Amendments on DAM Data Specification as at 26 October 2006

1. Objective

To amend / enhance data specifications in DAM Final Report in respect of Building CSU and Lot CSU data.

2. Background

Lands Department (LandsD) is the Data Agent of Building CSU, Lot CSU and Road Centreline CSU Data. LandsD prepared the initial set of 20K+ Building CSU data to Data Owners (DOs) and Data Provider (DP) in late August 2005 for entry of attribute information under their jurisdiction. After reviewing the returned data from DOs/DP and the operation need, DOs/DP and LandsD agreed that some data specifications in DAM Final Report need to be modified / enhanced. The concerned amendments / enhancements were endorsed by DAM Task Force in March 2006. Further to this, DOs/DP and LandsD discussed and agreed in the 2nd Building CSU Sub-Working Group Meeting of 22.6.2006 that there were additional amendments / enhancements as detailed in Section 3 for the on-going effective implementation of DAM.

Regarding Lot CSU data, during the course of manipulating and matching lot data from Land Registry (LR), LandsD identifies that some amendments should be made in the DAM Data Specification as detailed in Section 4 to facilitate the preparation of initial dataset as well as the on-going maintenance of Lot CSU data. There are amendments relate to the tables owned by LandsD and will not have implications on LR. Some amendments are also required for the tables owned by LR. The Lot CSU Interface System, which is used to convert the LR's data into DAM compliant format, will align with the required amendments in the design.

3. Part A - Building CSU

3.1 Amendment no. 1

<u>Description</u>

To apply default values '-11' and '-99' to character, numeric and integer type items, also '9999/01/01' and '9999/12/31' to date type items in the following tables:

Section (DAM Report)	Table	Data Item	Format	Revised Default Value
4.5.3 (Vol 2B p.4-9)	Building Geographical Info	Housing Scheme	X(10)	'-11' or '-99'
		Cert of Exemption Date Building Works	Date	'9999/01/01' or '9999/12/31'
		Cert of Exemption Date Site Formation Works	Date	'9999/01/01' or '9999/12/31'
		Cert of Exemption Date Drainage Works	Date	'9999/01/01' or '9999/12/31'
		Demolition Completion Date	Date	'9999/01/01' or '9999/12/31'
4.5.10 (Vol 2B p.4-16)	Building Structural Info	Category	X(3)	'-11' or '-99'
		Total Storeys from C&SD	N(3)	'-11' or '-99'
		Storeys Remarks	X(200)	'-11' or '-99'
		BD Block Type	X(3)	'-11' or '-99'
		Building Type In OP	X(200)	'-11' or '-99'
4.5.11 (Vol 2B p.4-22)	Geo-Struct Mapping	Category	X(3)	'-11' or '-99'
4.5.13 (Vol 2B p.4-24)	OP Info	OP Date	Date	'9999/01/01' or '9999/12/31'
		Domestic GFA	N(10,2)	'-11' or '-99'

