

Ref : HyD GR/1-50/1

Tel : 2762 3304

Highways Department
5th Floor
Homantin Government Offices
88 Chung Hau Street
Homantin
Kowloon

18 May 2022

Highways Department Technical Circular No. 2/2022

Supply of Digital Maps and LiDAR Data

1. Introduction

- 1.1 This Technical Circular (TC) lays down the arrangements for users of Highways Department (HyD) including HyD's Staff/Consultants/Contractors (HyD's users) to acquire Digital Maps and LiDAR (Light Detection and Ranging) Data from the Survey and Mapping Office (SMO) of Lands Department (LandsD) and the Survey Division of Civil Engineering and Development Department (CEDD), upon opening up of Digital Maps and LiDAR Data.
- 1.2 Chief Land Surveyor (CLS) is appointed as the departmental agent to liaise with SMO and CEDD for obtaining the latest Digital Maps and LiDAR Data.
- 1.3 This TC updates and supersedes HyDTC No. 2/2013.

2. Digital Map Data

- 2.1 With effect from April 2021, LandsD has opened up most of the Digital Maps¹ to the general public for free download and use. These Digital Maps are known as "Open Digital Maps". All other Digital Maps which are not opened-up are still supplied to the general public at a prevailing charge or to the government Bureaux/Departments (B/Ds) for internal use. In the context of this Circular, this set of non-opened up Digital Maps is called "Internal-use Digital Maps".

¹ Details of the Digital Maps can be found on the SMO website (<https://www.landsd.gov.hk/en/survey-mapping/mapping.html>).

Open Digital Maps

- 2.2 Open Digital Maps, which include the commonly used large-scale Digital Topographic Map, Digital Land Boundary Map, 3D Spatial Data, etc., are listed at Table 1 of Appendix A. HyD's users who wish to obtain the Open Digital Maps can visit the website of Hong Kong GeoData Store² (<https://geodata.gov.hk/gs/>) for browsing and free downloading. Users shall abide by the Terms and Conditions of Use of Data on Hong Kong GeoData Store.

Internal-use Digital Maps

- 2.3 Internal-use Digital Maps, which include large size aerial photos, small scale maps, orthophotos in specific file formats, etc., are listed at Table 2 of Appendix A. CLS shall be responsible for supplying the Internal-use Digital Maps to HyD's users according to the procedures in the ensuing paragraphs. A flowchart outlining the procedures for obtaining Internal-use Digital Maps is attached at Appendix B.
- 2.4 **HyD's Staff** who wishes to obtain Internal-use Digital Maps from CLS shall submit a request to CLS for the supply of the map data via memo/email. HyD's Staff shall abide by the "Terms and Conditions on the Use of Digital Map from Survey and Mapping Office, Lands Department (For Government Users)" at Appendix B1. The Internal-use Digital Maps shall not be released in part or in whole, or in whatever forms or media to any other third parties without the prior consent of CLS.
- 2.5 **HyD's Consultant/Contractor** who wishes to use Internal-use Digital Maps is required to follow the procedures as described below -
- 2.5.1 HyD's Consultant/Contractor is required to complete the Internal-use Digital Map Order Form at Appendix B2, sign the "Undertakings by Consultant/Contractor on the Use of Digital Map from the Survey & Mapping Office, Lands Department" (SMF-0096) at Appendix B3 and forward them to the responsible HyD project officer for follow-up actions as stipulated in the following paragraph.
- 2.5.2 The project officer shall check if the requested Digital Maps listed in the Digital Map Order Form tally with the project requirements. If the project officer is satisfied that the Consultant/Contractor's request is genuine, he shall complete and forward the standard memo of request at Appendix B4, the Digital Map Order Form and the Undertaking to CLS. The project officer shall make sure that the Consultant/Contractor has strictly observed the acknowledgement requirements as stipulated in Clause 10 of the Undertaking when the Internal-use Digital Maps are

² Hong Kong GeoData Store is the alpha version of Common Spatial Data Infrastructure (CSDI) portal which will be rolled out by end 2022.

required to be distributed to third party or be used on the Internet.

- 2.5.3 If the Consultant/Contractor needs additional Internal-use Digital Maps for the same project, he has to submit a fresh Digital Map Order Form and Undertaking through the project officer to CLS for action. A fresh standard memo of request is not required.
- 2.5.4 Within two weeks upon completion of the project, the Consultant/Contractor is required to inform CLS in writing using the “Confirmation by Government’s Consultant/Contractor on the Cessation of the Use of Digital Map from the Survey and Mapping Office, Lands Department” (SMF-0097) at Appendix B5 that he has ceased to use the Internal-use Digital Maps 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 SMO for record upon request.
- 2.5.5 If the Consultant/Contractor still requires to use the Internal-use Digital Maps for the project after the expected completion date as quoted in the Undertaking, he has to sign a fresh Undertaking with revised completion date indicated and submit to CLS through the project officer. 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.

2.6 Derived digital maps are those Digital Maps incorporated with or enhanced with the department’s own data (e.g. road alignments, project limits, etc.). The derived digital maps containing the Internal-use Digital Maps may be released to the Consultant/Contractor provided that the he has signed the Undertaking before such maps are released to him. On completion of the project, the Consultant/Contractor has to follow the procedures laid down in paragraph 2.5.4 above for ceasing the use of such derived digital maps.

3. LiDAR Data

- 3.1 CEDD has two LiDAR Datasets, namely LiDAR Data (2010) and LiDAR Data (2020), which were collected by LiDAR survey between 1 December 2010 and 8 January 2011 and between 20 December 2019 and 2 February 2020 respectively. The LiDAR Datasets can be utilized in producing territory-wide terrain information for various engineering applications.
- 3.2 Similar to LandsD, CEDD had opened up all their LiDAR Datasets to the public for free since July 2020. In October 2021, CEDD streamlined the procedures for obtaining the data in B/Ds and updated the conditions on the use of the LiDAR Data.

3.3 Digital Surface Model and Digital Terrain Model in GeoTIFF format can be downloaded through the website of Hong Kong GeoData Store at <https://geodata.gov.hk/gs/>. For other formats and types of the LiDAR Data, HyD's users need to obtain them from CEDD via email svyhq@cedd.gov.hk. HyD's users have to complete the LiDAR Data Order Form (Appendix C3 and/or Appendix C4) as required by CEDD.

