

Implementation of Tools for Facilitating Electronic Checking Process on Building Plans to the Lands Department and the Buildings Department

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presented by



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Founder

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Project Key Objectives



0.0 Project Background

- Currently, both LandsD and BD accept electronic GBP Submission by CAD
- Practice Notes are developed to govern e-submission CAD standard.
- LandsD also developed tools for checking of area calculation.



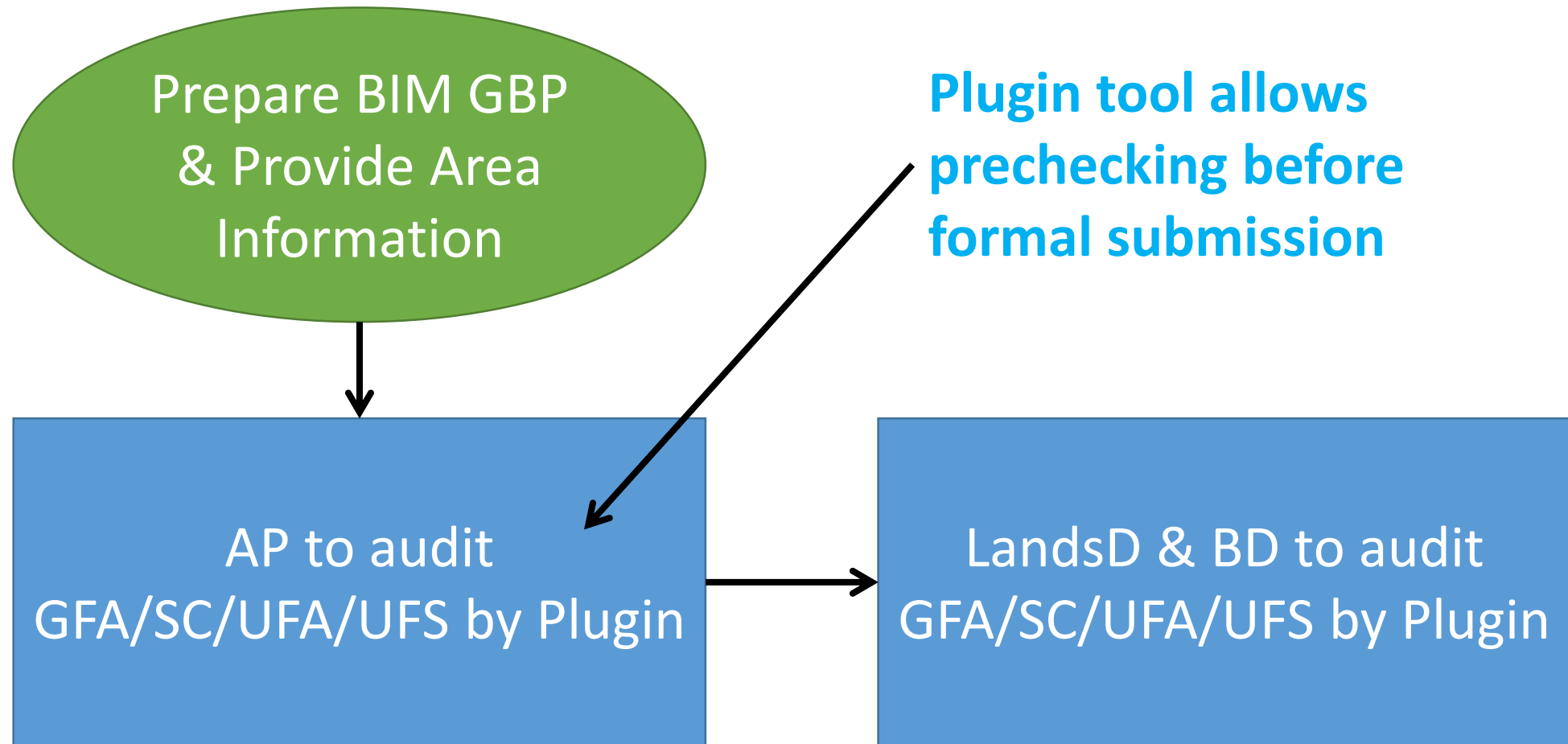
1.0 Project Key Contents

- This project is to develop **Practice Notes** and **Tools** to for **BIM e-submission**.

1.1 Project Key Objectives

- To **facilitate GBP BIM Submission** to LandsD & BD
- To **streamline** GBP Submission process by **aligning LandsD & BD requirements on area calculation**
- To develop **Plug-in Tools** in supporting electronic checking and verification process on gross floor area (**GFA**), site coverage (**SC**), usable floor area (**UFA**) and usable floor space (**UFS**) calculations through electronic submission on two common BIM software – Revit & ArchiCAD.

1.2 Streamline Submission Process by Pre-checking



2.0 Purpose of Consultation

- To explain the aligned area information requirements for General Building Plan (GBP) BIM electronic submission
- To demonstrate how the requirements can be fulfilled
- To seek comments on BIM model requirements / level of information required for GBP preparation

2.1 Why do we need an aligned area information requirements

- Currently AP is required to prepare **2 sets of area calculation diagrams** in BIM drawing, one for LandsD and another one for BD, addressing the area calculation requirements as stated by LandsD LAO PN No.3/2018 and BD PNAP ADM-19.
- The common methodology is to develop **one set of area calculation** requirements both acceptable by LandsD and BD for electronic submission. This facilitates Authorized Persons to develop one single set of calculation diagrams to fulfill both LandsD and BD requirements.

improvement



Current CAD Practice Notes

3.0 Current CAD Practice Notes

- **LAO PN No.3/2018 – LandsD** requirements remains unchanged in principle.
- **BD PNAP ADM-19 Appendix F** – BD requirements need more elaboration to facilitate electronic checking & at the same time reflect current area calculation statutory requirements for BIM GBP submission.

