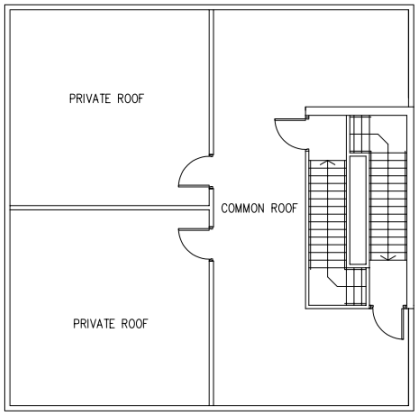
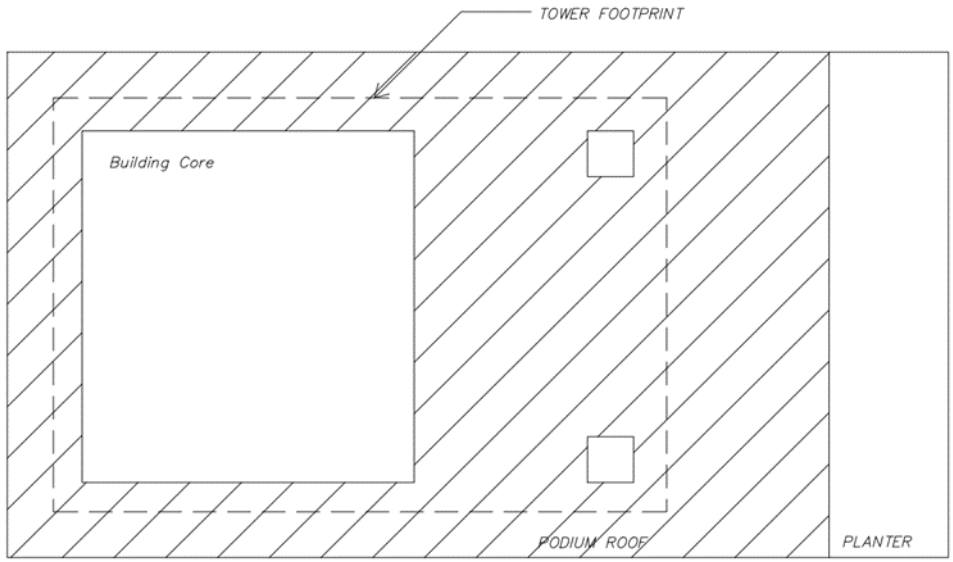
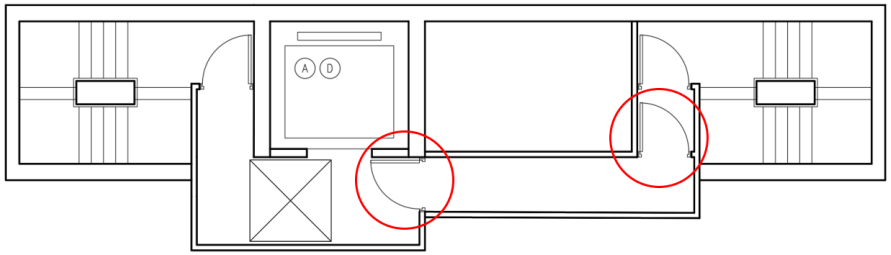
Summary of Items Discussed in APSEC Discussion Forum (ADF) 3/2024 on 9 August 2024

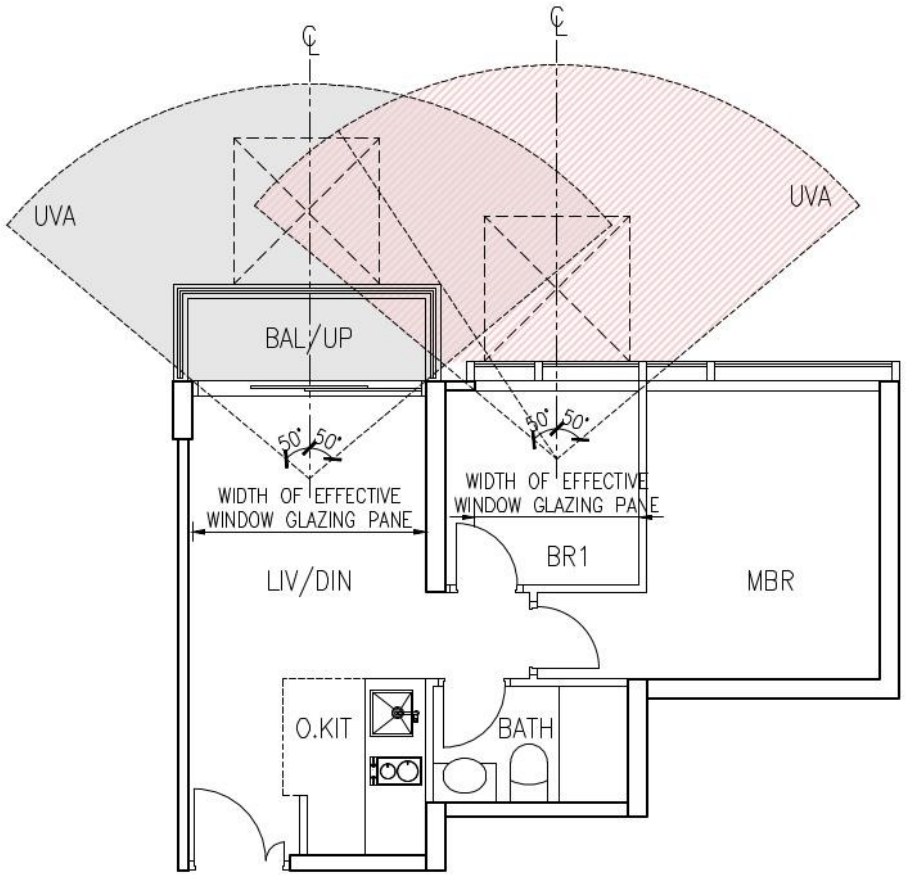
	Items proposed by Convenors for Discussion	Summary of Discussion and BD's Response
	Items raised by HKIA	
1.	**<u>Gross Floor Area (GFA) Calculation of Rooftop Staircase Hoods</u>** In some development projects, **private residential roofs** are located on the main roof, the common part of which are used as the exit route serving the private roofs discharging into the required staircases as illustrated below. **Both the private roofs and common roof are not GFA-accountable**.  As there are no accountable GFA on the roof, it is the HKIA's understanding that the required staircases on the main roof are not GFA-accountable. Please clarify if our understanding is correct or not.	Staircase of reasonable size on roof might not be accountable for GFA if there was no commercial activities / uses on the roof or there was no area accountable for GFA.

2.	**<u>Projecting Greenery</u>** Paragraph 1.2 in Appendix B to PNAP APP-152 allows minor building features, including **minor projecting features as described in paragraph 3 of PNAP APP-19** to be disregarded in the building separation assessment. Paragraph 3(g) of PNAP APP-19 includes window flower boxes projecting not more than 500 mm. Would BD please clarify if the **projecting greenery at common parts of building**, satisfying the requirements of exemption from plot ratio (PR) / site coverage (SC) calculation in paragraph 9 of PNAP APP-19, can be disregarded from the building separation assessment under PNAP APP-152?	BD advised that whether the projecting greenery at common parts of a building satisfying the requirements under paragraph 9 of PNAP APP-19 could be disregarded in the building separation assessment would be considered on case basis taking into account the design and permeability of the projecting greenery.
3.	**<u>Refuge Floor cum Communal Podium Garden</u>** In PNAP APP-122, there are detailed requirements for refuge floor cum sky garden. We suppose that the same is applicable to refuge floor cum podium garden. Clause B18.2(b) of the FS Code states that *"the net area for refuge should be not less than 50% of the total gross floor area of the refuge floor and should have a clear headroom of not less than 2300 mm"*. As illustrated in the diagram below, the sum of the uncovered area and the covered area of the communal podium garden is not less than 50% of the total GFA of the largest tower floor plate. We would like to seek BD's advice if the arrangements of using the	BD advised that podium gardens were usually located on the lower portion of a development and close to the final discharge at ground storey. As such, the arrangement of refuge floor cum podium garden was considered not desirable and effective in serving the purpose as a refuge for the occupants in case of fire.

