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## 2.4 DATA SPECIFICATION

### 2.4.1 Introduction

The purpose of this document is to describe the content and specification of the digital map data and customer and sales records in the proposed Computerized Land Information System (CLIS) Data Dissemination System (DDS) and the data specification of the Building, Lot and Road Centreline Common Spatial Units (CSU) for the CSU DDS of the integrated LandsD DDS.

The data volume information etc. contained in this document will provide input to the calculation of the data storage in Technical System Architecture.

The digital map data will be extracted from the currently stored mapping libraries within the systems in LandsD, where digital map data are combined with attribute data. In addition, topological relationships between vector features are also maintained in that system.

The data model consists of a series of attribute tables and look-up tables with layers built upon a map scale of 1:1000, 1:5000, 1:10000, 1:20000 for storing digital map, cadastral and geo-reference information. Each layer is discrete by itself and is uniquely defined to represent a different set of characteristics.

With reference to the User Requirements (UR), the demand for the historical digital map data is small and it is recommended that current procedures should be used to meet those requirements. Hence, the historical digital map data is not required to be included in this document.

LandsD would convert existing spatial data into seamless spatial data with the DAMin/DAMout module and relevant DO of individual CSU would input their data to the CSU DDS to form the initial set of CSU data in the Centralized CSU database. The initial CSU data set of each of the three CSUs would be distributed to individual Data Users. Periodically, respective Data Owners would provide updates on those data items under their jurisdiction. Being the Data Agent, LandsD would provide in the CSU DDS facilities (CSU Data Provision from DO and data validation) for this purpose. Then facilities will be provided for CSU Data Manipulation which would manipulate the loaded CSU data and update the existing CSU data kept in the centralised spatial database accordingly. CSU Data Dissemination to DU facilities would be provided to allow Data Users to download those updated CSU data (delta data) periodically to obtain the latest information they are interested.

## 2.4.2 Proposed Lands Department Data Dissemination System

### 2.4.2.1 Source Spatial Data Hub

A Source Spatial Data Hub is proposed to extract a copy of the digital map data from the master set of current mapping libraries residing within CLIS and store it into the Hub itself. The purpose of this Hub is to separate the digital map data for dissemination from the current master set of CLIS to avoid any interruption on the daily operation of CLIS.

At the initial set-up, the entire set of digital map data will be extracted from CLIS. However after that, only changed or updated layers will be extracted on a daily basis.

The digital map data stored in this Hub is listed as follows:

- B1000, B5000 in Arc/Info native format (Arc/Info 6.x Coverage)
- B10000, B20000 in DGN format
- C1000 in Arc/Info native format
- G1000 in Arc/Info native format

### 2.4.2.2 Multi-format Spatial Data Hub

A Multi-format Spatial Data Hub is proposed to store the digital map data from the Source Spatial Data Hub (without those restricted layers such as proposed layers in Digital Land Boundary Database) in a number of standard data formats, which can be readily made available to any customers for dissemination.

With reference to the UR, it identifies that the LandsD DDS allows read access to all up-to-date data dictionaries (Access rights should only be granted to customers who have purchased the original copy of the data dictionary and also have a valid licence). These data dictionaries are proposed to be kept in the Multi-format Spatial Data Hub. Whenever the data dictionary is upgraded, the old version will also be stored in this Hub along with the latest version. However, when more than 10 versions of the data dictionaries are accumulated, the oldest version of data dictionary will be purged from the Hub.

With respect to the requirement of disseminating digital data supplied by other government departments, as mentioned in UR, it is proposed that LandsD will only be responsible for serving those digital data and not the maintenance and updating of the data.

The formats of the digital map data stored in this Hub are tabulated as follows:

Types of Product	Product Name	Data Format
Digital Topographic Map Database	B1000	<ul style="list-style-type: none"> <li>• Arc/Info Export (E00)</li> <li>• ASCII (ArcInfo Ungenerate)</li> <li>• Microstation Design File (DGN)</li> <li>• AutoCAD Drawing File (DWG)</li> <li>• AutoCAD Data Exchange Format (DXF)</li> <li>• Tagged Interchange File Format (TIFF) for B5000, B10000 and B20000</li> </ul>
	B5000	
	B10000	
	B20000	
Digital Land Boundary Database	C1000	
Geo-Reference Database (G1000)	BG1000	
	Building Polygon*	
	SG1000	
	Site Polygon	
	RG1000	
	Road Centre Line	
Digital Orthophoto	Tagged Interchange File Format (TIFF), Enhanced Compressed Wavelet (ECW) and Multi-resolution Seamless Image Database (MrSID) for DOP5000 / DOP10000 provides seamless digital aerial images rectified for image displacement in the whole territory of HKSAR	
GeoCom Database	MS Excel Format	
Data Dictionaries	An area will be reserved in the proposed LandsD DDS to facilitate the read access of data dictionaries by the customers	
Digital data from other Government departments	An area will be reserved in the proposed DDS to facilitate the dissemination of the digital data provided by other Government departments	

\*BG1000 only has the ASCII format

At the initial set-up of the Multi-format Spatial Data Hub,

- The whole set of digital map data from the Source Spatial Data Hub will be converted into the required data format as stated above. Subsequently, only updated sheets in the Source Spatial Data Hub will be converted and stored into the Multi-format Spatial Data Hub in a batch mode on a daily basis

- The whole set of latest version of data dictionaries will be copied into the designated area
- The entire copy of digital data supplied by other Government departments will be copied into the designated area

In addition, the main benefit of this Hub is the ability to disseminate different format of LandsD digital map data, data dictionary and the digital data supplied by other Government departments, to the customers without performing complex processing.

#### 2.4.2.3 Customer and Sales Record Subsystem

A Customer and Sales Record Subsystem is proposed to maintain customer records as described in the UR. It aims to support various functions described below:

- Customer profile – New customer profile can be maintained in the database of the Subsystem. A customer is allowed to access the proposed dissemination system based on the customer information records stored in the database. Different levels of functions are provided to different categories of customers. For example, only licenced customers would be allowed to access the data dictionary online.
- Monitoring and maintaining the order of digital map data, licence and cessation records – The revision details and the order records of the digital map products will be maintained. Notification can be issued to the customer whenever the digital map data is updated and changed. Validation of data licence records and cessation data for the Government consultants can also be maintained.
- Delivery and payment – It will store the delivery and payment method selected by the customer.

2.4.2.4 CSU Data

2.4.2.4.1 Building CSU

The Building CSU data is essential to the business of the departments of HPLB and required for the works projects of works departments of ETWB. The Building CSU are maintained by 5 Data Owners (ArchSD, BD, LandsD, PlanD and RVD) and used among the 5 Data Users (BD, C&SD, LandsD, PlanD and RVD).

The CSU would keep useful information which is frequently shared among PDs for facilitate their daily business needs. These data include Spatial building records from LandsD, approved building plans and Occupation Permit records from BD and building address location reference from RVD.

Since there are different PDs involved as Data Owners in the Building CSU and some data are used in different PDs with different names or definitions, clear and well defined roles should be aligned among these PDs to remove any data inconsistency. Details of individual data items in the CSU maintained by responsible PDs are listed in Table 2.4.2-1.

PD	Entity	Ownership <sup>1</sup>
ArchSD	Building Geographical Info	F
	Building Structural Info	F
	Geo-Struct Mapping	R
	Data Provision Date	R
BD	Building Geographical Info	F
	Building Structural Info	F
	Geo-Struct Mapping	R
	Building OP Info	T
	OP Info	T
	Building Lot No In OP	T
	Data Provision Date	R
LandsD <sup>2</sup>	Building Geographical Info	F
	Proposed Tower Polygon	T
	Proposed Podium Polygon	T
	Active Tower Polygon	T
	Active Podium Polygon	T
	Demolished Tower Polygon	T
	Demolished Podium Polygon	T
	Building Structural Info	F
	Geo-Struct Mapping	R

<sup>1</sup> Mode of Ownership: T - the PD owns the entire entity; R - the PD owns all data items of particular records in the entity; F - the PD owns only particular data item(s) of particular record(s) in the entity.

<sup>2</sup> LandsD would provide surveyed addresses for converted data for buildings constructed before implementation of DAM only. Hence, the Building Address entity is not included in the ongoing exchanged entity list above.

PD	Entity	Ownership <sup>1</sup>
	Development Name	R
	Building Development Name	R
	Building Name	R
	Data Provision Date	R
	Participating Department	T
	Renamed CSU	T
PlanD	Building Geographical Info	F
	Building Structural Info	F
	Geo-Struct Mapping	R
	Data Provision Date	R
RVD	Development Name	R
	Building Development Name	R
	Building Name	R
	Building Address	R
	Street Location	T
	Street Name	T
	Location Name	T
	Data Provision Date	R

Table 2.4.2-1 - Ownership of Building Entities

As of September, 2003, the total number of active non-podium building records kept in LandsD is around 200,000 and active podium building records kept in PlanD is 2,000 respectively. Moreover, the number of private building (Category 1) records with OP issued by BD is 42,000.

2.4.2.4.2 Lot CSU

According to the Land Survey Ordinance (1995), for every subdivision of land, a land boundary plan prepared and certified by an Authorized Land Surveyor is required for land registration.

LandsD and LR are the 2 Data Owners to maintain the Lot CSU while BD, CED, DSD, LandsD, PlanD and RVD are the 6 Data Users interested in the Lot CSU data.

Information flows related to lot CSU data among PDs are described as follows:

- LR will include the lot transaction information on the Memorial Day Book, which will be distributed to PDs frequently.
- Works Departments would exchange lot information with LAO for land resumption or other purpose for the implementation of the public works projects.
- DSO prepares land boundary plan, handles land status enquiries and provides survey and mapping support to different Government departments.
- RVD collects the land grant document, resumption plan and cadastral map to maintain its survey record plan and sales record plan.
- BD and RVD will make use of the address reference in the lot data to support their businesses.
- BD requires lot information to process OP applications, lot clarification cases and other administration, control and enforcement activities.

Entities, solely or partially, owned by each Data Owner are summarised in Table 2.4.2-2.

PD	Entity	Ownership <sup>3</sup>
LandsD	Land Info	T
	Cert of Compliance Date	T
	Resumption Notice	T
	Land Resumption Notice	T
	Lot Type Name	T
	Lot Type District	T
	Land Classification	T
	Area Unit	T
	Land Ownership	T
	Lease Condition Type	T
	Lease Use	T
	Lot Polygon	T
	Overlap Lot Polygon	T
	LR	Lot Register
Lot Register Lot Type		T
Lot Register Area		T
Memorial		T

<sup>3</sup> Mode of Ownership: T - the PD owns the entire entity; R - the PD owns all data items of particular records in the entity; F - the PD owns only particular data item(s) of particular record(s) in the entity.

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<b>PD</b>	<b>Entity</b>	<b>Ownership<sup>3</sup></b>
	Lot Register Memorial	T
	Memorial Nature	T
	Subdivision	T

Table 2.4.2-2 - Ownership of Lot Entities

As at 2003, there is about 365,000 lot boundaries in LOT and OVERLAP LOT layers maintained in LandsD's C1000 library. At at Feb., 2004, there is about 533,000 records kept in LR's Land Registration System (LRS).

#### 2.4.2.4.3 Road Centreline CSU

With effect from 27 January 2000, LandsD is responsible for organizing and coordinating the naming of streets and roads and the processing of the gazetting of the names.

Majority of the road network in the HKSAR is managed, operated and maintained by HyD while small percentage of the road work is maintained by other PDs (such as WSD, DSD etc).

LandsD is the only Data Owner to provide and update the Road Centreline CSU while CED, DSD, HyD, LandsD and PlanD are the 5 Data Users of the Road Centreline CSU.

PDs would use the road centreline information for the following purposes:

- To confirm the location, the street name and street types for reference by projects and/or services.
- To communicate with other PDs for planning, operation and management of the road network.
- To form a backdrop of the GIS map.

Currently, there are about 4,000 streets recorded in the LandsD.

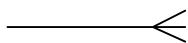
### 2.4.3 Required System Logical Data Structure

The section describes the Required System Logical Data Structures for the LandsD DDS.

Common legends used in the Required System Logical Data Structures are listed below:



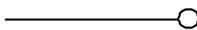
**Entity**  
Entity with name.



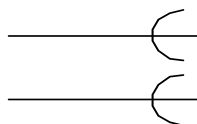
**Line with crow's foot**  
"many" end of a relation.



**Normal solid line**  
Mandatory end of a relation.



**Line with small circle at the end**  
Optional end of a relation. That is, a record on the left may not have any associated record on the right.



