Summary of Items Discussed in APSEC Discussion Forum (ADF) 2/2025 on 9 May 2025

	Items proposed by Convenors for Discussion	Summary of Discussion and BD's Response
	Items raised by HKIA	
1.	**<u>Fire Rated Access Panel</u>** Based on our recent project experience, BD does not accept screw-fixed fire rated access panels for installation in pipe ducts along the exit route. Could BD please confirm whether the installation of screw-fixed fire rated access panels is prohibited in the protected corridors along the exit route?	BD advised that according to Clause 9.3(d) of the Code of Practice for Fire Safety in Buildings 2011 (2024 Edition) (FS Code), any access openings in pipe duct enclosures within protected exits should be provided with a fire rated door having the requisite fire resistance rating (FRR). Such fire rated access doors or panels, whether they were screw-fixed or installed by other means, should be tested in accordance with Subsection E5 of Part E of the FS Code to demonstrate the required FRR and installed in accordance with relevant manufacturer's specifications.
2.	**<u>Covered Landscaped Area</u>** Will BD accept fixed furniture (e.g. seating benches) within the covered landscaped area described in paragraph 26 of PNAP APP-42?	BD advised that the installation of fixed furniture in the said covered landscaped area for siting out purpose without commercial activities was acceptable, provided that the fixed furniture would not jeopardise fire safety of the building and was able to withstand typhoon conditions.
3.	**<u>Inspection of Swimming Pool upon Application for Occupation Permit (OP)</u>** Does BD require swimming pools to be filled with water during the inspection upon application for OP?	BD advised that filling the swimming pools with water was not required for OP inspection. However, BD reminded that sufficient precautionary

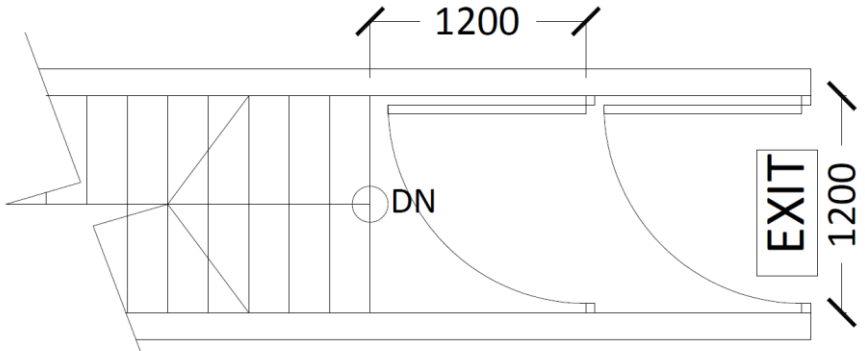
		measures should be provided to prevent accidental falling from the pool deck into the empty swimming pool.
4.	**Mechanical Ventilation in Kiosks or Guard Rooms** Does BD consider kiosks or guard rooms (as mentioned in paragraph 14 of PNAP APP-42) to be ancillary offices for the purpose of fulfilling the fresh air supply requirement under Annex 2 of Appendix E to PNAP ADM-2?	BD advised that whenever AP submitted a Form BA16 treating kiosks or guard rooms as ancillary offices and applying for modification of regulation 30 of the Building (Planning) Regulations (B(P)R), BD would favourably consider such applications and impose relevant mechanical ventilation and lighting requirements specified in PNAP ADM-2 as conditions of the modification.
5.	**Height of Balustrade at Open Terraces and Flat Roofs** It is generally understood that BD may not accept exceptionally high balustrades at open terraces or flat roofs in commercial buildings, as such designs could lead to potential misuse by decking over the space behind the high balustrades. However, a higher balustrade serves important functional purposes today. On one hand, it can protect users from extreme weather conditions, such as strong gusts, enhancing comfort while using the space. On the other hand, it can prevent accidents, such as tipping over in crowded situations, and discourage extreme behaviours, including suicide attempts. In light of balancing concerns about potential misuse with genuine functional needs, would BD consider accepting balustrades with a height of 1800 mm at	BD advised that light-weight balustrades with a height exceeding 1100 mm above finished floor level at open terraces and flat roofs might be acceptable on case basis, provided that the height was commensurate with the use and abuse of the enclosed area was unlikely. For the avoidance of doubt, the above was not applicable to green and amenity features with GFA concessions under JPNs and PNAPs.

