

**Layer Naming for  
Building Plan Area and Compartmentation Calculation**

**Scope**

This Practice Note serves to promulgate and standardize the format of layer names of CAD drawings for building plan area and compartmentation calculation.

**Applicability**

2. This Practice Note shall be applicable when CAD drawings for calculating building area and compartmentation are submitted to Architectural Services Department, Buildings Department or Lands Department.

**Background**

3. The use of CAD drawings in calculating and checking the building area and compartmentation is widely adopted in the architectural design and construction industries. Some Government Departments have developed plug-in programs in CAD software for automating the calculation and checking of building areas and compartmentation. Buildings Department has specified the format of layer naming of CAD drawings for area calculation in its Practice Note for Authorized Persons and Registered Engineers (PNAP) No. 272. To synchronize different practices and to ease the development of plug-in programs in CAD software, the CSWP Working Group considers that layer naming of CAD drawings for building area and compartmentation calculation has to be standardized within the framework of CSWP.

**Effective Date**

4. This Practice Note takes immediate effect.

**Effect on Existing Practice Notes**

5. This Practice Note has no effect on other CSWP Practice Notes.

**Coding**

6. The CSWP element codes “082”, “083” and “086” shall be used for calculating the building area and compartmentation. The layer names of CAD drawing for calculating building area and compartmentation shall conform with the conventions stipulated in Appendix A.

**Other Information**

7. In case there are conflicting requirements of this Practice Note and the other parts of the CSWP, the latter should prevail.

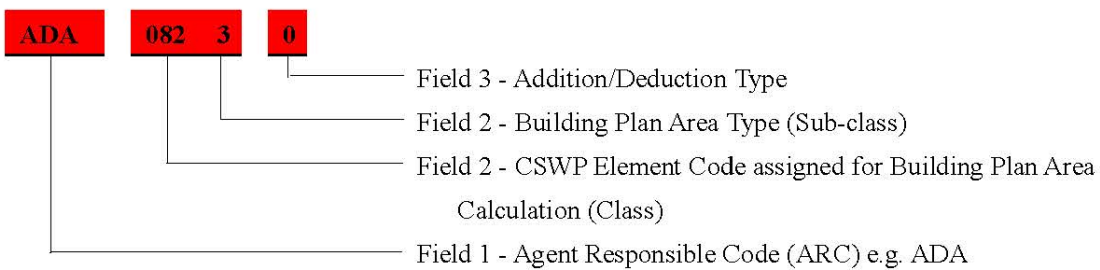
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Chairperson of CSWPWG

First issued : 5 September 2007  
This Revision : 1.01.00

## Layer Naming Convention for Building Plan Area and Compartmentation Calculation

### 1. Building Plan Area Calculation

#### 1.1 Layer Naming Convention

Layer Naming Convention			
 <p>Field 3 - Addition/Deduction Type</p> <p>Field 2 - Building Plan Area Type (Sub-class)</p> <p>Field 2 - CSWP Element Code assigned for Building Plan Area Calculation (Class)</p> <p>Field 1 - Agent Responsible Code (ARC) e.g. ADA</p>			
Field	Description	Length/Type	Coding
1	Agent Responsible Code	3 (alphanumeric)	See <a href="http://www.etwb.gov.hk/cswp">www.etwb.gov.hk/cswp</a>
2	CSWP Element Code assigned for Building Plan Area Calculation (Class)	3 (numeric)	a). 082 for ArchSD, BD & PlanD's area calculation, b). 086 for Lands D's area calculation
	Building Plan Area Type (Sub-class)	1 (numeric)	See section 1.1.1
3	Addition/Deduction Type	1 (alphanumeric)	See section 1.1.2

##### 1.1.1 Building Plan Area Type

Code	Building Plan Area Type
1	Site Coverage (SC) – Non-Domestic
2	Site Coverage (SC) –Domestic
3	Construction Floor Area (CFA) *
4	Gross Floor Area (GFA) – Non-Domestic
5	Gross Floor Area (GFA) – Domestic
6	Net Floor Area (NFA) *
7	Net Operating Floor Area (NOFA)
8	Usable Floor Space (UFS)
9	Usable Floor Area (UFA)
0	Open Space (OS)
–	Elements common to all area type

- \* Note : For Arch SD Government projects only

### 1.1.2 Addition/Deduction Type

Code	Addition/Deduction Type	Remarks
0	Base Area	
1	Base Area Deduction	
2	Non-Accountable Area (Grouped)	
3	Exemption Area (Grouped)	For Non-Accountable area to be deducted from the outline of area layers under the ArchSD requirement.
4	Deduction Area (PNAP272)	For Exemption area to be deducted from the outline of area layers under the ArchSD requirement, for GFA Calculation only).
5	Deduction Area (PNAP272)	For area to be deducted from the outline of area layers under the Lands Department requirement.
6	Deduction Area (PNAP272)	For area to be deducted from the outline of area layers under the Planning Department requirement.
7	<i>Reserved for Program</i>	
8	Dimension	
9	Hatching	
A-Z	Non-Accountable Area or Exemption Area (In Detail)	<p><b><u>Submission for ArchSD :-</u></b></p> <p>a). A-M : Non-Accountable Area (In Detail) for ArchSD submission.</p> <p>b). N-T : Exemption Area (In Detail) for ArchSD's GFA Calculation only</p> <p>c). U : Exemption for better Lift Service PNAP 207 for ArchSD's GFA Calculation only</p> <p>d). V-Z : Reserved for future use.</p>

