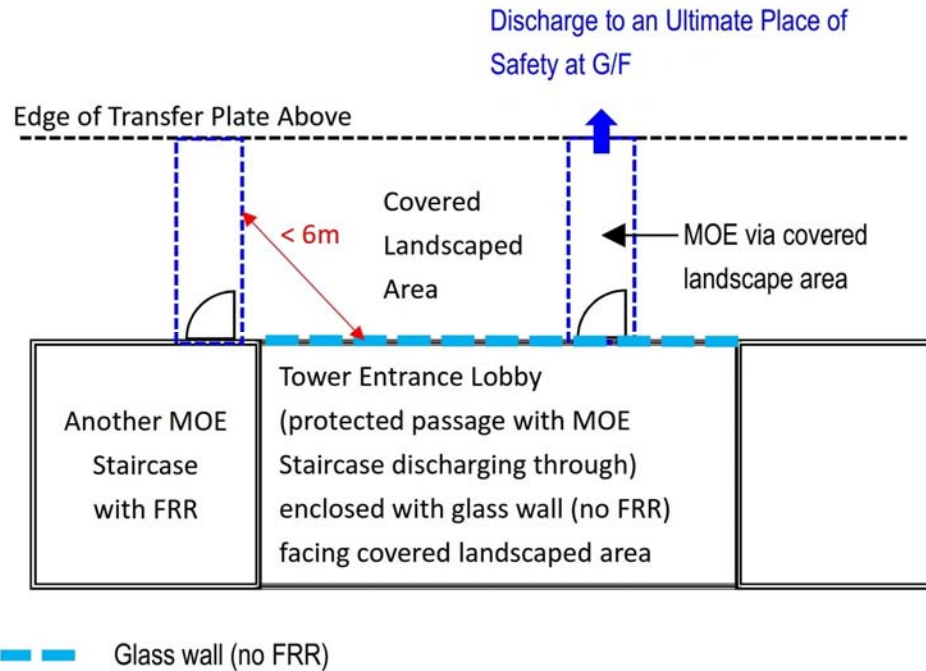


Summary of Items Discussed in 3/2018 APSEC Discussion Forum on 25 May 2018

	Items proposed by Convenors for Discussion	Summary of Discussion and BD's Responses
	Items raised by HKIA	
1.	<p><u>Flexibility for Solar Shading of Windows</u></p> <p>According to item 7 of ADF 2/2015 held on 20 March 2015, BD was receptive with the proposed sliding louvres in front of prescribed windows to enhance solar protection on a case-by-case basis subject to submission of detailed information of such system as well as the circumstances of individual cases. Further to the above, we would like to enquire if these external operable shading devices could also be taken into account in the RTTV assessment for residential buildings.</p>	<p>BD advised that whether such external operable shading devices could be taken into account in RTTV assessment would be considered on a case basis with due regard to the merits and circumstances of individual cases, as well as the following:</p> <ul style="list-style-type: none"> (i) External Shading Coefficient of the proposed device should be calculated with due reference to the methodology as stated in Section 2.5.3 of the "Guidelines on Design and Construction Requirements for Energy Efficiency of Residential Buildings 2014" (the Guidelines); (ii) Any possible adverse impact on natural lighting/ventilation to the habitable spaces concerned arising from such device should be carefully examined; (iii) Pursuant to Paragraph 11 of PNAP APP-156, quantitative assessment should be submitted for consideration if such device projected more than 750mm from the external walls; and <p>In general, if the proposed external shading devices were operated</p>

