Self-certification System for Plan Submission of Simple Structural Works

Introduction

In consideration of the Government's commitment to streamline the development process while upholding building safety in compliance with the Buildings Ordinance (BO), the Buildings Department (BD) introduces a self-certification system with fast track processing procedures for plan submissions of some structural works which are relatively simple in nature and pose less risk for construction (hereinafter referred as "simple structural works"). This practice note sets out the scope, requirements and procedures of the self-certification system.

Scope of Simple Structural Works

- 2. According to the extent and complexity of building works, construction methods, technical requirements and risk levels, simple structural works are categorised into five categories as below:
 - (a) Category A Works;
 - (b) Category B Works;
 - (c) Category C Works;
 - (d) Category D Works; and
 - (e) Category E Works.
- 3. The general descriptions of Category A to E Works and their eligibility criteria are listed in Appendix A. Simple structural works meeting the eligibility criteria can be processed on a fast track basis by relying on the self-certification of the registered structural engineer (RSE) who prepares the plans for approval. For Category C to E Works, a separate independent checking engineer (ICE) is required to be appointed for checking and certifying the plans. Works not meeting the eligibility criteria in Appendix A will not be qualified for fast track processing.

/Self-certification...

RSE appointed by the developer/owner of the project as indicated in the Form BA4 submitted to the Building Authority (BA). For cladding, curtain wall, window, window wall and precast concrete works mentioned in PNAP APP-16, APP-37 and APP-143, he/she can be a separate RSE appointed to prepare the design and supervise the carrying out of such works.

Self-certification of Simple Structural Works

4. RSE and ICE (if applicable), in addition to specified Forms BA5 and BA6², should complete the checklists³ as provided in Appendices B1 and B2 respectively and a certificate as provided in Appendix C for certifying that the relevant structural plans and design calculations meet the eligibility criteria given in Appendix A, the proposed structural works are compatible with the supporting structure and comply with the provisions of the BO and allied regulations. The structural plans and design calculations should be clearly presented and organised as outlined in PNAP ADM-8. They should be signed by RSE and ICE (as applicable) with a standard statement in accordance with Appendix D.

Appointment and Requirements of ICE

5. ICE should also be a registered structural engineer whose name is on the structural engineers' register kept under section 3(3) of the BO. To ensure impartiality and independency, ICE should be appointed by the developer/owner of the project and should have no conflict of interest with RSE and all relevant personnel/parties of the project in carrying out the duties. Notification of appointment of ICE and declaration of no conflict of interest by ICE should be submitted to BD in a standard form (see Appendix E) on or before the date of submission of plans for fast-track processing.

Duties and Responsibilities of ICE

6. ICE should carry out fundamental check on the plans for Category C to E Works according to the checklist at Appendix B2. ICE should advise RSE whether the works are in compliance with the criteria of simple structural works as specified in Appendix A and thus eligible for self-certification for fast track processing. After the fundamental check by ICE, the plans, design calculations and the checklists of Appendix B1 and Appendix B2 are to be submitted by RSE to BD.

Plan Processing

- 7. On the basis that the submission only involves simple structural works that have been certified by RSE (for all Category A to E Works) and ICE (for Category C, D and E Works) for complying with the provisions of the BO and allied regulations, the curtailed check performed by BD would focus on the completeness of the submitted documents, verification of registration status and the correctness/appropriateness of the following structural information shown on the plan submissions:
 - (a) compatibility between the simple structural works and the supporting structures (as appropriate);
 - (b) provision of fire resistance to structural elements;

/(c)...

For alteration and addition works.

RSE should complete the checklist for all categories of works as provided in Appendix B1. In addition, ICE should complete the checklist for Category C to E Works as provided in Appendix B2.

- (c) design loads;
- (d) design codes and standards;
- (e) specifications for materials and workmanship;
- (f) testing requirements and criteria on materials and structural fixings; and
- (g) provision of corrosion resistance to structural elements.
- 8. The processing time for plan submissions of simple structural works under the self-certification system will be as follows:

Type of submission	Processing time (Days)		
	Submission via Electronic Submission Hub (ESH)	Submission other than via ESH	
First submission/ resubmission/ major revision	20	40	
Amendment including Type II Works applied for fast track consent application	10	20	

- 9. Once a submission of simple structural works has adopted the self-certification system for fast-track processing, its subsequent resubmissions or amendment submissions should also adopt the same procedures for self-certification. As BD relies on the checking and certification by RSE/ICE in processing the plan submissions, if the subsequent resubmission/amendment submission is not submitted under the self-certification system, BD may consider it as a normal submission which will be processed under the normal time frame in accordance with regulation 30 of the Building (Administration) Regulations.
- 10. Notwithstanding the above, in case that the first submission of simple structural works has not adopted the self-certification arrangement, RSE and ICE may still adopt the self-certification arrangement in the subsequent resubmissions/amendment submissions.