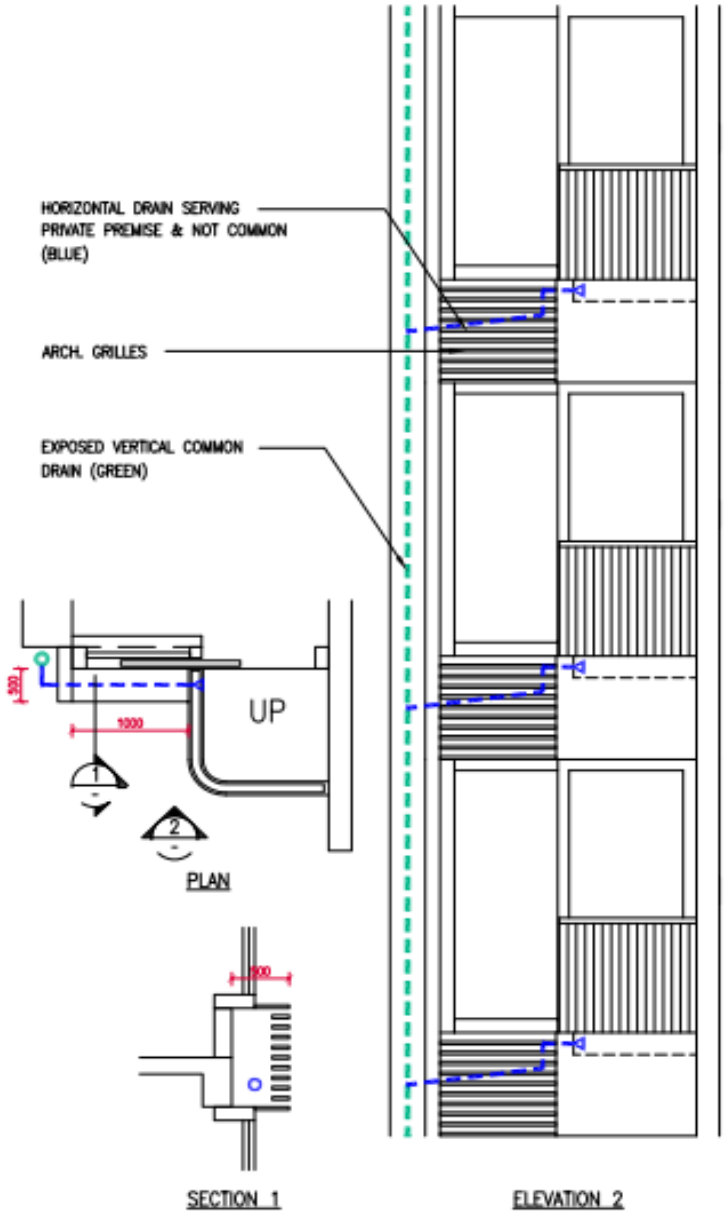
	communal podium garden as refuge floor (i.e. refuge floor cum communal podium garden) and designating the both the uncovered and covered areas of the communal podium garden as refuge area are acceptable or not.  HATCHED AREA ≥ 50% OF TOWER FOOTPRINT, therefore OK	
4.	**<u>Automatic Door for Protected Lobby</u>** Automatic door mechanism, i.e. automatically open when sensing an approaching individual, shall be acceptable for the door between general floor area and the fireman's lift/protected lobby if the automatic mechanism will be disabled upon actuation of an automatic heat or smoke detection system or a fire alarm.	BD advised that according to Clause B13.7(a) of the FS Code, the self-closing mechanism of every door to a required staircase or a protected lobby of a required staircase should not be capable of allowing a check action to hold the door open. Clause B13.8 also required that "hold-open device" should not be installed at the doors to a required staircase or its protected lobby. Similarly, automatic door mechanism

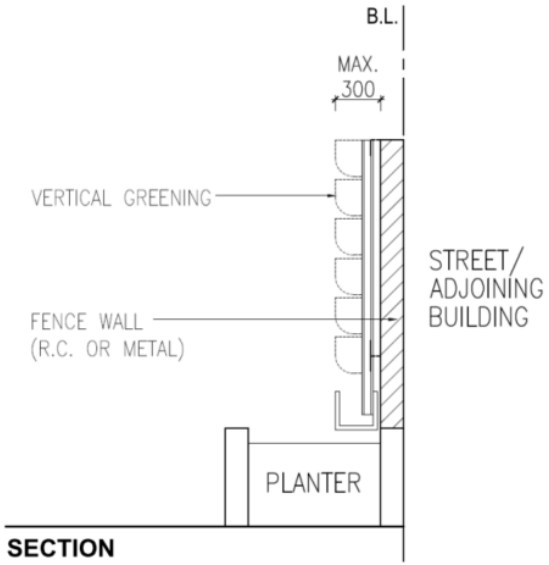
	 It is the HKIA's understanding that the circled exit doors as shown in the above diagram are all acceptable for incorporating automatic door mechanism as per description above. Would BD please advise if our understanding is correct or not.	was considered not desirable for the doors to a required staircase or its protected lobby. For fireman's lift lobbies not serving as protected lobbies of the required staircase, the installation of the automatic door mechanism on the doors of these lobbies would be considered on case basis, subject to no objection from the Fire Services Department (FSD).
5.	**<u>Fire Resistance Rating for Lift Doors of Alteration and Addition (A&A) Projects</u>** Lift doors for many old buildings may not have fire resistance rating. Since fire-rated lift door is usually thicker than non-fire-rated door, this will render enlargement of lift shaft for upgrading of non-fire-rated lift door to fire-rated lift door. Based on the above, we would like to seek BD's acceptance that upgrading of fire-rated lift door will not be required should there be evidence from lift supplier that thicker lift door is needed.	BD advised that according to paragraph 3(a) of PNAP APP-153, generally only the areas affected by the proposed A&A works would be required to comply with the requirements of the FS Code. Nevertheless, HKIA could provide the details of the subject case for further consideration.
6.	**<u>UVA encroaching on Balcony and Utility Platform (UP)</u>** It is our understanding that the window/door of the living/dining room facing	BD advised that HKIA's understanding was correct and the scenarios

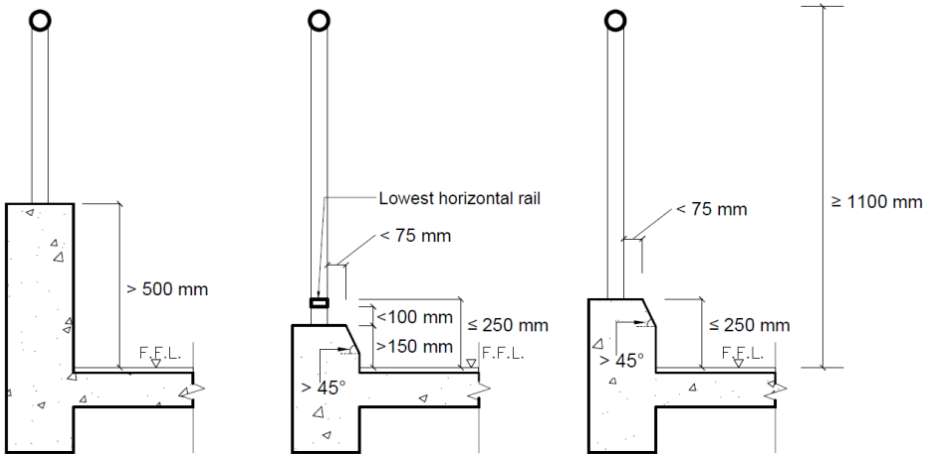
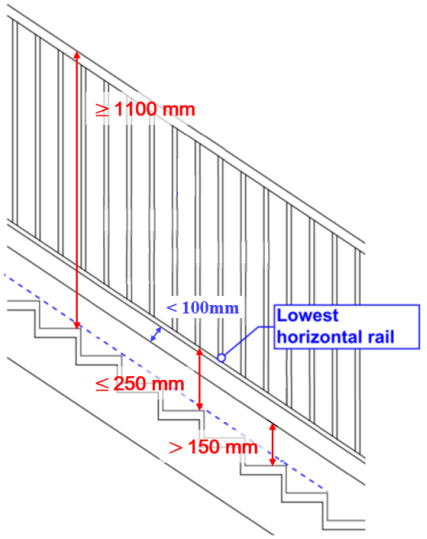
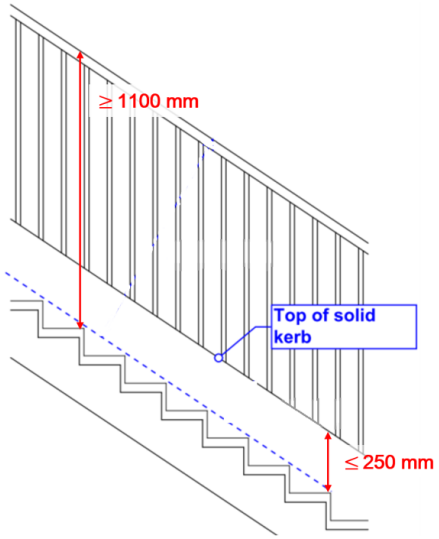
	the balcony/UP is considered satisfying the performance standards on the provision of natural lighting and ventilation for the purpose of regulations 30, 31 and 32 of the Building (Planning) Regulations by the unobstructed vision area (UVA) method under PNAP APP-130. By the same token, as illustrated in the below diagram, for the UVA of the adjacent room of the same unit, it is our understanding that the area of the UVA encroaching onto the balcony and UP can also be included into the UVA area calculation. Would BD please confirm if our understanding is correct or not.	depicted in the diagram were generally acceptable. In passing, BD advised that PNAP APP-130 was currently under review including the measurement of UVA in relation to projecting features such as balcony, UP and A/C platform.

