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Ashghal Building Information Modelling Standards (ABIMS)

File Naming Convention for BIM & CAD

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Disclaimer

This document is intended to be neither static nor all-inclusive and thus will be updated and enhanced as appropriate. Hardcopies of this document are considered uncontrolled. Please contact the Engineering Services Department of Ashghal for the latest version.

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PURPOSE OF THE DOCUMENT

The purpose of this document is to specify the file naming convention for BIM & CAD in all Ashghal projects across departments, following international best practice and standards, like ISO 19650.

Applying this naming convention enables all project stakeholders to identify data quickly, accurately and without ambiguity. Originator, location, discipline, type, and sequential number are of paramount importance when identifying the content of any project file.

This document is 'live' and will be updated and enhanced as appropriate to suit the business, internally as well as externally within Ashghal's supply chain.

Examples of possible changes are, but not limited to:

- Additions/ omissions to discipline codes
- Additions or amendments to file types

Please contact the Engineering Services Department of Ashghal for the latest version.

1 NAMING CONVENTION

The File Naming Convention is comprising **seven fields** as per table below, separated by a delimiter (*hyphen-minus*). All fields shall be used with the **exact number** of characters. In cases where a field is not applicable, 'XX' shall be used in the place of that field and contain the same number of characters.

Any file name shall have a total of 29 characters (23 alphanumerical + 6 hyphen-minus).

	Project (Contract Number)	**Originator**	**Functional** (Package / Volume)	**Spatial** (Location / Level)	**Form**	**Discipline**	**Number**
Field No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Format	**ANANANAN**	**AAA**	**AN**	**AN**	**AN**	**AA**	**NNNN**
Characters	**(8)**	**(3)**	**(2)**	**(2)**	**(2)**	**(2)**	**(4)**

A = Letter / N = Number / AN = Alphanumerical
Please note that Alphanumerical can be any combination AN, NA, AA, or NN.

Examples:

(a) P2019033-STA-P1-XX-M3-HW-0001
(b) P2021098-WSP-T3-03-DR-SK-2001
} Contracted project (Design Consultant)

(c) C2020026-HBK-XX-B2-DR-AC-4120
(d) C2021099-CCC-ZZ-XX-MR-ST-0105
} Contracted project (Contractor)

(e) DDNA1234-PWA-P2-XX-DR-HW-0100 In-house Design

The required fields are defined as per table below. Details and standard codes are listed in the next section.

1	Project	This field contains the unique project code, applicable for all type of projects from in-house design to contracted projects.
2	Originator	This field represents the originator of the file, e.g. the Consultant, Contractor, or Ashghal (PWA).
3	Functional Breakdown	This field refers to a specific package or volume within the Project, which the file is referencing.
4	Spatial Breakdown	This refers to the location or level of the asset for which the file is created.
5	Form	This field indicates the form of information contained in the file.
6	Discipline	This field refers to the discipline the document has been created for.
7	Number	This field contains a sequential number to further indicate the content.

2 FIELD CODIFICATION

2.1 Field 1 – Project

2.1.1 Contracted Projects

The project code for projects under a contract shall be equivalent to their contract number. For uncertainty on this number, please coordinate with Ashghal's Project Manager or the Engineering Services Department. The field shall be eight (8) characters in length.

Examples:

(a) P2021106 for a design project with contract number 'P 2021/106'
(b) C2022003 for a construction project with contract number 'C 2022/3'

2.1.2 In-house Projects

The project code for in-house design projects shall identify the Department (DD), Project Area (NA, WA, SA, DC) and include a unique 4-digit sequence number.

The field shall be eight (8) characters in length.

Examples:

(a) DDNA0001 – Designs Department, Roads & Drainage, Northern Area
(b) DDWA0002 – Designs Department, Roads & Drainage, Western Area
(c) DDSA0003 – Designs Department, Roads & Drainage, Southern Area
(d) DDDC1234 – Designs Department, Roads & Drainage, Doha City Area
(e) DDXX0001 – Designs Department, Architectural (Buildings), All Areas / Not applicable

2.2 Field 2 – Originator

The originator code should reflect the Consultant or Contractor. To obtain this code please refer to the projects document control in coordination with Ashghal's project manager.

In-house design documents shall have the originator code "**PWA**".

The field shall be three (3) characters in length.

2.3 Field 3 – Functional Breakdown

A unique identifier for the functional breakdown of a project should be defined and agreed within the project information standard (e.g. BIM Execution Plan). Every information container should document e.g. a project package or building volume.

Examples:

Roads & Drainage projects (examples only):

(a) P1, P2, P3, etc. – for project packages
(b) 1A, 1B, 1C, 2A, 2B, 2C, etc. – for sections A, B, C within packages 1 and 2

Buildings projects (examples only):

(a) AB, SH, CP, etc. – Administration Building, Sports Hall, Car Park
(b) T1, T2, etc. – Tower 1, 2
(c) S1, S2, S3, etc. – Section 1, 2, 3

The standard codes in below table shall apply. The field shall be two (2) characters in length.

Volume	Code
Multiple	**ZZ**
Not Applicable	**XX**

Table 1: Functional Breakdown

2.4 Field 4 – Spatial Breakdown

A unique identifier for each spatial subdivision of the project shall be defined by the project team. The standard codes in below table shall apply, and additional codes to be added and agreed in the project information standard (e.g. BIM Execution Plan).

For Roads & Drainage projects it can refer e.g. to any Location within a package, if applicable.

