

Appendix XI – A Sample Spreadsheet for BIM File Name Validation

Table of Content

1. IntroductionXI-1
2. BIM File Name Validation Process Using SpreadsheetXI-1

List of Figures

Figure App XI-1 - The “Project Specified Code” Worksheet.....XI-2
Figure App XI-2 –The Worksheets for Each Field.....XI-3
Figure App XI-3 - The “Model Naming” WorksheetsXI-3
Figure App XI-4 – Example of Drop-Down List for Selecting CodesXI-4
Figure App XI-5 - Example of Auto-Generated Information for Model FilesXI-4
Figure App XI-6 - Hidden Columns on the “Model Naming” WorksheetXI-5
Figure App XI-7 – Example of Cells with Grey Font Colour.....XI-5

1. Introduction

- 1.1. BIM file name validation process can be embedded in CDE, GBDR or spreadsheet.
- 1.2. This Appendix provides an example of BIM file name validation process using the spreadsheet approach. This process is not required if the CDE has validation capabilities.
- 1.3. This Appendix is composed of the following:
 - 1.3.1. A spreadsheet file containing worksheets for code management and BIM model name generation; and
 - 1.3.2. The step-by-step instructions in the section below on how to utilise the spreadsheet to facilitate the data validation process.

2. BIM File Name Validation Process Using Spreadsheet

- 2.1. In this example, a data spreadsheet has been created based on the project of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDA), Phase 1.
- 2.2. To ensure that the data going through conversion engine into GBDR to be shared with other parties have consistent naming (information container ID), a validation list is formed based on two types of codes:
 - 2.2.1. **Common Codes** in accordance with Appendix X – Common Codes for Naming; and
 - 2.2.2. **Project-specific Codes** which would be different for different projects. An example of project-specific codes is provided in Appendix IX – Sample Project Specific Codes for Naming.

2.3. To add codes to the list:

2.3.1. Go to the "Project Specific Code" worksheet (orange coloured tab). The "Common Code" worksheet should not be modified without consensus between all WDs.

Figure App XI-1 - The "Project Specified Code" Worksheet

Field 1: Project		Field 2: Originator		Field 3.1: Volume	
Abbreviation	Description	Abbreviation	Description	Abbreviation	Description
CE1314	Agreement No. CE 13/2014 (CE) Development of Kow Tung North (KTN) and Fanling North (FLN) New Development Areas (NDA), Phase 1 - Design and Construction				
ND1901	Kow Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works			C1	Kow Tung North New Development Area, Phase 1 Site Formation and Infrastructure Works
ND1902	Kow Tung North New Development Area, Phase 1: Roads and Drains between Kow Tung North New Development Area and Shek Wu Hui			C2	Kow Tung North New Development Area, Phase 1: Roads and Drains between Kow Tung North New Development Area and Shek Wu Hui
ND1903	Kow Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park			C3	Kow Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park
ND1094	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)			C4	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)
ND1905	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)			C5	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)
ND1906	Fanling North New Development Area, Phase 1: Rezononing of North District Temporary Wholesale Market for Agricultural Products			C6	Fanling North New Development Area, Phase 1: Rezononing of North District Temporary Wholesale Market for Agricultural Products
ND1997	Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works			C7	Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

2.3.2. Find the corresponding field and add the information to the bottom of the list. The field length and format as specified in the Guidelines should be followed.

2.3.3. The value of the field will be automatically updated in the corresponding field worksheet (green coloured tabs).

Figure App XI-2 –The Worksheets for Each Field

Field 1: Project		
Drop-down Menu	Abbreviation	Description
CC1314	CC1314	Agreement No. CE 13/2014 (CE) Development of Kwu Tung North (KTN) and Fanling North (FLN) New Development Areas (NDA), Phase 1 - Design and Construction
ND1901	ND1901	Kwu Tung North New Development Area, Phase 1: Site Formation and Infrastructure Works
ND1902	ND1902	Kwu Tung North New Development Area, Phase 1: Roads and Drains between Kwu Tung North New Development Area and Shek Wu Hui
ND1903	ND1903	Kwu Tung North and Fanling North New Development Areas, Phase 1: Development of Long Valley Nature Park
ND1094	ND1094	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shek Wu San Tsuen North to Lung Yeuk Tau)
ND1905	ND1905	Fanling North New Development Area, Phase 1: Fanling Bypass Eastern Section (Shung Him Tong to Kau Lung Hang)
ND1906	ND1906	Fanling North New Development Area, Phase 1: Reprovisioning of North District Temporary Wholesale Market for Agricultural Products
ND1097	ND1097	Fanling North New Development Area, Phase 1: Site Formation and Infrastructure Works

