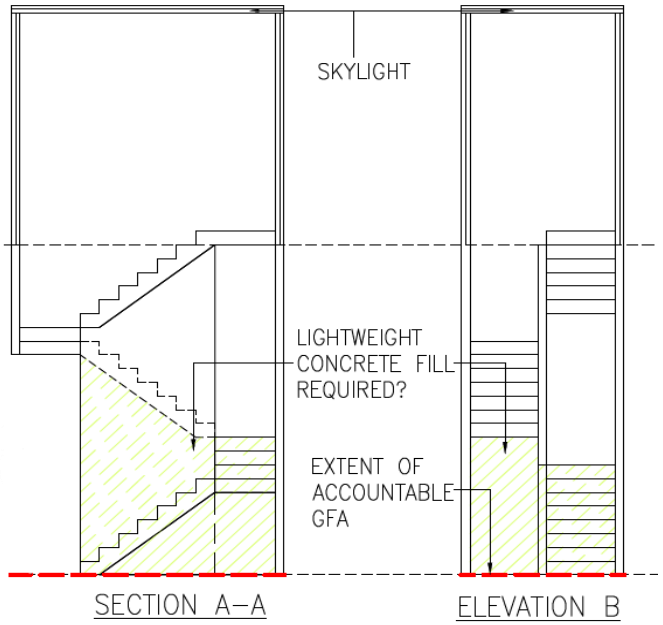
Summary of Items Discussed in 4/2022 APSEC Discussion Forum on 12 August 2022

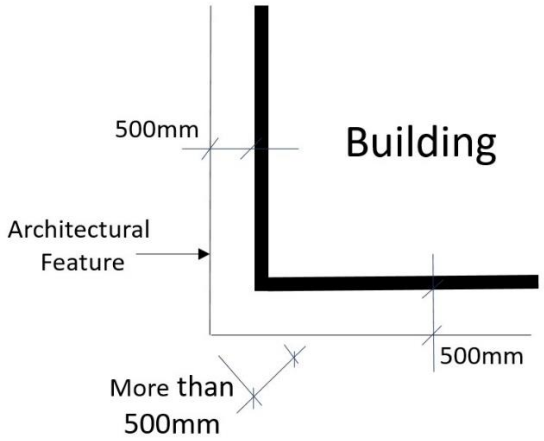
	Items proposed by Convenors for Discussion	Summary of Discussion and BD's Response
	Items raised by HKIA	
1.	**<u>Maintenance and Repair (M&R) Access to Air-conditioner (AC) Platform from M&E Plant Room</u>** It is our understanding that the provision of M&R access to AC platform from the window of M&E plant room in common area is acceptable to BD provided that the access route within the plant room is a genuine maintenance and/or circulation space of reasonable width. Would BD please advise if our understanding is correct?	BD advised that shared use of circulation space / working space within a plant room as the M&R access to A/C platform might be acceptable provided that (i) the size of the window fulfilled the requirements given in paragraph 2.2.1 of Part 3 of the Code of Practice on Access for External Maintenance 2021 (AfEM Code); (ii) circulation space was of adequate width for the workers to deliver the equipment/machines and materials to the A/C platform; and (iii) other requirements for M&R of AC platform, such as access to the outer surface of A/C platform in accordance with paragraph 3.1.3 of Part 2 of the AfEM Code, were complied with.
2.	**<u>Liquefied Petroleum Gas (LPG) Room / Cabinet</u>** Further to the following items discussed at the APSEC Discussion Forum (ADF) regarding the definition of "special hazard" in Section 3 of Part A of the Code of Practice for Fire Safety in Buildings 2011 (FS Code), • item 3 of ADF 5/2013 held on 18 October 2013; • item 1 of ADF 2/2014 held on 14 March 2014; • item 1(d) of ADF 4/2014 dated 8 August 2014; • item 1 of ADF 3/2015 held on 29 May 2015; and	In the FS Code, *""Special hazard" means a hazard that requires special consideration given the occupant awareness, knowledge of building, fire services systems installed, physical construction and location and width of exits, relative to the ignition risk, spread of fire, generation of smoke, heat or toxic gases that may endanger the life and safety of the occupants."*

	• item 14 of ADF 3/2016 held on 27 May 2016, it is our understanding that LPG room / cabinet with riser pipes and pressure regulator is not considered as an area of special hazard under the FS Code. Would BD please advise if our understanding is correct?	BD advised that the fire risk of a room should be dependent on the chances of catching fire and the fire load therein. Areas of special hazard had a relatively higher fire risk with regard to ignition. LPG room / cabinet with riser pipes and pressure regulator should be regarded as an area of special hazard under the FS Code.
3.	**<u>Height of Storeys</u>** According to paragraph 5 of PNAP APP-5, for the purpose of regulation 23(3)(a) of the Building (Planning) Regulations (B(P)R), the maximum acceptable storey height of a domestic flat at the topmost floor is 4 m. We would like to seek BD's advice if the storey height of the common area outside the residential flat exceeding 4 m is acceptable for technical reasons to cater for waterproofing construction and 150 mm level differences between indoor at outdoor at main roof level.	BD advised that provided that the storey height of the flat at topmost floor did not exceed 4 m as well as the common area outside was of genuine design and its abuse was unlikely, the BA would favourably consider accepting the common corridor with high storey height on a case-by-case basis.