3.1 Current CAD Practice Notes: LAO PN No. 3/2018

- LandsD requirements remains unchanged**

Non-Domestic GFA calculations

<u>Layer Name</u>	<u>Description</u>
ADA08640	Area for GFA calculations
ADA08645	Area to be deducted from GFA calculations
ADA0864A	Green features under Joint Practice Note 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 APP-89, 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)

Domestic GFA calculations

<u>Layer Name</u>	<u>Description</u>
ADA08650	Area for GFA calculations.
ADA08655	Area to be deducted from GFA calculations.
ADA0865A	Green features under Joint Practice Note 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 under LAO PN 4/2000(B)
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 APP-89, 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
ADA0865P	Area to be deducted from Recreational facilities
ADA0865N-Z	Miscellaneous Deduction (reserve layers to cater for future needs. I and O not to be used)

3.2 Current CAD Practice Notes: PNAP ADM-19

- **BD requirements need more elaboration** to facilitate BD electronic checking tool

Diagram D: Layer Names generated from the above rules for this PNAP

Code	Description	Remarks
<i>ARC08240</i>	Non-domestic area Layer	For outline of non-domestic GFA layer.
<i>ARC08244</i>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of non-domestic area layers under the Buildings Ordinance.
<i>ARC08246</i>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of non-domestic area layers under the Planning Department requirements.
<i>ARC08250</i>	Domestic area Layer	For outline of domestic GFA layer.
<i>ARC08254</i>	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.

A dark, atmospheric scene featuring a checkered floor that recedes into the distance. On the right, a wall with a similar checkered pattern is visible, illuminated by a bright, glowing light source that creates a strong lens flare and casts a long, soft shadow across the wall and floor. The overall mood is mysterious and dimly lit.

Example of area information required by BD

4.0 BD requirements for GFA Concession under PNAP APP-151

List of GFA Concessions

		Practice Notes	Features subject to compliance with the pre-requisites in para. 6 & 7 of PNAP APP-151	Features Subject to the Overall Cap of 10% in para.4 of PNAP APP-151
Disregarded GFA under Regulation 23(3)(b) of the Building (Planning) Regulations (B(P)R)				
1.	Carpark and loading/unloading area excluding public transport terminus	PNAP APP-2 & APP-111		
2.	Plant rooms and similar services			
2.1	Mandatory feature or essential plant room, area of which is limited by respective PNAP or regulation, such as lift machine room, TBE room, refuse storage chamber, etc. ⁽¹⁾	PNAP APP-35 & APP-84		
2.2	Mandatory feature or essential plant room, areas of which is NOT limited by any PNAP or regulation, such as room occupied solely by FSI and equipment, meter room, transformer room, potable and flushing water tank, etc. ⁽²⁾	PNAP APP-2 & APP-42		
2.3	Non-mandatory or non-essential plant room, such as A/C plant room, AHU room, etc. ⁽³⁾	PNAP APP-2 & APP-42	✓	✓
Disregarded GFA under Regulation 23A(3) of the B(P)R				
3.	Area for picking up and setting down persons departing from or arriving at the hotel by vehicle	PNAP APP-40		
4.	Supporting facilities for a hotel	PNAP APP-40		
Green Features under Joint Practice Notes (JPNs)				
5.	Balcony for residential buildings	JPN1	✓	✓
6.	Wider common corridor and lift lobby	JPN1	✓	✓
7.	Communal sky garden	JPN1 & 2 PNAP APP-122	✓	
8.	Communal podium garden for non-residential buildings	JPN1	✓	
9.	Acoustic fin	JPN1	✓	
10.	Wing wall, wind catcher and funnel	JPN1	✓	
11.	Non-structural prefabricated external wall	JPN2	✓	✓
12.	Utility platform	JPN2	✓	✓
13.	Noise barrier	JPN2	✓	
Amenity Features				
14.	Caretakers' quarters, counter, office, store, guard room and lavatory for watchman and management staff and owners' corporation office	PNAP APP-42	✓	✓

15.	Residential recreational facilities including void, plant room, swimming pool filtration plant room, covered walkway, etc. serving solely the recreational facilities	PNAP APP-2, APP-42 & APP-104	✓	✓
16.	Covered landscaped and play area	PNAP APP-42	✓	
17.	Horizontal screen/covered walkway and trellis	PNAP APP-42	✓	✓ ⁽¹⁰⁾
18.	Larger lift shaft	PNAP APP-89	✓	✓
19.	Chimney shaft	PNAP APP-2	✓	✓
20.	Other non-mandatory or non-essential plant room, such as boiler room, SMATV room ⁽⁴⁾	PNAP APP-2	✓	✓
21.	Pipe duct, air duct for mandatory feature or essential plant room ⁽⁵⁾	PNAP APP-2 & APP-93		
22.	Pipe duct, air duct for non-mandatory or non-essential plant room ⁽⁶⁾	PNAP APP-2	✓	✓
23.	Plant room, pipe duct, air duct for environmentally friendly system and feature ⁽⁷⁾	PNAP APP-2	✓	
24.	High headroom and void in front of cinema, shopping arcade etc. in non-domestic development ⁽⁸⁾	PNAP APP-2	✓	
25.	Void over main common entrance (prestige entrance) in non-domestic development	PNAP APP-2 & APP-42	✓	✓
26.	Void in duplex domestic flat and house	PNAP APP-2	✓	✓
27.	Sunshade and reflector	PNAP APP-19, APP-67 & APP-156		
28.	Minor projection such as A/C box, A/C platform ⁽⁹⁾ , window cill and projecting window	PNAP APP-19 & APP-42		
29.	Other projection such as A/C box and platform not covered in paragraph 3(b) and (c) of PNAP APP-19	PNAP APP-19	✓	✓
Other Items				
30.	Refuge floor including refuge floor cum sky garden	PNAP APP-2 & APP-122		
31.	Covered area under large projecting/overhanging feature	PNAP APP-19		
32.	Public transport terminus (PTT)	PNAP APP-2		
33.	Party structure and common staircase	PNAP ADM-2		
34.	Horizontal area of staircase, lift shaft and vertical duct solely serving floor accepted as not being accountable for GFA	PNAP APP-2		
35.	Public passage	PNAP APP-108		
36.	Covered set back area	PNAP APP-152		
Bonus GFA				
37.	Bonus GFA	PNAP APP-108		
Additional Green Features under JPN				
38.	Buildings adopting Modular Integrated Construction	JPN2 & PNAP APP-161		