2.3.4. The updated codes can now be selected from the “Model Naming” worksheet (blue coloured tabs).

Figure App XI-3 - The “Model Naming” Worksheets

Project	Originator	Volume	System	Location	Sub-structure / Level	Discipline	Sub-discipline	Type	Characteristic	Required (I)	Required (II)	Required (III)	Model File Name	Length of File Name	Auto Description
6	CE1314	ACM	C4	HWS - Highway	UP - Underpass	RD - Road	PV - Pavement	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-UP-RD_PV-MS_N	31	Underpass Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
7	CE1314	ACM	C4	HWS - Highway	UP - Underpass	ST - Structural		MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-UP-ST-MS_N	28	Underpass Structural 3D Model File of C4 (New Works/ Proposed Works)
8	CE1314	ACM	C4	RD - Road	XX - Non-specific	RD - Road	PV - Pavement	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-XX-RD_PV-MS_N	30	Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
9	CE1314	ACM	C4	RD - Road	RD - Roundabout	RD - Road	PV - Pavement	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-XX-RD_PV-MS_N	30	Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
10	CE1314	ACM	C4	RD - Road	XX - Non-specific	RD - Road	PV - Pavement	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-XX-RD_PV-MS_N	30	Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
11	CE1314	ACM	C4	HWS - Highway	XX - Non-specific	LA - Landscape		MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-XX-LA-MS_N	28	Bridge Landscape 3D Model File of C4 (New Works/ Proposed Works)
12	CE1314	ACM	C4	GE -	XX - Non-specific	SL - Slope		MS - 3D Model	N - New Works				CE1314-ACM-C4-GE-XX-SL-MS_N	27	Slope 3D Model File of C4 (New Works/ Proposed Works)
13	CE1314	ACM	C4	GE -	XX - Non-specific	SL - Slope	SD - Surface	MS - 3D Model	N - New Works				CE1314-ACM-C4-GE-XX-SL_SD-MS_N	30	Slope (Surface Drainage) 3D Model File of C4 (New Works/ Proposed Works)
14	CE1314	ACM	C4	RD - Road	XX - Non-specific	RD - Road	CT - Cycle-Track	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-XX-RD_CT-MS_N	30	Road (Cycle Track) 3D Model File of C4 (New Works/ Proposed Works)
15	CE1314	ACM	C4	RD - Road	XX - Non-specific	RD - Road	LG - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-XX-RD_LG-MS_N	30	Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
16	CE1314	ACM	C4	HWS - Highway	BD - Bridge	RD - Road	LG - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-BD-RD_LG-MS_N	31	Bridge Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
17	CE1314	ACM	C4	SD - Road	MS - Ma Sis	SD - Road	PV - Pavement	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-MS-SD_PV-MS_N	31	Ma Sis Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
18	CE1314	ACM	C4	GE -	XX - Non-specific	SL - Slope	RW - Retaining	MS - 3D Model	N - New Works				CE1314-ACM-C4-GE-XX-SL_RW-MS_N	30	Slope (Retaining Wall) 3D Model File of C4 (New Works/ Proposed Works)
19	CE1314	ACM	C4	PS - Electrical	XX - Non-specific	PS - Electrical		MS - 3D Model	N - New Works				CE1314-ACM-C4-PS-XX-PS-MS_N	27	Electrical Power Supply 3D Model File of C4 (New Works/ Proposed Works)
20	CE1314	ACM	C4	HWS - Highway	BD - Bridge	RD - Road	DR - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-BD-RD_DR-MS_N	31	Bridge Road (Road Drainage) 3D Model File of C4 (New Works/ Proposed Works)
21	CE1314	ACM	C4	SD - Stormwater	XX - Non-specific	SD - Stormwater		MS - 3D Model	N - New Works				CE1314-ACM-C4-SD-XX-SD-MS_N	27	Stormwater Drainage 3D Model File of C4 (New Works/ Proposed Works)
22	CE1314	ACM	C4	WS - Water	XX - Non-specific	FW - Fresh Water		MS - 3D Model	N - New Works				CE1314-ACM-C4-WS-XX-FW-MS_N	27	Fresh Water System 3D Model File of C4 (New Works/ Proposed Works)
23	CE1314	ACM	C4	PS - Sewerage	XX - Non-specific	PS - Sewerage		MS - 3D Model	N - New Works				CE1314-ACM-C4-PS-XX-PS-MS_N	27	Sewerage 3D Model File of C4 (New Works/ Proposed Works)
24	CE1314	ACM	C4	WS - Water	XX - Non-specific	SW - Salt Water		MS - 3D Model	N - New Works				CE1314-ACM-C4-WS-XX-SW-MS_N	27	Salt Water System 3D Model File of C4 (New Works/ Proposed Works)
