

Building Approval Process

Introduction

The Buildings Department (BD) is committed to adopt a totally positive attitude towards building development. Its mission is not to find faults in a building proposal but to facilitate building professionals in the approval process whilst ensuring public safety and health. This practice note sets out the principles adopted in the building approval process and the services which BD provides to facilitate the process.

Conformity Among Different Types of Plans

2. A project involves submissions of different types of plans. Among them, the general building plans (GBP) should form the basis for the development of the detailed design of other types of plans. In other words, the building layout shown on the GBP shall prevail over the layout shown on other types of plans. The authorized persons (AP), registered structural engineers (RSE) and registered geotechnical engineers (RGE) should ensure such other types of plans prepared by them correspond to the latest approved GBP. Approval of such other types of plans shall not be deemed to be approval of the building layout shown on such plans.

3. Prior to certifying completion of the alteration and addition (A&A) works or applying for an occupation permit (OP)/temporary occupation permit (TOP), the AP, RSE and RGE should ensure that approval and consent for all the amendments are obtained and the latest amended GBP, structural plans, drainage plans and site formation plans where applicable for the project, tally with each other.

Pre-submission Enquiry and Conference

4. AP, RSE and RGE may wish to settle the design principles involved at an early stage so that they can proceed with confidence and avoid abortive work. To facilitate early clearance of basic design principles before formal submission of plans, BD will upon receipt of a written enquiry provide a determination on the matters involved in the form of a “letter of assurance” normally within 45 days. BD may hold pre-submission conferences with AP/RSE/RGE and invite representatives of concerned Government departments to discuss and examine the issues and principles involved.

5. It is recommended that AP/RSE/RGE should make use of this service to consult BD as early as possible on the use of any new structural theory, materials or systems, sophisticated designs and unconventional construction methods prior to preparing the detailed design.

Processing of Plan Submissions

6. For submissions of GBP, superstructure plans and drainage plans, a curtailed check system has been adopted to check on fundamental issues only.

7. In respect of GBP, BD will check issues concerning density, safety, health and environment, and major issues under the allied legislations. The items to be checked are provided in Appendix A.

8. For superstructure plans¹, BD will check the master framing plans, notes, design loads, design methods, material standards, design codes and fire resistance rating requirements of structural elements. The items to be checked are provided in Appendix B.

9. For drainage plans, BD will check² the disposal system, underground drain layout and access for maintenance/repair as provided in Appendix C.

10. As regards other types of plans, such as demolition, site formation, foundation and excavation & lateral support works, the items to be checked are provided in Appendix D.

11. To facilitate the preparation of plan submissions for various types of building works, specific checklists and sample tables/drawings are given in Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAP) ADV-33.

12. Under the curtailed check system, non-fundamental issues will not be checked and will not be raised as disapproval items. These relate generally to matters that do not affect the basic design of the proposed building. It is the responsibility of the AP/RSE/RGE to ensure that all such non-fundamental issues fully comply with the relevant regulations and codes of practice before commencement of the works. After commencement of works, any contravention of the Buildings Ordinance (BO) and its subsidiary regulations should be rectified as and when they are discovered and in any event, before certification of completion of works.

13. To ensure that a high standard of self-regulation is maintained, BD carries out audit checks by examining in detail some submissions selected at random. BD will consider taking appropriate actions against AP/RSE/RGE who prepare plan submissions which blatantly or repeatedly contravene the requirements of the BO and its subsidiary regulations.

/Staged ...

¹ Including secondary structural elements such as curtain wall, window wall, cladding, space frame, precast element, canopy, skylight, balustrade, external ceiling, grille/louvre, ventilation duct, maintenance platform and similar secondary structural elements not affecting the overall stability of the building.

² Only a certain percentage of the proposed drainage works will be randomly selected for checking.

Staged Submission of Essential Information on GBP

14. Taking into account the design and construction process of a building development, AP may defer submission of plans and details to be provided in GBP as detailed in Appendix A1 of PNAP ADV-33, according to three milestone stages viz for seeking the first approval of GBP (Stage I), prior to applying for consent for the commencement of the superstructure works (Stage II), and prior to applying for OP/TOP (Stage III). Regulation 30(3)(c) of the Building (Administration) Regulations (B(A)R) will be applicable to the GBP amendment plans for such deferred submission, unless the amendment plans constitute a major revision under regulation 30(3)(b) of the B(A)R. The Building Authority (BA) may refuse to grant consent under section 16(3)(a) of the BO or refuse to issue OP/TOP under section 21(6)(a) of the BO if the BA has not given the approval to all the required plans and details prescribed under regulation 8(1) of the B(A)R at the material time.

15. To facilitate the early approval of GBP (Stage I), BD will not check the information and details that are deferred items for Stages II and III as listed in Appendix A1 of PNAP ADV-33, irrespective such items are shown in the GBP. The approval will only cover those items for Stage I. AP should note their duties under section 4(3) of the BO and ensure that the works shown in the GBP comply with the BO.

16. When granting the first approval of GBP (Stage I), the BA will require, under regulation 10 of the B(A)R, AP to submit a **full set** of GBP incorporating all plans and details required for Stages I and II, to seek the BA's approval of GBP (Stage II) prior to applying for consent for the commencement of the superstructure works.

17. AP may seek the BA's approval of GBP (Stage II) in any amendment submission, by indicating at the lower right-hand corner of each plan that "**This set of plans is submitted for Stage II Curtailed Check**". BD will carry out Stage II curtailed check from this amendment submission onwards.

18. Likewise, AP may seek the BA's approval of GBP (Stage III) in any amendment submission, and should ensure the BA's approval is obtained prior to the application for OP/TOP.

19. For the avoidance of doubt, the above practice of staged submissions for curtailed checks will be applicable to new building developments (not A&A works) the first GBP or major revision of which is submitted after 31 March 2023.

20. Notwithstanding paragraph 15 above, AP may request BD to conduct Stage II curtailed check when submitting the first GBP for special cases, such as simple buildings (e.g. single storey plant room, two-storey warehouse subject to fast track processing in paragraph 36 below); or for buildings that require speedy completion (e.g. "government, institution and community" buildings and buildings that are subject to a short period of Building Covenant under lease); or development projects which have progressed to an advance stage that the consent for the commencement of superstructure works will soon be submitted. The BA will consider the request according to the circumstances on case basis.

Enquiry Service

21. To assist AP/RSE/RGE in ensuring that design details comply with BD's requirements, BD will also provide an enquiry service regarding compliance or interpretation of building regulations and codes of practice throughout the entire development process. BD will give an answer to these enquiries normally within four weeks.

Concept Drawings

22. To assist AP in demonstrating to concerned Government departments that their basic design principles comply with Government and statutory requirements, they are recommended to submit concept drawings for pre-submission conference when making an enquiry or formal submission of GBP. Concept drawings are coloured key plans summarising the basic design parameters on site coverage, plot ratio, accountable gross floor areas, fire safety strategy, barrier free access strategy, etc. in broad terms. Guidelines for concept drawings are provided in Appendix E. A set of sample concept drawings is provided for reference in BD website at www.bd.gov.hk.

Use of Computer for Mathematical Calculations

23. AP adopting the use of computer for calculating floor areas of buildings in the preparation of GBP are required to provide BD with a digital file of the plan submission with the calculations in an accepted format capable of being verified by AutoCAD, MicroStation, Revit, ArchiCAD or other software accepted by BD. AP is required to submit the digital file together with the GBP in paper for referral to relevant departments under the centralised plan processing system.