		<p>manually, they should be excluded from the RTTV assessment as per principle laid under first bullet of Section 2.1.7 of the Guidelines. To facilitate the processing, BD strongly advised that pre-submission enquiry with detailed justifications should be made prior to formal submission.</p> <p>Whilst HKIA expressed that external operable shading devices had been widely adopted in overseas countries, HKIA requested BD to further review the Guidelines at the Technical Committee so as to streamline the acceptance of such devices, including those external manual-operable shading devices.</p>
2.	<p><u>Maintenance & Repair of External Cladding & Typhoon Proof Ceiling</u></p> <p>It is not uncommon that maintenance & repair (M&R) for external cladding or typhoon-proof ceiling are required during the life-time of a building. However, only erection, repair or removal of any cladding fixed to the external wall with the distance between any part of it and the adjoining ground/floor $\leq 6\text{m}$ would be considered as Minor Works (i.e. MW Item 3.31). We would therefore like to enquire on the following with respect to M&R works:</p> <p>(i) whether the requirements for structural A&A submission could be waived for dismantling, inspection, repairs and reinstatement works involving small quantities of existing cladding works (say 20 nos. defective cladding panels out of 300 nos.) or typhoon proof ceiling;</p>	<p>BD advised the following:</p> <p>(i) As the works concerned were neither considered as Minor Works or Designated Exempted Works under the Building (Minor Works) Regulations nor building works exempted under Section 41(3) of the Buildings Ordinance, structural A&A submission would be required for such works regardless of the quantities of the cladding panels involved.</p> <p>BD supplemented that in order to facilitate M&R of cladding panels, legislative amendments to introduce new MW item for repair and removal of cladding panels located at a level $> 6\text{m}$ from</p>

	<p>(ii) whether structural A&A submission would be required if the existing cladding panels are replaced with new panels of same size and material specifications; and</p> <p>(iii) In case structural A&A submission cannot be waived for item (i) and/or (ii) above, we understand that separate demolition proposal for the dismantling of the existing cladding/typhoon proof ceiling panels is NOT necessary since such works ought to be covered under the structural A&A submission. Please advise if our understanding is correct.</p>	<p>adjoining ground had already been proposed and would be put forward to LegCo for vetting in due course.</p> <p>(ii) Reply as per item (i) above was applicable.</p> <p>(iii) BD shared HKIA's understanding that separate demolition plan for dismantling of the existing cladding/typhoon proof ceiling panels would normally not be required.</p>
3.	<p><u>Clause C9.7 of the FS Code 2011</u></p> <p>With reference to Item 9 of ADF dated 16 March 2012, a required staircase discharging through the main entrance lobby of a tower which is recessed from the edge of open air outside a building with the arrangement as indicated in the diagram below is normally considered acceptable, providing that the covered recessed area is a common area, open in design and not encumbered with features carrying fire risks.</p>	<p>BD advised that the concerned MOE route discharged from another required staircase across the same covered recessed area should be located at least 6m away from the said main entrance lobby with non-FRR glass wall enclosure pursuant to Clause C9.7 of the FS Code 2011.</p> <p>Similarly, any unprotected opening on the external wall of a required staircase should be located at least 6m away from the unprotected opening on the external wall of another required staircase. This could prevent any smoke logging or other life-threatening incident occurring in a required staircase from affecting any other required staircases to ensure safe discharge of the evacuees.</p>




BD's reply to item 2 of ADF 2/2016 dated 18 March 2016 was also relevant.

By the same token, MOE route discharged from another required staircase across the same covered recessed area can be located within 6m from the said main entrance lobby with non-FRR glass wall enclosure, as the said tower lobby (with a required staircase discharges through) should be considered as a discharge route of no fire risk, and hence the requirement for fire protection under Clause C9.7 of the FS Code 2011 should not be applicable.

Please advise if our interpretation is correct.

