

Panel on Transport
Subcommittee on Matters Relating to Railways

**Issues relating to the settlement of existing railway facilities of
MTR Corporation Limited**

Purpose

This paper briefs the Subcommittee on matters relating to the settlement of existing railway facilities of the MTR Corporation Limited (MTRCL), and explains the measures taken by the Government and MTRCL on the impact of nearby construction works on existing railway facilities.

Impact of nearby construction works on existing railway facilities

2. Generally speaking, foundation works causing settlement in nearby structures is not uncommon. To protect railway safety, the Government and MTRCL have put in place stringent monitoring mechanisms to handle settlement of railway facilities arising from construction works within the railway protection area.

Regulatory regime of the Government

3. The Government has always accorded top priority to railway safety and has put in place a stringent regulatory system. The Electrical and Mechanical Services Department (EMSD) regulates and monitors the safe operation of the railway system according to the Mass Transit Railway Ordinance and its subsidiary regulations. The Buildings Department (BD) regulates the planning, design and construction of buildings and associated works on private land to ensure compliance with building safety standards according to the Buildings Ordinance (BO).

4. To safeguard the structural safety of railway facilities, construction works located within the railway protection area as stipulated under Schedule 5 of the BO should comply with a more stringent set of standards. BD would require the registered building professionals responsible for the works to monitor the effect arising from the building works to the adjacent railway structures according to the requirements set out in the BO and its subsidiary regulations, and the

“Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers” (PNAP) issued by BD. Comments of MTRCL have to be sought for the plans of the proposed works and the monitoring proposal. BD will formulate settlement monitoring checkpoints and applicable pre-set threshold for works suspension for relevant private development projects, after consultation with MTRCL, in order to safeguard the relevant railway facilities.

5. The registered building professionals are required to inform MTRCL direct before the commencement of any building works in the railway protection area to enable the Corporation to formulate appropriate monitoring plan as soon as possible, including requesting the developer to install additional monitoring checkpoints as per the established procedures for railway protection area to facilitate the monitoring of settlement data and ensure that railway safety and operation will not be affected by related works. During the construction period, the personnel responsible for the project should regularly monitor the impact of construction works to nearby railway structures, and submit reports as appropriate, so as to assist relevant departments and MTRCL in monitoring the situation and to request the registered building professionals responsible for the development project to follow-up as and when needed, including conducting more frequent monitoring and measurement, or even suspending works.

Prescription of pre-set threshold for works suspension

6. Regarding private development projects within the railway protection area, BD has stipulated in the PNAP the pre-set settlement thresholds of nearby structures during the construction period. The registered building professionals are required to take corresponding follow-up actions, or even suspend works, when they found that the settlement of monitoring checkpoints has reached certain levels during the construction period. Generally speaking, the pre-set settlement upper threshold of railway structures is prescribed as 20 mm. As the structures of the railway facilities, locations and conditions of the construction sites and railway facilities, construction methods, as well as the geological conditions varied from each other, they will all affect the prescription of relevant monitoring thresholds (including the pre-set settlement upper threshold). BD, MTRCL, relevant registered building professionals of the concerned development project, and other relevant government departments will take into account the aforementioned factors in devising appropriate pre-set settlement thresholds for individual

locations as and when necessary. That said, such pre-set thresholds shall be prescribed to protect public safety, and shall be approved by BD.

7. During the construction period, if the settlement situation stays within the pre-set threshold of the relevant monitoring checkpoints, the construction works may continue. If the settlement reading reaches the pre-set threshold for works suspension, the works have to be suspended and the relevant registered building professionals have to consider implementing additional mitigation measures and remedial measures to rectify the situation. However, it does not mean that the relevant railway facility structure and railway operation have been rendered unsafe. The threshold for works suspension has been adopted as a standard control point for monitoring construction works. It is important for the registered building professionals to formulate and implement effective measures in a timely manner to mitigate the impact of construction works on the railway facilities concerned and to ensure the structural safety of railway facility and the safe operation of the railway. The prescribed pre-set threshold for works suspension can be changed if necessary. For instance, when an on-grade platform constructed as a long-box slab structure is subject to settlement, a relatively higher settlement level will be expected. If the relevant registered building professionals responsible for the project propose to adjust the pre-set threshold for works suspension as a result of detailed structural analysis and a series of measures for mitigating the situation effectively, BD will vigorously consider such proposal along the principle of ensuring structural safety of the railway facilities, including consulting MTRCL and other relevant government departments.

