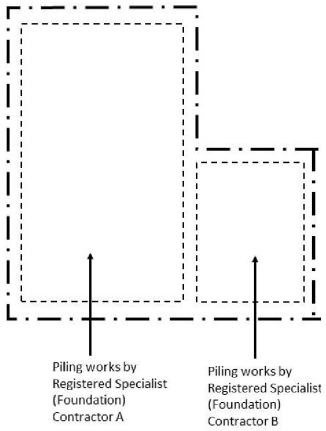
Summary of Items Discussed in 4/2021 APSEC Discussion Forum on 13 August 2021

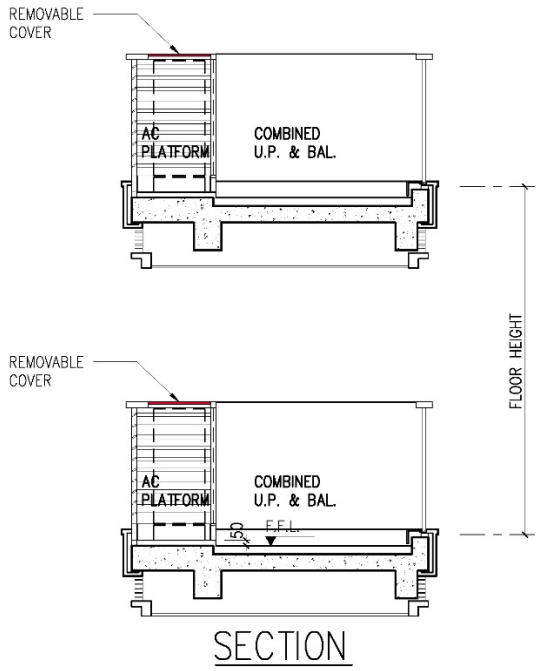
	Items Proposed by Convenors for Discussion	Summary of Discussion and BD's Responses
	Items raised by HKIA	

1.	**<u>Site Coverage and Open Space Provision</u>**
	
	Reference is made to PNAP APP-132. Would BD please advise if our understanding below is correct:
	
	(1) The "total covered area" limit as stated in para 4 of the PNAP, which shall include the features exempted from site coverage calculation under JPN 1 and 2, only applies to the cases which the following areas are to be exempted in the assessment:
	
	(a) unexcavated or backfilled area at a particular level underneath the footprint of a non-domestic or domestic building on a sloping site (example at Appendix C of PNAP APP-132); and
	
	(b) open-sided covered areas of non-domestic buildings qualified as green features under JPN 1 and 2, designated as common areas, accessible by all occupants of the buildings and without any commercial activities.
	
	(2) The total covered area as mentioned above shall not include curtain wall and cladding that are exempted from the calculation of site coverage.
	
	(3) In all cases so long as the criteria in para 3(a) to 3(f) of PNAP APP-132
		BD advised the following:
		
		For (1), HKIA's understanding was correct.
		
		For (2), according to footnote 3 under PNAP APP-132, 'the "total covered area" is the portion of the site covered by building(s) or in simple terms, the footprint of the shadow cast vertically down onto a site… but exclude the projections under PNAP APP-19'. Since curtain wall and cladding were not projections under PNAP APP-19, it should be included in the calculation of "total covered area".
		
		For (3), HKIA's understanding was correct.