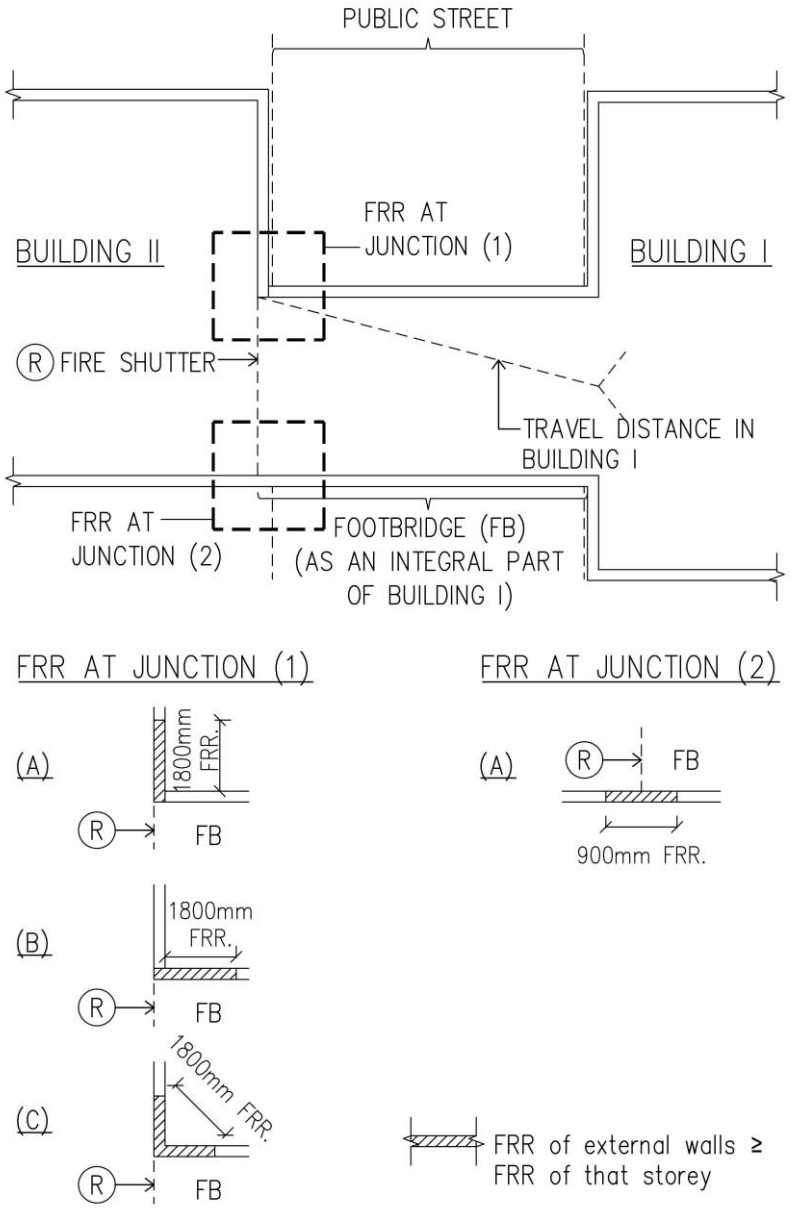
		
4.	**<u>GFA Calculations of Fan Room serving Refuse Storage and Material Recovery Rooms (RS&MRR)</u>** To avoid the nuisance due to the smell emitted from the RS&MRR provided on floors with domestic units, it is a good practice to provide centralised ventilation system with exhaust air duct and a fan room at the uppermost storey. In some cases, BD officers refused to accept gross floor area (GFA) exemption for these fan rooms.	BD advised that subject to the merits of and justifications provided for each case, a centralised ventilation system plant room for the purpose of provision of mechanical ventilation and air purifying facilities for refuse storage and material recovery rooms under the Building (Refuse Storage and Material Recovery Chambers and Refuse Chutes) might be regarded as an essential plant room for disregarding from GFA calculations and

