

Summary of Items Discussed in APSEC Discussion Forum on 16 March 2012

	Items proposed by Convenors for Discussion	Summary of Discussion and BD's Responses
	Items raised by HKIA	
1.	<p><u>Application of FS Code 2011</u> PNAP APP-153 regarding the application of the new Fire Safety Code stipulates that the use of the old codes may be allowed for a project for which the first consent (foundation or site formation) has been obtained before 1.4.12. However, BD has recently imposed an additional requirement that the first approval of building plans has also to be obtained. This has caused problem to some projects where the foundation has been designed and implemented based on building plans designed in accordance with the old codes but for some reason the building plans have not been approved before 1.4.12. HKIA members find this additional requirement unfair and would request BD not to impose this, especially when this has not been stated in the PNAP before.</p>	<p>BD advised that para. 2(i) of PNAP APP-153 is to cater for situations where the foundation has been designed based on a set of approved GBP for a proposed building designed to comply with the MOE/ FRC/ MOA Codes and such foundation works have already been commenced when the new FS Code comes into effect on 1.4.2012. The rationale being that there would be constraints in re-designing the proposed building to comply with the new FS Code as the corresponding foundation works have already been commenced. If a development site does not has a set of GBP approved before 1.4.2012, the early commencement of foundation works is solely at the applicant's own risk and should not and would not be accepted as an excuse for not able to comply with the new FS Code. That said, BD would consider any request for relaxation upon receipt of full substantiations of the circumstances of individual cases.</p>
2.	<p><u>Requirement for Plant Rooms under FS Code 2011</u> The new Fire Safety Code requires the assessment of occupancy for plant rooms larger the 100 sqm. in size. However, it does not further expand on whether the other MOE requirements in the code have to be applied to such plant rooms. This may be open to interpretation and may have a lot of implications. For example (1) should the plants/equipment in the plant rooms be shown on the plans to demonstrate escape paths of adequate width and headroom are provided? (2) Plant rooms are generally full of pipe runs across the room (at floor or high levels) – will these be considered obstructions to escape paths?</p>	<p>BD advised that pursuant to Table B1, a plant room exceeding 100m² in net floor area (i.e. area within the enclosing walls of the plant room) should be assessed for its occupant capacity. Persons who are expected to be present in plant rooms would be authorized/ maintenance personnels, the AP could exercise his professional judgment in providing suitable means of exit therefrom for such personnels.</p>

3.	<p><u>Definition of Hangers under Element of Construction</u></p> <p>Catwalks and overhead maintenance corridors of steel construction are common in some buildings such as theatres, halls, public transport terminus, etc. Are these construction considered as “hanger” under the definition of “Element of Construction”, thereby requiring FRP in the old FRC Code or FRR in the new Fire Safety Code? It has been hard to draw a line between more extensive hanger construction such as catwalks and less extensive hanger construction such as false ceilings but the requirements on FRC/FRR can be of great implications to construction method and cost. Can BD provide more guidelines on the differentiation?</p>	<p>BD advised that catwalks and overhead corridors are sometimes provided to effect maintenance to plant and services, they are not performing the function as floor/ beam/ column, which together with hanger are grouped as “Element of Construction”, hence they are not required to have FRP/ FRR. Whilst such catwalks and overhead corridors offer exit for authorized/ maintenance personnels thereon, there is no requirement for such exit routes to have FRP/ FRR.</p>
4.	<p><u>MOE for Car Ramps</u></p> <p>Are the areas of the car ramps considered occupied spaces requiring means of escape? There may be difficulties in complying with dead end and gradient requirements for MOE. Will there be a difference in requirements in the case of an aboveground ramp as opposed to an underground ramp?</p>	<p>BD advised that when shutters are deployed to form fire compartments in carparks for Table C1 purpose, in case the dispositions of the shutters would result in portions of the car ramps being dead-locked upon activation of the shutters, it would be necessary to provide means of exit to the required staircases / open area / ultimate place of safety to cater for any person who might be trapped within such dead-locked portions of the car-ramp.</p>
5.	<p><u>Calculation of Percentage of Opening Protected by Shutters</u></p> <p>Following BD’s clarification on the denominator for the total length of the perimeter of a fire compartment regarding the 25% calculation for opening protected by shutters without insulation properties, can BD further consider the inclusion of external walls of an aboveground compartment not requiring FRR into the denominator as well, with the understanding that such a wall (being on the exterior of a building and not requiring FRR) poses no additional fire risk compared to one in an underground compartment situation where FRR is required?</p>	<p>BD advised that in light of comments received, BD in liaison with the Consultant have holistically reviewed the requirement under Clause C8.1, the outcome has been incorporated in the final version of the FS Code promulgated on 2.4.2012. Relatedly, para.2(i) of PNAP APP-83 on FRC Code 10.1 will be similarly revised to reflect the same outcome.</p>