	are fulfilled, the allowable site coverage of building at different levels as stated in its Appendix A shall follow the calculation of site coverage as defined under Building (Planning) Regulations (B(P)R) and shall exclude those features such as curtain wall and cladding fulfilling the criteria as set down in PNAP APP-2.	
2.	**<u>Number of Firefighting and Rescue Stairways Required</u>** Referring to Table D1 "Number of Access Staircases, Fireman's Lift and Firefighting and Rescue Stairways (FRS) Required" in Code of Practice for Fire Safety in Buildings 2011 (FS Code 2011), it is our understanding that the determination of required FRS for basement carparks for buildings shall follow the criteria as set down in "item (8) All basements" in Table D1, instead of following the classification of the building aboveground. For example, for a high-rise industrial building under Classification 6 with basement carparks that DO NOT fall into the criteria of 8(a) and 8(b) in Table D1, NO FRS will be required for the basement carparks. Would BD please clarify if our understanding is correct.	BD advised that according to B(P)R 41C (1)(a) and 41C (2), Clauses D15.1, D15.2 and item (7) in Table D1 of FS Code 2011, FRS should be provided to industrial building including any basement in the building. FRS should serve every floor and every part of the building. Ancillary uses such as car parking and loading/unloading areas in such a building should also be served by FRS whatever the ancillary use occupied the whole floor or part of a floor.
3.	**<u>Building Works with More than One Registered Contractors</u>** It is our understanding that more than one Registered Contractors can carry out building works within the same site at the same time, provided that there is a clear demarcation of sites for which the respective contractors are responsible. For example, two Registered Specialist Contractors can carry	BD advised that HKIA's understanding was correct provided that the site works could be structurally and physically demarcated and carried out in accordance with the approved plans and imposed conditions.

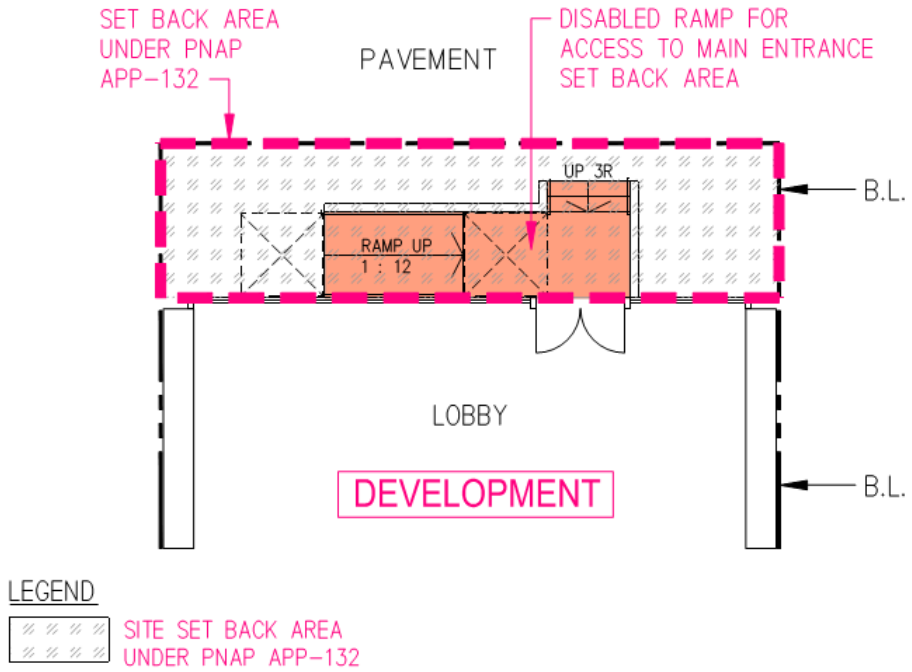
	out piling works within the same site at the same time as per the diagram below. Would BD please clarify if our understanding is correct.  	
4.	**<u>Floor Drain at Kitchen</u>** Para. 2(a) of PNAP APP-164 requires that for the purpose of preventing loss of water seal for the trap of a floor drain, used water from a lavatory basin, a bath or a shower bath should be diverted to replenish the water seal of the said floor drain. For residential units, it is quite often that the kitchen is located at a distance away from the bathroom/lavatory across the living room, and it is hence not desirable/practicable in having the floor drain at kitchen be replenished from the waste fitment in bathroom/lavatory only. We would suggest that used water from the sink of a domestic kitchen be allowed to replenish the	BD advised that used water from a lavatory basin, a bath or a shower bath were considered as suitable source of water for replenishing water seal of floor drain of a kitchen in domestic unit, a toilet or a pantry. Based on past experiences, used water from kitchen sink, which might contain food residue, oil and grease was considered not a suitable source for the purpose. Notwithstanding the above, BD welcomed practitioners to suggest alternatives, if any, for further consideration.