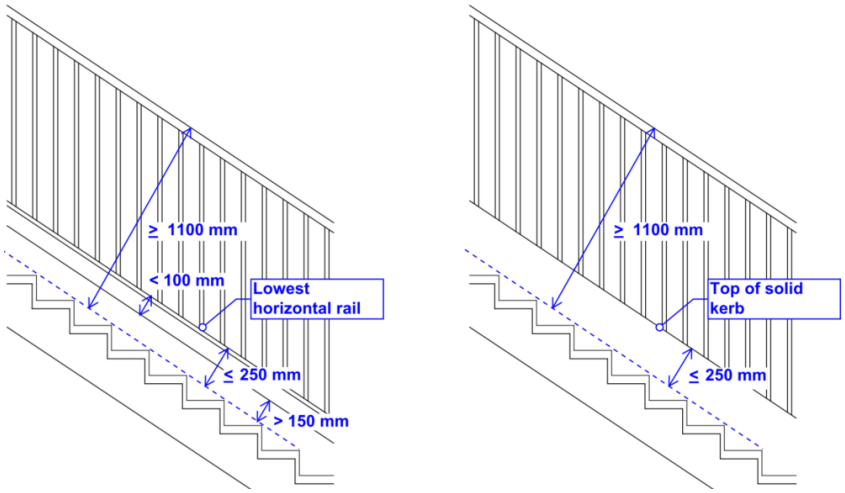
		
7.	**<u>Maintenance of External Drain not being a Common Drain</u>** According to the objective provided in paragraph 3 of PNAP APP-93, *"... to facilitate the future maintenance of common drains..."*, the whole PNAP including its appendices are not applicable to drains solely serving a private premise and are not a common drain. As such, any external drain that is not a common drain on the external wall shall not need to comply with the	BD advised that the requirements set out in paragraph 7 of PNAP APP-93 were applicable to the connections between the external drainage pipe serving a private premises and the common drainage pipe. BD also reminded that for the maintenance of external drainage works,

	requirements in Appendices B and C to the said PNAP, even if it is fully or partially enclosed by architectural features, provided that maintenance and inspection works can be carried out via a building maintenance unit. Would BD please clarify if this understanding is correct or not.	the requirements stated in the Code of Practice on Access for External Maintenance 2021 (AfEM Code) should be observed.


HORIZONTAL DRAIN SERVING
PRIVATE PREMISE & NOT COMMON
(BLUE)
ARCH. GRILLES
EXPOSED VERTICAL COMMON
DRAIN (GREEN)
UP
1000
300
1
2
PLAN
300
SECTION 1
ELEVATION 2

8.	**<u>Vertical Greening</u>** It is general practice that a boundary fence wall of reasonable height and thickness is not accountable for SC and GFA calculations. Our understanding is that vertical greening (modular type/wire type) installed on a boundary fence wall in compliance with PNAP APP-152 or any additional provision for greening purposes shall be exempted from SC and GFA calculations, provided that the thickness of the vertical green wall system is reasonable and the modification of regulation 23(3)(a) of the Building (Planning) Regulations is granted by BD. Would BD please advise if our understanding is correct or not.  	BD advised that according to paragraph 3(n) of PNAP APP-19, metal supporting frames for growing of plants (including vertical frame for climbing and/or weeping plants and panel/modular planters) projecting not more than 300 mm from the external walls within lot boundary could be excluded from site coverage and plot ratio calculations under the Building (Planning) Regulations. The same principle was also applicable to similar metal supporting frames projecting from a fence wall.

9.	**Protective Barrier – PNAP APP-110** According to paragraph 3 of PNAP APP-110 issued in June 2024, if the bottom solid curb portion is less than 500 mm, the height of curb of railing type protective barrier must be not less than 150mm and not more than 250 mm above the adjoining floor level, as shown in the following illustrations extracted from Appendix A to the said PNAP, in order for the curb not to be regarded as an adjoining floor level.  **Railing type protective barrier** For staircases requiring a protective barrier, the measurement should be based on the diagrams below. Could BD please clarify if the HKIA's understanding is correct or not?	BD advised that the measurements should be taken in a vertical manner from the highest point of each tread to the top of the balustrade as illustrated in red in the diagrams below for fulfilling the requirements laid down in PNAP APP-110.  

		
10.	**<u>Streamlining Approval Process</u>** It is the government's policy to streamline the development approval process and the BD would be in support of this policy. In many projects, it is quite common that idling on site for 3 months is encountered to wait for consent to commence next stage of works after submission of the notificaiton of completion of foundation works: 1. Day 1 – Submission of Form BA14 for Foundation Works 2. Day 31 – Selection of pile for Proof Test 3. Day 45 – Pile testing and inspection 4. Day 61 – Form BA14 Acknowledgement of Foundation Works & submission of Form BA8 for Pile Cap 5. Day 89 – Granting of Consent for Pile Cap	BD advised that to facilitate the development process, the following streamlining measures had been implemented for processing the completion of foundation works: (i) The review of piling design with back-analysis and the updated pile loading schedule plan as required under PNAP APP-18 could be submitted together with Form BA 14 for certifying completion of piling works. BD would proceed to select piles for proof load test within 14 days upon receipt of all essential information of pile installation and process the pile loading schedule plan concurrently. For details, please refer to BD's circular letter on "Streamlining Measures for Structural Works" issued on 27 February 2023.

	6. Day 90 – Submission of Form BA 10 for Pile Cap 7. Day 97 – Commencement of works for Pile Cap We would like to seek BD's advice if there are ways to streamline and shorten the above process.	(ii) BD would accept alternative arrangement for witnessing pile proof load test to be conducted by videotelephony and video record upon application from the AP/RSE. For details, please refer to BD's Circular Letter on "Alternative Arrangement for Witnessing Foundation Proof Load Test" issued on 2 June 2023. (iii) Upon notification from AP/RSE, BD officers would witness the pile proof load test(s) within 5 working days from the day of notification. (iv) For driven piles, consent for installation of working piles might be granted without completion of proof load test on trial piles provided that the result of Pile Driving Analyser test with Case Pile Wave Analysis Program analysis of trial piles were found satisfactory and relevant conditions for granting consent were fulfilled. For details, please refer to the said circular letter issued on 27 February 2023. (v) As it was not uncommon that excavation and lateral (ELS) works would be carried out concurrently with foundation works, consent would be granted to the commencement and carrying out of vertical retaining elements of ELS works together with the initial stage of excavation works not exceeding 1.5 m below ground level and erection of the first layer of lateral supports (if applicable). For details, please refer to the said circular letter issued on 27 February 2023.