24. When AutoCAD or MicroStation is used in the preparation of GBP, AP should follow the guidelines in Appendix F. When Revit or ArchiCAD is used for Building Information Modelling (BIM) in the preparation of GBP, AP should follow the Guidelines for Using Building Information Modelling in General Building Plan Submission and make reference to the sample drawings and BIM models which can be downloaded from BD website at www.bd.gov.hk. Further information on the use of BIM is provided in PNAP ADV-34.

25. Under PNAP ADM-14, AP may make minor amendments to the submitted plans with BD's prior agreement. If the paper drawings after revision are approvable but they do not tally entirely with the information in the submitted digital file, the plans may be approved, in the interest of time, subject to AP's incorporation of such revisions to the digital file for submission to BD in the next amendment submission involving change in area calculation. Upon the application of an OP/TOP or submission of a certificate for completion of A&A works, AP is required to submit the digital file consolidating all approved revisions for record.

Consent to the Extraction of Information from BIM Model

26. If BIM is used in the preparation of GBP, the model of the completed project will be referred to the Lands Department (LandsD) and the Planning Department (PlanD) for their updating of 3-Dimensional (3D) spatial data and other 3D maps, and their upkeep of 3D planning and design information to facilitate planning, urban design, and visual and landscape assessments.

27. LandsD will extract simplified BIM data containing features including walls, ceilings, floors, stairs, lift, common corridors, indoor routes, and textual attributes including the use, height, floor level, room number, dimensions, materials, etc. PlanD will extract BIM geo-spatial information such as spatial information, building bulk, views, site information, statutory planning restrictions, development parameters and floor uses from the BIM model. The submission of BIM models from AP will be taken as permitting the use of the BIM models for such purposes.

Minor Amendments

28. With regard to building works for which consent has been given, the requirement for prior approval and consent for all subsequent amendments may affect the progress of construction.

29. Subject to a modification of regulation 33(1) of the B(A)R being granted by the BA under section 42(1) of the BO, prior approval and consent to the minor amendments of building, superstructure³, drainage, foundation, pile cap, site formation, excavation and lateral support works for which the first consent has already been given, would not be required except for the amendments described in Appendix G.

30. AP/RSE/RGE deferring the submission of minor amendments should ensure that such amendments comply with the building regulations, requirements of concerned Government departments and the lease conditions prior to the execution of the works.

31. AP/RSE/RGE should submit an application for modification of regulation 33(1) of the B(A)R either after obtaining the first consent or simultaneously with the application for the first consent in respect of the specific type of works (i.e. building, building (A&A), superstructure, superstructure (A&A), drainage, drainage (A&A), foundation, pile cap, site formation, excavation and lateral support works). As a condition for exemption, the minor amendments would be required to be clearly documented and deposited in the site office. Moreover, AP, RSE and RGE are required to ensure that approval and consent for all these amendments are obtained prior to certifying completion of the building works or applying for an OP/TOP.

/32. ...

³ Once the permit to an application for modification/exemption of regulation 33(1) of the B(A)R for superstructure works has been granted, the permit is also applicable to all minor amendments of related secondary structural element works for which the first consent to the commencement of the works has been given. A separate application for modification/exemption of regulation 33(1) of the B(A)R for the secondary structural element works will not be required.

32. A practice note covering the above guidelines on minor amendments has also been issued to registered contractors.

Concurrent Applications for Approval and Consent

33. To streamline the approval process for building works, applications for approval of plans and consent for the commencement of the building works specified in the following paragraphs may be made concurrently.

(A) A&A, Drainage and Secondary Structural Element Works

34. Approval of plans and consent to the commencement of A&A, drainage, **and secondary structural element** works may be concurrently applied for if the following criteria are met:

- (a) The works do not involve foundation works (other than spread footing with excavation depth not exceeding 4.5m), nor works with significant geotechnical content;
- (b) The works do not entail precautionary works nor other safety measures which are required to be completed to the satisfaction of the BA prior to the commencement of the proposed works;
- (c) All the plans and documents prescribed under regulation 8 of the B(A)R are submitted for approval; and
- (d) All the requisite supporting information/documents for the consent application are submitted. These may include site supervision plans, hoarding plans or other supporting documents such as test reports or structural assessment reports required under PNAP APP-117. For curtain wall works, compliance certificates and test reports as required under PNAP APP-37 may be submitted prior to the application for an OP/TOP.

(B) Fast Track Processing for Simple A&A Works

35. For simple A&A works (including simple drainage A&A works), where AP/RSE confirm that the proposed works do not involve the structure of the building and do not affect the fundamental issues mentioned above (or if there are only minor changes and AP/RSE confirm that such changes comply with the provisions of the BO) and referrals to the other Government departments (except Fire Services Department) are not necessary, the concurrent applications for fast track approval and consent will be processed within 30 days. A sample of the AP/RSE's certification form is attached in Appendix H.

(C) Fast Track Processing for Two-storey Warehouse

36. Procedures for fast track processing of submissions for building a two-storey warehouse are given in Appendix I.

(D) ...

(D) Fast Track Processing for Repairs to Curtain Wall, Window Wall⁴ and Cladding

37. Under the Minor Works Control System (MWCS), certain types of minor repair or replacement of curtain wall, window wall and cladding⁵ have been designated as minor works and may be carried out under the simplified requirements as an alternative to obtaining prior approval and consent under the BO. Reference can be made to Schedule 1 of the Building (Minor Works) Regulation (B(MW)R) and PNAP APP-147 regarding the list of minor works items and the simplified requirements respectively.

38. If AP/RSE seeks prior approval and consent for the repair or replacement works, the concurrent applications for fast track processing of approval and consent will be processed within 30 days provided that the structural system of the curtain wall, window wall or cladding will not be altered. The submission requirements are provided in Appendix J. AP/RSE should ensure the submission⁶ complies with the requirements in PNAP APP-16, PNAP APP-37 and PNAP APP-117. In this regard, RSE should assess the existing condition and integrity of the curtain wall, window wall and cladding.

(E) Form BA8A

39. When submitting concurrent applications for approval and consent, AP/RSE should indicate the same in the covering letter and submit the consent application Form BA8A. The Form BA8A submission is subject to the following rules:

- (a) The effective date of application for consent to the commencement of the proposed building works will be the date on which the BA gives his approval of the plans of the proposed building works or, where applicable, the date on which approval is deemed to have been given by the BA;
- (b) The application for consent to the commencement of the proposed building works will not be processed if the prescribed plans and documents of the proposed building works are not approved; and

/(c) ...

⁴ Window wall, including glass wall and glass shop front, refers to window and wall formed by structural glass elements spanning between floors.

⁵ They are minor works items 1.48, 1.60, 1.61, 2.8, 2.48, 3.6 and 3.31 under Schedule 1 of the B(MW)R.

⁶ For replacement of individual components of the curtain wall and glass wall (e.g. glass panes, sealants, setting blocks, etc.), and the cladding panels which are the same as the approved design, structural analysis and design calculations for the replacement components/cladding panels and the checking on the structural adequacy of the parent structure are not required.

- (c) In cases where the BA considers that the approval can be given but not concurrently with the consent, the period of 28 days as stipulated under regulation 32(3) of the B(A)R would run from the date of approval.