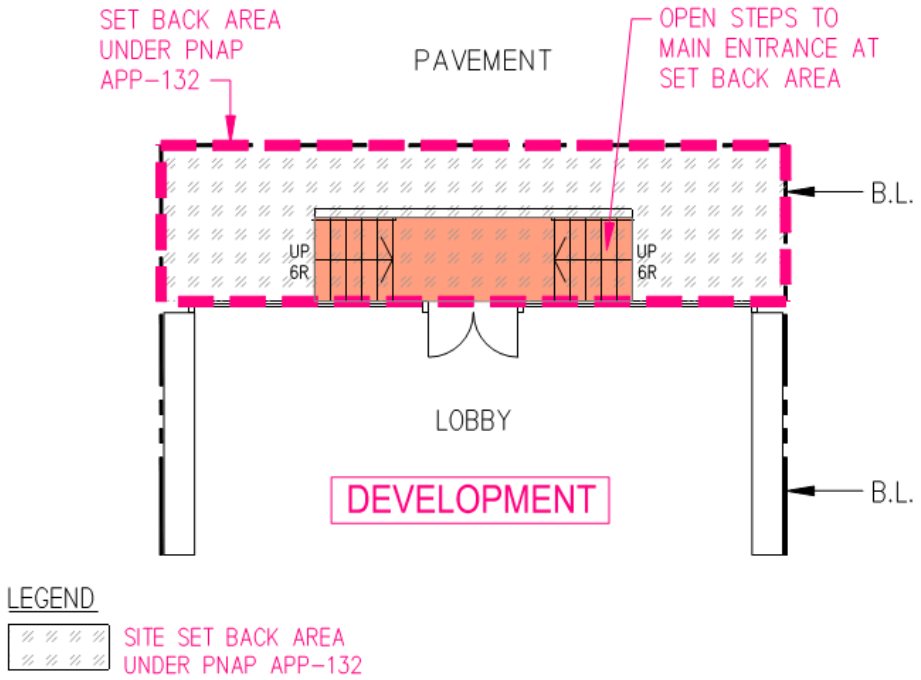
	water seal of the respective floor drain too, considering that the chance of clogging the trap by any grease in the used water is low when the sink is normally used regularly almost every day. Otherwise, designer may simply opt to omit the floor drain provision at domestic kitchen.	
5.	**<u>AC Platform Combined with Balcony/UP</u>** Further to item 2 of ADF 4/2020 held on 26 November 2020, we would like to seek BD's advice on whether a removable cover on top of AC platform is acceptable. The removable cover can serve as a safety measure to prevent direct contact of the AC unit. The proposed removable cover will be located within the AC platform and the top level will not be higher than the screen, therefore not affecting the building bulk.	BD advised that the proposed removable cover was considered not acceptable as it depicted no genuine need for the operation of the AC. In addition, it might also affect the ventilation / heat dissipation and cause concerns on abuse.

