

Soil management at Anzac Station



Our commitment

Safety of the community and our project team is the number one priority of the Metro Tunnel Project. Comprehensive health and safety systems are in place to ensure we deliver the new Anzac Station in accordance with the project Environmental Performance Requirements (EPRs), **Environment Protection** Authority (EPA) Guidelines, relevant regulations and industry best practice.

Soil management

Construction of the new Anzac Station and tunnel requires the excavation of over 1.8 million cubic metres of soil, some of which will be classified as contaminated as per the EPA's classification process.

Working with, removing and managing contaminated soil is undertaken on a daily basis across most work sites in Melbourne and will occur at our work sites in Domain.

There are strict rules regulated by WorkSafe and EPA Victoria for how excavated contaminated material must be managed, including processes for identifying contaminants and classifying the material, as well as methods and procedures for safely removing them from site and disposing of them in accordance with environmental regulation. This is to ensure the safety of the community and our workers.

The Metro Tunnel Project has comprehensive soil management systems in place for:

- Soil testing
 Removal
- Classification
 Disposal
- Handling

Soil testing

Extensive soil testing was carried out prior to the start of excavation in the Domain Precinct, with over 435 soil samples taken from a series of boreholes throughout the area.

This gives the project team a clear understanding of the types of soil to be excavated and how it should be removed from site for disposal. Further, regular sampling and testing will be conducted during excavation and removal of soil to satisfy Environment Protection Authority's (EPA) Victoria Industrial Waste Resource Guidelines (IWRGs).

This is a requirement of the project's Spoil Management Plan, which is prepared in consultation with the EPA and audited by the Independent Environmental Auditor.

Soil testing is underttaken by qualified specialists and verified.

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Classification

Once soil has been tested, it is classified for disposal in accordance with EPA IWRG publications. Classifications include prescribed industrial waste (categories A, B, C) and fill material (soil with low to zero contamination and safe for re-use).

Categories are determined by the type and quantity of contaminants found. Category A being the highest level and Category C being the closest to fill material. Categories B and C material can be accepted at best practice landfills that are licensed by EPA to accept this material. Category A material requires treatment before disposal.

The aim of the categorisation framework is to improve treatment standards and achieve greater waste separation to help identify further avoidance, reuse or recycling opportunities.

The results of soil testing conducted across works areas in the Domain Precinct show that most soil (over 86 percent) is designated as fill material.

The remainder of the material has shown to be Category B and Category C material, with a small section of Category A material.

The removal of category A, B and C soils are carefully managed and safely removed. All classified soil will be separated out and disposed of in accordance with EPA guidelines and the project's approved spoil management procedures.

Handling

The Metro Tunnel Project has a comprehensive Health and Safety Management Plan to ensure that members of the community and our project team are not exposed to hazardous materials.

Measures in place to ensure the safety of the community and project team prior to soil being removed include:

- Avoiding unnecessary handling of potentially contaminated soil
- Selection of equipment to manage dust
- Water carts to dampen the soil and manage dust
- Handlers to use personal protective equipment
- Stockpile management.

The Metro Tunnel Project has a comprehensive Air Quality Dust and Lighting Management Plan that includes a monitoring regime for local air quality during work. The air quality monitors on site will provide real-time measurements of air quality, including dust generated during construction activity and soil removal.

Removal

During the removal of soil, safety measures will include exclusion zones and the use of water carts to dampen the soil and prevent dust. Soil is loaded onto trucks using machinery such as diggers, loaders and excavators. All trucks used to transport contaminated soil are licenced by the EPA. All trucks removing soil and material from the Metro Tunnel Project work sites are covered to prevent dirt and dust escaping. The project also aims to minimise the length of time that spoil is stockpiled on site.

Disposal

Categories A, B and C soil will be separated out and disposed of in accordance with the EPA Guidelines and the Project's approved spoil management procedures.

This material will be transported to a pre-determined location and facility that is licenced to accept each of the corresponding types of waste.

Fill material can be re-used on site or transferred to other project sites where it can also be recycled. All soil handled and removed from site is managed by an EPA waste transfer certificate system. Each completed waste transport certificate is provided to the EPA.

Disposal Routes

Soil removal on site must be done along pre-approved trucking routes. Most of the soil excavated from the Anzac Station northern section of the station box site will be loaded onto trucks that will exit south along St Kilda Road. During construction of the southern section of the station box, soil will primarily be trucked out via Albert Road South and onto Kings Way.

The project has identified secondary routes that will be used for short periods of time when traffic conditions require a change of route, or when particular exit gates are unavailable due to the construction activity on site.

When tunnel boring commences in late 2019, the tunnel boring machine's excavated soil will excavate soil from the tunnel that will be mixed with bentonite* and pumped back via a series of pipes to the Edmund Herring Oval treatment plant. The soil excavated from tunnelling will have a higher moisture content and is less likely to generate dust.

This material is then trucked from site overnight, outside of peak traffic periods and school hours.

Trucks transporting spoil from site will be remotely tracked and the project team will be alerted to any trucks that do not follow the designated routes.

* Bentonite is a type of clay often used to help stabilise earthen walls.

More information

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