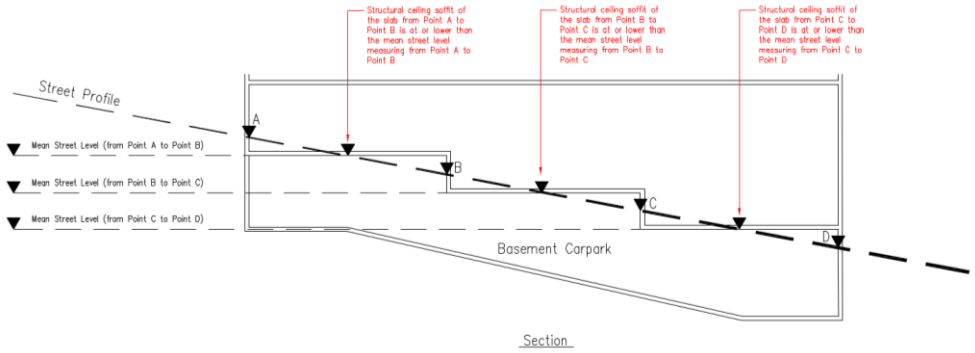
	We understand that these fan rooms serving the RS&MRR, although not separately listed in the PNAP APP-151, are provided to serve a mandatory feature and should be acceptable for disregarding from GFA calculations and not subject to the compliance with the pre-requisites and the 10% overall cap specified under the said PNAP.	would not be subject to compliance with the pre-requisites and the overall cap on GFA concessions stipulated in PNAP APP-151.
5.	**GFA Calculations of Staircase** According to item 5 of ADF 1/2022 held on 14 January 2022, BD advised that the staircase hood of a private staircase linking the top floor to the roof might be non-accountable for GFA calculation provided that the size of the staircase hood was not excessive and that no other building facilities, features and structures at roof were accountable for GFA. And according to item 2 of ADF 4/2012 held on 3 August 2012, BD confirmed that area of the staircase would be measured at each floor level for the purpose of GFA calculation irrespective of the number of flights between the floors of two adjoining storeys as long as such staircase travelled within the same staircase shaft.	Based on the scenario and the diagram provided by HKIA, BD advised that no lightweight concrete fill was required underneath the staircase as the respective area had already been included in the GFA calculation.

	 Would BD please confirm that no lightweight concrete fill will be required underneath the staircase, as this staircase hood case is different from the open external staircase case described in item 8 of ADF 1/2021 held on dated 22 January 2021 and the area indicated by the dotted red line in the above diagram has already been included in GFA calculations.	
6.	**<u>Projections from External Wall – PNAP APP-19</u>** Paragraph 3(f) of PNAP APP-19 states that architectural mouldings and the like features complying with the projection (i.e. project no more than 500 mm over a street) and clear height limits in regulation 7(1) of the	For the purpose of PNAP APP-19, BD accepted that part of the architectural feature wrapping around the corner of a building as shown in the sketch plan need not be counted for SC and PR. Reference was

	B(P)R need not be counted for site coverage (SC) and plot ratio (PR). Where such feature is located around the external wall corner of a building as per the following sketch plan, it is inevitable that the feature at the corner will be more than 500 mm as measured diagonally from the wall corner. Similarly, for wall signboard projecting not more than 600 mm from the external wall and located around the external wall corner, the signboard will also be slightly more than 600 mm when measured diagonally from the wall corner. We understand that BD will give favourable consideration to the above arrangement. Please advise if our understanding is correct.  	made to item 12 of ADF 5/2012 held on 26 October 2012, in which similar consideration was applied to curtain wall situation.
7.	**<u>Fire Resistance Rating (FRR) for an Enclosed Footbridge over a Public Street between Two Buildings – Clause C15.1 of the FS Code</u>** An enclosed footbridge is proposed to be constructed as part of Building I over a public street to connect Building II on the other side of the street. We understand that:	BD advised that with regard to the situation illustrated in the sketch that the buildings are situated on two different sites separated by a public street and an enclosed footbridge is proposed to be constructed as part of

	• The FRR at the junctions between the footbridge and Building II should follow the principles shown in Examples (b), (c) and (d) of Diagram C1 of the FS Code. Hence the FRR details shown in the following sketches at Junctions (1) and (2) are all acceptable. • By-pass lobby at the fire shutter location is NOT required unless the travel distance from the footbridge to the means of escape of Building I does not comply with Clause B11.2 and B11.3. Please confirm if the above understanding is correct.	Building I and to connect to Building II, the requirements under Clause C5.3 of the FS Code should be complied with. Under Clause C5.3 of the FS Code, the situation illustrated in Scenario (C) of Junction (1) might be acceptable subject to the location of site boundary of Building II. For the situation illustrated in Scenarios (A) & (B) of Junction (1), BD would take a pragmatic approach to consider the provisions of FRR for separation between buildings under both the proposals for construction of footbridge as part of Building I and the A&A proposal for Building II. For Junction (2), Scenario (A) was considered not acceptable according to Clause C5.3 of the FS Code. Regarding the provision of by-pass lobby, BD advised that HKIA's understading was correct.