Concession area information is required

4.1 Conditionally Required GFA Data for Compliance Checking: BD requirements on **better lift services under PNAP APP-89**

Lifts serving domestic accommodation in domestic/composite buildings including hotels

- (a) For domestic and composite buildings including hotel buildings, the area of lift shaft over and above 2.5% of the total GFA may be exempted provided that the total lift shaft area exempted should in no case be in excess of 3.5% of the total GFA of the proposed building, i.e. if the lift shaft area is more than 6% of the total GFA, then the maximum exempted area will be 3.5% of the total GFA.

Lifts serving office accommodation in office or office/commercial buildings with GFA of the office floors less than 10,000 m²

- (b) For office and office/commercial buildings, the area of lift shaft over and above 5% of the total GFA for office use¹ may be exempted provided that the total lift shaft area exempted should in no case be in excess of 3% of the total GFA for office use, i.e. if the lift shaft area is more than 8% of the total GFA for office use, then the maximum exempted area will be 3% of the total GFA for office use.

Lifts serving office accommodation in office or office/commercial buildings with GFA of the office floors equal to or more than 10,000 m²

- (c) Subject to (d) below, the area of lift shaft over and above 3.5% of the total GFA for office use may be exempted provided that the total lift shaft area exempted should in no case be in excess of 2.5% of the total GFA for office use, i.e. if the lift shaft area is more than 6% of the total GFA for office use, then the maximum exempted area will be 2.5% of the total GFA for office use.
- (d) For buildings with GFA between 10,000 m² and 12,000 m² for office use, a maximum concession area of 300 m² may be allowed.

**Total
office/hotel
GFA is required**

4.2 Conditionally Required GFA Data for Compliance Checking: BD requirements for shopping arcade under PNAP APP-2

Voids in Buildings

2. However, where large voids occur, a modification of regulation 23(3)(a) of B(P)R may be granted on application for voids in the following circumstances and subject to compliance with the pre-requisites (for items (a) to (g)) and the overall cap on GFA concessions (for items (f) and (g) only) stipulated in PNAP APP-151 on Building Design to Foster a Quality and Sustainable Built Environment:

- (a) in front of cinema and theatre balconies;
- (b) in banking halls;
- (c) in shopping arcades provided that the total area of voids in the shopping arcade does not exceed 10% of the total GFA of the shopping arcade;
- (d) in single-staircase buildings in which cockloft floors for storage are provided in the ground storey;
- (e) in auditoria, sporting halls (including squash courts), school halls and religious institutions;
- (f) in main common entrance lobbies of non-domestic buildings;
and
- (g) in duplex domestic flats or houses if they satisfy the criteria set out in Appendix A.

**Total shopping
arcade GFA is
required**

4.3 Conditionally Required GFA Data for Compliance Checking: BD requirements for **air handling units under PNAP APP-42**

7. In accordance with Regulation 23(3)(b) of the Building (Planning) Regulations (B(P)R), any floor space genuinely intended for air-conditioning may be disregarded from gross floor area (GFA) calculations, subject to compliance with the pre-requisites and the overall cap on GFA concessions stipulated in PNAP APP-151.

8. The following provisions would be considered reasonable in the absence of the detailed design layout of the plants :

- (a) air-conditioning plant rooms not exceeding 1% of the total GFA of a building; and/or
- (b) air handling units, not exceeding 4% of the total GFA of each floor on which they are situated.

**AHU zoning
information is
required for
certain cases**

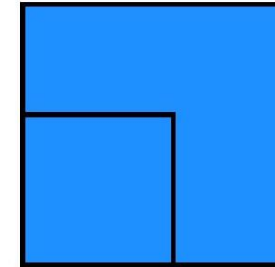
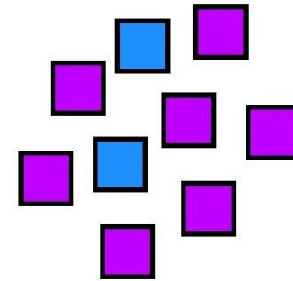
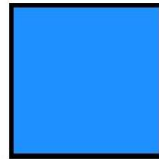
A dark, atmospheric scene with a checkered floor and a glowing light source. The floor is covered in a dark, textured checkered pattern that recedes into the distance. On the right side, a bright, glowing light source, possibly a neon tube, is mounted on a dark wall, casting a soft glow on the surrounding area. The overall mood is mysterious and futuristic.