**Line with a curve at the end**  
Exclusive relation. i.e. only 1 among the connected entities on left is linked to the entity on right at a time.

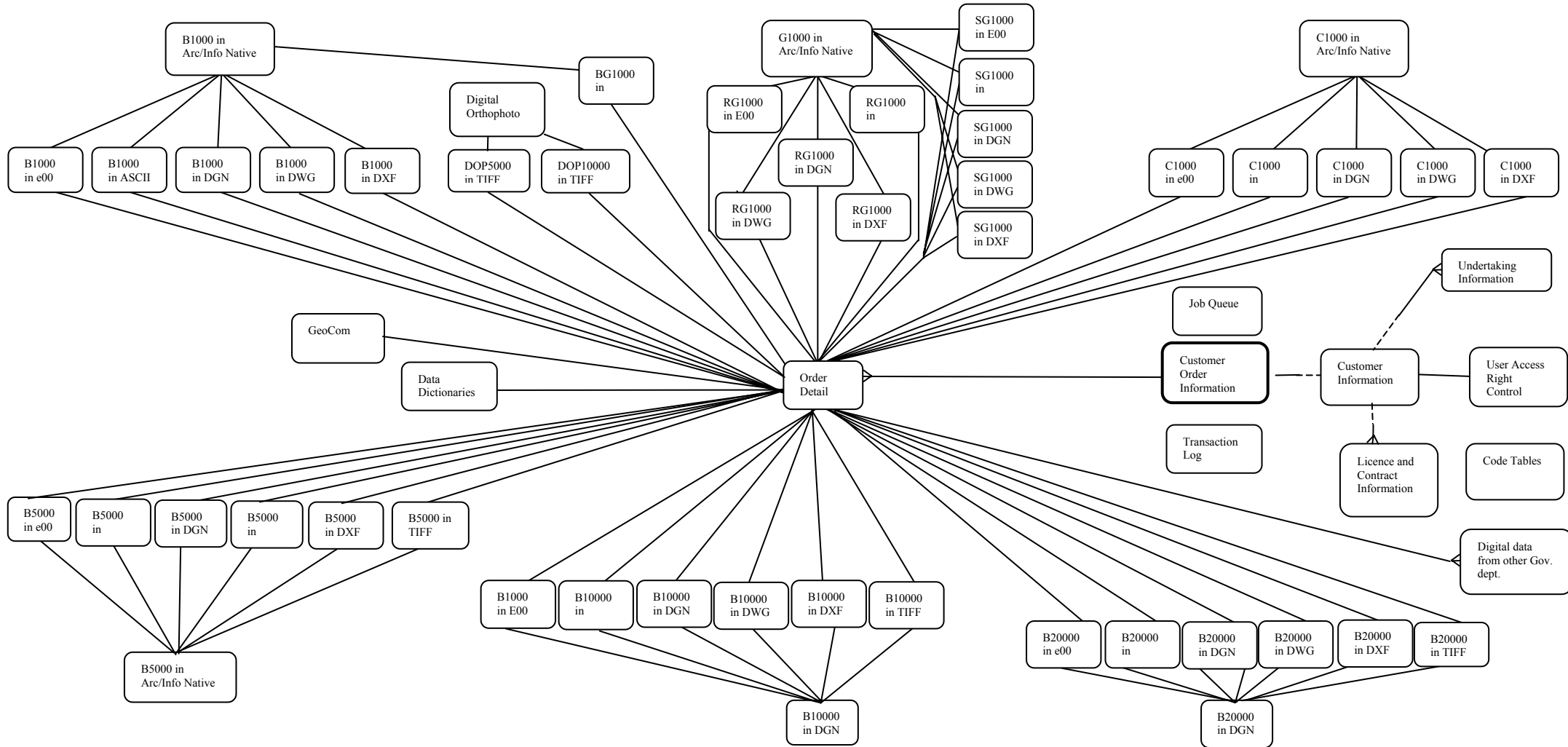


Figure 2.4.3-1 Required System Logical Data Structure – CLIS DDS

Note: Please refer section 2.5.4 of Function Specification for the detail of the data conversion processes involved in the above entities of digital map data.