	Items raised by HKIE
4.	<p data-bbox="181 193 1160 272"><u>Adopting Performance-based Approach in FS Code 2011 for Innovative Building Design</u></p> <p data-bbox="181 339 1160 515">For building projects that cannot meet the Deemed-to-Comply provisions of the FS Code 2011 due to genuine difficulties, a performance-based approach using fire engineering can be adopted to formulate an Alternative Solution. Clause G3.3 of FS Code 2011 refers.</p> <p data-bbox="181 582 1160 662">However, BD will normally not accept any reasons on better architectural design, more user-friendly and easier maintenance for future users/owners.</p> <p data-bbox="181 729 1160 1048">This deters the building professionals from innovative building designs and poses much limitations and constraints in the development of fire engineering design for complicated composite buildings. While fire engineering design is project specific and tailored made to suit the building design, performance and operational requirements, such fire engineering design should be a more suitable design approach to safeguard human lives and properties in case of fire.</p> <p data-bbox="181 1115 1160 1243">Hence, we would like to request BD to support innovative building design by considering Fire Engineering Approach as Alternative Solution irrespective of whether the Deemed-to-Comply provisions are applicable.</p> <p data-bbox="1182 339 2119 467">BD advised that they would favourably consider accepting performance-based approach by fire engineering as an Alternative Solution to prescriptive approach on case merits.</p> <p data-bbox="1182 534 2119 662">To streamline the approval process, pre-submission enquiry could be made to ascertain critical issues/comments from relevant government departments.</p>

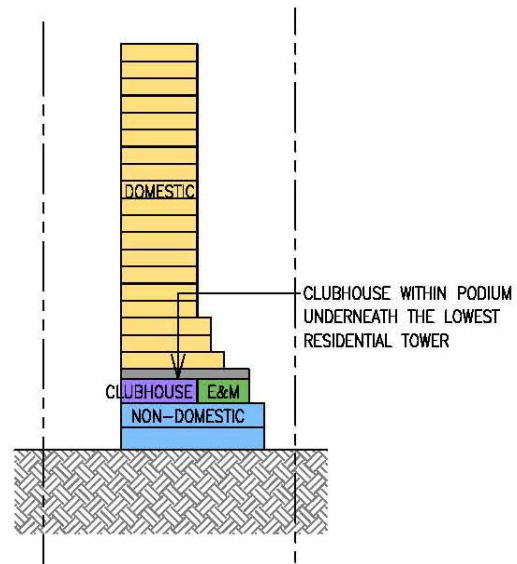
5.	<p><u>Clause 5.4.11 of CoP for Foundations 2017</u></p> <p>Clause 5.4.11 (5)(c) & (d) of CoP for Foundations 2017 specifies the dynamic load test requirements for steel H-piles driven to bedrock.</p> <p>(i) Would BD please clarify whether, unless specifically imposed in the approval letter for particular case, dynamic load tests on 10% of working piles for pile capacity and another 20% of working piles for integrity are sufficient.</p> <p>(ii) If hydraulic hammers are proposed for conducting the Stress Wave Dynamic Tests (SWDTs), do we need to submit Final Set Tables with hydraulic hammers for approval and construction?</p> <p>(iii) If only SWDTs on 10% of working piles is imposed during approval (e.g. Para. 1 (e) of App. II of the attached sample approval letter refers), do we need to conduct SWDTs on all working piles?</p> <p> Sample Approval Letter.pdf</p> <p>(iv) Do we need the pile integrity tests as per Clause 5.4.11 (5)(d) of CoP for Foundations 2017 if it is not imposed during approval?</p>	<p>BD confirmed that:</p> <p>(i) Dynamic load tests on 10% for pile capacity and another 20% for integrity as per CoP for Foundations 2017 would suffice. For the 10% verification test on pile capacity, selection of piles would accord priority to those which were driven to sloping rockhead. With regard to the difficulty in achieving 75% of yield stress when pile length is relatively long, this issue would be further discussed in the coming TC meeting.</p> <p>(ii) Submission of Final Set Tables by hydraulic hammer for conducting the SWDTs would not be required for BD's approval.</p> <p>(iii) The % of SWDTs to be conducted should be strictly in accordance with the conditions imposed in approval letter.</p> <p>(iv) BD confirmed that the % of integrity test should be carried out in accordance with the imposed condition. Meanwhile, BD would amend the standard appendix to approval letter for Steel H-piles driven to bed rock to tally with the relevant clauses of CoP for Foundations 2017.</p>
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	Item raised by AAP	
6.	<p><u>Site Coverage of Resident's Clubhouse under the application of PNAP APP-132</u></p> <p>We understand that the site coverage (SC) of resident's clubhouse has always been considered as non-domestic.</p> <p>We wish to know whether the determination will be different if clubhouse is located in a building which applied PNAP APP-132 for SC concession with building set back.</p> <p>It is our view that the determination should depend on the function of the premises and be unrelated to other circumstances. All uses within resident's clubhouse are non-domestic, and therefore non-domestic SC and GFA should always apply. We wish to know if our view is agreed.</p> <p>If the SC of resident's clubhouse is determined by circumstances other than its use, we wish to know whether the SC of the clubhouse in the following circumstances (all under PNAP APP-132) will be domestic SC or non-domestic SC.</p>	<p>BD confirmed that if the clubhouse was placed below the lowest domestic floor, its SC could be counted as non-domestic. However, if the clubhouse was placed within the domestic tower, its SC should be counted as domestic. The same principle should be applied in the context of PNAP APP-132.</p>

