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Highways Department Technical Circular No. 2/2013

Departmental Liaison Agent  
for the Supply of Digital Map Data and LiDAR Data

1. Introduction

- 1.1 This Technical Circular (TC) promulgates the appointment of Chief Land Surveyor (CLS) as the departmental agent to liaise with the Land Information Centre (LIC) of Lands Department (LandsD) and Survey Division of Civil Engineering and Development Department (CEDD) for obtaining Digital Map Data and LiDAR (Light Detection and Ranging) Data and lays down the procedures for supplying these data to the internal users and the consultants/contractors working for the Highways Department (HyD).
- 1.2 This TC updates and supersedes HyDTC No.3/2010 which is hereby cancelled.

2. Background of Digital Map Data

- 2.1 The Digital Map Data includes digital topographic map data, land boundary data, geographic data, photogrammetric data and 3D Spatial Data.
- 2.2 Digital topographic maps at scales of 1:1000, 1:5000, 1:10000 and 1:20000 covering the whole territory are available from LandsD. A full set of the digital topographic map data has been provided to HyD. Updates of the digital topographic map data are also provided regularly.
- 2.3 Digital land boundary, geographic data (such as geo-referenced data and geo-community data), photogrammetric data (such as digital aerial orthophoto data) and 3D Spatial Data are also available from LIC but they are only provided upon request made to LIC on a case-by-case basis. Such digital geographic data can only be supplied to the staff of HyD and its consultants/contractors provided that endorsement has been obtained from

CLS who will then seek the approval of LandsD.

- 2.4 For information on the latest Digital Map Data, users may visit the website (<http://www.landsd.gov.hk/mapping/welcome.htm>) - homepage of the Survey & Mapping Office of LandsD.
- 2.5 Digital topographic map and land boundary data are usually provided in Arc/Info, DGN, DWG, DXF or TIFF format. Other formats may be provided if agreed by LIC. Normally only one data format for any one type of Digital Map Data is provided to the consultant/contractor for the same project.
- 2.6 As agreed with LIC, offices/divisions/units may use the Digital Map Data within HyD or release them to HyD's consultants/contractors. Users shall abide by the "*Terms and Conditions for the Use of Digital Map Data from the Land Information Centre, Survey and Mapping Office, Lands Department within Government Departments*" (Appendix A1).
3. Procedures for obtaining Digital Map Data
  - 3.1 CLS is the departmental liaison agent to deal with LIC regarding the acquisition of Digital Map Data. All requests, including requests from the HyD's consultants/contractors, for Digital Map Data should be submitted to CLS.
  - 3.2 CLS shall obtain the periodic updates of digital topographic map data in DGN format from LIC for dissemination to internal users through the departmental intranet website.
  - 3.3 CLS shall regularly obtain the digital topographic map data and land boundary data in Arc/Info format from LIC for updating the geographic information systems of HyD.
  - 3.4 HyD's consultant/contractor who wishes to use the Digital Map Data of LIC is required to complete the "*Digital Map Order Form*" (Appendix A2), sign the "Undertakings by Consultant/Contractor on the Use of Digital Map from Land Information Centre, Survey & Mapping Office, Lands Department"(Appendix A3) and forward them to the project engineer in the first instance for follow-up actions as stipulated in paragraph 3.5 below. For request of Digital Map Data other than those specifically indicated in the form, the project engineer should first consult CLS before submitting the Digital Map Order Form. In any case, the consultant/contractor shall not send the Form and the Undertakings to or contact LIC direct.
  - 3.5 If the project engineer is satisfied that the consultant/contractor's need is genuine, he should follow the guidelines as stipulated in the Digital Map Order Form, complete the standard memo of request (Appendix A4) and forward the memo, Digital Map Order Form and Undertakings to CLS who shall make arrangement with LIC for the supply of the digital data. The project engineer shall also make sure that the consultants/contractors have strictly

observed the acknowledgement requirements as stipulated in Clause 8 of Appendix A3 when they use the Digital Map Data to prepare any drawings, plans, 3D models, reports, etc.

- 3.6 If the consultant/contractor needs additional Digital Map Data for the same project, he has to submit fresh Digital Map Order Form and Undertakings through the project engineer to CLS for action.
- 3.7 On completion of the project, the consultant/contractor is required to inform CLS in writing using the Cessation Confirmation Form (Appendix A5) that he has ceased to use the Digital Map Data as previously supplied and that all such digital data have been permanently erased from his computer systems. CLS shall then forward a copy of the Cessation Confirmation Form to LIC for record.
- 3.8 If the consultant/contractor still requires to use the Digital Map Data for the project after the expected completion date as quoted in the Undertakings, he has to sign a fresh Undertakings with the revised completion date indicated. The expected completion date is normally the date of submission of all deliverables as required under a consultancy agreement, or the date of substantial completion of construction works.