	open terraces and flat roofs?	
6.	**<u>General Building Plans (GBP) for Stage II Approval and Maintenance and Repair (M&R) Plan Submission</u>** It is our understanding that the M&R plans should be submitted together with the GBP amendment plans for Stage II approval according to PNAP ADV-33. Based on this arrangement, a separate Form BA5 is not required for the M&R plans since the plans will be approved together with the Stage II GBP. Can BD advise if our understanding is correct or not?	BD advised that according to PNAP ADV-33, it was essential that all information required under stage II approval be submitted for approval prior to applying for consent to commence superstructure works. However, this did not imply that the M&R plan must be submitted concurrently with the first GBP amendment plans. If the M&R plans were submitted together with the GBP amendment plans, they would be treated as one submission, such that only one Form BA5 was required. However, if the GBP amendment plans and M&R plans were submitted separately, they would be treated as two separate submissions, for which two Form BA5 would be required.
7.	**<u>Landing for Accessible Lift in Alterations and Additions (A&A) Works</u>** In fulfilling the requirements on barrier free access in the A&A works of an existing building, an accessible lift is provided for the initial access immediately adjacent to the lot boundary. As a result, the lift landing is provided outside the lot and is on a pavement maintained by the Highways Department. Would BD favourably consider the above arrangement of providing the lift landing outside the lot, given the existing site constraints for A&A works?	According to paragraph 7 of PNAP APP-41, where alteration and addition works were proposed to an existing building without initial access for persons with a disability, all practical measures should be taken to provide suitable barrier free access. Applications for exemptions from or modification of regulation 72 of the B(P)R citing the prevailing special circumstances, such as existing site constraints, would be considered on case basis, taking into account the advice given by the Advisory Committee on Barrier Free Access.

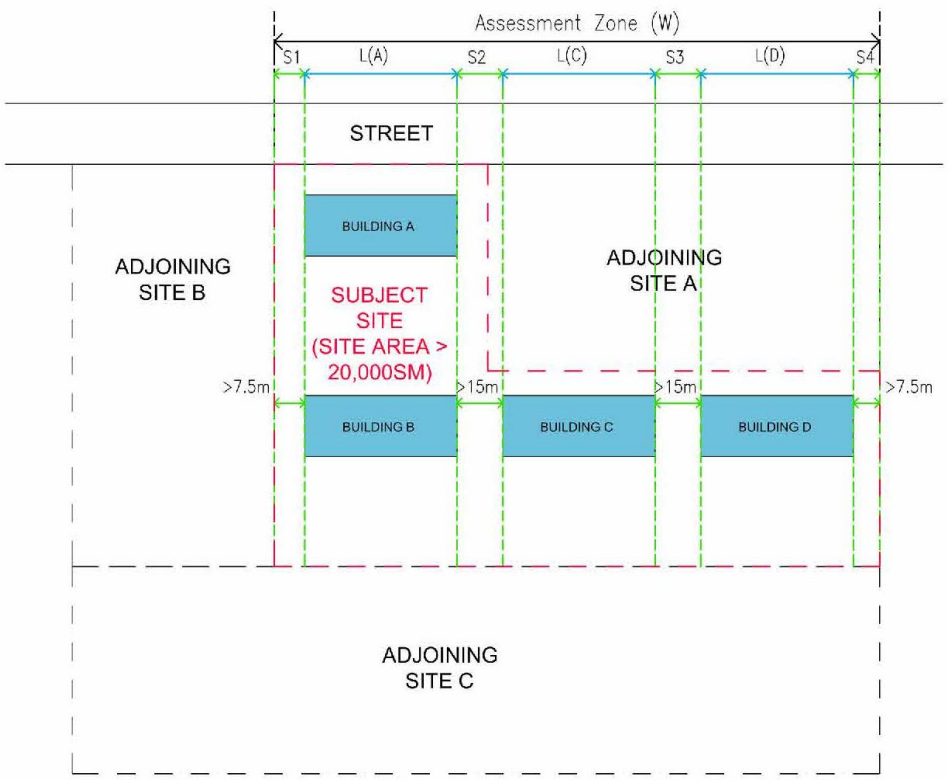
	Items raised by HKIE	
8.	**<u>Factor of Safety Against Toe Stability of Flexible Earth Retaining Structures for Excavation and Lateral Support (ELS) Works</u>** A factor of safety of 2.0 has long been adopted for toe stability of flexible earth retaining structures, probably based on the required minimum factor of safety against overturning moment due to loads other than wind loads as stipulated in regulation 15(1)(c) of the Building (Construction) Regulations (Cap 123B) which was repealed in 2020. With the implementation of the performance-based approach in the Building (Construction) Regulation (Cap 123Q) (B(C)R), the above requirement has been withdrawn and section 15 of the B(C)R simply stipulates that building works should be designed and constructed with an adequate margin of safety against instability. Table 6.1 of GEO Publication No. 1/2023 "Deep Excavation Design and Construction" recommends a minimum global factor of safety of 1.5 for effective stress analysis under ultimate limit state (ULS) conditions. This recommendation highlights current best practice in geotechnical engineering and is acceptable to GEO as fulfilling the margin of safety against toe stability for civil engineering works. Would BD please confirm if achieving a minimum factor of safety of 1.5 against toe stability is deemed to have achieved the margin of safety stipulated in section 15 of the B(C)R for private building works.	BD advised that with reference to GEO Publication No. 1/2023, a minimum global factor of 1.5 was considered appropriate for design against overturning/toe stability when adopting effective stress analysis (drained shear strength of soil). If total stress analysis (undrained shear strength of soil) was adopted, a minimum global safety factor of 2.0 should be applied for design against overturning / toe stability. BD also advised that the design requirements of the Global Factor Method and the Partial Factor Method in PNAP APP-57 were under review.