<p>6.</p>	<p><u>Minor Works</u></p> <p>There have been difficulties faced by AP/RMWC submitting minor works completion records where BD after audit checking in a few months from the works completion issue major comments on the submitted records for Minor Works or even objection to the works classification. Can BD commit to a period within which objection or comment may be issued so that rectification work can be made within reasonable time but not after user-occupation or long into license application procedures, etc.?</p>	<p>Members raised that, for minor works, especially those requiring only notification to BD upon completion, it would be difficult to comply with BD's comments to the works if they were given a few months after the notification. Further, members requested for a contact point for enquiry on minor works, especially on the structural aspect.</p> <p>BD requested HKIA to give examples on enquiry issues for review. Besides, BD advised that MWCS is a self-regulating control system which allows "minor works" to be commenced or carried out under the "simplified requirements" by prescribed building professionals (PBP)/prescribed registered contractors (PRC). Bearing in mind that the PBP/PRC have the obligation to ensure the subject works are in compliance with the BO and other enactments and should not rely on BD's audit check on the documents/works engaged by them. Minor Work Unit has advised that taking into account of large number of minor works submissions received by BD and the limited resources currently available for handling of the submissions, BD is not yet ready to commit a pledge on replying PBP/PRC. If PBPs have queries relating to minor works, they are welcome to screen the cases involved and outline the scope before raising the example cases for the enquiry services. The general enquiry relating to minor works may be sent to e-mail address pkleung@bd.gov.hk.</p>
<p>7.</p>	<p><u>Distances in SBD Guidelines</u></p> <p>In PNAP APP-151 & 152, the SBD Guidelines, a lot of distance requirements have been imposed say on the width of set back and building separation. However, it is not specified whether these distance requirements are measured from the structural face or the finished face of buildings. Can BD clarify on this? Is there any finishes allowance similar to those traditionally given in the case of Open Air and Prescribed Window calculation under the B(P)R.</p>	<p>Regarding the requirements on distances in PNAP APP-152 (SBD Guidelines), members enquired whether the distances were to be measured from the structural or the finished surface of buildings, and whether there was any allowance for finishes similar to those traditionally given in the case of Open Air and Prescribed Window calculations under the B(P)R.</p> <p>In response, BD advised that PNAP APP-151 regarding the overall cap on GFA concessions, all such dimensions of green / amenity features and plant rooms etc should be based on structural dimensions. In the case of the SBD Guidelines under PNAP APP-152, the required amount of building</p>

