UTLC 1/2008 Paper

WSD Special Site Arrangement
Noncompliance in the Provision of 1.5m Minimum Passage Width In Execution of Water Main Laying Works in Back Lanes

Introduction

1. This paper describes the practical difficulties to comply with the Code of Practice for the Lighting, Signing and Guarding of Road Works (CoP), 4th Issue, 2006, on the requirement for providing a minimum pedestrian footway width of 1.5m in laying water main in back lanes.

Current CoP Requirements

2. Paragraph 6.1 of the above CoP stipulates that: -

   "*When work is carried out in the footway, the maximum width possible should be provided for pedestrian movements. Normally, a minimum clear footway width of 1.5m should be maintained for pedestrians. Where it is not practicable to provide this minimum width and no adequate alternative route can be provided, the Police, the Transport Department and the Highways Department should be consulted, as it may be necessary to make use of the adjacent carriageway. If the affected footway is of a short length, the footway width may be reduced to less than 1.5m with the prior permission of the authorities…."*

3. Although the above requirement is expressly referred to works at footway, Highways Department (HyD) has also applied this requirement to the excavation work in back lanes during their audit inspection for non-compliance with the CoP.

Mainlaying Works in the Back Lanes

4. Water Supplies Department (WSD) has been implementing a 15-year programme to replace and rehabilitate about 45% of the aged water mains in Hong Kong, Kowloon and the New Territories. The required works include the replacement of the water mains in back lanes in the old districts of Hong Kong, Kowloon and New Territories.

5. In general, laying a new water main or replacing an existing water main in back lane will require an excavated trench of 0.9m minimum width, excluding space for barricade, to accommodate the pipe and to provide sufficient working space for the pipe works. However, the width of the back lanes, especially those in the old districts, is often less than 2m. It is, therefore, hardly able to maintain a

minimum clear passage width of 1.5m for pedestrian as required under the CoP in the back lanes while carrying out the water main laying works.

6. Although the minimum clear footway width has been relaxed by TD and RMO on a case by case basis from 1.5m to 1.1m (being the minimum required to allow passage of wheel chair users), in many cases, it is impractical to comply with because of the physical constraints that may be encountered in laying water mains in back lanes as stated below.

Constraints Commonly Encountered

Width of Back Lane

7. Many Back lanes were provided between the blocks of buildings in the old districts, to serve mainly as scavenger lanes or service lanes, rather than for normal pedestrian passage. These back lanes are often very narrow, with widths from about 1.2m to 2m.

Underground Utilities Congestion

8. Most utilities companies have continued laying ducts and services in the back lanes to provide new and improved services. The back lanes are therefore fully packed with various types of services and associated pits and manholes besides existing storm water drains and sewage pipes. The final alignment of the new water main is therefore very much dictated by the location and arrangement of the existing services in the back lane.

Other Obstructions

9. To add to the problem, there may often be above ground obstructions affecting the siting of the new water main, such as lighting poles, stalls, illegal structures and temporary stockpiling of materials, which are commonly found in the back lanes.

Space for Future Maintenance of the Water Mains

10. To allow space for future maintenance, the water main has to be laid at a minimum clearance of 300mm from the building line. Also, the new water main may have to negotiate through the congested existing utilities, service pits and manholes. Therefore, the excavated trench for laying water main may have to meander through the back lane and may often need to move towards the centre of the back lane.

Proposal

11. In view of the constraints encountered on site, the minimum clear footway width of 1.5m cannot be achieved when laying the water mains in back lanes. In many cases, even the relaxed 1.1m minimum clear pesdestrian width is impractical to achieve because of the actual site situation. As a result, WSD have received a lot of advices on non-compliance with the CoP requirement on this aspect from the HyD Audit Team.

12. In some cases, WSD has tried to divert the pedestrian to use other nearby back lane for access. However, it is not always possible to find a suitable alternative back lane for diversion. In many cases, even a nearby back lane is available as an alternative access, the diversion may cause even more inconvenience to the public because they may have to walk a much longer distance.

13. Furthermore, from WSD's experience and observations on site, most of the back lanes are not used for normal pedestrain access and rarely for the passage of wheel chair users; and hence the minimum 1.1m width is not strictly necessary.

14. In view of the above, in exceptional situations where physical constraints do not permit the provision of required minimum clear footway width of 1.5m, or even the relaxed limit of 1.1m, in the back lanes, the following measures are proposed to be taken for laying water mains or other utilities works in back lanes: -

(i) To further relax the clear footway width requirement to 0.8m;

(ii) In cases where clear footway width requirement of 0.8m cannot be provided, to permit temporary closure of the specific section of the back lane after consulting nearby residents;

(iii) For back lane temporarily closed or the clear footway width is less than 1.1m, to require temporary and immediate arrangement, such as decking,

planking, guarding, signalman etc., to be made so as to allow any pedestrian to pass through the back lane when such need arises; and

(iv) To require all trenches within the back lanes to be completely decked after working hours if the minimum clear footway width of 1.1m cannot be maintained and no alternative pedestrian passage is available (where the minimum clear footway width of 1.1m can be maintained, complete decking of the trenches is not required and a proper TTA should be implemented).

Water Supplies Department
April 2008

Modified **Extract of 72nd UTLC meeting minutes on 6.5.2008 (modification part is emphasized in italics)**

"WSD briefed the meeting on a discussion paper that described the difficulties WSD encountered in fulfilling TD's requirement of providing nominal 1.5m or minimum 1.1m wide temporary footway in *back lanes* where some of the width might only be 1.5m. WSD suggested that their Replacement and Rehabilitation of Water Mains project throughout Hong Kong in the coming decade would involve a lot of excavation works in the *back lanes*, and therefore WSD suggested that a minimum of 0.8m width would be allowed to be provided in the *back lane* where their trench for laying watermains, excavated in sequence linearly, would not be more than 10m long.

The Hong Kong Police Force raised their concern on the adequacy of 0.8m width for bi-directional flow of pedestrians. They also raised the issue of whether such width was adequate for handicapped persons' movement in *back lanes*, as well as the concern of fire escape access.

TD also expressed that the 0.8m wide temporary *back lane* pedestrian footway would only be agreeable on exceptional cases and ought to be forwarded to TD and to be considered on a case-by-case basis.

After some discussion, the meeting concluded that whenever and wherever a minimum 0.8m wide pedestrian footway in *back lanes would be* provided due to site constraints, *in addition to the proposed measures stated in paragraph 14 of WSD's discussion paper above*, WSD should adopt the following pedestrian flow measures at *back lanes*:

- the *section of* excavation trench *with 0.8m wide pedestrian footway* should not be more

than 10m;

- adequate road signs to inform pedestrians *should* be placed at both ends of the trench;
- at least a work supervisor *should* be on site to offer guidance to pedestrians requiring access to and from the *back lane*;
- *whenever* pedestrian access to the *back lane would demand* a width of more than 0.8m, WSD should ensure that the excavated area *would top* without delay with temporary covers to allow access for the pedestrians in the *back lanes*.
- WSD to demonstrate the feasibility of such measures by trials on site.

The meeting also discussed the situation on some relatively narrow footways flanking carriageway. The meeting concluded that the adoption of 0.8m wide in such situation might not be necessary as pedestrian flow could be diverted either to the other side of the carriageway or using part of the adjacent carriageway."

Research and Development Division
Highways Department
December 2008

Unanimous endorsement by UTLC members at the 75th UTLC meeting held on 9.2.2009 that the special pedestrian flow measures at backlanes be applicable generally to activities of all UTLC members, not limited to WSD.

Research and Development Division
Highways Department
February 2009

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