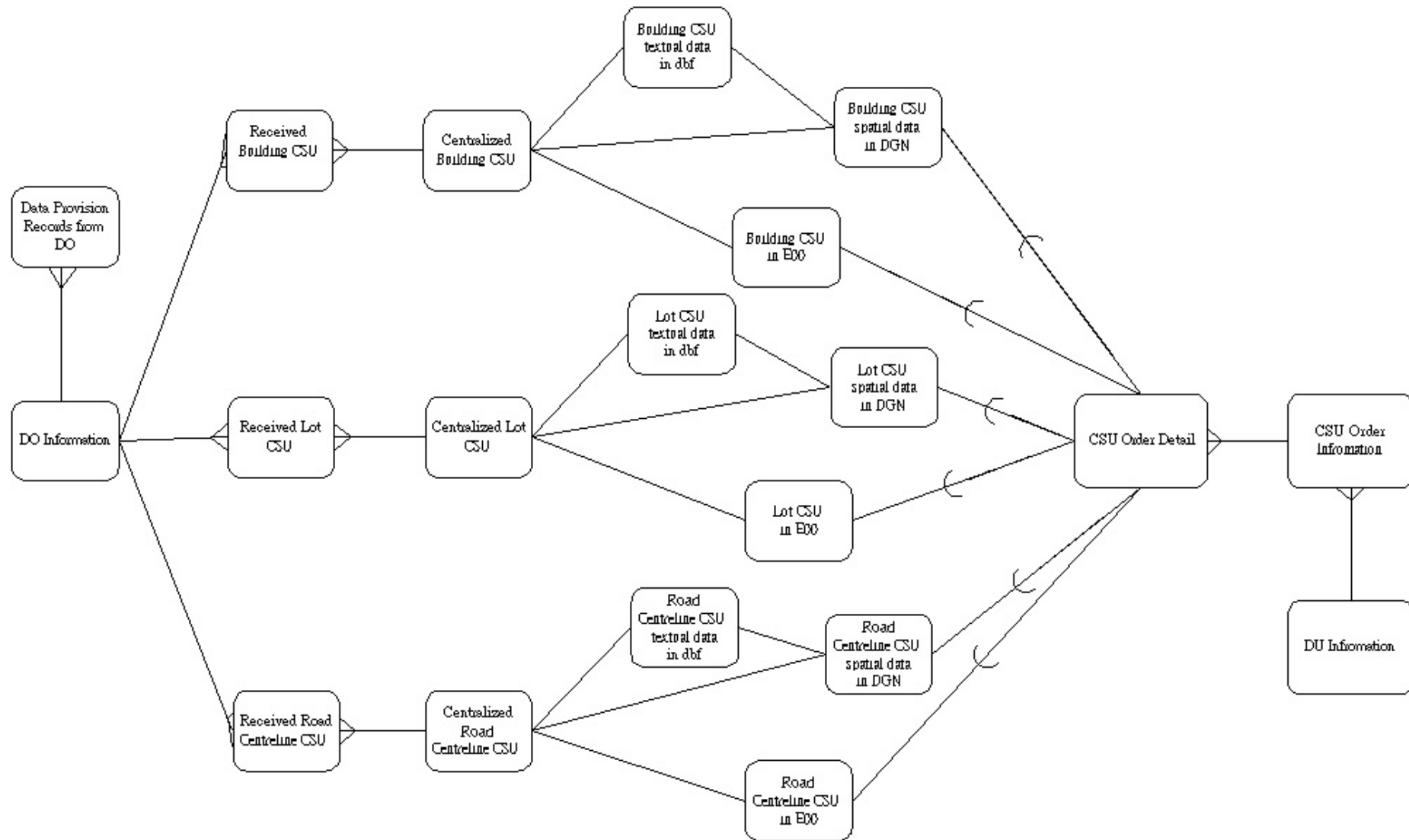


Figure 2.4.3-2 Required System Logical Data Structure – CSU DDS

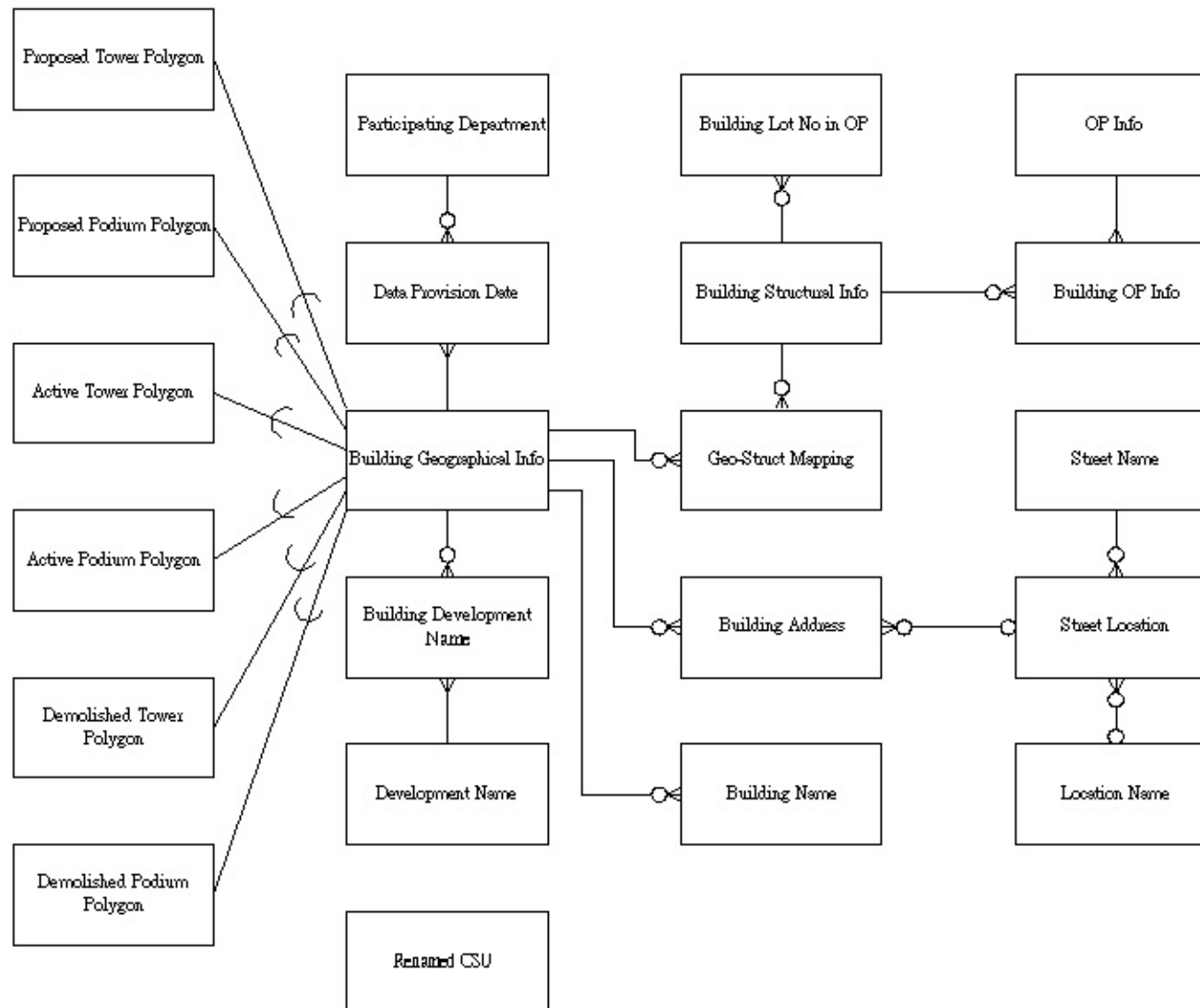


Figure 2.4.3-3 Required System Logical Data Structure –Building CSU

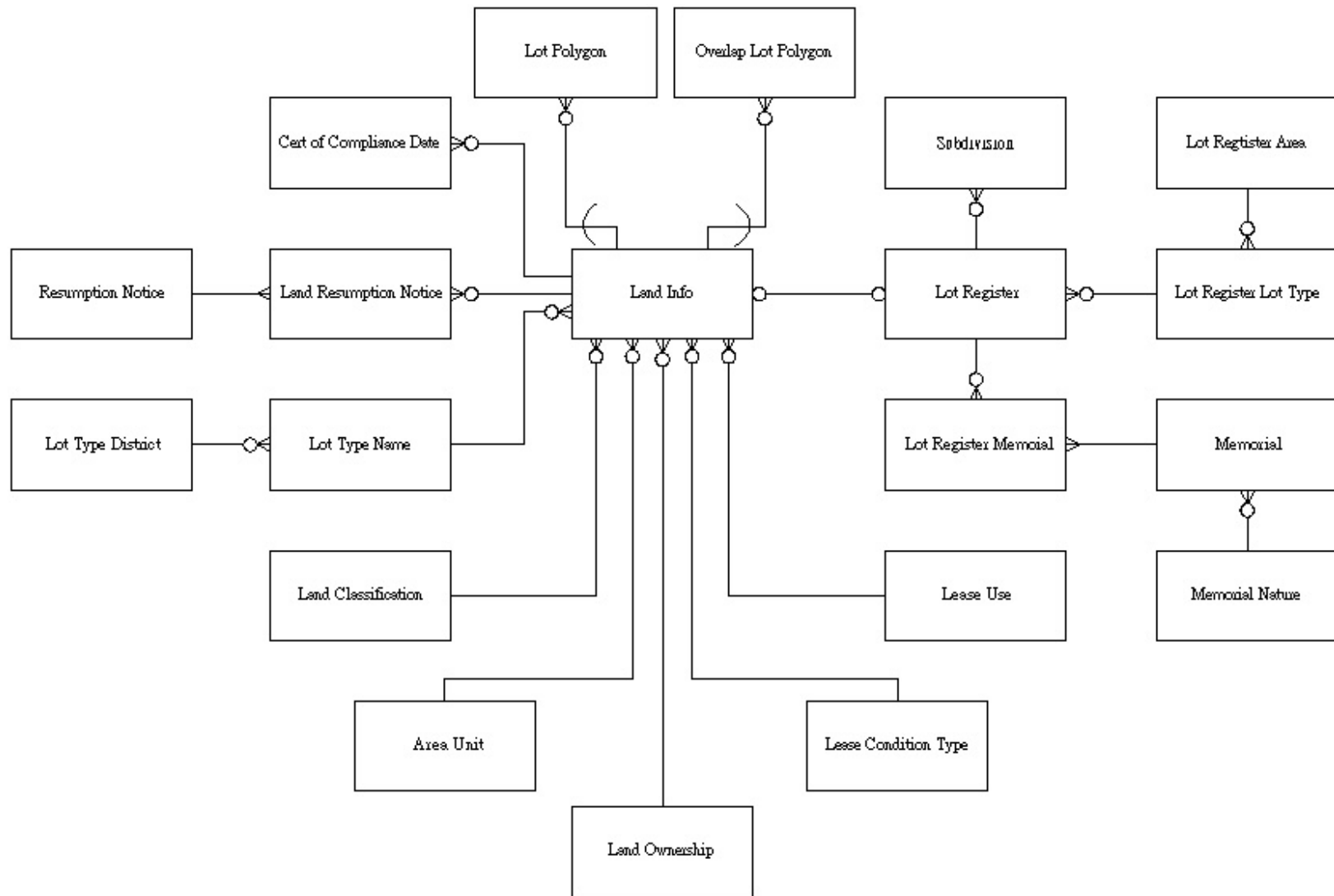


Figure 2.4.3-4 Required System Logical Data Structure – Lot CSU

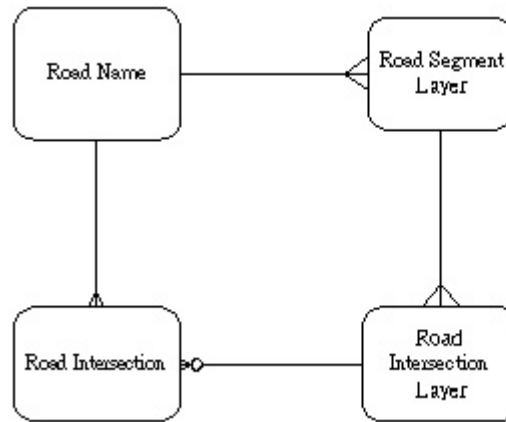


Figure 2.4.3-5 Required System Logical Data Structure – Road Centreline CSU

#### 2.4.4 Required System Entity Description

The CSU DDS consists of 3 major databases. They are:

- Received CSU database which keeps the incoming data from LandsD or Data Owners for updating the CSU spatial database in commonly file formats of E00, DGN or DWG<sup>4</sup>.
- Centralized CSU database which keeps all CSU data in a centralised database.
- Extracted CSU database which keeps all CSU data in common used file formats of E00, DGN and DWG for Data Users to download.

Sections 2.4.4.1 and 2.4.4.2 mainly describe individual entities of the Building, Lot and Road Centreline CSU in the Centralized CSU database. Received CSU database and extracted CSU database consist corresponding CSU textual data in XML format or CSU spatial database in the DAM recommended file formats.

##### 2.4.4.1 Entity Description (Part I – Volumetric for Each Entity (Year 1))

The following information for each entity would include:

- Entity name: Name of the entity
- Description: Brief description of the entity
- Entity occurrence: The minimum, average and maximum number of occurrences of the entity
- Volatility Period: Duration benchmarked for the calculation
- Volatility: Detail breakdown on number of tiles deleted / inserted / amended within volatility period
- Annual Growth Rate: Estimation of the annual growth of the entity  
[= (No. of Inserts – No. of Deletes) \* 100% / Avg. Occ.]

(The above formula does not apply to CLIS databases. Moreover, the annual growth rates applied in section 2.4.4.1.1 and 2.4.4.1.2 for CLIS data include annual tile growth rate, annual data content growth rate and annual data size growth rate)

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<sup>4</sup> Prior arrangement has been made between LandsD (Data Agent of Building CSU) and ArchSD so that ArchSD would submit Building CSU data under their jurisdiction in DWG format.

2.4.4.1.1 Source Spatial Data Hub

This data hub will be used to store a copy of the digital map data extracted from the master set of current mapping libraries residing within CLIS.

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B1000 in Arc/Info Native	B1000 in Arc/Info Native format stored in Source Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
B5000 in Arc/Info Native	B5000 in Arc/Info Native format stored in Source Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in DGN	B10000 in DGN format stored in Source Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in DGN	B20000 in DGN format stored in Source Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20
C1000 in Arc/Info Native	C1000 in Arc/Info Native format stored in Source Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,496	20
G1000 in Arc/Info Native	Building Polygon in G1000 stored in Source Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,791	30
	Road Centre Line in G1000 stored in Source Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,781	30
	Site Polygon in G1000 stored in Source Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	593	30

#### 2.4.4.1.2 Multi-format Spatial Data Hub

This data hub will be used to store the digital map data extracted from the Source Spatial Data Hub (without restricted layers) and converted in various standard formats. Since every tiles in Source Spatial Data Hub will be converted into different data formats, the entity occurrence for each of the following subsections (i.e. i to vii) are same as section (A). Moreover, this data hub will also be used to store data dictionaries as well as digital data from other Government departments, which are described in the subsections viii and ix.

##### i. Digital map data in E00 format

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B1000 in E00	B1000 in E00 format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
B5000 in E00	B5000 in E00 format stored in Multi-format Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in E00	B10000 in E00 format stored in Multi-format Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in E00	B20000 in E00 format stored in Multi-format Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20
C1000 in E00	C1000 in E00 format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,547	20
RG1000 in E00	RG1000 in E00 format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,814	30
SG1000 in E00	SG1000 in E00 format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,057	30

ii. Digital map data in ASCII format

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B1000 in ASCII	B1000 in ASCII (ungenerate) format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
B5000 in ASCII	B5000 in ASCII (ungenerate) format stored in Multi-format Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in ASCII	B10000 in ASCII (ungenerate) format stored in Multi-format Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in ASCII	B20000 in ASCII (ungenerate) format stored in Multi-format Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20
C1000 in ASCII	C1000 in ASCII (ungenerate) format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,547	20
BG1000 in ASCII	BG1000 in ASCII format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
RG1000 in ASCII	RG1000 in ASCII format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,814	30
SG1000 in ASCII	SG1000 in ASCII format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,057	30

iii. Digital map data in DGN format

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B1000 in DGN	B1000 in DGN format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
B5000 in DGN	B5000 in DGN format stored in Multi-format Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in DGN	B10000 in DGN format stored in Multi-format Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in DGN	B20000 in DGN format stored in Multi-format Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
C1000 in DGN	C1000 in DGN format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,547	20
RG1000 in DGN	RG1000 in DGN format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,814	30
SG1000 in DGN	SG1000 in DGN format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,057	30

iv. Digital map data in DWG format

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B1000 in DWG	B1000 in DWG format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
B5000 in DWG	B5000 in DWG format stored in Multi-format Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in DWG	B10000 in DWG format stored in Multi-format Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in DWG	B20000 in DWG format stored in Multi-format Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20
C1000 in DWG	C1000 in DWG format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,547	20
RG1000 in DWG	RG1000 in DWG format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,814	30
SG1000 in DWG	SG1000 in DWG format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,057	30

v. Digital map data in DXF format

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B1000 in DXF	B1000 in DXF format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,317	30
B5000 in DXF	B5000 in DXF format stored in Multi-format Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in DXF	B10000 in DXF format stored in Multi-format Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in DXF	B20000 in DXF format stored in Multi-format Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20
C1000 in DXF	C1000 in DXF format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	2,547	20
RG1000 in DXF	RG1000 in DXF format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,814	30
SG1000 in DXF	SG1000 in DXF format stored in Multi-format Spatial Data Hub	6,472	6,472	6,472	Yearly	n/a	n/a	1,057	30

vi. Digital map data in TIFF format

Entity Name	Description	Min. Occ. (tiles)	Avg. Occ. (tiles)	Max. Occ. (tiles)	Volatility Period	No. of Deletes (tiles)	No. of Inserts (tiles)	No. of Amend (tiles)	Annual Growth Rate %
B5000 in TIFF	B5000 in TIFF format stored in Multi-format Spatial Data Hub	272	272	272	Yearly	n/a	n/a	189	25
B10000 in TIFF	B10000 in TIFF format stored in Multi-format Spatial Data Hub	62	62	62	Yearly	n/a	n/a	62	20
B20000 in TIFF	B20000 in TIFF format stored in Multi-format Spatial Data Hub	17	17	17	Yearly	n/a	n/a	16	20
DOP5000 in TIFF *	DOP5000 in TIFF format stored in Multi-format Spatial Data Hub	189	189	189	Yearly	n/a	n/a	95	2
DOP10000 in TIFF	DOP10000 in TIFF format stored in Multi-format Spatial Data Hub	55	55	55	Yearly	n/a	n/a	28	2

Note: \* DOP5000 data in ECW & MrSID formats are also included.

vii. GeoCommunity data in EXCEL format

Entity Name	Description	Min. Occ. (files)	Avg. Occ. (files)	Max. Occ. (files)	Volatility Period	No. of Deletes (files)	No. of Inserts (files)	No. of Amend (files)	Annual Growth Rate %
GeoCom	GeoCommunity data in EXCEL format	18	18	18	Yearly	n/a	n/a	9	2

viii. Data Dictionaries

Entity Name	Description	Min. Occ. (copies)	Avg. Occ. (copies)	Max. Occ. (copies)	Volatility Period	No. of Deletes (copies)	No. of Inserts (copies)	No. of Amend ((copies)	Annual Growth Rate %
Data Dictionaries	Data dictionaries	20	20	20	Yearly	3	n/a	n/a	10

ix. Digital data from other Government departments

<b>Entity Name</b>	<b>Description</b>	<b>Min. Occ. (tiles)</b>	<b>Avg. Occ. (tiles)</b>	<b>Max. Occ. (tiles)</b>	<b>Volatility Period</b>	<b>No. of Deletes (tiles)</b>	<b>No. of Inserts (tiles)</b>	<b>No. of Amend (tiles)</b>	<b>Annual Growth Rate %</b>
Digital data from other Gov. dept.	Digital data provided from other Government departments which is disseminated from the proposed system	3,000	3,500	4,000	Yearly	n/a	n/a	n/a	10

2.4.4.1.3 Customer and Sales Record Subsystem

This subsystem is proposed to maintain customer and sales records. It aims to store the customer detail information such as customer profile, order information, licence information, delivery and payment information etc.

