



TransGrid

Powering Sydney's Future

Potts Hill to Alexandria transmission cable project

Construction Waste Management Plan

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TransGrid: State Significant Infrastructure - Powering Sydney's Future - Development and operation of a new 330 kV underground cable circuit



CONSTRUCTION WASTE MANAGEMENT PLAN (CWMP)

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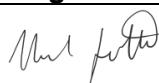
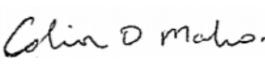
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Table of Contents

1	Introduction	5
1.1	Context	5
1.2	Scope and objectives of the CWMP	5
1.3	Changes since the Project EIS.....	5
1.4	Project environmental management system overview	6
1.5	Consultation for preparation of the CWMP	6
2	Environmental Requirements.....	8
2.1	Legislation.....	8
2.2	Guidelines and Standards	8
2.3	Minister's Condition of Approval	8
2.4	Environmental Mitigation and Management Measures	8
3	Environmental aspects and impacts	13
3.1	Potential construction impacts.....	13
3.2	Waste generating activities	13
3.3	Sources.....	13
3.3.1	Spoil generation.....	13
	Contaminated spoil	13
	Acid Sulfate Soil.....	14
3.3.2	General Solid Waste (Putrescible)	14
3.3.3	Liquid waste	14
3.4	Estimated Waste Quantities	14
4	Waste management.....	16
4.1	Waste management hierarchy.....	16
4.1.1	Waste Avoidance and Reduction	16
4.1.2	Waste Handling and Storage	17
4.1.3	Waste Recovery and Exemptions	17
4.1.4	Treatment & Disposal	17
4.2	Classification of waste streams	18
4.3	Classification of potential waste streams and potential for reuse	18
4.4	Waste exemption	23
4.5	Transportation Modes and Route	25
5	Environmental control measures.....	26
6	Compliance Management	30
6.1	Roles and responsibilities.....	30
6.2	Training and Induction.....	30

6.3	Monitoring and inspections.....	31
6.4	Non-conformances.....	31
6.5	Recording.....	31
6.5.1	WasteLocate.....	31
6.6	Reporting	31
6.7	Audits.....	31
6.8	Licenses and permits	31
7	Review and improvement	34
7.1	Continuous improvement	34
7.2	CWMP update and amendment	34
8	References.....	34
	Appendix 1– Waste Classification Maps	35
	Appendix 2 – Proposed Waste Facilities.....	36
	Appendix 3 – Waste Management Register Template.....	38
	Appendix 4 – Waste Material Tracking Form	39
	Appendix 5 – Consultation.....	41

1 Introduction

1.1 Context

The Powering Sydney’s Future – Potts Hill to Alexandria transmission cable project (the project) involves the construction of 330kV underground cables between TransGrid’s Rookwood Road substation in Potts Hill at Potts Hill and the Beaconsfield West substation Alexandria.

The NSW Department of Planning, Industry and Environment (DPIE) has assessed the State Significant Infrastructure (SSI-8583) and has granted Infrastructure Approval on 14 May 2020 in accordance with Section 5.19 of the Environmental Planning and Assessment Act 1979 (EP&A Act).

The purpose of this Construction Waste Management Plan (CWMP) is to address:

- the requirements of the Minister’s Conditions of Approval (CoA) for SSI-8583;
- the Environmental Management and Mitigation Measures (EMMMs) listed in the *Powering Sydney’s Future Potts Hill to Alexandria transmission cable project* Environmental Impact Statement (EIS) as documented in the Amendments Report; and
- applicable environmental legislation.

TransGrid and its contractors will construct the project infrastructure.

1.2 Scope and objectives of the CWMP

This CWMP details how TransGrid and its contractors proposes to manage resource, waste generation, waste handling, storage and disposal for the duration of construction works for the Project.

The waste management objectives for the Project are to:

- manage waste in accordance with the conditions of approval;
- manage wastes in accordance with relevant legislation and policy requirements; and
- design and construct the project so that waste is managed in accordance with the best practise waste management principles.

This CWMP is a sub-plan of the Construction Environmental Management Plan (CEMP) and is applicable to all activities during construction of the Project, including all areas where physical works will occur or areas that may be otherwise impacted by the construction works, and under the control of TransGrid and its contractors. All staff and sub-contractors are required to operate fully under the requirements of this plan and related environmental management sub-plans, over the full duration of the construction program.

1.3 Changes since the Project EIS

The following changes have been implemented since the Environmental Impact Statement (EIS) was completed.

- Trench width reduced to 1.6m wide, where possible.
- Additional locations have been included for under-boring works, which has reduced waste compared to open trenching.

- Additional chemical assessment undertaken to increase accuracy of areas insitu containing potentially restricted, hazardous or special waste and by extension limit volumes of these waste generated.

1.4 Project environmental management system overview

To achieve the intended environmental performance outcomes, TransGrid and its contractors have established, implemented, maintained and continually improves an EMS.

The Project Environmental Management System (EMS) is described in Figure 1-1.

The EMS consists of environmental plans, including this sub-plan, procedures, protocols and tools as set out below and illustrated in Figure 1-1.

1.5 Consultation for preparation of the CWMP

Consultation with relevant government agencies during plan development is a requirement of condition of approval C3 of SSI-8583.

Consequently, this plan was developed in consultation with the Innerwest Council, City of Sydney Council, and Canterbury-Bankstown Council. All comments have been addressed, refer Appendix 5.

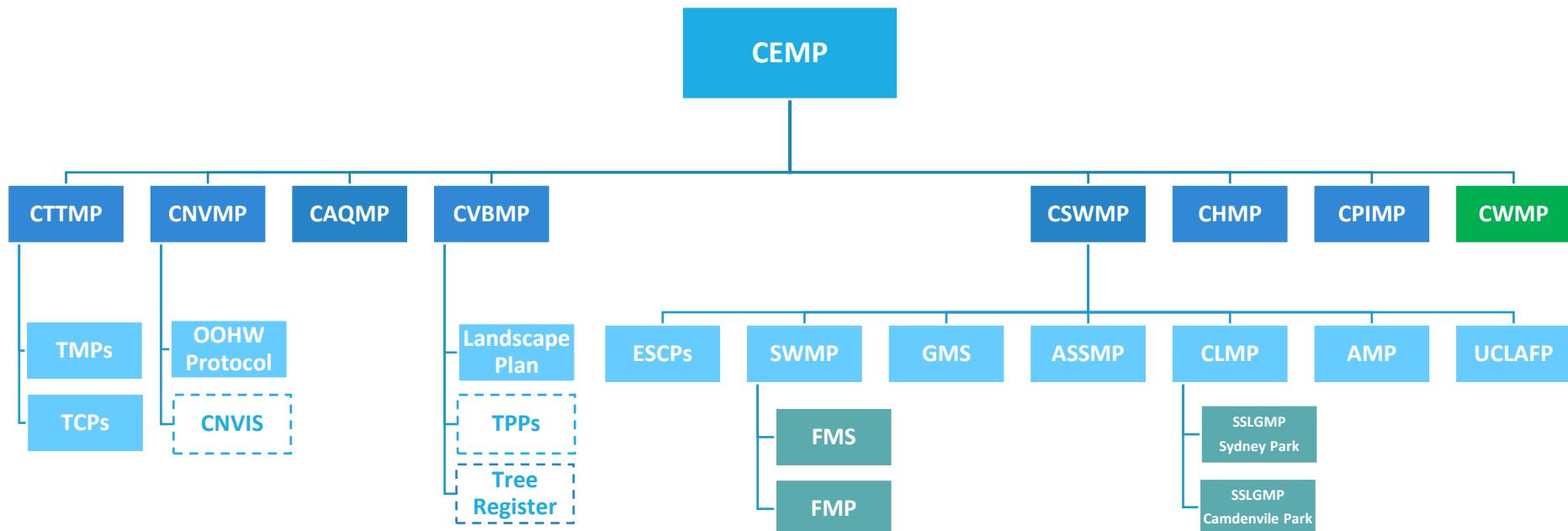


Figure 1-1 Project environmental management system

2 Environmental Requirements

2.1 Legislation

The following legislations and regulations are applicable to this CWMP.

- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations Act 1997
- Protection of the Environment Operations (Waste) Regulation 2014
- Contaminated Land Management Act 1997
- Environmentally Hazardous Chemicals Act 1985
- Noxious Weeds Act 1993

Refer CEMP Appendix A1 Legal Requirements Register for further information.

2.2 Guidelines and Standards

The main guidelines, specifications and policy documents relevant to this plan include:

- NSW EPA Waste Classification guideline 2014
- NSW EPA Asbestos and Waste Tyres Guidelines 2015
- Waste Avoidance and Resource Recovery Strategy 2007
- Resource Recovery Orders and Exemptions 2015
- NSW EPA Standards for Managing Construction Waste in NSW 2019.

2.3 Minister’s Condition of Approval

This CWMP is developed in accordance with the Conditions of Approval from the DPIE (2020) as described in Table 2-1.

2.4 Environmental Mitigation and Management Measures

The CWMP is developed in accordance with the Environmental Mitigation and Management Measures (EMMMs) included in the Amendments Report as shown in Table 2-2.

Table 2-1 Conditions of Approval

CoA No.	Condition Requirements	Document Reference	How addressed
C3	The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan in Table 1. h) Waste – Relevant council(s)	Section 1.5 Appendix 5	A Sub-Plan has been prepared which incorporates all mitigation and management measures identified in the Project EIS and Amendments Report. Consultation was undertaken with relevant the government agencies: <ul style="list-style-type: none">• Canterbury Bankstown Council• Inner West Council• City of Sydney Council
E37	Waste generated during construction and operation must be dealt with in accordance with the following priorities:	Section 4 Table 5-1.	The management measures that will be applied to waste generated during construction are detailed in Section 4. Management will include the prioritisation of waste according to the principles of the waste management hierarchy. Table 4-2 and Table 5-1 details the strategies and mitigation measures that will be undertaken to avoid and reduce the generation of waste. Waste treatment and disposal processes will be utilised when reuse, recycling or recovery is not feasible. These methods are outlined in Section 4 and detailed in Table 5-1.
	(a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced;		
	(b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and		
	(c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of.		
E38	The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the <i>Protection of the Environment Operations Act 1997</i> , the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> , and orders or exemptions under the regulation.	Section 4, Table 5-1, WM07, WM10, WM15, WM16	The waste storage, treatment, processing and disposal protocols, as outlined in Section 4 have been developed in compliance the <i>Protection of the Environment Operations Act 1997</i> , and the <i>Protection of the Environment Operations (Waste) Regulation 2014</i> .
E39	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the <i>Environment Operations (Waste) Regulation 2014</i> , or to any other place that can lawfully accept such waste.	Section 4 Table 5-1.	The storage, treatment and disposal of waste off-site will only occur at a facility licensed by the EPA. To ensure waste management practices are being followed, a waste tracking register will be maintained and waste facility receipts audited. Waste disposal requirements are outlined in Section 4.1.4 and ECM's (vis.WM07, WM10, WM15, WM16) A register of waste treatment and disposal facilities is provided in Appendix 2 .
E40	All waste must be classified in accordance with the EPA's <i>Waste Classification Guidelines</i> , with appropriate records and disposal dockets retained for audit purposes.	Section 4 Table 5-1. Section 6.5	All waste will be classified in accordance with the NSW EPA's <i>Waste Classification Guidelines</i> as summarised in Sections 4.2. Relevant documents and disposal dockets will be retained for audit purposes (ECM-WM24) and section 6.5.

Table 2-2 Environmental Mitigation and Management Measures

Impact	ID	Measure	Document Reference	How addressed
Waste management				
Waste minimisation	WM1	<p>The following waste minimisation strategies will be implemented:</p> <ul style="list-style-type: none"> • use of recycled materials (i.e. recycled content for asphalt and concrete including the use of fly ash) wherever feasible; • use of wastewater or recycled water to reduce potable water demand for construction activities; and • use of modular, precast/prefabricated structures, where feasible. 	Section 4 Table 5-1.	All waste will be managed in accord with the Waste Hierarchy (Sect 4.1), recycling opportunities (ECM- WM02); Use of Recycled material and excavation (ECM's WM03, WM04, WM06, WM08); and use of Prefabricate material (ECM-WM03)
General	WM2	<p>Waste will be managed in accordance with the waste hierarchy established in the Waste Avoidance and Resource Recovery Act 2007 (WARR Act). This will include the:</p> <ul style="list-style-type: none"> • classification of waste during construction in accordance with the current guidelines; • segregation of waste at construction laydown areas and substations (within appropriate bins) for ease of recycling/reuse; • procurement of materials on an as needed basis to avoid waste due to over-ordering; and • investigating opportunities to reuse materials where feasible. 	Section 4 Table 5-1. Refer to Contaminated Land Management Plan (CLMP)	<p>The waste management hierarchy is detailed in Section 4.1. Key requirements of the waste management hierarchy will be communicated to workers through the site induction, toolbox talks, daily pre-starts and within relevant ECMS(ECM-WM01)]</p> <p>This has been included as mitigation measure (ECM vis WMO2, WM04, WM08, and WM09).</p>
Construction waste	WM3	<p>Waste will be managed (classified, handled and stored) in accordance with relevant state legislation and government policies (including the NSW EPA Waste Classification Guidelines).</p> <p>All waste to be disposed off-site will be directed to a waste management facility that is lawfully permitted to accept that type of waste. Records of waste tracking and disposal will be maintained.</p>	Section 4 Table 5-1 Section 6.5	<p>All waste will be classified following the EPA's Waste Classification Guidelines and the Waste Classification Procedure.</p> <p>The waste classification guidelines outlined in Section 4 will be followed to ensure waste is correctly categorised prior to treatment, storage or offsite disposal. Communication of guidelines will occur during toolbox talks, daily pre-starts and will be documented on ECMS.</p> <p>This has been included as mitigation measure ECM vis WM01, WM02 and WM24</p>

Spoil management	WM4	The Waste Management Plan developed for the project as part of the CEMP will outline the requirements for spoil management. The plan will identify: <ul style="list-style-type: none"> • spoil generation activities; • spoil generation location; • spoil management hierarchy; • on-site management, including stockpile sites; • spoil reuse options; • spoil disposal locations; • spoil transport modes and routes; and • material tracking requirements. 	Section 4 Table 5-1	Spoil generation activities are described Table 4-2. Spoil generation locations are shown in the maps included in Appendix 1 . The spoil management hierarchy is included as Figure 4-1. Stockpiles may be located at the laydown area in Camdenville Park. Spoil reuse options are described in Table 4-2. Spoil transport modes and routes are described in Section 4.5.
Asbestos waste	WM5	The disturbance, movement and disposal of asbestos containing materials will be carried out in accordance with the <i>Work Health and Safety Regulation 2011</i> and other relevant guidelines. The handling and disposal of asbestos waste will be tracked in accordance with the Asbestos Management Plan (refer to CT6).	Section 4 Table 5-1 Refer to AMP	The handling and disposal of asbestos and clinical wastes will be managed in accordance with the AMP. Section 5 outlines waste handling procedures that will be communicated to staff through the site induction, toolbox talks, and daily pre-starts and will be documented in the ECMs for specific work areas. This has been included as mitigation measure (ECM-WM11-WM13 and is addressed in detail in the AMP (Section 4).
Construction wastewater	WM6	Wastewater not used on-site will be disposed off-site or discharged into the local stormwater system or sewer system under a trade waste agreement in accordance with the requirements of the POEO Act.	Section 4 Table 5-1 Refer to CSWMP	This has been included as mitigation measure i.e. ECM-WM07. Wastewater not used on-site will be disposed off-site or discharged into the local stormwater system or sewer system if a trade waste agreement is obtained from Sydney Water.
Spoil reuse	WM7	Reasonable and feasible options will be investigated to reuse spoil (where it can be achieved safely) in accordance with the POEO Act and WARR Act.	Section 4 Table 5-1	Regular inspections and audits will be conducted to ensure waste disposal and resource use is minimised.
Concrete recycling	WM8	Opportunities to recycle concrete (i.e. from excavation of concrete roads) will be investigated.	Section 4 Table 5-1	Resource and material minimisation initiatives will be explored and implemented where reasonable and feasible. This has been included as mitigation measure i.e. ECM-WM04, WM06 & WM08).