Examples of CSWP layer names for BD's non-domestic building area calculation corresponding to the respective layer names of PNAP 272 are given in Section 1.1.3.

Examples of CSWP layer names for Lands D's area calculation corresponding to the respective description are given in Section 1.1.4.

**1.1.3 Examples of CSWP Layer Names for BD's Non-domestic Building Area Calculation(ARC = "ADA")**

<b>CSWP Layer Name</b>	<b>Description</b>	<b>Remarks</b>
<b>ADA08240</b>	Non-domestic area Layer	For outline of non-domestic GFA layer. (same layer as ADA08640)
<b>ADA08244</b>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of area layers under the Buildings Ordinance.
<b>ADA08246</b>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of area layers under Planning Department requirements.
<b>ADA08250</b>	Domestic area Layer	For outline of domestic GFA layer. (same layer as ADA08650)
<b>ADA08254</b>	Domestic area to be deducted from area calculations	For domestic area to be deducted from the outline of Domestic area layers under the Buildings Ordinance.
<b>ADA08256</b>	Domestic area to be deducted from area calculations	For domestic area to be deducted from the outline of area layers under Planning Department requirements.
<b>ADA082_8</b>	Dimension layers	(same layer as ADA086_8)
<b>ADA08210</b>	Area for non-domestic site coverage calculations	For outline of non-domestic site coverage layer. (same layer as ADA08610)
<b>ADA08214</b>	Non-domestic site coverage deducted from calculations	Deduction complying with requirements of Buildings Department.
<b>ADA08216</b>	Non-domestic site coverage deducted from calculations	Deduction complying with requirements of Planning Department.
<b>ADA08220</b>	Area for domestic site coverage calculations	For outline of domestic site coverage layer. (same layer as ADA08620)
<b>ADA08224</b>	Domestic site coverage deducted from calculations	Deduction complying with requirements of Buildings Department.
<b>ADA08226</b>	Domestic site coverage deducted from calculations	Deduction complying with requirements of Planning Department.
<b>ADA08200</b>	Area for open space	For outline of open space layer. (same

	calculations	layer as ADA08600)
<b>ADA08204</b>	Area to be deducted for open space calculations	For area to be deducted from outline of the open space. (same layer as ADA08605)
<b>ADA08290</b>	Area for usable floor area calculations	For outline of usable floor area layer. (same layer as ADA08690)
<b>ADA08294</b>	Area to be deducted for the usable floor area calculations	For area to be deducted from outline of the usable floor area. (same layer as ADA08695)

#### 1.1.4 Examples of CSWP Layer Names for Lands D's Area Calculation (ARC = "ADA")

##### 1.1.4.1 Non-Domestic SC calculations

<b>CSWP Layer Name</b>	<b>Description</b>
<b>ADA08610</b>	Area for SC calculations. (same layer as ADA08210)
<b>ADA08615</b>	Area to be deducted from SC calculations.
<b>ADA0861A</b>	Green features under JPN Nos. 1 & 2.
<b>ADA0861B</b>	Curtain walling system
<b>ADA0861C</b>	Refuse chambers, E&M provisions, plant rooms for A/C or heating system, lift shaft area allowed under PNAP 207, etc.
<b>ADA0861D</b>	Private car parking spaces, loading and unloading spaces
<b>ADA0861E-Z</b>	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

##### 1.1.4.2 Domestic SC calculations

<b>CSWP Layer Name</b>	<b>Description</b>
<b>ADA08620</b>	Area for SC calculations. (same layer as ADA08220)
<b>ADA08625</b>	Area to be deducted from SC calculations.
<b>ADA0862A</b>	Green features under JPN Nos. 1 & 2.
<b>ADA0862B</b>	Curtain walling system
<b>ADA0862C</b>	Caretaker's/watchmen's office
<b>ADA0862D</b>	Caretaker's/watchmen's quarters
<b>ADA0862E</b>	Recreational facilities
<b>ADA0862F</b>	Owners' corporation / owners' committee office
<b>ADA0862G</b>	Refuse chambers, E&M provisions, plant rooms for A/C or heating system, lift shaft area allowed under PNAP 207, etc.
<b>ADA0862H</b>	Private car parking spaces, loading and unloading spaces
<b>ADA0862J-Z</b>	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