3.4 Users shall abide by the Conditions on Use of LiDAR Data as stipulated in the LiDAR Data Order Form.

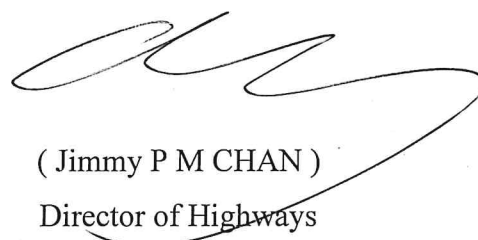
4. Technical Support Services

4.1 A full set of Open Digital Maps, Internal-use Digital Maps and the LiDAR Datasets has been provided to HyD. Updated datasets are also provided to HyD regularly by LandsD and CEDD. Should HyD's users require assistance from CLS for obtaining the Open Digital Maps and LiDAR Data, they shall follow the procedures as stipulated in Appendix C. CLS shall provide the following liaison and advisory services if necessary –

- a. To provide advice on quality, suitability and applications of the Digital Maps and LiDAR Data; and
- b. To arrange updating the geographic information systems of HyD at quarterly basis, in particular, Digital Topographic Maps at the departmental intranet http://portal.hyd/template/portal/tech/digital_map/.

5. Enquiries

5.1 Enquiries on this Circular shall be addressed to SLS/P&A, Survey Division (Tel. no. 3903 6683).



(Jimmy P M CHAN)
Director of Highways

Table 1 Open Digital Map

The Lands Department provides the following Open Digital Maps free of Charge.

Type of Product	Product Name	Scale	Data Format					Coverage (Sheet) ⁽ⁱ⁾
Digital Topographic Map	iB1000	1:1000	FGDB	GML ⁽ⁱⁱ⁾	DWG	DGN v8	GeoTIFF	3,318
	iB5000	1:5000						191
	iB10000	1:10000						59
	iB20000	1:20000						18
Digital Land Boundary Map	iC1000	1:1000	FGDB	GML ⁽ⁱⁱ⁾	DWG	DGN v8	4,612	
Geo-Reference Database	iG1000		ASCII ⁽ⁱⁱ⁾	FGDB	GML ⁽ⁱⁱ⁾	DWG	DGN v8	56
Digital Orthophoto	DOP1000-1963P (Plain Image Version)	1:1000	GeoTIFF with World file					2,541
	DOP1000-1963G (Grid Line Version)							
	DOP5000	1:5000	GeoTIFF with World file					191
	DOPM50-L0	1:50000	JPEG					1
Digital Aerial Photo	DAP-L0		JPEG					N.A.
	DAP-L0_RGB, DAP_L0_CIR		JPEG					
GeoCommunity Database	iGeoCom		MS Excel, Access & CSV ⁽ⁱⁱ⁾					1
3D Spatial Data	3D-BIT00		Max, 3ds, FBX, VRML					3,269

Notes:

(i) Sheet No. varies from time to time, please refer to Sheet Index at SMO website for the latest coverage

(ii) Open and machine-readable format

Table 2 Internal-use Digital Map (Chargeable Digital Map and Digital Map for Government's Internal Use)

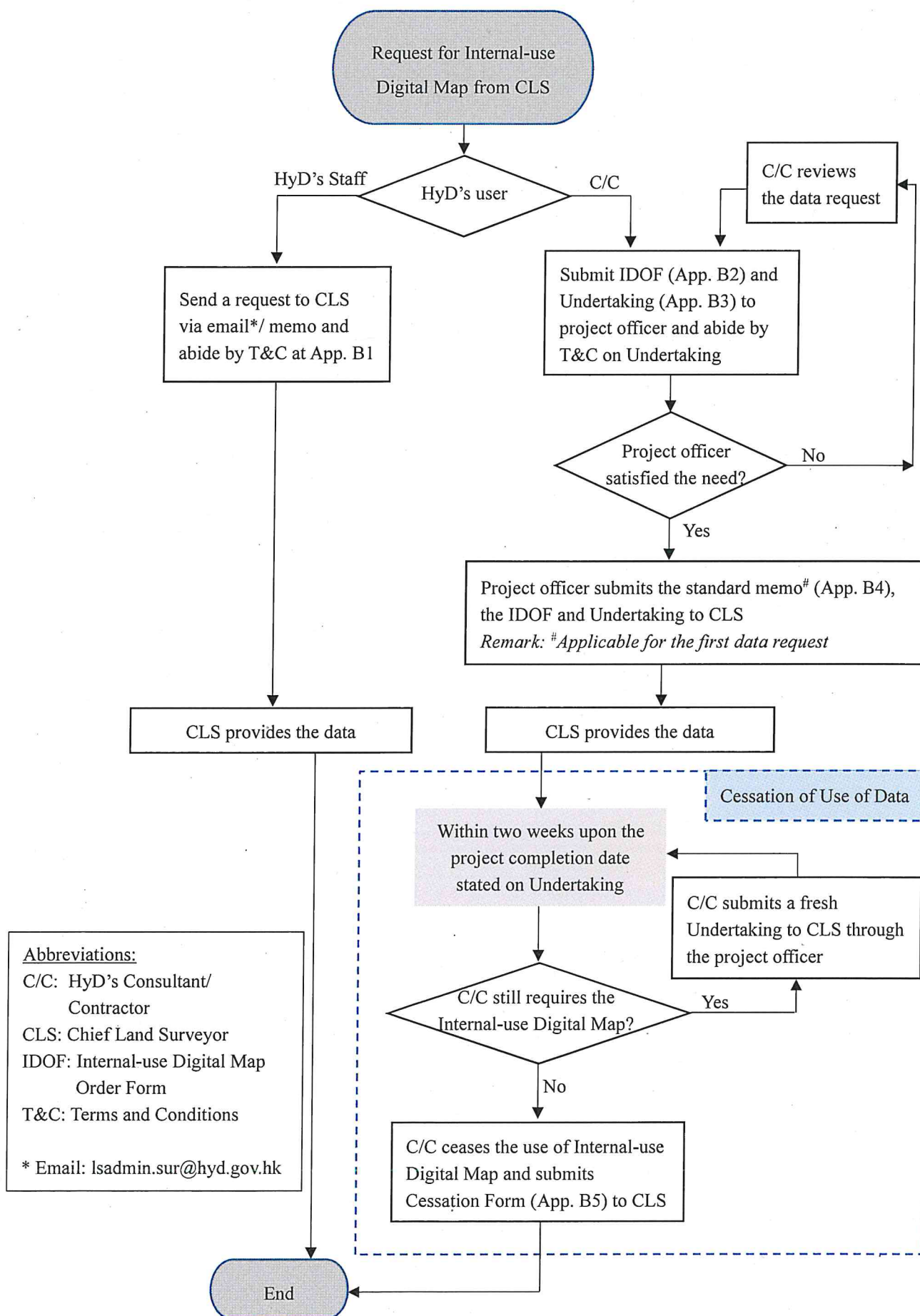
The Lands Department provides the following Internal-use Digital Maps with charges.