3 Environmental aspects and impacts

3.1 Potential construction impacts

Potential impacts associated with construction waste likely to be generated by the project include:

- inadequate storage, handling, transportation and classification of waste, resulting in waste contamination, mixing of different waste classes, inappropriate transportation and disposal to an inappropriate waste facility or unlawful disposal;
- contamination of soil, surface water and/or groundwater could occur due to spills from inappropriate storage of waste material, improper bunding for liquid waste storages, in appropriate stockpiling etc;
- dust impacts could result from the inappropriate soil storage management (both in trucks during transportation and at stockpile sites);
- transport and disposal of liquid and solid wastes could lead to environmental pollution and potential indirect impacts on public health;
- incorrect storage, handling and disposal of putrescible waste from work sites or site offices, this could lead to an increase in vermin and nuisance effects on surrounding properties; and
- incorrect classification, handling and/or disposal of contaminated waste, including contaminated soil and asbestos containing materials, could lead to environmental pollution or increased public health risks.

These potential waste management impacts would be managed through the implementation of the waste management measures identified in Section 4 and the ECMs in Section 5

The waste streams expected to be generated from the project are discussed in section 3.3 below.

3.2 Waste generating activities

Activities during the construction of the project that would generate waste include earthworks, removal of existing road pavements, vegetation clearing, conduit installation, joint bay construction, cable pulling and jointing, vehicle and plant wash-down, maintenance of equipment, substation upgrading, stormwater and groundwater dewatering and on-site offices.

3.3 Sources

3.3.1 Spoil generation

Spoil consists of soil, rock or dirt excavated as part of the proposed works and removed from its original location. It is estimated that approximately 129,000 cubic metres of spoil would be generated during construction. Spoil will be generated from trenching and excavation works.

Contaminated spoil

An assessment of known and potential contamination has been undertaken with the details described in the Environmental Impact Statement (EIS) and Contaminated Lands Management Plan (CLMP).

The assessment identified a number of areas with contamination or a potential for contamination, including asbestos within unclassified fill and various other contaminants along the transmission cable route. Further assessments will be undertaken for areas of potential contamination and, in the event of unexpected contamination finds. Refer to the CLMP.

Hazardous or special waste arising from the construction of the project will be handled and disposed of in accordance with the *Work Health and Safety Regulation 2011* and *NSW EPA Waste Classification Guidelines* (NSW EPA, 2014), *NSW Asbestos and Waste Tyres Guidelines* and the CLMP. Likely sources of hazardous waste include areas already identified as containing asbestos from investigations, and the former landfill site of Camdenville Park and Sydney Park. Similarly substation upgrading may generate such wastes.

Acid Sulfate Soil

Areas of the alignment containing Acid Sulfate Soil (ASS) have been identified and can be found in the ASSMP. ASS will be managed in accordance with the ASSMP. Refer to CSWMP.

3.3.2 General Solid Waste (Putrescible)

These are wastes pre-classified as putrescible e.g. household waste (including general office waste), waste from litter bins collected by or on behalf of local councils and food wastes.

The source of general putrescible waste will be from the operation the site compounds, laydown yards and at the alignment sections where work is actively being conducted by site crew.

3.3.3 Liquid waste

Liquid waste generated as a result of the project will include sullage, pumped water from trenches, drill mud and washdown water used for vehicles and equipment.

As the project would utilise potable water as its primary water source, opportunities to reuse wastewater for on-site uses (e.g. dust suppression) will be investigated during construction planning.

3.4 Estimated Waste Quantities

Some waste streams will be reused or recycled while other waste streams will require disposal such as:

- bitumen, concrete and asphalt as a result of removal of existing hard surfaces
- excavated earth material that is unsuitable for re-use
- waste water, oils, liquids and fuels from maintenance of construction plant and equipment
- wastes from site compounds (including sewage waste, putrescible waste etc.)
- building waste (packaging material, scrap metal, plastic wrapping, cardboard)
- excess building materials that can't be reused

- vegetation from clearing activities
- cable and conduit off-cuts
- timber cable drums
- timber pallets
- redundant equipment
- other general construction wastes
- liquid wastes from leachate and groundwater dewatering
- liquid wastes from underboring.

Table 3-1 Waste Estimates – Key Waste streams

Waste classification	Example waste streams and properties	Estimated waste (t)
Virgin excavated natural material	natural material (such as clay, gravel, sand, soil or rock fines)	95,880m ³
General solid (non-putrescible) waste	Spoil, metal, timber, paper and cardboard, glass, plastic, sediment and litter collected from stormwater treatment plants, asphalt, cured concrete	18,700m ³
General solid (putrescible) waste	Food waste, other organic matter.	
Restricted solid waste	Similar to general solid waste, however with up to four times the concentration contaminants.	1600m ³
Liquid waste	Drill slurry, groundwater and construction wastewater.	[a]
Hazardous waste	Contaminated soil	920m ³
Special Waste – Asbestos	Asbestos, waste tyres, classified by EPA gazettal notice.	580m ³
ASS	Acid Sulfate soils.	8320m ³

[a] Liquid wastes may be generated; however the estimated quantity is subject to a range of factors including local groundwater conditions, weather, final depth of excavation and duration of activities and will be determined in detailed design.

4 Waste management

4.1 Waste management hierarchy

The below (Figure 4-1) hierarchy for managing waste will be implemented during construction.

Waste will be assessed and managed from most preferred option to least preferred option which includes the following.

- **Avoid** unnecessary resource consumption and by extension waste generation;
- **Reduce** quantity of waste generated during activities by modifying work methodology and limiting work impact to the minimum possible area.
- **Reuse** potential waste resources where possible both on the Project and off the Project.
- **Recycle** e.g. transporting excess materials to a recycling facility.
- **Disposal** – transporting waste to a landfill should be a last resort and should only be implemented where other higher order measures in the waste hierarchy are not suitable for waste management. Excess waste materials for disposal must be disposed lawfully.

4.1.1 Waste Avoidance and Reduction

Works must be conducted in accordance with project design and where possible, work methodologies will be modified to avoid waste generation, and reduce waste generated where waste avoidance is not feasible. Further, work methodology will consider methods that allow for higher hierarchy of waste management.

For example if a methodology can allow for waste reuse on the project that method is preferred over a method that allows for waste generated to be reused off the project or recycled which is preferred to a method that generates waste suitable only for disposal to landfill.

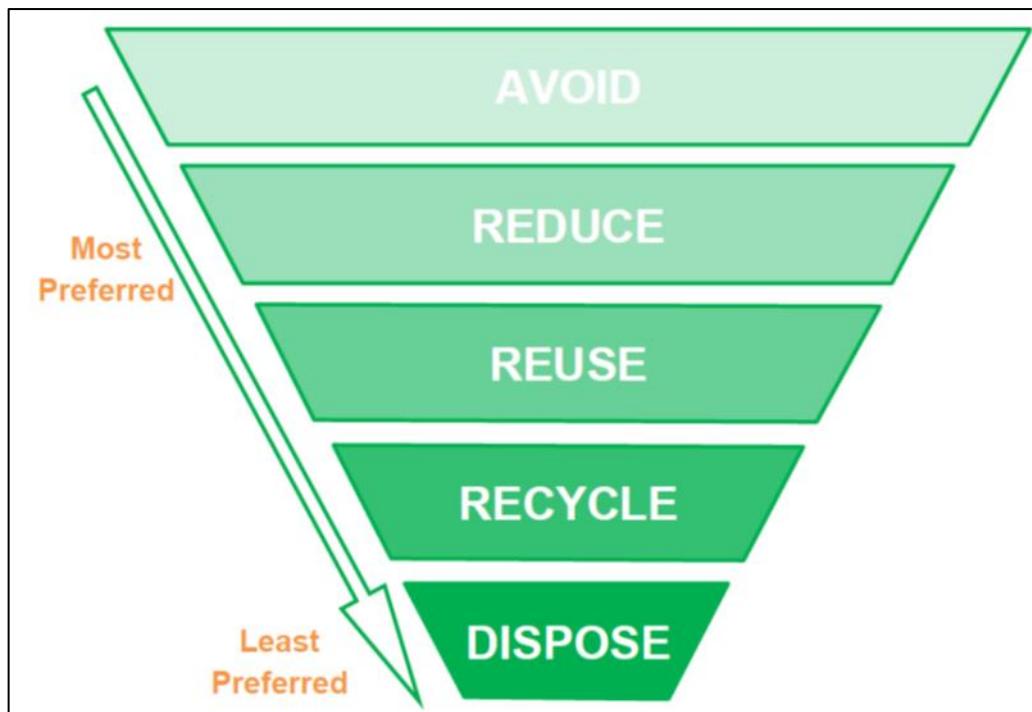


Figure 4-1 Hierarchy for Managing Waste

4.1.2 Waste Handling and Storage

Waste segregation and storage will be undertaken on the project to facilitate reuse and recycling.

Waste storage will be according to waste streams and relevant classifications. Further, measures will be implemented to ensure waste mixing is avoided.

Waste will be segregated onsite into clearly labelled dedicated trucks/bins/bays/areas for either reuse on the project, reuse off the project or collection by a waste contractor for disposal to a licensed waste facility. Refer to the AMP for asbestos waste handling and storage.

Project training will include waste segregation, storage and handling.

4.1.3 Waste Recovery and Exemptions

Where waste is to be taken for reuse off the project, the waste must be assessed and comply with the relevant *NSW EPA Resource Recovery Order*. Further, ensure the waste receiver is complaint with the relevant *NSW EPA Resource Recovery Exemption*.

Where there is no existing approved resource recovery order and exemption, an application will be made to the NSW EPA for resource recovery order and exemption.

4.1.4 Treatment & Disposal

If waste material is to be taken off the project, it must undergo waste classification in accordance with *NSW EPA Waste Classification Guidelines Part 1: Classifying waste 2014*.

Where waste requires treatment prior to disposal, the waste treatment must be in accordance with the *NSW Waste Guidelines Part 2: Immobilisation of waste 2014*.

Acid Sulphate Soils (ASS) must be managed in accordance with *NSW EPA Waste Classification Guidelines Part 4: Acid Sulfate Soils 2014* and in accordance with the ASSMP.

Wastes that are unable to be reused or recycled may be exported to an EPA licensed waste facility for storage, treatment, processing, reprocessing or disposal. Disposal of waste at these facilities must include tracking of waste vehicles, audits of waste facility receipts and cross verification with the facility. Details of waste types, volumes and destinations are to be recorded in the Waste Management Register (**Appendix 3**). In addition, all asbestos or tyre waste over 100kg or 10m³ in one load must be tracked through NSW EPA's WasteLocate service <https://wastelocate.epa.nsw.gov.au/>. Wastewater will be discharged offsite in accordance with the CSWMP.

Nominated materials waste and disposal facilities are included in **Appendix 2**. Additional facilities may be utilised subject to the approval of the Environment and Sustainability Manager.

4.2 Classification of waste streams

Where waste cannot be avoided, reused or recycled, it will be classified and appropriately disposed to an appropriately licensed facility. The classification of waste is undertaken in accordance with the *EPA Waste Classification Guidelines Part 1: Classifying Waste (2014)*. This document identifies six classes of waste: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible). The six-step process to classifying waste is shown in Table 4-1

4.3 Classification of potential waste streams and potential for reuse

The types of wastes which may be generated during construction are detailed in Table 4-2 together with storage, handling and identification of potential reuse, recycling and disposal methods. Pre-classification of wastes such as **Appendix 1** may be used in place of Table 4-2.

Table 4-1 Six step waste classification approach from EPA Waste Classification Guidelines Part 1: Classifying Waste (2014).