Erection of Fire Damper in Ventilation System, Supporting Frame for Suspending Air-conditioning Plant or Mechanical Ventilation Plant, and Large Metal Ventilation Duct or Associated Supporting Frame inside Building

40. Under the MWCS, certain types of minor building works involving erection of a fire damper in a ventilation system, a supporting frame for suspending an air-conditioning plant or mechanical ventilation plant, and a large metal ventilation duct or associated supporting frame⁷ inside an existing building have been designated as minor works and may be carried out under the simplified requirements as an alternative to obtaining prior approval and consent under the BO. Reference can be made to Schedule 1 of the B(MW)R and PNAP APP-147 regarding the list of minor works items and the simplified requirements respectively.

41. For development projects or A&A proposals, the proposed minor building works described in paragraph 40 above should be included in the plans for approval before submitting application for OP/TOP or certificate of completion of building works respectively unless in the case of A&A proposals, it is indicated on the plans that such works will be carried out under the MWCS. This requirement will apply to development projects with consent to the commencement of superstructure works and A&A proposals with consent to the commencement of works granted after 31 August 2021. However, APs and RSEs are encouraged to incorporate these minor building works in their plan submissions if feasible.

42. The following streamlined procedures are adopted for processing these plan submissions:

- (a) Only amended GBP are required for indicating the locations/layout of the proposed minor building works. Reference can be made to the sample drawings showing acceptable standards as given in Appendix A4 to PNAP ADV-33; and
- (b) Concurrent application for fast track processing of approval and consent in respect of structural plans for the supporting frames and large metal ventilation ducts or associated supporting frames can be made in accordance with paragraph 39 above and BD will process the application within 30 days.

⁷ They are minor works items 1.46, 1.51, 2.42 and 2.46 under Schedule 1 of the B(MW)R.

43. As an alternative for development projects and A&A proposals pending first plan approval, the AP/RSE may consider incorporating the information in paragraph 42(a) above and sample drawings for the structural details given in Appendix B11 to PNAP ADV-33 in the first submission of GBP and superstructure plans respectively. Under this arrangement, the approval and consent for the subsequent amendments to these works would not affect the progress of the construction programme if the requirements for minor amendments under paragraphs 28 to 31 above are followed.



(HO Chun-hung)
Building Authority

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Fundamental Issues of General Building Plans

1. Density

- (a) Site Parameters
- (i) Claimed site area
 - (ii) Site classification
(Building (Planning) Regulation 19(2) determination?)
 - (iii) Required private street/service lane
(Deducted from site area and not built over)
- (b) Site Coverage (SC) and Plot Ratio (PR)
- (i) Gross floor area (GFA) diagrams (accountable, non-accountable and exempted areas)
 - (ii) SC diagrams (accountable, non-accountable and exempted areas)
 - (iii) Exempted areas and non-accountable areas
 - (iv) Dedication/Surrender in return for bonus
 - (v) Overall PR & SC
Check against the permissible PR and SC, including any granted bonus SC & PR, mean street level and height of podium/building

2. Safety

- (a) Means of Access for Firefighting and Rescue (MOA)
- (i) Number and disposition of fireman's lifts/firefighting & rescue stairway (FRS)
 - (ii) Initial access to fireman's lifts and FRS
 - (iii) Emergency vehicular access
- (b) Means of Escape (MOE)
- (i) Single staircase building requirements
 - (ii) MOE table: Occupancy factor and the required/provided number and width of the exit doors and exit routes
 - (iii) Discharge value calculation
 - (iv) Discharge at G/F
(Directly to street, lane or to open area)
(Exits at ground storey)
 - (v) Inter-relationship between staircases
 - (vi) Direct distance and travel distance
 - (vii) Independent staircase serving the basement, kindergarten or child care centre
 - (viii) Disposition of refuge floors
 - (ix) PPE premises(Site, exit routes and staircases)

- (c) Fire Resisting Construction (FRC)
- (i) FRC table
(Required/provided fire resistance rating against the compartment volume and use)
 - (ii) Protection of adjoining buildings
 - (iii) External walls of required staircases/lobbies
 - (iv) Smoke vent disposition
 - (v) Bridge and tunnel
(Fire shutter and by-pass lobby)

3. **Health and Environment**

- (a) Lighting and Ventilation
 - (i) Window provided for habitable room, kitchen and office
 - (ii) Disposition of windows
- (b) Open space: Required/provided area and its disposition

4. **Major issues under allied legislations**

- (a) Barrier Free Access (BFA) Facilities
 - (i) Initial BFA to entrance
 - (ii) Accessible route to required areas
 - (iii) Accessible toilet
- (b) Fire certificate
- (c) Outline Zoning Plan
- (d) Vehicular run-in/out acceptable to Transport Department and Highways Department
- (e) Geotechnical assessment - PNAP APP-25
- (f) Airport height restriction
- (g) Railway protection
- (h) Road works - control under Section 22 of Roads (Works, Use and Compensation), Cap 370
- (i) Sewage tunnel works - control under Section 17A of Buildings Ordinance, Cap 123
- (j) Antiquities – prohibition of works in a proposed monument or monument under Section 6 of Antiquities and Monuments Ordinance, Cap 53

Fundamental Issues of Superstructure Plans

For superstructure plans, submissions are divided into two parts, viz. :

- (i) master framing plans in which all the requirements on materials, design loadings, workmanship and the structural framing of the structure are stipulated; and
 - (ii) structural detailed plans in which details of every structural members of a building, including the size of members, quantity and arrangement of steel bars inside the members are given; and
2. BD's check on the master framing will focus on the following aspects:
- (i) Stability and framing;
 - (ii) Fire Resistance Rating (FRR) requirements;
 - (iii) Loading; and
 - (iv) Materials.
3. To assist RSE in making superstructure submissions, a list of the items appropriate to the type of structural plans which will be checked in processing master framing plans is enclosed at Appendix B1 for general guidance. RSE should complete the checklist and include them into Part I of the calculations (prepared in accordance with PNAP ADM-8) for submission with the structural plans for approval.

Checklist on Fundamental Issues of Superstructure Plans

	Items to be checked	Remarks
<i>Structural Stability & Safety</i>		
(1) Structural System	<input type="checkbox"/> Beam-column/core wall/shear wall <input type="checkbox"/> Flat Slab/Prestressed/Precast Beam-Slab <input type="checkbox"/> Curtain Wall/Cladding/Window Wall <input type="checkbox"/> Others: _____	
(2) Compatibility Check	<input type="checkbox"/> Wind modelling <input type="checkbox"/> Structural layout compatible with building plans <input type="checkbox"/> Loading compatible with foundation plans	
(3) Stability Check	<input type="checkbox"/> Comply with B(C)R 15 <input type="checkbox"/> Max. lateral deflection= (d/H = 1/) <input type="checkbox"/> Anchorage system: cast-in/drill-in/through bolt <input type="checkbox"/> Supporting structure for curtain wall/cladding/window wall <input type="checkbox"/> Robustness of the building and in particular those adopting precast concrete construction	
(4) FRR Requirements	<input type="checkbox"/> Comply with building plans' requirements <input type="checkbox"/> Comply with Code of Practice for Fire Safety in Buildings 2011	
<i>Loading</i>		
(5) Floor Loads	<input type="checkbox"/> Comply with building plans' requirements <input type="checkbox"/> Comply with B(C)R 17(1) & (2)	
(6) Lateral Loads	<input type="checkbox"/> Wind loads comply with HK Wind Code 2004 <input type="checkbox"/> Impact loads comply with B(C)R 17(3) & (4) <input type="checkbox"/> Design soil pressure and surcharge loads <input type="checkbox"/> Others: _____	
(7) Dynamic Loads	<input type="checkbox"/> Comply with B(C)R 17(5) <input type="checkbox"/> Others: _____	