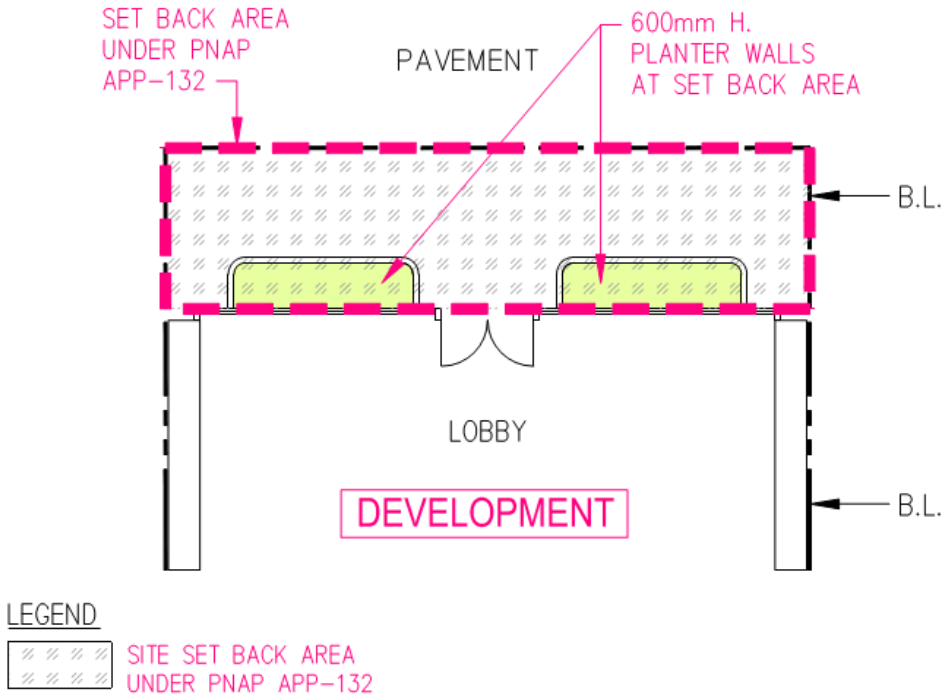
		
6.	**<u>Post-OP Rectification Works Procedure ("PRWP")</u>** Further to item 4 of ADF 2/2019 held on 22 March 2019 and BD's circular letter dated 3 October 2019 regarding repairs to curtain wall, glass wall and cladding, it is our understanding **both PRWP and Minor Works Control System (MWCS)** can be adopted for rectification / replacement of external cladding more than 6 m from adjoining ground, fixed glazing or spandrel glass of curtain wall and fixed glazing of protected barrier etc., provided that these works are shown on the latest approved plans.	BD advised that HKIA's understanding was correct. According to BD's circular letter dated 9 January 2014, PRWP was implemented as an alternative to the simplified requirements under the MWCS. Following the gazette of the Building (Minor Works) (Amendment) Regulation 2020 on 8 May 2020, repair or replacement of curtain wall, window wall and cladding had been designated as minor works under MWCS. Furthermore, repair or replacement of glazing of

	Would BD please advise if our understanding is correct.	protected barrier had already been covered by the MWCS. In this connection, both PRWP and MWCS could be adopted.
	Items raised by HKIE	
7.	**<u>Imposed Surcharge Loads for Buried Structures</u>** For the design of buried structures under public road or private road with EVA provision, we would like to confirm that the surcharge live load (on top and side) of the buried structures (e.g. tunnel, box culvert) shall follow Clause 3.9.1 & Clause 3.3.3 instead of Class 6D given in Clause 3.3 of the Code of Practice (CoP) for Dead and Imposed Loads 2011.	Upon clarification of the enquiry by a member of HKIE, BD would review the case and provide responses to the project RSE in due course.
8.	**<u>Fragmentation Test of Tempered Glass</u>** According to Clause 8.1.2 of CoP for Structural Use of Glass 2018, Fragmentation Test of tempered glass should be carried out in accordance with Section 10 of BS EN 14179-1 after the heat soak process. Would BD please confirm if the method of particle count shall be strictly in accordance with Annex C of BS EN 14179-1 (extracted copy attached).  BS EN 14179-1 2016 - Extracted S	BD advised that fragmentation test of tempered glass should be carried out in accordance with Section 10 of BS EN 14179-1 with examples given in Annex C therein to illustrate the test procedures.

9.	**<u>Management Proposal for Concrete Works</u>** We noted that BD requires the submission of a management proposal to ensure correct grades of concrete are placed for different superstructure elements prior to consent application. Would BD please advise the required content of the management proposal.	BD advised that the subject condition would only be imposed on a case-by-case basis for some projects where different concrete grades were proposed for the structural elements on the same floor (e.g. in a particular project, three and two different concrete grades were proposed for the vertical elements and horizontal elements respectively on the same floor). The project RSE should formulate the management proposal to suit the project requirements and for effective control and differentiation of different concrete grades during concreting process. The project RSE might discuss with BD on the content through an enquiry submission if necessary.
	Items raised by AAP	
10.	**<u>PNAP APP-132 – Site Coverage and Open Space Provision</u>** PNAP APP-132 states that in considering applications for site coverage to exceed the limit laid down in B(P)R using the "setback approach", the BA will favorably consider the application if "the setback area is properly landscaped and/or paved and open, uncovered and without any permanent building structures other than the landscaped features and perforated boundary walls". In this regard, please clarify if the following interpretations are correct: 1. Open disabled ramp and open steps at the set back area are considered	BD advised that the design of the setback area should be considered as a whole for satisfying the purpose of enhancing street environment. According to para. 3(d) of PNAP APP-132, the setback area should be properly landscaped and/or paved and open, uncovered and without any permanent building structures other than landscaped features or perforated boundary walls. For 1 and 2, the open disabled ramp and steps were considered not acceptable. However, under special circumstances due to site constraints (e.g. sloping site), BD would consider the design on the