Scenario 1

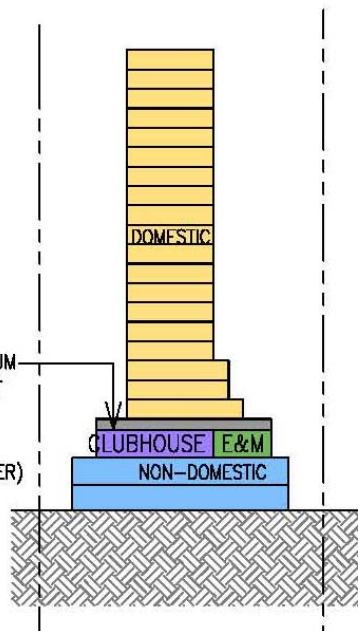
DOMESTIC PART
PERMITTED SITE COVERAGE
= 63% - 40%

NON-DOMESTIC PART
PERMITTED SITE COVERAGE
= 92% - 65%



Scenario 2

CLUBHOUSE WITHIN PODIUM
UNDERNEATH THE LOWEST
RESIDENTIAL TOWER
(PART OF CLUBHOUSE
AT THE OUTSIDE OF TOWER)



7.	<p><u>PNAP APP-159</u></p> <p>PNAP APP-159 and Circular Letter dated 6 February 2018 provided clear directions for AP to follow concerning subdivision of industrial premises.</p> <p>Members have noticed through their submissions of proposals that BD is also concerned about the misuse of office buildings for residential use. Subdivision into small office units provided with toilets would not be approved, even though the toilets do not require modification for natural lighting and ventilation and the office's size is larger than 80m², which seems to be even more stringent than the requirements for industrial premises.</p> <p>We understand the need to avoid misuse of office buildings for domestic use. We hope that clear guidelines can be available such that APs can follow.</p>	<p>BD advised that according to the previous reply to item 9 of ADF 3/2018 dated 19 May 2017, BD would make reference to the relevant criteria in PNAP APP-159 in bench marking whether the office layout resembled those for domestic use or not.</p> <p>[Post Meeting Notes: BD clarified that such practice was being reviewed in light of members' concerns as well as the latest situation of office developments/uses and would be further discussed in the next ADF.]</p>
	Item raised by BD	
8.	<p><u>Compliance Standard for Heat Soak Process of Tempered Glass Panes</u></p> <p>The compliance standard for heat soak process of tempered glass panes specified in PNAP APP-37 and PNAP APP-53 is BS EN 14179-1:2005, whereas the updated version BS EN 14179-1:2016 is specified in Annex A1 of the CoP for Structural Use of Glass 2018 (the 2018 Code). The main difference between the two versions is that the temperature of glass pane during the holding phase of the heat soak process, in which the glass pane</p>	<p>BD briefed members on the arrangement of accepting different versions of heat soak test standard under the 2018 Code during the grace period.</p>