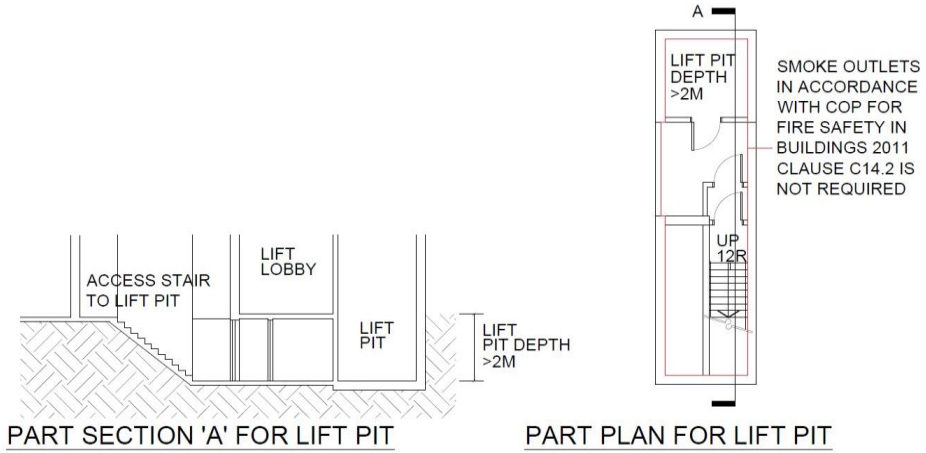

PUBLIC STREET
BUILDING II
FRR AT JUNCTION (1)
BUILDING I
R FIRE SHUTTER
TRAVEL DISTANCE IN BUILDING I
FRR AT JUNCTION (2)
FOOTBRIDGE (FB) (AS AN INTEGRAL PART OF BUILDING I)
FRR AT JUNCTION (1)
FRR AT JUNCTION (2)
(A)
1800mm FRR.
R
FB
(A)
R
FB
900mm FRR.
(B)
1800mm FRR.
R
FB
(C)
1800mm FRR.
R
FB
FRR of external walls ≥ FRR of that storey

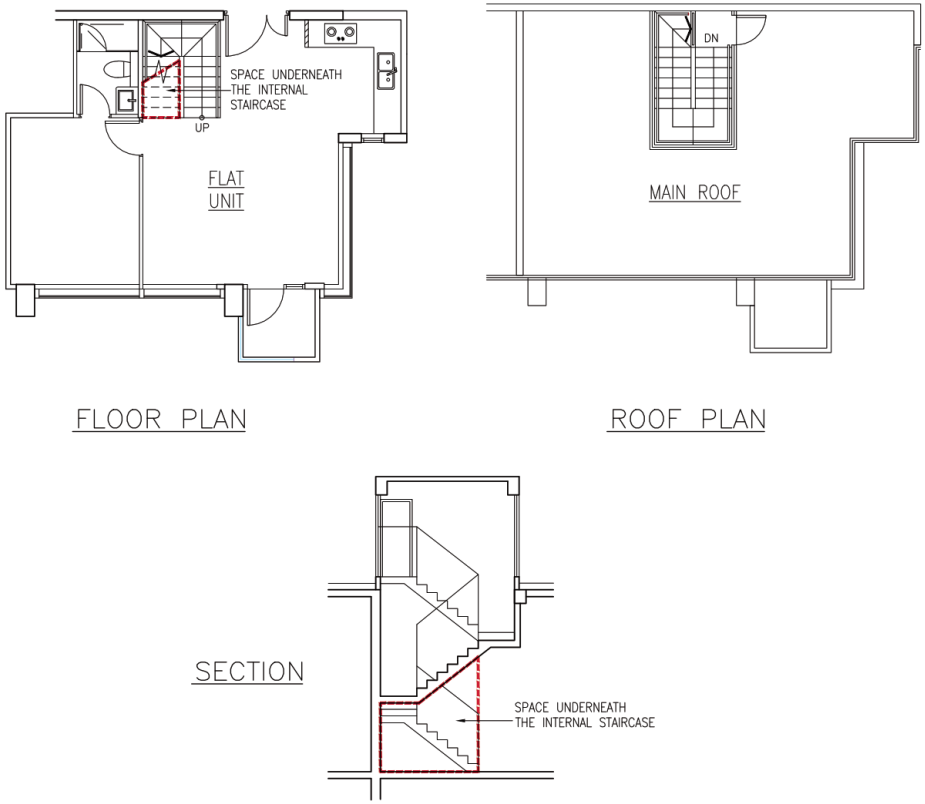
8.	**<u>Definition of Underground Car Park – Paragraph 3(a) of Appendix C to PNAP APP-2</u>** As stated in paragraph 3(a) of Appendix C to PNAP APP-2, if the site abuts on only one street, the **structural ceiling soffit of underground car park** shall be at or below the **mean level** of that portion of the street on which the site abuts, provided that such mean level is not more than 5 m above the lowest level of such portion of the street. If the site is abutting a sloping street, and the structural ceiling slab of the underground car park is stepping down with varying levels to align with the sloping street, would BD consider to accept the car park as a underground car park if the all levels of the structural ceiling slabs are either (i) at or below the mean street level or (ii) at or below the mean level of that portion of the street, as shown in the diagram below.  	Regarding to the definition of an underground car park, BD advised that for car park abutting a sloping street, according to paragraph 3(a) of Appendix C to PNAP APP-2, BD might consider accepting a car park as an underground one if the structural ceiling soffit of the car park was at or below the mean level of that portion of the street on which the site abutted. In general, there should only be a single mean level for the entire portion of the street which the site abutted. The information provided by HKIA was not sufficient for BD to consider the case. HKIA would provide further information about the case for discussion with BD separately.

