported for long term stockpiling or for disposal. Opportunities for waste avoidance and re-use and comanagement of resources between the two projects would be identified during detailed design and construction planning, and during the construction stage.

Operation

At operation, the proposed modification is not anticipated to result in any changes to the waste types and quantities currently generated as part of the management of the existing Westlink M7. Waste generated from the proposed modification would be subject to the existing operational waste management measures currently in place for the Westlink M7 (refer **Section 7.16.3**). Further operational mitigation and management measures related to contamination that would be required for the operation of the proposed modification are addressed in **Section 7.11** (Soils and contamination).

7.16.5 Management and mitigation

Based on the assessment above, the mitigation measures described in Table 7-117 are proposed to be implemented in order to manage the potential impacts associated with waste during construction of the proposed modification.

Note that measures related to asbestos containing material is contained in **Section 7.11** (Soils and contamination). Measures related to sediment control, noise and dust and associated management measures are discussed in **Chapter 7.11** (Soils and contamination), **Chapter 7.2** (Noise and vibration), and **Chapter 7.3** (Air quality) respectively.

Table 7-117	Mitigation	measures

Impact	ID	Mitigation measure	Responsibility	Timing
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 Identification of reporting requirements and procedures for waste tracking required 	Construction contractor	Prior to construction
	W2	Wherever feasible and reasonable, construction materials will be sourced locally from within the Sydney region.	Construction 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. 	Construction contractor	Prior to construction

Impact	ID	Mitigation measure	Responsibility	Timing
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.	Construction 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.	Construction contractor	Construction