8. Regarding the construction of public works within railway protection area, the Government has adopted similar regulatory mechanism to safeguard the relevant railway facilities.

Railway protection measures of MTRCL

9. The dedicated railway protection team of MTRCL will monitor the status of various railway facilities in accordance with a set of stringent railway protection measures and procedures, including regular machinery inspection of railway structures to ensure that the track is always maintained in a safe and good condition. The contractor responsible for the building works will also be required to set up additional monitoring checkpoints at appropriate locations to facilitate MTRCL's monitoring of

the situation of various railway facilities. If there are any defects, MTRCL will immediately notify the relevant persons. Moreover, MTRCL maintenance team has been conducting annual inspections on relevant railway facilities including viaducts and platforms in accordance with the rigorous railway infrastructure and asset maintenance and repair systems, inspecting the bridges and piers in details to ensure their structural safety. Please refer to Annex 1 for the details of MTRCL's railway protection principle and mechanism.

Railway facilities under settlement monitoring within Railway Protection Area

10. According to the information provided by MTRCL (see Annex 2), in early 2018, there were 64 projects under settlement monitoring within railway protection area, of which 54 involved construction works in the vicinity of the heavy rail and 8 involved construction works in the vicinity of light rail. In August 2018, there have been 3 cases of suspension of works due to settlement, one concerned the viaduct piers of Yuen Long Station of the West Rail Line, the others concerned the platform of Tin Wing Stop of the light rail and railway facilities of Tai Wai Station of the East Rail Line respectively. Regarding the aforementioned three cases, MTRCL and the relevant government departments have taken corresponding actions once being informed of the monitoring results, including requesting the developer of the concerned private development projects to suspend the works temporarily. BD has also issued letters to the relevant registered structural engineers, requesting for examination of the causes of the settlement, submission of remedial proposal and mitigating measures, and a review on the design and construction method of the works concerned so as to ensure the adjacent railway facilities would not be further affected by the construction works.¹

¹ For the case of Yuen Long Station viaduct piers, BD accepted the MTRCL's preventive underpinning proposal for the viaduct piers in June 2015 and the works commenced in September 2017 are still in progress. During the course of the preventive underpinning works, the readings of 4 monitoring checkpoints installed on the two affected piers have been stabilised and remained in the range between 16 mm and 17 mm, without exceeding the pre-set threshold of 20 mm for works suspension. Regarding the Tin Wing Stop and Tai Wai Station cases, the corresponding registered structural engineers submitted to BD the structural appraisal and analysis with proposed enhanced mitigating measures in late July. BD consulted the Geotechnical Engineering Office of the Civil Engineering and Development Department and MTRCL. After consolidating the views from various parties, BD has written to the registered structural engineers requesting them to consider those views and submit amendment plans. The recent settlement readings at the platform of Tin Wing Stop and the platform and overhead line mast of Tai Wai Station have been stabilised and their current readings are 90 mm, 23 mm and 23 mm respectively.

11. All of the aforementioned three incidents have not affected railway safety. Upon receipt of MTRCL's notification of those incidents, BD sent officers to inspect the relevant railway facilities and confirmed that they were structurally safe. EMSD also reviewed the rail monitoring data submitted by MTRCL and confirmed that the railway safety was not affected by the related works. The tracks of the relevant railway lines complied with safety standards and were operating normally. Since the occurrence of the respective incidents, BD and EMSD have been closely monitoring the situation to ensure the structural safety of railway facilities and safe operation of the railway.