Steps in creating Aligned Area Information Requirements

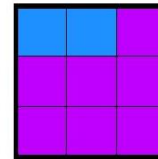
5.0 Steps in creating Common Methodologies

**Align Area Information with same meaning
to minimize AP's effort**

BD Area
info Req't

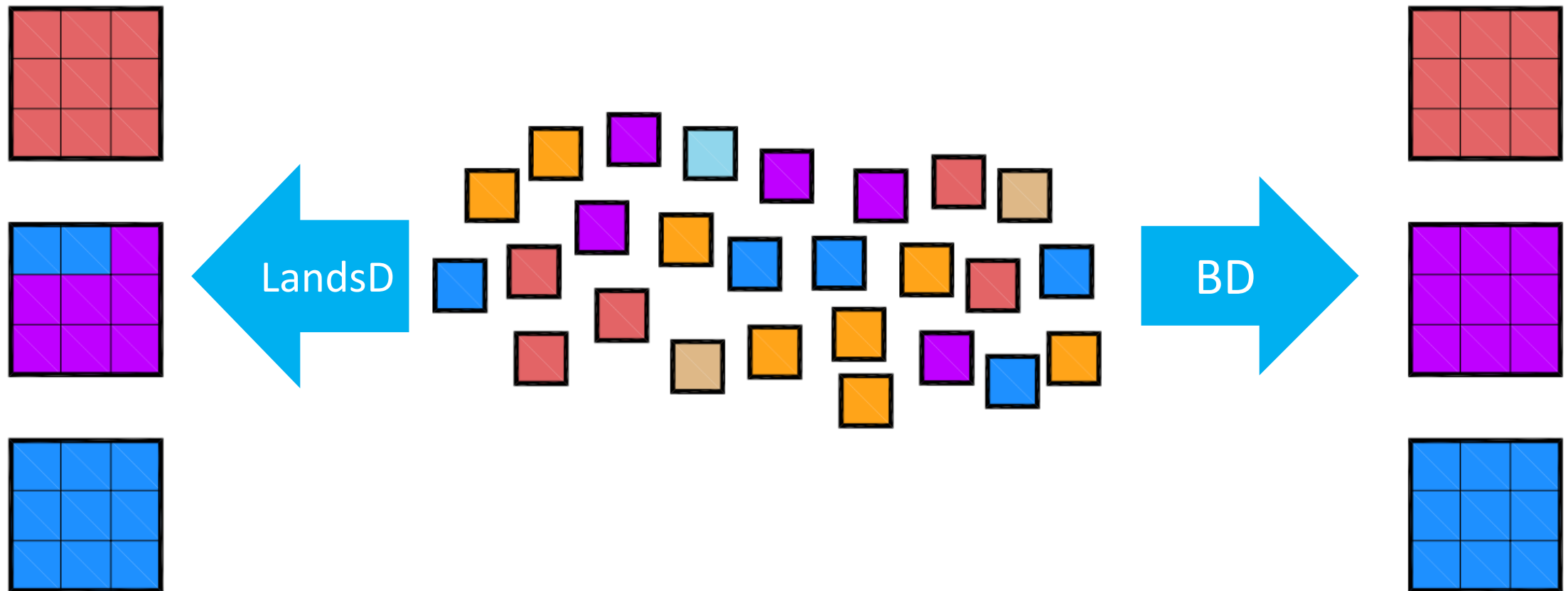


LandsD
Area info
Req't



5.0 Steps in creating Common Methodologies

Area information required by LandsD and BD will then be collected by the plug-in from single set of area information



Schedule of Required Area Information & Live Demonstration

6.0 Aligned Area Information Requirements for Domestic GFA

	Description	List / example of required information	Remark
Domestic area			
Basic	GFA Definition	Domestic area	N/A
		Domestic area to be excluded from LandsD GFA Calculation	
	Area ID	Any alphabet or number	An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Quantity	any integer > 0, e.g. 30	This is an optional input. By default, if no value is provided for this parameter the BIM programme will count the area once for GFA calculation. If an integer larger than 1 is provided, such as 30, then the BIM programme will multiply the area by 30 for assessment of total GFA.
	Air Handling Unit Serving Zone	Zone Name, e.g. Clubhouse, or Typical Floor etc.	This is an optional input. By default, if no value is provided for this parameter the BIM programme will assess % of AHU area against total GFA of <u>each floor</u> according to para. 8(b) of APP-42. If it is required to adopt an alternative way to assess % of AHU area against GFA by <u>zone</u> , he should breakdown the GFA into different zones and provide an unique zone name for each zone.

6.0 Aligned Area Information Requirements for Domestic GFA

	Description	List / example of required information			Remark
Domestic area to be deducted					
Basic	GFA Definition	Domestic Area to be deducted from GFA calculations			
		Domestic area to be deducted from BD GFA calculations and included in LandsD GFA Calculation			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Quantity	any integer > 0, e.g. 30			N/A
	Air Handling Unit Serving Zone	Zone Name, e.g. Clubhouse, or Typical Floor etc.			
	% of GFA Concession	Any number > 0, e.g. 90			
	GFA Concession Definition	Private car parking spaces,	Underground	N/A	
			At & Above ground		
			At & Above ground with site constraints or posing no adverse impact		
			Car Park Ancillary Area, include reasonable driveways, ramps, lift shafts and lobbies of car/passenger lifts and staircases	Solely serve car parks that are 100% disregarded, or solely serve car parks and other floor spaces that are also 100% disregard	
				Solely serve private car parks that are 50% disregarded, or solely serve private car parks that are 50% disregarded and other floor spaces that are 100% disregarded	
				serve other scenarios	