Type of Product	Product Name	Scale	Data Format	Coverage (Sheet)
Digital Aerial Photo	DAP	N.A.	TIFF (with camera calibration report)	N.A.
	DAP_RGBI, DAP_RGB, DAP_CIR		TIFF (with camera calibration report and Worldfile)	

The following Internal-use Digital Maps are provided for Government's internal use only. They are NOT available for sale nor included in the Open Digital Maps.

Type of Product	Product Name	Scale	Data Format				Coverage (Sheet)
Digital Topographic Map	iB50000	1:50000	FGDB	DGN	TIFF		1
	iB200000	1:200000					1
Digital Orthophoto	DOP5000	1:5000	ECW30	ECW60	MrSID30	MrSID60	N.A.

Procedures for Obtaining Internal-use Digital Map from CLS





Terms and Conditions on the Use of Digital Map
From Survey and Mapping Office, Lands Department
(For Government Users)

1. Digital Map means map or map image or compilation of map data in digital form produced by Land Information Centre (hereinafter referred to as "LIC"), Survey and Mapping Office (hereinafter referred to as "SMO"), Lands Department. They include Digital Topographic Map, Data Dictionary of Digital Topographic Map, Digital Land Boundary Map, Data Dictionary of Digital Land Boundary Map, Geo-Reference Database, GeoCommunity Database, Digital Aerial Photo, Digital Orthophoto, 3D Spatial Data and e-Hong Kong Guide.
2. The use of the Digital Map shall follow the intended use as specified in the order of Digital Map.
3. Upon completion of the project or the work, the user Bureau/Department shall immediately cease using the Digital Map and confirm to Chief Land Surveyor/Land Information Centre of SMO in writing within two weeks that it is no longer in possession of the Digital Map or any part thereof in any media or in any form and that the same has been permanently erased and/or duly destroyed, as the case may be.
4. If the supplied Digital Map is found to be corrupted or defective within one month from the date of collection by the user Bureau/Department, LIC shall replace the supplied Digital Map. The Digital Map will not be regarded as corrupted or defective if it can be loaded into and displayed on the computer system of LIC.
5. LIC shall not be responsible to install the Digital Map or provide any training in the use of the Digital Map and gives no warranty that the Digital Map can be processed on the user's computer systems.
6. The user Bureau/Department acknowledges that the Digital Map has not been prepared specifically to meet its individual requirements and purposes and that it will not have any recourse against LIC for any damage or loss it may suffer in any use or attempted use of the Digital Map.
7. LIC gives no warranty that the Digital Map is error-free and LIC shall in no way be held for any loss or damage which may be suffered by the users or any other persons from the use of the Digital Map.
8. The Government of the Hong Kong SAR remains the owner of the Digital Map at all times. All staff shall not copy or otherwise infringe any intellectual property rights the Government may have in the Digital Map, whether in whole or in part.
9. The user Bureau/Department shall use all the Resource Files, including but not limited to fonts, symbols, product information and other related data, together with the Digital Map at all times. The user Bureau/Department shall not extract the Resource Files from the Digital Map, and use or apply the said Files for any other purposes.
10. The user Bureau/Department must apply to and obtain prior written consent from Chief Land Surveyor/Land Information Centre, Lands Department before the Digital Map is permitted to be incorporated in whatever forms, in whole or in part, with any data or that of the products derived therefrom to :-
 - (a) be distributed to any third party, with or without charges.
 - (b) be used on the Internet.
11. In the event that prior written consent is given by Lands Department in the preceding paragraph, the user Bureau/Department shall display on and in the products containing the Digital Map an acknowledgement with the specific wordings provided by the Lands Department.



Survey Division
Highways Department

For Office Use	
File Ref.	() in HYD SD/18-4/2/3
LS/Admin	

Internal – use Digital Map Order Form **(For HyD's Consultant/Contractor Only)**

This form will be annexed to and form part of the Undertaking by Consultant/Contractor on the use of
Internal-use Digital Map from the Highways Department

PART A General Information

1. Consultant / Contractor

I. Name of Company _____

II. Address _____

III. Name and Post of Contact Person _____

IV. Telephone No. _____

Fax No. _____

E-mail Address _____

2. Intended Uses of the Internal-use Digital Map *

Note: the information collected in the Digital Map Order Form will be used for the purpose of processing your request only.

3. Hardware and Software Configuration of the Computer for using the Digital Map

Hardware (OS Platform) : _____

Software (Application Software): _____

LAN Environment (LAN of Standalone) : _____

Part B Internal-use Digital Map (Digital Map listed in Table 2 of Appendix A)**1. Terms and Conditions of Uses**

Users shall abide by the Conditions on use of Digital Map in the Undertaking at Appendix B3.