Concurrent Applications for Approval and Consent

11. Concurrent applications for approval and consent for Category A, B, C, D or E Works may be processed provided that approval of the corresponding building plans have been given. The requirements under PNAP ADM-19 should be followed and all requisite supporting information/documents for consent application should be submitted and found satisfactory before granting of the consent.

Audit Checks of Plan Submissions

12. To maintain a high quality standard of self-certification and prevent abuse, BD will carry out audit checks on the fundamental issues of the submissions by random selection. The results of audit checks will be conveyed to RSE and ICE. If there is any misrepresentation of material facts in any plans/certification or misconduct in carrying out duties under the BO, appropriate action will be taken in accordance with the BO.

(HO Chun-hung) Building Authority

Ref.: BD NBD2/K/BREG/1 BD GR/1-125/5/1 (IV)

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Eligibility Criteria for Fast Track Processing of Structural Plan Submissions for Simple Structural Works Under Self-certification System

- 1. General eligibility criteria for Category A to E Works are as follows:
 - (a) only involving conventional construction materials (such as reinforced concrete, precast reinforced concrete, structural glass, structural steel, stainless steel, structural aluminium, stone and other materials in the Buildings Department's Central Data Bank);
 - (b) not affecting the overall structural stability of the building for which the simple structural works are attached to;
 - (c) not involving any prestressed structure; and
 - (d) not involving any retaining structure.
- 2. Specific eligibility criteria for Category A to E Works are as follows:
 - (I) Simple structural works relying on self-certification by RSE
 - (A) Category A Works
 - (a) Simple structural works in a new building development that are of the same nature, scale and complexity as a minor works (MW) item¹; and
 - (b) MW in an existing building, plans of which are submitted by RSE for seeking the Building Authority's (BA) approval and consent, instead of adopting the simplified requirements under the Minor Works Control System (MWCS).
 - (B) Category B Works

Simple structural works in a new building development involving the erection of the following elements including their anchors and support details, which do not fall within Category A Works and are neither exempted works nor designated exempted works:

(a) Metal/glass cladding, false ceiling², louvre and grille³

/(i)...

MW items are specified in Schedule 1 of the Building (Minor Works) Regulation (B(MW)R).

False ceiling that is subject to wind load and suspended underneath a structure e.g. balcony, transfer plate or open frame structure.

Louvre and grille that are subject to wind load and attached to the exterior of a building or suspended underneath a structure, e.g. balcony, transfer plate or open frame structure.

- (i) the highest point of any part of the works is not more than 100m above the adjoining ground of the building; and
- (ii) the least dimension of a rectangle inscribing any individual panel does not exceed 2m; and the area of any individual panel does not exceed 6m².
- (b) Metal supporting frame and modular units⁴ for the growing of plants that are fixed to an external wall of a building
 - (i) criterion in item (a)(i) above is met;
 - (ii) each modular unit is of a size not exceeding 0.75m in height and width;
 - (iii) projection of each modular unit from the plane of fixing points does not exceed 0.2m; and
 - (iv) the system is a proprietary system.
- (c) Metal/glass canopy
 - (i) criteria in item (a)(i) and (ii) above are met; and
 - (ii) no part of the canopy projects more than 2m from the column/wall/beam.
- (d) Metal supporting frame for suspending a building service installation⁵ (BSI) inside a building, of which the imposed load due to the BSI on the supporting frame is not more than 2 kPa and the weight of individual BSI is not more than 2000 kg.
- (e) Metal supporting frame for glass reinforced polyester (GRP) water tanks/BSI on-grade or on a slab inside a building, of which the imposed load due to the GRP water tank/BSI on the supporting frame is not more than 20 kPa and the weight of individual GRP water tank/BSI is not more than 9000 kg.
- (f) Maintenance platform and its supporting metal frame sitting on or suspending underneath a slab inside a building, of which the designed imposed load on the supporting frame is not greater than 2 kPa.
- (II) Simple structural works relying on self-certification by RSE with checking and certification by ICE
 - (C) Category C Works

/(a)...

⁴ See Circular Letter titled "Submission of Vertical Greening Plans" issued by the BA on 14 February 2019.

As defined under Section 1 Part 1 of Schedule 1 to the B(MW)R.

- (a) Stone cladding works including their anchors and support details in a new building development and the works do not fall within Category A Works:
 - (i) the highest point of any part of the works is not more than 100m above the adjoining ground of the building; and
 - (ii) the least dimension of a rectangle inscribing any individual panel does not exceed 2m; and the area of any individual panel does not exceed 6m².

(D) Category D Works⁶

- (a) Single storey refuse room/plant room/covered walkway and associated structural works⁷ in a new building development
 - (i) no structural element of the structure has a span of more than 8m:
 - (ii) the height of the structure is not be more than 5m; and
 - (iii) the structure has no basement.
- (b) Detached or semi-detached single-family house not exceeding three storeys and associated structural works⁷
 - (i) no structural element of the structure has a span of more than 8m;
 - (ii) the height of each storey is not more than 4.5 m; and
 - (iii) the structure has no basement.