#### 1.1.4.3 Non-Domestic GFA calculations

<b>CSWP Layer Name</b>	<b>Description</b>
ADA08640	Area for GFA calculations. (same layer as ADA08240)
ADA08645	Area to be deducted from GFA calculations.
ADA0864A	Green features under JPN Nos. 1 & 2.
ADA0864B	Curtain walling system
ADA0864C	Refuse chambers, E&M provisions, plant rooms for A/C or heating system, lift shaft area allowed under PNAP 207, etc.
ADA0864D	Private car parking spaces, loading and unloading spaces
ADA0864E	Covered walkways
ADA0864F	Mail Rooms / Nest Letter Boxes (only for commercial and industrial building)
ADA0864G	Residential Care Homes for the Elderly
ADA0864H	Government Accommodation
ADA0864J	Public transport terminus
ADA0864K	Hotel back of house facilities
ADA0864L-Z	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

#### 1.1.4.4 Domestic GFA calculations

<b>CSWP Layer Name</b>	<b>Description</b>
ADA08650	Area for GFA calculations. (same layer as ADA08250)
ADA08655	Area to be deducted from GFA calculations.
ADA0865A	Green features under JPN Nos. 1 & 2.
ADA0865B	Curtain walling system
ADA0865C	Bay windows
ADA0865D	Caretaker's/watchmen's office
ADA0865E	Caretaker's/watchmen's quarters
ADA0865F	Recreational facilities
ADA0865G	Owners' corporation / owners' committee office
ADA0865H	Refuse chambers, E&M provisions, plant rooms for A/C or heating system, lift shaft area allowed under PNAP 207, etc.
ADA0865J	Private car parking spaces, loading and unloading spaces
ADA0865K	Covered walkways
ADA0865L	Logistic service room (only for residential building)
ADA0865M	Residential Care Homes for the Elderly
ADA0865N-Z	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

#### 1.1.4.5 NOFA calculations

<b>CSWP Layer Name</b>	<b>Description</b>
ADA08670	Area for NOFA calculations.
ADA08675	Area to be deducted from NOFA calculations.
ADA0867A-Z	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

#### 1.1.4.6 UFA calculations

<b>CSWP Layer Name</b>	<b>Description</b>
ADA08690	Area for UFA calculations. (same layer as ADA08290)
ADA08695	Area to be deducted from UFA calculations. (same layer as ADA08294)
ADA0869A	Active Recreational Facilities under LAO PN 4/2000.
ADA0869B	Passive Recreational Facilities under LAO PN 4/2000.
ADA0869C-Z	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

#### 1.1.4.7 Open Space calculations

<b>CSWP Layer Name</b>	<b>Description</b>
ADA08600	Area for Open Space calculations. (same layer as ADA08200)
ADA08605	Area to be deducted from Open Space calculations. (same layer as ADA08204)
ADA0860A-Z	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

#### 1.1.4.8 Dimension

<b>CSWP Layer Name</b>	<b>Description</b>
ADA086_8	Dimension layers.

## 2.0 Compartmentation Calculation

### 2.1 Layer Naming Convention

<b>Layer Naming Convention</b>			
<div style="display: flex; align-items: center; gap: 10px;"> <div style="border: 1px solid black; background-color: red; color: white; padding: 2px 5px;">ADA</div> <div style="border: 1px solid black; background-color: red; color: white; padding: 2px 5px;">083</div> <div style="border: 1px solid black; background-color: red; color: white; padding: 2px 5px;">0</div> <div style="border: 1px solid black; background-color: red; color: white; padding: 2px 5px;">A</div> </div> <div style="margin-top: 10px;"> <div style="display: flex; align-items: center; gap: 10px;"> <div style="border-left: 1px solid black; height: 100px; margin-left: 10px;"></div> <div> <p>Field 3 – Compartment Name</p> <p>Field 2 – Program Reserved Number (Sub-class)</p> <p>Field 2 - CSWP Element Code assigned for Compartmentation Calculation (Class)</p> <p>Field 1 – Agent Responsible Code (ARC) e.g. ADA</p> </div> </div> </div>			
Field	Description	Length/Type	Coding
1	Agent Responsible Code	3 (alphanumeric)	See <a href="http://www.etwb.gov.hk/cswp">www.etwb.gov.hk/cswp</a>
2	CSWP Element Code Reserved for Compartmentation Calculation (Class)	3 (numeric)	083
	Program Reserved Number (Sub-class)	1 (numeric)	See section 2.1.1
3	Compartment Name	1 (alphanumeric)	See section 2.1.2

### 2.1.1 Program Reserved Number

Program Reserved Field	Code
Indicate Compartment Layer	0
Indicate Hatching Layer (Generated by Program)	9
<i>Reserved for Program</i>	1-8

### 2.1.2 Compartment Name

Compartment Name	Code
Compartment A – R	A - R
Special Compartment S - X	S – X
<i>Reserved for Program</i>	0-9