		Non Domestic GFA	N(10,2)	'-11' or '-99'
4.5.14 (Vol 2B p.4-25)	Building Lot No In OP	DD SD Type	X(5)	'-11' or '-99'
		DD SD No	X(4)	'-11' or '-99'
		Lot Type	X(15)	'-11' or '-99'
		Lot No	X(13)	'-11' or '-99'
4.5.15 (Vol 2B p.4-28)	Development Name	Eng Dev Name	X(80)	'-11' or '-99'
		Chi Dev Name	CX(25)	'-11' or '-99'
4.5.17 (Vol 2B p.4-29)	Building Name	Full Eng Bldg Name	X(195)	'-11' or '-99'
		Full Chi Bldg Name	CX(85)	'-11' or '-99'
4.5.18 (Vol 2B p.4-31)	Building Address	Eng Bldg Name 1	X(35)	'-11' or '-99'
		Eng Bldg Name 2	X(35)	'-11' or '-99'
		Eng Bldg Name 3	X(35)	'-11' or '-99'
		Chi Bldg Name 1	CX(14)	'-11' or '-99'
		Chi Bldg Name 2	CX(14)	'-11' or '-99'
		Chi Bldg Name 3	CX(14)	'-11' or '-99'
		Eng Block Desc	X(35)	'-11' or '-99'
		Chi Block Desc	CX(14)	'-11' or '-99'
		Block No Alpha	X(10)	'-11' or '-99'
		St Loc ID	N(9)	'-11' or '-99'
		Eng Full Addr 1	X(35)	'-11' or '-99'
		Eng Full Addr 2	X(35)	'-11' or '-99'
		Eng Full Addr 3	X(35)	'-11' or '-99'
		Eng Full Addr 4	X(35)	'-11' or '-99'
		Eng Full Addr 5	X(35)	'-11' or '-99'
		Eng Loc Addr 1	X(35)	'-11' or '-99'
		Eng Loc Addr 2	X(35)	'-11' or '-99'
		Eng Loc Addr 3	X(35)	'-11' or '-99'
		Chi Full Addr 1	CX(14)	'-11' or '-99'
		Chi Full Addr 2	CX(14)	'-11' or '-99'
		Chi Full Addr 3	CX(14)	'-11' or '-99'
		Chi Full Addr 4	CX(14)	'-11' or '-99'
		Chi Full Addr 5	CX(14)	'-11' or '-99'
4.5.19 (Vol 2B p.4-35)	Street Location	Location ID 1	N(9)	'-11' or '-99'
		Location ID 2	N(9)	'-11' or '-99'
		Location ID 3	N(9)	'-11' or '-99'
		Eng Full Name	X(57)	'-11' or '-99'
		Chi Full Name	CX(24)	'-11' or '-99'
4.5.20 (Vol 2B p.4-37)	Street Name	Eng Name	X(35)	'-11' or '-99'
		Eng Type	X(20)	'-11' or '-99'
		Eng Direction	X(10)	'-11' or '-99'
		Chi Name	CX(14)	'-11' or '-99'
		Chi Type	CX(5)	'-11' or '-99'
		Chi Direction	CX(5)	'-11' or '-99'
4.5.21 (Vol 2B p.4-38)	Location Name	Eng Name	X(35)	'-11' or '-99'
		Chi Name	CX(14)	'-11' or '-99'

Note

- '-99' is used for the first initial Building CSU dataset to represent that data is not available

- '-11' is used to represent that data is not available after the implementation of CSU DDS

- '9999/01/01' is used for the first initial Building CSU dataset to represent that data is not available

- '9999/12/31' is used to represent that data is not available after the implementation of CSU DDS

In the 1st Building CSU Sub-Working Group Meeting, the proposal of adding default values '-11' and '-99' to some data items has been endorsed by DAM Task Force. During the course of system development, the DDS project team observes that these default values should also be applied to the above character, numeric and integer type items in order to let users understand whether the data is unavailable or the data is missing.

3.2   Amendment no. 2

Description

To amend the description on data item "Category" in Section 4.5.3 of the DAM Report as follows:-

"… This information may not be available on record creation. However, once it is ever filled by the Data Owner, it ~~must not~~ **can only** be reverted to null value **by DA**…"

Justification

Practically, there may have operational need to revert the Category to null value when a DO wrongly classifies a building polygon's category and wishes to revert back to null value in the next data update. The amendment allows the DA to carry out the reversion on need basis. Updating the relevant record in the CSU dataset is handled by amendment no. 3 in Section 3.3.

3.3   Amendment no. 3

Description

To add a new item "Action Code" at the end of each of the following tables for effective maintenance of CSU attributes.

(a)   Group A - for tables having primary key

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.10 (Vol 2B p.4-16)	Building Structural Info	Action Code	Action for the record A = Add D = Delete U = Update Z = Default (i.e. no action required)	X(1)	Y
4.5.12 (Vol 2B p.4-23)	Building OP Info				
4.5.13 (Vol 2B p.4-23)	OP Info				
4.5.15 (Vol 2B p.4-28)	Development Name				
4.5.18 (Vol 2B p.4-31)	Building Address				
4.5.19 (Vol 2B p.4-35)	Street Location				
4.5.20 (Vol 2B p.4-37)	Street Name				
4.5.21 (Vol 2B p.4-38)	Location Name				

The following constraint description should also be added in the concerned tables:-

Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
CK	Action Code	In ('A', 'D', 'U', 'Z')		