(E) Category E Works

Shallow foundation⁸ supporting Category D Works

- (a) the allowable pressure of the foundation is not more than 300 kPa or 150 kPa (if the foundation is located below ground water table);
- (b) the foundation is not founded on soft clay or mud;
- (c) the foundation is not founded at more than 3m below existing ground level;

/(d)...

⁶ Category D Works may rest on a podium floor, shallow foundation or pile cap supported by a pile foundation directly.

Associated structural works include curtain wall, skylight, precast element, external steel maintenance platform, external metal staircase, external cat-ladder (other than Designated Exempted Works item 28) or similar structures that meet the general eligibility criteria in paragraph 1.

Shallow foundation includes, but not limited to spread footing, pad footing, strip footing and raft foundation.

- (d) it does not involve any foundation works in Area Numbers 1, 3 and 5 of Schedule Areas in Schedule 5 of the BO;
- (e) the overall gradient of the area bounded by lines 10m away from the location of the footing in the downhill direction is not more than 15 degrees;
- (f) there is no slope steeper than 15 degrees within the area mentioned in item (e) above; and
- (g) there is no retaining wall or terrace wall higher than 1.5m, or below a line drawn down from the base of the footing that is 45 degrees to the horizontal, within the area mentioned in item (e) above.

Checklist for Registered Structural Engineer (RSE) For Fundamental Checking of Simple Structural Works under Self-Certification System^a Submission Title: Category [A,B,C,D,E]# Works Comments/Observations Part 1.1 STRUCTURAL SYSTEM S/U/NA^{*} [Complete this box for superstructure works] For Category A Works, please specify the equivalent Minor Works item(s): MW No. Descriptions of structural system and load path: << Example in Explanatory Notes 1>> Y/N/NA%# [Complete this box for shallow foundation (i.e. spread/pad/strip footing/raft foundation/others)] @ Spread/pad/strip# footing/raft foundation/ others# found on soil/rock# stratum of: Category _____ of Table 2.1 of Code of Practice (CoP) for Foundations 2017^a (Foundation PART 1: STRUCTURAL STABILITY, SERVICEABILITY AND SAFETY Code) with bearing capacity kPa (w/o wind) and kPa (w/wind); OR Others: << Description of founding material>> and with allowable bearing capacity _____ kPa (w/o wind) and _____ kPa (w/ wind) based on equation in Section 2.2.4 of Foundation Code with $F.O.S \ge 3$ to be verified with plate load tests. 1.2 COMPATIBILITY CHECK Y/N/NA%# Structural layout compatible with analysis model. Y/N/NA%# Loading compatible with the assumed design load of parent structures. Y/N/NA%# Structural layout compatible with building plans. 1.3 STABILITY, STRUCTURAL ADEQUACY AND SERVICEABLITY CHECK Y/N/NA%# The maximum flexural and shear stresses of major structures fulfill the requirements of the relevant design standards/CoP. Y/N/NA%# Robustness of the building/structure found satisfactory Y/N/NA%# Max. lateral deflection = ____ mm < allowable: ____ mm Anchorage system: cast-in/drill-in/through bolt[#] with F.O.S. ≥ 3 Y/N/NA%# Y/N/NA%# Stability check of the footing found satisfactory@ Design ground water level: _____mPD (Depth below ground level = _____ m) Sliding: F.O.S. = $__$ $\ge 1.5^{\$}$ Uplift: F.O.S. = $\geq 1.5^{\$}$ Overturning F.O.S. = $__$ $\ge 1.5^{\$}$ due to wind and ground water; and ≥ 2 due to loads other than wind and ground water.# Maximum bearing pressure = ____ kPa Minimum bearing pressure = ____ kPa Y/N/NA%# Serviceability check of the footing found satisfactory@ Max. settlement of the footing = ____ mm; differential settlement of the footing = ____ mm