9.	**Flat Slab Design Using Finite Element Analysis** Following the discussions in item 7 of ADF 5/2022 on 25 November 2022 and item 18 of ADF 3/2024 on 9 August 2024 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 for flat slab analysis, would BD please provide an update on the deliberations/conclusions of the Technical Committee on Code of Practice for Structural Use of Concrete?	BD advised the review of flat slab design, particularly regarding punching shear check using the results of finite element analysis computer program, was still under deliberation by the said Technical Committee.
10.	**Consent for Initial Stage ELS Works** Paragraph 18 of Appendix C to PNAP APP-18 states that *"to minimise the idling time on construction sites, earth-retaining elements such as sheet/pipe pile walls may be installed and, if applicable, initial stage excavation and lateral support works may be carried out concurrently with the foundation works."* Additionally, paragraph 1(d) of BD's Circular Letter (ref: BD GR/1-115/12) dated 27 February 2023 on Streamlining Measures for Structural Works mentions that the *"consent to the commencement and carrying out of the vertical retaining elements for ELS works (e.g. sheet piling) may be granted 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, provided that the initial stage excavation works would not commence before the submission of Form BA14 certifying completion of construction of the vertical retaining elements"*.	BD advised that the streamlining measure for carrying out the initial stage of excavation works not exceeding 1.5 m below ground level and erection of the first layer of lateral support was promulgated via BD's Circular Letter dated 27 February 2023 and revised PNAP APP-18 issued in October 2024 (paragraph 18 and footnote 3 of Appendix C to the said PNAP referred). BD officers had been reminded of such streamlining measure. BD also clarified that PNAP APP-57 mainly outlined the submission and design requirements for excavation and lateral support works (ELS) plans under the Building (Administration) Regulation 8(1)(bc). Nevertheless, to enhance clarity and facilitate practitioners' adoption of the above streamlining measure, PNAP APP-57 would soon be revised to include such measure.