	<p>shall be maintained within the range 290°C±10°C for BS EN 14179-1:2005 and 260°C±10°C for BS EN 14179-1:2016.</p> <p>In order to facilitate the industry during the transition period when the oven for heat soak process are re-calibrated to conform to BS EN 14179-1:2016, heat soak test in accordance with BS EN 14179-1:2016 and the corresponding assessment report would be considered acceptable even though BS EN 14179-1:2005 has been specified on the structural plans approved before the promulgation of the 2018 Code.</p> <p>On the other hand, for tempered glass design to 2018 Code and BS EN 14179-1:2016 is specified on the approved plans, heat soak test conforming to BS EN 14179-1:2005 and the corresponding assessment report would not be accepted.</p>	
	AOB Items	
9.	<p><u>Minor Amendments for Phased Development</u> (Item raised by HKIE)</p> <p>Phased development nowadays is very common, especially for large scale developments where foundation works cannot be completed within a short period.</p> <p>Would BD please advise whether application for modification of regulation 33(1) of the B(A)R is applicable for minor amendments of building, superstructure and drainage works in phased developments provided that</p>	<p>BD advised that application for modification of regulation 33(1) of the B(A)R would be considered in accordance with PNAP ADM-19 provided that the extent of application had been clearly demarcated on plan.</p>

	first consents have been granted.	
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11 OCT 2017

YOUR REF 來函檔號：
OUR REF 本署檔號：
FAX 圖文傳真：
TEL 電話：
www.bd.gov.hk

6 October 2017
1st - Submi

Dear Sir,

I refer to your application dated received on 8 August 2017 for approval of proposals in respect of **Foundation (Large Diameter Bored Piles and Driven Steel H-piles)**.

2. Your submission of plans has been checked under the curtailed check system announced in Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers ADM-19. On this basis, I am satisfied that your submission is fundamentally acceptable and may be approved.

3. You are reminded that the curtailed check system covers only the fundamental issues of a building proposal. Although non-fundamental issues will not be raised as reasons for disapproving a submission, I expect that all contraventions of the Buildings Ordinance and its subsidiary legislation are rectified as and when they are discovered and in any event, before completion of the works is certified. In this connection, I ask you to note that the Building Authority attaches great importance to the proper assumption of duties and responsibilities by authorized persons and registered structural engineers.

4. In accordance with the provisions of regulation 30(1) of the Building (Administration) Regulations, this is to notify that the above - mentioned plans submitted with your application dated received on 8 August 2017 are hereby approved. One set of the said plans, on which I have signified my approval, is enclosed. Your client has been sent a copy of this letter but I would request that you ensure that the contents are understood by him.

5. This approval should not be deemed to confer any title to land or to act as a waiver of any term in any lease or licence. This approval does NOT authorize the commencement or the carrying out of any works shown in the approved plans. Section 14(2) of the Buildings Ordinance refers.

(Please refer to the attached sheets)

Yours sincerely,

Chief Structural Engineer
for Building Authority

CO/SM
GE

S.L.9 (11/2009)

Our Ref.: BD

6. This approval is subject to the conditions and requirements given in Appendices I to III attached.

7. To ensure full compliance with the Buildings Ordinance, it is prudent for the Authorized Person who acts as the coordinator of the building works to inform the Registered General Building Contractor/Registered Specialist Contractor of all the imposed conditions attached to this approval.

8. This approval is based on the assumed loads used in the design of these foundations. The superstructural plans, when submitted, may not be approved if the loads from the detailed calculations of the superstructure differ from the loads assumed in the foundations now approved.

9. You are reminded that the approval of this submission does not infer that any general building plans corresponding to this application will be approved by the Building Authority and it is your duty to ensure that the approved structural submissions are compatible with the approved general building plans.

10. Under item 6 of Section 17(1) of the Buildings Ordinance, you are required to submit initial readings of all the monitoring stations prior to the commencement of the foundation works and subsequent monitoring readings at bi-weekly intervals during the course of works. A copy of the monitoring record shall be kept on site for inspection by staff of Buildings Department. Monitoring checkpoints should be duly monitored and assessed at various critical stages of construction works and the Registered General Building Contractor/Registered Specialist Contractor should regularly update the works programme of site activities.