<i>Design Standard</i>		
(8) Design Codes	<input type="checkbox"/> Code of Practice for Structural Use of Concrete 2013 <input type="checkbox"/> Code of Practice for the Structural use of Steel 2011 <input type="checkbox"/> Others: _____	
(9) Design Method	<input type="checkbox"/> Working Stress Method <input type="checkbox"/> Limit State Method <input type="checkbox"/> Others: _____	
(10) Computer Programme	<input type="checkbox"/> Pre-acceptance programmes: _____ <input type="checkbox"/> Others: _____	

<i>Material Specification</i>		
(11) Concrete	<input type="checkbox"/> Not exceeding grade C45 <input checked="" type="checkbox"/> Exceeding grade C45, please specify : <hr/>	
(12) Reinforcement	<input type="checkbox"/> Grade 250/500 complying with CS2:2010 <input type="checkbox"/> Others: _____	
(13) Prestressed Tendon	Grade _____ complying with _____	
(14) Structural Steel	Grade _____ complying with _____	
(15) Aluminum	Grade _____ complying with _____	
(16) Glass	Type: _____ Permissible stress = _____ complying with _____	
(17) Others		

Fundamental Issues of Drainage Plans

1. Method of disposal

- (a) Public sewers (including nullah, culvert and streamcourse) available for connection and acceptable to Drainage Services Department (DSD);
- (b) Private sewers available for connection and acceptable to DSD;
- (c) Sewage treatment plant, septic tank and soakaway design acceptable to Environmental Protection Department (EPD);
- (d) Trade/industrial effluent discharge acceptable to EPD; and
- (e) Standard details and connections of traps with replenishing function for floor drains of kitchens of domestic units, toilets or pantries (PNAP APP-164).

2. Layout of underground drain

- (a) Direction of flow in order;
- (b) No surface water discharging to foul water drains;
- (c) No foul water discharging to surface water drains;
- (d) Special design provisions for underground drains on newly reclaimed land (Clause 2.4 of the Code of Practice for Foundations 2017);
- (e) Underground drains kept out of slopes (PNAP APP-76); and
- (f) Terminal manholes, invert levels and sizes of connection pipes acceptable to DSD.

3. Access for maintenance/repair

- (a) Common underground drains and above-ground stacks located in common areas (PNAP APP-93); and
- (b) No water-borne pipes embedded in structural elements (PNAP APP-105).

4. Other related issues

- (a) Well construction in order (PNAP APP-4);
- (b) Drain within a gathering ground acceptable to Water Supplies Department;
- (c) Discharge proposal for sites within 200m of seaward boundaries of a marine fish culture zone acceptable to EPD;
- (d) Railway protection zone:
 - (i) Deep excavation acceptable to MTR Corporation Limited (MTRCL)
 - (ii) Installation of wells including bored well acceptable to MTRCL; and
- (e) Condensate disposal system for air-conditioning units (PNAP APP-112).

1. Fundamental Issues of Demolition Plans

- (a) Precautionary measures particularly the hoarding, covered walkways and any necessary propping and shoring;
- (b) The codes and standards proposed to be adopted;
- (c) Appraisal of the building to be demolished, method statement, sequence of demolition and the safe use of any powered mechanical plant;
- (d) Stability of the framing system during demolition and of any remaining structures after demolition; and
- (e) Effects on all affected buildings, slopes structures, lands and services and the provision of supports and protection, if necessary.

2. Fundamental Issues of Site Formation Works (including Slope Works) and Excavation and Lateral Support (ELS) Works

- (a) The codes and standards proposed to be adopted;
- (b) The geotechnical parameters and assumptions adopted in the design;
- (c) The margin of safety, including local/ regional stability of ground, stability of earth retaining structures, overall stability of ELS system;
- (d) The structural adequacy of major structural elements, including structural members of slope protection works/ earth retaining structures and structural framing of ELS system;
- (e) The effects of the proposed works on adjoining buildings, structures, lands, streets, utility services and facilities, including ground settlement/ building settlement/ groundwater drawdown estimations;
- (f) The buildability such as the construction sequence, working space and safety under temporary condition; and
- (g) The adequacy of precautionary measures.

3. Fundamental Issues of Structural Works other than Superstructure, such as Foundation and ELS Works

- (a) The codes and standards proposed to be adopted;
- (b) The geotechnical parameters and assumptions adopted in the design;
- (c) Design loadings;
- (d) The margins of safety, including stability of structural framing and foundation system and overall stability of ELS system;
- (e) The structural adequacy of major structural elements of the foundation system and the ELS system;
- (f) The effects of the proposed works on adjoining buildings, structures, lands, streets, utility services and facilities, including ground settlement/building settlement/groundwater drawdown estimations;
- (g) The buildability such as construction sequence, working space and safety under temporary condition; and
- (h) The adequacy of precautionary measures.

Guidelines for Concept Drawings

1 Basic Information in Concept Drawings

- (a) Site coverage including accountable, non-accountable and exempted SC areas;
- (b) GFA including accountable, non-accountable and exempted domestic and non-domestic GFA;
- (c) Fire safety strategy including MOE, MOA and FRC arrangements; and
- (d) Barrier free access including basic provision of access and facilities for wheelchair-users.

2 Sample Drawings

Sample concept drawings are available in BD's website at www.bd.gov.hk for reference.

3 Size

A2, A3 or A4 depending on size of development.

4 Colour Scheme

It is recommended that the colour schemes for designation of different types of SC & GFA and barrier free access in sample concept drawings be adopted.

5 Signs and Indicators

It is recommended that the signs and indicators for MOE, MOA and FRC arrangements in the sample concept drawings be adopted.

Notes on Submission Drawing Standards in Electronic Format

Electronic Submission for Mathematical Calculation of Areas

Introduction

The purpose of this supplementary note is to advise on the electronic format and the pre-requisites for checking of area calculations in CAD drawing files electronically.

2. When the requirements set out in the following paragraphs are complied with and clearly shown in the submitted CAD drawing files, diagrammatic breakdowns and details on calculation of the gross floor area, usable floor area, site coverage, plot ratio, refuge floor area and green feature area etc. would not be required to be included in plan submission. For avoidance of doubt, annotation and dimension of the areas concerned are required to be indicated on plans for checking purpose. Samples of the dimensioned plans are in Annex 1 for reference.

3. For area calculations computed electronically, soft copies of the building floor plans containing the area diagram layer(s) are required to facilitate verification of the calculations. For approval purpose, hard copies of the general building plans showing floor area layouts, area diagrams and calculations without breakdowns are required. Information shown in both the soft and hard copies of the plans submitted for approval must be identical to each other. Plans may be rejected if discrepancy between the two is found. The AP should certify on each of the DVD-ROM discs with a permanent marker signifying that information in the electronic drawing files are identical to the submitted hard copies and that all files are prepared under his supervision. The disc should be finalised before submission, i.e. the contents of the disc cannot be further changed. His signature shall be deemed to be his assumption of responsibility for the electronic plans and the calculations.

4. The following minimum requirements in CAD drawing format should be observed and provided for in the area calculations computed electronically. Plans may be rejected on grounds of insufficient information if these requirements are not complied with.