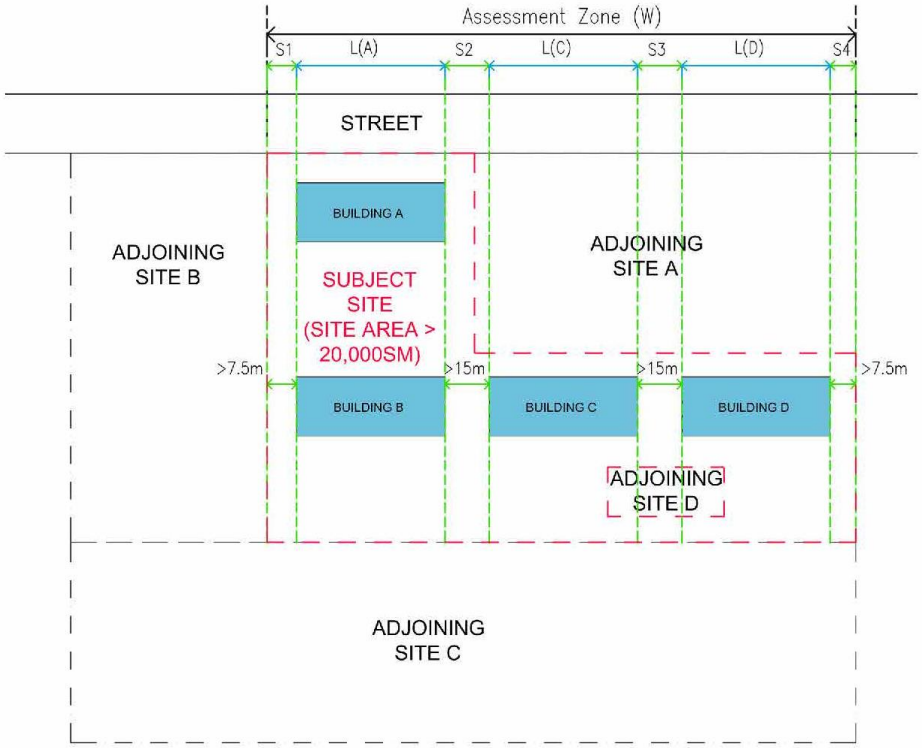
	However, the initial stage excavation (1.5 m) is not covered under PNAP APP-57. A member reported that BD staff did not allow him to apply for the consent to commence the initial stage excavation works not exceeding 1.5 m below ground level because it is not stated in PNAP APP-57. Would BD consider updating PNAP APP-57 to include the initial stage excavation works to avoid ambiguity?	
	Items raised by HKIS	
11.	**<u>Exit Door and Landing in Required Staircase on Topmost Floor</u>** Further to item 13 of ADF 4/2012 on 3 August 2012 regarding Clauses B13.3 and B14.3 of the FS Code, for the topmost floor being served by a required staircase, the arrangement being shown in the diagram below shall be able to comply with the requirement in Clause B13.3 of the FS Code as that landing is not situating between flights and the door swing shall not be deemed as reducing the effective width of the exit route. Please confirm whether our understanding is correct or not.	BD advised that HKIS's understanding was correct.