		Members welcomed the above streamlining measures.
11.	**Signing of Site Formation Plan - PNAP APP-141** Table 4 of Appendix B to PNAP APP-141 excerpted below clearly states the individual responsibility of AP/RGE/RSE for signing site formation plans:- **4. Site Formation** It is our understanding that only the relevant drawings of the submission plans need to be signed by the AP, RGE, or RSE. The AP does not need to sign the entire set of submission plans, even though the AP is the party who submitted the site formation plans to the BD. Would BD please clarify if our understanding is correct or not?	BD advised that HKIA's understanding was correct. The AP, RSE and RGE should sign the site formation plans in accordance with Table 4 of Appendix B of PNAP APP-141.

Buildings Ordinance & Regulations	Brief Description of the Requirement	Signing of Plans	Signing of Supporting Documents	Supervision of Works	Certification of Completion
B(A)R 8(1)(bb)	Site formation plans are prescribed plans	AP* - General layout plan showing location of site and extent of works, and connection of proposed surface drainage to public drains	RGE to sign Geotechnical Reports and supporting documentations	The RGE appointed shall give such periodic supervision and make such inspections as may be necessary to ensure that the geotechncial works are being carried out in general accordance with the provisions of the Ordinance and regulations and with the plans approved by the BA, and the supervision plan prepared in compliance with the technical memorandum issued under section 39A of BO, and Qualified Supervision imposed under BOs.17(1)(6)(e) as set out in PNAP 83 RSE- supervision of structural works	AP* to certify completion of site formation works
B(A)R 11A	In area number 1 of the scheduled areas, foundation plan to be submitted with site formation plan	RGE – All site formation plan except general layout plan and plans involving structural details only	RGE to sign Performance Review Reports and supporting documentations on the completed site formation works as required under BOs.17(1)(6)(g).		RGE to certify completion of geotechnical aspects of site formation works
B(C)R 20	Site formation works to be designed and constructed to have adequate margin of safety and would not adversely affect any structure, etc.	RSE – plans showing structural details	RSE to sign structural calculations and structural assessment reports		If structural works are involved, RSE to certify the structural works.

12.	**<u>Air-conditioner (AC) Platform for Non-Domestic Portion</u>** It was previously discussed at item 3 of ADF 1/2021 held on 22January 2021 that under item (h)(ii) of Appendix B to the AfEM Code, individual AC platforms must not be erected at the external walls of the building where AC platform combined with balcony and/or UP (the 'combined features') are provided. BD further clarified that such requirement is applicable to the **entire development (including the non-domestic portion of a composite development).** However, for composite developments comprising **Government Accommodation** (e.g. Child Care Centre, Day Care Centre for the Elderly, etc.), there have been comments from relevant government departments requiring the provision of **simple AC design** where **AC platforms** are to be reserved for accommodating **split type AC or partial VRV system,** instead of provision of AC plant rooms for accommodating the more costly centralised AC system. Based on the comments from relevant government departments as abovementioned, we would appreciate if BD could re-consider to permit such **Government Accommodation** located at the non-domestic portion of a composite building be provided with **AC platform**, albeit that the residential units at the tower portion above (which can be considered as a separate building under the purview of section 2(1) "Interpretation" of the Buildings Ordinance (BO)) are designed with the combined features. Extract of typical comments received from the Social Welfare Department regarding the provision of AC platform in a reference case of Government	BD advised that their response in item 3 of ADF 1/2021 was still pertinent. AC design with support from relevant government departments would be favourably considered on case basis.

	Accommodation is attached below for easy reference. **Building Service perspective** 1. Please be reminded that separate A/C system should be designed for CCC. A/C design should be kept simple as far as practical (A/C platforms should be reserved for splint-type A/C or partially VRV system). Please re-consider & revise the A/C plantroom to outdoor A/C platform as shown on the submitted arch layout.	
	Items raised by HKIE	
13.	**Resistance for Piles Subject to Uplift Forces** According to item 8 of ADF 1/2020 held on 10 January 2020, BD confirmed that the cone weight need not be checked under R_a case for pile subjected to uplift force. Clause 5.3.3(1) of the Code of Practice for Foundations 2017 (Foundation Code) states that *"piles subject to uplift forces should satisfy the requirements of the ultimate anchorage resistance R_u & the allowable anchorage resistance R_a of the piles stipulated in clause 5.1.6. The anchorage resistance of the piles to resist uplifting force can be determined from sub-clauses (2) and (3) below as appropriate. Where other engineering methods are used and the allowable uplift resistance of the pile shaft is based on the ultimate uplift capacity of the pile shaft, the applied factor of safety should not be less than 3 unless the ultimate uplift capacity or the parameters for assessing the ultimate uplift capacity have been verified by tests. In no cases should this factor of safety be less than 2."* In this context, I would like to seek BD's confirmation on whether, in checking the uplift resistance of piles, the R_a needs to be limited by $R_u/2$,	BD advised that according to the amendment to Clause 5.3.3(1) of the Foundation Code promulgated in item 10 of Appendix A1 to PNAP APP-18 in February 2021, factor of safety of not less than 2 or 3 was only applicable to anchorage resistance of piles derived from bond resistance. BD also advised that when checking the uplift resistance of piles, there was no need to limit R_a to $R_u/2$, where R_u was estimated based on the effective weight of soil column and rock or soil cone.

	where R_u is estimated based on the cone weight of soil and rock.	
14.	**Streamlining the Application for Modification of Regulation 33(1) of the Building (Administration) Regulations (B(A)R) for Ancillary Structures** Modification of regulation 33(1) of the B(A)R can be applied for once the consent for superstructure works has been granted. However, it is noted in the approval letters of ancillary structures like curtain wall, balustrades, etc. that RSE are required to submit Form BA16 for such modification together with the application for consent for such works. As there are a great number of ancillary structures involved in modern buildings, such requirement will create unnecessary workload to both BD and the industry. To streamline the procedures, it is suggested that the modification of regulation 33(1) of the B(A)R for superstructure works be extended to cover all associated ancillary structures once their first consent has been obtained.	BD advised that PNAP ADM-19 was under review to streamline the procedures of the application for modification of B(A)R 33(1) for secondary structural elements.
15.	**Streamlining the Application for Modification of Section 31(1)(a) of the Building (Construction) Regulation (B(C)R)** For curtain wall amendment submission, modification of section 31(1)(a) of the B(C)R has to be applied for in case cast-in embeds are misaligned/re-aligned and drilled-in anchors are proposed as remedial measures for fixing the curtain wall. As it has been confirmed in item 9 of ADF 1/2024 held on 23 February 2024 that there is no percentage limit on the use of remedial brackets using drill-in anchors, it is suggested that once modification of section 31(1)(a) of the B(C)R has been granted for the first curtain wall amendment, there is no need to apply for such modification	BD advised that the suggested arrangement was not acceptable. According to section 31(1)(a) of the B(C)R, a curtain wall support of a building must be fixed on to a load-bearing structure of the building by a cast-in anchorage in a structural concrete member of the structure. Notwithstanding that there was no percentage limit on the use of drilled-in anchors as remedial fixing for the curtain wall, subsequent amendment with revised anchorage system should be considered on case basis. BD advised that feasibility of administrative streamlining to