4.1 Format and Software Version

- (a) The submitted CAD drawing files should be stored in non-rewritable DVD-ROM discs. Except otherwise agreed by the Building Authority all other electronic submission formats are not acceptable;
- (b) CAD drawings using AutoCAD version R14 or later or MicroStation version SE, J, V8 or later are acceptable;
- (c) AutoCAD files should be saved in “.dwg” format and MicroStation files in “.dgn” format only. All other compressed or zipped file formats are not acceptable; and
- (d) Title blocks completed with drawing number showing revision legends, site/project title, drawing title etc. should be inserted in every drawing for identification purpose. Each CAD file shall contain one hard copy drawing only. Typical title block sample is attached in Annex 2 for reference.

4.2 Referencing System

File Name/Drawing Number Convention

- (a) Each file shall contain one drawing only, default zoomed to full drawing extent;
- (b) All information for approval shall be contained in the same drawing file. The need to cross-reference or hyper-link with another CAD file to enable verification of the area calculations in the DVD-ROM is not acceptable except in situation covered in (c) below;
- (c) In situation where the layering number and the system are limited due to software constraint, limited referencing system might be used provided that all information and model files which compose the final drawings are clearly visible and intact when files are open in the computer. A clear and systematic path trial in hard copy format highlighting the list of file(s) for area checking purpose should be provided to facilitate the verification exercise. All drawing files and model files are to put into the same folder to ensure coherent path recognition. Cross-referencing and hyper-linking within folder should be kept to the minimum;
- (d) Naming and numbering of drawing files in the hard copy should be identical to those in the submitted soft copy; and
- (e) A completed hard and soft copy of the drawing index listing all file names, drawing numbers with brief description on location and contents of the submitted drawings shall be provided. Drawings under different revision must carry a revision letter (e.g. A to Z) for identification purpose. For large and complicated project involving numerous drawing versions/amendments, a revision legend should also be provided as well.

e.g. **B-01_A.DWG**



Drawing No. Rev. A

4.3 Layering Organization

- (a) CAD drawing files including floor plans, tables and calculations etc. shall contain all information identical to the hard copy. Each file shall accommodate different elements such as floor layout plans, usable floor area, gross floor area and dimension etc. into the relevant layers. The “layering” drafting technique isolates elements of a drawing and places them into separate layers for easy reference and manipulation. The same principle applies to “level” in MicroStation files;
- (b) To facilitate checking of the area calculations, general building plans shall contain GFA and other areas diagram layer(s) for verification and calculations. To reconcile the requirements of other government departs and to adopt the rules under CAD Standard for Works Projects (CSWP) of Development Bureau, AP shall name the relevant layers in a format specified below;

Layer Name Convention

Diagram A: Rules of Layer Name Convention of CSWP (abstracted)

ARC	082	4	0
			Field 3 - Addition/Deduction Type
			Field 2 - Building Plan Area Type (Sub-class)
			Field 2 - CSWP Element Code assigned for Building Plan Area Calculation (Class)
			Field 1 - Agent Responsible Code (ARC) e.g. ADA
Field	Description		Length/Type
1	Agent Responsible Code		3 (alphanumeric)
2	CSWP Element Code assigned for Building Plan Area Calculation (Class)		3 (numeric) a) 082 for BD's area calculation, b) 086 for LandsD's area calculation
	Building Plan Area Type (Sub-class)	1 (numeric)	See Diagram B
3	Addition/Deduction Type		1 (alphanumeric)
			See Diagram C

Diagram B

Code	Building Plan Area Type
1	Site Coverage (SC) – Non-domestic
2	Site Coverage (SC) – Domestic
4	Gross Floor Area (GFA) – Non-domestic
5	Gross Floor Area (GFA) – Domestic
9	Usable Floor Area (UFA)
0	Open Space (OS)
	Elements common to all area type

Diagram C

Code	Addition/Deduction Type	Remarks
0	Base Area	
4	Deduction Area	For area to be deducted from the outline of area layers under the Buildings Ordinance.
5	Deduction Area	For area to be deducted from the outline of area layers under the Lands Department requirement.
6	Deduction Area	For area to be deducted from the outline of area layers under the Planning Department requirement.
8	Dimension	

Diagram D: Layer Names generated from the above rules for this PNAP

Code	Description	Remarks
<i>ARC08240</i>	Non-domestic area Layer	For outline of non-domestic GFA layer.
<i>ARC08244</i>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of non-domestic area layers under the Buildings Ordinance.
<i>ARC08246</i>	Non-domestic area to be deducted from area calculations	For non-domestic area to be deducted from the outline of non-domestic area layers under the Planning Department requirements.
<i>ARC08250</i>	Domestic area Layer	For outline of domestic GFA layer.
<i>ARC08254</i>	Domestic area to be deducted from area calculations	For domestic area to be deducted from the outline of domestic area layers under the Buildings Ordinance.
<i>ARC08256</i>	Domestic area to be deducted from area calculations	For domestic area to be deducted from the outline of domestic area layers under the Planning Department requirements.
<i>ARC082_8</i>	Dimension layers	All dimensions for the floor layout plans are automatically generated from the computer software (<i>not to be manually inserted by text input construction</i>)
<i>ARC08210</i>	Area for non-domestic site coverage calculations	For outline of non-domestic site coverage layer.
<i>ARC08214</i>	Non-domestic site coverage deducted from calculations	Deduction complying with requirements of the Buildings Department.
<i>ARC08216</i>	Non-domestic site coverage deducted from calculations	Deduction complying with requirements of the Planning Department.
<i>ARC08220</i>	Area for domestic site coverage calculations	For outline of domestic site coverage layer.
<i>ARC08224</i>	Domestic site coverage deducted from calculations	Deduction complying with requirements of the Buildings Department.
<i>ARC08226</i>	Domestic site coverage deducted from calculations	Deduction complying with requirements of the Planning Department.
<i>ARC08200</i>	Area for open space calculations	For outline of open space layer.
<i>ARC08204</i>	Area to be deducted from open space calculations	For area to be deducted from outline of the open space under the Buildings Ordinance.
<i>ARC08290</i>	Area for usable floor area calculations	For outline of usable floor area layer.
<i>ARC08294</i>	Area to be deducted from the usable floor area calculations	For area to be deducted from outline of the usable floor area under the Buildings Ordinance.

- (c) The layer names required by LandsD are not listed in this PNAP and AP should make reference to LandsD LAO Practice Note 3/2018. AP should also refer to CSWP of Development Bureau (at www.devb.gov.hk) for other layer name convention;
- (d) Layering organization of the file(s) in hard copy format shall be submitted. If more layering description is required in the submitted general building plans, AP could lengthen the above list with additional input along similarly constructed methodology. All layering organizations must be clearly shown; and

Layer contents

- (e) CAD file for the floor plan shall contain all elements and information that have to be shown on the drawings to facilitate approval, including, *inter alia*, the area and the dimension layers. Elements such as lighting, electric appliances and the like where approval from the Building Authority is not required should not be shown in the submitted drawings.

4.4 Presentation Style

Drawing Scale

- (a) CAD drawings should be drawn in true size (i.e. 1 drawing unit = 1mm or metre) with precision rounded up to the nearest mm unit.

Drawing Object within area diagram

- (b) The position of the drawing shall be close to World Coordination 0,0 and drawing objects in area diagram shall not be grouped or blocked.