Step 1: Is it 'special waste'?	<p>Establish if the waste should be classified as special waste. Special wastes are clinical and related, asbestos, waste tyres. Definitions are provided in the guidelines.</p> <p><u>Notes:</u></p> <ol style="list-style-type: none"> Asbestos and clinical wastes must be managed in accordance with the requirements of Clauses 42 and 43 of the Protection of the Environment Operations (Waste) Regulation 2005. Where asbestos is mixed with other waste to form asbestos waste, the generator must continue to assess the waste in accordance with the remainder of the steps in this guide. Asbestos waste can only be disposed of at a waste facility that can lawfully receive asbestos and other class of waste with which it is mixed (if any). <p>If it is established that the waste is not special waste, progress to waste classification under step 2.</p>
Step 2: If not special, is it 'liquid waste'?	<p>If it is established that the waste is not special waste it must be decided if it is 'liquid waste'. Liquid waste means any waste that: has an angle of repose of less than 5° above horizontal becomes free-flowing at or below 60° Celsius or when it is transported is generally not capable of being picked up by a spade or shovel.</p> <p>Liquid wastes are sub-classified into:</p> <ul style="list-style-type: none"> Sewer and stormwater effluent Trackable liquid waste according to Protection of the Environment Operations (Waste) Regulation 2005 Schedule 1 Waste to which waste tracking requirements apply Non-trackable liquid waste. <p>If it is established that the waste is not liquid waste, progress to waste classification under step 3.</p>
Step 3: If not liquid, has the waste already been pre-classified by the NSW EPA?	<p>The EPA has pre-classified several commonly generated wastes in the categories of hazardous, general solid waste (putrescibles) and general solid waste (non-putrescibles). If a waste is listed as 'pre-classified', no further assessment is required.</p> <p><i>Note: Wastes that have been classified by the EPA cannot be reclassified by any other party. A list of all the pre-classified waste streams is located in NSW EPA Waste Classification Guidelines – Part 1: Classifying Waste (pg. 7-10).</i></p> <p>If it is established that the waste is not pre-classified waste, progress to waste classification under Step 4.</p>
Step 4: If not pre-classified, is the waste hazardous?	<p>If the waste is not special waste (other than asbestos waste), liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste.</p> <p>Hazardous waste includes items such as explosives, flammable solids, substances liable to spontaneous combustion, oxidizing agents, toxic substances and corrosive substances.</p> <p>Waste classified as hazardous waste cannot be disposed of in NSW and must be treated prior to disposal.</p> <p>If it is established that the waste is not hazardous waste, progress to waste classification under Step 5.</p>
Step 5: If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification	<p>If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine whether it is hazardous, restricted solid or general solid waste (putrescible and non-putrescible).</p> <p>If the waste is not chemically assessed, it must be treated as hazardous.</p> <p>Waste is assessed by comparing Specific Contaminant Concentrations (SCC) of each chemical contaminant, and where required the leachable concentration using the Toxicity Characteristics Leaching Procedure (TCLP), against Contaminant Thresholds (CT).</p> <p>If it is established that the waste is not hazardous or restricted waste, it is then general solid waste. Progress to waste classification under step 6 and determine whether the general solid waste is putrescible or non-putrescible.</p>
Step 6: Is the general solid waste putrescible or non-putrescible?	<p>If the waste is chemically assessed as general solid waste, a further assessment is available to determine whether the waste is putrescible or non-putrescible. The assessment determines whether the waste is capable of significant biological transformation. If this assessment is not undertaken, the waste must be managed as general solid waste (putrescible).</p>

Table 4-2 Classification of waste stream and potential management measures

Waste Type	Storage & Handling Method	Opportunities for potential reuse, recycling, disposal method
Building and Construction Waste		
Vegetation (logs, mulched timber, weeds)	Separate native and weed species Separate temporary stockpiles of materials where space is available; or Load into trucks or skip bins	<ul style="list-style-type: none"> Native Vegetation – Reuse as biodiversity measures such as mulch onsite; or recycled through a licensed contractor or facility or Disposal to licensed waste facility Weeds – Offsite disposal at a licensed facility, or burial onsite.
Excavated top soil	Stockpile separately to subsoil Segregate waste classes Implement CSWMP measures	<ul style="list-style-type: none"> Reuse onsite e.g. landscaping and revegetation; or offsite recycling through a licensed contractor or facility or Disposal to licensed waste facility.
Excavated sub soil	Load into trucks or skip bins or stockpile separately to topsoil Stockpile different waste class in separate storages (bays, skips, stockpiles etc.) Implement CSWMP measures	<ul style="list-style-type: none"> Disposal to licensed waste facility or approved development site Reuse onsite <ul style="list-style-type: none"> <i>Note: Direct reuse of sub-soil may not be possible at the exact locations where sub soil will be excavated as geotechnical thermally stable backfill is required as backfill around conduits. TransGrid and its contractors will explore options associated with treatment and reuse of excavated sub soil.</i>
Excavated rock	Load into trucks or stockpile separately to subsoil and topsoil Implement CSWMP measures	<ul style="list-style-type: none"> Reuse off project at approved development sites Disposal to licenced recycling facility Disposal to licensed waste facility
Contaminated Soils	Contain in separate receptacles or load directly to trucks. Implement CSWMP measures	<ul style="list-style-type: none"> Where the soil chemical properties is consistent with the land use criteria it may be reused as fill material at that location. Disposal to licensed waste facility Where applicable immobilise and reuse on project.
Acid Sulfate Soils (ASS)	Stockpile and treat in accordance with ASSMP, NSW - ASSMAC Manual and NSW EPA Waste Classification Guidelines Part 4: Acid Sulfate Soils Implement CSWMP measures	<ul style="list-style-type: none"> Reuse onsite where consistent with an Acid Sulfate Management Plan which may include use as topsoil or in topsoil blend meeting AS4419; or Neutralisation and reuse as engineering fill where it meets technical requirements; or Disposal to licensed waste facility
Pavements i.e. concrete, asphalt and gravel	Progressive excavation in layers to separate asphalt, concrete, road base and fill layers. Place waste in separate bins or stockpiles where space is available or load directly into trucks for transportation to relevant laydown area or recycling/waste facility	<ul style="list-style-type: none"> Reuse as backfill, off-site recycling or disposal to licensed facility.

Concrete (solids and washouts)	Establish specific areas for concrete washout e.g. construct pit washout or lined sump. Remove concrete when set and place in separate bin	<ul style="list-style-type: none"> • Reuse as backfill or as road base on site • Transfer to offsite recycling facility
Waste water Storm water runoff .e.g. collected in excavations after rainfall; Groundwater infiltration e.g. excavation below water table; Water extraction for construction purposes	Refer to CSWMP.	<ul style="list-style-type: none"> • Reuse for dust suppression, watering revegetation areas, reuse in compaction activities • Dispose to storm water system or sewer system in accordance with CSWMP • Dispose to licensed waste facility
Bulk electrical cabling	Store In metal recycling receptacle	<ul style="list-style-type: none"> • Transfer to offsite recycling facility
Plastic conduit / pipes	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> • Transfer to offsite recycling facility
Geo -textile material and other open or close weave bio-degradable material; e.g. sediment fence / jute mesh	Reclaim material which can be reused – store under cover Place non-reusable material in general waste receptacle	<ul style="list-style-type: none"> • Reuse for erosion and sediment control and landscaping; or • Disposal to licensed waste facility
Timber e.g. cable drums, pallets, form work, packaging timber, off cuts etc.	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> • Cable drums and pallets returned to client or supplier or transfer to offsite recycling facility • All other timber products transfer to offsite recycling facility
Empty oil and other drums	Handle in accordance with the relevant State legislation and guidelines Place empty drums in steel recycling receptacle	<ul style="list-style-type: none"> • Transfer to offsite recycling facility • Disposal at a licensed facility
Packaging (recyclable) e.g. paper / cardboard / steel straps	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> • Transfer to offsite recycling facility • Disposal at a licensed facility
Packaging (non - recyclables) e.g. Shrink wrap / Styrofoam	Place in general waste bin	<ul style="list-style-type: none"> • Transfer to offsite recycling facility • Disposal at a licensed facility
Pesticides, herbicides, spill cleans ups, paints and other chemicals	Contain in secure bunded area	<ul style="list-style-type: none"> • Disposal at a licensed facility
Hydrocarbons e.g. oil and fuel	Contain in secure bunded area	<ul style="list-style-type: none"> • Transfer to offsite recycling facility; or • Disposal to licensed waste facility
Asbestos	Store and Handle in accordance with the AMP	<ul style="list-style-type: none"> • Disposal to licensed waste facility
General Waste from Compounds and Laydown Storage Yards		
Tyres	Store onsite in segregated area	<ul style="list-style-type: none"> • Beneficial reuse in site works e.g. stabilising or supporting pipes, tracking plant across pavement, retaining walls, etc.

	Store and Handled in accordance with the NSW EPA Asbestos and Waste Tyres Guidelines 2015	<ul style="list-style-type: none"> Transfer to offsite recycling facility
Waste generated by the maintenance of equipment including air and oil filters and rags.	Contain in secure bunded area	<ul style="list-style-type: none"> Transfer to offsite recycling facility; or Disposal to licensed waste facility
Batteries	Contain in secure bunded area	<ul style="list-style-type: none"> Transfer to offsite recycling facility; or Disposal to licensed waste facility
Office Waste		
Paper and Cardboard	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> Transfer to offsite recycling facility
Recyclable Plastics	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> Transfer to offsite recycling facility
Glass and aluminum	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> Transfer to offsite recycling facility
Food wastes and non-recyclables	Place in general waste receptacle	<ul style="list-style-type: none"> Disposal to licensed waste facility
Electronic waste e.g. computer hardware	Store safely in IT Room until quantity sufficient to transfer off site	<ul style="list-style-type: none"> Transfer to offsite recycling facility
Printer and toner cartridges	Place in separate receptacle for recycling.	<ul style="list-style-type: none"> Transfer to offsite recycling facility
Sewage	Store in holding tanks and manage by licensed waste contractor; or Connection to local sewage system	<ul style="list-style-type: none"> Disposal to licensed waste facility; or Discharge to local sewage treatment plant

4.4 Waste exemption

Clause 51 Protection of the Environment Operations (Waste) Regulation 2005 enables the EPA to grant exemptions to the licensing and payment of levies for the land application or use of waste.

The EPA has issued general exemptions for a range of commonly recovered, high volume and well characterised waste materials that allow their use as fill or fertiliser at unlicensed, off-site facilities.

The general Resource Recovery Exemptions and Orders that may be applicable to the Project are defined in Table 4-3 below. These are general gazette exemptions that do not require approval. Other general Resource Recovery Exemptions and Orders may be utilised during construction, where consistent with achieving the project's waste targets.

A specific exemption may be granted where an application is made to the EPA.

Table 4-3 Waste Recovery Exemptions and Orders, and associated conditions

Exemption/Order	General Conditions
The excavated natural material exemption 2014 The excavated natural material order 2014	<p>At the time the excavated natural material is received at the premises, the material must meet all chemical and other material requirements as detailed in the 'the excavated natural material order 2014'. This includes a written sampling plan, characterisation sampling, and analytical testing in accordance with defined test methods.</p> <p>The excavated natural material can only be applied to land as engineering fill or for use in earthworks.</p> <p>The consumer must keep a written record of the following for a period of six years:</p> <ul style="list-style-type: none"> a) the quantity of any excavated natural material received; and b) the name and address of the supplier of the excavated natural material received. <p>The consumer must provide any records required to be kept under this exemption available to authorised officers of the EPA on request.</p> <p>The consumer must ensure that any application of excavated natural material to land must occur within a reasonable period after its receipt.</p>
The excavated public road material exemption 2014 The excavated public road material order 2014	<p>The excavated public road material can only be applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities.</p> <p>The excavated public road material can only be stored within the road corridor at the site where it is to be applied to land.</p> <p>The excavated public road material cannot be applied to private land.</p> <p>The consumer must ensure that any application of excavated public road material to land must occur within a reasonable period after its receipt.</p> <p>Records must be retained for a period of six years.</p>

Exemption/Order	General Conditions
The mulch exemption 2016	The raw mulch can only be applied to land for the purposes of filtration or as a soil amendment material or used either singularly or in any combination as input material(s) to a composting process.
The mulch order 2016	<p>At the time mulch is received at the premises, the material must meet all requirements as detailed in the 'the mulch order 2016'.</p> <p>Where written measures for the land application of mulch are required under 'the mulch order 2016', a processor must provide these to the consumer. The consumer must apply the mulch to land in accordance with the written measures.</p> <p>The consumer must ensure that they do not cause or permit the migration of leachate from the land application site.</p> <p>The consumer must not undertake further processing of the mulch at the land application site.</p> <p>The consumer must ensure that any application of mulch to land occurs within a reasonable period after its receipt.</p>
The recovered aggregate exemption 2014	The material must meet all chemical concentration and other material requirements for recovered aggregate under "the recovered aggregate order 2014". This includes a written sampling plan, characterisation sampling, and analytical testing in accordance with defined test methods.
The recovered aggregate order 2014	<p>The recovered aggregate can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications:</p> <ul style="list-style-type: none"> • Construction of dams or related water storage infrastructure • Mine site rehabilitation • Quarry rehabilitation • Sand dredge pond rehabilitation • Back-filling of quarry voids • Raising or reshaping of land used for agricultural purposes • Construction of roads on private land unless: the relevant waste is applied to land to the minimum extent necessary for the construction of a road, and a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or it is to provide access (temporary or permanent) to a development approved by a Council, or the works undertaken are either exempt or complying development.
The reclaimed asphalt pavement exemption 2014	The reclaimed asphalt pavement can only be:
The reclaimed asphalt pavement order 2014	<ul style="list-style-type: none"> • applied to land for road related activities including road construction or road maintenance activities being: <ul style="list-style-type: none"> a) use as a road base and sub base b) applied as a surface layer on road shoulders and unsealed roads and c) use as an engineering fill material. • used as an alternative input into thermal processes for non-energy recovery purposes in the manufacture of asphalt. <p>The consumer must ensure that any application of reclaimed asphalt pavement to land or any use of reclaimed asphalt pavement in connection with a process of thermal treatment must occur within a reasonable period of time after its receipt</p>

4.5 Transportation Modes and Route

The transportation mode for waste generated on the project will be by road. However, routes will vary depending on disposal location, the most expedient route and considerations to mitigate impacts on local traffic.

5 Environmental control measures

Specific Environmental Control Measures (ECMs) to meet the objectives of this CWMP and to address impacts of waste management are outlined in Table 5-1.