(b)   Group B - for tables having composite key or having no primary key

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.11 (Vol 2B p.4-21)	Geo-Struct Mapping	Action Code	Action for the record A = Add D = Delete Z = Default (i.e. no action required)	X(1)	Y
4.5.14 (Vol 2B p.4-24)	Building Lot No in OP				
4.5.16 (Vol 2B p.4-28)	Building Development Name				
4.5.17 (Vol 2B p.4-29)	Building Name				

The following constraint description should also be added in the concerned tables:-

Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
CK	Action Code	In ('A', 'D', 'Z')		

Justification

DOs and LandsD have common views that there should be an action code to the above tables to indicate the required operation (i.e. add, update or delete) for a particular record when DOs provide the updated CSU data to LandsD and when LandsD disseminates the delta change data to DUs. This is to maintain the integrity and completeness of the Building CSU data. Otherwise, both DOs and LandsD would have operational problems in updating and deleting records in the above tables.

3.4   Amendment no. 4

Description

To include BD to be the Data Owner of item "Housing Scheme" in table "Building Geographical Info" as follows:-

Section (DAM Report)	Data Item	Original		Revised	
		Condition	Data Owner	Condition	Data Owner
4.5.3 (Vol 2B, p. 4-11)	Housing Scheme	Category = '3'	PlanD	Category = '1'	BD
				Category = '3'	PlanD

Justification

With reference to the Data Item Description in Volume 2B page 4-9 of DAM Report, Housing Scheme is applicable for PSPS buildings under Category 1 and those under Category 3 only. Accordingly, Category 1 data belongs to Buildings Department (BD) and Category 3 data belongs to Planning Department (PlanD).

However, there is ambiguity in the data ownership of Housing Scheme as specified in Volume 2B page 4-11 of DAM Report in which Category 1 building is found missing.

3.5   Amendment no. 5

Description

To extend the field length of the following items :

Section (DAM Report)	Table	Data Item	Format	
			Original	New
4.5.10 (Vol 2B p.4-16)	Building Structural Info	Category	X(1)	X(3)
4.5.11 (Vol 2B p.4-22)	Geo-Struct Mapping	Category	X(1)	X(3)
4.5.12 (Vol 2B p.4-23)	Building OP Info	Category	X(1)	X(3)
4.5.14 (Vol 2B p.4-25)	Building Lot No In OP	Category	X(1)	X(3)
4.5.20 (Vol 2B, p. 4-37)	Street Name	Eng Type	X(10)	X(20)

Justification

The change of the width of item 'Category' in tables "Building Structural Info", "Geo-Struct Mapping", "Building OP Info" and "Building Lot No In OP" is to align the width of same item 'Category' in table "Building Geographical Info". The change was discussed and agreed in the 1st Building CSU Sub-Working Group Meeting.

The amendment of 'Street Name' table is recently raised by RVD. All the records in this table are owned and contributed by RVD. RVD extracts the address attributes from their system to this data item 'Eng Type'. As the field width of English Street Type in RVD's system has been extended to 20 characters, the width of data item 'Eng Type' in the DAM Specification needs to be amended to accommodate the data.

4.   Part B – Lot CSU

4.1   Amendment no. 6

Description

To add a new CSU status 'U – unmatched' for the unmatched lot records of LandsD data to LR data.

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.3 (Vol 2C, p. 4-8)	Land Info	Status	Status of the Lot CSU, where A = Active Z = Inactive **U = Unmatched**	X(1)	Y

Justification

It is not uncommon that some lot data in LandsD cannot be matched with that in Land Registry (LR) or vice versa. In addition, there will be some LandsD lot records (e.g. permanent government land allocation, temporary government land allocation, defence lot, etc) which will not be registered in the LR but will form part of Lot CSU data (ref. Sect 2.2.2 of Vol. 2C of the DAM Final Report). These records can never be matched with the LR's data. The Lot CSU statuses given in the DAM Final Report do not fit to describe these records. Therefore, it is necessary to add a new CSU status 'U-Unmatched' for this type of lot data.