	again for subsequent curtain wall amendment with increased number of drilled-in anchors.	minimise the number of modification application could be studied.
16.	**Minimum Number of Large Diameter Bored Piles subject to Post-construction Proof Drilling** Upon the satisfactory submission of Form BA14 for large diameter bored piles, BD would require proof drilling of a certain number of bored piles subject to a minimum number of two, even for sites with only four bored piles. As interface coring test, sonic logging test and Koden test have been carried out for each bored pile to prove their quality, a minimum number of two test piles for sites with only a few bored piles would seem to be too demanding and uneconomical. Would BD revisit the minimum number of bored piles for proof drilling test taking into consideration of the total number of bored piles covered by the relevant Form BA14?	BD advised that a minimum of 2 proof core-drilling tests would be required for the certificate on completion of foundation works with more than 20 nos. of large diameter bored piles. For sites with not more than 20 nos. of large diameter bored piles of any diameters, only one of the piles would be subject to post-construction proof drilling.
17.	**Conditions Imposed upon Adoption of Presumed Allowable Values of the Founding Stratum given in GEO Technical Guidance Note No. 53 (TGN 53)** For the adoption of a higher presumed allowable bearing pressure for Category 1(a), 1(b) and 1(c) rock according to TGN 53 issued by the Geotechnical Engineering Office (GEO), BD will impose the conditions stated in paragraphs 6(a), 6(b) and 6(c) of Appendix C to PNAP APP-18 on approval of foundation plans. As such requirements should have been fulfilled before the piling plans are approved, there is no need to impose such conditions in the approval letter and further checking of settlements will be	BD advised the requirements set out in paragraphs 6(a), 6(b) and 6(c) of Appendix C to PNAP APP-18 were to review the settlement of the foundation and assess the structures above with as-constructed pile lengths/founding levels in consideration of the soil-structure interaction after completion of the foundation works. As the as-constructed conditions could be different from the tentative ones, the requirements were considered necessary to be imposed in the approval letter.

	subject to the requirements arising from the variation of as-constructed pile lengths according to paragraph 17 of Appendix C to PNAP APP-18. Would BD review if the requirements stated in paragraphs 6(a), 6(b) and 6(c) of Appendix C to PNAP APP-18 could be revoked for piling plan approval?	In passing, a settlement monitoring scheme should be submitted for agreement and subsequent implementation to monitor the performance of foundations throughout the construction of superstructure. A final performance review report on the settlement behaviour should be submitted prior to the application for occupation permit (OP) or submission of Form BA14 for A&A works as stipulated in paragraphs 6(d) and 6(e) of Appendix C to PNAP APP-18.
18.	**Flat Slab Design** Following the discussion in item 7 of ADF 5/2022 held on 22 November 2022 on flat slab design regarding the applicability of the relevant clauses in the Code of Practice for Structural Use of Concrete 2013 (2020 Edition) when employing finite element analysis (FEA) for flat slab analysis, would BD please provide an update on the conclusion of the considerations by the Technical Committee on Code of Practice for Structural Use of Concrete.	BD advised that the matter was under deliberation by the said Technical Committee.
19.	**Presentation of Structural Information in Submission of Superstructure Plan** In item 7 of ADF 2/2024 ADF held on 3 May 2024, BD advised the details of lateral wind loads extracted from the wind tunnel test report, which are subjected to changes throughout the design and construction stage, should be shown in the structural plans for approval.	BD advised that the matter was under review. [**Post-meeting note**: After reviewing of the current requirements, BD had streamlined the requirements and only the following key information were required to be shown on the superstructure plan for

	However, BD confirmed that they would review the essential information of lateral wind load to be shown on structural plans for approval. Would BD please advise the outcome of their review.	approval: (a) a diagram showing the orthogonal wind directions of the subject building and the relationship between the building local axis and actual northing (N); (b) the height of building (H), the wind reference pressures or design wind loads of each wind directions at the topmost level with the corresponding effective height (Z_e); (c) directionality factors (S_θ); (d) topographic multipliers (S_t); (e) force coefficient (C_f); and (f) size and dynamic factors ($S_{q,z}$). Illustrative examples were shown below for reference:

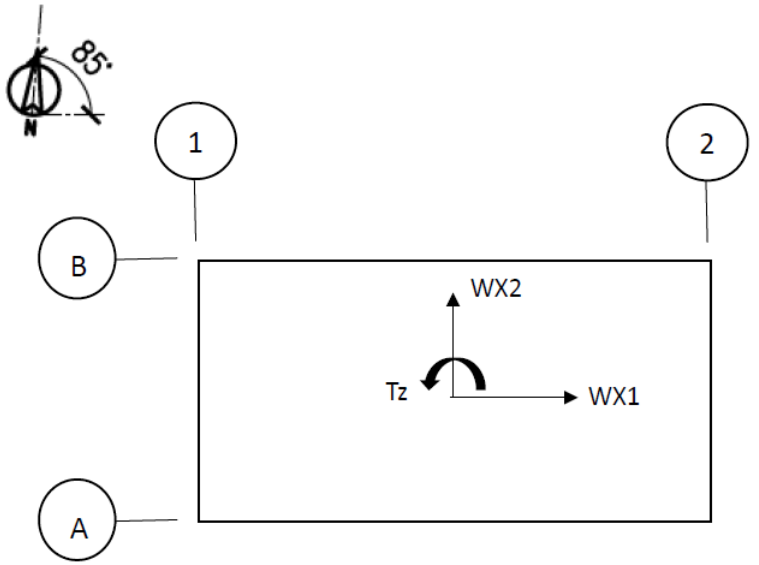


Figure 1 – Diagram showing wind directions and the relationship between the local axis and northing (N)

		+WX1		-WX1		+WX2		-WX2	
Directionality Factor, S_θ		0.84		0.85		0.85		0.84	
Topographic Multiplier, S_t		1.72		1.52		1.72		1.39	
Force Coefficient C_f		1.13		1.13		1.10		1.10	
Size and Dynamic Factor $S_{q,z}$		0.95		0.95		1.02		1.02	
		Z_e	$Q_{o,z}$	Z_e	$Q_{o,z}$	Z_e	$Q_{o,z}$	Z_e	$Q_{o,z}$
Wind Reference Pressure, $Q_{o,z}$ (kPa)	R/F	12 m	2.04	13 m	2.06	12 m	2.04	14 m	2.09

Notes: 1. Height of building, H = 16 m

Example 1 showing the wind reference pressures of each wind direction at the topmost level with same design factors applied for all levels

(values are indicative only)

Floor	Effective Height, Z_e (m)	Size and Dynamic Factor, $S_{q,z}$		Design Wind Force (kN)				Torsional Force, T_z (kNm)
		(WX1)	(WX2)	$W_{z,+x1}$	$W_{z,-x1}$	$W_{z,+x2}$	$W_{z,-x2}$	
R/F	12	0.95	1.02	220	-223	107	-106	528

Notes:

1. Height of building, H = 13 m
2. Topography factor, S_t = 1.0
3. Force coefficient, C_f = 1.15 (WX1) and 1.106 (WX2)
4. Directionality factors, S_θ for each wind direction:

+WX1	-WX1	+WX2	-WX2
0.84	0.85	0.85	0.84

Example 2 showing the design wind loads of each wind direction at the topmost level with same design factors applied for all levels

(values are indicative only)

