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## INFORMATION NOTE

### **Research on the Methodology for the Calculation of Economic Costs Relating to Excavation Works on Pedestrian Ways**

#### **1. Background**

1.1 The Bills Committee of the Lands (Miscellaneous Provisions) (Amendment) Bill 2002 of the Legislative Council (LegCo) is considering the feasibility of introducing a charging scheme for economic costs associated with extended excavation works on pedestrian ways. Members of the Bills Committee requested the Research and Library Services Division (RLSD) of the Legislative Council Secretariat during its meeting in February 2003 to conduct a research on the methodology for the calculation of economic costs relating to excavation works on pedestrian ways in overseas places.

#### **2. Research approach**

2.1 To search for the relevant information, enquiries have been sent to the relevant authorities, universities and research institutions in Hong Kong and overseas places.

2.2 In Hong Kong, the Highways Department and Transport Department are contacted and both departments indicate the difficulty to quantify the economic costs associated with excavation works on pedestrian ways. They are also not aware of any overseas practices in this area.

2.3 In addition to government departments, academics in two local universities specializing in civil engineering<sup>1</sup> are inquired on the existence of any methodology for such calculations with reference to overseas practices. The academics contacted do not realize the existence of any such practices in overseas places nor any research studies of related nature conducted by international research institutions or published in academic journals.

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<sup>1</sup> Dr. S. C. Wong in the University of Hong Kong, Professor William Lam and Dr. W. T. Hung in the Hong Kong Polytechnic University.

2.4 Dr. Hung of the Hong Kong Polytechnic University indicates that the common practice for estimating economic costs of traffic delay is based on three parameters:

- (a) the number of vehicles (i.e. traffic volume) affected;
- (b) the period (time in minutes) of delay (estimated using transport models); and
- (c) the value of time (HK\$/minute, figures available from the Transport Department's publications<sup>2</sup>).

2.5 Dr. Hung also suggests that the parameters mentioned in paragraph 2.4 may be possible criteria for estimating the economic costs associated with excavation works on pedestrian ways. Nonetheless, there is no information available regarding whether these parameters are being applied in overseas places.

2.6 Enquiries have also been sent to the following overseas organizations and authorities in the United Kingdom (UK), the United States (US), Australia and Singapore:

- (a) Department for Transport of the UK;
- (b) Institute for Transport Studies of the UK;
- (c) United States Department of Transportation;
- (d) United States Department of Transportation Federal Highway Administration;
- (e) California Research Bureau of the US;
- (f) Center for Transportation Research, the University of Texas at Austin, the US;
- (g) Department of Public Works, Los Angeles, the US;
- (h) Department of Transport Federal Highway Administration, New York, the US;
- (i) Library of Congress of the US;
- (j) National Conference of State Legislature of the US;
- (k) Department of Public Works and Services of New South Wales, Australia;
- (l) Institute of Transport Studies of Australia; and
- (m) Ministry of National Development, Singapore.

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<sup>2</sup> The Transport Planning Design Manual and the Third Comprehensive Transport Study.

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2.7 Of all the organizations and authorities aforementioned, only the Institute of Transport Studies of Australia, the California Research Bureau of the US, the National Conference of State Legislature of the US and the Department of Public Works and Services of New South Wales, Australia have responded to our enquiries. While the Institute of Transport Studies of Australia does not have any information related to the topic of concern, the other three organizations have acknowledged the receipt of our enquiries and have promised to follow up. Nevertheless, we have not received any further information from them as of the publication date of this note.

2.8 The simultaneous searches on the Internet have not provided us with much relevant information. In the UK, although we have found the *Street Works (Charges for Occupation of the Highway) (England) Regulations 2001*, they are applicable strictly to highways and not pedestrian ways. The charging scheme mentioned in the *Regulations*, therefore, cannot be used as a reference.

#### 1999 RLSD Report

2.9 In October 1998, LegCo Members received a petition made by a group of retail shop operators along Nathan Road over the viability of compensating business loss arising from temporary traffic diversion and re-route of buses in Nathan Road, as a result of the West Kowloon Drainage Improvement project.

2.10 In a bid to address the above concern, Members requested RLSD to conduct a research on the *Compensation Mechanism for Shop Operators Affected by Construction Projects in Major Overseas Cities*<sup>3</sup>. To obtain the necessary information, enquiries were sent to relevant authorities in a number of overseas cities, including London, Los Angeles, Melbourne, New York, Perth, Seoul, Singapore, Sydney and Taipei. The following paragraphs are extracts from the report.

2.11 None of the places which responded to that research indicated that there was any compensation for retail shop owners due to construction works as long as the construction projects were permitted under the existing statutory powers. Neither was compensation payable to shop operators when traffic was diverted or buses were re-routed.

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<sup>3</sup> LIU, Eva and Joseph LEE, *Compensation Mechanism for Shop Operators Affected by Construction Projects in Major Overseas Cities*, 15 February 1999, RP06/98-99.

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2.12 For instance, in the UK, when a highway authority or utility company properly executed construction projects under its statutory powers, there was no compensation to anyone for loss of business resulting from a drop of pedestrian flow. There was no plan to introduce a statutory duty to compensate loss of business for the following reasons:

- (a) construction works ultimately benefited the whole community (including businesses and others) although there might be short-term interruption;
- (b) duty to pay compensation for temporary disruption could increase the costs of the construction works; and
- (c) fluctuation in businesses could make accurate assessment of losses directly attributable to construction works difficult.

2.13 The research found that complementary measures were adopted in overseas places to mitigate the losses of retail shop owners due to construction works, including:

- (a) maintaining access to retail shops at all times;
- (b) completing the construction works within the shortest possible time;
- (c) stopping the construction works during peak shopping season; and
- (d) erecting signage to areas where traffic was diverted.

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## References

### Australia

1. Department of Public Works and Services of New South Wales, Australia available at <http://www.dpws.nsw.gov.au/Home.htm>.
2. Institute of Transport Studies of Australia available at <http://www.its.usyd.edu.au/>.

### Hong Kong

1. LIU, Eva and Joseph LEE, Compensation Mechanism for Shop Operators Affected by Construction Projects in Major Overseas Cities, 15 February 1999, RP06/98-99.

### Singapore

1. Ministry of National Development, Singapore available at <http://www.mnd.gov.sg/>.

### The United Kingdom

1. Department for Transport, the United Kingdom available at <http://www.dft.gov.uk/>.
2. Institute for Transport Studies, the United Kingdom available at <http://www.dft.gov.uk/>.

### The United States

1. United States Department of Transportation available at <http://www.dot.gov/>.
2. United States Department of Transportation Federal Highway Administration available at <http://www.fhwa.dot.gov/>.
3. California Research Bureau of the United States available at <http://www.library.ca.gov/>.
4. Center for Transportation Research, the University of Texas at Austin, the United States available at <http://www.utexas.edu/depts/ctr/>.
5. Department of Public Works, Los Angeles, the United States available at <http://www.ci.la.ca.us/dpw/dpwhome.htm>.
6. Department of Transport Federal Highway Administration, New York, the United States available at <http://www.nymtc.org/>.
7. Library of Congress, the United States available at <http://www.loc.gov/>.
8. National Conference of State Legislature of the United States available at <http://www.ncsl.org/public/sitesleg.htm>.