Table 5-1 Environmental Control Measures

ID	Mitigation and Management Measures	When to implement	Responsibility	Reference
ECM-WM01	<p>Construction personnel will undergo inductions in accordance with the CEMP and any other training commitments agreed as part of the project approval.</p> <p>Induction to include:</p> <ul style="list-style-type: none"> • Existence and requirements of this Sub-plan • Relevant compliance obligations • Incident response, management and reporting • Waste reporting, tracking and monitoring requirements • Efficient use of plant and materials • Documentation and record keeping requirements • Waste/material storage, segregation and transportation requirements • Potential for contaminated material (including asbestos containing material) to be present onsite and management requirements • Appropriate location, use and maintenance of spill kits near high risk areas on site including waste oil storage areas and plant refuelling sites. 	Construction	Environment and Sustainability Manager	Best practice
ECM-WM02	Reflecting the waste hierarchy, waste management principles and targets will be incorporated into site specific management plans and procedures	Pre-construction Construction	Environment and Sustainability Manager	Best practice, E37, WM1, WM8
ECM-WM03	Prefabricated materials will be used where possible	Pre-construction Construction	Civil Project Manager	WM8
ECM-WM04	Use recycled materials (i.e. recycled content for asphalt and concrete including the use of fly ash) wherever feasible;	Pre-construction Construction	Environment and Sustainability Manager	WM8, WM21WM21
ECM-WM05	Excavated materials from the excavation trenching phase will be reused to the maximum permitted extent (e.g. spoil, asphalt and concrete). The remainder will be transferred to a recycling or a licence waste disposal facility.	Construction	Environment and Sustainability Manager	Best Practice, WM1WM1
ECM-WM06	Opportunities to recycle concrete will be investigated	Pre-construction Construction	Environment and Sustainability Manager	WM08WM08

ID	Mitigation and Management Measures	When to implement	Responsibility	Reference
	Wastewater or recycled water will be used where feasible to reduce potable water demand for construction activities	Pre-construction Construction	Civil Project Manager	WM8, WM1
ECM-WM07	<p>Wastewater not used on-site will be disposed off-site or discharged into the local stormwater system in accordance with the requirements of the POEO Act.</p> <ul style="list-style-type: none"> Note: Any wastewater from groundwater dewatering activities consider reasonable and feasible alternatives to discharge to stormwater. Where groundwater is discharged to stormwater, wastewater pollutant discharge concentrations, unless otherwise agreed by the EPA, must achieve criteria in the national <i>Water Quality Guidelines</i> at a 95% protection level for marine ecosystems and, for analytes not covered by the guidelines, the amended National Health and Medical Research Council (NHMRC) <i>Australian Drinking Water Guidelines</i> (2015). 	Pre-construction Construction	Civil Project Manager	WM6WM6 E38, E14E14
ECM-WM08	Investigate opportunities to reuse materials where feasible	Pre-construction Construction	Environment and Sustainability Manager	WM8WM88
ECM-WM09	Procure materials on an 'as needed' basis to reduce over-ordering and wastage	Construction	Civil Project Manager	WM1WM1
ECM-WM10	Cover unconsolidated stockpiles with geofabric, hydro mulch or other revegetation applicants where stockpiles will be left standing for more than 10 days. Refer to CSWMP.	Construction	Environment and Sustainability Manager	Best Practice
ECM-WM11	Asbestos or asbestos-contaminated materials that are discovered during demolition and construction activities will be strictly managed in accordance with the AMP.	Construction	Site Manager	WM5WM5
ECM-WM12	All asbestos waste over 10m ³ or 100kg in one load must be tracked through EPA's WasteLocate service.	Pre-construction Construction	Environment and Sustainability Manager	WM5, E39,
ECM-WM13	The handling and disposal of asbestos waste will be tracked in accordance with the AMP.	Pre-construction Construction	Civil Project Manager	WM5, E40E40
ECM-WM14	Recycling receptacles will be inspected frequently to monitor contamination levels that would restrict recycling potential	Construction	Environment and Sustainability Manager	Best practice
ECM-WM15	Liquid wastes (e.g. waste oil) will be stored in appropriate containers in bunded areas (with 110% capacity of the largest container) and disposed at an appropriately licensed facility.	Pre-construction Construction	Environment and Sustainability Manager	Best Practice, WM6, E399
ECM-WM16	Waste truck loads will be covered prior to trucks leaving the worksite.	Construction	Site Manager	Best Practice
ECM-WM17	Spill kits will be maintained and located near high risk areas on site including waste oil storage areas and plant refuelling sites.	Pre-construction Construction	Environment and Sustainability Manager	Best Practice

ID	Mitigation and Management Measures	When to implement	Responsibility	Reference
ECM-WM18	<p>Excavated materials and contamination (including VENM and ENM) will be classified, handled, stored and reused or removed from site in accordance with the requirements of this plan and the Waste Classification Guidelines.</p> <p>Pre-classified contaminated materials will be transferred directly into haulage trucks for offsite disposal at a waste facility licensed to accept the contaminated material.</p>	Construction	Environment and Sustainability Manager	WM2 WM3, E40
ECM-WM19	<p>Materials will be segregated into stockpiles of spoil, concrete, steel, timber, paper and cardboard and vegetation to maximise recycling opportunities and sent to a waste facility with recycling capabilities.</p> <p>Spoil should be segregated based on predetermined waste classification or if it appears to be contaminated (refer to "Unexpected Contaminations Finds"- CSWMP).</p>	Construction	Environment and Sustainability Manager	WM4
ECM-WM20	Labelled storage containers (bins, skips, tanks, etc.) will be provided at each work area, where possible, and in sufficient numbers to facilitate segregation of waste.	Construction	Environment and Sustainability Manager	WM4
ECM-WM21	<p>Waste and recycling containers must be emptied at a frequency that is sufficient to ensure their correct use.</p> <p><i>If a bin needs to be collected contact your Site Manager or Environmental and Sustainability Coordinator.</i></p>	Construction	Site Manager	WM4
ECM-WM22	Ensure waste and contaminated material is transported by a licensed contractor (as required) and received at an appropriately licensed site for storage, treatment, processing, reprocessing or disposal. All appropriate documents and disposal dockets will be retained for audit purposes.	Construction	Environment and Sustainability Manager	WM3, E39
ECM-WM23	The relevant licences of waste facilities utilised for the disposal or handling of waste will be obtained to ensure they are legally compliant.	Pre-construction	Environment and Sustainability Manager	E39, WM3
ECM-WM24	<p>Waste tracking will be implemented for all waste leaving the project and a Waste Register will be maintained.</p> <p>The 'Waste Material Tracking Form' in Appendix 4 will be completed by the Site Manager to keep record of all waste leaving site and a copy (can be electronic) will be forwarded to the Environment and Sustainability Manager no later than close of business the next day.</p> <p>A copy (can be electronic) of waste dockets received from waste facilities will be forwarded to the Environment and Sustainability Manager no later than close of business the next day.</p> <p>Refer Appendix 3 and Appendix 4.</p>	Construction	Environment and Sustainability Manager Site Manager	E39, WM4

ID	Mitigation and Management Measures	When to implement	Responsibility	Reference
	A monthly audit of waste facility receipts and cross verification with the waste facility will be conducted monthly.			
ECM-WM25	Excess concrete and concrete washout will not be discharged to land or stormwater; a bunded and lined concrete washout facility must be used.	Construction	Site Manager	E38, WM8, WM3
ECM-WM26	An adequate number of fully maintained concrete washout pits will be maintained onsite at all times as required.	Construction	Site Manager	E38, WM8, WM3
ECM-WM27	Burial or burning of waste is not permitted.	Construction	Site Manager/Project Engineer	E38
ECM-WM28	Fuel and oil storage for machinery and plant will be secured and stored within bunded areas/containers on compound sites during works and removed on completion of works.	Construction	Environment and Sustainability Manager	Best Practice
ECM-WM28	All waste data will be collated and tracked using the Waste Register.	Construction	Environment and Sustainability Manager	WM6, E39
ECM-WM29	The Waste Register will be audited monthly to ensure documentation is complete. Results will be presented in the monthly report.	Construction	Environment and Sustainability Manager	WM6, E39
ECM-WM30	The site will be maintained in a clean and tidy condition and rubbish will be regularly removed from site.	Construction	Site Manager	Best Practice

6 Compliance Management

6.1 Roles and responsibilities

The organisational structure and overall roles and responsibilities are outlined in Section 3.1 of the CEMP.

Key roles with relevant to the management of waste are identified in Table 6-1.

Table 6-1 Roles and responsibility

Role	Authority and responsibility
Environmental and Sustainability Manager	Promote waste hierarchy across the project Keep and maintain waste register Deliver toolbox talks and education training on best practise waste management to site staff
Project Manager	Classify all waste generated on site during construction in accordance with NSW EPA Waste Classification Guidelines prior to transporting offsite. When transporting waste to a premise other than a licensed facility, ensure the premises can lawfully accept this waste Make available resources for implementation of Waste Management Plan
Site Manager	Keep site free of litter and maintain good housekeeping Do not cause, permit or allow waste generated outside of the project site to be received for storage, treatment processing or disposal on the project site except as expressly permitted under licence of the <i>Protection of the Environment Operations Act 1997</i> Obtain and provide waste dockets/receipts for waste removed to the Environment and Sustainability Manager Ensure waste is collected and stored as stipulated in Table 4-2 or as advised in the Environmental Work Method Statement (EWMS) Reuse excavated spoil and other waste material onsite where possible Ensure portable toilets are emptied regularly When transporting waste to a premises other than a licensed facility, ensure the premises can lawfully accept this waste
Contracts Manager	Where possible, implement agreements with suppliers to return excess construction materials or packaging for future reuse. Establish list of preferred suppliers of waste management services

6.2 Training and Induction

All employees and subcontractors working on-site will undergo site induction training relating to waste and resource management issues. The induction training will address elements related to waste and resource management including:

- Existence and requirements of this Sub-plan
- Relevant compliance obligations, including tracking requirements for certain waste streams.
- Incident response, management and reporting
- Waste reporting, tracking and monitoring requirements
- Efficient use of plant and materials
- Documentation and record keeping requirements
- Waste/material storage, segregation and transportation requirements
- Potential for contaminated material (including asbestos containing material) to be present onsite and management requirements

- Appropriate location use and maintenance of spill kits near high risk areas on site including waste oil storage areas and plant refuelling sites.

Targeted training in the form of toolbox talks or specific training will also be provided to personnel with a key role in waste management.

Further details regarding staff induction and training are outlined in Section 6 of the CEMP.

6.3 Monitoring and inspections

Monitoring and Inspections requirements relevant to the management of waste are identified in Table 6-2

6.4 Non-conformances

Refer to the Section 8 of the CEMP

6.5 Recording

Records of the quantity of waste, type of waste and the disposal location will be kept. A copy of the waste docket or other appropriate chain of custody document (including, completed s143 certificate) will be kept as part of project records.

6.5.1 WasteLocate

Asbestos and tyre waste will be tracked utilising the NSW EPA *WasteLocate* system when it is of the required quantity.

6.6 Reporting

Refer to CEMP section 8.1 for reporting requirements.

6.7 Audits

Audits (both internal and external) will be undertaken to assess the effectiveness of environmental control measures, compliance with this Sub-plan, CoA and other relevant approvals, licenses and guidelines.

Audit requirements are detailed in Section 8.1.3 of the CEMP.

6.8 Licenses and permits

The requirements of the approval to exhume waste are described in Appendix A1 of the CEMP.

Table 6-2 Inspection and monitoring requirements

Item	Scope	Timing	Frequency	Responsibility	Records / Reporting
Environmental site inspections	Environmental site inspections to check: <ul style="list-style-type: none"> • Stockpile management • Waste bin labels, capacity • cross contamination • Waste storage • Covering of loads • Concrete washout • Housekeeping • Wastewater treatment from rainwater in excavations • Leachate monitoring • Groundwater dewatering 	Construction	Weekly	Site Manager Environment and Sustainability Manager	Environmental inspection checklist
Spoil Tracking	Reconciliation of mass haul Total volume %'s contaminated/uncontaminated %'s reused onsite/reused offsite/disposed to landfill	Construction	Monthly	Site Manager Environment and Sustainability Manager	Monthly Progress Reports
Topsoil	Total topsoil won %'s topsoil contaminated / uncontaminated % topsoil remaining productive at completion of construction.	Construction	Monthly	Civil Project Manager	Monthly Progress Reports
Construction Waste Tracking	Construction Waste (excluding spoil) reused/recycled	Construction	Monthly	Environmental & Sustainability Manager	Monthly Progress Reports

Table 6-3 Reporting Requirements

Report	Scope	Timing	Frequency	Responsibility	Submission
Monthly Progress Reports	<p>Progress against the requirements of the Sub-plan including:</p> <ul style="list-style-type: none"> • Spoil Tracking • Topsoil preservation <p>Construction Waste Tracking and audit results</p>	Monthly, within seven Business Days after the end of the relevant calendar month	Monthly	Environment and Sustainability Manager.	Client

7 Review and improvement

7.1 Continuous improvement

Refer CEMP Section 8.4.

7.2 CWMP update and amendment

Refer CEMP Section 8.4.

