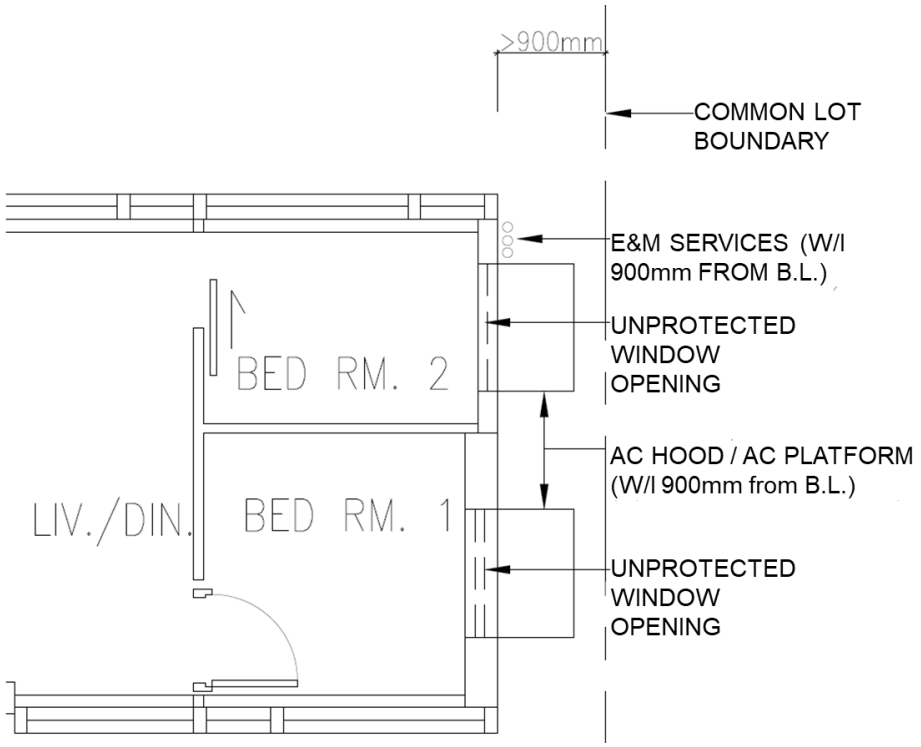
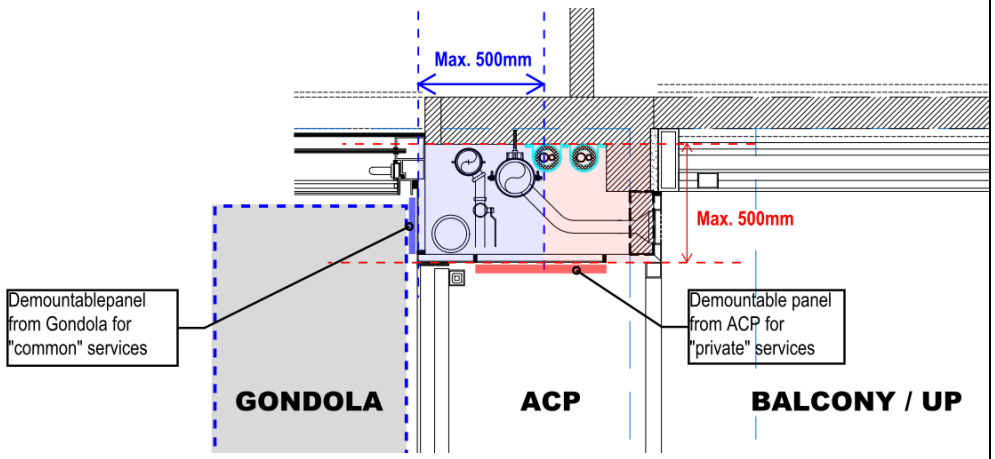
Summary of Items Discussed in 1/2024 APSEC Discussion Forum (ADF) on 23 February 2024