11. Under Building (Administration) Regulation 10, you are required to submit a pre-construction condition survey report on the ground, the adjacent structures and services located within and in the vicinity of the site. The area to be surveyed shall cover at least 50m from the perimeter of the site. Under section 16(3)(b) of the Buildings Ordinance, the consent for the commencement of foundation works will not be given until the report has been submitted and found satisfactory.

12. Under Building (Administration) Regulation 10, you are required to submit a Public Relation Plan (PR Plan) for my agreement prior to the commencement of pile driving operations. The PR Plan should set out the actions to be carried out before and after the commencement of the pile driving operations in order to address the concerns of the occupants of adjacent buildings that may be affected by the vibrations of the pile driving operations.

13. You are reminded that for works outside the lot boundaries and for any monitoring check points to be installed at the adjacent existing buildings, streets, pavements and lanes, you are reminded to obtain consent/permission from the relevant owners of the adjacent buildings and/or relevant authorities. Your attention is drawn to Buildings Ordinance section 14(2).

Our Ref.: BD

14. You are reminded that the record plans and/or test reports required under this approval should be submitted within the time frame as specified in the attached appendix/appendices. Delay in the submission of the required documents may affect the timely processing of Form BA14 and/or occupation permit applications.
15. You are requested to promptly report all significant signs of distress and/or notable landslides during the construction works to the Buildings Department and the Geotechnical Engineering Office.
16. Comments from CEDD are given in Appendix IV attached.
17. Comments from DSD are given in Appendix V attached.
18. Comments from Highways Department are given in Appendix VI attached.
19. You are requested to forward a copy of the above approved plans to GEO.
20. RDO/HyD advised that AP/RSE should closely liaise with MTRCL's contact person (Mr. Adrian TAN, Senior Construction Engineer of SCL at Tel. no. 3767 0270 for site interface issue.
21. MTRCL has no comment on your plan submission and reminds you that the limits stipulated in paragraph B(1) of the Appendix A of PNAP APP-24 shall not be exceeded.
22. The Mass Transit Railway aspects under the Railway Ordinance will be dealt with separately.

Ref : BD

Address :

Appendix I to approval dated 6 October 2017

**Foundation Works
(Driven Steel Bearing Piles)**

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) For welding of structural steel works, welding procedures and welders should be assessed/tested in accordance with the appropriate provisions of the Annex A to the Code of Practice for the Structural Use of Steel 2011. Before driving in spliced sections of the piles, non-destructive tests on a representative number of welded joints should be carried out with a sampling rate of not less than 10% of the total number of welded joints in accordance with the appropriate provisions of the Annex A to the Code of Practice for the Structural Use of Steel 2011 and by a laboratory* accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or by other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS for the particular test concerned. The test reports[@], with the joint locations clearly specified, should be submitted within 21 days after testing.
- (b) Test driving on pile no.(s) P1 of CP46 should be carried out to verify the design assumptions before driving, other than pitching the first section, of any other piles. The Buildings Department should be notified of the time and date of the test so that the test driving may be witnessed by a representative from the Department.

2. You are reminded that site supervision of the foundation works by a team of supervisors shall be provided each by the Authorized Person, the Registered Structural Engineer and the Registered Specialist Contractor in accordance with the Technical Memorandum for Supervision Plans 2009 and the Code of Practice for Site Supervision 2009 to ensure that the quality of the foundation works is up to standard and that the works are carried out in accordance with the plans approved and in such a manner as not to render inadequate the margin of safety of, or impair the stability of, or cause danger to any building, structure, land, street or services. Details of site supervision for the foundation works shall be included in the supervision plan and submitted prior to or at the time of application for consent to the commencement of the foundation works.