Announcement Mechanism for the Impact of Construction Works on Railway Operation

12. The Government understands public concerns on the impact on railway safety brought by the relevant settlement incidents. To respond to public concerns, relevant government departments (including BD and EMSD) and MTRCL reviewed the existing arrangement in monitoring and announcing the impact of private construction works on the structural safety of railway facilities and safe operation of the railway, and stipulated measures to enhance communication and information dissemination arrangement. The Government also issued a press release on 6 August to elaborate on the detailed measures under the new mechanism.

13. Private development projects have all along been required to obtain consent from BD. The department has to be notified before construction works commences. Under the new mechanism, BD will notify both EMSD and MTRCL when granting consent to commence works for a private development project within railway protection area to allow MTRCL to timely formulate plan to monitor a safe railway operation. For individual cases where it comes to MTRCL's knowledge from other sources that private works have commenced within railway protection areas, MTRCL will also notify BD and EMSD to enhance communication.

14. BD will continue to formulate settlement monitoring checkpoints and applicable pre-set thresholds for works suspension for relevant private development projects. In addition, MTRCL may require the developer of a private development project to set up additional

monitoring checkpoint(s) and prescribe pre-set threshold(s) for works suspension according to the established procedures for railway protection.

15. During the construction of the private development project, if any monitoring checkpoint within the railway protection area records a settlement reading reaching the pre-set threshold for works suspension set by MTRCL or the Government, or under any other circumstances where MTRCL or relevant government departments consider the settlement may affect the safety of railway facilities or railway operation thereby warranting works suspension, MTRCL, BD and EMSD will notify each other immediately. In the next 48 hours, BD will complete inspection of the affected railway facilities to confirm their structural safety and EMSD will complete reviewing MTRCL's rail monitoring data to ensure a safe railway operation. BD and EMSD will then issue a joint press release to report the situation to the public.

16. During works suspension, BD, EMSD and MTRCL will continue to closely monitor the situation to ensure the structural safety of the railway facilities and safe operation of the railway. BD and MTRCL will request the registered building professionals responsible for the development project to stipulate mitigation measures to reduce the impact on the structure of railway facilities. EMSD will also ensure that MTRCL implements stringent monitoring measures ensuring a safe railway operation.

17. Upon receipt of any application to resume construction works, BD will adhere to the principle of ensuring structural safety of the railway facilities when vigorously scrutinising such application. During the process, BD will consult EMSD, other relevant government departments and MTRCL as per the established mechanism. BD and EMSD will jointly announce to the public the decision to accept application to resume construction works.

18. As regards the construction of public works within the railway protection area, the Government has stipulated comparable guidelines, in order to enhance communication and information dissemination arrangement.

Transport and Housing Bureau
Buildings Department
Electrical and Mechanical Services Department
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MTR's Railway Protection Mechanism

Introduction

This paper briefs Members the MTRCL's protection mechanism for railway facilities within railway protection areas, covering the monitoring of settlement, etc.

2. Safety is MTRCL's overriding principle on railway operations, which could never be compromised. MTRCL has put in place an established regime for maintaining our railway infrastructure and assets. This regime, comprehensive and stringent, is recognised internationally as of high standard that ensures railway facilities are safe. Besides, to address the impact on railway facilities arising from construction works in the vicinity, MTRCL has set up a stringent and comprehensive railway protection mechanism in accordance with relevant ordinances. In short, MTRCL has put in place an all-embracing system on protecting railway facilities and ensuring safe operations at any point of time, regardless of whether those facilities are within or outside railway protection areas.