	Items proposed by Convenors for Discussion	Summary of Discussion and BD's Response
	Items raised by HKIA	
1.	**Curtain Wall outside Floor / Room without Accountable Gross Floor Area (GFA)** Further to item 4 of ADF 2/2023 held on 5 May 2023, it was agreeable to BD that for floor/room which was non-accountable to GFA calculation, the curtain wall system projecting from the outer surface of the structural elements exceeding 200 mm for domestic building or 250mm for non-domestic building might also be disregarded from GFA and site coverage calculations on case basis. We would like to seek BD's clarification if the same pragmatic approach is also applicable to transfer plate.	BD advised that under section 26 of the Building (Construction) Regulation (B(C)R), curtain wall meant *"a non load-bearing enclosure of a building fixed on to the load-bearing structure of the building"*, and cladding meant *"a facing or architectural decoration additional to the structural elements of the building"*. Under PNAP APP-2, curtain wall with projection from the outer surface of the structural elements not exceeding 200 mm for a domestic building or 250 mm for a non-domestic building could be disregarded from the GFA and site coverage (SC) calculations, and cladding with overall thickness of not more than 90 mm (75 mm in the case of cladding to non-structural prefabricated external walls) as the external wall finishes might be disregarded for the purpose of measurement of dimensions under regulation 23(3) of the Building (Planning) Regulations (B(P)R). Curtain wall at transfer plate was an external facing or architectural decoration of a structural element and did not serve as an external enclosure of a building. The pragmatic approach as mentioned in item 4 of ADF 2/2023 held on 5 May 2023 was not applicable to transfer plate, except for cases with specific and strong justifications.

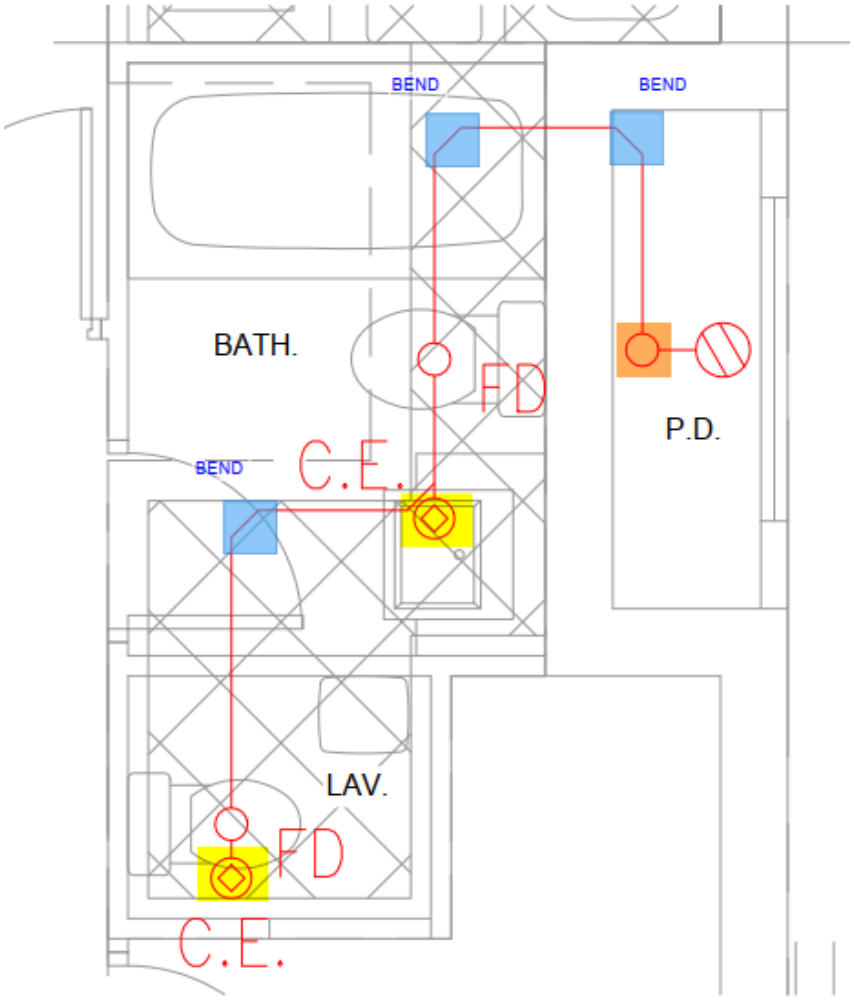
2.	**<u>Separation between Buildings not on the Same Site – Clause C5.3 of Code of Practice for Fire Safety in Buildings 2011 (June 2023 Edition) (FS Code)</u>** In accordance with Clause C5.3 of the FS Code, the minimum distance between any unprotected openings and the common lot boundary is 900mm. If the opening and the common lot boundary is more than 900mm, it is our understanding that air-conditioner (AC) platform / hood with air conditioning unit, and building services are allowed within the 900mm separation as illustrated in the diagram below. Would BD please confirm our understanding is correct?	BD advised that HKIA's understanding was correct.