3. Under Building (Administration) Regulation 10, the following documents are required to be submitted:

- (a) For structural steel classified as Class 1 or 2 in accordance with the Code of Practice for the Structural Use of Steel 2011, a copy each of the mill certificates of the structural steel used, which should be submitted within 60 days of the delivery of the structural steel to the site and appended with a statement signed by the Registered Structural Engineer to confirm that the requirements of chemical composition and mechanical properties appropriate to the type of steel have been complied with and that the structural steel used is produced from a manufacturer with an acceptable Quality Assurance system.

- (b) Two set(s) of foundation record plans and report together with the Form BA14 required under Building (Administration) Regulation 25 to certify the completion of the foundation works. The record plans should include details of the characteristic features of the site and the identification, location, size, depth and level of each pile as constructed. The report should include for each pile the date of installation, the quality and quantity of materials used and the driving performance.

5. If trial pile testing is required in paragraph 1(b) above, consent to the commencement and carrying out of the piling works will not be given until the report on trial pile testing has been submitted and found satisfactory.

6. Consent to the commencement and carrying out of the pile cap and superstructure works will not be given until the test reports specified in paragraphs 1(a) above, and the mill certificates of the structural steel used, the foundation record plans, report and Form BA14 specified in paragraph 3 above have been submitted and found satisfactory, and that the required proof tests have also been satisfactorily carried out.

7. All significant signs of distress during the construction works should be reported promptly to the Buildings Department. Where the ground settlement reaches or exceeds the trigger value of the "Alarm Level" defined in the monitoring scheme, the Chief Highway Engineer/Research and Development, Highways Department (Attention: Land Surveyor/Geographic Information System, telephone number: 2762 3498, fax number: 2714 5290, email: lsgis.rnd@hyd.gov.hk) should be notified promptly together with the relevant details of the monitoring.

* A Directory of Accredited Laboratories in Hong Kong is obtainable from the Hong Kong Accreditation Service (HKAS) Executive, Innovation and Technology Commission.

A laboratory's accreditation for an individual test or calibration may be granted, modified or withdrawn at any time. Up-to-date information on accredited laboratories and their scopes of accreditation are available on the internet at the HKAS website at <http://www.info.gov.hk/ite/hkas/>.

@ The test carried out by an accredited laboratory should be within its scope of accreditation. To ensure this, test results should be reported on a HOKLAS Endorsed Certificate or equivalent Certificate/Report issued from other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS.

Ref: BD

Address :

Appendix II to approval dated 6 October 2017

Foundation Works
(Steel Bearing Piles Driven to Bedrock)

In giving this approval of plans, I hereby impose the following conditions under item 6 in section 17(1) of the Buildings Ordinance:

- (a) For welding of structural steel works, welding procedures and welders should be assessed/tested in accordance with the appropriate provisions of the Annex A to the Code of Practice for the Structural Use of Steel 2011. Before driving in spliced sections of the piles, non-destructive tests on a representative number of welded joints should be carried out with a sampling rate of not less than 10% of the total number of welded joints in accordance with the appropriate provisions of the Annex A to the Code of Practice for the Structural Use of Steel 2011 and by a laboratory* accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) or by other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS for the particular test concerned. The test reports[@], with the joint locations clearly specified, should be submitted within 21 days after testing.
- (b) Test driving on pile no.(s) P1 of CP74 should be carried out to verify the design assumptions before driving, other than pitching the first section, of any other piles. PDA testing with CAPWAP analysis should be carried out to verify the maximum driving stresses and the integrity/capacity of the piles during final set measurement of all tested piles. The Buildings Department should be notified of the time and date of the test so that the test driving may be witnessed by a representative from the Department.
- (c) *Predrilling* – Predrilling at locations in close proximity of the piles should be carried out to better identify the quality of the founding material during construction of the piles and to confirm the appropriate founding levels. The number of predrill boreholes required should be such that the pile tip of every such pile should be within 5m from a predrill borehole. The predrilling should be sunk to at least 5m below the rock head of the specified category in accordance with the Code of Practice for Foundations.
- (d) *Post-installation proof drilling* – Upon completion of the piles, some additional proof drill holes should be sunk to at least 5m below the as-built founding level of the nearest pile, to verify the rockhead profile and hence assess the adequacy of the piles. The number of such proof drill holes should be at least 2 for sites with 100 or less piles; or 1% of the number of piles for sites with more than 100 piles (any fraction of a proof drill hole so calculated should be construed as one additional proof drill hole).
- (e) *Stress wave dynamic tests* – At least 10% of the total number of piles should be