		1.4 FIRE RESISTANCE RATING (FRR) REQUIREMENTS				
Floor uses comply with building plan Dead load (unit weight for concrete/steel/glass/aluminum*) =kN/m³ Superimposed dead load =kPa (or shown in drawing no) Imposed load =kPa for <floor use="">> (or shown in drawing no) Hydrostatic load for water tank (designed for water height = m) (or shown in drawing no) Soil load (designed for soil height = m) (or shown in drawing no) Others: =kPa (or shown in drawing no) Others: =</floor>			Y/N/NA%#			
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Others: =kPa (or shown in drawing no) 2.2 LATERAL LOADS						
Soli pressure		Soil load (designed for soil height = m) (or shown in drawing no)				
Net pressure coefficient $C_p = $ Size factor $S_s = $ Other lateral imposed load shown on plan. Soil pressure : Imposed/Surcharge loads : S/U/NA^\(\frac{1}{2}\) Hydrostatic : Others: Syluminations considered for checking footing stability. 2.3 OTHER RELEVANT LOADS 3.1 DESIGN CODES AND STANDARDS ADOPTED^\(\frac{1}{2}\) CoP on Wind Effects in Hong Kong 2019 CoP for Dead and Imposed Loads 2011 S/U/NA^\(\frac{1}{2}\) CoP for Structural Use of Concrete 2013 BS8118:Part1:1991 Structural Use of Aluminium		Others: = kPa (or shown in drawing no)				
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CoP for Foundations 2017	D					
CoP for Structural Use of Glass 2018	AR					
3.2 COMPUTER PROGRAMME	ANI					
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SADS ver(BD ref:) Other:(BD ref:) MATERIAL SPECIFICATIONS	TEF					
33 MATERIAL SPECIFICATIONS	MA					
4 133 MATERIAL SPECIFICATIONS	R					
Concrete grade complying with CS1 and CS3: Y/N/NA ⁹	N	3.3 MATERIAL SPECIFICATIONS				
Concrete grade complying with CS1 and CS3; Reinforcement grade of Class 1/2/3# complying with CS2;	SIC	Concrete grade complying with CS1 and CS3;				
Structural steel gradecomplying with;	i D	Structural steel grade complying with;				
Aluminum gradecomplying with;	T 3	Aluminum gradecomplying with;				
Stainless steel grade complying with;	AR					
Glass type: annealed/heat strengthened/tempered# glass complying with; Type of cast-in/drill-in/through bolt# adopted:(BD ref:). Strictly in compliance with	-					
the manufacturer recommendation, which was shown on plan.						
Others:		i i				
		i i				

3.4 DURABILITY AND WORKMANSHIP REQUIREMENTS			
Corrosion resistance provision to structural elements and found satisfactory.	Y/N/NA%#		
Pull out test and test load for drill-in anchor/rebar complying with PNAP APP-169.			
Type 1/2# mechanical coupler adopted (BD ref:); Test frequency and standard complying with CoP for Structural Use of Concrete 2013.			
Welding test involved and test frequency and standard complying with CoP for the Structural Use of Steel 2011.	Y/N/NA%#		
Others:	S/U/NA [*]		
4.1 ADJACENT/ADJOINING STRUCTURES ^Ω AND PRECAUTIONS			
With adjacent/adjoining structures (
4.2 CONSTRUCTION SEQUENCE AND SAFETY UNDER TEMPORARY CONDITION			
Construction sequence shown on plan and in safe manner.	Y/N/NA%#		
4.3 GROUND SETTLEMENTS AND GROUND WATER DRAW DOWN			
Monitoring plan provided.	Y/N/NA%#		
Alert/Alarm/Action triggering levels fulfilling Foundation Code ^a and PNAP APP-24.			
Sufficient monitoring checkpoints provided.			
comments:			
lse certification or declaration may be subject to legal and/or disciplinary action.##			
Signature of Registered Structural Engineer	*		
(Name in full)* Certificate of Registration Number*:			
 See Annex for "Explanatory Notes for RSE/ICE to Complete the Checklists for Fundamental Checking of Simple Structural Wounder Self-certification System". S = Satisfactory U = Unsatisfactory NA = Not Applicable Y = Yes N = No NA = Not Applicable Information to be provided for Category A Works involving footing works or Category E Works only. Where the design is based on the highest possible groundwater table, the factor of safety could be adjusted to 1.1 as per Section 2.5.4 of Foundation Code. Any person making a false declaration or misrepresenting a material fact shall be guilty of a criminal offence and subject prosecution and/or disciplinary action. In accordance with the registration record. Unless otherwise specified, latest edition of the CoP/standards listed in Appendix A of PNAP APP-53 should be adopted checking the simple structural works. Unless otherwise specified, assessment on the structural adequacy of the existing building or building elements that may affected by the simple structural works should be checked in accordance with the requirements under PNAP APP-117. Tick as appropriate 			
	Corrosion resistance provision to structural elements and found satisfactory. Pull out test and test load for drill-in anchor/rebar complying with PNAP APP-169. Type 1/2* mechanical coupler adopted (BD ref:		