		<p>separation and building setback is primarily concerned with the available open space between buildings or between the building and the street / boundary lines, hence all dimensions should be measured from the finished face of the buildings i.e. the outer face of the wall finishes and curtain walls. This would be similar to the requirement that no part of any wall finishes should project beyond the site boundaries. The same principle should also be applicable to the measurements for site coverage of greenery. Measurement of soil areas should discount the areas occupied by wall finishes / curtain walls.</p>
8.	<p><u>Access to another staircase under Clause B8.2(c) of FS Code 2011</u> Clause B8.2(c) of the New Fire Safety Code has a new requirement that only “intermediate” refuge floors can be used together with the roof to provide access to another staircase for some buildings. This would effectively eradicate all buildings of 26 to 39 storeys without a common lobby to provide “change of staircase”. Will BD clarify the intention of and reconsider this?</p>	<p>BD advised that in light of comments received, BD in liaison with the Consultant have holistically reviewed the requirement under Clause B8.2, the outcome has been incorporated in the final version of the FS Code promulgated on 2.4.2012.</p>
9.	<p><u>Recessed Discharge Point at Ground Storey</u> Regarding Clause B9.1 of the new FS Code, it is stipulated that the enclosing walls of the passage from the staircase at ground storey should be up to the ground storey discharge point. There are cases where such ground storey discharge point may be recessed from the ultimate edge of the building (i.e. covered) but only with landscape planters on both sides of the notional passage beyond the discharge point. In terms of safety in evacuation this arrangement is not inferior to the case of podium staircase transfer where only a 6m distance from any unprotected opening is required. Assuming that this arrangement is acceptable can BD advise on the maximum extent of such a notional passage (or the maximum depth of such recessed ground storey discharge point) in cases where GFA is accountable</p>	<p>BD advised that the exit route from staircase at ground storey should be enclosed by fire barriers up to its ground storey discharge point leading directly to an ultimate place of safety. The design of the ground storey discharge point which is recessed from the ultimate edge of the building may be acceptable if the covered recessed area is a common area, open in design and not encumbered with features carrying fire hazards. Such recessed covered areas would be counted for SC and PR. However, it would be irrational to set any depth as an acceptable recess, each case has to be assessed based on its own design, layout and other relevant circumstances.</p>

	and not accountable for such a recessed notional passage	
10.	<p><u>Follow-up issues from previous forums</u></p> <ul style="list-style-type: none"> - Measuring the Height of Protective Barriers - Definition of “Atrium” and “Void” in New FS Code - Response to queries on the New Fire Safety Code generally 	<p><u>BD’s response: -</u></p> <ul style="list-style-type: none"> - In measuring the height of protective barrier, the height should be generally measured from the finished floor level to the top of protective barrier. This principle applies to the case for a solid curb (which is built at the lowermost of the protective barrier) of not more than 150mm high and with a maximum of 75mm width measured from the inner surface of the protective barrier. For cases not meeting the dimensional requirements of the solid curb as stated above, the height of the protective barrier should be measured from the finished level of a solid curb to the top of the protective barrier. For certainty, details of the barriers may be provided for agreement. - Please refer to item 4 (on Clause C10.3) in the Summary of Discussion for the Forum held on 6.1.2012. The outcome has been incorporated in the final version of the FS Code promulgated on 2.4.2012. - Responses to HKIA’s list of enquiry items regarding the FS Code submitted on 18.11.2011 had been sent out on 10.4.2012.
	Item raised by HKIE	
11.	<p>For the first item, I would like to refine it to " For the Wholesale Conversion of Industrial Buildings, HKIE members would request BD to liaise with Lands Department to resolve and clarify the discrepancies arise from the installation of curtain wall resulting in the curtain wall projecting beyond site boundary, as so permitted by BD under PNAP 150, but subsequently disapproved by Lands Department on the ground that no such provision has ever been made correspondingly in the Practice Notes of Lands Department.</p>	<p>BD advised that the related paragraphs in PNAP APP-2 and APP-150 will be revised such that for curtain walls projecting over public streets, the AP will be reminded of the provisions of BO s.14(2) and the need to obtain the agreement of the LandsD prior to the commencement of the works.</p>