2. Internal-use Digital Map to Order**I Digital Orthophoto**

☐ **DOP5000** (1:5000 territory-wide Digital Orthophoto)

II Digital Topographic Map

☐ **iB50000** (1:50000 territory-wide Digital Topographic Map)

☐ **iB200000** (1:200000 territory-wide Digital Topographic Map)

III Digital Aerial Photos (DAP/ DAP-RGBI/DAP_RGB/DAP_CIR in Tiff format)

Fill in the photo number required below*

IV Others*

3. Data Formats Required

Tick ONE format per Digital Map only

Internal-use Digital Map	Product Format			
DOP5000	ECW30	ECW60	MrSID30	MrSID60
	FGDB	DGN	TIFF	
iB50000				
iB200000				

Part C Storage Media

The storage media to be provided by consultant/contractor (Tick ONE storage media only)

☐ Writable CD or DVD-R

☐ Other Portable Storage Device

Remark: * If the space is not enough, please complete the listing/description on separate sheets



**UNDERTAKINGS BY CONSULTANT/CONTRACTOR
ON THE USE OF DIGITAL MAP FROM THE
SURVEY AND MAPPING OFFICE, LANDS DEPARTMENT**

PLEASE COMPLETE IN BLOCK LETTERS AND RETURN IT TO
THE SURVEY AND MAPPING OFFICE, LANDS DEPARTMENT

We, _____
(Name of Consultant/Contractor in full)

agree to abide by the following conditions in the use of Digital Map from the Survey and Mapping Office, Lands Department for the Contract/Agreement _____

(Contract/Agreement Title and Number)

with _____
(Name of Government Bureau/Department in full)

concerning _____
(Details of Contract/Agreement)

1. Digital Map means map or map image or compilation of map data, in digital form produced by the Survey and Mapping Office (hereinafter referred to as "SMO"), Lands Department and supplied to the public with charges or/and supplied to the Government for internal distribution.
2. The provided Digital Map shall not be used for any purposes other than the above Contract/Agreement.
3. The provided Digital Map shall not be distributed in whole or in part or in whatever forms or media to any third party.
4. The Digital Map stored in our computer systems and storage media shall all be destroyed immediately after completion of the work for the above Contract/Agreement. The expected date of completion is _____. We shall confirm to SMO and our client Government Bureau/Department that we are no longer in possession of the Digital Map or any part thereof in any media or in any form by completing and returning the form of "Confirmation by Government's Consultant/Contractor on the Cessation of the Use of Digital Map from the Survey and Mapping Office, Lands Department" (SMF-0097) to the above said Government Bureau/Department within two weeks upon completion of the work for the Contract/Agreement.
5. SMO shall not be responsible to install the Digital Map or provide any training in the use of the Digital Map and gives no warranty that the Digital Map can be processed on our computer systems.
6. We acknowledge that the Digital Map has not been prepared specifically to meet our individual requirements and purposes and that we will not have any recourse against SMO for any damage or loss we may suffer in any use or attempted use of the Digital Map.
7. SMO gives no warranty that the Digital Map is error-free and SMO shall in no way be

held for any loss or damage which may be suffered by the users or any other persons from the use of the Digital Map.

8. The Government of the Hong Kong SAR remains the owner of the Digital Map at all times. We shall not copy or otherwise infringe any intellectual property rights the Government may have in the Digital Map, whether in whole or in part.
9. We shall use all the Resource Files, including but not limited to fonts, symbols, product information and other related data, together with the Digital Map at all times. We shall not extract the Resource Files from the Digital Map, or use or apply the said Files for any other purposes.
10. We must obtain prior written consent from Chief Land Surveyor/Technical, Lands Department before the Digital Map is permitted to be incorporated in whatever forms, in whole or in part, with any data or that of the products derived therefrom to :-
 - (a) be distributed to any third party, with or without charges.
 - (b) be used on the Internet.
 If such is permitted, we shall display on and in the products containing the Digital Map an acknowledgement with the specific wordings provided by the Lands Department.
11. We understand that our staff have to abide by the above conditions upon their use of the Digital Map. If they are proved to be liable for the infringement of copyright of the Digital Map, our company has to compensate the Government for any loss and damage.
12. We understand that the Government reserves the right to charge our company for the loss and damage caused to the Government arising from the violation of any condition in this Undertakings, including but not limited to the data charge, copyright charge and relevant administrative charges.

Signed for and on behalf of the Consultant/Contractor

Signature _____

Name _____

Designation _____

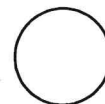
E-mail Address _____

Tel. No. _____

Company Address _____

Company Chop

Date _____



MEMO

From Office Head
 Ref. () in HyD
 Tel. No. _____
 Fax. No. _____
 Date _____

To Chief Land Surveyor
 (Attn. _____)
 Your Ref. () in _____
 dated _____ Fax. No. _____
 Total Pages _____

Agreement/Contract No. _____

(Project Title) _____

Request for Internal-use Digital Map

I should be grateful if you would provide the Internal-use Digital Map as listed in the attached **Internal-use Digital Map Order Form**.

2. I confirm that:

- (a) The types of Internal-use Digital Map required are appropriate for the consultant/contractor to complete the assignment/works stipulated in the consultancy agreement/ contract except _____.
- (b) The sheets of Internal-use Digital Map required are relevant to the implementation of the project except sheet no(s). _____.
- (c) The Internal-use Digital Map will be used by the consultant/contractor mainly for the purpose(s) of _____.
- (d) The computer hardware and software used by the consultant/contractor are appropriate for producing the following deliverables mentioned in the assignment brief/contract:
 - (i) _____.
 - (ii) _____.

3. The **completed Undertaking** signed by the consultant/contractor is returned herewith for your necessary action.

4. The project would last for _____ months and upon completion of the project, I will inform the consultant/contractor to complete the Cessation Confirmation Form and forward the completed form to you for action.

5. It would be appreciated if the required data could be available by _____. Please contact _____ at _____ for collection of the data.

(XXX XXX)
Office Head



For Official Use	
Licence No.	G
File Ref.	() in LD SMO/MI

**CONFIRMATION BY GOVERNMENT'S CONSULTANT/CONTRACTOR
ON THE CESSATION OF THE USE OF DIGITAL MAP FROM THE
SURVEY AND MAPPING OFFICE, LANDS DEPARTMENT**

(Please complete in Block Letters)

This is to confirm that we, _____ ,
(Name of Consultant/Contractor in full)
have ceased using the Digital Map from the Survey and Mapping Office, Lands Department
with effect from _____
(Date)
for the Contract/Agreement No. _____ with

(Name of Government Bureau/Department in full)
concerning _____
(Title of Project/Study)

We are no longer in possession of the above Digital Map or any part thereof in any media or in any forms and that the same has been permanently erased and/or duly destroyed from our computer systems.