25	CE1314	ACM	C4	WS - Water	XX - Non-specific	IR - Irrigation		MS - 3D Model	N - New Works				CE1314-ACM-C4-WS-XX-IR-MS_N	27	Irrigation 3D Model File of C4 (New Works/ Proposed Works)
26	CE1314	ACM	C4	GS - Gas Supply	XX - Non-specific	GS - Gas Supply		MS - 3D Model	N - New Works				CE1314-ACM-C4-GS-XX-GS-MS_N	27	Gas Supply 3D Model File of C4 (New Works/ Proposed Works)
27	CE1314	ACM	C4	TC -	XX - Non-specific	TC -		MS - 3D Model	N - New Works				CE1314-ACM-C4-TC-XX-TC-MS_N	27	Telecommunication 3D Model File of C4 (New Works/ Proposed Works)
28	CE1314	ACM	C4	HWS - Highway	FBF6 - Footbridge	RD - Road	PV - Pavement	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-FBF6-RD_PV-MS_N	33	Footbridge F6 Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
29	CE1314	ACM	C4	BD - Building	PG - Playground	BS - Building	LG - Lighting	MS - 3D Model	N - New Works				CE1314-ACM-C4-BD-PG-BS_LG-MS_N	30	Playground Building Services (Lighting) 3D Model File of C4 (New Works/ Proposed Works)
30	CE1314	ACM	C4	HWS - Highway	UP - Underpass	BS - Building	HA - Heating	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-UP-BS_HA-MS_N	31	Underpass Building Services (Heating, ventilation, and air conditioning) 3D Model File of C4 (New Works/ Proposed Works)
31	CE1314	ACM	C4	HWS - Highway	UP - Underpass	EL - Electrical		MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-UP-EL-MS_N	28	Underpass Electrical 3D Model File of C4 (New Works/ Proposed Works)
32	CE1314	ACM	C4	HWS - Highway	UP - Underpass	FS - Fire Services		MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-UP-FS-MS_N	28	Underpass Fire Services 3D Model File of C4 (New Works/ Proposed Works)
33	CE1314	ACM	C4	HWS - Highway	UP - Underpass	RD - Road	LG - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-UP-RD_LG-MS_N	31	Underpass Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
34	CE1314	ACM	C4	HWS - Highway	BD - Bridge	ST - Structural	BR - Bridge	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-BD-ST-MS_N	31	Bridge Structural (Bridge) 3D Model File of C4 (New Works/ Proposed Works)
35	CE1314	ACM	C4	HWS - Highway	FBF4 - Footbridge	ST - Structural		MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-FBF4-ST-MS_N	30	Footbridge F4 Structural 3D Model File of C4 (New Works/ Proposed Works)
36	CE1314	ACM	C4	HWS - Highway	FBF4 - Footbridge	RD - Road	LG - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-FBF4-RD_LG-MS_N	33	Footbridge F4 Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
37	CE1314	ACM	C4	HWS - Highway	FBF6 - Footbridge	ST - Structural		MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-FBF6-ST-MS_N	30	Footbridge F6 Structural 3D Model File of C4 (New Works/ Proposed Works)
38	CE1314	ACM	C4	RD - Road	FBF6 - Footbridge	RD - Road	LG - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-FBF6-RD_LG-MS_N	32	Footbridge F6 Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
39	CE1314	ACM	C4	RD - Road	FBF6 - Footbridge	RD - Road	DR - Road	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-FBF6-RD_DR-MS_N	32	Footbridge F6 Road (Road Drainage) 3D Model File of C4 (New Works/ Proposed Works)
40	CE1314	ACM	C4	RD - Road	XX - Non-specific	RD - Road	NB - Noise	MS - 3D Model	N - New Works				CE1314-ACM-C4-RD-XX-RD_NB-MS_N	30	Road Noise Barrier 3D Model File of C4 (New Works/ Proposed Works)
41	CE1314	ACM	C4	HWS - Highway	XX - Non-specific	ST - Structural	NB - Noise	MS - 3D Model	N - New Works				CE1314-ACM-C4-HWS-XX-ST_NB-MS_N	31	Structural (Noise Barrier) 3D Model File of C4 (New Works/ Proposed Works)
42	CE1314	ACM	C4	SD - Stormwater	SMPS -	WB - Whole	AK -	MS - 3D Model	N - New Works				CE1314-ACM-C4-SD-SMPS-WB-AR-MS_N	32	Stormwater Pumping Station (Whole Building) Architectural 3D Model File of C4 (New Works/ Proposed Works)
43	CE1314	ACM	C4	SD - Stormwater	SMPS -	WB - Whole	ST - Structural	MS - 3D Model	N - New Works				CE1314-ACM-C4-SD-SMPS-WB-ST-MS_N	32	Stormwater Pumping Station (Whole Building) Structural 3D Model File of C4 (New Works/ Proposed Works)