		
3.	**<u>Access to External Services Covered by Architectural Features</u>** It is our understanding that the maximum depth of pipe duct covered by external architectural features, such as cladding, is 500 mm in order to facilitate inspection and maintenance. Would BD please advise if the arrangement as shown in the figure below is acceptable:- - Access to "common" services from gondola within 500 mm - Access to "private" services from AC platform within 500 mm	BD advised that the arrangement shown in the figure failed to enable workers in the gondola to reach all common drainage pipes within 500 mm. Further information on the effective inspection of drainage pipe should be provided to demonstrate the fulfilment of relevant requirements in PNAP APP-93 and the Code of Practice on Access for External Maintenance (AfEM Code). If the "demountable panel from ACP" as shown in the figure was designed for the maintenance of common drainage pipes, right to access for maintenance should be

		demonstrated in accordance with paragraph 5 of Appendix F to AfEM Code.
4.	**<u>Maintenance and Repair (M&R) Provision for Top Roof Structure</u>** Referring to item 1 of ADF 3/2022 held on 13 May 2022, the use of metal scaffold tower is one of the possible M&R access accepted by BD on case basis. For some projects which installation of gondola or davit arm are not possible, heavy spider lift may sometimes be required by BD to be provided at main roof for the M&R to the external walls of top roof structure. Taken into consideration that most of the external walls of top roof structures are tile finishes, the need for inspection and cleansing is relatively low and repair and replacement works can be carried out by scaffolding. Spider lifts with heavy loading are therefore not be the most practical way for M&R for top roof structures.	BD advised that item 2 of the summary of discussion of ADF 1/2023 held on 10 February 2023 was applicable. The use of alternative means of M&R access such as temporary metal scaffolding should be considered on case basis, and AP was reminded to observe the Code of Practice for Metal Scaffolding Safety issued by the Labour Department.

	Would BD consider accepting temporary metal scaffolding as the M&R access for the external wall of top roof structure with tile finishes only?	
5.	**<u>Cleaning Eye Provision for Drainage</u>** According to regulation 28(2)(b) of the Building (Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines) Regulations (B(SSFPDWL)R), a cleaning eye or other suitable means of access shall be provided at or near the bend of soil pipes and waste pipes. Diagram 1 below demonstrates a common approach for the cleaning eye provision, i.e. every bend served by at least 1 no. of cleaning eye / access through a straight drainage pipe within a reasonable distance. In some drainage plan submissions, BD required that cleaning eye should be provided right at the bend or within a very close distance from the bend as marked in green in Diagram 2. The requested cleaning eye provision might be in conflict with the shower tray / bath tub, and induced difficulty in the layout planning. We consider that Diagram 1 is also acceptable to fulfill the requirement in regulation 28(2)(b) of B(SSFPDWL)R. Would BD please clarify whether our understanding is correct or not?	BD advised that access points in sunken slab should be provided to facilitate inspection of every part of the pipe works and clearance of any blockage thereof in accordance with paragraph 5 of PNAP APP-93. BD also advised that the design of the drainage system illustrated in Diagrams 1 and 2 required further clarification to demonstrate the effectiveness and workability of cleaning. BD supplemented that practitioners were being consulted on the design and testing of drains in sunken slab for the preparation of the Code of Practice for Drainage in Buildings. Members were encouraged to provide their views on the matters.