	acceptable (disregarding from permanent building structure):  	case-by-case basis. For 3, the planters with 600 mm high planter walls was considered acceptable.

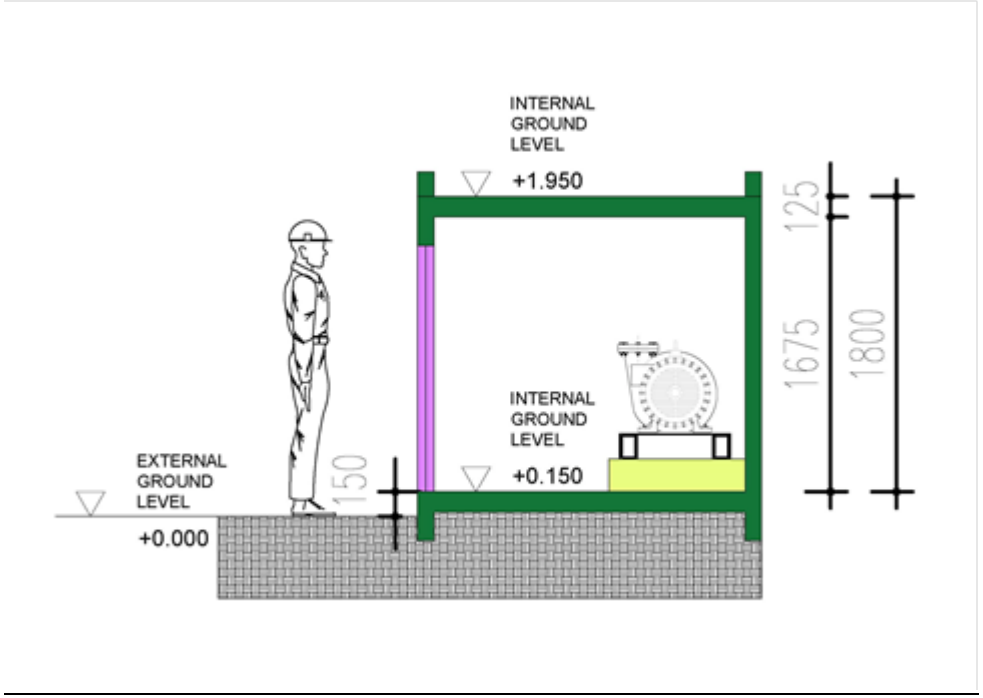
	2. Open steps at set back area are considered acceptable (disregarding from permanent building structure):  	

	3. 600mm height raised planter as landscaped features to be acceptable at the set back area:  	
	Items raised by AREC	
11.	**<u>Management Proposal for Concrete Works</u>** The following consent condition is added in recent superstructure first approval:	[Please see BD's responses in item 9 above]