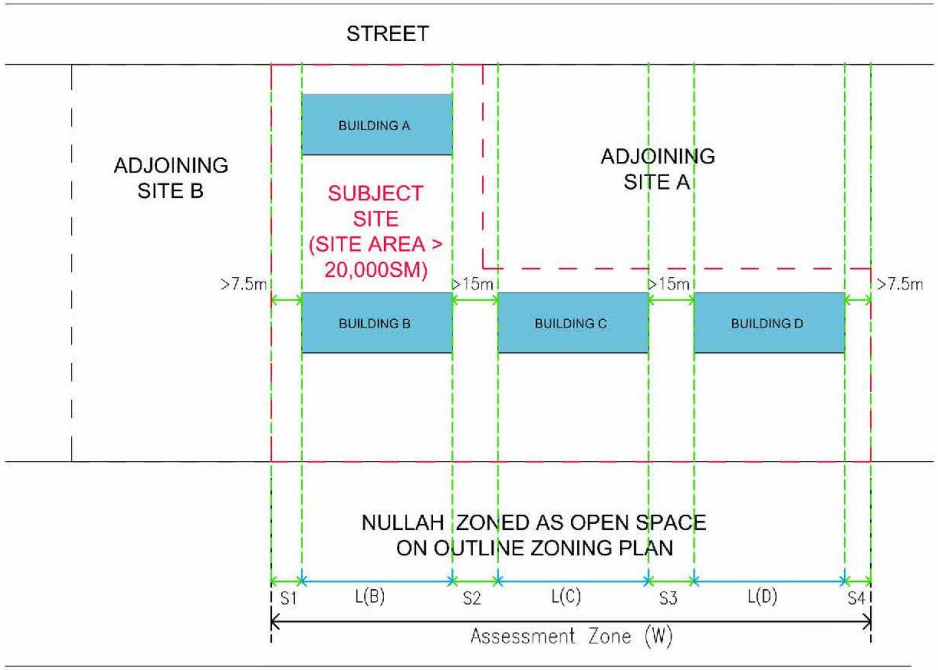
	 THE TOPMOST FLOOR OF THE MOE STAIRCASE (ONE DIRECTION)	
	Items raised by AAP	
12.	**Proof Tests for Repair of Reinforced Concrete – Code of Practice for the Mandatory Building Inspection Scheme and the Mandatory Window Inspection Scheme 2012 (2023 Edition) (MBIS Code)** According to paragraphs 1.1(f)(i) and (ii) of Appendix V to MBIS Code, proof tests (such as hammer-tapping) and pull-off test are required to ascertain the integrity and quality of the repair works for spalling of reinforced concrete. Paragraph 1.1(f)(ii) states that:- "*Pull-off tests shall be carried out at a minimum rate of one number per 25m^2 of the patch repaired surface. However, a minimum of one number pull-off test shall be conducted for each day's patch repair works.*"	BD advised that the pull-off test was a quality control test to evaluate the bond strength between the repair mortar and the existing concrete substrate, while the hammer-tapping test was to ascertain the integrity of the repair works by identifying any poor bonding and delamination of the patch repair. According to paragraph 1.1(f)(ii) of Appendix V to the MBIS Code, a bond strength of 0.5N/mm2 should be achieved unless fracture takes place within the concrete substrate. In this regard, hammer-tapping test could not be considered as an appropriate alternative to the pull-off test for assessing the bond strength of repaired mortar to

	For the case when the repair works are small-scale or the total work area being substantially less than 25 m^2 (e.g. only 1-2 m^2), would BD favorably consider accepting alternative means of quality control test like hammer test in lieu of pull-off test on the condition that the repair works are being carried out using proprietary repair mortar and in strict accordance to manufacturer's recommended application method.	the existing concrete substrate. BD reminded that the matter should be deliberated in the Technical Committee on the Code of Practice for the Mandatory Building Inspection Scheme and the Mandatory Window Inspection Scheme. A member also raised that the requirement of pull-off test for concrete repair works was absent under the Minor Works Control System, and such requirement would appear impractical for small-scale concrete repair works (e.g. patch repaired surface in the palm size. BD advised that the matter would be reviewed by their respective Divisions.
13.	**Building Separation – Design Requirement (2) – Separating Distance (*S*) and Permeability (*P*)** In accordance with paragraph 3.1 of Appendix B to PNAP APP-152, "*at least one of the projection planes for the low zone shall be set parallel to a street on which the site abuts*". Please advise if our understandings on the projection plane and assessment of *S* and *P* for low zone as illustrated in the below scenarios are correct:	BD advised that the purpose of building separation was to improve air ventilation, enhance environmental quality at pedestrian level and mitigate heat island effect arising from the undesirable walling effect of "long buildings". According to Appendix B to PNAP APP-152, for building proposal with a site area not less than 20,000m^2, the assessment on compliance with Design Requirement (2) shall be made through a pair of vertical projection planes at an orthogonal relationship to each other. At least one of the projection planes for the low zone shall be set parallel to a street on which the site abuts and must be projected onto the street side. Item 1 of ADF 1/2014 was relevant. The separating distance involving site boundary or adjoining street/lane,

	Scenario 1 – Adjoining Site located partly between Street and subject Site:  	if it varies on plan, should comply with the requirements under paragraph 4.2 of Appendix B to PNAP APP-152. Nullah zoned as open space under OZP might be treated as a lane for the purpose of assessing separating distance and permeability. If the building proposal could not meet the prescriptive requirements under Appendix B of PNAP APP-152, alternative approaches provided in Appendix E to PNAP APP-152 could be adopted. The building separation requirement at the low zone may be waived for buildings with less dominating building bulk and adequate setback along street frontage. The adoption of performance-based design alternative on the provision of building separation might also be accepted. AP, RSE and RGE might make use of the pre-submission enquiry mechanism for early clearance of basic design principles so that they could proceed with confidence in the formal submission stage. In passing, BD advised that, for the sake of providing more design flexibility and assisting the practitioners in complying the requirements, the Sustainable Building Design Guidelines in PNAP APP-152 were currently under review and a Building Information Modelling automated checking tool for the building separation requirements (scheduled for release in Q4 of 2025) was being developed in parallel.

