



Western Harbour Tunnel Underground Spoil Loadout

In the original Environmental Impact Statement (EIS), spoil load-out for the Western Harbour Tunnel (WHT) - Southern Tunnelling Works Project was set to occur at the site of the old Balmain Leagues Club on the corner of Victoria Road and Darling Street, Rozelle.

The 8,500m² Balmain Leagues site is bounded by residential properties, Rozelle Public School and numerous small retail businesses. With up to 420 heavy vehicle movements anticipated to enter the site daily, this proposal was likely to be highly impactful for the community.

John Holland and CPB Contractors Joint Venture (JHCPB) the design and construction contractors for the works, developed an innovative solution - Underground spoil load-out!



Innovation

By retrofitting the existing WHT portal within the Rozelle Interchange Project footprint to contain a spoil stockpile and load-out access zone, the team avoided use of the Balmain Leagues Club site as a construction support site.

The team set up the infrastructure needed for this innovative solution by:

- prioritising completion of the Rozelle Interchange drainage bridge which runs along the edge of the WHT portal,
- adding two temporary cross-passages for heavy vehicle access/egress (avoiding the need to reverse heavy vehicles),
- pouring a 20,000m² concrete slab to enable spoil truck access and a further 6,000m³ as spoil bin walls to store excavated spoil,
- relocating the Project's water treatment plant underground to minimise surface footprint impacts,
- establishing new site offices along City West Link and The Crescent,
- relocating mechanical and electrical workshops underground.



Benefits

Social

- **Pedestrian safety**
Significantly less interaction between construction vehicles and pedestrians, particularly school children attending Rozelle Public School
- **Public access to green space**
Site offices placed at the WHT portal, rather than within the future Rozelle Parklands, mean opening this public green space to the community earlier than anticipated

Financial

- **Site establishment**
Months of site establishment (environmental controls, traffic management and site access points) and associated costs avoided
- **Excavation**
Temporary decline excavation and associated costs avoided

Programme benefits

- **Accelerated program**
Excavation began 3 weeks earlier than forecast
- **Government acquisition**
No need for government acquisition or leasing of the Balmain Leagues site

Economic

- **Businesses**
No traffic congestion from heavy vehicle movements exiting site at Victoria Road and Darling Street, Rozelle means less impact on business performance and deliveries
- **Site redevelopment**
Allows potential earlier redevelopment of the disused Balmain Leagues site



Environment

- **Noise**
Noise contained within WHT tunnel portal
- **Heavy vehicle routes**
Heavy vehicles enter and exit the site via City West Link, a major arterial road large enough to accommodate heavy vehicle traffic
- **Sensitive receivers**
No immediately adjacent residential or commercial neighbours
- **Dust**
Less dust potential associated with spoil management
- **Flood risk**
No increased flood risk (the original design brought a risk of changes to nearby water flows)

Sustainability

- **Sustainable material use**
The WHT cut and cover structure is an existing site, so fewer materials required to establish a spoil load-out zone



Installing the site offices alongside the WHT portal (in an existing commercial/industrial area) reduced negative impacts to visual amenity.



The new WHT support site (green) has fewer sensitive receivers than the original design (blue), and adjoins a major road (City West Link) that can better accommodate heavy vehicles.