6.0 Aligned Area Information Requirements for Domestic GFA

	Description	List / example of required information			Remark
		loading and unloading spaces	Underground & G/F	N/A	N/A
			Above G/F		
			area directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading purposes, or ramps have no direct access to the accommodation on the floors.		
			area Not directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading, or ramps have direct access to the accommodation on the floors.		
			run-in/out or driveway		
		public car park	Public car parking spaces underground	Solely serve car parks that are 100% disregarded, or solely serve car parks and other floor spaces that are also 100% disregard serve other scenarios	N/A
			Public car parking spaces at & above ground		
			Car Park Ancillary Area, include reasonable driveways, ramps, lift shafts and lobbies of car/passenger lifts and staircases		

6.0 Aligned Area Information Requirements for Domestic GFA

	Description	List / example of required information	Remark
		Mandatory feature or essential plant room, area of which is limited by respective PNAP or regulation, such as lift machine room, refuse storage chamber etc.	N/A
		Mandatory feature or essential plant room, areas of which is NOT limited by any PNAP or regulation	
	Non-mandatory or non-essential plant room -	A/C plant room	
		AHU room	
		Other	
		Balcony for residential buildings	
		Wider common corridor and lift lobby for residential buildings	
		Communal sky garden for residential buildings	
		Acoustic fin	
		Wing wall, wind catcher and funnel	
		Non-structural prefabricated external walls	
		Utility Platform	
		Noise barrier	
		Caretaker's/watchmen's office	
		Caretaker's/watchmen's quarters	
		Owners' corporation / owners' committee office	
		Residential recreational facilities including void, plant room, swimming pool filtration plant room, covered walkway, etc. serving solely recreational facilities.	
		Covered landscaped and play area	
		Horizontal screen and trellis	
		Larger lift shaft	
		Chimney Shaft	
		Other non-mandatory or non-essential plant room, such as boiler room, SMATV room	

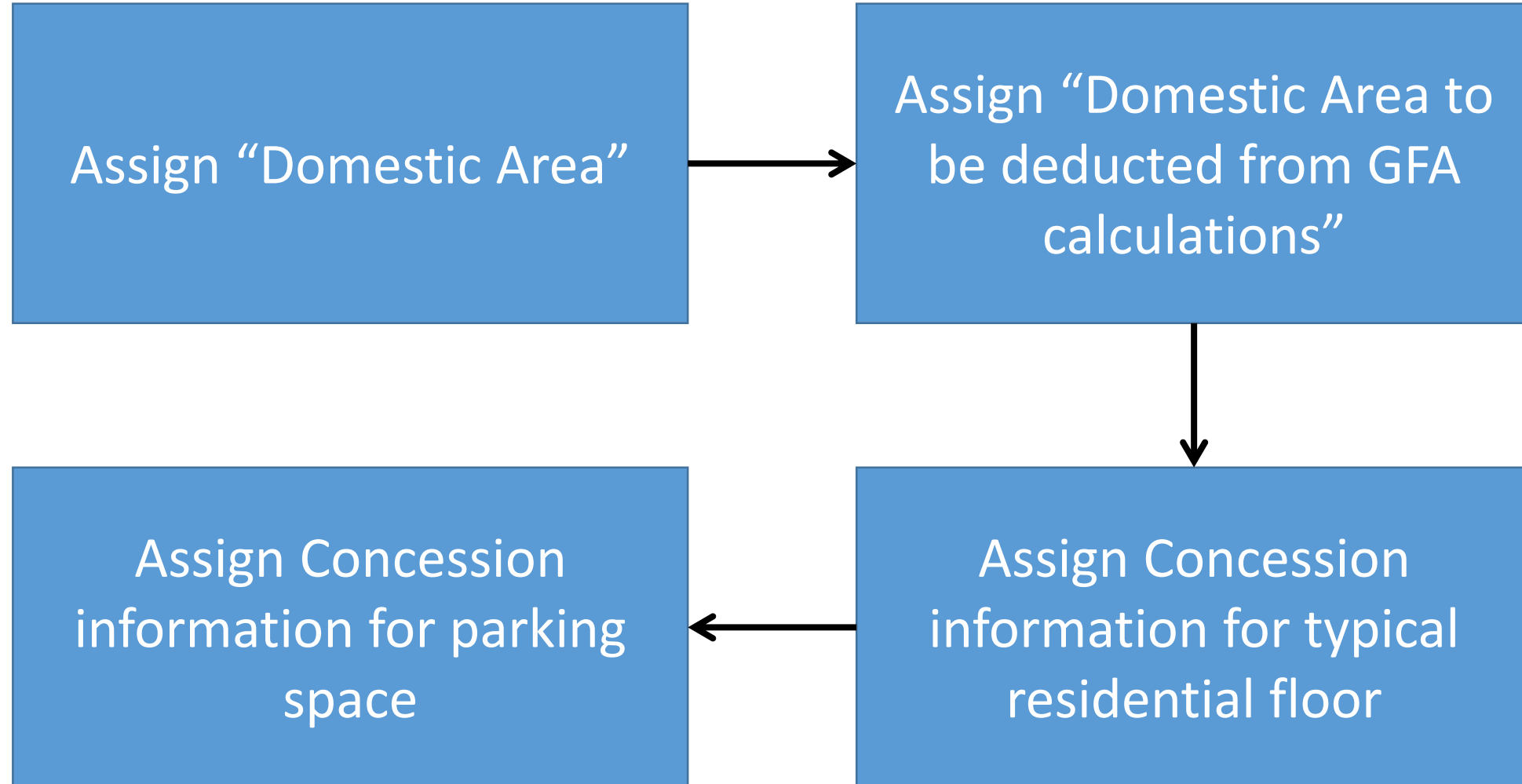
6.0 Aligned Area Information Requirements for Domestic GFA