#### 4. Reporting of problem in using Digital Map Data

- 4.1 If problems are encountered on the use of Digital Map Data, users are requested to report the problems to LIC through CLS using the Report Form (Appendix A6).

#### 5. Background of LiDAR Data

- 5.1 LiDAR (Light Detection and Ranging) Data were collected in a territory-wide Airborne Light Detection and Ranging (LiDAR) survey conducted by CEDD between 1 December 2010 and 8 January 2011. The LiDAR Dataset can be utilized in producing accurate territory-wide terrain information for various engineering applications.
- 5.2 LiDAR Data are available from CEDD but they are only provided upon request made to CEDD on a case-by-case basis. Such LiDAR data can only be supplied to the staff of HyD and its consultants/contractors provided that endorsement has been obtained from CLS who will then seek the approval of CEDD.
- 5.3 LiDAR Data are provided in LAS, ASCII, dBase IV and Raster formats. Normally only one data format for any one type of LiDAR Data is provided to the consultant/contractor for the same project.
- 5.4 As agreed with CEDD, offices/divisions/units may use the LiDAR Data within HyD or release them to HyD's consultants/contractors. Users shall abide by the "*Conditions on Use*

*of LiDAR Data from the Civil Engineering and Development Department”* (Annex on page 2 of the LiDAR Data Order Form in Appendix B1 (for Government Department/ Bureau) and Annex on page 2 of the LiDAR Data Order Form in Appendix B2 (for Consultant/ Contractor of Government)).

6. Procedures for obtaining LiDAR Data

- 6.1 CLS is the departmental liaison agent to deal with CEDD regarding the acquisition of LiDAR Data. All requests for LiDAR Data, including requests from staff of HyD and HyD’s consultants/ contractors, should be submitted to CLS.
- 6.2 Users within HyD can complete the “*LiDAR Data Order Form*” (Appendix B1) and forward to CLS. HyD’s consultant/ contractor who wishes to use the LiDAR Data of CEDD is required to complete the “*LiDAR Data Order Form*” (Appendix B2), sign the “Undertakings by Consultant/Contractor of Government on the Use of LiDAR Data from Civil Engineering and Development Department”(Appendix B3) and forward them to the project engineer in the first instance for follow-up actions as stipulated in paragraph 6.3 below. In any case, the consultant/contractor shall not send the Form and the Undertakings to or contact CEDD direct.
- 6.3 If the project engineer is satisfied that the consultant/contractor’s need is genuine, he should complete the standard memo of request (Appendix B5) and forward the memo, LiDAR Data Order Form and Undertakings to CLS who shall make arrangement with CEDD for the supply of the LiDAR Data. The project engineer shall also make sure that the consultants/contractors have strictly observed the requirements as stipulated in the Conditions on Use of LiDAR Data (Annex in page 2 of Appendix B2) when they use the LiDAR Data to prepare any drawings, plans, 3D models, reports, etc.
- 6.4 If the consultant/contractor needs additional LiDAR Data for the same project, he has to submit fresh LiDAR Data Order Form and Undertakings through the project engineer to CLS for action.
- 6.5 On completion of the project, the consultant/contractor is required to inform CLS in writing using the Cessation Confirmation Form (Appendix B4) that he has ceased using the LiDAR Data as previously supplied and that all such LiDAR Data have been permanently erased from his computer systems. CLS shall then forward a copy of the Cessation Confirmation Form to CEDD for record.
- 6.6 If the consultant/contractor still requires to use the LiDAR Data for the project after the expected completion date as quoted in the Undertakings, he has to sign a fresh Undertakings with the revised completion date indicated. The expected completion date is normally the

date of submission of all deliverables as required under a consultancy agreement, or the date of substantial completion of construction works.

7. Protection of Copyright

- 7.1 The Digital Map Data and LiDAR data shall be properly kept in the Drawing Offices, R&D Division, Survey Division/ Sections. Except for supply to consultants/contractors, the Digital Map Data and LiDAR Data shall not be released to any other third parties without the prior consent of CLS.
- 7.2 Derived digital maps are those Digital Map Data incorporated with or enhanced with the department's own data (e.g. road alignments, project limits, etc.). The derived digital maps with coverage not larger than 23 hectares may be released to the consultants/contractors and utility undertakers without the need to sign the Undertakings, but Digital Map Data beyond the limits of the relevant project should be kept to a minimum.
- 7.3 A large project should not be deliberately split into several coverages each not larger than 23 hectares for the purpose of waiving the requirement of signing the Undertakings. Utility undertakers who are also licensees of the Digital Map Data are not required to sign the Undertakings for derived digital maps with coverage larger than 23 hectares, provided that the utility undertakers have the right to use the same version of Digital Map Data supplied together with the derived digital map. Any other third parties are required to sign the Undertakings before derived digital maps are released to them, unless the coverage of each of the non-continuous derived digital maps so released is not larger than 15 hectares.

(Original Signed)

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Director of Highways