Polyline

- (c) All line drawings intended for area calculations in area layer(s) shall be in **closed** polyline diagram (or in complex shape in MicroStation files).

Dimension

- (d) All dimensions should be true dimensions generated automatically by the software and laid in the specified layers. Text figures or figures manually inserted, amended or constructed for calculation purpose in the CAD file is not acceptable.

Decimal places of areas and volumes

- (e) All areas and volumes should be presented in m^2 and m^3 units respectively and rounded up to 3 decimal places.

Suggested Text Font

- (f) Text style is not compulsory. Conventional text fonts are suggested. Common type such as “Romans” font is recommended for use in the text. For MicroStation, “Engineering” font could be adopted.

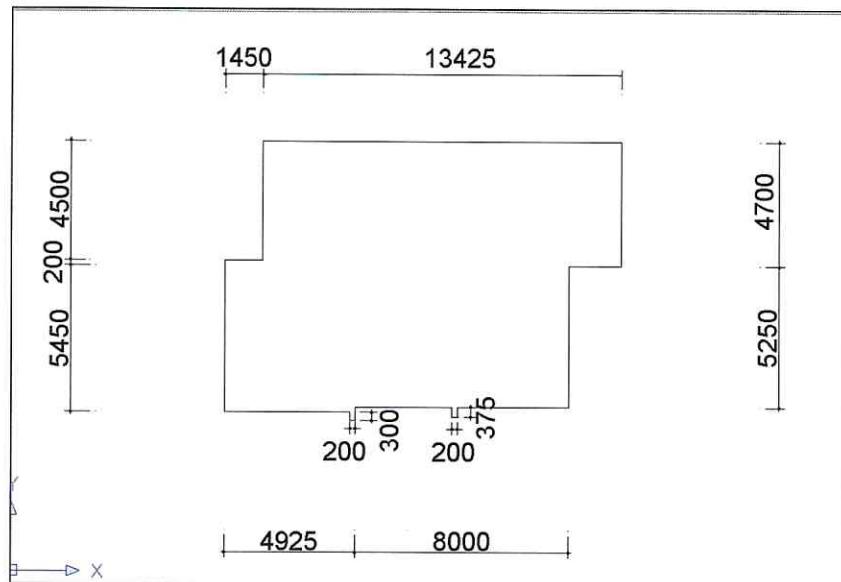
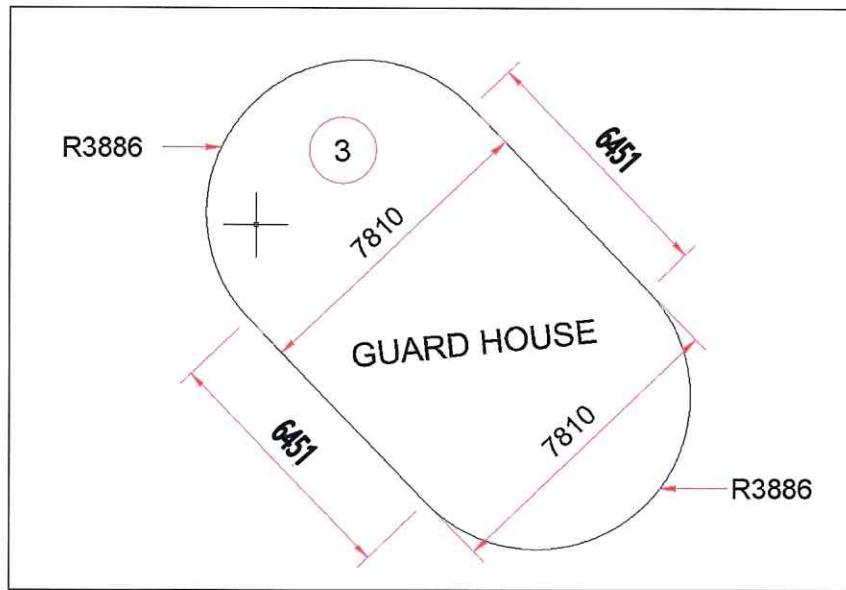
Review

5. These guidelines will be refined taking into the experience gained. Suggestions to facilitate and/or to improve the electronic vetting procedures are always welcomed.

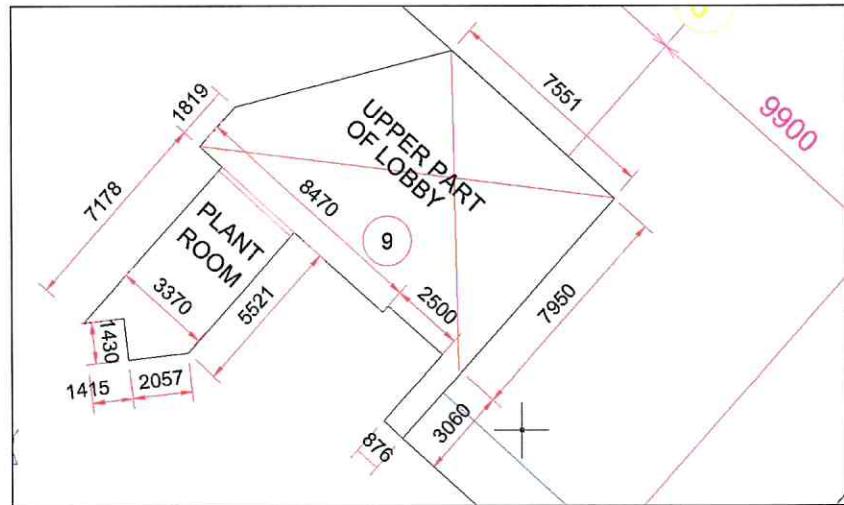
(Rev. 9/2019)

Samples for Dimensioned and Annotated GFA Diagrams

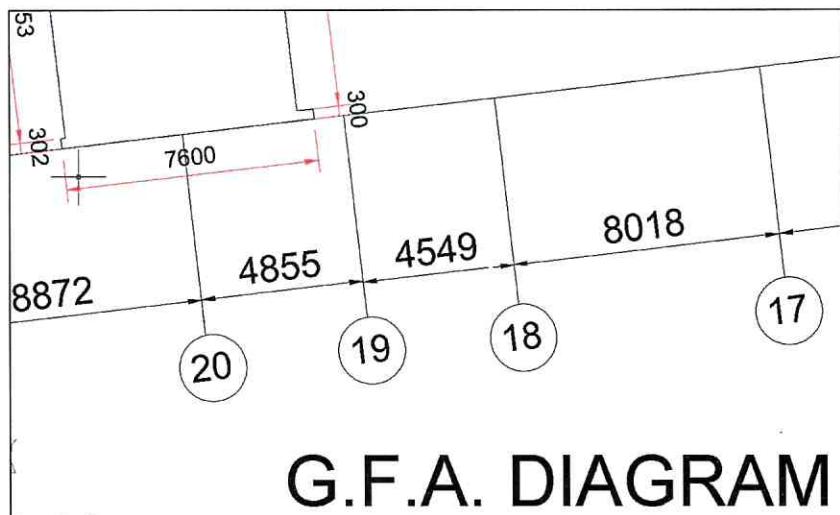
The following part diagrams shown with dimensions and annotations are for reference only. They are intended to illustrate the minimum information required to facilitate electronic verification of the area calculations more effectively. Illustrations shown are by no means exhaustive.