	Description	List / example of required information	Remark
		<div> <div>Pipe duct, air duct for mandatory feature or essential plant room</div> <div>Pipe duct, air duct for non-mandatory or non-essential plant room</div> <div>Plant room, pipe duct, air duct for environmentally friendly system and feature</div> <div>Void in duplex domestic flat and house</div> <div>Sunshade and reflector</div> <div>Minor projection such as A/C box, A/C platform, window cill</div> <div>Other projection of more than 750mm from the external wall</div> <div>Refuge floor including refuge floor cum sky garden</div> <div>Covered area under large projecting/overhanging feature</div> <div>Public transport terminus</div> <div>Party structure and common staircase</div> <div>Horizontal area of staircase, lift shaft and vertical duct solely serving floor accepted as not being accountable for GFA</div> <div>Dedication of Lands/Areas for public passage</div> <div>Covered set back area</div> <div> <div>Bonus GFA</div> <div>G/F</div> <div>Floor other than G/F</div> </div> <div>Buildings adopting Modular Integrated Construction</div> <div>Signboard</div> <div>Other non-accountable area, e.g. bicycle parking / concession granted through BA16 modification</div> </div>	N/A

6.0 Aligned Area Information Requirements for Domestic GFA

	Description	List / example of required information	Remark
	Unique Premises ID	Unique Name for each Premises, e.g. Block A 18/F Flat D	Mandatory input when concession item "Balcony" & "Void in duplex domestic flat and house are applicable
Other information required			
Optional	Curtain walling system	Y/N	N/A
	Covered Walkway which is GFA non-accountable under lease	Y/N	
	Residential Care Homes for the Elderly	Y/N	
	Other deduction under Lease	Y/N	

7.0 Sample Illustration: Actions required from AP during BIM GBP Submission



8.0 Full Set of Aligned Area Information Requirements

- **Please provide your comments to this document which will be incorporated into LandsD practice notes and BD BIM Guidelines**



Area Information Requirements
(ver. 20210917)



9.0 Project Deliverables

- Revised Practice Notes & Guidelines
- BIM GBP Templates to facilitate easy input of required area information.
- Plug-in for electronic checking & verification of GFA, SC, UFA & UFS calculation. Details will be presented in upcoming public consultation

9.1 Project Programme

- Project will be divided into 3 phases
- Phase A focuses on development of common methodologies, to be completed by Q4 2021
- Phase B focuses on LandsD practice notes and plug-in development, to be completed by Q2 2022
- Phase C focuses on BD guidelines and plug-in development, to be completed by Q2 2023

9.2 Consultation

- 1st Consultation focus on proposed common methodologies – Sep 2021
- 2nd Consultation focus on revised common methodologies and LandsD draft practice note – Dec 2021
- 3rd Consultation focus on BD BIM Guidelines – before Q2 2023

Questions & Answers

Way Forward

- Materials and video record of this consultation event would be provided by email after the event
- The 2nd Consultation Event
 - Tentatively scheduled in December 2021
- Soft Launch Arrangement
 - The plug-in tools for LandsD's requirements in 1st Phase would be delivered to the practitioners for trial use, as early as Q2 2022

Feedback & Enquiry

GBPBIM_Consultation@landsd.gov.hk

Welcome your comments on or before 18 October 2021

Thank you



Annex

Area Information Requirements



	Table Code	Description	Revision Date		
	ND-GFA	Common Methodology - Non-Domestic GFA Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information			Remark
Non-domestic area					
Basic	GFA Definition	Non-domestic area			
		Non-domestic area to be excluded from LandsD GFA Calculation			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Function of Area	Office			This is an optional input. For project involving office or hotel, if application of larger lift shaft concession is required, office or hotel GFA should be defined for assessment of larger lift shaft exempted area.
		Hotel			
		Shopping Arcade			This is an optional input. For project involving shopping arcade, if application of GFA exemption for voids is required, shopping arcade should be defined for assessment.
	Quantity	any integer > 0, e.g. 30			This is an optional input. By default, if no value is provided for this parameter the BIM programme will count the area once for GFA calculation. If an integer larger than 1 is provided, such as 30, then the BIM programme will multiply the area by 30 for assessment of total GFA.
	Air Handling Unit Serving Zone	Zone Name, e.g. Podium Shopping Arcade, Podium Restaurant, or Typical Office etc.			This is an optional input. By default, if no value is provided for this parameter the BIM programme will assess % of AHU area against total GFA of each floor according to para. 8(b) of APP-42. If it is required to adopt an alternative way to assess % of AHU area against GFA by zone , he should breakdown the GFA into different zones and provide an unique zone name for each zone.
Non-domestic area to be deducted					
Basic	GFA Definition	Non-domestic Area to be deducted from GFA calculations			
		Non-domestic area to be deducted from BD GFA calculations and included in LandsD GFA Calculation			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Function of Area	Office			
		Hotel			
		Shopping Arcade			
	Quantity	any integer > 0, e.g. 30			
	Air Handling Unit Serving Zone	Zone Name, e.g. Podium Shopping Arcade, Podium Restaurant, or Typical Office etc.			
	% of GFA Concession	Any number > 0, e.g. 90			This is an optional input. By default, if no value is provided the area will be counted 100%. If this input is provided the area will be counted
	GFA Concession Definition	Private car parking spaces,	Underground		
			At & Above ground		
			At & Above ground with site constraints or posing no adverse impact		
			Car Park Ancillary Area, include reasonable driveways, ramps, lift shafts and lobbies of car/passenger lifts and staircases	Solely serve car parks that are 100% disregarded, or solely serve car parks and other floor spaces that are also 100% disregard	
				Solely serve private car parks that are 50% disregarded, or solely serve private car parks that are 50% disregarded and other floor spaces that are 100% disregarded	
				serve other scenarios	
		loading and unloading spaces	Underground & G/F		
			Above G/F		
			area directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading purposes, or ramps have no direct access to the accommodation on the floors.		