Checklist for Independent Checking Engineer (ICE) For Fundamental Checking of Simple Structural Works under Self-Certification System^a Category [C, D, E]# Works Submission Title: *S/U/NA **Particulars** Observations Fulfillment of eligibility criteria Category works and the type of works (1) SELF-CERTIFICATION <<e.g. covered walkway and associated for self-certification involved: **ELIGIBILITY FOR** structural works. For details, see Appendix A of PNAP ADM-23>> The maximum flexural, shear stresses of major structures Structural stability, adequacy and (2)and the maximum vertical and lateral deflection serviceability SERVICEABILITY AND SAFETY /settlement# fulfill the requirements of the relevant design STRUCTURAL STABILITY, standards/CoP Robustness of the building/structure found satisfactory (3) Compatibility between simple Structural layout compatible with analysis model structural Loads compatible with the assumed design loads of parent works and the supporting structures structures (as appropriate) Bearing pressure within allowable bearing capacity FRR requirements (4) Fire resistance rating (FRR) 60/60/60[#] 120/120/120[#] Not required requirements for structural elements 240/240/240# Dead load Floor loads Superimposed dead load (5) Imposed load Soil load Upthrust load Others: LOADING Lateral loads ■ Wind load (6) Soil load Hydrostatic Imposed/Surcharge Others: (7) Load combinations Sufficient load combinations considered for checking stability of foundation CoP for Dead and Imposed loads 2011 (8) Design codes and standards CoP on Wind Effects in Hong Kong 2019 DESIGN AND MATERIAL CoP for Structural Use of Concrete 2013 CoP for Structural Use of Steel 2011 STANDARD CoP for Foundations 2017 ☐ BS 8118-1:1991 Structural Use of Aluminium CoP for Structural Use of Glass 2018 ☐ SCI Publication P291 Structural Design of Stainless Steel Others: Acceptable and compliance with PNAP APP-53. (9)Specifications for materials and workmanship

	(10) Testing requirements for structural materials and fixings (11) Corrosion resistance and	Materials: Concrete Reinforcement Steel Glass Aluminium Stainless Steel Others: Structural Fixings: Drilled-in Anchors Type 1/2# Coupler Grouted Bolts/Dowels/Rebars Others: Concrete: Cover		
	protection to structural elements	Others: Steel: Hot-dipped galvanizing Others: Aluminum: Anodizing Others: Other materials:		
NINING	(12) Precautionary measures to adjacent/adjoining structure	Adequate precautionary measures have been provided		
EFFECTS ON ADJACENT/ADJOINING STRUCTURES	(13) Construction sequence and safety under temporary conditions	Method statement and construction sequence have been developed with consideration of the site constraints and are provided accordingly		
ADJA(S	(14) Ground settlements and ground water drawdown	Monitoring system and monitoring plan have been considered and provided		
(15) Other Observations:				
Checked by Independent Checking Engineer (for Category [C, D, E]# Works) Any false certification or declaration may be subject to legal and/or disciplinary actions.##				
Date:		Signature of Independent Checking Engineer	s	
	Certificate of Registration Number Date of Expiry of Registration			
 ∆ See Annex for "Explanatory Notes for RSE/ICE to Complete the Checklists for Fundamental Checking of Simple Structural Works under Self-certification System". * S = Satisfactory U = Unsatisfactory NA = Not Applicable. Delete where not applicable In accordance with the registration record. Any person making a false declaration or misrepresenting a material fact shall be guilty of a criminal offence and subject to prosecution and/or disciplinary action. □ Tick as appropriate 				

Explanatory Notes for RSE/ICE to Complete the Checklists for Fundamental Checking of Simple Structural Works under Self-certification System

These explanatory notes provide guidance for RSE and ICE to complete the checklists for fundamental checking of the respective categories of simple structural works under the self-certification system so as to ensure that the structural plans are in compliance with the relevant statutory requirements and the latest design standards.

Part 1 Structural Stability, Serviceability and Safety

1.1 Structural System

To facilitate fundamental checking of the structural system for the proposed simple structural works, RSE and ICE are required to provide a succinct description of the structural system on the checklists which should include the structural form and supporting system of the proposed works and the load path of the proposed works in transferring the loads to parent supporting structures or foundations. It is essential to specify the equivalent Minor Works Item number under the Minor Works Control System on the checklist for Category A Works to enable fundamental checking of the proposed works.

Examples for completing the checklist:

(I) For Category A/B/C Works

(1) The aluminium cladding/stone cladding/louvre/grille/vertical greening is fixed to a projected steel frame by stainless steel fasteners. The projected steel frame is in turn fixed to reinforced concrete (r.c.) beams/columns/wall by drilled-in anchor bolts.

Load path:

Wind load/dead load \rightarrow aluminium cladding/stone cladding/louvre/grille/stainless steel modules for vertical greening (secondary steel and main members) \rightarrow stainless steel fasteners/brackets \rightarrow projected steel frame (main beam to steel post and the base plate) \rightarrow drilled-in anchor bolts \rightarrow r.c. beams/columns/wall.

(2) The aluminium ceiling is fixed to a braced steel frame by stainless steel fasteners. The steel frame is in turn hung underneath r.c. beams and fixed to r.c. wall/column by drilled-in anchor bolts.

Load path:

Wind load/dead load → aluminium ceiling (secondary steel beams and main beams/hanger posts) → stainless steel fasteners → drilled-in anchor bolts → r.c. beams/walls/columns.

(3) A vertical steel member (dia. 273 x 12.7mm CHS) as flag pole is fixed on r.c. spread footing with drilled-in anchor bolts.