Signed for and on behalf of the Consultant/Contractor

Signature _____

Name _____

Designation _____

E-mail Address _____

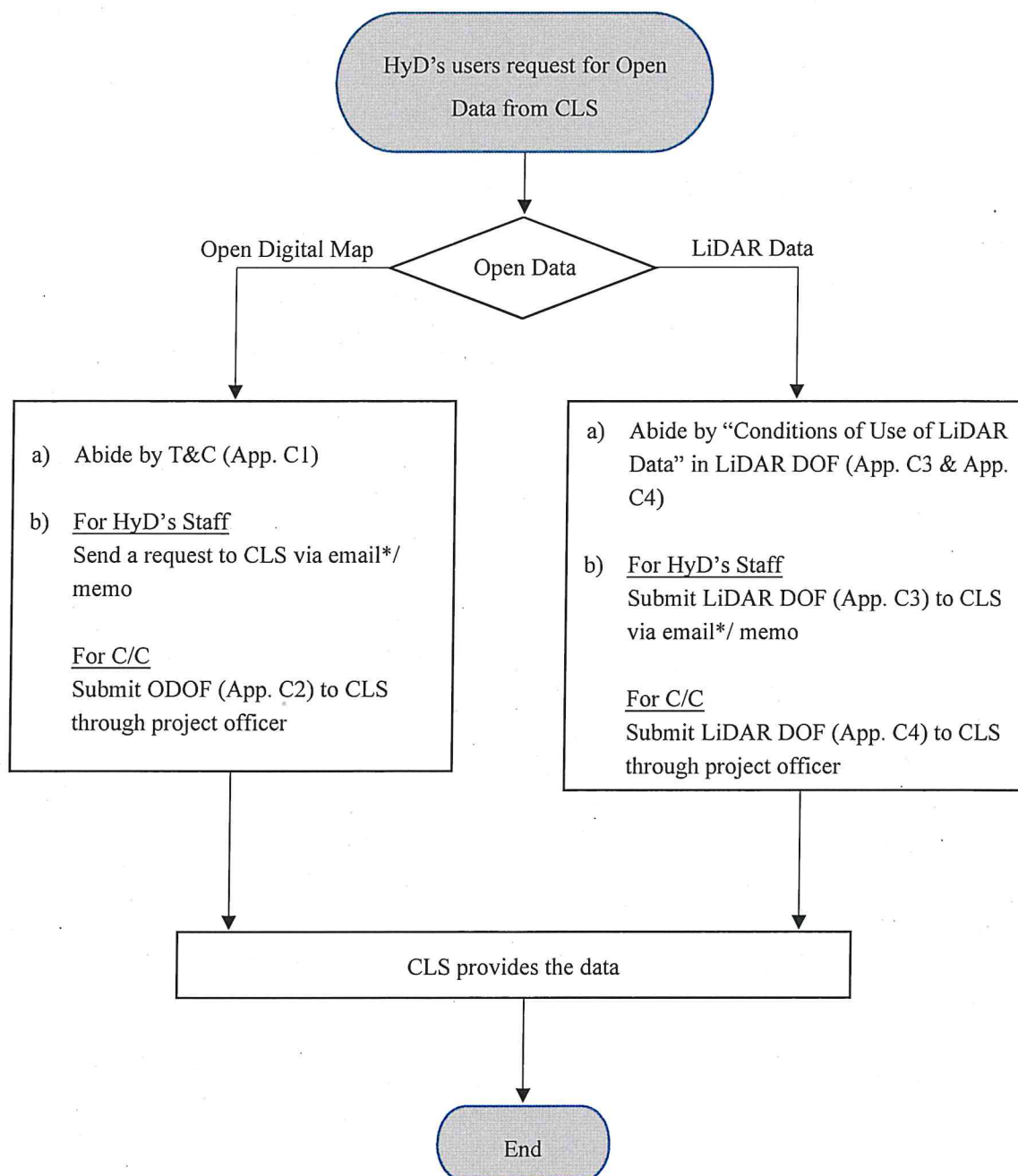
Tel. No. _____

Company Address _____

Company Chop

Date _____

Procedures for Obtaining Open Digital Map and LiDAR Data from CLS



Abbreviations:

C/C: HyD's Consultant/ Contractor

CLS: Chief Land Surveyor

DOF: Data Order Form

ODOF: Open Digital Map Order Form

T&C: Terms and Conditions

* Email: lsadmin.sur@hyd.gov.hk

TERMS AND CONDITIONS OF USE

Version 1.3 (last updated on 30 Jun 2021)

1. HONG KONG GEODATA STORE is an online geospatial information service provided by the Lands Department of the Government of the Hong Kong Special Administrative Region (the "Government") to the public for obtaining certain geo-referenced public sector information.
2. In these Terms and Conditions of Use of HONG KONG GEODATA STORE ("Terms of Use"), "Data" means the data, Application Programming Interface (API), and all contents provided by the Government and other organisations to the public on HONG KONG GEODATA STORE. For the avoidance of doubt, "Data" include all data, digital maps, text, graphics, drawings, diagrams, photographs, compilation of data, Application Programming Interface (API), and other materials of HONG KONG GEODATA STORE.

Use of Data on HONG KONG GEODATA STORE

3. You are allowed to browse, download, distribute, reproduce, hyperlink to, and print in their original format the Data for both commercial and non-commercial purposes on a free-of-charge basis on condition that:-
 - you shall comply with the Terms of Use;
 - you shall identify clearly the source of the Data and acknowledge the Government ownership of the intellectual property rights in the Data and in all copies thereof including but not limited to paper copies, digital copies and copies placed on other websites;
 - you shall indemnify the Government against any allegations or claims of infringement of the rights of any person and all costs, losses, damages and liabilities incurred by the Government, which in any case arise directly or indirectly in relation to your use, reproduction and/or distribution of the Data;
 - you shall also give proper attribution to the Government and HONG KONG GEODATA STORE.
4. In paragraph 3, "commercial purposes" include, without limitation, the following:-
 - an offer to supply goods, services, facilities, land or an interest in land;
 - an offer to provide a business opportunity or an investment opportunity;
 - an advertisement or promotion of goods, services, facilities, land or an interest in land;
 - an advertisement or promotion of a business opportunity or an investment opportunity;
 - an advertisement or promotion of a supplier, or a prospective supplier, of goods, services, facilities, land or an interest in land; and
 - an advertisement or promotion of a provider, or a prospective provider, of a business opportunity or an investment opportunity,

in the course of or in the furtherance of any business.