4.2 Amendment no. 7

Description

To modify the below data items from "Timestamp" to "Datestamp" and their descriptions:

Section (DAM Report)	Table	Data Item		Description	
		Original	Revised	Original	Revised
4.5.3 (Vol 2C p. 4-9)	Land Info	Timestamp	Datestamp	"Date and time when …"	"Date when …"
4.5.14 (Vol 2C p. 4-16)	Lot Polygon	Timestamp	Datestamp	"Date and time when …"	"Date when …"
4.5.15 (Vol 2C p. 4-16)	Overlap Lot Polygon	Timestamp	Datestamp	"Date and time when …"	"Date when …"
4.5.16 (Vol 2C p. 4-18)	Lot Register	Timestamp	Datestamp	"Date and time when …"	"Date when …"

Justification

With reference to the DAM Final Report, there is inconsistency between the format of the item "Timestamp" and its description. The format of this item is date whereas its description defines that both date and time information are required.

The time information is not essential for the on-going data update. This is because each data update will replace the relevant record previously stored in the CSU dataset. The amendment is to let the data item name and its description better reflect the actual operation of the DAM implementation and align with the format of the item as adopted in the DAM Final Report.

4.3 Amendment no. 8

Description

To add a new item "Action Code" at the end of each of the following tables for effective maintenance of CSU attributes.

(a)   Group A – for LandsD and LR lot information core tables

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.3 (Vol 2C p.4-7)	Land Info	Action Code	Action for the record A = Add D = Delete U = Update Z = Default (i.e. no action required)	X(1)	Y
4.5.5 (Vol 2C p.4-10)	Resumption Notice				
4.5.7 (Vol 2C p.4-11)	Lot Type Name				

Section (DAM Report)	Table				
4.5.8 (Vol 2C p.4-12)	Lot Type District				
4.5.9 (Vol 2C p.4-13)	Land Classification				
4.5.10 (Vol 2C p.4-13)	Area Unit				
4.5.11 (Vol 2C p.4-14)	Land Ownership				
4.5.12 (Vol 2C p.4-14)	Lease Condition Type				
4.5.13 (Vol 2C p.4-15)	Lease Use				
4.5.14 (Vol 2C p.4-15)	Lot Polygon				
4.5.15 (Vol 2C p.4-16)	Overlap Lot Polygon				
4.5.22 (Vol 2C p. 4-22)	Subdivision				

The following constraint description should also be added in the concerned tables:-

Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
CK	Action Code	In ('A', 'D', 'U', 'Z')		

(b)   Group B – for LR lookup tables

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.17 (Vol 2C p. 4-19)	Lot Register Lot Type	Action Code	Action for the record A = Add U = Update Z = Default (i.e. no action required)	X(1)	Y
4.5.18 (Vol 2C p. 4-20)	Lot Register Area				
4.5.19 (Vol 2C p. 4-20)	Memorial				

The following constraint description should also be added in the concerned tables:-

Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
CK	Action Code	In ('A', 'U', 'Z')		

(c)   Group C – for LR table indicating the change of record status from active to inactive

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.16 (Vol 2C p. 4-18)	Lot Register	Action Code	Action for the record A = Add D = Delete U = Update I = Inactive	X(1)	Y

			Z = Default (i.e. no action required)		

The following constraint description should also be added in the concerned tables-

Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
CK	Action Code	In ('A', 'D', 'U', 'I','Z')		

(d)   Group D – for other tables

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.4 (Vol 2C p.4-10)	Cert of Compliance Date	Action Code	Action for the record A = Add D = Delete Z = Default (i.e. no action required)	X(1)	Y
4.5.6 (Vol 2C p.4-11)	Land Resumption Notice				
4.5.20 (Vol 2C p. 4-21)	Lot Register Memorial				

The following constraint description should also be added in the concerned tables:-

Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
CK	Action Code	In ('A', 'D', 'Z')		

Justification

With reference to DAM Final Report, LandsD (DA) will provide the incremental data changes including the newly created, deleted and updated records to Data Users (DUs) for the on-going implementation of the DAM. In order to let DUs maintain their dataset easily based on the delta change data, an action code is required in the above tables to indicate the required operation (i.e. add, update or delete). In addition, as there exists some unmatched LR's lot data in the CSU dataset and these lots may become inactive some time later, it is necessary to keep DUs aware of the inactive status to avoid misuse of the concerned data in their business applications. This can also maintain the integrity and completeness of the Lot CSU data.