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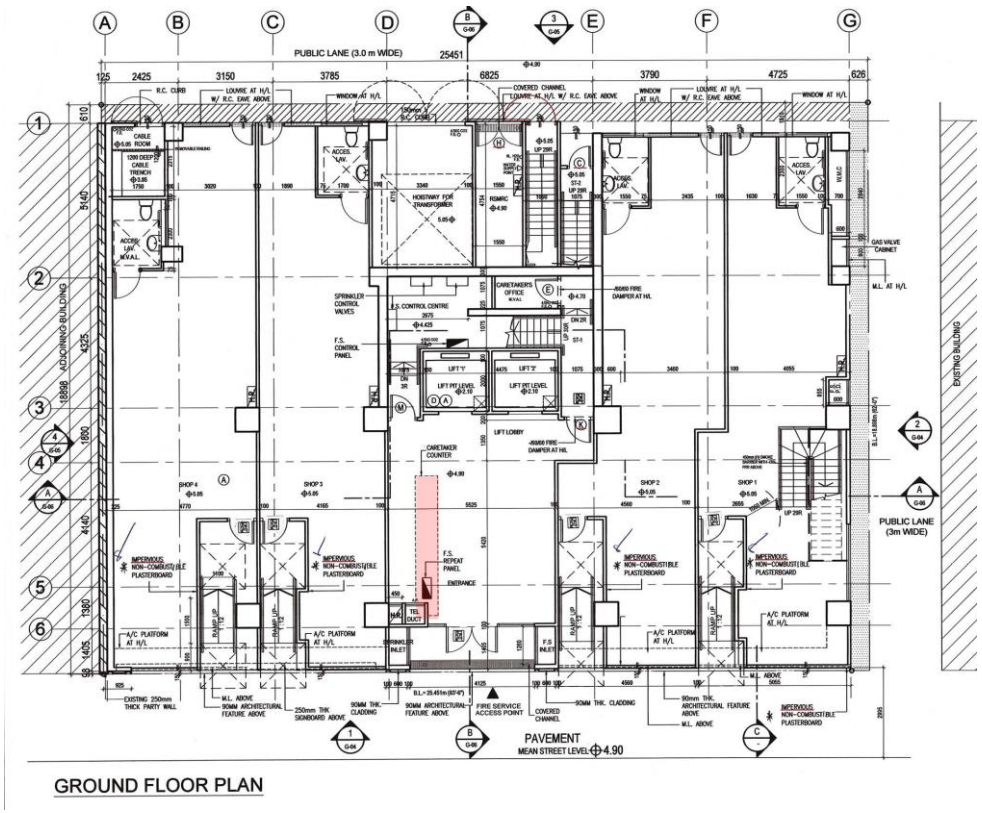
	Items raised by AAP	
20.	**<u>Caretaker Counter at the Access to Fireman's Lift at Ground Floor</u>** To revisit item 17 of ADF 4/2023 held on 17 November 2023, it is a usual practice that a caretaker counter at G/F lobby can open directly to the passage from the fire service access point (FSAP) to the fireman's lift as illustrated in plan below and is acceptable to BD. Please confirm if such understanding is correct.	BD advised that the arrangement depicted in the diagram generally complied with Clause B9.1 of the FS Code. As regards Clause D7.3(b), the case would be favourably considered subject to no objection from FSD.

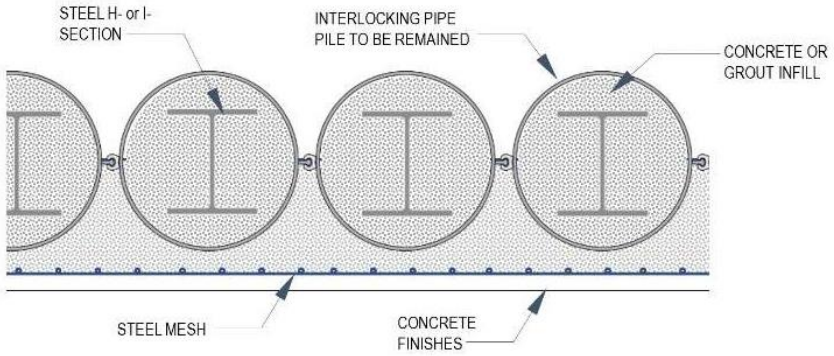
	 GROUND FLOOR PLAN	
21.	**<u>Temporary Building – Code of Practice on Access for External Maintenance 2021</u>** It is our understanding the maintenance and repair (M&R) submission shall not be applicable to temporary buildings. Would BD please confirm if the understanding is correct.	BD advised that the requirements for the provision of M&R access and submission of M&R access plans were applicable to temporary buildings according to the relevant provisions of the B(C)R, the AfEM Code and PNAP APP-163. BD supplemented that according to paragraphs 2 and 3 of PNAP

		APP-163, the requirements for the provision of M&R access were not applicable to building works commenced before 31 January 2021 and A&A works to existing buildings only.
22.	**M&R Provision for Concrete Blank Wall** Further to item 2 of ADF 3/2023 held on 4 August 2023, it is our understanding that M&R provision shall not be required for concrete blank walls (e.g. wall of staircase tower, lift core wall or any wall facing the rear lot boundary, etc.) in view that routine maintenance and repair works for such blank walls are not required. Would BD please confirm if the understanding is correct.	BD advised that in case the concrete blank walls concerned were the outer surface of external wall of a building, the provision of adequate M&R access such as power-operated elevating work platform and suspended working platform was required according to section 27(2) of the B(C)R and paragraph 2 in Part 2 of the AfEM Code. The use of alternative means of M&R access such as temporary metal scaffolding should be considered on case basis.
	Items raised by ACEHK	
23.	**Submission for In-principle Acceptance (IPA) of Modular Integrated Construction (MiC) System** Our understanding of the IPA Submission for MiC is for the pre-acceptance of the "MiC system" but the essential information checklist in Appendix C to PNAP ADV-36 appeared to be related to the "details", e.g. waterproofing. For instance, if the waterproofing detail in the actual project submission for approval is deviated from that shown in the pre-accepted system, will it render non-compliance with the IPA and will the pre-acceptance become inapplicable?	BD advised that the pre-acceptance mechanism for MiC aimed to resolve non-site specific design and construction matters of MiC system/component and provided curtailed assessment on whether the design and materials used meet certain minimum standards for a particular aspect set out under the provisions of the BO so that the industry would have greater confidence in using such system/component for development project. IPA for a MiC system was not a pre-requisite for approval of plans for development project adopting MiC. Any proposed revisions to the pre-accepted MiC system for adoption in

	If the inhabitants of the MiC unit modified the waterproofing details within 10 years' time due to material dilapidation and thus the need for building maintenance, but did not quite follow the "as-accepted" details (or were unaware of it), would it trigger an A&A submission?	development project could be incorporated into the submission of plans for approval by the Building Authority (BA). The IPA was still valid for the non-site specific MiC system. BD advised that prior approval and consent from the BA in accordance with section 14(1) of the BO were required for building works to be carried out at a completed building with MiC systems/components, unless the works were exempted building works under sections 41(3), 41(3B) and 41(3C) of the BO, or were eligible to be carried out through the simplified requirements under the Minor Works Control System.
	Items raised by AREC	
24.	**<u>Adoption of 5A Approach for Ground Deformation Control Mechanism</u>** In GEO Technical Guidance Note No. 54 (TGN 54) and GEO Publication No. 1/2023, an enhanced empirical approach for ground deformation control mechanism, termed as "5A Approach", is proposed. Please advise if such approach can be adopted under the BO as an update/alternative to the current "3A Approach" provided in PNAP APP-137.	BD advised that PNAP APP-137 was under review to incorporate the adoption of engineering approach on the assessment of the effects of foundation and ELS works to the nearby sensitive receivers, and to introduce additional triggering levels in addition to the extant three triggering levels as an enhanced monitoring control. BD also advised that the empirical limits as specified in GEO Publication No. 1/2023 might not be applicable to private building sites. Moreover, the proposed values of triggering levels other than the empirical limits as specified in the PNAP APP-24 and APP-137 should be assessed/determined according to the effects of building works to the nearby sensitive receivers and subject to the formal acceptance from the relevant government authorities and/or stakeholders (i.e. building

		owners, utilities providers, etc.).
25.	**<u>Suspension of Works upon Exceedance of Groundwater Drawdown Action Level</u>** Chapter 9.2.2.7 of GEO Publication 1/2023 extracted below mentioned that *"suspension of works solely due to exceedance of groundwater Action Level is unnecessary and impractical, unless there is sudden ingress of excessive groundwater, as the impacts on the sensitive receivers are safeguarded by the control mechanism."* This situation is obvious in many cases that when the groundwater drawdown exceeds the Action Level, the ground settlement is still within the acceptable value. Please if our understanding that exceedance of groundwater DRAWDOWN Action Level will not trigger suspension of works unless the ground settlement has also reached its Action Level, is correct or not.	BD advised that excessive groundwater drawdown could be a signal of undue water ingress and might not only cause undue settlement but also impair the integrity, stability and functionality of the adjoining buildings, structures, street, land and underground services/utilities (collectively known as sensitive receivers). AP/RSE/RGE and their TCPs were responsible for preparing an adequate instrumentation and monitoring pertinent to the foundation or ELS works to be carried out and checking the monitoring data throughout the construction process so as to ensure that the induced groundwater variations (drawdown and upsurge) and ground settlements were within the tolerable limits and compatible with the design assumption. If any exceedance in the changes of groundwater levels reached the trigger values of action level as prescribed in the monitoring plan, AP/RSE/RGE should review the design and construction methodology to ensure no adverse impacts on nearby sensitive receivers, in particular for those resting on shallow foundations (i.e. pad or raft footings), or pile foundations with inadequate lateral resistance, etc. Moreover, appropriate response actions corresponding to the reached trigger values should be rigorously assessed and implemented by AP/RSE/RGE and their TCPs, such as implementation of contingency measures, suspension of works, etc.