Sample 1 Rectangular shape GFA diagram**Sample 2 GFA diagram with curve(s) and annotations**

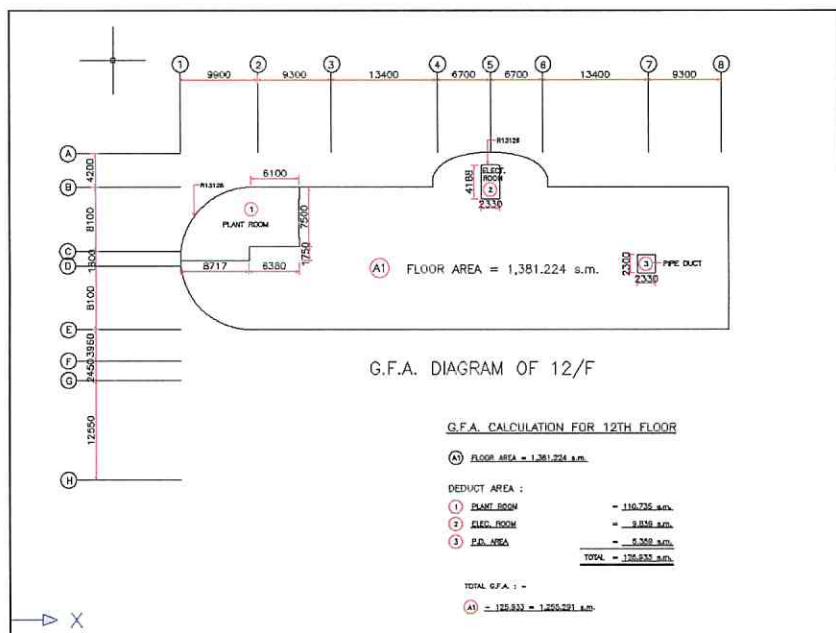
Sample 3 GFA diagram (part) with dimension and annotation



Sample 4 GFA diagram (part) with grid line and dimension.

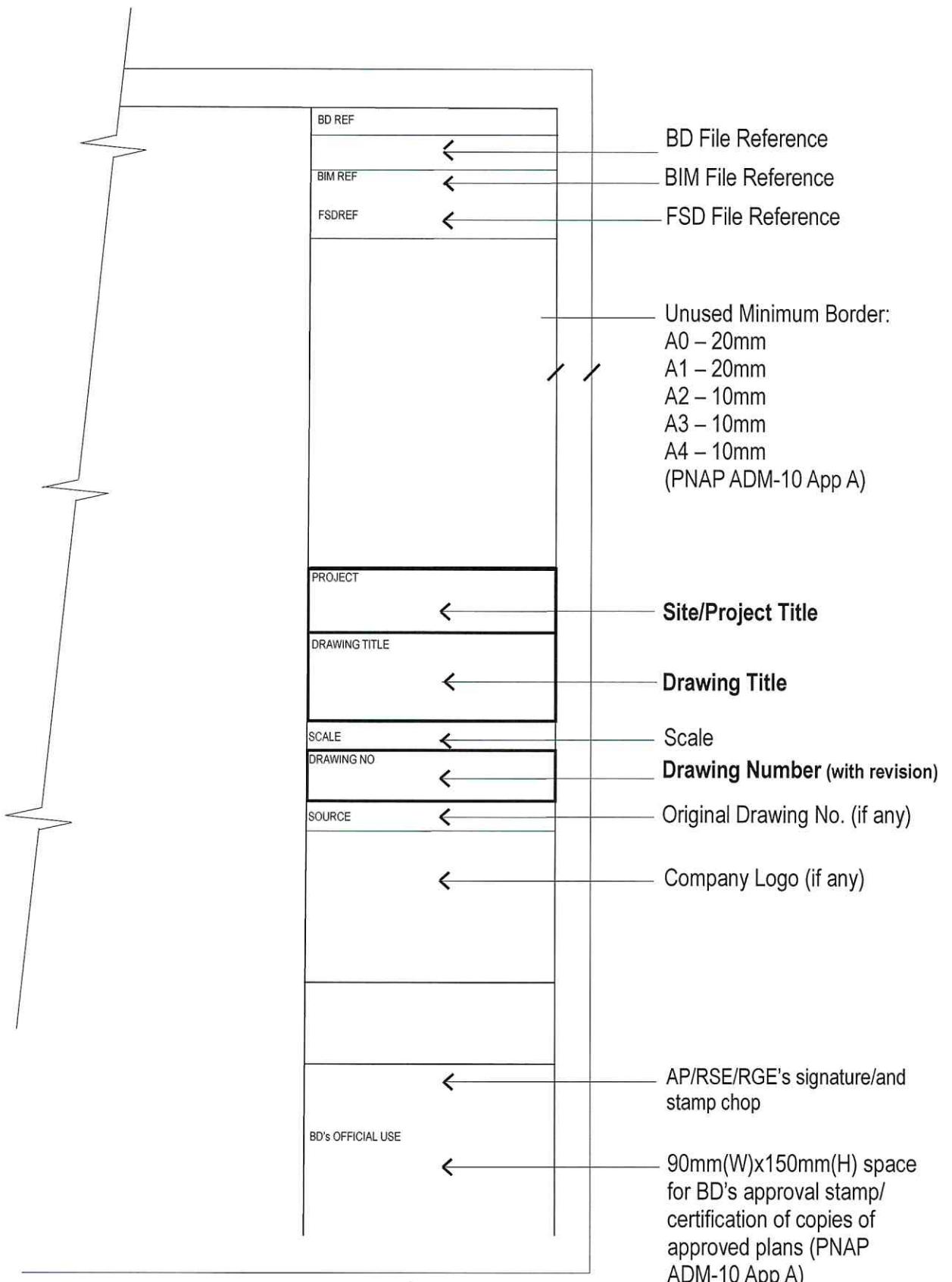


Sample 5 Overview of a sample GFA diagram with calculations



Sample Title Panel

Annex 2



**List of Amendments Not Qualified as Minor Amendments
for Deferring Submission**

1. For **building and building (A&A)**, an amendment:
 - (a) resulting in a major revision or localised major revision as per the criteria specified in PNAP APP-55;
 - (b) having material effect on the fundamental issues;
 - (c) involving concern on stability/deformation of slopes, retaining walls, adjoining land and buildings;
 - (d) involving an application for exemption or modification of the BO and its subsidiary regulations;
 - (e) not in compliance with the relevant Outline Zoning Plan or deviating from a scheme approved by the Town Planning Board; or
 - (f) involving works outside the lot boundary.
2. For **superstructure and superstructure (A&A)**, an amendment:
 - (a) affecting the overall structural stability of the building;
 - (b) having material effect on the fundamental issues; or
 - (c) involving an application for exemption or modification of the BO and its subsidiary regulations.
3. For **drainage and drainage (A&A)**, an amendment:
 - (a) involving the revision of drainage layout as a result of a major revision of the building proposal;
 - (b) involving the change of disposal system or connections to public sewers;
 - (c) involving concern on stability/deformation of slopes, retaining walls, adjoining land and buildings;
 - (d) involving an application for exemption or modification of the BO and its subsidiary regulations;
 - (e) involving excavations deeper than 3m; or
 - (f) involving works outside the lot boundary.