Load path:

Wind load/dead load \rightarrow flag pole (vertical steel member and base plate) \rightarrow drilled-in anchor bolts \rightarrow r.c. spread footing.

(II) For Category D Works

(1) An r.c. beam-column/core wall/shear wall[#] structure with maximum horizontal span of 8m supported by r.c. spread footing (footing approved/to be submitted under separate submissions[#])

Load path (vertical):

Dead load/imposed load \rightarrow r.c. slab \rightarrow r.c. secondary steel beams/main beams \rightarrow r.c. columns/walls \rightarrow r.c. spread footing.

Load path (lateral):

Wind load \rightarrow external wall \rightarrow main beams/column/wall (frame action) \rightarrow r.c. spread footing.

(III) For Category A/E Works involving shallow foundation works

- (1) The shallow foundation founded on Category 4(a)/4(b)/4(c)[#] non-cohesive soil with allowable bearing capacity of 250/150/50[#] kPa (w/o wind) and 312.5/187.5/62.5[#] kPa(w/ wind).
- (2) The shallow foundation founded on Category 5(a)/5(b)/5(c)# cohesive soil with allowable bearing capacity of 300/150/80# kPa (w/o wind) and 375/187.5/100# kPa(w/ wind).
- (3) The shallow foundation founded on Category 1(a)/1(b)/1(c)/1(d)[#] rock with allowable bearing capacity of 10000/7500/5000/3000[#] kPa and 12500/9375/6250/3750[#] kPa(w/ wind).
- (4) The shallow foundation founded on fill with soil parameters, effective cohesion of soil, c' = 0 and angle of shearing resistance, Φ= 30° with allowable bearing capacity of 300 kPa and 375 kPa(w/ wind) based on equation in Section 2.2.4 of the Code of Practice for Foundations 2017* with F.O.S = 3.

1.2 Compatibility Check

To scrutinise the design calculation for ensuring that the loads induced by the proposed simple structural works do not have adverse effect on the parent supporting structures, RSE and ICE (if applicable) should check whether the structural layout is compatible with the building plans and analysis model, as well as the induced loading is compatible with the assumed design load on the parent supporting structures or foundations in accordance with the design assumptions.

1.3 Stability, Structural Adequacy and Serviceability Check

To ensure that the structures or structural works can safely sustain the combination of the dead loads, imposed loads and wind loads, and can safely transmit the loads to the ground, the structures or structural works must be designed with the adequate factors of safety against instability. RSE and ICE (if applicable) should ensure that the major structural elements of the proposed simple structural works have been checked in compliance with the design codes accepted by the Buildings Department (BD) and their deflections and/or vibrations are within the serviceability limit.

1.4 Fire Resistance Rating Requirements

To ensure that the design of the proposed simple structural works is in compliance with the fire safety requirements specified in the Code of Practice for Fire Safety in Buildings 2011*, RSE and ICE (if applicable) should provide adequate cover to reinforcing bars of r.c. structural elements in accordance with the Code of Practice for Structural Use of Concrete 2013*. Similarly, accepted fire protection system to the structural steel works should be provided in accordance with the Code of Practice for the Structural Use of Steel 2011*.

Part 2 Loading

2.1 Floor Loads

RSE and ICE (if applicable) should ensure that the dead, superimposed dead load (e.g. finishes) and imposed loads adopted in the design of proposed simple structural works conform to the approved building plans and the Code of Practice for Dead and Imposed Loads 2011*.

2.2 Lateral Loads

RSE and ICE (if applicable) should ensure that the design wind load with the parameters adopted e.g. the wind pressures and wind design parameters are in compliance with the Code of Practice on Wind Effects in Hong Kong 2019*; the design soil load with the soil pressures and soil parameters adopted are in compliance with the Geoguides or other relevant Code of Practice; the design horizontal imposed load on protective barrier is in compliance with the Code of Practice for Dead and Imposed Loads 2011* and the floor usage as shown in the approved building plans, etc.

2.3 Other Relevant Loads

RSE and ICE (if applicable) should consider all other anticipated loads (e.g., soil load, thermal load, dynamic load, temporary load and so on) in design of the proposed simple structural works.

PART 3 Design and Material Standards

3.1 Design Codes and Standards Adopted

RSE and ICE (if applicable) should ensure that the design of the proposed simple structural works is in accordance with the acceptable design codes and standards.

3.2 Computer Programme

RSE and ICE (if applicable) should ensure that the computer programmes used for the structural analysis modelling are in the BD's pre-accepted list stipulated in PNAP ADM-6.

3.3 Material Specifications

RSE and ICE (if applicable) should ensure that the materials (their properties such as characteristic strength, elastic modulus, density) adopted in the design of the proposed simple structural works comply with the relevant standards and codes of practice.

3.4 Durability and Workmanship Requirements

RSE and ICE (if applicable) should ensure that the thickness of protective coating/concrete cover has sufficient durability characteristics to resist corrosion and weathering and fulfils the design life requirement, and performance tests are adequately provided to prove the workmanship of the proposed simple structural works.