8 References

NSW EPA (2014) Waste Classification Guidelines Part 1: Classifying Waste

NSW EPA (2014) Waste Classification guideline

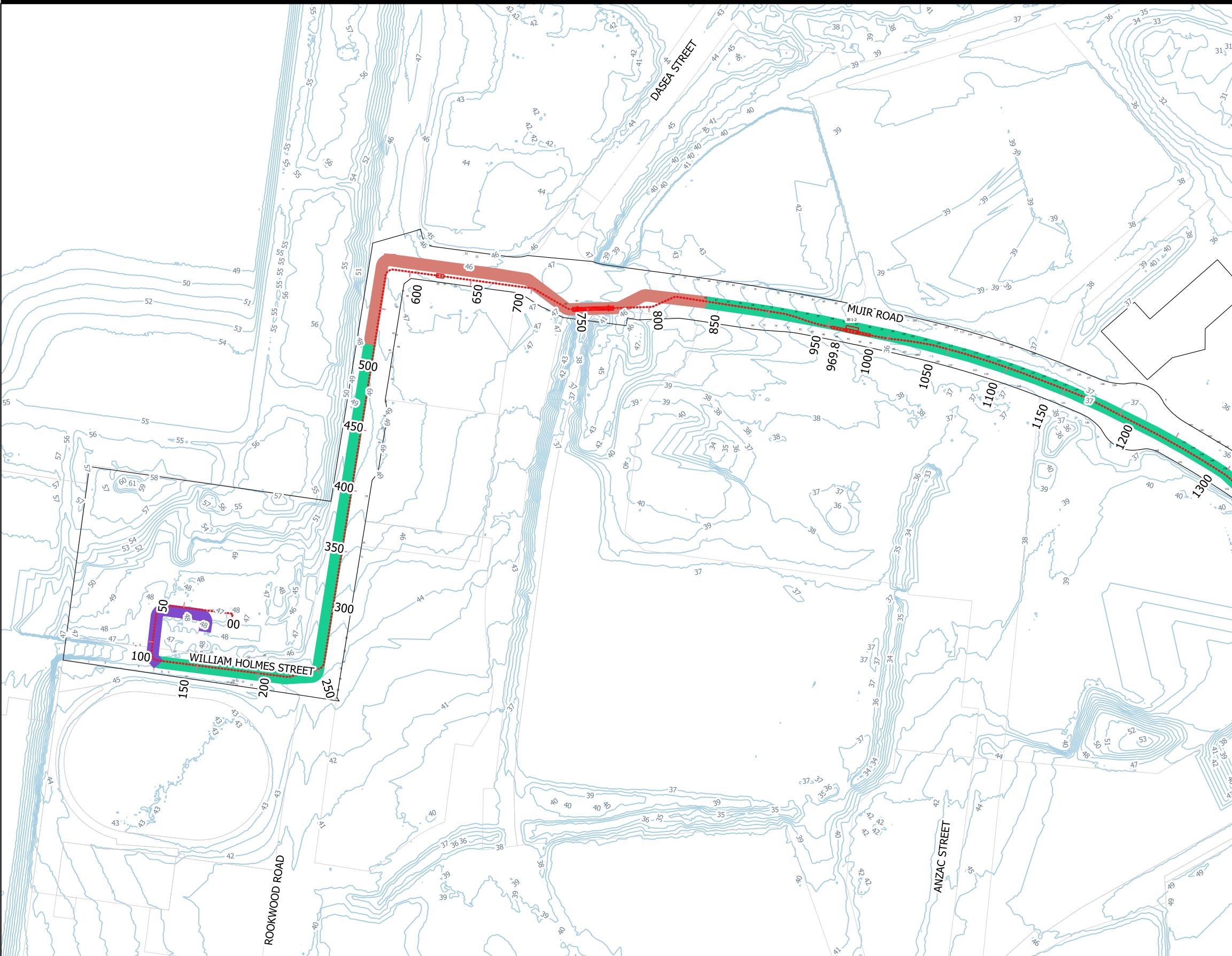
NSW EPA (2015) Asbestos and Waste Tyres Guidelines

Department of Environment and Climate Change (2007) Waste Avoidance and Resource Recovery Strategy

NSW EPA (2015) Resource Recovery Orders and Exemptions

NSW EPA (2019) Standards for Managing Construction Waste in NSW.

Appendix 1– Waste Classification Maps



Legend

- Boundary Project EIS
 - Centreline RevC
 - HDD RevC
 - Joint bays RevC
 - Bridge RevC
- Waste classification [Preliminary 2019-09-24]**
- Acid Sulfate Soils (Untreated) - General Solid Waste CT1 (non-putrescible)
 - Acid Sulfate Soils (Untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible)
 - Acid Sulfate Soils (Untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible)
 - Acid Sulfate Soils (untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible) / Acid Sulfate Soils (untreated) - General Solid Waste CT1 (non-putrescible)
 - Excavated Natural Material
 - General Solid Waste CT1 (non-putrescible)
 - General Solid Waste TCLP1/SCC1 (non-putrescible)
 - Hazardous Waste
 - Restricted Solid Waste TCLP2/SCC2 (non-putrescible)
 - Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)
 - Special Waste (asbestos) - Hazardous Waste
 - Virgin Excavated Natural Material
 - NO DATA



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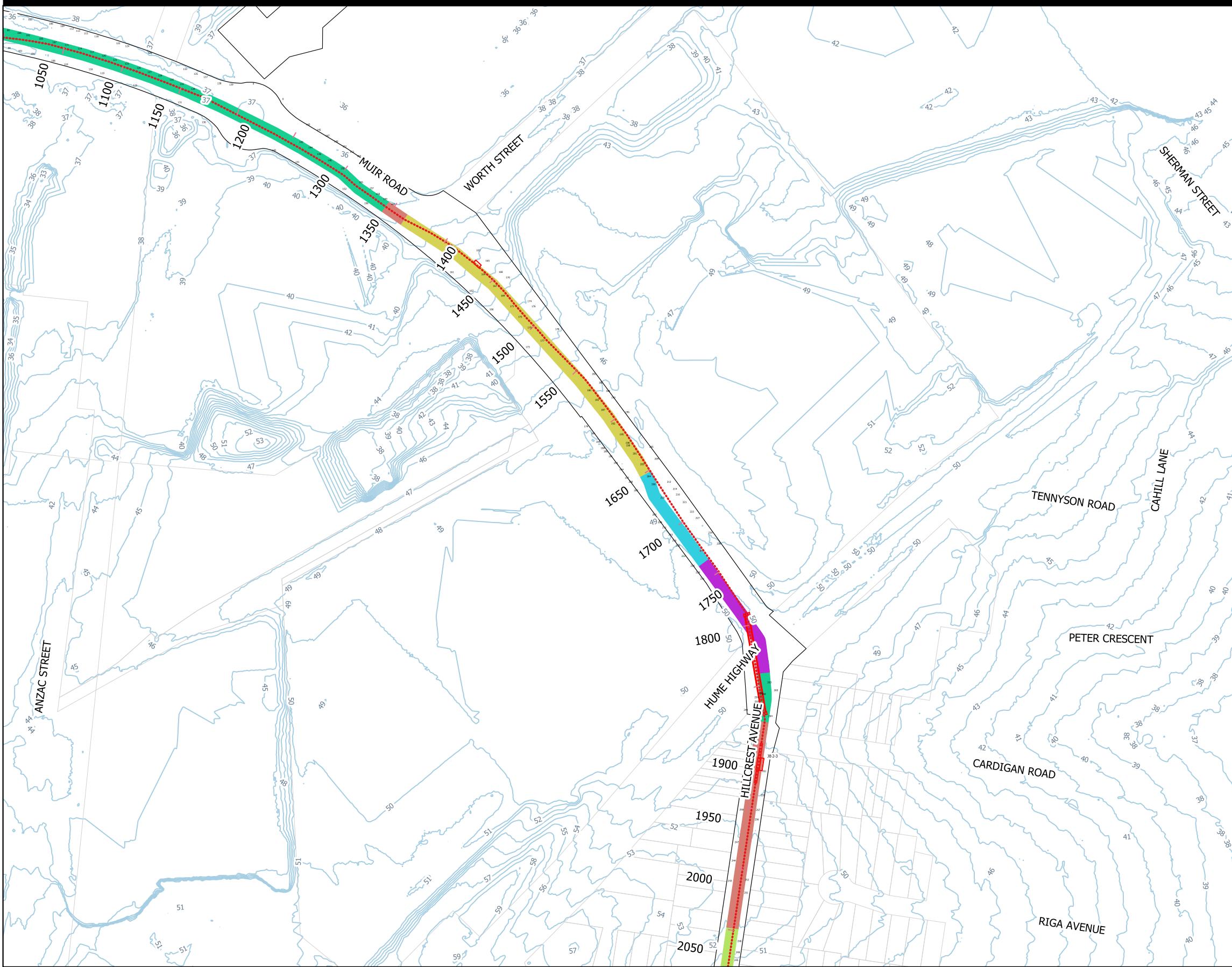
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Legend

	Boundary Project EIS
-----	Centreline RevC
—	HDD RevC
—	Joint bays RevC
—	Bridge RevC
Waste classification [Preliminary 2019-09-24]	
	Acid Sulfate Soils (Untreated) - General Solid Waste CT1 (non-putrescible)
	Acid Sulfate Soils (Untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible)
	Acid Sulfate Soils (Untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible)
	Acid Sulfate Soils (untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible) / Acid Sulfate Soils (untreated) - General Solid Waste CT1 (non-putrescible)
	Excavated Natural Material
	General Solid Waste CT1 (non-putrescible)
	General Solid Waste TCLP1/SCC1 (non-putrescible)
	Hazardous Waste
	Restricted Solid Waste TCLP2/SCC2 (non-putrescible)
	Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)
	Special Waste (asbestos) - Hazardous Waste
	Virgin Excavated Natural Material
	NO DATA

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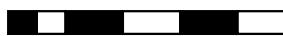
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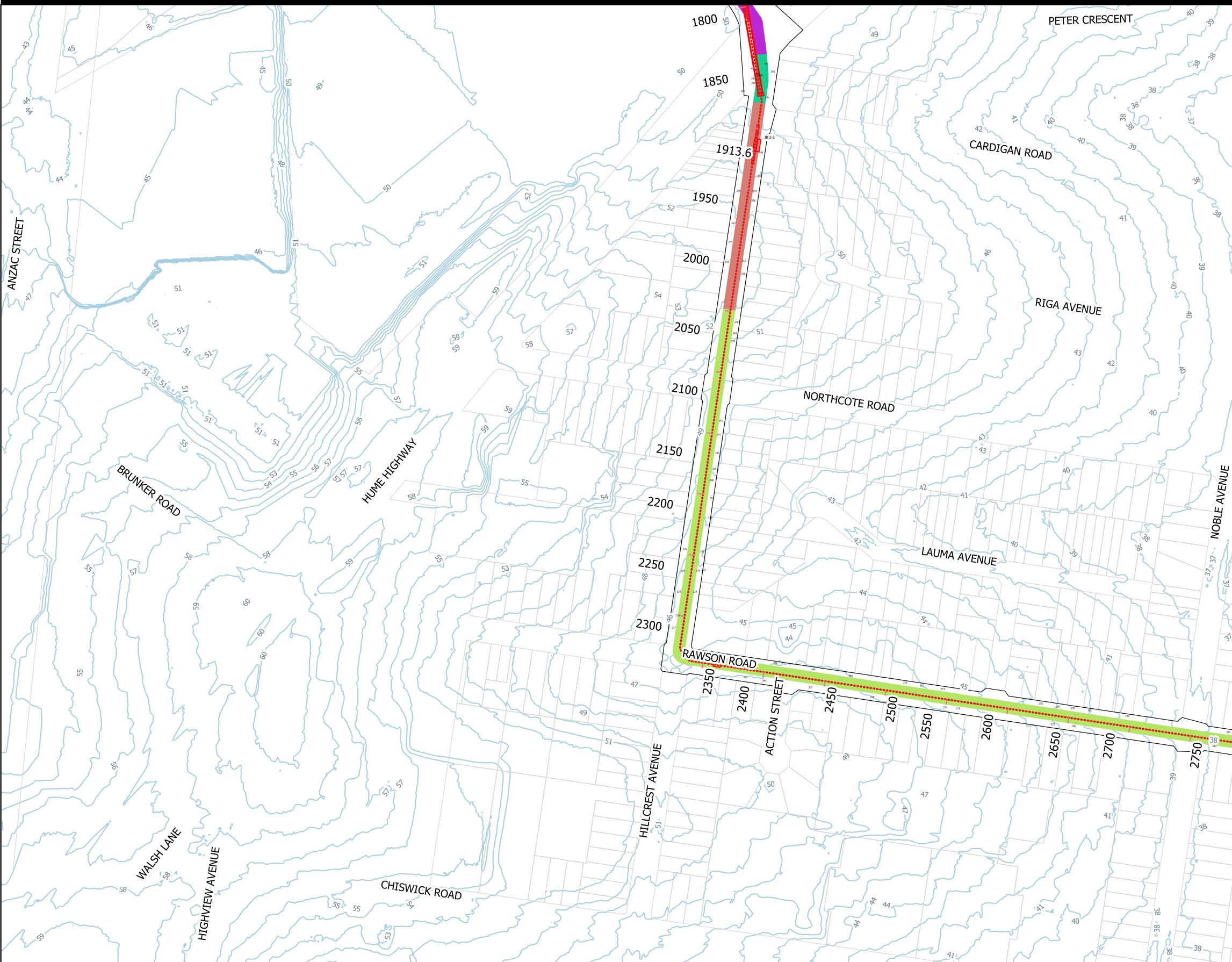
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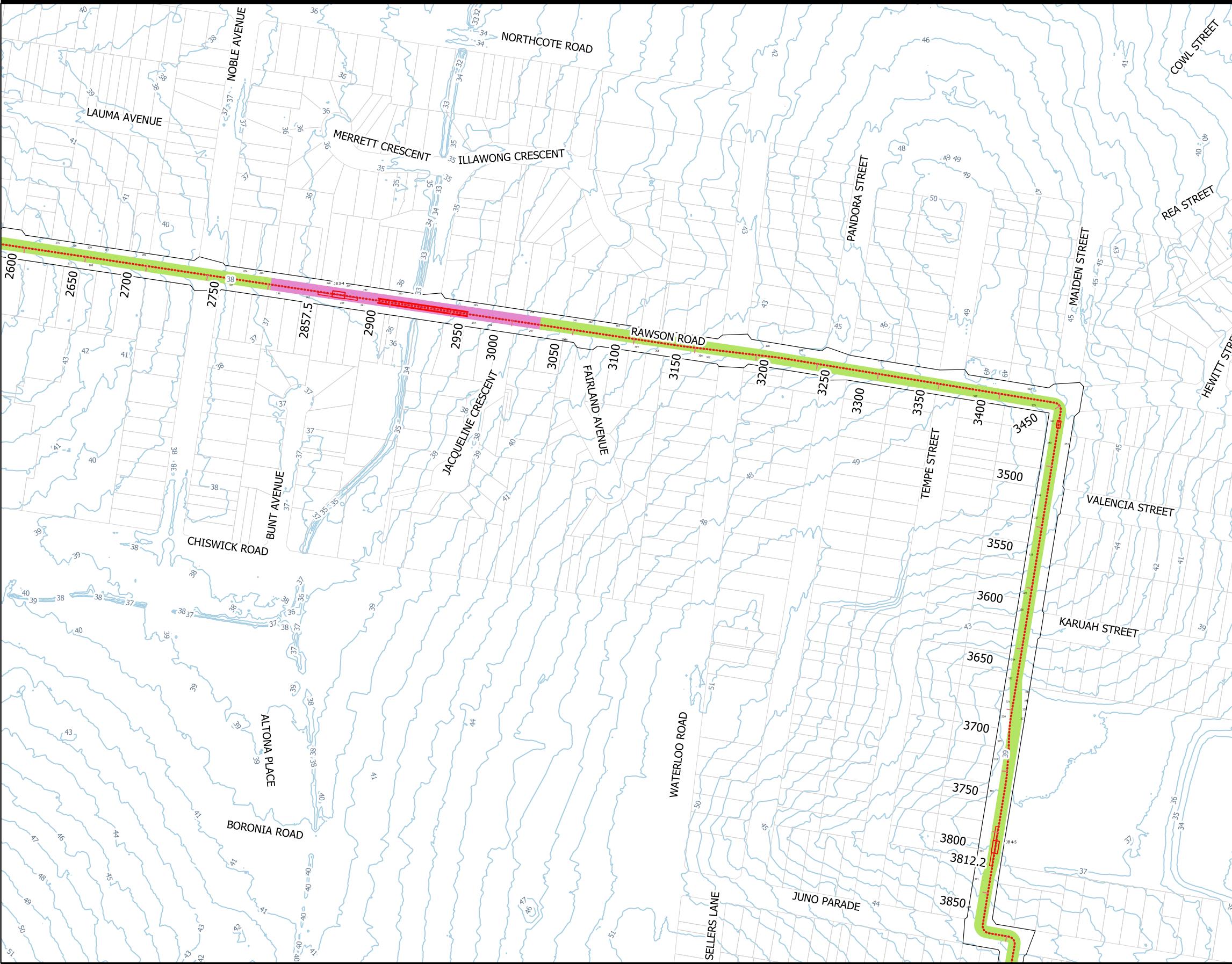