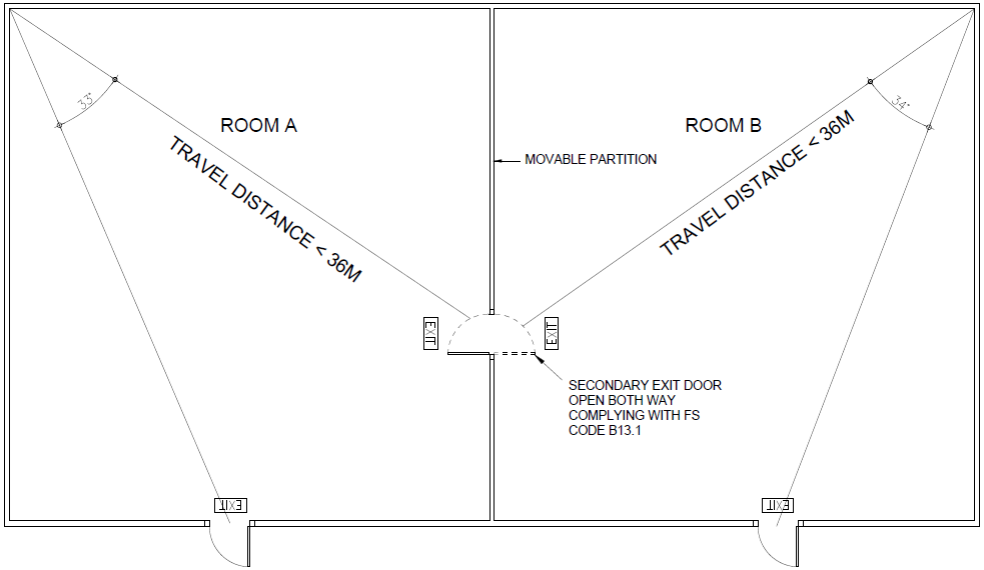
Scenario 2 – Scenario 1 and Adjoining Site located within the Site:



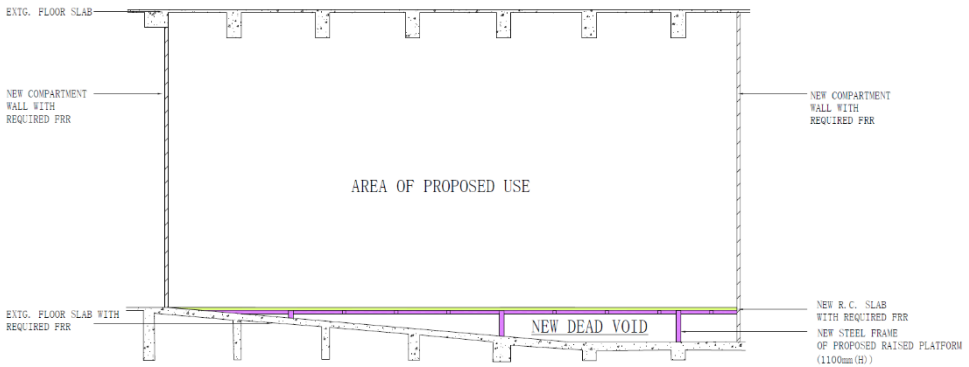
	Scenario 3 – Scenario 1 and Nullah zoned as Open Space on OZP abutting site boundary opposite the Street:  	
	Items raised by AREC	
14.	**<u>Wind Calculation for Tower Crane</u>** According to Clause 2.5 of the Code of Practice on Wind Effects in Hong Kong 2019 (Wind Code), *"wind loads on temporary buildings and associated constructions that are not used for residency, and which will remain in position for a period of not more than one year, may be designed for a*	BD advised that the design wind loads for temporary structures should be in accordance with Clause 2.5 of the Wind Code. If a temporary structure was to remain in the position of a period not more than one year, the tower crane might be designed for a minimum of 70% of the design