Disclaimer and Limitation of Liability

5. The Data are provided by the Government and other organisations to you on an "as is" and "as available" basis. No statement, representation or warranty of any kind (whether express or implied) is given by the Government or the relevant organisations in relation to the Data (including the accuracy, completeness, non-infringement, reliability, security, timeliness and appropriateness of the Data for use in any particular circumstances). The Government or the relevant organisations shall not be liable for any errors, omissions, misstatements or misrepresentations (express or implied), concerning any Data, and shall not have or accept any liability, obligation or responsibility whatsoever for any loss, destruction or damage (including without limitation consequential loss, destruction or damage) howsoever arising from or in respect of any use or misuse of or reliance on the Data, or any inability to use the Data.

HONG KONG
GEODATA STORE

6. In consideration of the Government and other organisations providing the Data on HONG KONG GEODATA STORE, by using HONG KONG GEODATA STORE, you accept unconditionally the Terms of Use. IF YOU DO NOT AGREE, DO NOT USE HONG KONG GEODATA STORE. The Terms of Use may be revised and/or amended from time to time by the Government or the relevant organisations without prior notice to any person. Please check the Terms of Use regularly for any revisions and/or amendments which may be made.
7. The Government shall not be liable for any loss, destruction or damage howsoever arising out of or in relation to any transmission from you to the Government or vice versa over the Internet.
8. The Government shall not be responsible for any loss or damage whatsoever arising out of or in connection with the Data. The Government reserves the right to revise, omit, edit or suspend the provision of the Data at any time in its absolute discretion without giving any reason or prior notice to any person (including you).
9. The Government does not undertake to provide any updated version of the Data and reserves the right to suspend the provision of the Data and Service at any time.

Third-Party Contribution

10. HONG KONG GEODATA STORE may provide a function for the user to add graphics and textual information ("User Submissions"). HONG KONG GEODATA STORE may allow the user to view maps with or without the User Submissions. The Government shall not have or accept any liability, obligation or responsibility whatsoever for any loss, destruction or damage (including without limitation consequential loss, destruction or damage) howsoever arising from or in respect of using, misusing, inability to use, or relying on the User Submissions. By browsing, contributing to, submitting, downloading, distributing, reproducing or in any way using such User Submissions you agree to accept unconditionally the terms listed below:-
 - You shall be solely responsible for the User Submissions you submit to HONG KONG GEODATA STORE and the consequences arising from or in relation to the submission, browse, download, distribute, reproduce, hyperlinking to, printing or use of such User Submissions by you or any other users;
 - You agree that you will not by the submission, browse, download, distribute, reproduce, hyperlinking to, printing or use of the User Submissions defame, abuse, harass, stalk, threaten or otherwise violate the legal rights (such as rights of privacy and publicity) of others;
 - You agree that you will not submit or otherwise make available by way of User Submissions any inappropriate, defamatory, obscene, or unlawful contents or materials, any contents or materials that infringe the intellectual property rights of any person;
 - You warrant that the User Submissions do not and will not infringe any intellectual property rights of any person and you agree to indemnify the Government against any allegations or claims of intellectual property rights infringement in relation to User Submissions or the use of User Submissions.

Linked Information and other Third-Party Websites

11. HONG KONG GEODATA STORE may provide or assist in providing links to third-party websites through the web interface. The links are produced solely as a convenience to users of HONG KONG GEODATA STORE. Provision of, or assistance in providing, any links at HONG KONG GEODATA STORE to any third-party website does not give rise to any statement, representation or warranty, express or implied, that the Government agrees with, approves, recommends or endorses the contents of any such third-party websites. The provision of any links to third-party websites shall not constitute any form of co-operation or affiliation with the Government of any such third parties or external websites. The Government shall not have or accept any liability, obligation or responsibility whatsoever for any loss, destruction or damage (including without limitation consequential loss, destruction or damage) howsoever arising from or in respect of your use or misuse of or reliance on, or inability to use such links to any third-party website or your use or reliance on the contents of any such third-party websites. You should refer to the terms and conditions of each such third-party website when using such website.

Privacy Policy

12. The Government may record visits to HONG KONG GEODATA STORE and usage of Application Programming Interface (API) provided by HONG KONG GEODATA STORE without collecting your personal data. Information relating to visits to HONG KONG GEODATA STORE and usage of Application Programming Interface (API) provided by HONG KONG GEODATA STORE are

Intellectual Property Rights

13. Unless otherwise indicated, the Government is the owner of the intellectual property rights in all contents available on HONG KONG GEODATA STORE, including but not limited to all Data.

Governing Law

14. The Terms of Use shall be governed and construed in accordance with the laws of the Hong Kong Special Administrative Region of the People's Republic of China ("Hong Kong"). You also agree to submit to the jurisdiction of the Hong Kong Courts.

If there is any inconsistency or ambiguity between the English version and the Chinese version, the English version shall prevail.

Version 1.2 (last updated on 9 Oct 2019)

Version 1.1 (last updated on 13 Aug 2019)

Version 1.0 (last updated on 10 Dec 2018)



Survey Division
Highways Department

For Office Use	
File Ref.	() in HYD SD/18-4/2/3
LS/Admin	

Open Digital Map Order Form (For HyD's Consultant/Contractor Only)

PART A General Information

1. Consultant / Contractor

I. Name of Company

II. Address

III. Name and Post of Contact Person

IV. Telephone No.

Fax No.

E-mail Address

Note: the general information collected in the Open Digital Map Order Form will be used for the purpose of processing your request only.

PART B Open Digital Map (Digital Map listed in Table 1 of Appendix A)

1. Terms and Conditions of Uses

Users shall abide by the "Terms and Conditions of Use of Data" stipulated at Hong Kong GeoData Store (https://geodata.gov.hk/gs/?p=terms_and_conditions). Users are deemed to have agreed with the Terms and Conditions of Use of Data once Part B of this form is completed and submitted.

2 Open Digital Map to Order

Users shall provide a digital file in excel format storing the sheet number of the requested digital map.