Legend

Boundary Project EIS	
Centreline RevC	
HDD RevC	
Joint bays RevC	
Bridge RevC	
Waste classification [Preliminary 2019-09-24]	
Acid Sulfate Soils (Untreated) - General Solid Waste CT1 (non-putrescible)	
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Excavated Natural Material	
General Solid Waste CT1 (non-putrescible)	
General Solid Waste TCLP1/SCC1 (non-putrescible)	
Hazardous Waste	
Restricted Solid Waste TCLP2/SCC2 (non-putrescible)	
Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)	
Special Waste (asbestos) - Hazardous Waste	
Virgin Excavated Natural Material	
NO DATA	



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Legend

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Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)	
Special Waste (asbestos) - Hazardous Waste	
Virgin Excavated Natural Material	
NO DATA	



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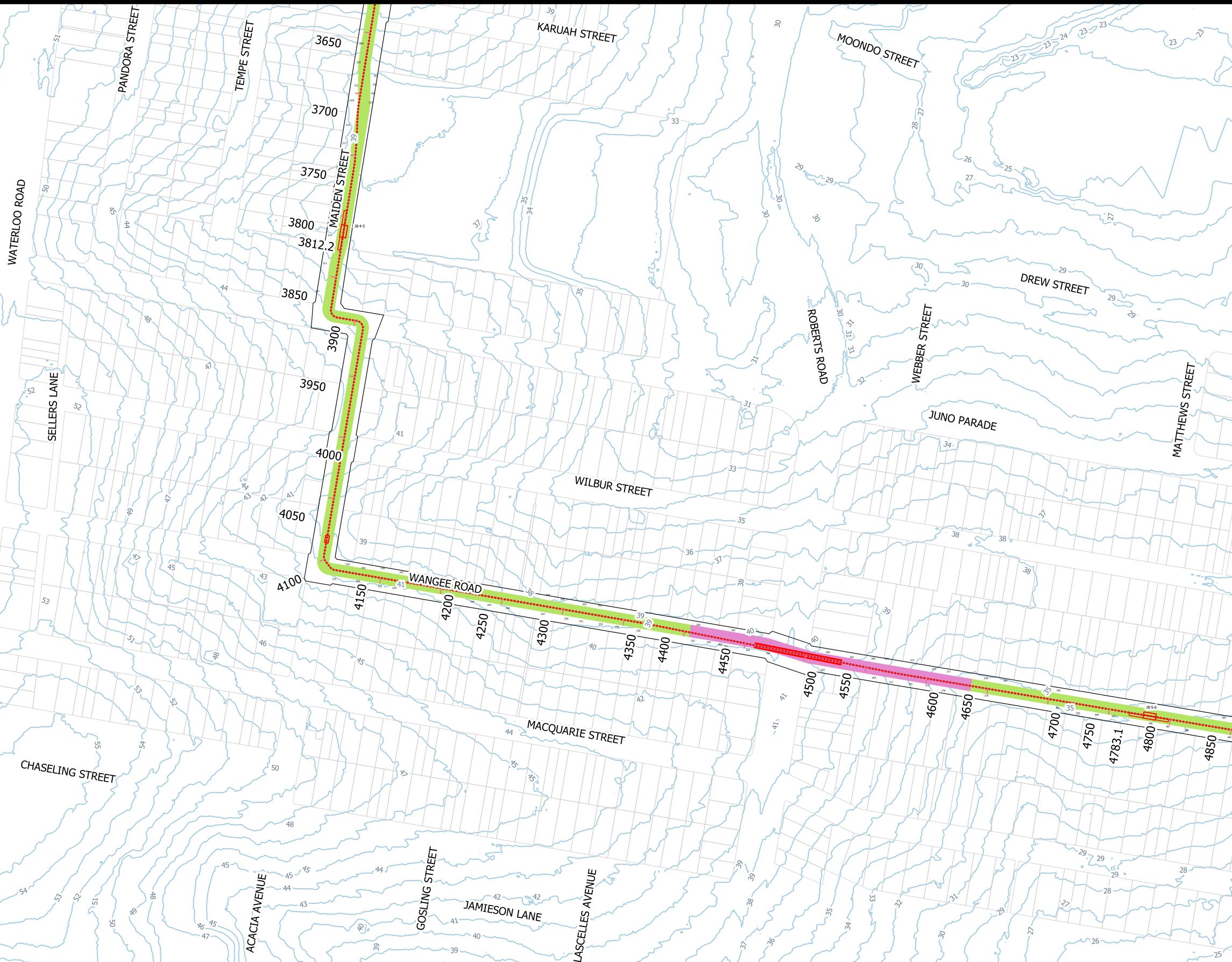
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Virgin Excavated Natural Material	
NO DATA	



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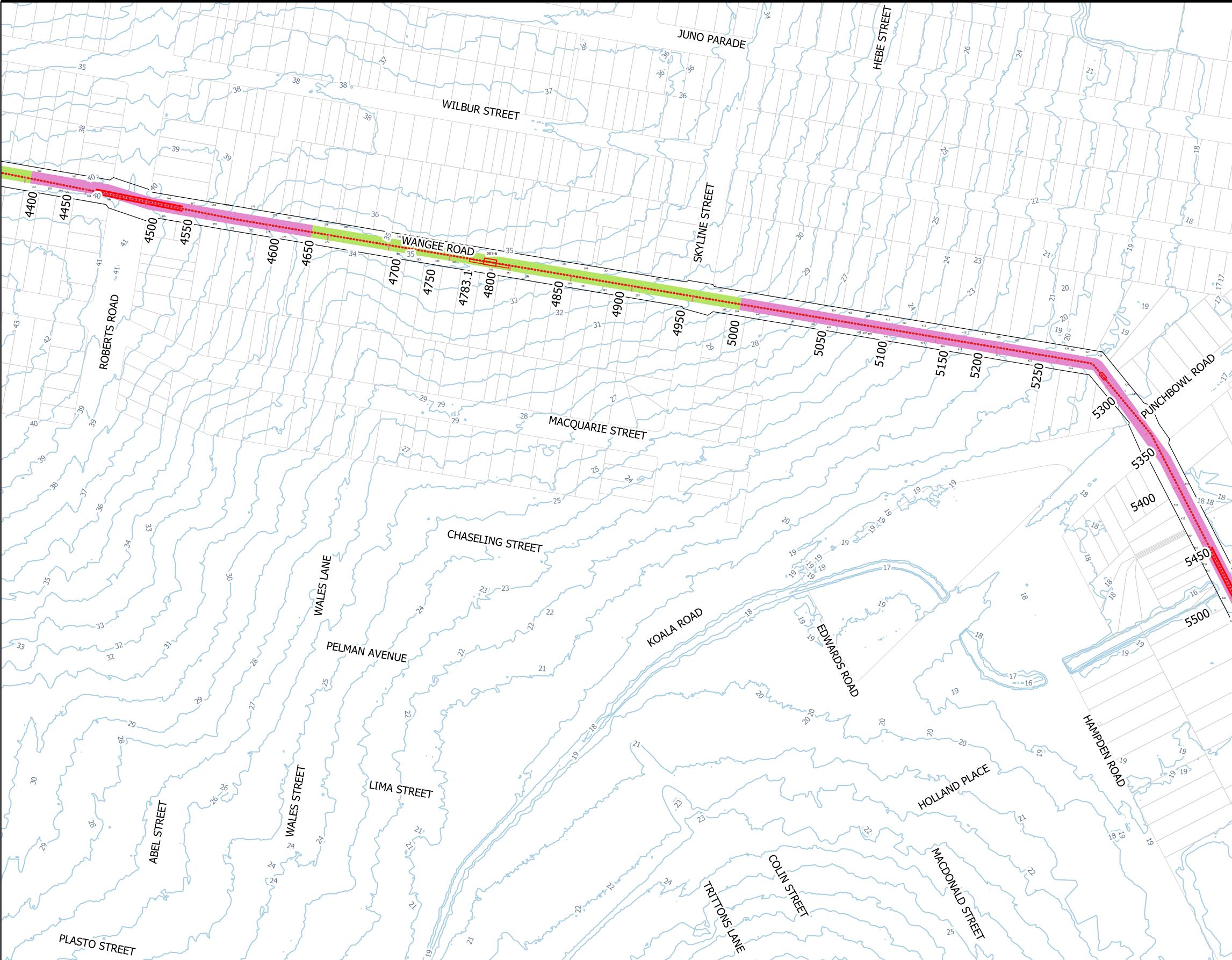
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NO DATA	



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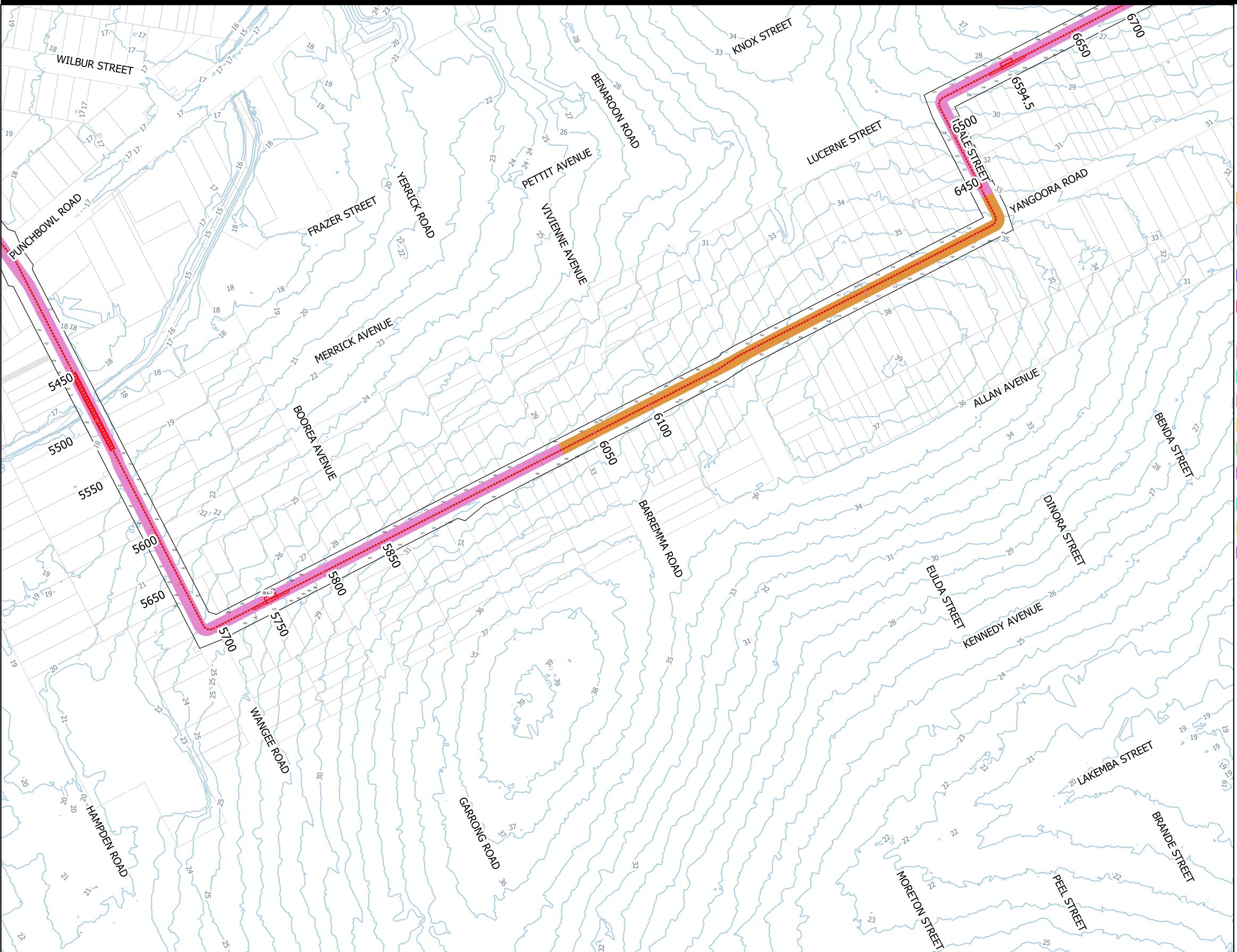
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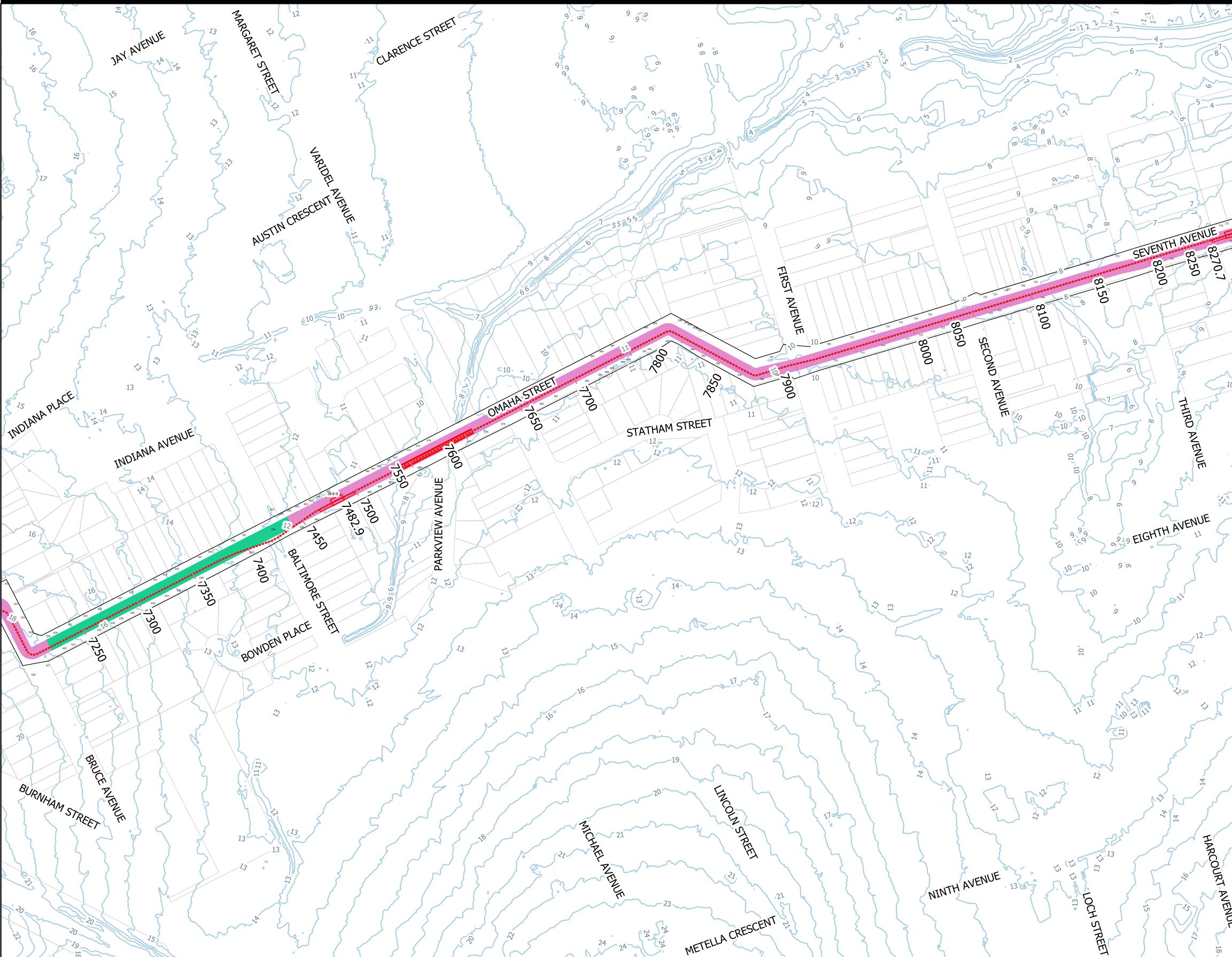
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Waste class