	Items raised by HKIE	
9.	**Design of New Works in Existing Buildings under PNAP APP-117** Paragraph 3 of PNAP APP-117 states that all new structural elements in the A&A works should be designed in accordance with the current Building Regulations and relevant codes of practice. On the other hand, paragraph 4 of the said PNAP states that the structural adequacy of an existing building or part thereof, as may be affected by proposed A&A works may, subject to some requirements, be checked according to the then prevailing Building Regulations and codes of practice to which they were designed. A requirement therein regarding wind calculations stipulates that in the case of A&A works involving (i) partial or total removal of existing major wind resisting walls or frames, which would result in a reduction in their stiffness by 5% or more, or (ii) the extension of building dimensions which would result in an increase of 10% or more of the wind exposure areas of a building, the structural adequacy of the building due to wind should be checked based on the current wind code. It follows, for consistency, the design of new structural elements in the A&A works is also subject to the same wind code based on which the structural adequacy of the building should be checked. To this end, the relevant code of practice for wind effects on the new structural elements under paragraph 3 of the said PNAP impliedly refers to the wind code considering wind calculations under paragraph 4 of the said PNAP. Would BD please advise if our understanding is correct?	BD advised that if the A&A works did not involve the situations described in both i and ii under paragraph 4(a) of PNAP APP-117, the structural adequacy of the building due to wind should be checked based on the prevailing wind code.

10.	**APSEC Discussion Forum** Would BD consider to post the finalised Summary of Items Discussed in ADF on BD website such that all frontline BD officers and industry practitioners can be fully aware of the contents?	BD advised that the ADF was not an official meeting as such the finalised Summary of Items Discussed would not be uploaded to the website. Notwithstanding, the finalised Summary of Items Discussed would be disseminated to all frontline BD officers. Item 16 of ADF 5/2015 held on 13 November 2015 was applicable.
11.	**Foundation Submission** To facilitate fast track development program, the practitioners always based on assumed loads for foundation submissions. In some occasions, RSE was requested to provide full computational model of superstructures to support the assumed loads in foundation plan submissions. Would BD please clarify whether this requirement is necessary?	BD advised that assumed loads were generally acceptable for foundation design submission, unless under special circumstances where further information were required for justification.
12.	**Record Plan submissions** Would BD please clarify whether record plans should possess the BD's approval stamp or not?	BD advised that according to paragraph 5 of PNAP APP-13, the record plans should bear either the signed and dated approval chop applied by the BA or a chop giving the AP's personal certification of the plans being identical to those approved by the BA on the date specified.
	Items raised by AAP	
13.	**Hoarding / Covered walkway for Superstructure Works** Regarding item 9 of ADF 5/2021 held on 12 November 2021, BD advised	BD advised that in view of different site situations which warrant

	that for sites where superstructure works were being carried out, provisions of hoardings, covered walkways and gantries were required; additional catch platform and protective screen should also be provided during the erection of structural frame of a building unless the works satisfied the conditions under paragraph 4 of PNAP APP-102. In this regard, we would like to enquire on the following: According to regulation 64(1)(a) of the B(P)R, "*Every building owner who intends to erect, alter, or demolish any building shall submit to the Building Authority plans of such hoardings, covered walkways and gantries* ***as may be necessary*** *for the safety and convenience of passers-by in the street…*" The word "may" is different from "shall", our understanding of the said regulation allows certain extent of flexibility on hoarding design to suit individual specific site conditions, for example: construction site in remote area, low rise building construction, A&A works, etc. In this connection, will BD consider alternative hoarding design on a case-by-case basis?	different safety precautionary measures, such considerations would be taken into account during the review of PNAP APP-102. For case with adequate justifications submitted by the AP to demonstrate the specific site constraints/conditions, the BA would consider accepting alternative hoarding design proposal on a case-by-case basis.
14.	**Provision of Smoke Outlets in Basement** An access door leading to a stair shall be provided to the lift pit if the pit depth exceeds 2m in accordance with Clause 3.8.2 under Code of Practice for Building Works for Lifts and Escalators 2011 (2020 Edition).	BD advised that AAP's understanding was correct.