- 2.4. To automatically generate a list of model names for the model registers:
- 2.4.1. Go to the “Model Naming” worksheet.
- 2.4.2. Use the drop-down list of each field (from Column A to Column K) to select the correct code. Required fields must not be omitted. The cells with project-specific code selected

would be automatically highlighted with orange colour while that with common code selected would be automatically highlighted with blue colour.

Figure App XI-4 – Example of Drop-Down List for Selecting Codes

Model File Naming										
1	2	3.1	3.2	4.1	4.2	5.1	5.2	6.1	6.2	7
Project	Originator	Volume	System	Location	Sub-location / Level	Discipline	Sub-discipline	Type	Characteristic	Sequential Number
Required (1-8)	Required (3)	Required (1-3)	Optional (1-3)	Required (1-4)	Optional (1-2)	Required (1-2)	Optional (1-2)	Required (1-2)	Optional (1)	Optional (3)
CE1314	ACM	C4	HWS - Highway	UP - Underpass		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	HWS - Highway	UP - Underpass		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	RD - Road	XX - Non-specific		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	RD - Road	RO -		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	RD - Road	XX - Non-specific		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	HWS - Highway	BG - Bridge		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	GE -	XX - Non-specific		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	GE -	XX - Non-specific		SL - Slope	SD - Surface	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	RD - Road	XX - Non-specific		RD - Road	CT - Cycle Track	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	RD - Road	XX - Non-specific		RD - Road	LG - Road	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	HWS - Highway	BG - Bridge		RD - Road	LG - Road	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	RD - Road	MSR - Ma Sik		RD - Road	PV - Pavement	M3 - 3D Model	N - New Works/	
CE1314	ACM	C4	GE -	XX - Non-specific		SL - Slope	RW - Retaining	M3 - 3D Model	N - New Works/	

2.4.3. After selecting the codes for all required fields, the model file name, length of file name and description (from Column W to Column Y) would be generated automatically.

Figure App XI-5 - Example of Auto-Generated Information for Model Files

Model File Naming		
Model File Name	Length of File Name	Auto Description
CE1314-ACM-C4_HWS-UP-RD_PV-M3_N	31	Underpass Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_HWS-UP-ST-M3_N	28	Underpass Structural 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_RD-XX-RD_PV-M3_N	30	Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_RD-RO-RD_PV-M3_N	30	Roundabout Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_RD-XX-RD_PV-M3_N	30	Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_HWS-BG-LA-M3_N	28	Bridge Landscape 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_GE-XX-SL-M3_N	27	Slope 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_GE-XX-SL_SD-M3_N	30	Slope (Surface Drainage) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_RD-XX-RD_CT-M3_N	30	Road (Cycle Track) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_RD-XX-RD_LG-M3_N	30	Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_HWS-BG-RD_LG-M3_N	31	Bridge Road (Road Lighting) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_RD-MSR-RD_PV-M3_N	31	Ma Sik Road Road (Pavement) 3D Model File of C4 (New Works/ Proposed Works)
CE1314-ACM-C4_GE-XX-SL_RW-M3_N	30	Slope (Retaining Wall) 3D Model File of C4 (New Works/ Proposed Works)

2.5. The limitations of the sample spreadsheet for BIM file name validation should be noted. To keep this spreadsheet’s file size manageable, the numbers of rows for the “Model Naming” worksheet and the worksheets for each field are capped at 10,000.