PART 4 Effects on Adjacent/Adjoining Structure

4.1 Adjacent/Adjoining Structures and Precautions

RSE and ICE (if applicable) should check if adequate precautionary measures have been provided to ensure that no adverse effects will pose on the adjacent/adjoining structures.

4.2 Construction Sequence and Safety under Temporary Condition

RSE and ICE (if applicable) should check if the method statement and construction sequence for the proposed structural works have taken into account the site constraints and different site activities to ensure that the works are carried out in a safe manner. For example, adequate number of steel props should be temporarily provided for slab opening/demolition/removal works and the affected area should be barricaded.

4.3 Ground Settlements and Ground Water Drawdown

RSE and ICE (if applicable) should check if a monitoring system with suitable instrumentation is to be implemented for the foundation works under Category A or E Works. Adequate number of monitoring checkpoints with Alert/Alarm/Action triggering levels should be provided to safeguard the adjoining sensitive structures and facilities.

[#] Delete as appropriate

^{*} Unless otherwise specified, the latest edition of the codes of practice/standards listed in Appendix A of PNAP APP-53 should be adopted for checking the simple structural works.

Request for Fast-Track Processing of Plan Submission for Simple Structural Works under Self-certification System

(To be completed in duplicate[@], complete in BLOCK LETTERS and tick the appropriate boxes)

To the Building Authority

Part A (To be certified by Registered Structural Engineer for Category A to E Works)

1. In accordance with PNAP ADM-23, I hereby request for fast-track processing of
the plans submitted as per the attached drawing list for the proposed simple structural works,
with nature as below and to be carried out at(address of the site)
Nature of Simple Structural Works
New Building Works
□ Category A Works - Minor Works items specified in Schedule 1 of Building (Minor Works) Regulation (B(MW)R)
□ Category B Works
☐ Metal/Glass* cladding/false ceiling/louvre/grille*
☐ Metal supporting frame and modular units for the growing of plants that are fixed to an external wall of a building
☐ Metal/Glass* canopy
☐ Metal supporting frame for suspending a building service installation¹ (BSI) inside a building
☐ Metal supporting frame for glass reinforced polyester (GRP) water tanks/BSI on grade or on a slab inside a building*; and
☐ Maintenance platform and its supporting frame sitting on or suspending underneath a slab inside a building
☐ Category C Works - Stone cladding
□ Category D Works
☐ Single-storey refuse room/plant room/covered walkway* and associated structural works ²
☐ Detached or semi-detached single-family house not exceeding three storeys and associated structural works²

As defined under Section 1 Part 1 of Schedule 1 to the B(MW)R.

Associated structural works include curtain wall, skylight, precast element, external steel maintenance platform, external metal staircase, external cat-ladder (other than Designated Exempted Works item 28) or similar structures that meet the general eligibility criteria in paragraph 1 of Appendix A of PNAP ADM-23.

Nature of Simple Structural Works (continued)
☐ Category E Works - Shallow foundation supporting Category D Works (i.e. spread/pad/strip* footing/raft foundation/others*)
Alteration and Addition Works
☐ Category A Works - Minor Works items (MW) specified in Schedule 1 of B(MW)R. The works shown on plan for approval solely involve MW.
2. I certify that the plans mentioned in paragraph 1, duly signed by me, fulfil the following requirements:
(a) The building works shown on the above-mentioned plans meet the eligibility criteria of simple structural works as specified in Appendix A of PNAP ADM-23:
(b) The building works shown on the above-mentioned plans are structurally compatible with the supporting structures;
(c) The structural plans and calculations are clearly presented and organised as specified in PNAP ADM-8; and
(d) The structural plans and calculations comply in all respects with the provisions of the Buildings Ordinance and allied regulations.
3*. A Form BA8A applying for consent to the commencement and carrying out of the works mentioned in paragraph 1 above is enclosed.
Any false certification or declaration may be subject to legal and/or disciplinary action.##
Date: Signature of Registered Structural Engineer [#]
(Name in full)#
Certificate of Registration Number. #: RSE/
Date of Expiry of Registration#:

Part B* (To be certified by Independent Checking Engineer for Categories C, D and E Works)

- 4*. I certify that the plans relating to the above building works as per the attached drawing list submitted by <u>(name of the registered structural engineer in part A)</u> mentioned in Part A, duly signed by me, fulfil the following requirements:
 - (a) The building works shown on the above-mentioned plans meet the eligibility criteria of simple structural works as specified in Appendix A of PNAP ADM-23;
 - (b) The building works shown on the above-mentioned plans are structurally compatible with the supporting structures;
 - (c) The structural plans and calculations are clearly presented and organised as specified in PNAP ADM-8; and
 - (d) The structural plans and calculations comply in all respects with the provisions of the Buildings Ordinance and allied regulations.