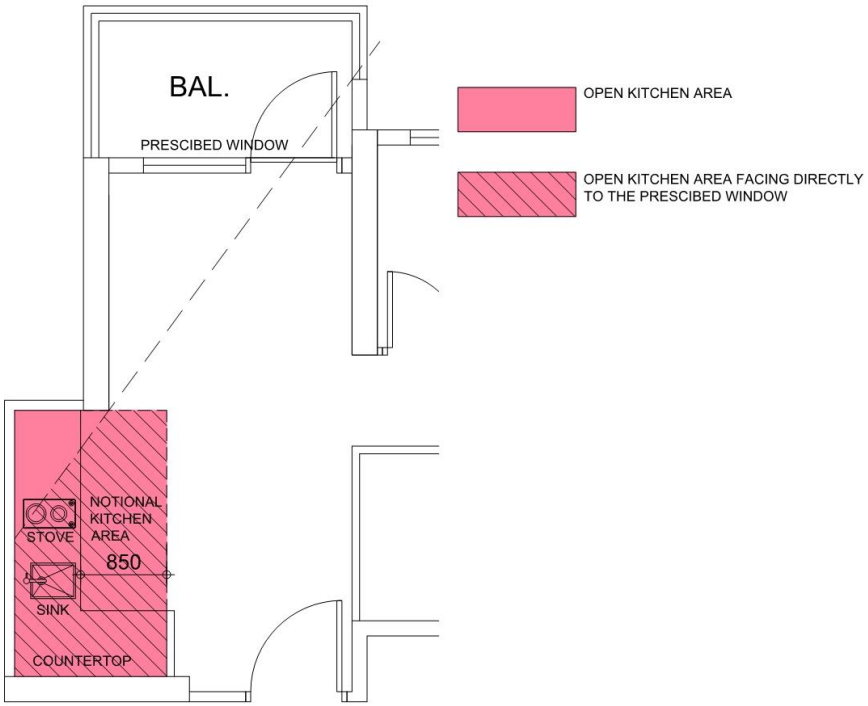
	To our understanding, provision of smoke outlets in accordance with Clause C14.2 of the FS Code for the abovementioned lift pit and the associated maintenance and access area is not required. A typical case is demonstrated in below diagrams.  Please advise if our understanding is correct.	
15.	**<u>Space Underneath Internal Staircase</u>** Space underneath an internal staircase within a staircase core which leads to the main roof of a building is accountable for GFA calculation. Based on the above, we opine that the underside of the staircase need not be filled up by light-weight mass concrete to avoid abusive use of the subject space. Please advise whether our interpretation is correct.	BD advised that AAP's understanding was correct.

		
16.	**<u>Location of Open Kitchen</u>** Reference is made to the previous discussion under item 22 of ADF 2/2021 held on 19 March 2021 for the requirement that the open kitchen should be located in a position where most of the open kitchen area could face the prescribed window(s) of the room for the required natural lighting and ventilation. Over the year, we have encountered different interpretations from the case	BD advised that as per item 22 of ADF 2/2021 held on 19 March 2021, open kitchen should be located in a position where most of the open kitchen area could face the concerned prescribed window(s) of the room for the required natural lighting and ventilation. To this end, the open kitchen in the sketch was considered acceptable.

officers of BD.

We would like to seek BD's clarification if our following understanding is correct as illustrated in the attached sketch:

More than 50% of the kitchen area (including 850 mm deep notional kitchen area) facing directly to the prescribed window will be deemed to comply with the aforementioned requirement on natural lighting and ventilation.