12.	Update of revised quality supervision for precast concrete construction proposed by HKIE.	<p>BD had reviewed the requirements on quality supervision for precast concrete elements construction. BD expressed that the requirement of monthly inspection by an RSE to the precast factory in the Mainland China has its functional purpose for ensuring quality precast products. However, BD realized the practical difficulty of the industry and proposed an alternative option of conducting testing/inspection of precast concrete elements when they are delivered to construction site. In parallel, BD also proposed to amend the TCP of the RGBC stream from TCP (T3) to TCP (T1) but maintained the requirement of monthly inspection by the AS.</p> <p>BD also took the opportunity to clearly specify the quality supervision for in-situ reinforced concrete works, i.e. qualification of not lower than an TCP (T3) and TCP (T1) for the RSE and RGBC stream respectively. The proposal details would be tabled at the coming BSC/APSEC Meeting in May.</p>
13.	Clarification on FRP requirements for structural element on Roof, i.e. whether roof beam & slab have any FRP requirement.	<p>BD advised that in general, roof beams and slab are not required to have FRP/FRR but should be constructed of non-combustible materials. However, the roof of a single-staircase building in which the level of the highest floor is more than 13m above ground level, or the roof of a building which is designated as a refuge roof, should have FRP/ FRR – paras. 4 & 13 of the FRC Code (Section 3 in Part A and Clause C12 of the FS Code 2011) refer. Moreover, in case the failure of the roof members will affect the global stability of the building, or where the roof is accessible and functions as a load-bearing floor, such roof members should also achieve the FRP/FRR requirements.</p>
14,	The acceptance criteria of allowable load bearing capacity of rock other than granite and volcanic rock (table 2.1 of the CoP on Foundations refers).	<p>BD advised that Table 2.1 of the Foundation Code only provides the allowable bearing capacity for granite and volcanic rock. For other rock types, the measure of total corer recovery, point load index, etc as specified in Table 2.1 of the Foundation Code may not be adequate. In this connection, RSE in consultation with RGE may make reference to other relevant design guides (e.g, GEO 1/2006) and submit the set of testing requirements to justify the rock has the bearing capacity as prescribed in</p>

		Table 2.1 of the Code.
15.	The possibility of adoption existing GI reports conducted under site supervision of other AP & RGE in accordance with CoP on Site Supervision	<p>BD advised that there would be no fundamental objection for allowing an RSE to adopt the GI works by other AP or RSE on the conditions that:</p> <ul style="list-style-type: none"> i) The GI works were carried out in accordance with the Integrated Site Supervision System implemented in 2005; and ii) The RSE should formally write to BD that the GI information are correct and appropriate to be adopted as the supporting documents for the foundation submission of the project. <p>BD expressed that additional verification boreholes may be required to substantiate the accuracy of the GI information.</p>
16.	Testing criteria on aging effect for stone used in cladding submission.	BD advised that internal review was being conducted. PNAP APP-16 might be amended to specify the testing requirements for BSC/APSEC members' comments.
17.	Completion certification procedures for A&A works involve large scale demolition.	BD advised that the appointment of a Specialist Contractor (Demolition) for A&A works was clearly specified in relevant PNAPs. Submission of BA14A is therefore required for demolition works involving the appointment of Specialist Contractor (Demolition).
18.	Can we ignore transient wind load induced by adjacent structures when assessing the settlement of ground in an ELS proposal?	BD advised that wind loading from the adjacent existing building(s) had to be considered. For strength design of structural members of the E&LS works, full wind loading from adjoining existing building(s) should be adopted in the design. However, BD would review the possibility of reducing the wind loading for ground movements assessment if there was no safety problem on the adjoining building, street, services, etc.
19.	To avoid clashing with existing reinforcement, sometime we need to adjust the location of bolts for temporary steel works of precautionary measures for demolition works. As these temporary works will be removed upon completion of demolition works, will BD accept structural justification with record plan instead of amendment submission?	BD considered that these types of works are not within the scope of the PNAP 272 therefore an amendment submission and corresponding consent application should be made. Besides, the approval plans facilitate staff of Site Monitoring Section to control the building works of an active construction site. HKIE might make proposal on very minor relocation of base plates to BD for consideration.