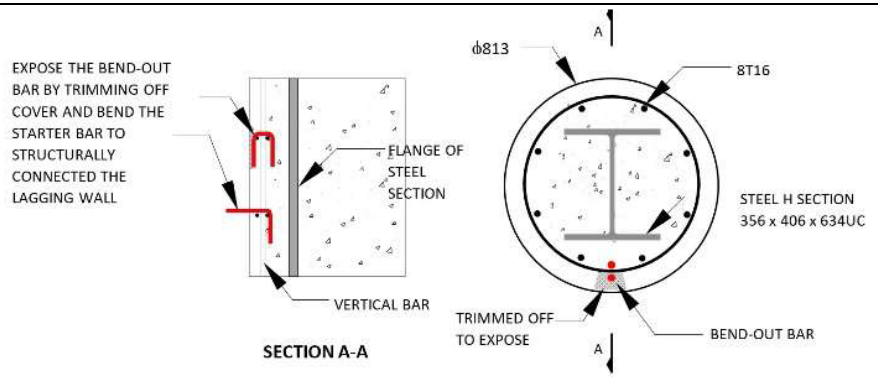
	9.2.2.7 Action Levels for Changes in Groundwater Levels Changes of groundwater level have an indirect effect on sensitive receivers and are normally allowed for in both ULS and SLS design of ELS works. Any rise of groundwater above the assumed DGWL for ULS design may affect the stability of the ELS works. On the contrary, drawdown below the lowest allowable GWL for SLS design may result in ground settlement greater than originally anticipated. Therefore, it is prudent to set trigger values of Action Level for these two assumed groundwater levels, such that timely review of design assumptions and construction quality could be carried out to confirm the safety of the ELS system and determine any precautionary measures needed. The recommended trigger values for Action Levels of DGWL are: (a) Where another 0.5 m of groundwater level rise will reach the assumed DGWL for ULS design; and (b) Where another 0.5 m of groundwater level drawdown will reach the lowest allowable GWL for SLS design. Suspension of works solely due to exceedance of the groundwater Action Level is unnecessary and impractical, unless there is sudden ingress of excessive groundwater, as the impacts on the sensitive receivers are safeguarded by the control mechanism. If the changes in groundwater levels have caused ground settlement reaching the trigger values of the control mechanism, the agreed response actions should be implemented to ensure the serviceability of the sensitive receivers.	
26.	**<u>Corrosion Protection Measures of Permanent Soldier Piles</u>** Please advise if the corrosion protection measures on permanent soldier piles shown in Figures 1 to 3 below are acceptable and hence no sacrificing thickness on the soldier piles is required if such protection measures are adopted.	BD advised that the issue was being reviewed by BD and GEO.



NOTES:

1. Concrete or grout to be filled inside the prebored hole with strength greater than 30 MPa at 28 days.
2. No composite section is allowed. Only steel section is used in supporting the soil
3. Interlocking pipe piles as sacrificial element
4. Concrete filling in front of the wall is assumed to be non-structural element. The embedded steel section in the interlocking pipe pile is close enough to transfer the soil load.

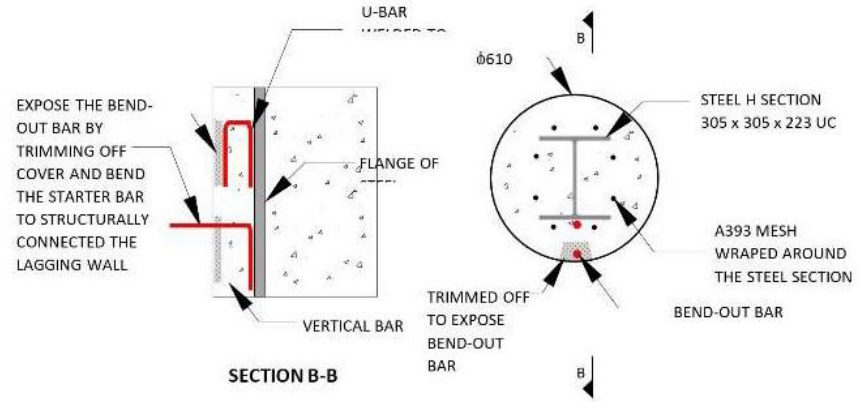
Figure 1 - Typical detail for soldier pile wall to be used as permanent cantilever wall (using interlocking pipe pile)



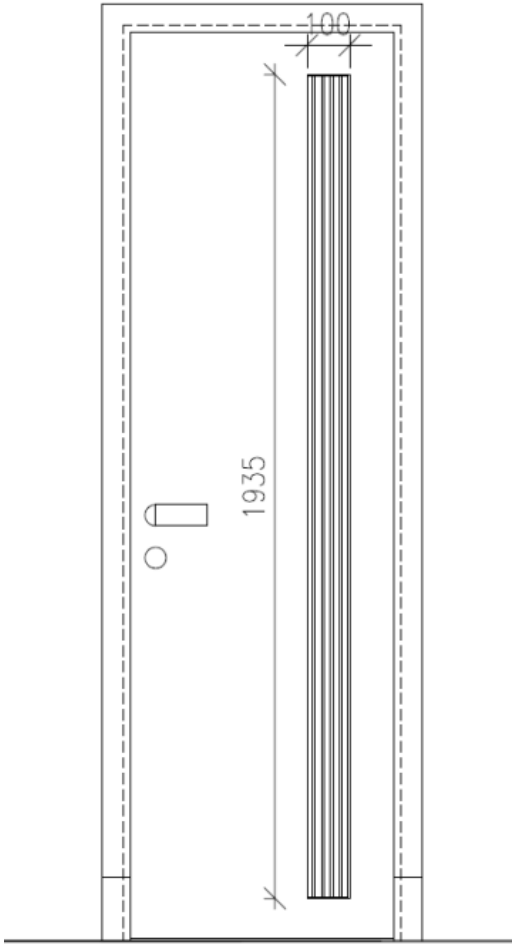
NOTES:

1. Concrete or grout should be used to fill inside the pre-bored hole with strength greater than 30 MPa at 28 days.
2. No composite section is allowed. Only steel section is used in supporting the soil.
3. Vertical bars and links are provided for controlling crack.

Figure 2 - Typical details for soldier pile wall to be used as permanent cantilever wall (813 mm in diameter)

	 NOTES: 1. Concrete or grout should be used to fill inside the prebored hole with strength greater than 30 MPa at 28 days. 2. No composite section is allowed. Only steel section is used in supporting the soil 3. Steel mesh for controlling crack **Figure 3 - Typical details for soldier pile wall to be used as permanent cantilever wall (610 mm in diameter)**	
	Items raised by PBSCA	
27.	**<u>Signboard with Display System consisting of Light Emitting Diodes (LED) – Minor Works Item 1.22</u>** According to minor works item 1.22, if the signboard does not comprise any display system consisting of LED, the display area of the signboard allowed is more than 10 m^2 but not more than 40 m^2. To our understanding, LED lightbox behind the fixed vinyl display surface is not treated as a display system consisting of LED. Only LED wall with digital display would be treated as a display system consisting of LED.	BD advised that PBSCA's understanding was correct. BD also reminded that apart from the dimensional requirements, the signboard with vinyl display surface should comply the other requirements, including those related to structure and fire safety, as specified in PNAP APP-126.

	Would BD please confirm if the understanding is correct?	
	AOB Items	
28.	**<u>Aperture protected with Ventilating Louvres for Internal Bathroom</u>** (Item raised by AAP) According to paragraph 3(b) of PNAP APP-98, permanent ventilation in the form of an aperture in a door, which should be suitably located and protected with louvres having a minimum size of 1/20 of the floor area of the room is acceptable. As such, would BD please confirm that the size of the aperture protected with louvres as shown in below sketch is acceptable:	BD advised that AAP's proposed provision of louvre for compliance with the requirements in paragraph 3(b) of PNAP APP-98 was acceptable.