MTRCL's railway protection principles and mechanism

3. There is a designated Railway Protection Unit in MTR that implements railway protection initiatives in accordance with the Buildings Ordinance or relevant regulations¹. Under the established regulations, the Corporation strictly requires, via the Buildings Department, registered building professionals hired by developers to assess the impact of the construction work on existing railway structures, formulate a monitoring plan and pre-set various monitoring indicators (including settlement limits) and corresponding containment measures, to enable the Corporation's monitoring of settlement as well as other data and ensure safe railway operation will not be affected. Such monitoring

¹ The Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers APP-24 provided by Buildings Department states that railway protection measures are carried out according to the Railways Ordinance, Mass Transit Railway (Land Resumption and Related Provisions) Ordinance, and Area Number 3 of the Scheduled Areas in Schedule 5, Buildings Ordinance, Cap 123. For details, please refer to relevant practice notes:
<https://www.bd.gov.hk/english/documents/pnap/APP/APP024.pdf> (Eng)
<https://www.bd.gov.hk/chineseT/documents/pnap/signed/APP024sc.pdf> (Chi)

plans require the Corporation's consent and the approval of the Buildings Department.

These protection measures mainly include the followings:

- (i) according to practice notes for regulations relating to railway protection measures, registered building professionals are required to seek comments and consent from the Corporation on the building plans of new construction works within the railway protection area (in general referring to the boundary of 30 metres or less from railway structures) prior to obtaining Government approval to these plans or commence such works.
- (ii) registered building professionals are required to assess the impact of construction work on existing railway structures such as viaduct, track, platform, overhead lines, tunnels, etc. The professionals will also have to establish a monitoring plan to monitor the situation of various railway facilities, e.g. the degree of settlement and pre-set relevant works suspension threshold(s), and also formulate relevant containment measures such as grouting, revision of construction methods, etc.
- (iii) the pre-set thresholds for relevant monitoring works (including settlement threshold) might vary according to different railway structures, location of respective structures and construction work, as well as construction method and ground condition. The monitoring methods, work suspension threshold and containment measures concerning works within individual railway protection area, therefore, would be not exactly the same. The fundamental principle is to ensure safe railway operation.
- (iv) in the event of any temporary work suspension, to ensure safe railway operations, the Corporation would continue with the monitoring of relevant locations and railway facilities; and maintain liaison with relevant government departments as well as registered building professionals of the concerned development projects to ensure suitable measures and corresponding actions are taken before any resumption of construction works by the developer. To ensure safe railway operations, work suspension thresholds may be adjusted subject to actual circumstances. Such adjustment needs to be agreed by the Corporation and approved by the Buildings Department prior to adoption.

Monitoring Works within Railway Protection Areas

4. Currently there are 64 sites within railway protection areas where public works or private works projects are being carried out (please refer to Annex 2 for details announced by the Corporation on 6 August). The Corporation has been closely monitoring the impact of such construction works on facilities within railway premises, including settlement readings, according to the stringent mechanism outlined above. In terms of safe railway operations, it is of utmost important to ensure the tracks are smooth, and the relative height and distance between the tracks, platform and overhead lines comply with safety standards. The settlement levels of most of the railway facilities at the abovementioned sites are very minor and stable. The relevant heights and distances of facilities at these sites are also within the safety standard. The settlement levels of facilities are within work suspension thresholds at all locations except the residential property development project at Tin Shui Wai Town Lot No.23 and the property development project atop Tai Wai Station. We have to emphasise that the purpose of pre-setting a settlement threshold is to temporarily suspend the relevant works to allow time for the registered building professionals to conduct a holistic assessment and review as well as to explore other mitigation measures to effectively alleviate the settlement situation, and to ensure that the works can only be resumed on the condition that railway safety would not be affected by works to be carried out later on. The reaching of such threshold in any location does not in itself mean that the building structure or public safety has been affected.