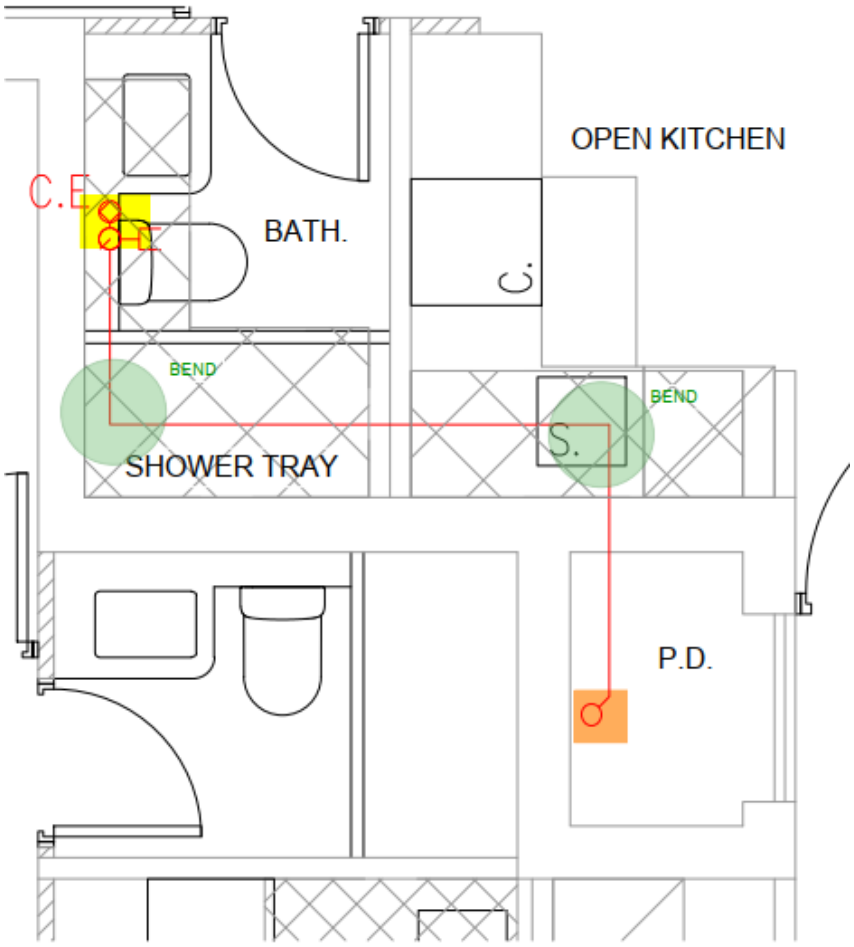
Diagram 1



CLEANING EYE

MODIFICATION ITEM - TO USE COUPLING JOINT WITH RUBBER GASKET COLLAR FOR EASY INSTALLATION AND ACCESS IN LIEU OF CLEANING EYE FOR DRAINAGE SYSTEM.

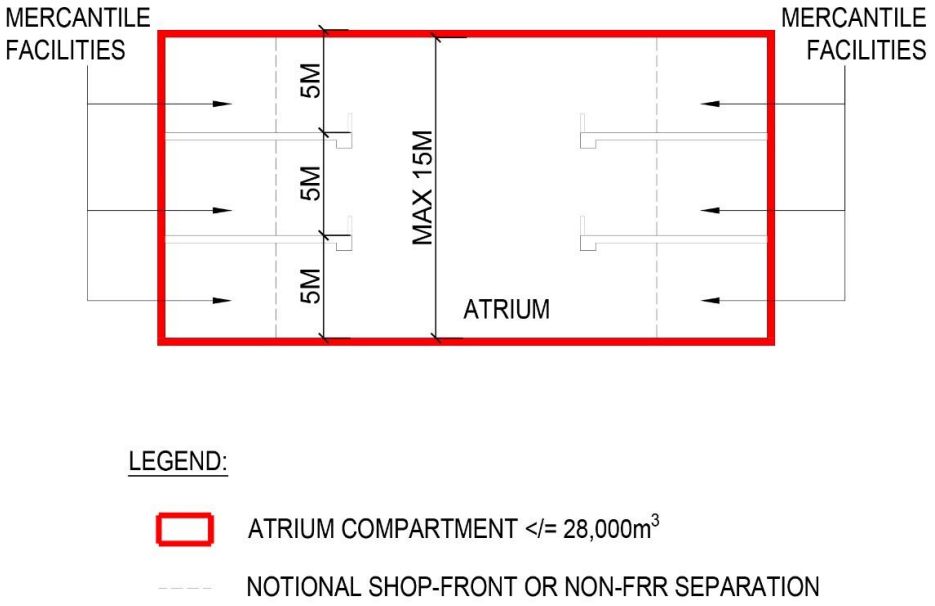
Diagram 2



CLEANING EYE

MODIFICATION ITEM - TO USE COUPLING JOINT WITH RUBBER GASKET COLLAR FOR EASY INSTALLATION AND ACCESS IN LIEU OF CLEANING EYE FOR DRAINAGE SYSTEM.