Powering Sydney's Future
Supply and Installation of Integrated Cable
Systems Rookwood to Beaconsfield



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	Restricted Solid Waste TCLP2/SCC2 (non-putrescible)
	Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)
	Special Waste (asbestos) - Hazardous Waste
	Virgin Excavated Natural Material
	NO DATA

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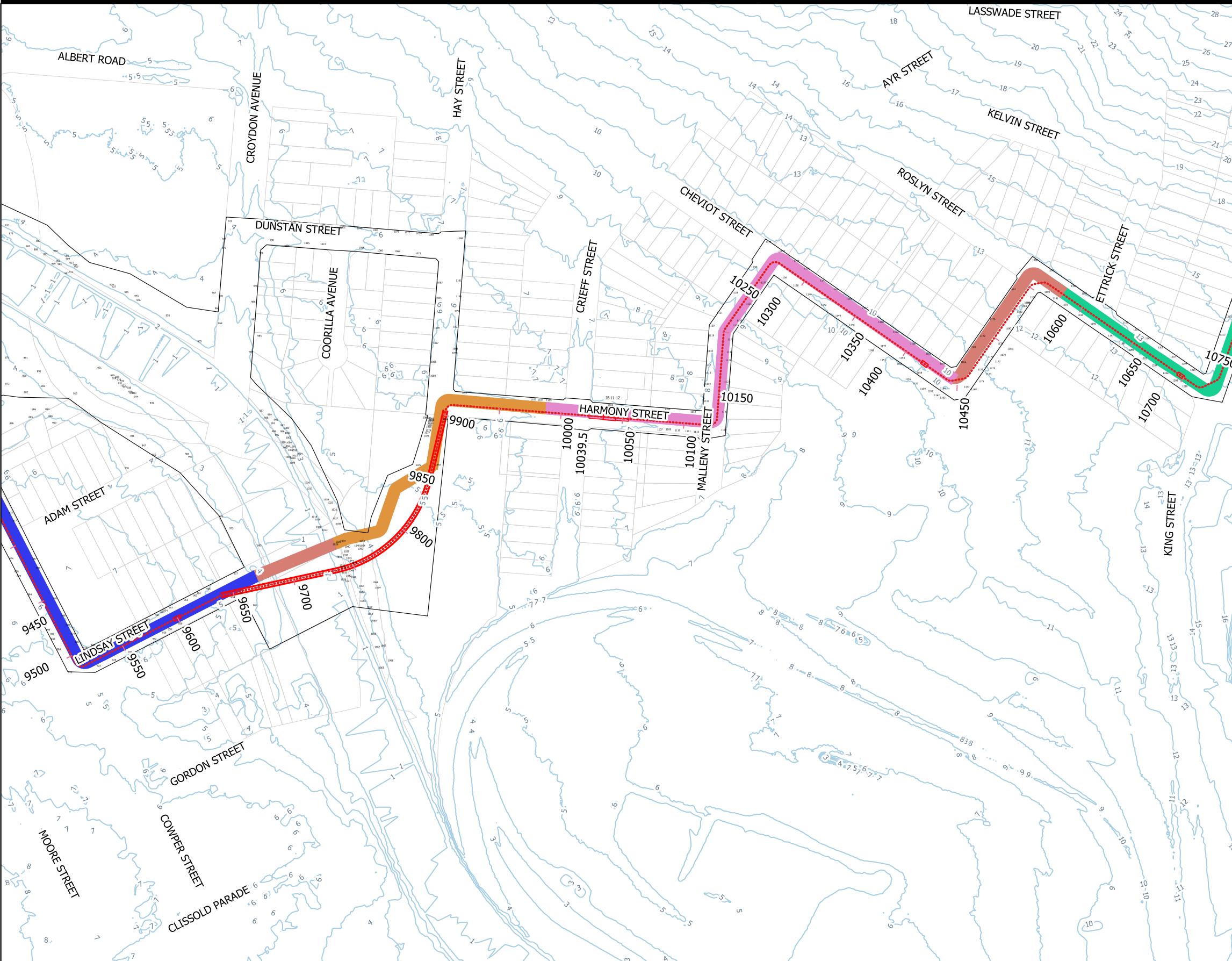
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- NO DATA

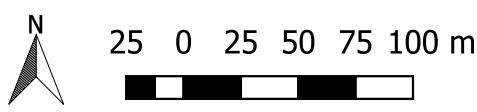
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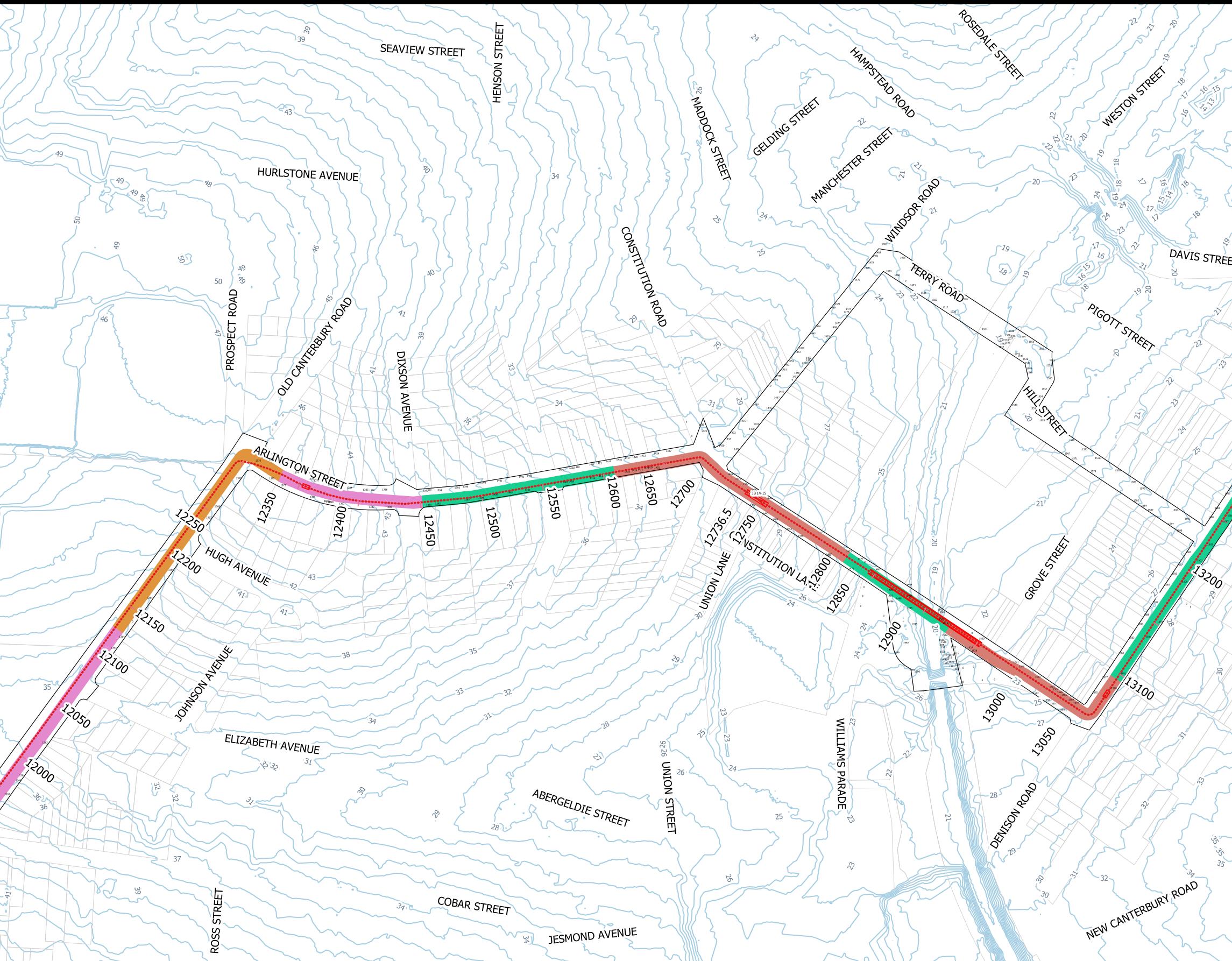
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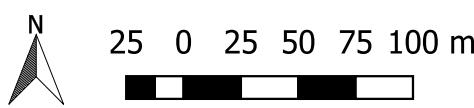
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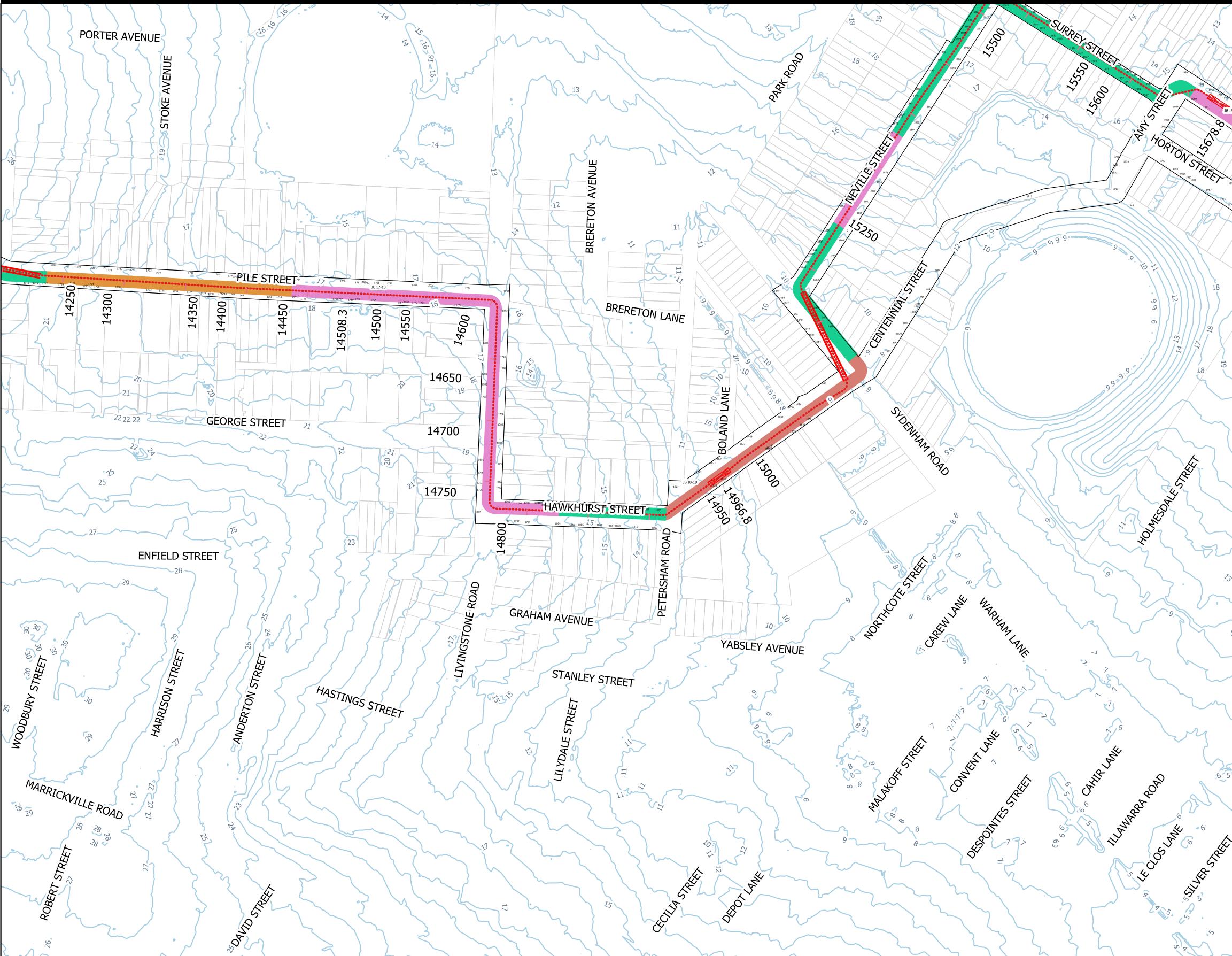
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Acid Sulfate Soils (Untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible)	
Acid Sulfate Soils (untreated) - General Solid Waste TCLP1/SCC1 (non-putrescible) / Acid Sulfate Soils (untreated) - General Solid Waste CT1 (non-putrescible)	
Excavated Natural Material	
General Solid Waste CT1 (non-putrescible)	
General Solid Waste TCLP1/SCC1 (non-putrescible)	
Hazardous Waste	
Restricted Solid Waste TCLP2/SCC2 (non-putrescible)	
Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)	
Special Waste (asbestos) - Hazardous Waste	
Virgin Excavated Natural Material	
NO DATA	