5. Monitoring work is on-going. Subject to actual circumstances, the Corporation might require the developers to propose settlement mitigation measures even if the work suspension thresholds are yet to be reached. If a settlement level reaches the pre-set work-suspension threshold, the Corporation would immediately require the developers to suspend construction works at the concerned railway protection area and notify relevant government departments. The Corporation would also require the registered building professionals hired by the developers to explore construction methods and mitigation measures to effectively contain the settlement. Construction works in these areas can only be resumed on the condition that railway safety would not be affected by any works to be carried out later on and agreements from relevant Government departments have been obtained.

Announcement mechanism

6. According to the announcement mechanism announced by the Government on 6 August 2018 regarding the impact of private construction works within railway protection area on the structural safety of railway facilities and safe operation of railway, information will be provided to the public if MTRCL finds that the settlement level at railway facilities within such areas has reached the work suspension threshold pre-set by the MTRCL and relevant Government departments, or in the event that MTRCL considers that the settlement may affect railway facilities or operations and thus require the temporary suspension of such works. The Corporation will work in accordance with the aforementioned mechanism.

MTR Corporation Limited
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Annex 2**Railway-related Facilities under Settlement Monitoring
within Railway Protection Areas**

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
Kwun Tong Line							
1	Universal access facilities at footbridge, elevated walkway and subway	Civil works	Public works	Highways Department	Between Kowloon Bay and Ngau Tau Kok stations	20	+2
2	East Kowloon Cultural Centre	Building project	Public works	Architectural Services Department	Kowloon Bay Station	20	+4
3	Barrier-free access facilities at highway structure	Civil works	Public works	Highways Department	Kowloon Bay Station	20	-1
4	Tseung Kwan O – Lam Tin Tunnel	Civil works	Public works	Civil Engineering and Development Department	Near Lam Tin Station	20	+4
5	Barrier-free access facilities at highway structure	Civil works	Public works	Highways Department	Kowloon Bay Station	20	-1
6	Property development project at Ho Man Tin Station	Building project	Private project works	(Note 1)	Ho Man Tin Station	20	-2
7	Property development project at No.35 Clear Water Bay Road	Building project	Private project works	(Note 1)	Near Choi Hung Station	20	-1

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
Tsuen Wan Line							
8	Tsim Sha Tsui Carnarvon Road Subway	Building project	Private project works	(Note 1)	Tsim Sha Tsui Station	20	+2
9	Property development project on Kin Chuen Street, Kwai Chung	Building project	Private project works	(Note 1)	Between Kwai Hing and Tai Wo Hau stations	20	+6
10	Redevelopment project at No. 742 – 744 Nathan Road, Mong Kok	Building project	Private project works	(Note 1)	Between Mong Kok and Prince Edward stations	20	+2
11	Lift and connecting footbridge on Sai Lau Kok Road, Tsuen Wan	Civil works	Public works	Highways Department	Tsuen Wan Depot	20	-3
Island Line							
12	Property development project on Oil Street	Building project	Private project works	(Note 1)	Fortress Hill Station	20	-2
13	Property development project on Java Road	Building project	Private project works	(Note 1)	Near North Point Station	20	-8
14	Redevelopment project at No. 450 – 456G Queen's Road West	Building project	Private project works	(Note 1)	Near HKU Station	20	-4
15	Redevelopment project at No. 1 – 19 Chung Ching Street	Building project	Private project works	(Note 1)	Sai Ying Pun Station	20	+3
16	Redevelopment project at No.48 – 51 Connaught Road West	Building project	Private project works	(Note 1)	Between Sai Ying Pun and Sheung Wan stations	20	-3