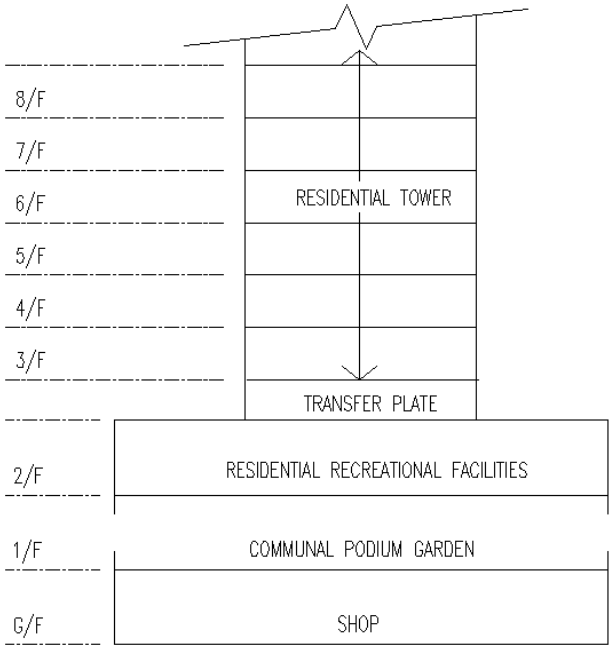
6.	**Site Coverage of Greenery** Paragraph 3 of Appendix D to PNAP APP-152 states that a 50% reduction factor will be applied on planters on an inaccessible roof located at primary zone is in computing the greenery areas. Whilst greenery on inaccessible roof located at areas other than the primary zone can be wholly included in the overall greenery areas calculation (subject to the provision of maintenance access), it is our understanding that those greenery on inaccessible roof located at primary zone can likewise be wholly included in the overall greenery areas calculation, provided that they are not included as the required greenery areas in primary zone. Please advise if our understanding is correct.	BD advised that uncovered greenery area, irrespective of location, could be included in the overall greenery areas calculation subject to compliance with all requirements under Appendix D to PNAP APP-152. For planters on inaccessible roof, in addition to other requirements, communal access paths should still be provided from the common areas for maintenance in accordance with paragraph 8 of Appendix D to PNAP APP-152. If planters on an inaccessible roof are to be included in the primary zone greenery areas calculation, they should comply with paragraph 3 of Appendix D to PNAP APP-152 (i.e. reduction factor and 30% cap would be applicable).
7.	**"Atrium" in Clause C10.3(a) of FS Code** It was discussed in item 2 of ADF 2/2023 held on 5 May 2023 that it was not the intention of BD to restrict uses (such as retail shops, cafeteria, pop-up stores, kiosks, etc) within the atrium compartment. Following the above, we understand that the atrium compartment is not merely restricted to the void space and the circulation aisle along the perimeter of the atrium void, but can also include the mercantile facilities beyond the aisle at each floor adjoining the atrium void (without any fire rated separation fromthe void) as indicatively illustrated in the following sketch section. Please confirm that our understanding is correct.	BD advised that according to Clause C10.3(a) of the FS Code, an atrium should be separated from all other spaces by fire barriers having an FRR of not less than that of those spaces. The commentary to Clause C10.3 supplemented that there was a risk of smoke spread at the atrium that could affect adversely the life safety of the occupants, especially on upper floors of the atrium. Hence, the volume of an atrium should mainly include the atrium itself and fire barriers should be provided to separate the atrium from other

		spaces including shops. Noting that the atrium might be of irregular shape and the alignment of fire shutters along the edge of atrium might be impractical, BD would consider accepting minor arcade and circulation areas adjoining the atrium with relatively low fire risk to be included as part of the atrium compartment. However, mercantile facilities outside the atrium would not be accepted to be included within the same compartment of the atrium void.
	Items raised by HKIE	
8.	**<u>Cast-in Embed</u>** To streamline the approval process, it is suggested to treat the cast-in embeds as typical structural elements with all typical details given in superstructure plans. The design load, alignment and exact location shall be shown in the structural submission for the secondary building elements. Modification of regulation 33(1) of the Building (Administration) Regulations for the installation of cast-in embeds can be applied for once the first consent to the commencement of the superstructure works has been granted.	BD welcomed the proposed streamlining measure. BD advised that structural details, design standards, material specifications, design load and general locations of the cast-in embeds should be clearly indicated in the first submission of superstructure plans, while their exact locations, layout and setting-out could be provided in the subsequent superstructure amendment plans or the structural plans for the corresponding secondary building elements.

9.	**Percentage of Remedial Brackets for Curtain Wall** It is noticed that some BD officers limit the adoption of remedial brackets with drill-in anchors not exceeding 10% of the cast-in embeds of the curtain wall. As random strength test will be conducted on these drill-in anchor, such limitation will certainly restrain the design flexibility and buildability. Would BD please clarify.	BD advised that no such percentage limit was imposed on the remedial works for cast-in embeds. In passing, BD advised that for alterations and additions (A&A) works adopting brackets solely with drill-in anchors for installation of new curtain wall in existing buildings, the sampling rate of at least 5% or 5 numbers, whichever is more, for pull-out test on each type and size of the drill-in anchors on each floor would be imposed.
10.	**Comparison of Total Loading for Foundation Piling Plan Approval** For foundation piling submission, the following two capacity assessment tables are given for demonstration of the technical feasibility of the proposed piling system for approval: a) Column/Wall Loading Schedule: assumed loads on each column/wall of the superstructure on the foundation, e.g. dead loads, imposed loads, wind loads, earth loads including ground water pressure, etc. b) Pile Loading Schedule: magnitude of characteristic dead, imposed, wind and earth loads, including ground water pressure, negative skin friction (if applicable), and others, and their critical combinations acting on each pile. However, some BD officers require the comparison of "the sum of dead load (DL) and live load (LL) of all columns and walls under different pile caps" and "the sum of all pile reactions of the whole structure" to be shown in the piling plans for easy checking.	BD advised that while the total sum of the assumed DL and LL was required to be shown in the Column/Wall Loading Schedule in the foundation plan for BD's approval, the total DL and LL of individual pile cap was not required to be shown on the plan.