Date:	
	Signature of Independent Checking Engineer#
	(Name in full)#
Certificate of Registration Number#:	RSE/
Date of Expiry of Registration [#] :	

Any false certification or declaration may be subject to legal and/or disciplinary action. ##

* Delete where inapplicable

[#] In accordance with the registration record.

[@] One copy for Owner and one copy for Authorized Person

Any person making a false declaration or misrepresenting a material fact shall be guilty of a criminal offence and subject to prosecution and/or disciplinary action.

A. Standard Statement to be Shown on Plans and Design Calculations for All Simple Structural Works

Plans and Design Calculations Self-certified by Registered Structural Engineer

The works shown on these plans are Simple Structural Works and meet the eligibility criteria as listed in PNAP ADM-23 for self-certification by the Registered Structural Engineer. These plans and design calculations are found in compliance in all respects with the provisions of the Buildings Ordinance and the regulations made thereafter.

<< Signature of RSE >>

<<Name of RSE>>

Registered Structural Engineer

<< Registration No RSE XX/XX>>

B. Additional Statement to be Shown on Plans and Design Calculations for Categories C, D and E Simple Structural Works

Plans and Design Calculations Checked and Certified by Independent Checking Engineer

The works shown on these plans are Simple Structural Works and meet the eligibility criteria as listed in PNAP ADM-23 for checking and certification by the Independent Checking Engineer. These plans and design calculations have been checked by me on the fundamental issues in accordance with PNAP ADM-19 and are found in compliance in all respects with the provisions of the Buildings Ordinance and the regulations made thereafter.

<<Signature of ICE>>

<<Name of ICE>>

Independent Checking Engineer

<< Registration No RSE XX/XX>>

Notice of Appointment of Independent Checking Engineer

10: The Building Authority	
Part A Notice of Appointment (To be completed by the person intending to c	arry out the works)
I. Details of Works (a) Address of Site:	
(a) Address of Site.	
(b) Lot Number with Details of Any Section	of the Lot
(c) Name of the Owner (Surname first)	
(d) Address of the Owner	
(d) Address of the Owner	
(e) Name of Duly Authorized Agent of the O	wner (if any)
(f) Address of Duly Authorized Agent of the	Owner (if any)
II. Details of Independent Checking Engine	
Persons, Registered Structural Engineers and	f paragraph 5 of Practice Notice for Authorized and Registered Geotechnical Engineers (PNAP)
	e appointed the following person as Independent endent fundamental checking on the plans and rorks as specified in PNAP ADM-23.
Chinese Name#:	(Surname First)
English Name#:	(Surname First)
Correspondence Address#	
Contact Tel. No.	Fax No.
I I	

III. Details of the Person Intending to Chinese Name:	(Surname First)
English Name:	(Surname First)
Correspondence Address	
Correspondence / tudiess	
Contact Tel. No.	Fax No.
Contact 101. 140.	1 dx 1vo.
Identification	
HKID No./Business Registration	
Date:	
Date.	Signature of Person
	Intending to Carry out the Works
	(Name in full)
Part B Confirmation of Appointment To be filled by the appointed Independent	
Chinese Name [#] :	(Surname First)
Chimese Traine .	(Sui Name 1 tristy
English Name#:	(Surname First)
English Name [#] : Certificate of Registration Number [#]	(Surname First) Date of Expiry of Registration [#] (dd/mm/yyyy)
	And get all reactions of the contract of

I confirm that I have been appointed as the Independent Checking Engineer to carry out independent fundamental checking on the plans and calculations for the simple structural works at the above site as specified in PNAP ADM-23 and undertake to perform duties for ensuring the works shown on the plans prepared by the registered structural engineer (RSE) are in compliance in all respects with the provisions of the Buildings Ordinance and the regulations made thereafter.

Part C Declaration of Conflict of Interest

I declare that:

- (a) I am independent of the RSE, registered geotechnical engineer (RGE) and registered contractor (RC) of the captioned site where the building works (including the simple structural works for self-certification) are proposed; and the RSE, RGE or RC and I, including our employing companies, have no holding, subsidiary, consultant/sub-consultant, consultant/contractor, contractor/sub-contractor, employer/employee relationship or any other kind of relationship;
- (b) I do not receive any payment, commission, advantage or benefit of any kind, whether directly or indirectly, from the RSE, RGE or RC of the captioned site where the building works (including the simple structural works for self-certification) are proposed; and
- (c) I have no actual, potential or perceived conflict of interest with the RSE, RGE or RC of the captioned site where the building works (including the simple structural works for self-certification) are proposed, and I undertake to declare so as soon as I become aware of such a conflict.

Date:	 Signature	of Indepen	dent Checking Engin	neer#
		(Nam	e in full)#	

Any false certification or declaration may be subject to legal and/or disciplinary action. ##

[#] In accordance with the registration record.

Any person making a false declaration or misrepresenting a material fact shall be guilty of a criminal offence and subject to prosecution and/or disciplinary action.