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
17	Redevelopment project at No. 87 – 89 Des Voeux Road West	Building project	Private project works	(Note 1)	Between Sheung Wan and Sai Ying Pun stations	20	-2
18	Redevelopment project at No.2 Murray Road	Building project	Private project works	(Note 1)	Between Central and Admiralty stations	20	-2
19	Redevelopment project at No.2 Murray Road	Building project	Private project works	(Note 1)	Between Central and Admiralty stations	20	-2
20	Redevelopment project at No.1A – 1P Marble Road	Building project	Private project works	(Note 1)	North Point Station	20	-4
South Island Line							
21	Property development project on Lee Nam Road, Ap Lei Chau	Building project	Private project works	(Note 1)	Ventilation building near Lee Wing Street	20	-1
Tseung Kwan O Line							
22	LOHAS Park Package 7, Tseung Kwan O	Building project	Private project works	(Note 1)	Near Tseung Kwan O Depot	20	+2
23	LOHAS Park Package 9, Tseung Kwan O	Building project	Private project works	(Note 1)	Near Tseung Kwan O Depot	20	+2
24	LOHAS Park Package 10, Tseung Kwan O	Building project	Private project works	(Note 1)	Near Tseung Kwan O Depot	20	+3
Tung Chung Line and Airport Express							
25	Environmental protection works in Kwai Chung Park	Civil works	Public works	Environmental Protection Department	Section in Kwai Chung Park	20	-10

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
26	West Kowloon Cultural District – M+ Project	Building project	Private project works	(Note 1)	Near Kowloon Station <i>Relevant works has been completed thus settlement monitoring ceased</i>	20	-17
27	West Kowloon Cultural District – M+ Project	Building project	Private project works	(Note 1)	Between Kowloon and Hong Kong stations <i>Relevant works has been completed thus settlement monitoring ceased</i>	20	-6
28	West Kowloon Cultural District – Lyric Theatre Complex	Building project	Private project works	(Note 1)	Near Kowloon Station	20	-5
29	Hong Kong International Airport Three Runway System	Building project	Private project works	(Note 1)	Between Airport and AsiaWorld-Expo stations	20	-3
30	Tung Chung New Town Extension	Civil works	Public works	Civil Engineering and Development Department	Between Siu Ho Wan and Tung Chung Station	20	-1
East Rail Line and Ma On Shan Line							
31	Universal access facilities at footbridge, elevated walkway and subway	Civil works	Public works	Highways Department	Near Mong Kok East Station	15	+3

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
32	Widening of footbridge of Fanling Station	Civil works	Public works	Civil Engineering and Development Department	Fanling Station	15	-2
33	Barrier-free access facilities at footbridge	Civil works	Public works	Highways Department	Near Fanling Station	20	-3
34	Cable laying at Liantang/Heung Yuen Wai Boundary Control Point	Civil works	Public works	Highways Department	Between Tai Wo and Fanling stations <i>Relevant works has been completed thus settlement monitoring ceased</i>	20	-3
35	Widening of Fanling Highway – reinstatement of Tai Wo Footbridge	Civil works	Public works	Highways Department	Between Tai Wo and Fanling stations	20	-2
36	Barrier-free access facilities at footbridge	Civil works	Public works	Highways Department	Between Tai Wo and Fanling stations	20	-2
37	Lo Wu Station improvement works	Building project	Private project works [@]	(Note 1)	Lo Wu Station	20	0
38*	Property development project atop Tai Wai Station	Building project	Private project works	(Note 1)	Tai Wai Station	20	-23
39	Public housing development project at Choi Yuen Road Sites 3 and 4, Sheung Shui	Building project	Public works	Hong Kong Housing Authority	Sheung Shui Station	15	-3

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
40	Property development project on On Yiu Street in Shek Mun, Sha Tin	Building project	Private project works	(Note 1)	Between Shek Mun and Tai Shui Hang stations	20	-1
41	Subsidised housing development project on Hang Kin Street, Ma On Shan	Building project	Public works	Hong Kong Housing Authority	Between Tai Shui Hang and Hang On stations	15	-2
West Rail Line							
42	Redevelopment project at No. 18 – 24 Salisbury Road, Tsim Sha Tsui	Building project	Private project works	(Note 1)	East Tsim Sha Tsui Station	20	+3
43	Redevelopment project at No. 12 Salisbury Road, Tsim Sha Tsui	Building project	Private project works	(Note 1)	Between East Tsim Sha Tsui and Austin stations	20	+2
44	Redevelopment project of New World Centre, Tsim Sha Tsui	Building project	Private project works	(Note 1)	Between East Tsim Sha Tsui and Austin stations	20	+4
45	Yuen Long Station viaduct column improvement works	Building project	Private project works	(Note 1)	Between Kam Sheung Road and Yuen Long stations	20	-16
46	West Kowloon public housing project 3	Building project	Public works	Hong Kong Housing Authority	Between Nam Cheong and Mei Foo stations	15	-3
47	West Kowloon public housing project 3	Building project	Public works	Hong Kong Housing Authority	Between Nam Cheong and Mei Foo stations	15	-3