	Since the two sets of figures are irrelevant, would BD please clarify their necessity?	
	Items raised by AAP	
11.	**<u>"Means of Escape and Access " in PNAP APP-73</u>** Paragraph 5 of PNAP APP-73 states that "*a service lane, public or private, would not be acceptable as a means of escape and access if it is obstructed, incapable of improvement or obviously in a decaying state.*" We would like to seek BD's advice on the acceptance criteria in this regard.	BD advised that a service lane, public or private, would not be acceptable as a means of escape and access if it was obstructed, incapable of improvement or obviously in a decaying state as stated in paragraph 5 of PNAP APP-73. BD would take into account the physical conditions of the service lane at the material time of submissions. Service lanes obstructed by unauthorised structures or fixtures such as railings, fence walls, security gates, etc. would not be acceptable as a means of escape and access. Under Clause D7.1 of the FS Code, fire service access point (FSAP) should be available either directly from a street accessible by vehicles of the Fire Services Department (FSD) or through an open area having a minimum dimension of 1.5 m and having access free from any obstruction to such a street. BD advised that if access from a street to the FSAP through a service lane was proposed, the AP should demonstrate that the service lane was free from any obstruction for the consideration by BD and FSD.

12.	**<u>Communal Podium Garden for Residential Building</u>** Under paragraph 26 of PNAP APP-42, it is stated that: *"The provision of communal podium gardens, covered landscaped and play areas is encouraged. Where these amenities occur* ***under and within the perimeter of a domestic tower****, a modification of Regulation 23(3)(a) of the B(P)R would be granted, provided the area is open in design and not encumbered with structural elements, and the total area exempted is within 5% of total domestic GFA."* In a typical podium arrangement with residential tower sitting on top, as per below schematic building section, please advise whether it is acceptable to locate the communal podium garden at 1/F or any podium floor other than the floor immediately below the residential tower, provided that the communal podium garden is designated for the exclusive use of the owners, tenants and their visitors only.	BD advised that pursuant to the GFA concession under PNAP APP-42, the communal podium garden should be provided under and within the perimeter of a domestic tower. For the case shown in the "Schematic Building Section", the communal podium garden on 1/F could not fulfill the said requirement for the purpose of GFA concession since it had extended beyond the perimeter of the domestic tower above. In passing, BD reminded that the communal podium garden under PNAP APP-42 and the communal sky garden for residential buildings under JPN No. 1 were subject to different requirements for fulfilling the criteria of GFA concession.

	 SCHEMATIC BUILDING SECTION	
	Items raised by ACEHK	
13.	**Application for Consent to Commencement of A&A works involving Removal of Structure** It is understood that BD's inspection of propping and temporary support is required for granting consent to commencement of **Demolition Works**. In the approval letters of **structural (A&A) works**, however, there is no requirement for the erection of propping or temporary support prior to the	BD advised that the Building (Demolition Works) Regulations applied to the demolition of a building or of any substantial or significant part of a building. For A&A works involving demolition of any substantial or significant part of a building, precautionary and other protective measures including propping and temporary supports, etc. should be installed prior

