23 June 2016.

Sean Murphy Unit 5/20 Dalgety Road

Millers Point NSW 2000

Director Transport Assessments Department of Planning and Environment GPO Box 39 SYDNEY NSW 2001

CHATSWOOD-SYDENHAM METRO: SS15 7400 (the Proposal)

With regards to the above project, I hereby lodge my objection to the project as it currently stands. My reasons for this objection are listed as follows:

- It appears from the current plans/ diagrams that the eastern tunnel may pass beneath, or very close to, the north western corner of the Dalgety Road building of at a (stated) depth of 35 metres. Given that the EIS Summary notes that the current plans / diagrams are indicative only (as well as containing a 30 metre tolerance for the tunnels' final position), this objection is based on the assumption that it is intended that the tunnel is in fact due to be located in the position described.
- The tunnel described continues south below Dalgety Road and continues to the new proposed metro station at Barangaroo. The tunnel also passes below Dalgety Road and, in part, passes beneath terraces on Dalgety Road. Those terraces sit on a sandstone cliff situated approximately 10 metres above the Dalgety Road surface. That adds an additional 10 metres to the (claimed) 35 metre buffer between the tunnel and the surface for those properties. In contrast, the Towns Place residential tower not only lacks this 10 metre buffer, but also has a private and public car park down to a depth of approximately 20 metres below ground level, significantly reducing the buffer shown on the plan, and exacerbating noise and vibrations.
- The technicians present at the explanatory meeting in respect of this part of the tunnel on 25 May 2016 were not aware that the building had a 6 level carpark below ground to a depth of approximately 20 metres and that, if the tunnel depths were maintained at 35 metres, as indicated on the current plans / diagrams, the buffer between the eastern tunnel and the bottom level of the carpark would, at most, be only about 10 metres.
- If, as appears to be the case, the actual depth of the top of the tunnel is less than the publicly disclosed 35 metres (due to rail gradient limits coming up to the Barangaroo metro station), then the buffer under Towns Place will be materially less than 10 metres.
- This issue could simply be resolved by relocating the eastern side of the tunnel approximately 10 metres to the west of Dalgety Road so that no part of it runs close to or below the Towns Place building on Dalgety Road.

- Moving the tunnel west is clearly within the 30 metre tolerance allowed for in the Proposal and places the tunnel below a much higher cliff face where noise and vibration will not impact on any surface building.
- This solution / amendment to the Proposal would move the western tunnel slightly to the west. However, this would in no way adversely impact on the Dalgety Road terraces, as they have an existing tunnel below them and they sit on an additional 10 metres of sandstone above the 35 metre deep tunnel.

Noise / vibration abatement measures

- The Proposal indicates that the Metro's tracks will be of steel, as will the wheels of the rolling stock. The reason expressed for this choice at the explanatory meeting on 25 May 2016 is that it needs to be consistent with other tracks/rolling stock in the system.
- Best modern practice for this type of rapid transport system is for the rolling stock to have rubber wheels running on rubber tracks. This makes its operation virtually silent. This is evidenced by the Paris Metro and other lines in Montreal, Kobe and Mexico City.
- Attenuation is proposed for other parts of the line but not between the harbour and Barangaroo metro station. Without resiling from the principal submission that 21st century best practice dictates a rubber wheel / track system be installed, all of this track should have high quality attenuation measures installed. Particularly that part from the harbour to Barangaroo metro station.

Removal of spoil

- The Proposal indicates a suggested intention of removing spoil from the tunnel to a temporary site under the overhead bridges on Hickson Road, and then for re-removal to a final unidentified site elsewhere. The indicated timing of construction (and removal) is on a 24/7 basis, which is both superfluous and unreasonable. The spoil should just simply be removed from the area directly to its final destination, and this should not occur at night.
- The EIS represented at the explanatory meeting on 25 May 2016 that the spoil may be removed from the area by barge. If that was to happen, it must only do so from the harbour side of the central Barangaroo site. To do so from any other local harbour location would again involve double handling, unwarranted and unreasonable noise and increase the number of truck movements in the area.

Yours faithfully

Sean Murphy

Unit 5/20 Dalgety Road

Jean Mungling

Millers Point 2000