	minimum of 70% of the design loads for permanent buildings". Would BD please clarify if a tower crane is to be erected for more than one year, whether the full design wind loads or 70% of the design loads as referred in the above clause of the Wind Code, shall be adopted.	wind loads for permanent buildings. For tower crane that would remain on site for one year or longer, full design wind loads, i.e. 100% of design wind load for permanent buildings, should be adopted for the tower crane and all its supporting structures and connections, regardless of any changes in supporting points and supporting system.
15.	**<u>Submission of Forms TW1, TW2 and TW3 for Tower Crane</u>** It is very common that foundation works and pile cap works would be carried out by Registered Specialist Contractor in the foundation works category (RSC(F)), while the superstructure works will be carried out by the Registered General Building Contractor (RGBC). Based on the above arrangement, the cast-in bolt for the temporary works providing support to a tower crane will be installed by the RSC(F) during the pile cap concreting works, and the subsequent temporary works providing support to the tower crane will be carried out by the RGBC. Would BD advise if two separate sets of Forms TW1, TW2 and TW3 in Appendix XI to the Code of Practice for Site Supervision 2009 (2024 Edition) (Supervision Code), one by the RSC(F) and one by the RGBC, shall be prepared and submitted to AP/RSE respectively?	BD advised that pursuant to paragraph 4.12(a) to (d) of Supervision Code, Forms TW1 and TW2 certified by the Design Engineer and Independent Checking Engineer appointed by RSC(F) respectively for the design for temporary works providing support to the tower crane would suffice, if RGBC followed the design of the temporary works prepared by RSC(F). As regards the certification of completion of temporary works, the technically competent persons (TCP) T4 and T5 of the respective contractors should certify their corresponding parts of the completed works by submitting two separate forms TW3. Specifically, TCP T4 and T5 Person of RSC(F) should certify the completion of the cast-in bolt works, while those of the RGBC should certify the completion of the remaining parts. A plan demarcating the portions of the completed works under their certification should be appended to the Form TW3.
	Items raised by PBSCA	
16.	**<u>Exemption of Guard Houses/Kiosks in Existing Buildings from the Compliance with Pre-requisites in PNAP APP-151</u>** According to paragraph 14 of PNAP APP-42, for counters, kiosks, stores,	Recognising the constraints in A&A works, BD would take a pragmatic

	guard rooms and lavatories for watchman and management staff, BA will consider favourably on application for exemption of these provisions from GFA calculations. Paragraph 14(c) of the said PNAP states that *"the maximum GFA that may be allowed for exemption in a domestic building or domestic part of a composite building is 0.2% of the total domestic GFA or 5 m^2 for every 50 flats, whichever is smaller"*. Paragraph 15 of the said PNAP states that *"the granting of GFA concessions set out in paragraph 14 above is subject to compliance with the pre-requisites and the overall cap on GFA concession stipulated in PNAP APP-151"*. In existing buildings, there are quite a number of cases that the erection of the existing guard houses/kiosks have not been approved by the Building Authority. The Incorporated Owners or the owners of the buildings have received statutory orders from BD for the removal of the unauthorised guard houses/kiosks. Although owners are willing to remove them to comply with Buildings Ordinance, they are necessary security provision for residential buildings. According to item 14 of Appendix A to PNAP APP-151, guard houses/kiosks are subject to compliance with the pre-requisites in paragraphs 6 and 7 of PNAP APP-151, inter alia, to comply with the sustainable building design guidelines on building separation, building setback and site coverage of greenery as in PNAP APP-152. In practice, this cannot be fulfilled in existing buildings. In view of the above, will BD take a pragmatic approach to favourably	approach in considering grating GFA concessions for guard houses/kiosks that were commensurate with the development under the said case.