i. Main Tables

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Customer Information	Information of customers who have ordered digital map data from LandsD - including customers from other Government department, private sector, general public and academic	3,692 Gov: (92) Private: (3,600)	n/a	4,426 Gov: (106) Private: (4,320)	Yearly	n/a	734 Gov: (14) Private: (720)	n/a	Gov: (15) Private: (20)
Licence and Contract Information	Information of Licence detail for private customers and Contract information for Government Consultants	17,050 Gov: (2798) Private: (14,252)	n/a	20,321 Gov: (3,218) Private: (17,103)	Yearly	n/a	3,270 Gov: (420) Private: (2,850)	n/a	Gov: (15) Private: (20)
Customer Order Information	Information of order for digital map data received by LandsD – including order from customers in other Government department, private sector, general public and academic	17,051 Gov: (2,795) Private: (14,256)	n/a	20,321 Gov: (3,214) Private: (17,107)	Yearly	n/a	3,270 Gov: (419) Private: (2,851)	n/a	Gov: (15) Private: (20)
Order Detail	Information of digital map sheet disseminated out from LandsD to customers in other Government department, private sector, general public and academic	316,346 Gov: (287,834) Private: (28,512)	n/a	365,223 Gov: (331,009) Private: (34,214)	Yearly	n/a	48,877 Gov: (43,175) Private: (5,702)	n/a	Gov: (15) Private: (20)
Undertaking Information	Information of Undertaking forms received by LandsD	2,795	n/a	3,214	Yearly	n/a	419	n/a	15

Note: The figures provided above indicate the overall figures and the breakdown figures for storing customer and ordering records from government departments and private sectors.

ii. Code Tables

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Code Tables	The code and relevant information for supporting DDS application	612	n/a	624	Yearly	n/a	12	n/a	2

iii. User Access Right Control Table

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
User Access Right Control Table	Information of user access right of the DDS – including customers and the system administrators	1,224	n/a	1,248	Yearly	n/a	24	n/a	2

iv. Job Queue

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Job Queue	Information of queuing job for processing	2,600 Gov: (434) Private: (2,166)	n/a	3,098 Gov: (499) Private: (2,599)	Yearly	n/a	498 Gov: (65) Private: (433)	n/a	Gov: (15) Private: (20)

Note: The figures provided above indicate the overall figures and the breakdown figures for storing job queue records from government departments and private sectors.

v. Transaction Log

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Transaction Log	Transaction information of the proposed system	4,149 Gov: (577) Private: (3,571)	n/a	4,949 Gov: (664) Private: (4,285)	Yearly	n/a	801 Gov: (87) Private: (714)	n/a	Gov: (15) Private: (20)

Note: The figures provided above indicate the overall figures and the breakdown figures for storing transaction records from government departments and private sectors.

2.4.4.1.4 CSU Entities

2.4.4.1.4.1 Building CSU Entities

This specifies the relevant entries related to the Building CSU within the centralised database repository of CSU DDS.

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Building Geographical Info	Textual geographical information of a Building CSU	207,243	208,554	209,865	Yearly	0	12,704	18,450	6
Proposed Tower Polygon	Spatial feature representing the boundary of a proposed tower Building CSU	4,800	6,000	7,200	Yearly	6,000	6,000	12,000	0
Proposed Podium Polygon	Spatial feature representing the boundary of a proposed podium Building CSU	120	150	180	Yearly	150	150	300	0
Active Tower Polygon	Spatial feature representing the boundary of an active tower Building CSU	200,000	200,000	200,000	Yearly	400	6,000	6,000	3
Active Podium Polygon	Spatial feature representing the boundary of an active podium Building polygons	2,000	2,000	2,000	Yearly	4	150	150	7
Demolished Tower Polygon	Spatial feature representing the boundary of a demolished tower Building	320	400	480	Yearly	0	400	0	100

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Demolished Podium Polygon	Spatial feature representing the boundary of a demolished podium Building CSU	3	4	5	Yearly	0	4	0	100
Building Structural Info	Textual structural information of a Building CSU	207,243	208,554	209,865	Yearly	2,086	6,257	12,513	2
Geo-Struct Mapping	Mapping between concerned Building Geographical Info and Building Structural Info records of a Building CSU	208,554	227,968	248,692	Yearly	456	6,839	13,678	3
Building OP Info	OP(s) related to a building. This entity is applicable for buildings under Category 1 only	42,000	42,000	42,000	Yearly	0	1,260	1,260	3
OP Info	Information of Occupation Permits (OP). This entity is applicable for buildings under Category 1 only.	14,000	21,000	42,000	Yearly	0	630	630	3
Building Lot No In OP	Lot Number as marked in OP	42,000	42,000	42,000	Yearly	0	1,260	1,260	3
Development Name	Names of developments/estates	6,217	6,257	6,296	Yearly	0	381	369	6
Building Development Name	Links between buildings and their corresponding development names	207,243	208,554	209,865	Yearly	0	12,704	18,450	6

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Building Name	Name of buildings	207,243	208,554	209,865	Yearly	0	12,704	18,450	6
Building Address	Addresses of a Building CSU	208,554	312,831	417,108	Yearly	0	12,704	18,450	6
Street Location	Combination of street name and at most 3 location names that can be used in addresses	4,000	8,000	12,000	Yearly	20	240	100	3
Street Name	List of street names	4,000	4,000	4,000	Yearly	20	120	40	3
Location Name	List of location names	160	200	240	Yearly	1	6	2	3
Data Provision Date	The date when any attribute, regardless spatial or textual, of a Building CSU is last updated by Data Owners.	208,554	312,831	417,108	Yearly	0	9,385	0	3
Participating Department	List of Data Owner PDs. This is to be maintained by the Data Agent	5	6	7	Yearly	1	1	1	0
Renamed CSU	The history log for tracing purpose when a CSU is changed from Proposed status to Active status	4,920	6,150	7,380	Yearly	0	6,150	0	100

2.4.4.1.4.2 Lot CSU Entities

This specifies the relevant entries related to the Lot CSU within the centralised database repository of CSU DDS.

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Land Info	Information of lots that mainly relates to the land administration	365,000	365,000	365,000	Yearly	365	3,650	18,250	1
Cert of Compliance Date	Date(s) of Certificate(s) of Compliance issued for each lot	43,800	54,750	65,700	Yearly	0	1,643	548	3
Resumption Notice	Information of resumption notices	365	730	1,095	Yearly	0	7	7	1
Land Resumption Notice	Relation between resumption notices and the affected lots	8,760	10,950	13,140	Yearly	0	110	110	1
Lot Type Name	Lookup table for Lot Type Codes	880	1,100	1,320	Yearly	1	1	1	0
Lot Type District	Lookup table for District Codes	10	13	15	Yearly	1	1	1	0
Land Classification	Lookup table for Class Codes (i.e. types of grants)	63	79	95	Yearly	1	1	1	0
Area Unit	Lookup table for Site Area Codes	4	5	6	Yearly	1	1	1	0

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Land Ownership	Lookup table for Land Ownership Codes, which are mostly for Government Land Allocation	10	55	100	Yearly	1	1	1	0
Lease Condition Type	Lookup table for Lease Condition Types	8	10	12	Yearly	1	1	1	0
Lease Use	Lookup table for Lease Use Codes	100	550	1,000	Yearly	1	1	1	0
Lot Polygon	Lot boundaries of active lots	361,350	361,350	361,350	Yearly	0	7,227	7,227	2
Overlap Lot Polygon	Active lot boundaries that are overlapping with other neighbouring lots	3,650	3,650	3,650	Yearly	0	73	73	2
Lot Register	Lot registers maintained by LR	533,093	533,093	533,093	Yearly	0	10,662	10,662	2
Lot Register Lot Type	Lookup table for Lot Type Codes adopted by Lot Registers from LR	2,665	5,331	10,662	Yearly	5	11	11	0
Lot Register Area	Lookup table for Area Codes adopted by Lot Registers from LR	11	14	17	Yearly	1	1	1	0
Memorial	Memorials registered at LR (only related to lot registers are covered)	1,224,343	1,224,343	1,224,343	Yearly	0	42,402	12,243	3
Lot Register Memorial	List of memorials that involved with a Lot Register	1,224,343	2,448,686	3,673,029	Yearly	0	84,804	24,487	3

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Memorial Nature	Lookup table for nature categorizations of memorials	200	250	300	Yearly	3	3	3	0
Subdivision	History of lot subdivision registered by LR	42,402	46,642	50,882	Yearly	0	42,402	933	91

2.4.4.1.4.3 Road Centreline CSU Entities

This specifies the relevant entries related to the Road Centreline CSU within the centralised database repository of CSU DDS.

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Road Segment Layer	This contains information relating linear features representing the active road network	12,000	24,000	204,000	Yearly	48	480	240	2
Road Intersection Layer	This contains information relating node features representing the active road intersections	24,000	30,000	36,000	Yearly	60	600	300	2
Road Intersection	This contains information about the street codes at a road intersection	8,000	20,000	200,000	Yearly	40	400	200	2
Road Name	This contains information about the street name of Road Centreline	4,000	4,000	4,000	Yearly	8	80	40	2

2.4.4.1.4.4 System and Code Entities

Besides the core CSU entities, there are also some system and code tables entities kept in the centralised database repository of CSU DDS.

Entity Name	Description	Min. Occ. (records)	Avg. Occ. (records)	Max. Occ. (records)	Volatility Period	No. of Deletes (records)	No. of Inserts (records)	No. of Amend (records)	Annual Growth Rate %
Task and Schedule Table	The scheduled information to extract CSU data to conform to different file format standards	160	320	640	Yearly	320	320	0	2
Code Tables	The code and relevant information for supporting CSU DDS application	200	300	500	Yearly	10	10	20	2
User Access Right Control Table	Information of user access right of the CSU DDS, including DA, DO & DU	25	50	100	Yearly	2	2	4	2
Job Queue	Information of queuing job for processing	100	200	400	Yearly	200	200	0	2
Transaction Log	Transaction information of the proposed system	400,000	475,000	550,000	Yearly	0	475,000	0	2

#### 2.4.4.2 Entity Description (Part II –Data Item Description)

The following describes the convention on the Formats used in the Entity Description:

- (a) X(n) : Variable-length character strings of max. length n.
- (b) CX(n): Variable-length character strings of maximum n Chinese characters. Maximum number of bytes will depend on the character set used by the CSU dataset. E.g. CX(5) occupies at most 10 bytes if data are stored in Big5 character set.
- (c) N(m,n) : Fixed and floating point numbers, where m is precision (total number of digits before and after decimal point) and n is scale (number of digits to the right of decimal point). The n part is omitted, i.e. denoted in N(m), for integers.
- (d) Date : Point-in-time values (date and time).
- (e) Line : Types of line format.
- (f) Node : Type of node format.
- (g) Polygon : Type of polygon format.

2.4.4.2.1 Entities in the Source Spatial Data Hub

The digital map data stored in this Hub is actually extracted from the master set of digital map data residing within CLIS. Since the extracted digital map data is exactly the same as the corresponding digital map data stored in CLIS, the entity description of a digital map data can be directly referred to the data dictionary of the corresponding digital map data in CLIS. The following data dictionaries are referred:

<b>Entities in the Source Spatial Data Hub</b>	<b>Referred Data Dictionaries*</b>
B1000 in Arc/Info Native	Basic Mapping System Data Dictionary Version 2.1 May 2002
B5000 in Arc/Info Native	B5000 Mapping System Data Dictionary Version 2.0 March 2001
B10000 in DGN	B10000 Mapping Dataset in DGN format Data Dictionary Version 2.02 September 2002
B20000 in DGN	B20000 Mapping Dataset in DGN format Data Dictionary Version 2.02 September 2002
C1000 in Arc/Info Native	Cadastral Information System Data Dictionary Version 2.1 May 2002
G1000 in Arc/Info Native	Basic Mapping System Data Dictionary Version 2.1 May 2002**

\* The names and versions of the data dictionaries are subjected to change with the updated version of corresponding documents in LandsD.

2.4.4.2.2 Entities in Multi-format Spatial Data Hub

The digital map data stored in this Hub is extracted from the Source Spatial Data Hub (except the restricted layers) and converted to the following formats:

- E00
- ASCII
- DGN
- DWG
- DXF
- TIFF
- EXCEL

The entity description for each format of the digital map data stored in this Hub are stated as follows:

i. Digital map data in E00 format

The content of the digital map data in this group is same as the current digital map data disseminated by LandsD in E00 format. The following data dictionaries in sales version are used as direct references for the entity description:

Entity Name	Referred Data Dictionaries*
B1000 in E00	1:1000 Basic Mapping System Data Dictionary (Data Sale Version - Arc/Info Export Format) Version 2.1 June 2002
B5000 in E00	B5000 Mapping System Data Dictionary in ArcInfo format Version 2.0 March 2001
B10000 in E00	B10000 Mapping Dataset in ArcInfo Format Data Dictionary Version 2.02 September 2002
B20000 in E00	B20000 Mapping Dataset in ArcInfo Format Data Dictionary Version 2.02 September 2002
C1000 in E00	C1000 1:1000 Digital Land Boundary Map Database Data Dictionary (Data Sale Version - Arc/Info Format) Version 2.1 June 2002
RG1000 in E00	The reference data dictionaries will be provided once they are available from LandsD
SG1000 in E00	

\* The names and versions of the data dictionaries are subjected to change with the updated version of corresponding documents in LandsD.

ii. Digital map data in ASCII format

The content of the digital map data in this group is same as the current digital map data disseminated by LandsD in ASCII format. For the following digital map data:

- B1000
- B5000
- B10000
- B20000
- C1000

the data dictionaries are not currently available in ASCII format. It is suggested to refer to the data dictionaries in Arc/Info format (sales version) for the entity description as the digital map data in ASCII format is generated from Arc/Info using internal command of Arc/Info.

