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Dear Professor Lee,

West Island Line

I write to respond to your letters dated 27 April 2009 and 23 May 2009 addressed to the Hon Miriam Lau Kin-ye, JP on the possible impact of the proposed West Island Line on The Belcher's residential development in Western District.

First of all let me set out the facts:

Two tunnels are proposed to be constructed underneath The Belcher's development. One is a pedestrian subway used to connect the new University station to the proposed entrance in Belchers Street, immediately to the north of The Belcher's development. The other is a temporary construction tunnel which will be used to gain construction access to the underground railway works and to subsequently remove the excavated material from the stations and tunnels comprising the West Island Line project.

The former i.e. the pedestrian subway will be up to 8.6m in diameter. The latter, i.e. the construction tunnel will be up to 7.3m in diameter. Both tunnels will be located in rock and will lie at least 10m below the foundations of the Belcher's development.

The plans for these tunnels were shown on the plans issued under the Railways Ordinance gazette in October 2007 and have been regularly reported on in the various public consultations carried out for the West Island Line. The gazette plans show the area potentially affected by the tunnels, including a larger area for the tunnels than is required to be excavated, as this also includes the area within which rock bolts and other temporary support and ground treatment may be undertaken during excavation to ensure stability of the tunnels.

The two tunnels cannot be combined into one because the pedestrian subway must be kept relatively close to the surface to avoid excessive walking distances by passengers using the future subway, whilst the construction tunnel must be deep enough to remain wholly within the rock strata as it passes underneath Connaught Road West.

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Now to respond to your concerns.

Safety

All proposals for tunneling under buildings require agreement with the relevant Government authorities including Buildings Department and the Geotechnical Engineering Office. MTR will implement an extensive monitoring programme with frequent regular reporting of ground information and other geotechnical parameters to the Government to verify that the works are proceeding in accordance with the agreed proposals.

It would not be possible to undertake the West Island Line project without tunneling underneath buildings; indeed the West Island Line tunnels will pass underneath several hundred buildings. This has also been done for almost all other previous MTR projects and is an accepted means of solving the difficult alignment constraints that apply for virtually all underground railways within the densely populated areas of HK. The foundations of the Belcher's development are supported on good quality rock and the two tunnels will be even deeper still. There is no question that the foundations of the Belcher's development will be undermined by the proposed tunnels.

Blasting

Excavation of tunnels in areas of hard rock by use of explosives is common in HK. The use of explosives is governed by the Mines Division of the Civil Engineering Development Department (CEDD) and strict guidelines are enforced over issues such as ground vibrations and public safety. Under the requirements of the EIA Ordinance a risk assessment on the transport, storage and use of explosives must be undertaken and this has been completed and endorsed by the relevant authorities. In addition MTR must submit blasting assessment reports to Mines Division for their approval prior to gaining permission to blast anywhere along the alignment. These reports contain details of the proposed blasting methods, identify all sensitive receivers and assess any adverse effects arising from blasting, and the mitigation measures to be taken to ensure the integrity of the buildings and services within the vicinity of blasting. Further, once the construction contracts commence the contractors must make a further application to Mines Division to gain a blasting license. Blast design details must also be provided to Mines Division prior to every blast being carried out. The quantity of explosives for each blast will be subject to stringent control so that the blasting work will not affect the safety of buildings and services within the vicinity of blasting. Building Department and Mines Division of CEDD will also carry out site audit monitoring to check for compliance. MTR will implement a consultation forum during construction to keep residents informed of the times of blasting and to address any other issues of concern. Prior to commencement of construction, condition surveys of all buildings in the vicinity of the West Island Line will be undertaken for record purposes.

Purpose of the Tunnels

It is not correct to state that the construction tunnel will be used for removal of rubbish. Its purpose is to provide access for construction into the main West Island Line tunnels from a temporary works area adjacent to the waterfront, to minimise the need for heavy construction equipment to use the narrow and steep roads within Western District. This tunnel will also be used to remove rock which is excavated from the West Island Line tunnels, to allow the rock to be taken away by sea for recycling, either as raw material for concrete or as a useful fill material for other construction projects. Rather than providing a financial benefit to MTR as you suggest, the construction tunnel will in fact add to the overall cost of the WIL Project, but this is considered to be essential on safety and environmental grounds during construction. On completion the tunnel will be filled with concrete, generally in the same manner as concrete foundations are constructed for most buildings, including the Belcher's development and will be of similar long term durability.

Alternative Alignments

Your suggestions for alternative alignments for the pedestrian subway and the construction tunnel have been examined and a response was given in the reply from Highways Department dated 6 May 2009. The residents in the Belchers Street area have expressed a strong desire for an entrance. The only suitable location which does not result in resumption of private buildings or occupy valuable road space is the location on the north side of the Belcher's development as currently proposed. The pedestrian subway connecting to the station must therefore pass underneath the Belcher's development to secure the most direct route.

Your alternative proposed alignment for the construction tunnel is also not feasible. It would clash with the foundations of other buildings and would not provide the required direct connection to the main station excavation at University station.

In conclusion I hope you find the responses helpful. As usual we are prepared to meet to further discuss any remaining concerns.

Yours faithfully,



A. M. Gibson

Head of Project Engineering

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