	consider exempting the requirement of compliance with the pre-requisites in PNAP APP-151 for the submissions of A&A works to construct new guard houses/kiosks in existing building, so that the existing unauthorised guard houses/kiosks could be replaced by a new and approved one for better building safety and security provision for building owners.	
	AOB Items	
17.	**<u>Common Secondary Exit Door for Two Adjoining Rooms</u>** (Item raised by PBSCA) Referring to the below drawings, the exit door opened both ways complying with Clause B13.1 of the FS Code serves as the common secondary exit door for two adjoining rooms. Would BD advise that it is acceptable given that requirements of travel distance could be fulfilled?  	BD advised that additional information including the travel distance between the furthest point on a storey or within a fire compartment to the centre of the fire rated door to a protected exit or a required staircase, the Use Classifications and occupancies of Room A and Room B, etc. should be clarified for further consideration on whether the scenario in the diagram was acceptable. Without prejudice to the above, provided that the requirements on travel distance were complied with, and Room A and Room B were not required to be separated from each other by fire barriers, the said common exit door which opened both ways and had a transparent upper view panel would be accepted as a secondary exit door of both rooms under the FS Code.

18.	**<u>Requirement on Fire Resistancne Rating (FRR) for Supporting Frame for Raised Reinforced Concrete (RC) Floor Platform</u>** (Item raised by HKIS) In an A&A submission, a new raised RC floor platform is proposed. It will be sitting on an existing floor slab to create a level surface for meeting the functional requirement of the proposed space as well as facilitating the barrier free access. A "dead void" with no use or access would therefore be formed under the proposed platform as shown in the diagram below. The dead void will be fully enclosed by fire barriers with the required FRR (e.g. RC slab, Y-tong block wall, fire rated gypsum plaster board, etc.) from all directions. As the dead void itself would not pose any fire risk and the exposed surfaces of the steel frame inside the dead void could be fully protected by the said fire barriers, the steel frame in the dead void shall not require any further fire rated intumescent coating or sprayed-applied cementitious fire coating. Please clarify if our understanding is correct or not.	BD advised that pursuant to "Section 3 – Definitions" in Part A of the FS Code, any raised flooring system at a height of more than 600 mm from the original floor would be considered as an element of construction. As such, the proposed raised RC floor platform of 1100 mm high as shown in the diagram was regarded as an element of construction and should be provided with the requisite FRR under Clauses 4.1 and 4.2 of the FS Code. [**Post-meeting note**: In consultation with FSD, BD advised that non-provision of fire resisting coating to the steel members inside the inaccessible void (i.e. dead void) of the proposed raised flooring system would be favourably considered.]

		
19.	**<u>Update of Central Data Bank (CDB)</u>** (Item raised by HKIE) Under the current arrangment, after the grant of OP for new developments or the acknowledgement of the Form BA14 for A&A works, BD will request the AP/RSE appointed for the works to certify the adoption of newly accepted building materials and/or systems and submit the relevant test reports and other supporting documents for BD's updating of the information in the CDB for the industry's reference. The information in the CDB becomes outdated when AP/RSE failed to submit the required information after the completion of works. To facilitate the practitioners' use of the CDB, would BD consider updating the information in the CDB once the relevant building materials, components and construction systems are accepted for adoption in the approval of the relevant plans? Also, for previously accepted products the validity dates of the test and assessment reports of which available in the CDB had already lapsed, BD	BD would consider reviewing the issue. [**Post-meeting note**: BD advised that streamlining measures for updating information of accepted building materials, components or construction systems in the CDB were being explored. Regarding building products for which the validity dates of the test and assessment reports available in the CDB had already lapsed, BD advised that the inclusion of any building materials in the CDB did not imply pre-acceptance for use in proposed building works. AP/RSE/RGE should ensure the materials, components or construction systems adopted had been properly tested according to the latest standards and submit valid test and assessment reports upon certifying completion of works.]

	requires AP/RSE's submission of their valid test certificates upon their proposed adoption of the products. Since these suppliers will seldom keep testing their products, further adoption of these products become infeasible. Would BD consider to review the above procedures to enhance the approval system?	
20.	**<u>Site Monitoring Inspections</u>** (Item raised by BD) BD advised that their Site Monitoring Section had stepped up inspections on active construction sites to enhance the safety and quality of building works. BD officers might carry out site audit checks including steel rebar inspections and non-destructive tests (such as covermeter surveys) to ensure that the building works were carried out in accordance with the approved plans. Pursuant to PNAP ADM-13, AP/RSE/RGE were reminded to ensure that copies of all approved plans, agreed work sequence and procedures and all conditions imposed by the Building Authority were issued to registered contractors for on-site reference by BD.	Members noted.