For G1000 digital map data, a fact sheet is used as a direct reference for the entity description in ASCII format (please refer to Appendix 3.2.9 for the fact sheet).

The following data dictionaries and document are referred:

Entity Name	Referred Data Dictionaries and Document*
B1000 in ASCII	1:1000 Basic Mapping System Data Dictionary (Data Sale Version - Arc/Info Export Format) Version 2.1 June 2002
B5000 in ASCII	B5000 Mapping System Data Dictionary in ArcInfo format Version 2.0 March 2001
B10000 in ASCII	B10000 Mapping Dataset in ArcInfo Format Data Dictionary Version 2.02 September 2002
B20000 in ASCII	B20000 Mapping Dataset in ArcInfo Format Data Dictionary Version 2.02 September 2002
C1000 in ASCII	C1000 1:1000 Digital Land Boundary Map Database Data Dictionary (Data Sale Version - Arc/Info Format) Version 2.1 June 2002
BG1000 in ASCII	"Geo-Reference Database (G1000)" – fact sheet of LandsD published on April 2003
RG1000 in ASCII	
SG1000 in ASCII	

\* The names and versions of the referred data dictionaries and document are subjected to change with the updated version of corresponding documents in LandsD.

iii. Digital map data in DGN format

The data content of the digital map data in this group is same as the current digital map data disseminated by LandsD in DGN format. The following data dictionaries in sales version are used as a direct reference for the entity description:

Entity Name	Referred Data Dictionaries *
B1000 in DGN	B1000 1:1000 Digital Topographic Map Database Data Dictionary for DGN Format Version 2.1 June 2002
B5000 in DGN	B5000 1:5000 Digital Topographic Map Database Data Dictionary for DGN Format Version 2.0 June 2001
B10000 in DGN	B10000 Mapping Dataset in DGN format Data Dictionary Version 2.02 September 2002
B20000 in DGN	B20000 Mapping Dataset in DGN format Data Dictionary Version 2.02 September 2002
C1000 in DGN	C1000 1:1000 Digital Land Boundary Map Database Data Dictionary for DGN Format Version 2.1 June 2002
RG1000 in DGN	The reference data dictionaries will be provided once they are available from LandsD
SG1000 in DGN	

\* The names and versions of the data dictionaries are subjected to change with the updated version of corresponding documents in LandsD.

iv. Digital map data in DWG/DXF format

The data content of the digital map data in this group is same as the current digital map data disseminated by LandsD in DWG/DXF format. The following data dictionaries in sales version are used as direct references for the entity description.

Entity Name	Referred Data Dictionaries*
B1000 in DWG/DXF	B1000 1:1000 Digital Topographic Map Database Data Dictionary for DWG/DXF Format Version 2.1 June 2002
B5000 in DWG/DXF	B5000 1:5000 Digital Topographic Map Database Data Dictionary for DWG/DXF Format Version 2.0 June 2001
B10000 in DWG/DXF	B10000 Mapping Dataset in DWG/DXF format Data Dictionary Version 2.02 September 2002
B20000 in DWG/DXF	B20000 Mapping Dataset in DWG/DXF format Data Dictionary Version 2.02 September 2002
C1000 in DWG/DXF	C1000 1:1000 Digital Land Boundary Map Database Data Dictionary for DWG/DXF Format Version 2.1 June 2002
RG1000 in DWG/DXF	The reference data dictionaries will be provided once they are available from LandsD
SG1000 in DWG/DXF	

\* The names and versions of the data dictionaries are subjected to change with the updated version of corresponding documents in LandsD

v. Digital map data in TIFF format

The digital map data in this group is in a raster format (i.e. image file). The reference for the entity description of this group will be based on the relevant data dictionaries in LandsD once they are available.

vi. GeoCommunity Database (GeoCom) in EXCEL format

GeoCom is a set of geo-coded community information embedded with spatial reference in textual database EXCEL format. The reference for the entity description of this group will be based on the relevant data dictionaries in LandsD once they are available.

vii. Data dictionaries for the LandsD digital map data

The entity description of the data dictionaries for the LandsD digital map data is not applicable as those dictionaries are proposed to be stored as document files format (e.g. Acrobat format).

viii. Digital data from other Government departments

The entity description of the digital data from other Government departments is not applicable as LandsD should be only responsible for providing the digital data from other Government departments to users upon receipt of request and should not be responsible for the maintenance and updating of the data.

### 2.4.4.2.3 Entities in Customer and Sales Record Subsystem

Customer and Sales Record Subsystem is developed for the proposed dissemination system to store information on the particulars of customers, order records, total cost of each order and other related information for digital map data dissemination. Apart from this, various code tables are required to support the system. However, the detail structure and number of code tables can be decided during system design phase.

The major entities for this subsystem are tabulated below (the number of entities and attributes of each entity will be finalised in the System Analysis and Design (SA&D) stage)

#### i. Customer Information

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Customer Information	Customer ID	A unique identification number assigned to each customer	X(10)	Y	Y
	Customer Type Code	A code assigned to identify the customer type (e.g. public, Government consultant)	X(5)	Y	N
	Department Code	A code assigned to identify the department (for Government only) of the customer	X(5)	N	N
	Company	Company name	X(20)	N	N
	Job Title	Job title of the customer	X(20)	N	N
	Customer Name	Customer name	X(20)	Y	N
	Address 1	Line 1 of the customer mailing address	X(50)	N	N
	Address 2	Line 2 of the customer mailing address	X(50)	N	N
	Address 3	Line 3 of the customer mailing address	X(50)	N	N
	Telephone Number	Telephone number of the customer	N(10)	N	N
	Fax Number	Fax number of the customer	N(10)	N	N
	Email Address	Email address of the customer	X(30)	N	N
	Login Name	Login name for the customer to login the system	X(10)	N	N
	Login Password	Login password for the customer to login the system	X(10)	N	N

#### ii. Licence and Contract Information

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Licence and Contract Information	Licence/Contract ID	An unique identification number assigned to the licence issued or the unique identification number assigned to the contract	X(10)	Y	Y
	Code for Intended use of the digital map data	A code assigned to identify the customer intention in using the ordered digital map data	X(5)	N	N
	Code for Hardware and Software Configuration	A code assigned to identify the computer configuration of the customer for using the ordered digital map data	X(10)	N	N
	Terminal Type	Type of terminal	X(10)	N	N
	Serial No.	Terminal serial no.	X(10)	N	N
	Location	Terminal location	X(20)	N	N
	Expiry date	Licence / Contract expiry date	Date	N	N
	Cessation Date	Contract cessation date for Government consultants	Date	N	N
	Customer Id	Customer identification number	X(10)	N	N
	Remarks	Remarks	X(80)	N	N

iii. Customer Order Information

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Customer Order Information	Customer ID	A unique identification number assigned to the customer	X(10)	Y	N
	Undertaking ID	An unique identification number assigned to Undertaking form received	X(10)	Y	N
	Licence/ Contract ID	An unique identification number assigned to the licence issued or the unique identification number assigned to Contract	X(10)	Y	N
	Order ID	A unique identification number assigned for the order made by the customer each time	X(10)	Y	Y
	Demand Note ID	A unique identification number assigned for the demand note issued to the customer	X(10)	N	N
	Issue date	Demand note issue date	Date	N	N
	Due Date	Payment Due Date	Date	N	N
	Print Flag	A flag indicating whether Demand note has already been printed or not	X(1)	N	N
	Status Code	A flag indicating the status of demand note	X(1)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Key
	Code for Payment Method	Code identify the payment method for the order	X(5)	N	N
	Code For Dispatch Method	Code identify the dispatch method requested by the customer	X(5)	N	N
	Order Date	Order date for the digital map data	Date	N	N
	Order Completion Date	The completion date of the order	Date	N	N
	Total Cost for the Order	The total cost for the order	N(10)	N	N

iv. Order Detail

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Order Detail	Order ID	A unique identification number assigned for the order made by the customer each time	X(10)	Y	Y
	Code for Product Category	The code assigned to identify the category of the map product, e.g. Digital Topographic Map Database, Data Dictionary etc.	X(10)	Y	Y
	Code for Product Scale	The code assigned to identify the scale of the map product	X(5)	Y	Y
	Code for Product Name	The code assigned to identify the sheet number of the digital map data or the name of data dictionary ordered	X(10)	Y	Y
	Layer Name	The digital map data layer ordered	X(30)	N	N
	Code for Product Format	The code assigned to identify the data format of the ordered map data	X(5)	Y	Y
	Pointer to Product	Pointer to the file location of the product	X(80)	N	N
	Quantity	Quantity of each product ordered	N(5)	N	N
	Product Revision Date	The revision date of the map sheet or the data dictionary	Date	N	N

v. Undertaking Information

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Undertaking Information	Customer ID	Customer Identification Number	X(10)	Y	Y
	Undertaking ID	An unique identification number assigned to Undertaking form received	X(10)	Y	Y
	Undertaking Date	Date on which Undertaking form is filled up	Date	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Key
	Agreement No.	Agreement number of the contract between the government department and the government consultant	X(10)	Y	N
	Contract Expiry date	Date on which contract expires	Date	Y	N
	Government Dept	Name of Government Department	X(20)	N	N
	Responsible person	Name of the responsible person for undertaking	X(10)	N	N
	Designation	Designation of the responsible person	X(10)	N	N
	Section	Section of the responsible person	X(10)	N	N
	Tel no	Telephone No. of the responsible person	X(10)	N	N
	Fax No	Fax No. of the responsible person	X(10)	N	N

vi. Code Tables

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Code Tables	Table Flag	A unique identifier to identify each code table	X(10)	Y	Y
	Code 1	Code 1 required to support the DDS activities	X(10)	Y	Y
	Code 2	Code 2 required to support the DDS activities	X(10)	Y	Y
	Description for Code 1	Description for the code 1	X(50)	N	N
	Description for Code 2	Description for the code 2	X(50)	N	N

vii. User Access Right Control Table

Entity	Data Item	Description & Validation	Format	Mandatory	Key
User Access Right Control Table	User/Customer ID	A unique identification number assigned to the LandsD users or customers	X(10)	Y	Y
	User/Customer Name	Name of the LandsD users or customer	X(20)	Y	N
	Group ID	A unique identification number assigned to the group of user/customer who have same access right to the system	X(10)	Y	Y
	Access Right Code	The code represent the access right to the system	X(10)	Y	N
	Access Right Code Description	The description of the access right code	X(50)	N	N

viii. Job Queue

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Job Queue	Job Number	A unique identification number assigned to a job queuing for processing	X(10)	Y	Y
	Order ID	A unique identification number assigned for the order made by the customer each time	X(10)	Y	N
	Creation Date	Date of the job created	Date	N	N
	Execution Date	Date of the job executed	Date	N	N
	Completion Date	Date of the job completed	Date	N	N
	Priority	Priority of the job	X(2)	N	N
	Status	The status of the job	X(5)	N	N
	Remarks	Remarks	X(50)	N	N

ix. Transaction Log

Entity	Data Item	Description & Validation	Format	Mandatory	Key
Transaction Log	Function ID	A unique identification number assigned to the LandsD users or customers	X(10)	Y	Y
	User/Customer ID	A unique identification number assigned to the LandsD users or customers	X(10)	Y	Y
	Transaction Date	Date of transaction	Date	Y	N
	Transaction Type	Type of transaction	X(10)	N	N
	Action Code	Action code	X(10)	N	N
	Before Image	Image before the transaction	X(80)	N	N
	After Image	Image after the transaction	X(80)	N	N