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
48	West Kowloon public housing project 3	Building project	Public works	Hong Kong Housing Authority	Between Nam Cheong and Mei Foo stations	15	-3
49	Lift at footbridge on Kwai Fuk Road, Kwai Fong	Civil works	Public works	Highways Department	Between Tsuen Wan West and Mei Foo stations	15	-1
50	Property development project at No.22 Wing Kin Road, Kwai Chung	Building project	Private project works	(Note 1)	Between Mei Foo and Tsuen Wan West stations	20	-2
51	Cycling track on Long Yat Road, Yuen Long	Civil works	Public works	Civil Engineering and Development Department	Between Kam Sheung Road and Yuen Long stations	15	+2
52	Hung Hom Station alteration and addition works	Alteration and addition works to existing building	Private project works [@]	MTR Corporation	Hung Hom Station	20	-2
53*	Property development project – Grand YOHO	Building project	Private project works	(Note 1)	Near Yuen Long Station	20	-16
54	Long Ping Station (South) property development project	Building project	Private project works	(Note 1)	Long Ping Station	20	-3
55	Property development project in Au Tau, Yuen Long	Building project	Private project works	(Note 1)	Between Kam Sheung Road and Yuen Long stations	20	-2
56	Yuen Long Station property development project	Building project	Private project works	(Note 1)	Yuen Long Station	20	+3

	Project	Project Type	Project Nature	Responsible Party	Nearby MTR Station/Railway Facilities	Settlement Limit for Suspension (mm)	Settlement Level (mm) # as of 3 Aug 2018
Light Rail							
57	Lift on Tuen Mun Heung Sze Wui Road	Civil works	Public works	Highways Department	Near Light Rail Town Centre Stop	20	-5
58	Lift on Tuen Mun Heung Sze Wui Road	Civil works	Public works	Highways Department	Near Light Rail Town Centre Stop	20	-2
59	Footbridge improvement works on Siu Hong Road, Tuen Mun	Civil works	Public works	Highways Department	Near Light Rail Siu Hong Stop	20	-2
60	Redevelopment project near No.5 San Yick Lane, Tuen Mun	Building project	Private project works	(Note 1)	Near Light Rail Kin On Stop	20	-7
61	Yuen Long Station property development project	Building project	Private project works	(Note 1)	Near Light Rail Yuen Long Stop	20	-5
62*	Property development project at Tin Shui Wai Town Lot No.23	Building project	Private project works	(Note 1)	Light Rail Tin Wing Stop	80	-90
63	Subsidised housing development project on Ming Kum Road, Tuen Mun	Building project	Public works	(Note 1)	Near Light Rail Shek Pai Stop	20	+3
64	Property development project at Tuen Mun Swimming Pool Stop	Building project	Private project works	(Note 1)	Near Light Rail Tuen Mun Swimming Pool Stop	20	-17

The figure in each item represents the maximum movement among monitoring points as at 3 August 2018. “+” and “-“ represent raised and settled levels respectively. The figures are based on the MTR Corporation’s records.

*Relevant works temporarily suspended due to settlement levels exceeding pre-set limit.

@ Station improvement works

Note 1: The private project works concerned are subject to the regulation of the Buildings Department in accordance with the Buildings Ordinance.

MTR Corporation Limited
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