	12. It is noted that different grades of concrete are used in the construction of the superstructure now approved. Under Building (Administration) Regulation 10, a management proposal to ensure that correct grades of concrete are placed for different elements should be submitted. Under section 16(3)(b) of the Buildings Ordinance, consent to the commencement and carrying out of the superstructure works now approved will not be given until the proposal has been submitted and found satisfactory. What is the acceptable standard for this management proposal and list of required information to be included?	
12.	**<u>Code of Practice for Structural Use of Concrete 2013 (Code)</u>** Refer to the Clause 6.1.5.7(e) of the Code, below: *6.1.5.7 Shear under concentrated loads* (e) Provision for shear reinforcement The use of shear reinforcement other than links is not covered specifically by this code and should be justified separately. If $v_c < v < 2\ v_c$, shear reinforcement in the form of links may be provided in accordance with equations 6.44 and 6.45 in slabs over 200 mm deep to increase the shear resistance. For cases where $v \leq 1.6\ v_c$ shear reinforcement should be provided in accordance with the following equation:	BD advised that Clause 6.1.5.7(e) of the Code was applicable to punching shear checking for flat slab. For design of pile caps, reference should be made to Clause 6.7.3 of the Code. RSE should exercise professional judgement on the application of the above-mentioned relevant clauses in the Code for the design of transfer plates.

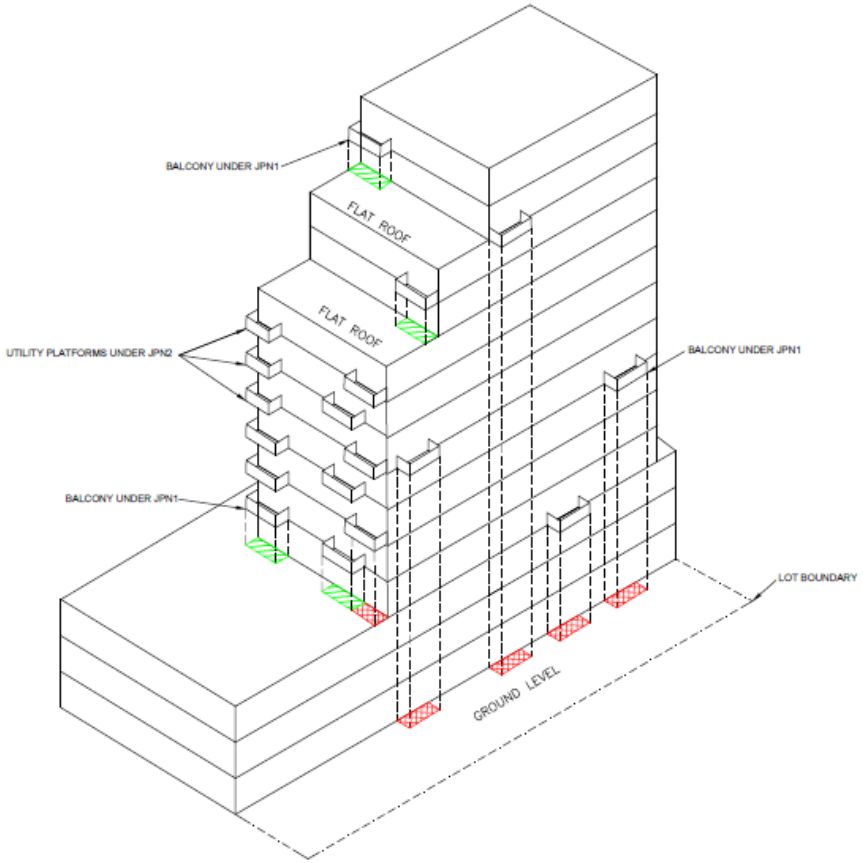
	$\sum A_{sv} \sin\alpha \geq \frac{(v - v_c)ud}{0.87 f_{yv}}$ 6.44 where: f_{yv} is the characteristic strength of shear reinforcement (in N/mm²), ΣA_{sv} is the area of shear reinforcement (in mm²), α is the angle between the shear reinforcement and the plane of the slab. For cases where 1.6 v_c < v ≤2 v_c, shear reinforcement should be provided in accordance with: $\sum A_{sv} \sin\alpha \geq \frac{5(0.7v - v_c)ud}{0.87 f_{yv}}$ 6.45 Equations 6.44 and 6.45 should not be applied where the shear stress v exceeds 2 v_c. Where $v > 2 v_c$ and a reinforcing system is provided to increase the shear resistance, justification should be provided to demonstrate the validity of the design. When using equations 6.44 and 6.45, $\Sigma A_{sv} \sin\alpha$ should not be taken as less than $v_r ud/0.87 f_{yv}$ where v_r is defined in Table 6.2. As stated in this clause, when v > 2v_c, justification should be provided. Is this clause applied when checking the punching shear only? It should not apply to pile cap and transfer plate strip force design.	
	Items raised by PBSCA	
13.	**<u>Requirements on Fresh Air Intake of Mechanical Ventilation System</u>** In the past for kitchen with mechanical ventilation system, the exhaust air outlet and fresh air intake will be checked at the external wall location and assessed if they have sufficient separation to avoid contamination. We understand that the 5 m separation requirement as stated in Annex 2 of PNAP ADM-2 is related to outdoor environmental matters, but the internal kitchen exhaust and fresh air intake ventilation is relevant to effectiveness	BD advised that in granting of modification on B(P)R 30 in relation to kitchens in licensed premises, relevant conditions as specified in Annexes 1 and 2 of PNAP ADM-2 would be imposed including: (i) Provision of mechanical ventilation at a rate of not less than 20 ACH; and