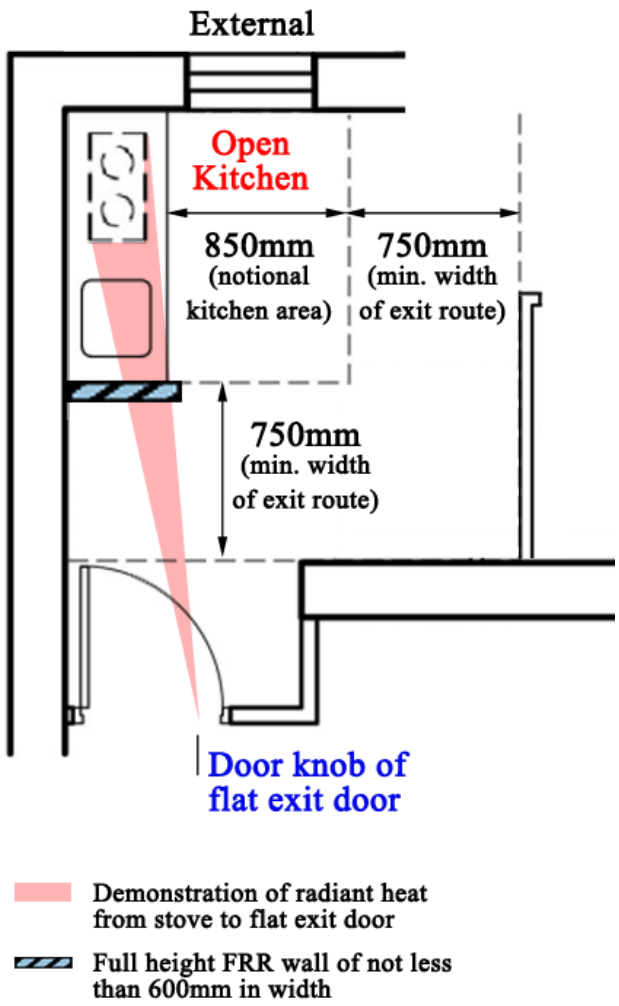
	application for consent to the commencement of A&A works involving the removal of structures, e.g. a portion of structure slab. Our understanding is that all the required propping and temporary support should be installed according to details and construction sequence as outlined in the A&A plans after the consent to commencement of works is obtained, instead of being a pre-requisite condition in applying the consent. We would like to seek BD's view on our understanding.	to consent application of such works, otherwise consent to the commencement of the A&A works would be refused under section 16(3)(bb) of the Buildings Ordinance. BD might impose conditions upon approval of plans on the requirements for the precautionary and other protective measures for A&A works involving substantial demolition works on a case-by-case basis.
14.	**Post-Occupation Permit (OP) Rectification Works Procedures (PRWP) for Replacement of Tempered Glass** Refer to BD's circular letter dated 9 January 2014, PRWP can be used as an alternative to Minor Works Control System (MWCS). If the PRWP involve the replacement of tempered glass, could BD clarify if the quality supervision requirements as stipulated in PNAP APP-37 shall be strictly followed during manufacturing of the replacement tempered glass? To be specific, if the tempered glass is from the same manufacturing plant and the frequency of quality supervision prior to OP as stated in paragraph 13(e)(i) of PNAP APP-37 exceeds 30% of the number of tempered glass panes used in the project, such that it still meets the 30% requirement after counting the extra quantity of replacement tempered glass, does the heat soak process of the replacement tempered glass need to be further supervised by quality control coordinator (QCC) from RC stream and quality control supervisor (QCS) from RSE stream to meet another 30% requirement?	BD advised that if the tempered glass for replacement under PRWP was provided from the same batch of production for the project and the frequency of quality supervision prior to OP still met the 30% requirement on the quantity of the tempered glass for replacement, there was no need for such tempered glass to meet a separate 30% requirement on quality supervision.

	Items raised by AREC	
15.	**<u>Site Formation Plan involving Permanent Soldier Pile or Pipe Pile Wall</u>** In recent site formation plan submissions to BD and GEO, it was noted that corrosion of soldier pile walls in the long run shall be considered, or otherwise, such soldier piles shall only be used for temporary cases. Please advise if a sacrificing thickness of 0.05mm/yr on the steel section is adopted for the design life of the soldier pile wall and the steel section is hot-dip galvanized (say, 85 micro-meter thick), is it acceptable to adopt solider pile wall for permanent cases? Please advise whether the above design is also acceptable for the adoption of pipe pile wall for permanent cases.	BD advised that soldier pile might be used as permanent structure, provided that apart from the Code of Practice for Foundations 2017, assessments with regard to different codes of practices and standards were conducted for consideration by BD and GEO. BD would further discuss with GEO regarding the design and acceptance criteria of the permanent soldier and pipe pile wall.
	Items raised by PBSCA	
16.	**<u>Drainage of Refuse Storage and Material Recovery Chambers</u>** According to regulation 11(1) of the Building (Refuse Storage and Material Recovery Chambers and Refuse Chutes) Regulations (B(RSMRC&RC)R), *"every refuse storage and material recovery chamber (RSMRC) shall be provided, in the floor thereof, with an outlet drain."* As per our understanding, there is no requirement of surface channel to be provided near the entrance door in RSMRC. Please advise whether our understanding is correct.	BD advised that there was no requirement on the provision of surface channel near the entrance door of the RSMRC. BD also advised that the outlet drain should be provided on the floor of RSMRC to facilitate cleansing of the floor. In accordance with regulation 11(2) and 11(3) of the B(RSMRC&RC)R, the outlet drain should also be connected to a back inlet trapped gully for inspection and clearance of blockage in the pipe.