			area Not directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading, or ramps have direct access to the accommodation on the floors.		
			run-in/out or driveway		
		public car park	Public car parking spaces underground		
			Public car parking spaces at & above ground		
			Car Park Ancillary Area, include reasonable driveways, ramps, lift shafts and lobbies of car/passenger lifts and staircases	Solely serve car parks that are 100% disregarded, or solely serve car parks and other floor spaces that are also 100% disregard	
				serve other scenarios	
		Mandatory feature or essential plant room, area of which is limited by respective PNAP or regulation, such as lift machine room, refuse storage chamber etc.			
		Mandatory feature or essential plant room, areas of which is NOT limited by any PNAP or regulation			
		Non-mandatory or non-essential plant room -	A/C plant room		
			AHU room		
			Other		
		Area for picking up and setting down persons departing from or arriving at the hotel by vehicle			
		Suppoting facilities for hotel			
		Communal sky garden for non-residential buildings			
		Communal podium garden for non-residential buildings			
		Acoustic fin			
		Wing wall, wind catcher and funnel			
		Non-structural prefabricated external walls			
		Noise barrier			
		Counter, office, store, guard room and lavatory for watchman and management staff and owners' corporation office			
		"Horizontal Screen" defined by BD under APP42			
		Larger lift shaft	Office		
			Hotel		
		Chimney Shaft			
		Other non-mandatory or non-essential plant room, such as boiler room, SMATV room			
		Pipe duct, air duct for mandatory feature or essential plant room			
		Pipe duct, air duct for non-mandatory or non-essential plant room			
		Plant room, pipe duct, air duct for environmentally friendly system and feature			
		High headroom and void in front of cinema, shopping arcade etc. in non-domestic development			
		Void over main common entrance (prestige entrance) in non-domestic development			
		Sunshade and reflector			
		Minor projection such as A/C box, A/C platform, window cill			
		Other projection of more than 750mm from the external wall			
		Refuge floor including refuge floor cum sky garden			
		Covered area under large projecting/overhanging feature			
		Public transport terminus			
		Party structure and common staircase			
		Horizontal area of staircase, lift shaft and vertical duct solely serving floor accepted as not being accountable for GFA			
		Dedication of Lands/Areas for public passage		dedication is on G/F	
				dedication is on floor other than G/F	
		Covered set back area			
		Bonus GFA			
		Buildings adopting Modular Integrated Construction			
		Signboard			
		Other non-accountable area, e.g. bicycle parking / concession granted through BA16 modification			
Other information required					
Optional	Curtain walling system	Y/N			

	Covered Walkway which is GFA non-accountable under lease	Y/N			
	Residential Care Homes for the Elderly	Y/N			
	Government Accommodation	Y/N			
	Public transport terminus	Y/N			
	Other deduction under Lease	Y/N			

	Table Code	Description	Revision Date		
	D-GFA	Common Methodology - Domestic GFA Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information			Remark
Domestic area					
Basic	GFA Definition	Domestic area			
		Domestic area to be excluded from LandsD GFA Calculation			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
	Quantity	any integer > 0, e.g. 30			This is an optional input. By default, if no value is provided for this parameter the BIM programme will count the area once for GFA calculation. If an integer larger than 1 is provided, such as 30, then the BIM programme will multiply the area by 30 for assessment of total GFA.
	Air Handling Unit Serving Zone	Zone Name, e.g. Clubhouse, or Typical Floor etc.			This is an optional input. By default, if no value is provided for this parameter the BIM programme will assess % of AHU area against total GFA of each floor according to para. 8(b) of APP-42. If it is required to adopt an alternative way to assess % of AHU area against GFA by zone , he should breakdown the GFA into different zones and provide an unique zone name for each zone.
Domestic area to be deducted					
Basic	GFA Definition	Domestic Area to be deducted from GFA calculations			
		Domestic area to be deducted from BD GFA calculations and included in LandsD GFA Calculation			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Quantity	any integer > 0, e.g. 30			
	Air Handling Unit Serving Zone	Zone Name, e.g. Clubhouse, or Typical Floor etc.			
	% of GFA Concession	Any number > 0, e.g. 90			
	GFA Concession Definition	Private car parking spaces,	Underground		
			At & Above ground		
			At & Above ground with site constraints or posing no adverse impact		
			Car Park Ancillary Area, include reason	Solely serve car parks that are 100% disregarded, or solely serve car parks and other floor spaces that are also 100% disregard	
				Solely serve private car parks that are 50% disregarded, or solely serve private car parks that are 50% disregarded and other floor spaces that are 100% disregarded	
				serve other scenarios	
		loading and unloading spaces	Underground & G/F		
			Above G/F		
			area directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading purposes, or ramps have no direct access to the accommodation on the floors.		
			area Not directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading, or ramps have direct access to the accommodation on the floors.		
			run-in/out or driveway		
		public car park	Public car parking spaces		
			underground		