	of ventilation system. Recently, in A&A works, the kitchen exhaust outlet and fresh air intake **inside** the commercial kitchen area have also been checked against the 5 m separation requirement by BD during the inspection for completion of works notified by Form BA14 (BA 14 inspection). As the location of internal ducting usually has yet been fixed during the BA14 inspection and the tenant will carry out works to suit its internal kitchen equipment layout in later stage. Installation of such ducting for the BA14 inspection may result in abortive works due to subsequent alteration by tenant. Appreciate if BD can clarify whether the checking of separation for exhaust air outlet and fresh air intake inside a commercial kitchen is required. But if yes, can BD streamline the inspection to the stage of licensing application?	(ii) Fresh air intake complying the requirements set out in Annex 2 of PNAP ADM-2. Among others, the requirements of fresh air intake should not be located within 5 m from other sources of contamination such as exhaust outlets of the building or adjacent buildings. Upon completion, BD would conduct audit check.
14.	**Floor-to-floor Height of Standalone E&M Plant Room** A recent comment from BD states that the maximum floor-to-floor height of a standalone E&M plant room on G/F for a new building development shall be limited to 1800 mm (See diagram below). Assuming the roof slab to be 125 mm thick, the internal headroom of the plant room will be 1675 mm only. Such headroom is insufficient and not reasonable, which may cause danger to workers who carry out maintenance works in the plant room. Considering the minimum headroom for MOE route is 2000 mm,	BD clarified that there was no such height restriction as quoted. BD advised that the size and headroom of a plant room building should be reasonable, commensurate with the functional use and complied with statutory requirements such as access for maintenance and MOE requirements.

	we believe that such 2000 mm headroom and 2200 mm floor-to-floor height shall be adopted for standalone E&M plant room so that workers can carry out works in the plant room safely. The plant room must not be oversized and will be demonstrated with the equipment layout.  	
	AOB Items	
15.	**<u>Enhanced Communication and Timely Submission of Documents</u>** (Item raised by BD) BD would like to seek Members' views on the following: 1. Enhanced communication and alert system to ensure early detection and	For items 1 and 2, members shared their experience in handling site incidents concerning quality of works and the difficulties encountered for timely submission of structural documents to BD. Members raised

	prompt notification to BD of site incidents concerning quality of work. 2. Timely submission of structural material certificates and testing reports. 3. Timely submission of drain tests in accordance with the regulation requirements	that the heavy workload of laboratories on preparation of test reports / certificates for the building materials had affected the workflow of contractors. To enhance effective handling of documents and proper record, members suggested setting up a link for AP/RSE/RGE to upload the structural documents supplementary to formal submissions. BD would consider members' suggestions and advised that the electronic submission hub was being developed to facilitate submissions of electronic format of documents. For item 3, members noted the submission of certificate on completion of drain test should be made within 7 days from attending the drain test as stipulated in PNAP APP-58 and would observe the requirement accordingly.
16.	**<u>Paperless Submission</u>** (Item raised by BD) Refer to item 7 of ADF 1/2021 held on 22 January 2021 regarding paperless submission for structural documents in CD/DVD, BD would like to inform Members that the revised PNAP ADM-8 incorporating a list of structural documents (Appendix B to PNAP ADM-8) that can be submitted in CD/DVD format as an alternative to the conventional paper format has been issued in July 2021. Refer to item 23 of ADF 5/2018 held on 16 November 2018 , BD would like to remind that similar guidelines on paperless submission of Part II	Members noted and would remind the practitioners to adopt paperless submission for structural documents and Part II structural submissions. Members of HKIE suggested BD to further accept paperless submissions regarding Part II structural submissions for excavation and lateral support, foundation and site formation. BD would consider HKIE's suggestion.