20.	<p>Under current APP-68 (previously known as PNAP-173), the structural design of cantilevered structure with span more than 1000mm should use a beam-and-slab type of arrangement instead of pure slab cantilever. Recently, most of the new residential buildings in Hong Kong have balconies with a cantilever span of 1200mm to 1500mm. For aesthetic reason, most architects would like to have a thicker pure cantilever slab for the balcony, instead of having the edge beams. Also, when the width of the balcony is only half way across the living room, the anchorage detail for the cantilever beam is much more difficult to construct. We understand that the APP-68 advised to increase the slab thickness inside the flat in order to have a straight re-bar; however, the slab would need to be at least 300mm thick which will increase the concrete volume a lot & reduce the clear headroom of the normal residential unit. We would like BD to allow and consider using pure cantilever slab construction for span up to 1500mm. The minimum cover and slab thickness can be increased, and the design service stress at re-bar will still be limited to certain value.</p>	<p>BD clarified that PNAP APP-68 for cantilevered structures to adopt a beam-slab construction if the span exceeding 1000mm is advisory. BD would consider RSE's proposal case by case with due consideration of global stability and safety, i.e. reduced working stress of rebars, detailing of rebars arrangement, etc. HKIE's suggestion on limit the working stress of rebars, concrete cover etc. are already given in the PNAP.</p>
21	<p><u>Query on CoP for Fire Safety in Buildings</u></p> <ul style="list-style-type: none"> - Diagram B3: Open Plan Layout - One of the d1 should be deleted. - Diagram B4: Balcony Approach - One of the d2 should be deleted. - Clause B17.5 - For staircase from basement floor with direct discharge independently into an ultimate place of safety, no protected lobby is required at basement nor at 	<p>BD's responses:-</p> <ul style="list-style-type: none"> - One of the annotations "d1" in Diagram B3 has been deleted in the final version of the FS Code promulgated on 2.4.2012. - One of the annotations "d2" in Diagram B4 has been deleted in the final version of the FS Code promulgated on 2.4.2012. - Where the staircase is an independent staircase complying with Clause B17.4, a protected lobby is not required at that basement level and the ground level, provided that the staircase leads independently and directly

	ground level?	to the ultimate place of safety at G/F and the whole staircase enclosure does not have any opening communicating with other areas of the building.
	<u>A.O.B.</u>	
22	<p>a) PNAP ADV-3 - complaints on floor numbering system of development projects. (Item raised by BD)</p> <p>b) Soft Copy of Record Plans for R&VD in AutoCAD or Microstation format. (Item raised by BD)</p> <p>c) Excavation for Car Park to Be Considered Underground (Item raised by HKIA)</p> <p>d) Plastic WC Pan Connector for Connecting WC P-trap discharge to vertical or horizontal pipework (Item raised by HKIA)</p>	<p>a) Arising from recent complaints against the floor numbering system of two development projects, Members were reminded of the requirements set out in the PNAP ADV-3 on Standardization of Floor Numbering, and were requested to convey the BD's advice to members of their organizations to revisit all building plans that have been approved prior to the promulgation of the revised PNAP in May 2010 and to make necessary amendments to comply with the prevailing requirements. It was noted that Members had not experienced any problems or reluctance in complying with the floor numbering system as set out in the PNAP.</p> <p>b) In response to R&VD's request for introducing a requirement in PNAP APP-13 to require the supply of soft copy of the record plans in AutoCAD or Microstation format after project completion, Members discussed and agreed to convey the message to members of their organizations and to provide their response to such request to BD.</p> <p>c) Members mentioned that strictly following the criteria in PNAP APP-2 to make a car park underground in sites with large difference in levels between streets would require substantial yet unnecessary excavation if GFA is to be exempted. Members advised that modification applied for such cases following paragraph 15(b)(vii)(4) of the PNAP was rejected. BD advised the concerned AP to check with the BS the reason of such rejection and resubmit the proposal for a review if necessary.</p> <p>d) HKIA reps raised a case of rejection by BD citing the non-availability of a British Standard for these connectors. However, a British Standard for these connectors is available. BD advised that the rejection of such connectors may be for the reason that they did not comply with other drainage regulations. HKIA reps would provide more information to</p>

	<p>e) Potential for UBW in Relation to GBP Approval (Item raised by HKIA)</p>	<p>BD for their review and response on this specific case.</p> <p>e) Members enquired if BD would follow the DB's public statement in LegCo that existence of potential for UBW/abuse would not be a ground for disapproval of plans. BD clarified that in processing applications for modifications/exemptions, potential for UBW/abuse would be one of the relevant factors to be considered in formulating a decision.</p>
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