	Items raised by ACEHK	
17.	**<u>Design and Supervision Responsibilities for the Adoption of Modular Integrated Construction (MiC)</u>** We would like to enquire on the respective design and supervision responsibilities of the following parties in new building developments adopting MiC: 1. the AP and RSE who obtained the in-principle acceptance of the MiC system which had been included in the Lists of Pre-accepted MiC Systems/Components (the Accepted Lists) on BD website; 2. the Project AP and Project RSE who adopted the MiC system in the Accepted Lists into their superstructure design; 3. the Registered General Building Contractor (RGBC) who constructed the MiC system.	BD advised that the pre-acceptance mechanism aimed to resolve the non-site specific design and construction matters of a MiC system/component by granting in-principle acceptance (IPA) to individual MiC systems/components and provide curtailed assessment on whether the design and materials used meet certain minimum standards for a particular aspect set out under the provisions of the Buildings Ordinance (BO) so that the industry would have greater confidence in using such systems/components for the local projects. An AP and a RSE appointed by MiC supplier/manufacturer for preparing the application for IPA of MiC system should ensure that the fundamental issues could be fully considered and essential information set out in Appendix C to PNAP ADV-36 be included in the submission to facilitate processing by the BD. The Project AP and Project RSE who adopted MiC granted with IPA would assume the full responsibilities for the application and performance of the pre-accepted MiC systems/components, and ensure that they had been properly designed and constructed in compliance with the latest provisions of the BO and its subsidiary regulations including the supervision requirements upon their application in a project. . The RGBC appointed had to provide continuous supervision to the

		carrying out of the building works in accordance with requirements as stipulated under PNAP ADV-36, PNAP APP-158, supervision plans and conditions imposed under item 6 of section 17(1) of the BO.
18.	**<u>Criteria for Submission of Excavation and Lateral Support (ELS) Plans</u>** Paragraph 3 of PNAP APP-57 for ELS works stipulates that: 3. ELS plans will be required to be submitted to the Buildings Department (BD) for approval where the excavation works to be carried out are: (a) deeper than 2.5 m and greater than 5 m in length; and (b) liable to affect any road, building, structure, slope steeper than 30° or water main 75 mm in diameter or greater, the affected area being defined as within the 45° line up from the base of the excavation to the ground surface. It is understood that submission is only required when both criteria in paragraph 3(a) and 3(b) are met. However, some case officers of BD interpreted that an ELS submission is still required when either criterion (a) or (b) is met. We would like to seek clarification on the above. If BD's clarification on the above is positive, does RSE/RGE still need to submit the ELS proposal to BD "for information" prior to superstructure consent application or to include such ELS details for information in the submissions of pile caps, manholes, etc. involving shallow excavation works?	BD clarified that ELS plans were required to be submitted for approval when both criteria in paragraph 3(a) and 3(b) of PNAP APP-57 were met. BD advised that notwithstanding the above, the intended method and details of shallow/local excavation for substructures such as pile caps and ground beams, could be indicated on the foundation plans for BD's acceptance.

19.	**<u>Width of Design Strip in Transfer Plates</u>** Our member encountered a case of transfer plate design submission that the transfer plate was designed to support the residential towers above with shear wall systems. The transfer plate was 4 m thick and supported by columns of about 2.5 m x 2.5 m below. During the processing of plans, the case officer of BD only accepted the width of the design strips to be taken as 1 m even it was far from the lift/staircase openings. Case officers of BD opined that there was no code or guideline accepted by BD to determine the strip width so that it should be as narrow as possible. This resulted in stress concentration in some design strips and thus unreasonable rebar arrangement (local strip became very heavy but adjacent strip had much less rebar). It is suggested providing guidelines in the Code of Practice for Structural Use of Concrete 2013 (Concrete Code) regarding the determination of design strip width, which should take into consideration the transfer plate layout, thickness, load width, support width, etc.	BD advised that the results generated by commonly used computer softwares should be sufficient for determining the width of design strip. The required 1 m wide design strips might be an individual case and BD would further review the issue when information of the particular case were available. BD would put forward the issue for discussion at the Technical Committee on Concrete Code if considered necessary.
	Items raised by PBSCA	
20.	**<u>Incorporating Conditions of Modifications/Exemptions in final General Building Plan (GBP) Amendment Submission</u>** For modifications/exemptions granted pursuant to section 42 of the BO, it is required to incorporate the relevant conditions of modifications/exemptions in the final GBP amendment submissions for both new development and A&A works. For A&A works, if amendment	BD advised that according to paragraph 14 of PNAP ADM-2, in order to ensure that the imposed conditions were fulfilled and the parameters for granting modifications/exemptions could be made known to the public and any person who might have an interest in such building/building

	submission for GBP is not required after the first approval, could the summary of the modifications/exemptions be incorporated in the record plan instead so no amendment submission is necessary for such purpose before the submission of Form BA14?	works, it was one of the conditions imposed in the Form BD 106 that items covered by Form BD 106 should be incorporated into the subsequent amendments for approval before the submission of Form BA14. As advised in item 12 of ADF 2/2021 held on 19 March 2021, AP might communicate with the case officers to expedite processing of amendments solely involving incorporating valid Form BD106 on the amendment plans.
21.	**Requirement of Floor Drain – PNAP APP-164** As per paragraph 2(a) of PNAP APP-164, the trap of a floor drain should be prevented from loss of water seal by replenishing with used water diverted from a lavatory basin, a bath or a shower bath. There are cases for A&A works at G/F that the provision of the replenishing pipe from the wash basin to the floor drain may require crossing the ground beams which poses difficulties in complying with the requirement in the said PNAP. Would BD take pragmatic approach to allow for modification or relaxation of the requirement on case basis?	BD would consider the application of enhanced design standards to A&A works on a case-by-case basis.
	AOB Items	
22.	**Part A & Part B of Form BA5** (Item raised by HKIE) Part A & Part B of Form BA5 are to be completed by the owner as the applicant for approval of plans of building works and Part C of the said	BD advised that the arrangement outlined in item 19 of ADF 3/2016 remained valid. It was noted that the industry adopted a common