	structural submissions had been promulgated in PNAP ADM-8 in the revision in July 2016. However, the latest statistics indicates that quite a large proportion of the Part II structural submissions were still in paper format. BD would like to solicit the cooperation of the RSEs in supporting the green initiative to submit the Part II structural submissions in CD/DVD format as far as practicable.	
17.	**Exemption of GFA and SC for Covered Areas Underneath Lowest Balcony/UP** (Item raised by BD) Referring to item 9 of 5/2019 ADF and item 18 of 3/2020 ADF held on 22 November 2019 and 29 September 2020 respectively, it was advised that only the covered areas underneath the lowestmost balcony and UP might be fully exempted from GFA and SC calculations. Upon further review and in consultation with LandsD and PlanD, BD would like to clarify that for situation where the upper portion of a domestic building is designed to have setback terraces/flat roofs at its upper storeys, the covered areas underneath balcony/UP over those private flat roofs might also be fully exempted from GFA and SC calculations subject to compliance with the criteria laid down in the respective JPNs and the overall cap of 10% on GFA concession. In cases of innovative design where balconies/utility platforms are staggered (i.e. not in the same vertical alignment) or isolated balconies/utility platforms scattered on the external wall, the covered areas underneath any balconies/UP over ground level/flat roofs of more than one storey might be	Members noted and welcomed BD's clarification. In response to members' enquiries, BD advised that the covered areas underneath the balcony/UP as shown in red colour in the drawing would be disregarded from GFA calculation and no submission of Form BA16 was required for applying for exemption.

	disregard on GFA calculations if the aforesaid balconies/utility platforms are not considered as providing a weather protected shelter of any functional use. Sample drawing is provided below for illustration: SAMPLE DRAWING PREPARED BY BD  	

	 EXEMPTION OF COVERED AREA UNDERNEATH BALCONY/UTILITY PLATFORM FROM GFA CALCULATION UNDER JPN1/JPN2 MAY BE GRANTED SUBJECT TO OVERALL 10% CAP AND THE CRITERIA UNDER JPN3 BEING FULFILLED  GFA NOT ACCOUNTABLE IF THE BALCONY(IES)/ UTILITY PLATFORM(S) ARE CONSIDERED NOT PROVIDED AS A WEATHER PROTECTED SHELTER CAPABLE OF ANY FUNCTIONAL USE	
18.	**<u>Equipment / Building Services Installed at the Soffit of Balcony and UP</u>** (Item raised by BD) Feedback was received from the practitioners that there would be genuine difficulty and hazard in carrying out repair / replacement works for heavy equipment such as A/C unit installed at the soffit of balcony / UP. Examples are shown in the following photographs.	Members noted and would observe the requirements accordingly.

	
- 2 OUs at UP Ceiling. - Gas stove will also be installed in the circled area	- 3 OUs at UP Ceiling

Attention of members is drawn to the following:

(i) Requirements on access for M&R of A/C particular the required working space as outlined in paragraphs 3.1 and 3.2 and appendices B and C of CoP on AfEM should be duly observed. GBP and/or M&R plan with proposed A/C installations not complying the relevant requirements would be disapproved; and

	(ii) In designing the M&R access, in additional to the requirements under CoP on AfEM, AP should exercise his/her duty of care and observe other relevant statutory occupational safety requirements such as OSHO and FIUO (Appendix D of CoP on AfEM is relevant). Work-related hazards arising from work-above-ground / work-at-height and the corresponding necessary safety precautions should be duly considered in preparing the M&R plan.	