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**Legend**

Boundary Project EIS	
Centreline RevC	
HDD RevC	
Joint bays RevC	
Bridge RevC	
Waste classification [Preliminary 2019-09-24]	
Acid Sulfate Soils (Untreated) - General Solid Waste CT1 (non-putrescible)	
Acid Sulfate Soils (Untreated) - General Solid Waste CT1 (non-putrescible) / General Solid Waste TCLP1/SCC1 (non-putrescible)	
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Excavated Natural Material	
General Solid Waste CT1 (non-putrescible)	
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Hazardous Waste	
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Special Waste (asbestos) - General Solid Waste TCLP1 / SCC1 (non-putrescible)	
Special Waste (asbestos) - Hazardous Waste	
Virgin Excavated Natural Material	
NO DATA	

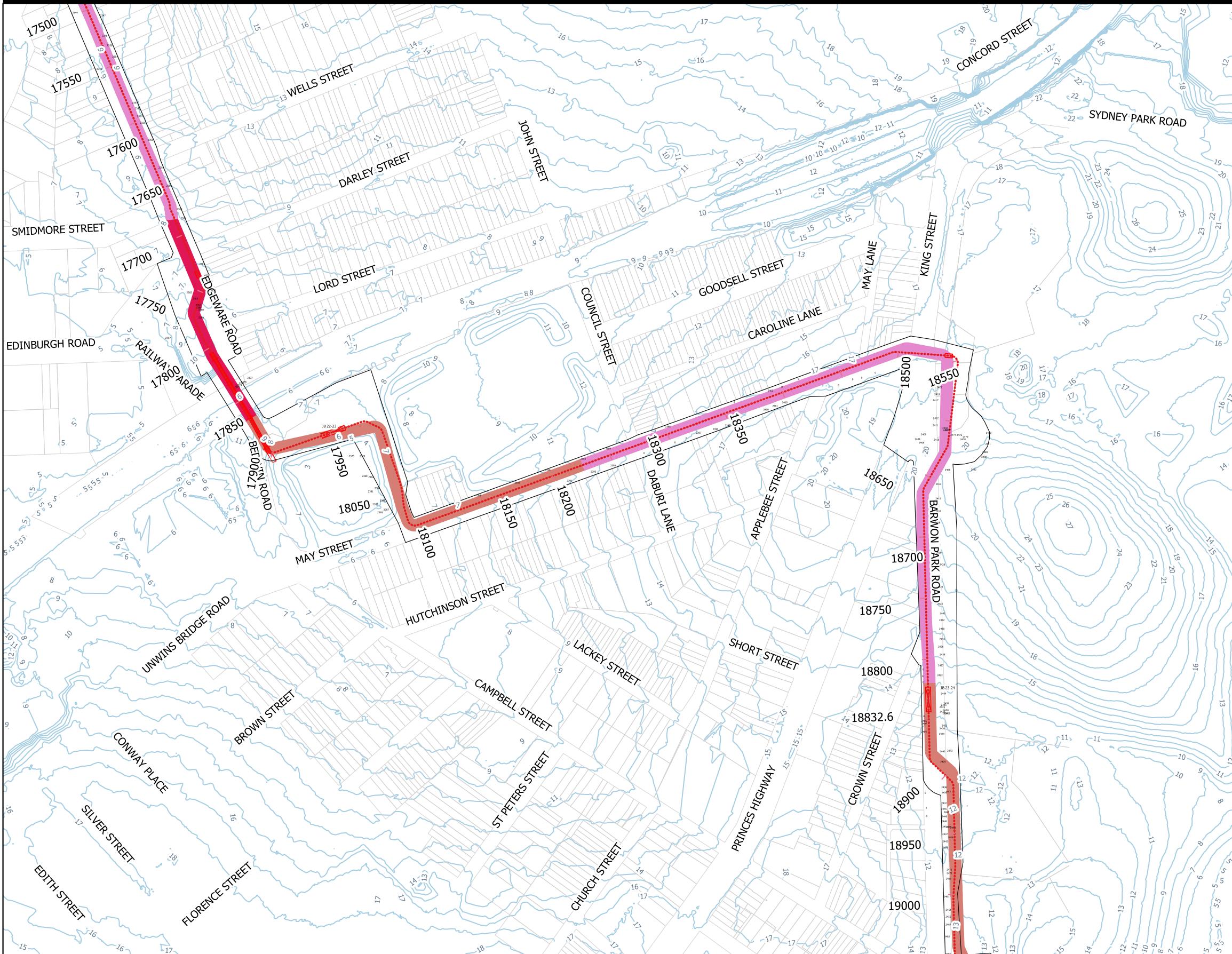


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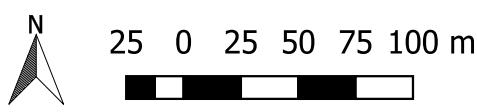
Waste class

Powering Sydney's Future
Supply and Installation of Integrated Cable
Systems Rookwood to Beaconsfield



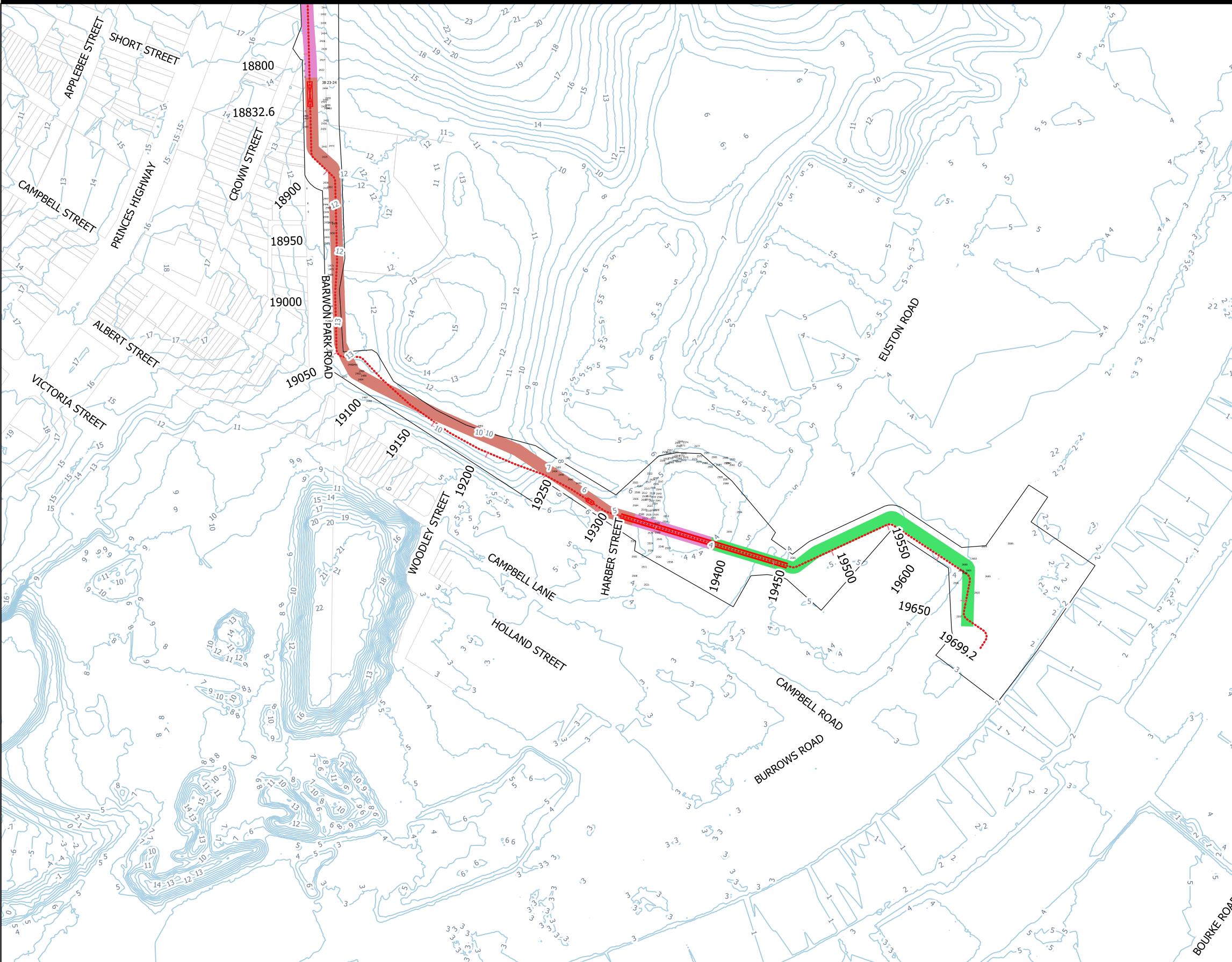
Legend

Boundary Project EIS	
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HDD RevC	
Joint bays RevC	
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NO DATA	



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Legend

Boundary Project EIS	
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Appendix 2 – Proposed Waste Facilities

Proposed Waste Facilities*

Material	Name	Location	EPL	Operational Status
Recyclable - Asphalt	Concrete Recyclers	Camellia	EPL 6664	Operational
Recyclable - Concrete	Concrete Recyclers	Camellia	EPL 6664	Operational
	Met	Silverwater	EPL 20948	Operational
Recyclable - Road Base	Concrete Recyclers	Camellia	EPL 6664	Operational
VENM/ENM	DA Approved Landfill Sites	Various	S143 Certificates	Operational
General Solid Waste (Non-Putrescible)	GPP	Chullora	EPL 11219	Operational
	Met	Silverwater	EPL 20948	Operational
Asbestos Containing Material	Suez	Wetherill Park	EPL 4548	Operational
Restricted Solid Waste	Suez	Wetherill Park	EPL 4548	Operational
ASS/PASS	Tox Free	Windsor	[a]	
Special Waste	Suez	Wetherill Park	EPL 4548	Operational
Hazardous Waste	Suez	Wetherill Park	EPL 4548	Operational
	Suez	Port Kembla	[a]	[a]
	Suez	Mayfield North, Newcastle	EPL 20881	Operational
General Solid Waste (Putrescible)	Suez	Eastern Creek	EPL 12517	Operational

[a] Under review for use by TransGrid

* Note :Additional facilities may be added to Substation Works

Appendix 3 – Waste Management Register Template

Date	Time	Waste Classification	Description of waste e.g. timber, steel, ACM	Chainage Source of Waste	Amount (tonnes)	Amount (m3)	Receiving Facility (Name, address and EPL No.)/Reuse location	Reference (Dockets, Transport Certificate/Invoice No./receiving facility ref.no.)

Appendix 4 – Waste Material Tracking Form

Waste/Material Tracking Form

Docket No	
Truck Registration	
Haulage Company	
Driver's Name and Signature	
Supervisors' Name and Signature	
Description of Waste (clean fill, concrete, vegetation, hard waste, asphalt etc)	

All materials transported within or offsite need to be captured on this form.

 Submit a completed copy of this form daily with delivery dockets or weigh bridge tickets to the Waste Receiving Site and the Waste Receiving Company is to return it to the Environment and Sustainability Manager.

Date	Time start loading	Location/origin <i>Special crossing/ chainage/ substation/ other ID.</i> <i>Address</i>	Waste classification	Quantity Solids (m ³ or tonnes) Slurries (kL)	Destination <i>Site, chainage, offsite</i> <i>Address</i>	End use <i>Fill, recycled, reused, landfill, etc...</i>	Time start dumping

Appendix 5 – Consultation

#	Document No	Plan Title	Date	Organisation	Name	Document name Page / section / reference	Revision	Comment	TransGrid/Taihan How addressed	Status
79	TEA-PSF-MP-004.800	Construction Waste Management Plan (CWMP)	19-Jun-20	City of Canterbury Bankstown	Jeff Senior		0	Section 4.5 amendment to existing clause to "The Transportation mode for waste generated on the project will be by road. Routes will vary depending on disposal location, local traffic volumes and time of transportation. The routes shall be acceptable to the Local Council and relevant Road Authorities." The current wording just directs the trucks to the most expedient route, which may not be appropriate	Section 4.5 has been updated as follows. The transportation mode for waste generated on the project will be by road. However, routes will vary depending on disposal location, and the most expedient route and considerations to mitigate impacts on local traffic, at the time of transport depending on traffic volumes will be utilised.	Closed
80	TEA-PSF-MP-004.800	Construction Waste Management Plan (CWMP)	17-Jun-20	City of Sydney	Rowan Clark (Parks Environmental Engineer)	Construction Waste Management Plan (TEA-PSF-MP-004.800 PSF CWMP)	0	Document sufficiently addresses any concerns raised. No Comments recorded.		Closed
Consultation summary										
<p>5 June 2020 Invitation to CEMP and sub-plan briefing.</p> <p>10 June 2020 CEMP and sub-plan "Zoom" briefing to Relevant Government Agencies/.Councils/ Authorities/Service providers.</p> <p>16 June 2020 Open invitation to all stakeholders for drop in Q&A session.</p> <p>19 June 2020 Original closure of consultation period.</p> <p>3 July 2020 Email sent to all organisations identifying (a) how all comments received on this Sub-Plan were addressed and closed; and (b) confirming formal consultation period is closed.</p>										
Comment status at time of submission to DPIE										
<ul style="list-style-type: none"> • Comments received on this Sub-Plan from: <ul style="list-style-type: none"> ○ City of Canterbury Bankstown Council – closed. Refer item 79 above • No comments received on this Sub-Plan from: <ul style="list-style-type: none"> ○ Inner West Council – closed ○ City of Sydney Council – closed 										