	form is to be completed by AP/RSE/RGE as a certificate of preparation of the plans. As clarified by BD at item 19 of ADF 3/2016 held on 27 May 2016, for subsequent submissions, Part A and Part B are not required after the 1st submission of GBP unless there is a change of ownership, but Part C is still required. Would BD please confirm if this arrangement is still valid? 19. **Submission of Form BA5** It has been an established practice that Form BA5 is required for 1st submission of each type of plans, and not required for resubmission or subsequent amendments. We notice that some APs were requested to submit BA5 for all resubmissions and amendments recently. Please clarify if there has been a change of practice. Under B(A)R 18A, where plans of building works were submitted to the BA for his approval, there should be submitted together with plans, a certificate which should be in the specified form, by the AP, RSE or RGE, as the case might be, who prepared the plans or under whose supervision the plans were prepared. Form BA5 should therefore always be submitted together with plans. However, owners' signature or ownership proof would not be necessary after the 1st submission of general building plans unless there was a change of such.	practice that when submitting amendment plans, the AP/RSE would fill in and sign Part A and B of Form BA5 as the applicant of the submission and BD had been all along accepting such practice. Meanwhile, the Form BA5 was being revised.
23.	**Mass Concrete Fill for Foundation Works** (Item raised by HKIE) According to paragraph 3 of PNAP APP-18 on Foundation Works, "*Mass concrete fill is often applied for benching uneven or sloping rock surface for construction of shallow foundation. However, mass concrete fill of significant size (i.e. with a maximum depth greater than 1 m) placed beneath the footing or raft foundation should be regarded as a structural element and designed in accordance with the Code of Practice for Structural Use of Concrete 2013.*" Would BD please clarify whether mass concrete fill, which is generally subject only to direct compressive force and no tensile stress, can be designed as plain concrete without reinforcement in accordance with the	BD advised that mass concrete fill of significant size placed beneath the footing or raft foundation should be regarded as a structural element, as it was subject to other components' forces in addition to axial load, such that minimum reinforcements in accordance with the Concrete Code were required. Subject to justifications by the RSE, BD would consider the issue on a case-by-case basis.

	clause 6.2.2.3 of the Concrete Code?	
24.	**Foundation Submission** (Item raised by HKIE) According to item 11 of ADF of 2/2022 held on 18 March 2022, BD may consider foundation submission as Major Revision/Amendment if it involves new types of foundations or change in load path which would affect nearby sensitive receivers. It does not categorically spell out if it applies to vertical load bearing foundations or even to traditional shear piles taking only wind lateral loads. The checking of lateral loads using shear piles is straightforward and should not warrant additional 30 days for plan processing, which violates BD's facilitation intention. Would BD please clarify?	BD advised that whilst shear pile might not be a type of foundation pile, whether the proposal should be treated as Major Revision also depended on other considerations such as the extent of revision and any change in overall design concept. The examples given in item 11 of ADF of 2/2022 held on 18 March 2022 were not exhaustive. The RSE might discuss with the frontline BD officers on whether a foundation submission would constitute a Major Revision/Amendment before the submission.
25.	**Check List in Appendix A to PNAP ADM-2** (Item raised by HKIS) Given that BD would review the prescribed forms, HKIS therefore reminded BD that, although the Check List on Documents included in New Building / A&A Plan Submissions in Appendix A to PNAP ADM-2 is not a prescribed form, there is a bug in its PDF version, which is downloadable from BD website. The formula being used on P.4/4 of the check list for automatically generating the "Total no. of sets of plans to be submitted" was found incorrect.	BD would review the issue.

26.	**<u>Minor Works Items indicated on A&A Plans</u>** (Item raised by PBSCA) In submission of A&A plans, sometimes, there are works to be carried out under the Minor Works Control System indicated on the GBP. In the past, upon the application for consent to the commencement of A&A works, there was no requirement that the notice of commencement of the minor works indicated on the GBP should be submitted to BD before granting the consent for the A&A works. But in a recent case, BD's officer requested the AP to submit the notice of commencement of the minor works to BD before granting the consent for the A&A works. We would like BD to clarify on this issue.	BD clarified that saved for special circumstances, there was no such requirement in general.