4.4   Amendment no. 9

Description

To change the UK constraint of data items "Eng Lot Description" in table "Lot Register" and "Lot Type Name" in table "Lot Register Lot Type" as follows:

Section (DAM Report)	Table	Data Item	Constraint	
			Original	New
4.5.16 (Vol 2C, p. 4-17)	Lot Register	Eng Lot Description	Unique key	Non-unique key
4.5.17 (Vol 2C, p. 4-19)	Lot Register Lot Type	Lot Type Name	Unique key	Non-unique key

Justification

Duplicated records of "Eng Lot Description" and "Lot Type Name" fields were found in Lot data from LR. It has been confirmed with LR that different lots might have the same field value as it reflects the actual information on the legal documents submitted to LR. To protect the data integrity between the data source and data output, it is recommended to remove the UK constraint of the above 2 fields.

4.5 Amendment no. 10

<u>Description</u>

To remove "Memorial Nature" table, a Lookup table for nature categorizations of memorials from Lot CSU Entity as follows:

Section (DAM Report)	Table	Data Item	Description	Format	Mandatory
4.5.21 (Vol 2C, p. 4-22)	Memorial Nature	Main Nature Code	Main nature code	X(2)	Y
		Sub Nature Code	Sub nature code	X(1)	Y
		Description	General description of the nature	X(105)	Y
		Explanation Remarks	Explanation remarks of the nature	X(100)	

<u>Justification</u>

It has been confirmed with LR that this table has no relationship to any other tables of Lot CSU. The "Description" field under this table is editable in LR's system to reflect the actual information on the related legal documents submitted to LR. The "Main Nature Code" and "Sub Nature Code" fields were found to contain null value in this table. Null values in these fields are not compliant with the DAM requirements which are defined as mandatory fields as illustrated above.

4.6 Amendment no. 11

<u>Description</u>

To apply default values to mandatory data items in the following tables:

Section (DAM Report)	Table	Data Item	Format	Revised Default Value
4.5.19 (Vol 2C p.4-20)	Memorial	Date of Instrument	Date	'9999/12/31'
		Main Nature Code	X(2)	'ZZ'
		Sub Nature Code	X(1)	'Z'
		Nature Description	X(105)	'-'

<u>Justification</u>

Null values were found in the above mandatory data items in the Lot data from LR. It has been confirmed with LR that this is likely to happen as long as it reflects the actual information on the legal documents submitted to LR or it may be resulted due to historical reasons of the old LR system.

4.7 Amendment no. 12

<u>Description</u>

To add a new "Chinese Characters Reference" table to hold the reference information to all those LR table(s) which may have Chinese content as follows:

(a)   Data Item Description

Data Item	Description	Format	Mandatory
Table Name	Name of the table containing Chinese characters	X(8)	Y
Field Name	Column/ Field Name of the table with Chinese characters	X(10)	Y
Identifier	Identifier of the Record/ Record ID	X(15)	Y
Value	Original Chinese content of the column/ field	X(320)	Y

(b)   Constraint Description

Type	Data Item	Validation	Reference Entity	Reference Data Item
PK	Table Name, Field Name , Identifier			

Justification

Currently Chinese data (including Simplified Chinese and Traditional Chinese characters) were found in the "Nature Description" of Memorial table. This was inevitable as all records within LR IRIS System have to reflect the actual inputs on the plans from law firms. To handle the Chinese attributes which was not specified in the DAM Final Report for Lot CSU, the LCSUI system would check for the Chinese characters in the Lot data provided by LR and replace the contents of the field with a pre-defined value " This Field Contains Chinese Characters and/or Special Characters. Please refer to the CHN_REF Table."

Another table, "Memorial_Chinese" will be provided by DDS for DUs to reference. Its structure and format will be the same as the "Memorial" table except that it will contain only the records with Chinese characters.

The above similar checking for Chinese characters will be handled by LCSUI System for "Lot Register", "Lot Register Lot Type" and "Lot Register Area" tables which may, in future, also contain Chinese characters.

Prepared by : DDS Unit, LandsD
                LCSUI Team, HPLB
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