Room Area = 3.85 sq.m

Minimum required size of aperture protected with louvres
= 3.85 sq.m / 20 = 0.1925 sq.m

	Louvre Area = 1.935m x 0.1m = 0.1935 sq.m > 0.1925 sq.m (required)	
29.	**<u>Insulation for Fire Dampers</u>** (Item raised by AAP) According to Table C2 of the FS Code, • fire dampers should have an fire resistance rating (FRR) with regard to the criterion of integrity only, the criterion of insulation is not required for fire dampers <u>unless specified</u>; and • fire barriers should have an FRR with regard to the criterion of both integrity and insulation According to Clause C8.2 of the FS Code, building services passing through a fire barrier should be protected with fire dampers or other suitable form of fire stop to maintain the required FRR of that fire barrier. In Hong Kong, there are very limited suppliers providing fire dampers with insulation. In BD's Central Data Bank, there are a few kinds of fire dampers with 240 minutes integrity but not insulation. As such, would BD please advise, for building services passing through a fire barrier with fire damper, whether such fire damper needs to satisfy the insulation criterion of FRR.	BD advised that under Clause C4.2 and item 9 in Table C2 of the FS Code, the criterion of insulation was not applicable to fire dampers unless specified otherwise. Accordingly, the criterion of insulation was not applicable to the fire dampers specified in Clause C8.2.
30.	**<u>Overall Thermal Transfer Value (OTTV) and Residential Thermal Transfer Value (RTTV)</u>**	

	(Item raised by BD) BD reminded that PNAP APP-67 and APP-156 were issued on 31 July 2024 to promulgate streamlining measures for submission of the required documents relating to OTTV, RTTV and OTTV of residents' recreational facilities. Under the streamlined arrangement, the BA required only the submission of the Summary Sheets instead of the provisional OTTV Report and provisional Energy Efficiency (EE) Report after the approval of building plans and prior to the application for consent to commence building works. The submission of the OTTV Report and EE Report would be required upon application for OP or submission of Form BA14.	Members noted and supported the streamlining measures. In response to Members' enquiry, BD advised that the EE Report could be submitted at any time before the application for OP.
31.	**<u>GFA Concession for Carparks</u>** (Item raised by BD) BD has received an enquiry concerning the granting of 100% GFA concession for ancillary or public carparks in not more than one aboveground level in private project as stipulated in paragraph 7 of Appendix C to PNAP APP-2. In such case, there are specific site constraints rendering it impossible to fully utilise the site for construction of the concerned aboveground carparking floor such that it is necessary to provide the carpark in the form of split-levels or multiple levels. Having considered the justifications in the case as well as relevant contents of PNAP APP-2, it was agreed in principle that if there are specific site constraints rendering it impossible to fully utilise the site for construction of the concerned aboveground carparking floor such that it is necessary to	Members noted and supported the arrangement.

	provide split levels or stack up the car park spaces in multi-levels, more than one aboveground carparking floors may be 100% disregarded from GFA calculation on the condition that the total floor area of the concerned aboveground carpark would not exceed the site area in line with the spirit at paragraph 8(c) and the circumstances mentioned at paragraph 9 in Appendix C to PNAP APP-2 exist on the site. Examples of such site constraints may include the presence of slope, retaining wall, old and valuable trees; provision of government accommodation, public open space, public passage, non-building area, wind corridor and reserved areas for railway facilities/public road/underground utilities required under government lease or Outline Zoning Plan for the site. In this connection, the application for GFA exemption under the aforementioned flexible approach will be considered by the Building Committee of the BD based on the justification provided, the merits of the case and the comments from relevant government departments.	
32.	**<u>Stage 3 of Electronic Submission Hub (ESH)</u>** (Item raised by BD) BD launched the Stage 3 of ESH on 30 June 2024 to accept all types of plan submissions and related applications under the BO, including general building plans and plans for alteration and addition works. BD briefed Members on the measures undertaken to resolve some technical issues reflected by practitioners as well as points to note to facilitate the use of the ESH, including: (i) activation of ESH accounts and projects;	Members noted and welcomed the enhanced support given by BD on the use of ESH. In response to a Member's concern on disclosure of information on all of his projects to the AP/RSE who acted temporarily in his stead, BD would discuss separately with the Member to troubleshoot the issue. When enquired about using ESH on mobile phone, BD advised that ESH

	(ii) e-submissions/e-applications for on-going projects; (iii) enhancement on the functions of collaborators for projects; (iv) digital signing for e-form BA4 by owners; (v) maximum 50 characters for drawing title; (vi) uploading of remaining plans upon interruption; (vii) auto-referral to government departments under centralised processing system by AP's completion of submission checklist; (viii) submission of revised plans by using the same drawing number; and (ix) payment of plan processing fees via Faster Payment System by project owner. BD also advised that some limitations on ESH, for instance, withdrawal of hoarding proposal, application for contractor shed, projects with missing data in former database system and issues related to submission of Form BA21 for temporary acting of registered building professionals of projects, were being followed up. To provide better support for ESH users, the ESH website was under revamp to improve user-friendliness and short video clips for some crucial functions in ESH were being prepared. BD would also arrange seminars on the implementation of the ESH for various institutes/associations in September 2024 after normal office hours to facilitate practitioners' attendance. In addition, the service hours of the ESH hotline had been temporarily extended to 7:00 pm on Mondays to Fridays (except Public Holidays) since the launch of ESH Stage 3 and would continue until further notice. Practitioners were welcomed to make appointment with the ESH Team of BD for visits to their offices for on-site support regarding adoption of ESH.	was primarily optimised for use on desktop computers and laptops, not for mobile phones.

	BD appreciated Members' feedbacks and suggestions for the ongoing improvement of ESH.	
33.	**<u>Area Tool for Building Information Modelling (BIM)</u>** (Item raised by BD) To facilitate the use of Area Tool for BIM, BD advised that an enquiry hotline and a contact email were available on BD website. For submission of general building plans making use of the Area Tool, BD advised the AP to state such use in the cover letter in order to facilitate BD's plan processing. Feedback from the practitioners on the adoption of this checking tool for further enhancement was welcomed. BD also advised that two automated checking tools for the requirements on sanitary fitments and fire safety provisions were being developed for launch soon.	Members noted and welcomed the enhanced support given by BD on the adoption of BIM in plan submission.
34.	**<u>Smart Site Safety System</u>** (Item raised by BD) BD reminded that according to the Circular Letter issued by BD on 28 March 2024 with effect from 1 July 2024, BD will impose conditions under item 6 of section 17(1) of the BO upon granting the first approval of superstructure plans or major revision of superstructure plans requiring the registered contractor to provide qualified supervision of building works	Members noted.

	involving the use of mobile plants and tower cranes by adopting the Mobile Plant Alert System and Tower Crane Alert System if the estimated cost of building works exceeds $30 million. To further enhance construction site safety, BD was exploring to extend the above measure to other types of works, such as foundation works and pile cap works. Practitioners would be consulted on the details of the proposal when ready.	
35.	**<u>Electronic Submission of Ground Investigation (GI) Report</u>** (Item raised by BD) In the Joint BSC and APSEC 3/23 Meeting held on 15 September 2023, the Geotechnical Engineering Office (GEO) of the Civil Engineering and Development Department encouraged practitioners to submit digital copies of the GI and laboratory test reports together with the data files conforming to the specifications promulgated by the Association of Geotechnical & Geoenvironmental Specialists (AGS). BD appealed again to practitioners' submission of the said AGS files of the GI and laboratory test reports via ESH.	Members noted and advised that currently the said AGS files were included in the CD-ROM submitted together with the hard copies of GI and laboratory test reports. On account of Members' suggestions to allow practitioners' access to the past GI and laboratory tests reports conducted for private developments on GEO's Digital Geotechnical Information Unit (DGIU), BD advised that legitimacy of releasing GI information via DGIU would be studied.