2.4.4.2.4 CSU Entities

2.4.4.2.4.1 Building CSU Entities

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Building Geographical Info	Geo Ref No	Geo-reference No. of the label point of the building polygon	X(10)	Y	Y
	Record Creation Date	Date on which the building polygon is first created in CLIS of LandsD	Date	Y	Y
	Polygon Type	Type of the building polygon, where T = Tower P = Podium	X(1)	Y	Y
	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date (GGGGGGGGGGTYYYYMMDD), where GGGGGGGGGG part = Geo Ref No T part = Polygon Type YYYYMMDD part = Record Creation Date formatted to string representation in YYYYMMDD date format	X(19)	Y	N
	Record ID	Computer-generated unique identifier	N(9)	Y	N
	Status	Record status, where P = Proposed A = Active D = Demolished	X(1)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Category	<p>Building category, where</p> <p>1 = Legal private buildings and HA/HS buildings that require an occupation permit and are under enforcement of the Buildings Ordinance</p> <p>2 = NT small houses</p> <p>3 = HA buildings except PSPS buildings</p> <p>4 = Other government buildings</p> <p>5 = Miscellaneous structures</p> <p>This information may not be available on record creation. However, once it is ever filled by the Data Owner, it must not be reverted to null value. In addition, warning should be given to original and new Data Owners in case Category is changed from a non-null value to another non-null value.</p>	X(1)	N	N
	Housing Scheme	<p>HA housing scheme</p> <p>(Applicable for PSPS buildings under Category 1 and those under Category 3 only, Null for others)</p>	X(10)	N	N
	Cert of Exemption Date Building Works	<p>Date on which Certificate of Exemption - Building Works is issued</p> <p>(Applicable for Category 2 only, Null for others)</p>	Date	N	N
	Cert of Exemption Date Site Formation Works	<p>Date on which Certificate of Exemption - Site Formation Works is issued</p> <p>(Applicable for Category 2 only, Null for others)</p>	Date	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Cert of Exemption Date Drainage Works	Date on which Certificate of Exemption - Drainage Works is issued  (Applicable for Category 2 only, Null for others)	Date	N	N
	Demolition Completion Date	Completion date of demolition work, in particular, Category 1: As reported by responsible AP/RSE. Category 4: As recorded by ArchSD Category 2, 3 & 5: Information not available and will be left as Null.	Date	N	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Proposed Tower Polygon	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date	X(19)	Y	Y
	Geometry	Geometry of building polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Proposed Podium Polygon	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date	X(19)	Y	Y
	Geometry	Geometry of building polygon	Polygon	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Active Tower Polygon	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date	X(19)	Y	Y
	Geometry	Geometry of building polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Active Podium Polygon	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date	X(19)	Y	Y
	Geometry	Geometry of building polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Demolished Tower Polygon	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date	X(19)	Y	Y
	Geometry	Geometry of building polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Demolished Podium Polygon	Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date	X(19)	Y	Y
	Geometry	Geometry of building polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Building Structural Info	Category	Building category	X(1)	Y	Y
	Structure ID	Record identifier: When Category = '1', it references to the concerned Building Block ID as in BD's BCIS; For other categories, it references to Record ID of the concerned Building Geographical Info record.	N(9)	Y	Y
	Storeys Above Podium	Number of storeys above podium/basement for tower blocks. It is applicable only when BD Block Type = 'TOW' or 'OTH' for Category 1 buildings, or Polygon Type of corresponding Building Geographical Info = 'T' for other categories.  This figure counts only the over-podium part if the tower is sitting on a podium. For towers not sitting on podium, this counts the part over basement.  (Applicable for Category 1-4 only, Null for Category 5)	N(3)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Storeys In Podium	<p>Number of storeys in podium and above basement. This means the number of above-basement storeys in the podium itself for podium blocks, and means number of above-basement storeys in the podium below for tower blocks.</p> <p>This information may not be available for Category 1 &amp; 4 buildings.</p> <p>This data item is not applicable for Category 2 &amp; 5 and will be left as Null.</p>	N(2)	N	N
	Storeys In Basement	<p>Number of storeys in basement/lower ground. This counts only the storeys covered by the concerned Building CSU. For example, the basement storeys are counted into the podium block only but not to the towers sitting above.</p> <p>(Applicable for Category 1, 3 &amp; 4 only, Null for Category 2 &amp; 5)</p>	N(2)	N	N
	Storeys Remarks	<p>Textual description to clarify number of storeys of the building</p> <p>(Applicable for Category 1 only, Null for others)</p>	X(200)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Completion Year	Year in which the building is completed, in particular, Category 1: The year in which the OP is issued for the building. For buildings covered by multiple OPs, the first full OP will be referenced. Category 2: The year in which the Certificate of Compliance is issued for the building. Category 3: Year of completion information as provided by HA. Category 4: Year of completion as identified by ArchSD. Category 5: Information not available and will be left as Null.	N(4)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Completion Month	<p>Month in which the building is completed, in particular,</p> <p>Category 1: The month in which the OP is issued for the building. For buildings covered by multiple OPs, the first full OP will be referenced.</p> <p>Category 2: The month in which the Certificate of Compliance is issued for the building.</p> <p>Category 3: Month of completion information as provided by HA.</p> <p>Category 4: Month of completion as identified by ArchSD.</p> <p>Category 5: Information not available and will be left as Null.</p> <p>For Category 1-4 buildings, both year and month of completion should be provided for all new buildings constructed after implementation of DAM. However, for some existing buildings, maybe only the year information is available.</p>	N(2)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Completion Day	<p>Day of the month (1-31) on which the building is completed, in particular,</p> <p>Category 1: The day on which the OP is issued for the building. For buildings covered by multiple OPs, the first full OP will be referenced.</p> <p>Category 2: The day on which the Certificate of Compliance is issued for the building.</p> <p>Category 3: Day of completion information as provided by HA.</p> <p>Category 4: Day of completion as identified by ArchSD.</p> <p>Category 5: Information not available and will be left as Null.</p> <p>For Category 1-4 buildings, the full completion date (with year, month and day) should be provided for all new buildings constructed after implementation of DAM as far as possible. However, for some buildings, maybe only the year information, or year/month, is available.</p>	N(2)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Approximate Building Top Level	Elevation of building above principal datum in metres, in particular,  Category 1 & 4: Top level of a building is measured to the mean height of the roof over the highest usable floor space in the building.  Category 2: Approximate level of the top of a building in metre above HKPD.  Category 3 & 5: Approximate level of the top of a building in metre above HKPD. Due to resource constraint and site constraint, LandsD does not have building height of every building in Hong Kong. Only partially available for buildings constructed before implementation of DAM and LandsD currently has no resource to collect this information regularly.	N(8,2)	N	N
	GFA	Gross floor area in M2  (Applicable for Category 1 only, Null for others)	N(10,2)	N	N
	BD Block Type	Building block type as recorded by BD, where  TOW = Tower POD = Podium OTH = Others  (Applicable for Category 1 only, Null for others)	X(3)	N	N
	Building Type In OP	Types of building as of OP e.g. industrial, commercial  (Applicable for Category 1 only, Null for others)	X(200)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Geo-Struct Mapping	Geo Record ID	Identifier of the concerned Building Geographical Info record	N(9)	Y	Y
	Category	Building category	X(1)	Y	Y
	Structure ID	Identifier of the concerned Building Structural Info record. Hence, when Category $\neq$ '1', it has the same value as Geo Record ID.	N(9)	Y	Y
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset). Hence, it also means when Category is identified for the Building CSU.	Date	Y	N
Building OP Info	Category	Building category. Hence, always '1'.	X(1)	Y	Y
	Structure ID	Identifier of the concerned Building Structural Info record. Hence, it references to the concerned Building Block ID as in BD's BCIS	N(9)	Y	Y
	OP No	Occupation permit number e.g. 'D141/55'	X(15)	Y	N
OP Info	OP No	Occupation permit number e.g. 'D141/55'	X(15)	Y	Y

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	OP Date	Issue date of OP.  This can be null only for converted records for existing buildings, and is mandatory for all OPs issued after implementation of DAM.	Date	N	N
	Domestic GFA	Domestic gross floor area covered by the OP, and hence it covers all the buildings under this OP.  This can be null only for converted records for existing buildings, and is mandatory for all OPs issued after implementation of DAM.	N(10,2)	N	N
	Non Domestic GFA	Non-domestic gross floor area covered by the OP, and hence it covers all the buildings under this OP.  This can be null only for converted records for existing buildings, and is mandatory for all OPs issued after implementation of DAM.	N(10,2)	N	N
Building Lot No In OP	Category	Building category. Hence, always '1'.	X(1)	Y	N
	Structure ID	Identifier of the concerned Building Structural Info record. Hence, it references to the concerned Building Block ID as in BD's BCIS	N(9)	Y	N
	DD SD Type	DD/SD Type in English e.g. 'DD', 'SD'	X(5)	N	N
	DD SD No	DD/SD Number e.g. '1', '2'	X(4)	N	N
	Lot Type	Lot Type in English abbreviation e.g. 'LOT', 'CLL', 'IL', 'KIL'	X(15)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Lot No	Lot Number (including both numeric and alphabetical part) e.g. '123', '328', '20A'	X(13)	Y	N
	Section 1	The first section letter (e.g. 'A', 'B', 'AA', 'C-F') appeared in a lot designation.  Special values for non-section letters are enclosed in brackets, where:  (PE) = PRAYA EXTENSION TO (PR) = PRAYA EXCLAMATION TO (RP) = THE REMAINING PORTION OF (RC) = THE RECLAMATION TO	X(4)	N	N
	Subsection 1	The first subsection number (e.g. '1', '2') appeared in a lot designation.	X(4)	N	N
	Section 2	The second section letter (e.g. 'A', 'B') appeared in a lot designation.  Special values for non-section letters are enclosed in brackets, where:  (PE) = PRAYA EXTENSION TO (PR) = PRAYA EXCLAMATION TO (RP) = THE REMAINING PORTION OF (RC) = THE RECLAMATION TO	X(4)	N	N
	Subsection 2	The second subsection number (e.g. '1', '2') appeared in a lot designation.	X(2)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Section 3	The third section letter (e.g. 'A', 'B') appeared in a lot designation.  Special values for non-section letters are enclosed in brackets, where:  (PE) = PRAYA EXTENSION TO (PR) = PRAYA EXCLAMATION TO (RP) = THE REMAINING PORTION OF (RC) = THE RECLAMATION TO	X(4)	N	N
	Subsection 3	The third subsection number (e.g. '1', '2') appeared in a lot designation.	X(2)	N	N
	Section 4	The forth section letter (e.g. 'A', 'B') appeared in a lot designation.  Special values for non-section letters are enclosed in brackets, where:  (PE) = PRAYA EXTENSION TO (PR) = PRAYA EXCLAMATION TO (RP) = THE REMAINING PORTION OF (RC) = THE RECLAMATION TO	X(4)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Ext Portion	Extended portion, where 1 = and the first extension thereto 2 = and the second extension thereto 3 = and the third extension thereto 4 = and the fourth extension thereto 5 = and the fifth extension thereto 6 = and the sixth extension thereto 7 = and the seventh extension thereto 8 = and the eighth extension thereto 9 = and the extension thereto	N(1)	N	N
	Misc No	Miscellaneous number (as in LR's LRS/IRIS)	N(4)	N	N
Development Name	Info Source	Provider of this development name, where R = Recorded name provided by RVD S = Surveyed name provided by LandsD	X(1)	Y	Y
	Development ID	Unique identifier among the development names provided by one Data Owner	N(9)	Y	Y
	Eng Dev Name	Development name in English	X(80)	Y	N
	Chi Dev Name	Development name in Chinese	CX(25)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Status	Status of the development name, where E = default O = other name (alias) P = proposed R = renamed	X(1)	Y	N
Building Development Name	Record ID	Identifier of the concerned Building Geographical Info record	N(9)	Y	Y
	Info Source	Provider of the concerned development name, where R = Recorded name provided by RVD S = Surveyed name provided by LandsD	X(1)	Y	Y
	Development ID	Identifier of the concerned development name	N(9)	Y	Y
Building Name	Record ID	Identifier of the concerned Building Geographical Info record	N(9)	Y	N
	Info Source	Provider of the concerned development name, where R = Recorded name provided by RVD S = Surveyed name provided by LandsD	X(1)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Full Eng Bldg Name	Building name in English. When Address Source = 'R', it is constructed by building name line 1-3, block description and block number in the corresponding Building Address record. At least one between Full Eng Bldg Name and Full Chi Bldg Name must not be null.	X(100)	N	N
	Full Chi Bldg Name	Building name in Chinese. When Address Source = 'R', it is constructed by building name line 1-3, block description and block number in the corresponding Building Address record. At least one between Full Eng Bldg Name and Full Chi Bldg Name must not be null.	CX(50)	N	N
	Status	Status of the development name, where E = default O = other name (alias) P = proposed R = renamed	X(1)	Y	N
Building Address	Record ID	Identifier of the concerned Building Geographical Info record	N(9)	Y	Y