	Also, can the outlet drain be in the form of vertical grating instead?	
17.	**<u>Location of Manholes in Car Park</u>** As there is no restriction on the location of manholes in the car park area, can the manhole or the associated drainage pipes located within the private car parking area be acceptable by the Building Authority (BA), considering that the car can be easily relocated to other places for maintenance of the manhole/drainage pipes, if required? Please advise whether our understanding is correct.	BD advised that all manholes or associated drainage system located at the car parking floors should be conveniently and safely accessible for frequent inspection and routine maintenance to meet the spirits in PNAP APP-93. Manholes or associated drainage system not accessible through common area in car park might also be acceptable if central management and control by a party with the right of entry was available at appropriate time to facilitate frequent inspection and routine maintenance.
	AOB Items	
18.	**<u>Open Kitchen</u>** (Item raised by BD) In a recent review with the stakeholders on the following previous discussion items in ADF on fire safety requirements of open kitchen: • item 7 of ADF 1/2016 held on 15 January 2016, • item 7 of ADF 2/2016 held on 18 March 2016, • item 13 of ADF 3/2017 held on 19 May 2017, • item 4 of ADF 2/2018 held on 23 March 2018, • item 3 of ADF 4/2019 held on 23 August 2019, • item 14 of ADF 5/2021 held on 12 November 2021, • item 18 of ADF 5/2022 held on 25 November 2022, and	Members noted and would observe the requirements accordingly.

	• item 8 of ADF 3/2023 held on 4 August 2023, BD re-iterated that the purpose of the "full height fire rated wall" required for open kitchen under in Clause C13.4(d) of the FS Code was to shield the occupants from radiant heat of stove fires and allow the necessary pause of occupants to open the exit door (and gate, if any). Such wall must be provided at a suitable location in order to serve shielding function. Besides, the notional open kitchen area should include a minimum clear space of 850 mm fronting the cooking slab. The exit route adjacent to the kitchen leading to the flat exit door should be not less than 750 mm in width and should not pass through the notional open kitchen area. A sample drawing illustrating the above requirements was provided below.	

SAMPLE DRAWING PREPARED BY BD



In passing, BD reminded that if a toilet was provided adjacent to the open kitchen, a minimum corridor width of 850 mm separating the toilet and

	notional open kitchen area should be provided.	
19.	**Submission of Electronic Certificates / Test Reports for Building Materials** (Item raised by BD) While works department of the government had been accepting the submission of electronic certificates / test reports with digital signature for building materials, BD encouraged practitioners to do the same via the Electronic Submission Hub (ESH).	Members noted and expected no difficulty would be encountered in submitting certificates / test reports in PDF format via ESH. Members would further liaise with the contractors for the submission of electronic certificates/ test reports with digital signature.
20.	**Issuance of Letters of Notification for the Results of Plan Submission / Consent Application for Structural Works via ESH** (Item raised by BD) To encourage the wider use of ESH, BD advised that the letters of notification for the results of plan submission / consent application for all structural works (excluding A&A works) would be issued in electronic format via ESH only, and no hard copy of such letters would be issued. AP/RSE/RGE should activate their ESH accounts for receiving these letters. For structural plans not submitted via ESH, the set of the processed plans to be returned to RSE would include the hard copy of the first page of the letter of notification for easy reference. BD advised that the above arrangement would be promulgated in March 2024 via circular letter and implemented in September 2024 tentatively. As an interim measure, BD would dispatch these letters via email to	Members noted and would follow the arrangement accordingly. In passing, BD drew members' attention that a tentative roadmap on adoption of Building Information Modelling (BIM) for building plan preparation and submission was issued by the Development Bureau in December 2023 for consultation with stakeholders. The roadmap outlined the key milestones for adoption of BIM by private sector with the ultimate goal of achieving full use of BIM throughout the preparation and approval process of all building plans submitted under the Buildings Ordinance (BO).

	AP/RSE/RGE after the promulgation of the circular letter.	
21.	**<u>Site Safety Matters</u>** (Item raised by BD) BD advised that BSC and APSEC Papers 4/23, 5/23 and 2/24 recently circulated for members' comments regarding enhancement on control of temporary works providing support to tower crane, time frame for reporting non-conformities and site incidents to the Building Authority, and proposed implementation of Smart Site Safety System (SSSS) for private projects, aimed to clarify the duties and responsibilities of AP/RSE/RGE and/or their technical competent persons (TCP) on site safety under the BO, but not to impose additional supervision requirements on AP/RSE/RGE. BD also advised that the registered contractors (RC) bore the utmost responsibility on the safety of works in construction sites. New measures to regulate RC's discharge of their duties and responsibilities in construction sites would be promulgated soon.	Members responded that the proposals in the concerned papers would inevitably increase the responsibility and workload of AP/RSE/RGE and their TCP on site safety matters, as well as putting them in a position susceptible to legal actions in respect of construction site incidents. Members also raised that the adoption of SSSS in construction sites should be subject to the control under the Factories and Industrial Undertakings Ordinance instead of the BO. They suggested that the Labour Department should enhance the requirements on provision of safety officer in construction sites. BD reiterated that all practitioners had their roles in the construction site safety and would respond to members' comments on the said BSC and APSEC Papers.