For Buildings projects it shall refer to the Level, if applicable.

The standard codes in below table shall apply. The field shall be two (2) characters in length.

Spatial	Code
Multiple	**ZZ**
Not Applicable	**XX**
Ground Level	**00**
Level 01	**01**
Level 02, etc.	**02**
Mezzanine Level 01	**M1**
Mezzanine Level 02, etc.	**M2**
Basement Level 01	**B1**
Basement Level 02, etc.	**B2**

Table 2: Spatial Breakdown

2.5 Field 5 – Form

A unique identifier for the form of information contained in the file.

The field shall be two (2) characters in length. The following standard codes shall apply.

Form	Code	Description
Animation File	**AF**	A file that gets exported from VDC applications showing a specific topic, e.g. the proposed construction sequence.
Bill of Quantities	**BQ**	Bill of Quantities is one or more lists that describe the asset in terms of quantities.
Calculations	**CA**	The output of calculation software such as Tekla, ETABS or DIALux.
Combined Model	**CM**	Combining multiple discipline models (e.g. the combined model for the complete project in NWF or NWD format).
Clash Rendition	**CR**	Model rendition with multiple disciplines for clash detection purposes.
Database	**DB**	A structured file holding several tables of information that depict the model.
Drawing File	**DR**	2D drawing file extracted from the model.
Geo Database	**GD**	Database containing geospatial information (e.g. GDB file format)
2D Model	**M2**	Drawing production file to produce 2D sheets, using BIM methodologies (e.g. Revit sheet file).
3D Model	**M3**	3D model file (e.g. DWG, RVT, NWC, IFC).
Model Rendition	**MR**	Model rendition file for specific BIM uses or software tools (e.g. engineering analysis)
Point Cloud File	**PC**	File containing large amount of 3D points captured by laser scan technology.
Room Data Sheet	**RD**	A list generated from a model containing information specific to architectural rooms.
Schedule	**SH**	A list generated from a model containing information, such as count, volume, size, etc. about specific model elements.
Visualisation	**VS**	A visualisation (e.g. rendered image, video animation) of the model for the purpose of demonstrating specific aspects of a project.

Table 3: Form

2.6 Field 6 – Discipline

The field shall be two (2) characters in length.

The following standard codes shall apply.

Discipline	Code	Buildings	Infrastructure
Multiple	**ZZ**	x	x
Acoustic	**AC**	x	
Architectural	**AR**	x	x
Audio Visual	**AV**	x	
Building Engineering	**BE**	x	
Building Permit	**BP**		x
Chilled Water	**CW**		x
Civils	**CI**	x	
Combined Services	**CS**	x	
Doha Surveillance Security System	**DS**		x
Earthworks	**EW**		x
Electrical / Electricity	**EL**	x	x
Environmental	**EN**	x	x
Façade and Envelope	**FA**	x	
Fencing	**FE**		x
Fire Protection	**FP**	x	
Fire Water	**FW**		x
Foul Sewer	**FS**		x
Furniture	**FU**	x	
General	**GE**		x
Geotechnical	**GT**		x
Grading	**GR**		x
Health & Safety	**HS**	x	
Highways	**HW**		x
HVAC	**HV**	x	
Information Communication Technology	**IT**	x	
Infrastructure	**IF**	x	
Intelligent Traffic Systems	**IS**		x
Interior Design	**ID**	x	
Land Expropriation and Encroachment Plan	**LP**		x
Landscape	**LS**	x	x
Lifts and Escalators	**LE**	x	
Lighting	**LT**	x	
Mechanical	**ME**	x	x
Oil & Gas	**OG**		x
Plumbing	**PL**	x	

Discipline	Code	Buildings	Infrastructure
Potable Water	**PW**		x
Public Health	**PH**	x	
Road Restraints	**RR**		x
Sanitary	**SA**	x	
Security	**SE**	x	
Signage	**SN**	x	
Site Clearance	**SC**		x
Site Facilities & Temporarily Works	**SF**	x	
Sketch Drawing[1]	**SK**	x	x
Strategic Trunk Sewer	**SS**		x
Street Lighting	**SL**		x
Structural	**ST**	x	x
Surface Water	**SW**		x
Survey	**SU**	x	
Telecommunications	**TE**		x
Traffic & Safety	**TR**		x
Treated Sewage Effluent	**TS**		x
Utility Services Corridor	**UC**		x
Vertical Transportation	**VT**	x	

Table 4: Discipline

2.7 Field 7 – Number

A number should be assigned to each information container when it is one of a series.

The field shall be four (4) characters in length.

Form	Number
All files	**0001 - 9999**
3D Models (M3)	**0001 - 0500**
2D Models (M2)	**0501 - 0999**
2D Drawings (DR)	As per PWA CAD Standards Manual (App. C)

Table 5: Number

[1] ***Note:*** *Sketch Drawings (SK) may be used to present a general design concept or may be included with instruction for clarification in correspondence.*

3 METADATA

Further information should be included in all model/ drawing submissions through Ashghal's Document Management Systems using metadata, which is not included within the naming convention. Some examples of the required metadata are:

- Revision
- Format
- Publisher
- Document Title
- Date of Issue
- Project Stage
- Suitability Code
- WBS Code
- PMO Code
- Reference Project ID (e.g. from Design stage)

For any further clarifications related to metadata, please refer to any guidance documents issued by the project management related to electronic data submissions to Ashghal.

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