I Digital Topographic Map

a. iB1000 (1:1000 Digital Topographic Map)

Fill in the sheet number required below*: (Refer to the Sheet Index of iB1000 for the sheet numbers)

Total No. of sheets:			

b. **iB5000 (1:5000 Digital Topographic Map)**

Fill in the sheet number required below*: (Refer to the Sheet Index of iB5000 for the sheet numbers)

Total No. of sheets:			

c. **iB10000 (1:10000 Digital Topographic Map)**

Fill in the sheet number required below*: (Refer to the Sheet Index of iB10000 for the sheet numbers)

Total No. of sheets:			

d. **iB20000 (1:20000 Digital Topographic Map)**

Tick the sheet number required below*: (Refer to the Sheet Index of iB20000 for the sheet numbers)

Sheet No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Required																		

II Digital Land Boundary Map**iC1000 (1:1000 Digital Land Boundary Map)**

Fill in the sheet number required below*: (Refer to the Sheet Index of iC1000 for the sheet numbers)

Total No. of sheets:			

III Geo-Reference Database**iG1000 (Geo-Reference Database)**

Fill in the sheet number required below*: (Refer to the Sheet Index of iG1000 for the sheet numbers)

Total No. of sheets:			

IV GeoCommunity Database
☐ **iGeoCom** (territory-wide GeoCommunity Database)
V Digital Orthophoto
☐ **DOPM50-L0** (1:50000 territory-wide Digital Orthophoto in JPEG format)

☐ **DOP5000** (1:5000 Digital Orthophoto in GeoTIFF format)

☐ **DOP1000-1963P** (1:1000 Digital Orthophoto in GeoTIFF format)

☐ **DOP1000-1963G** (1:1000 Digital Orthophoto in GeoTIFF format)

Fill in the sheet number required below if DOP5000/ DOP1000-1963P/DOP1000-1963G is chosen*
 (Refer to the Sheet Index of iB5000 for DOP5000 and iB1000 for DOP1000-1963P and DOP1000-1963G for the sheet numbers)

Total No. of sheets:			

VI 3D Spatial Data**3D-BIT00** (1:1000 digital 3D model data)

Fill in the sheet number required below*: (Refer to the Sheet Index of iB1000 for the sheet numbers)

Total No. of sheets:			

VII Digital Aerial Photos (DAP-L0/ DAP_L0_RGB/ DAP_L0_CIR in JPEG format)

Fill in the photo number required below*

3. Data Formats Required

Open Digital Map	Product Format				
	FGDB	GML	DWG	DGN v8	GeoTIFF
iB1000					
iB5000					
iB10000					
iB20000					
iC1000	FGDB	GML	DWG	DGN v8	
iG1000	FGDB	GML	DWG	DGN v8	ASCII
iGeoCom	MDB	XLS		CSV	
3D-BIT00	3DS	MAX	VRML	FBX	

Part C Storage Media

The storage media to be provided by consultant/contractor (Tick ONE storage media only)

☐

Writable CD or DVD-R

☐

Other Portable Storage Device

Remark: * If the space is not enough, please complete the listing/description on separate sheets

For Official Use	
File Ref.	CEDD SY60/1040-50/5
LS/GI	

*Please read the Terms and Conditions at Annex prior to completing this form.

Email: svyhq@cedd.gov.hk

Project / Contract Name :

(If the following space is not enough, please complete the description on separate sheet.)

Fill in the co-ordinates of boundary / Sheet Numbers (Refer to the Sheet Index of iB1000)

Total number of sheets :			

a. LAS

All Data	Any 1 st Returns	1 st of Many Returns	Intermediate Returns	Ground	Any Last Returns
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

b. ASCII DTM ☐ DSM ☐

c. dBase IV DTM ☐ DSM ☐

d. Raster (0.5m grid)		ERS		GeoTIFF		PIX	
Vegetation		ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
DTM		ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
DSM		ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
Intensity Imagery		ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>

a. LAS	All Data (exclude overlap points)	All Data (Class 12 overlap points only)	First Returns	Middle Returns	Last Returns		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Building	Transmission Tower	Ground	Vegetation	Water		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
b. ASCII	DTM	<input type="checkbox"/>	DSM	<input type="checkbox"/>			
c. dBase IV	DTM	<input type="checkbox"/>	DSM	<input type="checkbox"/>			
d. Raster (0.5m grid)	Vegetation	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
	DTM	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
	DSM	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
	Intensity Imagery	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>



Use of LiDAR Data

CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT

Conditions on Use of LiDAR Data

1. The Government of the HKSAR remains the owner of the Territory-wide Airborne Light Detection and Ranging (LiDAR) Data at all times.
2. You are allowed to browse, download, distribute, reproduce, hyperlink to and print the LiDAR Data for both commercial and non-commercial purposes on a free-of-charge basis on the condition that:-
 - you shall comply with the Terms of Use;
 - you shall identify clearly the Government as the source of the LiDAR Data and acknowledge the Government's ownership of the intellectual property rights in the LiDAR Data and in all copies thereof including but not limited to paper copies, digital copies and copies placed on other websites;
 - you shall indemnify the Government against any allegations or claims of infringement of the rights of any person and all costs, losses, damages and liabilities incurred by the Government, which in any case arise directly or indirectly in relation to your use, reproduction and/or distribution of the LiDAR Data.
3. The LiDAR Data are provided by the Government to you on an "as is" and "as available" basis. No statement, representation or warranty of any kind (whether express or implied) is given by the Government in relation to the LiDAR Data (including its accuracy, correctness, completeness, non-infringement, reliability, security, timeliness and appropriateness of the use of the LiDAR Data in any particular circumstances). The Government shall not be liable for any errors, omissions, deficiencies, inconsistencies, misstatements or misrepresentations (express or implied), concerning any LiDAR Data, and shall not have or accept any liability, obligation or responsibility whatsoever for any loss, destruction or damage (including without limitation consequential loss, destruction or damage or other costs or expenses) howsoever arising from or in respect of any use or misuse of or reliance on the LiDAR Data, or any inability to use the LiDAR Data.
4. In consideration of the Government providing the LiDAR Data, you accept unconditionally the Terms of Use. IF YOU DO NOT AGREE TO THE TERMS OF USE, PLEASE DO NOT USE THE LIDAR DATA. The Terms of Use may be revised and/or amended from time to time by the Government without prior notice to any person. Please check the Terms of Use regularly for any revisions and/or amendments which may be made.
5. The Government shall not be responsible for any loss or damage whatsoever arising out of or in connection with the LiDAR Data. The Government reserves the right to revise, omit or edit the LiDAR Data or to suspend or terminate the provision of the LiDAR Data at any time in its absolute discretion without giving any reason or prior notice to any person.
6. Information collected will be used for processing your request and statistical purposes. With regard to this information, you undertake that the information is true, accurate and up to date. You should inform us if there is any change in your information so that we can ensure it remains accurate and up to date.
7. You shall not use the LiDAR Data obtained thereunder for any activity which is unlawful or illegal, or which is objectionable as determined by the Government. In particular, they shall not be used for any activity or purpose in violation of any provisions of the Copyright Ordinance (Cap.528).