			Public car parking spaces at & above ground		
			Car Park Ancillary Area, include reasonable driveways, ramps, lift shafts and lobbies of car/passenger lifts and staircases	Solely serve car parks that are 100% disregarded, or solely serve car parks and other floor spaces that are also 100% disregard	
				serve other scenarios	
		Mandatory feature or essential plant room, area of which is limited by respective PNAP or regulation, such as lift machine room, refuse storage chamber etc.			
		Mandatory feature or essential plant room, areas of which is NOT limited by any PNAP or regulation			
		Non-mandatory or non-essential plant room -	A/C plant room		
			AHU room		
			Other		
		Balcony for residential buildings			
		Wider common corridor and lift lobby for residential buildings			
		Communal sky garden for residential buildings			
		Acoustic fin			
		Wing wall, wind catcher and funnel			
		Non-structural prefabricated external walls			
		Utility Platform			
		Noise barrier			
		Caretaker's/watchmen's office			
		Caretaker's/watchmen's quarters			
		Owners' corporation / owners' committee office			
		Residential recreational facilities including void, plant room, swimming pool filtration plant room, covered walkway, etc. serving solely recreational facilities.			
		Covered landscaped and play area			
		Horizontal screen and trellis			
		Larger lift shaft			
		Chimney Shaft			
		Other non-mandatory or non-essential plant room, such as boiler room, SMATV room			
		Pipe duct, air duct for mandatory feature or essential plant room			
		Pipe duct, air duct for non-mandatory or non-essential plant room			
		Plant room, pipe duct, air duct for environmentally friendly system and feature			
		Void in duplex domestic flat and house			
		Sunshade and reflector			
		Minor projection such as A/C box, A/C platform, window cill			
		Other projection of more than 750mm from the external wall			
		Refuge floor including refuge floor cum sky garden			
		Covered area under large projecting/overhanging feature			
		Public transport terminus			
		Party structure and common staircase			
		Horizontal area of staircase, lift shaft and vertical duct solely serving floor accepted as not being accountable for GFA			
		Dedication of Lands/Areas for public passage		dedication is on G/F	
				dedication is on floor other than G/F	
		Covered set back area			
		Bonus GFA			
		Buildings adopting Modular Integrated Construction			
		Signboard			
		Other non-accountable area, e.g. bicycle parking / concession granted through BA16 modification			
	Unique Premises ID	Unique Name for each Premises, e.g. Block A 18/F Flat D			Mandatory input when concession item "Balcony" & "Void in duplex domestic flat and house are applicable
Other information required					
Optional	Curtain walling system	Y/N			
	Covered Walkway which is GFA non-accountable under lease	Y/N			

	Table Code	Description	Revision Date		
	ND-SC	Common Methodology - Non-Domestic Site Coverage Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information			Remark
Non-Domestic Site Coverage area					
Basic	Site Coverage Definition	Non-Domestic area			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Application of APP 132	Y/N			This is an optional input. This parameter is stored under project parameter in the provided BIM Template
	Height of a level of a building in metres from street level.	Any number in metre, e.g. 30			This is an optional input.
Other information required					
Optional	Curtain walling system	Y/N			
	Miscellaneous Deduction	Y/N			

	Table Code	Description	Revision Date		
	D-SC	Common Methodology - Domestic Site Coverage Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information			Remark
Domestic Site Coverage area					
Basic	Site Coverage Definition	Domestic area			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Application of APP 132	Y/N			This is an optional input. This parameter is stored under project parameter in the provided BIM Template
	Height of a level of a building in metres from street level.	Any number in metre, e.g. 30			This is an optional input.
Other information required					
Optional	Curtain walling system	Y/N			
	Caretaker's/watchman office	Y/N			
	Caretaker's/watchman quarters	Y/N			
	Owners' corporation / owners' committee office	Y/N			
	Miscellaneous Deduction	Y/N			

	Table Code	Description	Revision Date		
	NOFA	Common Methodology - NOFA Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information			Remark
NOFA area					
Basic	NOFA Definition	Y/N			
Other information required					
Optional	Miscellaneous Deduction	Y/N			

	Table Code	Description	Revision Date		
	OS	Common Methodology - Open Space Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information			Remark
Open Space area					
Basic	Open Space Definition	Y/N			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Other information required					
Optional	Miscellaneous Deduction	Y/N			

	Table Code	Description	Revision Date		
	UFA	Common Methodology - UFA Area Information Requirements	17-Sep-21		
	Required Area Information				
	Description	List / example of required information		Remark	
UFA					
Basic	UFA Definition	UFA			
		UFS which is not under UFA definition			
	Area ID	Any alphabet or number			An Area ID should be provided according to BD Guidelines for using Building Information Modelling in General Building Plans Submission
Optional	Unique Premises ID	Unique Name for each Premises, e.g. Block A 18/F Flat D			Mandatory input when concession item "Balcony" & "Void in duplex domestic flat and house are applicable
	Quantity	any integer > 0, e.g. 30			This is an optional input. By default, if no value is provided for this parameter the BIM programme will count the area once for calculation. If an integer larger than 1 is provided, such as 30, then the BIM programme will multiply the area by 30.
Other information required					
Optional	NOFA	Y/N			
	Area for greenery calculations	Y/N			
	Area for water feature, green paver and other 50% accountable green areas calculations	Y/N			
	Area for green roof calculations	Y/N			
	Miscellaneous Deduction	Y/N			