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Address Source	Provider of this address, where R = Recorded address provided by RVD S = Surveyed address provided by LandsD  When Address Source = 'S', only the Bldg No Num, Bldg No Alpha, Bldg No Ext and St Loc ID data items are applicable and all the other non-mandatory data items will be left as Null.	X(1)	Y	Y
	Address ID	Identifier of address assigned by Data Owner.  When Address Source = 'R', it references to the concerned Block ID as in RVD's PMS	N(9)	Y	Y
	Eng Bldg Name 1	Line 1 of building name in English e.g. 'KAM FAI BUILDING', 'BLOCK 40'	X(35)	N	N
	Eng Bldg Name 2	Line 2 of building name in English	X(35)	N	N
	Eng Bldg Name 3	Line 3 of building name in English	X(35)	N	N
	Chi Bldg Name 1	Line 1 of building name in Chinese	CX(14)	N	N
	Chi Bldg Name 2	Line 2 of building name in Chinese	CX(14)	N	N
	Chi Bldg Name 3	Line 3 of building name in Chinese	CX(14)	N	N
	Eng Block Desc	Block description in English e.g. 'BLDG', 'APT', 'HSE', 'BLK'	X(35)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Chi Block Desc	Block description in Chinese	CX(14)	N	N
	Block No Num	Numeric part of block number e.g. '1' in 'TOWER 1'	N(5)	N	N
	Block No Alpha	Alphabetic part of block number e.g. 'A' in 'BLK A'	X(10)	N	N
	Block No Alpha Prec Ind	Determine ordering of numeric and alphabetical parts of block number when both parts are not Null, where Y = Block No Alpha precedes Block No Num N = Block No Num precedes Block No Alpha	X(1)	N	N
	Block Desc Prec Ind	Determine ordering of block description and block number in full address when both are not Null, where Y = block description precedes block number (e.g. in the cases of 'BLK A' and 'TOWER 1') N = block number precedes block description (e.g. in the cases of 'NORTH BLK' and 'WEST TOWER')	X(1)	N	N
	Bldg No Num	Numeric part of building number e.g. '18' in '18A/20A', and '1' in '1B/1C'	N(4)	N	N
	Bldg No Alpha	Alphabetical part of building number e.g. 'A' in '18A/20A', and 'B' in '1B/1C'	X(2)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Bldg No Ext	Extension of building number e.g. '/20A' in '18A/20A', and '/1C' in '1B/1C'	X(8)	N	N
	St Loc ID	Identifier of the concerned street-location	N(9)	N	N
	Unofficial Address Code	Indicate that the address unofficial, where 1 = Building number to be bracketed/No building number 2 = Building number and street name to be bracketed 3 = Dummy address i.e. building number within the range occupied by the building and recorded for search purpose, but there is no tenement/unit in the building using this building number in full address	X(1)	N	N
	Bldg No Confirm Code	Indicate whether the assigned building number is confirmed, where C = Confirmed building number P = Provisional building number A = Not yet allocated but action to be taken B = Use existing old number but action to be taken X = Not applicable When this code is C or P, at least one of the three Bldg No fields must not be Null.	X(1)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Eng Full Addr 1	Line 1 of the full postal address in English.  Concerned lot number(s) is generated as part of the full address (line 1-5) for unofficial addresses, where unofficial addresses refer to those with non-blank Unofficial Address Code.  The full address is mandatory for records with Address Source = 'R' and Unofficial Address Code = 1, 2 or Null.	X(35)	N	N
	Eng Full Addr 2	Line 2 of the full postal address in English	X(35)	N	N
	Eng Full Addr 3	Line 3 of the full postal address in English	X(35)	N	N
	Eng Full Addr 4	Line 4 of the full postal address in English	X(35)	N	N
	Eng Full Addr 5	Line 5 of the full postal address in English	X(35)	N	N
	Eng Loc Addr 1	Line 1 of location name part for postal addresses with location name.  Location name part (line 1-3) is applicable normally for buildings in the New Territories only, and is appended to the last non-blank line of English full address (line 1-5) to form the full postal address.	X(35)	N	N
	Eng Loc Addr 2	Line 2 of location name part for postal addresses with location name	X(35)	N	N
	Eng Loc Addr 3	Line 3 of location name part for postal addresses with location name	X(35)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Eng Addr Verify Code	Indicate whether the English full postal address is verified, where N = Not yet verified V = Verified, and the full address is generated by the structural address S = Verified, but the full address is manually input by user	X(1)	N	N
	Chi Full Addr 1	Line 1 of the full postal address in Chinese. Concerned lot number(s) is generated as part of the full address (line 1-5) for unofficial addresses, where unofficial addresses refer to those with non-blank Unofficial Address Code. The full address is mandatory for records with Address Source = 'R' and Unofficial Address Code = 1, 2 or Null.	CX(14)	N	N
	Chi Full Addr 2	Line 2 of the full postal address in Chinese	CX(14)	N	N
	Chi Full Addr 3	Line 3 of the full postal address in Chinese	CX(14)	N	N
	Chi Full Addr 4	Line 4 of the full postal address in Chinese	CX(14)	N	N
	Chi Full Addr 5	Line 5 of the full address in Chinese	CX(14)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Chi Addr Verify Code	Indicate whether the Chinese full postal address is verified, where N = Not yet verified V = Verified, and the full address is generated by the structural address S = Verified, but the full address is manually input by user	X(1)	N	N
Street Location	St Loc ID	Unique identifier of a street name-location name combination	N(9)	Y	Y
	Street ID	Identifier of the concerned street name e.g. references to 'CASTLE PEAK RD' for 'CASTLE PEAK RD-TSUEN WAN' e.g. references to 'TAI MONG TSAI RD' for 'TAI MONG TSAI RD, TSAM CHUK WAN, SAI KUNG'	N(9)	Y	N
	Location ID 1	Identifier of the first concerned location name, if any. Normally not available for streets in Hong Kong Island and Kowloon. e.g. references to 'TSUEN WAN' for 'CASTLE PEAK RD-TSUEN WAN' e.g. references to 'TSAM CHUK WAN' for 'TAI MONG TSAI RD, TSAM CHUK WAN, SAI KUNG'	N(9)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Location ID 2	Identifier of the second concerned location name, if any. Normally not available for streets in Hong Kong Island and Kowloon. e.g. references to 'SAI KUNG' for 'TAI MONG TSAI RD, TSAM CHUK WAN, SAI KUNG'	N(9)	N	N
	Location ID 3	Identifier of the third concerned location name, if any. Normally not available for streets in Hong Kong Island and Kowloon.	N(9)	N	N
	Location Nature	Nature of the street-location combination, where 1 = Street-location is equal to gazetted street name 2 = Street name part alone is equal to gazetted street name 3 = Village 4 = Others	X(1)	Y	N
	Eng Full Name	Full street-location name in English generated according to the concerned street name and location name(s) e.g. 'CASTLE PEAK RD-TSUEN WAN'	X(57)	Y	N
	Chi Full Name	Full street-location name in Chinese generated according to the concerned street name and location name(s)	CX(24)	Y	N
Street Name	Street ID	Unique identifier of a street name	N(9)	Y	Y
	Eng Name	Street name in English e.g. 'CONNAUGHT' in 'CONNAUGHT RD C'	X(35)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Eng Type	Street type in English e.g. 'RD' in 'CONNAUGHT RD C'	X(10)	N	N
	Eng Direction	Street direction in English e.g. 'C' in 'CONNAUGHT RD C'	X(10)	N	N
	Eng Type Prec Ind	Determine ordering of type and direction parts of the English street name when both parts are not Null, where Y = Eng Type precedes Eng Direction N = Eng Direction precedes Eng Type (Normally 'Y' for all records)	X(1)	N	N
	Chi Name	Street name in Chinese	CX(14)	Y	N
	Chi Type	Street type in Chinese	CX(5)	N	N
	Chi Direction	Street direction in Chinese	CX(5)	N	N
	Chi Type Prec Ind	Determine ordering of type and direction parts of the Chinese street name when both parts are not Null, where Y = Chi Type precedes Chi Direction N = Chi Direction precedes Chi Type	X(1)	N	N
Location Name	Location ID	Unique identifier of a location name	N(9)	Y	Y
	Eng Name	Location name in English	X(35)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Chi Name	Location name in Chinese	CX(14)	Y	N
Data Provision Date	Record ID	Identifier of the concerned Building Geographical Info record	N(9)	Y	Y
	Dept Code	Data Owner	X(10)	Y	Y
	Last Prov Date	Date on which the Data Owner last update any attribute of the CSU	Date	Y	N
Participating Department	Dept Code	Code of PD e.g. 'LANDSD', 'RVD'	X(10)	Y	Y
	Last Upload Date	Date and time when data from this Data Owner is imported into the CSU dataset. This data item may be left null upon defining a new Data Owner PD (i.e. when setting up values in this reference code table). Once the first source dataset from this Data Owner has been imported into the CSU dataset, this data item value will be set and cannot be reverted to null value.	Date	N	N
Renamed CSU	Old Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date of the original CSU ID	X(19)	Y	Y
	New Concatenated ID	Concatenation of Geo Ref No, Polygon Type and Record Creation Date of the new CSU ID after renaming/merging/splitting	X(19)	Y	Y

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Operation	Operation applied to the concerned building polygon, where R = CSU ID reassigned for a CSU M = multiple CSUs merged into one S = one CSU split into multiple	X(1)	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N