Notes on LiDAR Data Provided

1. The LiDAR Data (2010) provided were obtained from the LiDAR Survey under CEDD Contract No. GE/2008/28 conducted between 1 December 2010 and 8 January 2011. The LiDAR Data (2020) provided were obtained from the LiDAR Survey under CEDD Contract No. GE/2018/37 conducted between 20 December 2019 and 2 February 2020. All LiDAR Data provided are in Hong Kong 1980 Grid System and Hong Kong Principal Datum. The LiDAR Data were prepared in accordance with the practice and information available at the time of preparation. They are therefore subject to time limitation as subsequent changes in technical knowledge and/or physical changes in site conditions may affect parts of the LiDAR Data.
2. The name of the file of LiDAR Data (2010) indicates the co-ordinates of the southwest corner of the area represented by the file. For example, e830n814_DTM covers the area with southwest corner at (830 000E, 814 000N). Each file covers a 1 km × 1 km area. The following types of LiDAR Data (2010) are provided, where appropriate:
 - (a) Files with names suffixed with "DEM"
The files contain LiDAR Data points classified as ground. No thinning process was required in this Project. The co-ordinates (easting and northing) and elevations of the points are provided in ASCII format and dBaseIV format. Intensity values and flight line numbers of the points are also included in the dBaseIV format.
 - (b) Files with names suffixed with "DSM"
The files contain LiDAR Data points such as buildings and tree tops for digital surface modeling. The co-ordinates (easting and northing) and elevations of the points are provided in ASCII format and dBaseIV format.
 - (c) Files with names suffixed with "LAS"
The files contain all the reported LiDAR Data points in the Project in a binary format following the LAS 1.1 Standard published by the American Society for Photogrammetry and Remote Sensing.

The following Class Nos. are used to represent different classes of the LiDAR Data points:

Class No.	Description	Class No.	Description
0	Created, never classified	7	Low Point (noise)
1	Unclassified	8	Model Key-point (mass point)
2	Ground	10	Reserved for ASPRS Definition
3	Low Vegetation	11	Error Points
4	Medium Vegetation	12	Overlap Points
5	High Vegetation	13-31	Reserved for ASPRS Definition
6	Building		

(d) Intensity & Vegetation Classes Models

Intensity and Vegetation Classes Raster Model are available in GeoTIFF, *.pix and *.ers formats.

3. The name of the file of LiDAR Data (2020) indicates the iB1000 sheet index. The following types of LiDAR Data (2020) are provided, where appropriate:

(a) Files with names suffixed with "DTM"

The files contain LiDAR Data points classified as ground. No thinning process was required in this Project. The co-ordinates (easting and northing) and elevations of the points are provided in ASCII format and dBaseIV format. Intensity values and flight line numbers of the points are also included in the dBaseIV format.

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(c) Files with names suffixed with "LAS"

The files contain all the reported LiDAR Data points in the Project in a binary format following the LAS 1.4 Standard published by the American Society for Photogrammetry and Remote Sensing.

The following Class Nos. are used to represent different classes of the LiDAR Data points:

Class No.	Description	Class No.	Description
0	Created, never classified	7	Low Point (noise)
1	Unclassified	9	Water
2	Ground	12	Overlap Points
3	Low Vegetation	15	Transmission Tower
4	Medium Vegetation		
5	High Vegetation		
6	Building		

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LiDAR Data Order Form

For Official Use	
File Ref.	CEDD SY60/1040-50/5
LS/GI	

(for Consultant / Contractor of Government)

*Please read the Terms and Conditions at Annex prior to completing this form.

To : CLS (Attn: SLS/BIM)

Email: svyhq@cedd.gov.hk

Name of Company :

Address :

Contact Person :

Phone :

Email Address :

Client Department :

Contract / Agreement No. :

Contact Person :

Post :

Phone :

Intended Uses of the LiDAR Data

(If the following space is not enough, please complete the description on separate sheet.)

Area of Interest (If the below space is not enough, please complete your listing with an excel file.)

Fill in the co-ordinates of boundary / Sheet Numbers (Refer to the Sheet Index of iB1000)

Total number of sheets :			

File Format for LiDAR Data (2010)

- a. LAS All Data Any 1st Returns 1st of Many Returns Intermediate Returns Ground Any Last Returns
- ☐ ☐ ☐ ☐ ☐ ☐ ☐
- b. ASCII DTM ☐ DSM ☐
- c. dBase IV DTM ☐ DSM ☐
- d. Raster Vegetation ERS ☐ GeoTIFF ☐ PIX ☐
- (0.5m grid) DTM ERS ☐ GeoTIFF ☐ PIX ☐
- DSM ERS ☐ GeoTIFF ☐ PIX ☐
- Intensity Imagery ERS ☐ GeoTIFF ☐ PIX ☐

File Format for LiDAR Data (2020)

a. LAS	All Data (exclude overlap points)	All Data (Class 12 overlap points only)	First Returns	Middle Returns	Last Returns		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
	Building	Transmission Tower	Ground	Vegetation	Water		
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
b. ASCII	DTM	<input type="checkbox"/>	DSM	<input type="checkbox"/>			
c. dBase IV	DTM	<input type="checkbox"/>	DSM	<input type="checkbox"/>			
d. Raster (0.5m grid)	Vegetation	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
	DTM	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
	DSM	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>
	Intensity Imagery	ERS	<input type="checkbox"/>	GeoTIFF	<input type="checkbox"/>	PIX	<input type="checkbox"/>



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 - you shall indemnify the Government against any allegations or claims of infringement of the rights of any person and all costs, losses, damages and liabilities incurred by the Government, which in any case arise directly or indirectly in relation to your use, reproduction and/or distribution of the LiDAR Data.
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(d) Intensity & Vegetation Classes Models

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Class No.	Description	Class No.	Description
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