checked with PDA measurement with CAPWAP analysis to verify the maximum driving stresses and the integrity/capacity of the piles during driving.

2. You are reminded that site supervision of the foundation works by a team of supervisors shall be provided each by the Authorized Person, the Registered Structural Engineer and the Registered Specialist Contractor in accordance with the Technical Memorandum for Supervision Plans 2009 and the Code of Practice for Site Supervision 2009 to ensure that the quality of the foundation works is up to standard and that the works are carried out in accordance with the plans approved and in such a manner as not to render inadequate the margin of safety of, or impair the stability of, or cause danger to any building, structure, land, street or services. Details of site supervision for the foundation works shall be included in the supervision plan and submitted prior to or at the time of application for consent to the commencement of the foundation works.

3. Under Building (Administration) Regulation 10, the following documents are required to be submitted:

(a) For structural steel classified as Class 1 or 2 in accordance with the Code of Practice for the Structural Use of Steel 2011, a copy each of the mill certificates of the structural steel used, which should be submitted within 60 days of the delivery of the structural steel to the site and appended with a statement signed by the Registered Structural Engineer to confirm that the requirements of chemical composition and mechanical properties appropriate to the type of steel have been complied with and that the structural steel used is produced from a manufacturer with an acceptable Quality Assurance system.

(b) Two set(s) of foundation record plans and report together with the Form BA14 required under Building (Administration) Regulation 25 to certify the completion of the foundation works. The record plans should include details of the characteristic features of the site and the identification, location, size, depth and level of each pile as constructed. The report should include for each pile the date of installation, the quality and quantity of materials used, the driving performance, the predrilling and post construction proof drilling records and any necessary test on the bearing strata and should also be accompanied by an assessment report with a rockhead contour plan prepared based on the ground investigation, the predrilling and the post construction proof drilling.

5. If trial pile testing is required in paragraph 1(b) above, consent to the commencement and carrying out of the piling works will not be given until the performance review report for the trial piles specified in paragraph 3(b) above has been submitted and found satisfactory.

6. Your attention is also drawn to Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) APP-18, the Technical Memorandum for Supervision Plans 2009 and the Code of Practice for Site Supervision 2009 regarding the requirements on predrilling and post construction proof drilling works.

7. Consent to the commencement and carrying out of the pile cap and superstructure works will not be given until the test reports specified in paragraphs 1(a) above, the records of predrilling, post construction proof drilling and stress wave dynamic tests specified in paragraphs 1(c), 1(d) and 1(e) above, and the mill certificates of the structural steel used, the

foundation record plans, report and Form BA14 specified in paragraph 3(a) and (c) above have been submitted and found satisfactory, and that the required proof tests have also been satisfactorily carried out.

8. All significant signs of distress during the construction works should be reported promptly to the Buildings Department. Where the ground settlement reaches or exceeds the trigger value of the "Alarm Level" defined in the monitoring scheme, the Chief Highway Engineer/Research and Development, Highways Department (Attention: Land Surveyor/Geographic Information System, telephone number: 2762 3498, fax number: 2714 5290, email: lsgis.rnd@hyd.gov.hk) should be notified promptly together with the relevant details of the monitoring.

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- @ The test carried out by an accredited laboratory should be within its scope of accreditation. To ensure this, test results should be reported on a HOKLAS Endorsed Certificate or equivalent Certificate/Report issued from other laboratory accreditation bodies which have reached mutual recognition agreements/arrangements with HOKLAS.