2.4.4.2.4.2 Lot CSU Entities

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Land Info	C1000 Lot ID	Concatenation of Lot Type Code, Lot Number Numeric, Lot Number Alpha and Section Code components in C1000-format CSU ID. Lot Type Code and Lot Number Numeric components are padded with leading zeros. Lot Number Alpha component is padded with trailing space to its maximum length if Section Code is not null. e.g. the ID ('320', '197', Null, 'B,4,RP') forms '032000197 B,4,RP'; the ID ('320', '197', Null, Null) forms '032000197'; the ID ('320', '197', 'A', Null) forms '032000197A'.	X(29)	Y	Y
	Lot Type Code	Code of the Lot Type part in the lot designation in C1000-format	N(4)	Y	N
	Lot Number Numeric	Numeric part of the Lot Number part in the lot designation in C1000-format	N(5)	Y	N
	Lot Number Alpha	Alphabetical part of the Lot Number part in the lot designation in C1000-format. The majority of records may have the numeric component only and this component is left as null.	X(4)	N	N
	Section Code	Section/subsection/extension codes delimited by commas (without space after) to define the levels of sections and subsections in the lot designation in C1000-format.	X(16)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	PRN	<p>Property Reference Number.</p> <p>This information is available only after the C1000-format CSU ID has been matched with the corresponding PRN-format CSU ID.</p> <p>For whole lots, matching between C1000-format CSU ID and the corresponding PRN-format CSU ID will be provided by LR in the corresponding Lot Register record before provision of the concerned Land Info record by LandsD. Upon importing the Land Info record, the matching result will then be copied from the associated Lot Register record to this data item.</p> <p>When this data item is not null, C1000 Lot ID and PRN data items must have the same value as in the matched-up Lot Register record.</p> <p>Warning should be given if this data item is reset to null or changed from a non-null value to another non-null value.</p>	X(8)	N	N
	Status	<p>Status of the Lot CSU, where</p> <p>A = Active</p> <p>Z = Inactive</p>	X(1)	Y	N
	Class Code	Class code (Type of Grant)	X(4)	Y	N
	Site Area	Area of site	N(12,3)	N	N
	Site Area Unit	Measurement unit of Site Area data item e.g. 'SF', 'SM'	X(2)	N	N
	Ownership Code	Code of land ownership for government allocation	X(4)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Condition Type	Type of lease condition	X(4)	N	N
	Condition Number	Lease condition reference number	X(35)	N	N
	Use Code	Lease use code e.g. 'AB', 'ACCS'	X(4)	N	N
	Lease Effective Start Date	Commencement date of the lease term. Applicable for whole lots only.	Date	N	N
	Lease Effective End Date	Expiry date of the lease term. Applicable for whole lots only.	Date	N	N
	Lease Term Length	Length of lease term. Applicable for whole lots only.	N(5)	N	N
	Lease Term Unit	Measurement unit of lease term, where D = Days W = Weeks M = Months Y = Years Applicable for whole lots only.	X(1)	N	N
	Renewability	Renewability of the lease, where Y = Yes N = No Applicable for whole lots only.	X(1)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Cert of Compliance Date	C1000 Lot ID	Concatenation of Lot Type Code, Lot Number Numeric, Lot Number Alpha and Section Code components in C1000-format CSU ID	X(29)	Y	Y
	CC Date	Issue date of Certificate of Compliance	Date	Y	Y
Resumption Notice	Resumption Notice No	Reference number of the resumption notice	X(8)	Y	Y
	Resumption Notice Date	Issue date of the resumption notice	Date	Y	N
	Actual Reversion Date	The actual date that the affected lands to be resumed	Date	Y	N
Land Resumption Notice	C1000 Lot ID	Concatenation of Lot Type Code, Lot Number Numeric, Lot Number Alpha and Section Code components in C1000-format CSU ID	X(29)	Y	Y
	Resumption Notice No	Reference number of the resumption notice	X(8)	Y	Y
Lot Type Name	Lot Type Code	Code of the Lot Type part in the lot designation e.g. '5590', '2130'	N(4)	Y	Y
	Lot Type Abbr	Abbreviated name of Lot Type e.g. 'KIL', 'DD169'	X(10)	Y	N
	Lot Type Name	Full name of Lot Type e.g. 'KOWLOON INLAND LOT', 'DEMARCATIION DISTRICT 169 LOT'	X(45)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	District Code	Code of district where the lot locates e.g. 'HK', 'K', 'IS'	X(2)	Y	N
Lot Type District	District Code	Code of district	X(2)	Y	Y
	District Name	Full name of district	X(20)	Y	N
Land Classification	Class Code	Class code (Type of Grant)	X(4)	Y	Y
	Class Description	Full description of type of grants	X(50)	Y	N
Area Unit	Area Unit Code	Code of area measurement unit	X(2)	Y	Y
	Area Unit Description	Description of area measurement unit	X(20)	Y	N
Land Ownership	Ownership Code	Code of land ownership	X(4)	Y	Y
	Ownership Description	Full description of land ownership	X(80)	Y	N
Lease Condition Type	Condition Type	Type of lease condition	X(4)	Y	Y
	Condition Description	Description of lease condition type	X(40)	Y	N
Lease Use	Use Code	Lease use code	X(4)	Y	Y
	Use Description	Description of lease use	X(40)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Lot Polygon	C1000 Lot ID	Concatenation of Lot Type Code, Lot Number Numeric, Lot Number Alpha and Section Code parts in C1000-format CSU ID.	X(29)	Y	Y
	Geometry	Geometry of lot boundary polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Overlap Lot Polygon	C1000 Lot ID	Concatenation of Lot Type Code, Lot Number Numeric, Lot Number Alpha and Section Code parts in C1000-format CSU ID.	X(29)	Y	Y
	Geometry	Geometry of lot boundary polygon	Polygon	Y	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Lot Register	PRN	Property Reference Number	X(8)	Y	Y
	Lot Type	The Lot Type component in the lot designation in LR structural format	X(15)	Y	N
	Lot Number	The Lot Number component in the lot designation in LR structural format	X(6)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Section 1	The Section 1 component in the lot designation in LR structural format. i.e. the first section appeared in a lot designation	X(4)	N	N
	Subsection 1	The Subsection 1 component in the lot designation in LR structural format. i.e. the first subsection appeared in a lot designation	X(4)	N	N
	Section 2	The Section 2 component in the lot designation in LR structural format. i.e. the second section appeared in a lot designation	X(4)	N	N
	Subsection 2	The Subsection 2 component in the lot designation in LR structural format. i.e. the second subsection appeared in a lot designation	X(2)	N	N
	Section 3	The Section 3 component in the lot designation in LR structural format. i.e. the third section appeared in a lot designation	X(4)	N	N
	Subsection 3	The Subsection 3 component in the lot designation in LR structural format. i.e. the third subsection appeared in a lot designation	X(2)	N	N
	Section 4	The Section 4 component in the lot designation in LR structural format. i.e. the forth section appeared in a lot designation	X(4)	N	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Extension	‘(EX)’ if the lot designation ends with ‘AND THE EXTENSION THERETO’; Null otherwise	X(4)	N	N
	Miscellaneous Item	Indicator of peculiar lots, where Null = normal lot Non-null value (normally 9100 or above) = peculiar lot	N(4)	N	N
	Eng Lot Description	The textual lot designation in English. Long translation form is used instead of abbreviated form. E.g. ‘KOWLOON INLAND LOT 123’, ‘DD 360 LOT 1’, ‘THE EXTENSION TO REMAINING PORTION OF INLAND LOT NO.269A’	X(320)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	C1000 Lot ID	<p>Concatenation of Lot Type Code, Lot Number Numeric, Lot Number Alpha and Section Code parts in C1000-format CSU ID.</p> <p>For whole lots, this information will be provided by LR upon creation of the Lot Register record.</p> <p>For subdivided lots, matching between C1000-format CSU ID and the corresponding PRN-format CSU ID will be provided by LandsD in the corresponding Land Info record. Upon importing the Land Info records, the matching result will then be copied to this data item.</p> <p>When this data item is not null and the concerned Land Info record already created, C1000 Lot ID and PRN data items must have the same value as in the matched-up Land Info record.</p> <p>Warning should be given if this data item is reset to null or changed from a non-null value to another non-null value.</p>	X(29)	N	N
	Timestamp	Date and time when the record is last created/modified (i.e. when new data value(s) from Data Owner(s) is imported into the CSU dataset)	Date	Y	N
Lot Register Lot Type	Lot Type Code	Code of the Lot Type part in the lot designation e.g. 'AIL', 'KIL', 'DD360L'	X(15)	Y	Y
	Lot Type Name	Full name of Lot Type e.g. 'ABERDEEN INLAND LOT', 'KOWLOON INLAND LOT', 'DD 360 LOT'	X(45)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	LR Area Code	Code of areas where the lots locate (Hong Kong Island, Kowloon, NT Urban, Tsuen Wan, Sha Tin, Tuen Mun, Yuen Long, Tai Po, North, Sai Kung, or Islands)	X(2)	Y	N
Lot Register Area	LR Area Code	Code of area	X(2)	Y	Y
	LR Area Name	Full name of area	X(20)	Y	N
Memorial	Memorial No	Unique identifier of registered memorials	X(14)	Y	Y
	Date of Instrument	The date of the instrument	Date	Y	N
	Main Nature Code	The main nature code of the document	X(2)	Y	N
	Sub Nature Code	The sub nature code of the document	X(1)	Y	N
	Nature Description	Textual description on nature of the document	X(105)	Y	N
	Consideration Part Code	The consideration code of the document	X(4)	N	N
	Consideration	The consideration (HK\$) of the document	N(16,2)	N	N
	Consideration Text	The consideration (text) of the document. Applicable only when both Consideration and Consideration Part Code are not available.	X(100)	N	N
Lot Register Memorial	PRN	Property Reference Number.	X(8)	Y	Y
	Memorial No	Unique identifier of registered memorials	X(14)	Y	Y

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Memorial Nature	Main Nature Code	Main nature code	X(2)	Y	Y
	Sub Nature Code	Sub nature code	X(1)	Y	Y
	Description	General description of the nature	X(105)	Y	N
	Explanation Remarks	Explanation remarks of the nature	X(100)	N	N
Subdivision	Subdivided Lot PRN	Property Reference Number of the subdivided child lot	X(8)	Y	Y
	Parent Lot PRN	Property Reference Number of the parent lot being subdivided	X(8)	Y	N

2.4.4.2.4.3 Road Centreline CSU Entities

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Road Segment Layer	Street Code	A unique code number assigned for a particular street name.	N(5)	Y	Y
	Sub ID	A number generated by a program automated to uniquely denote each road segment having the same Street Code.	N(3)	Y	Y
	Start Intersection	The Start Intersection Node of the Road Segment is defined by the Geo Reference Number stored in the corresponding node. It establishes the link between the Road Segment Layer and the Road Intersection Layer, such that cascade updating can be facilitated even when the arc and node are maintained by two separate spatial layers.	N(10)	Y	N
	End Intersection	The End Intersection Node of the Road Segment, is defined by the Geo Reference Number stored in the corresponding node. It establishes the link between the Road Segment Layer and the Road Intersection Layer, such that cascade updating can be facilitated even when the arc and node are maintained by two separate spatial layers.	N(10)	Y	N
	Geometry	Geometry of line	Line	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Street Type	Type of the street for the road segment assigned by LandsD, which consists of eight types: EX = Expressway; MA = Main Road; SE = Secondary Road; FY = Elevated Road, Flyover, Road Bridge; TN = Tunnel; NM = Non-motorable Track; CL = Closed Road; RA = Restricted Access;	X(3)	Y	N
Road Intersection Layer	Geometry	Geometry of Node	Node	Y	Y
	Geo Reference Number	This is a unique identifier formed by concatenating the Easting (x) and Northing (y) coordinate of the node point. Before concatenation, all decimals of the x-y coordinates are trimmed off and their preceding figures '8' are removed. Thus, the Geo Reference Number of a node of coordinate: '813579.94E; 824680.12N' would become 1357924680. This attribute will be used to link with the Road Intersection entity. For the pseudo nodes that will be added when the arc reaches the tile border or the arc's vertex number is greater than 500, they are required to be assigned a Geo Reference Number as well. Thus, this attribute can form a primary key.	N(10)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Road Intersection	Geo Reference Number	This is an identifier formed by concatenating the Easting (x) and Northing (y) coordinate of the node point. Before concatenation, all decimals of the x-y coordinates are trimmed off and their preceding figures '8' are removed. Thus, the Geo Reference Number of a node of coordinate: '813579.94E; 824680.12N' would become 1357924680. This value is used to map with the Road Intersection layer. For the cross intersection of two roads, more than one record with same Geo Reference Number will be resulted. Thus, this attribute cannot become a primary key.	N(10)	Y	N
	Street Code at the Intersection	Street Code at the intersection point	N(5)	Y	N
	Alternative Street Code at the Intersection	Alternative Street Code at the intersection point	N(5)	Y	N
Road Name	Street Code	A number assigned by LandsD for a particular street. This is a unique code for street.	N(5)	Y	Y
	English Street Name	English name of the street.	X(80)	N	N
	Chinese Street Name	Chinese name of the street.	CX(50)	N	N

2.4.4.2.4.4 System and Code Entities

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
Task and Schedule Table	Start Time	Date and time set for starting extraction of CSU data to conform different file format standards	Date	Y	Y
	Task Sequence	Sequence of task scheduled base on time	N(2)	Y	Y
	CSU Type	Type of CSU for execution	N(1)	Y	N
	User ID	ID of the DA who creates the task	X(10)	Y	N
	Timestamp	Date and time when the record created	Date	Y	N
Code Tables	Table Flag	A unique identifier to identify each code table	X(10)	Y	Y
	Code 1	Code 1 required to support the DDS activities	X(10)	Y	Y
	Code 2	Code 2 required to support the DDS activities	X(10)	Y	Y
	Description for Code 1	Description for the code 1	X(50)	N	N
	Description for Code 2	Description for the code 2	X(50)	N	N
User Access Right Control Table	User ID	A unique identification number assigned to the CSU users including DA, DO and DU	X(10)	Y	Y
	User Name	Name of the user	X(20)	Y	N

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	Group ID	A unique identification number assigned to the group of users who have same access right to the system	X(10)	Y	Y
	Access Right Code	The code represents the access right to the system	X(10)	Y	N
	Access Right Code Description	The description of the access right code	X(50)	N	N
Job Queue	Job Number	A unique identification number assigned to a job queuing for processing	X(10)	Y	Y
	Order ID	A unique identification number assigned for the order made by the customer each time	X(10)	Y	N
	Creation Date	Date of the job created	Date	Y	N
	Execution Date	Date of the job executed	Date	Y	N
	Completion Date	Date of the job completed	Date	N	N
	Priority	Priority of the job	X(2)	N	N
	Status	The status of the job	X(5)	Y	N
	Remarks	Remarks	X(50)	N	N
Transaction Log	Function ID	A unique identification number assigned to the LandsD users or customers	X(10)	Y	Y

Entity	Data Item	Description & Validation	Format	Mandatory	Primary Key
	User/Customer ID	A unique identification number assigned to the LandsD users or customers	X(10)	Y	Y
	Transaction Date	Date of transaction	Date	Y	N
	Transaction Type	Type of transaction	X(10)	Y	N
	Action Code	Action code	X(10)	N	N
	Before Image	Image before the transaction	X(80)	Y	N
	After Image	Image after the transaction	X(80)	N	N