4. For **foundation**, an amendment;

- (a) involving the change in design assumptions, construction method/material, safety precautionary measures, safety tolerances, monitoring measures/criteria, founding material, allowable load carrying capacity;
- (b) causing an impact on the railway structures or facilities in Area Number 3 of the scheduled areas in Schedule 5 to the BO, or in other railway protection areas as referred to in PNAP APP-24, that results in not complying with the monitoring control limits shown on the latest approved plans or the requirements set out in the guidelines under PNAP APP-24;
- (c) causing an impact on the drainage and sewage tunnels in Area Number 5 of the scheduled areas in Schedule 5 to the BO, or in the tunnel protection zones of Drainage Services Department (DSD) tunnels as referred to in PNAP APP-62, that results in not complying with the monitoring control limits shown on the latest approved plans, or the requirements set out in the technical notes under PNAP APP-62 or the technical guidelines under DSD Practice Note No. 2/2017;
- (d) involving excavation for pile caps or footing below the approved bulk excavation limit in Area Number 1 of the scheduled areas in Schedule 5 to the BO;
- (e) involving steel H-piles driven to bedrock steeper than 25 degree from the horizontal if any as shown on the latest approved plans;
- (f) involving piles constructed over slope of which the stability will affect or be affected by the piles;
- (g) not in compliance with the approved minimum clear distance between the foundation and the site boundaries or adjacent sensitive buildings/features;
- (h) involving a change from Type 1 to Type 2 mechanical couplers for steel reinforcing bars or vice versa, or a change in the mechanical couplers which requires a further quality assurance scheme of the manufacturer to be submitted prior to the application for consent to the commencement of the splicing assembly works;
- (i) involving relocation of pile(s) to position(s) more than 5m from its/their original location(s), as shown on the latest approved plans; or

- (j) involving the following percentage increase over the number of piles of the same type, as shown on the latest approved plans:
- (i) more than 5%¹ for piles of the same type except large diameter bored piles (LDBP); or
 - (ii) more than 15%¹ for LDBP only.
5. For **pile cap**, an amendment:
- (a) involving the change in design assumptions;
 - (b) involving excavation for pile caps below the approved bulk excavation limit in Area Number 1 of the scheduled areas in Schedule 5 to the BO;
 - (c) causing an impact on the railway structures or facilities in Area Number 3 of the scheduled areas in Schedule 5 to the BO, or in other railway protection areas as referred to in PNAP APP-24, that results in not complying with the monitoring control limits shown on the latest approved plans or the requirements set out in the guidelines under PNAP APP-24;
 - (d) causing an impact on the drainage and sewage tunnels in Area Number 5 of the scheduled areas in Schedule 5 to the BO, or in the tunnel protection zones of Drainage Services Department (DSD) tunnels as referred to in PNAP APP-62, that results in not complying with the monitoring control limits shown on the latest approved plans, or the requirements set out in the technical notes under PNAP APP-62 or the technical guidelines under DSD Practice Note No. 2/2017;
 - (e) resulting in amendment to the latest approved/accepted excavation and lateral support plans as described in paragraph 6 below; or
 - (f) involving a change from Type 1 to Type 2 mechanical couplers for steel reinforcing bars or vice versa, or a change in the mechanical couplers which requires a further quality assurance scheme of the manufacturer to be submitted prior to the application for consent to the commencement of the splicing assembly works.

¹ When the number of pile(s) so calculated involves decimal numbers, round up to the nearest whole number. For example, if there are 15 non-LDBP shown on the latest approved plans, the increase in number of non-LDBP should not be more than 1 ($15 \times 5\% = 0.75$ and rounding up to the nearest whole number, i.e. 1). If there are 10 LDBP shown on the latest approved plans, the increase in number of LDBP should not be more than 2 ($10 \times 15\% = 1.5$ and rounding up to the nearest whole number, i.e. 2).

6. For **excavation and lateral support (ELS)**, an amendment:

- (a) involving the change in design assumptions, construction method/material, safety precautionary measures, safety tolerances, monitoring measures/criteria, type/size or installation method of vertical earth retaining elements or construction sequence including pre-loading arrangement of struts;
- (b) involving excavation below the approved bulk excavation limit in Area Number 1 of the scheduled areas in Schedule 5 to the BO;
- (c) causing an impact on the railway structures or facilities in Area Number 3 of the scheduled areas in Schedule 5 to the BO, or in other railway protection areas as referred to in PNAP APP-24, that results in not complying with the monitoring control limits shown on the latest approved plans or the requirements set out in the guidelines under PNAP APP-24;
- (d) causing an impact on the drainage and sewage tunnels in Area Number 5 of the scheduled areas in Schedule 5 to the BO, or in the tunnel protection zones of Drainage Services Department (DSD) tunnels as referred to in PNAP APP-62, that results in not complying with the monitoring control limits shown on the latest approved plans, or the requirements set out in the technical notes under PNAP APP-62 or the technical guidelines under DSD Practice Note No. 2/2017; or
- (e) involving the change in strutting layout (horizontal and inclined) or construction material of lateral support system or reduction of size of structural members of the approved ELS system, except localised minor changes to the horizontal or inclined arrangement of structural members without reduction of the stiffness of affected struts to resolve obstruction to the permanent structures.

7. For **site formation**, an amendment:

- (a) involving the change in design assumptions, construction method/material, safety precautionary measures, safety tolerances or monitoring measures/criteria;
- (b) involving excavation below the approved bulk excavation limit in Area Number 1 of the scheduled areas in Schedule 5 to the BO;
- (c) causing an impact on the railway structures or facilities in Area Number 3 of the scheduled areas in Schedule 5 to the BO, or in other railway protection areas as referred to in PNAP APP-24, that results in not complying with the monitoring control limits shown on the latest approved plans or the requirements set out in the guidelines under PNAP APP-24;

- (d) causing an impact on the drainage and sewage tunnels in Area Number 5 of the scheduled areas in Schedule 5 to the BO, or in the tunnel protection zones of Drainage Services Department (DSD) tunnels as referred to in PNAP APP-62, that results in not complying with the monitoring control limits shown on the latest approved plans, or the requirements set out in the technical notes under PNAP APP-62 or the technical guidelines under DSD Practice Note No. 2/2017;
- (e) involving change of any site formation level shown in the latest approved plans for more than 1m;
- (f) involving change of site formation level/profile adversely affecting the overall stability of approved ELS system in the site or adjoining structures/slopes/utilities;
- (g) involving an increase in retained height of permanent earth retaining structures or reduction of such for more than 1m; or
- (h) involving a change from Type 1 to Type 2 mechanical couplers for steel reinforcing bars or vice versa, or a change in the mechanical couplers which requires a further quality assurance scheme of the manufacturer to be submitted prior to the application for consent to the commencement of the splicing assembly works.

**Request for Fast Track Processing of Plans
of Alteration and Addition (A&A) Works and Certificate of Preparation of Plans**

To the Building Authority,

In accordance with paragraph 35 of PNAP ADM-19, I hereby request for fast track processing of the plans submitted for the proposed A&A works to be carried out at _____.

2. I confirm that the A&A works as shown on the enclosed drawings (dwg. no. _____ to _____) do not involve the structure of the building and do not involve changes to the latest approved plans of the affected areas in the following aspects :

- Density - site parameter, plot ratio, site coverage
- Fire safety - means of access, means of escape in case of fire, fire resistance, compartmentation
- Health and environment - lighting, ventilation, open space
- Fundamental issues required under allied legislation - fire safety, OZP, access for persons with a disability, airport height restrictions, railway route protection
- Method of disposal to public sewers

3. I also confirm that the A&A works as shown on the enclosed drawings (dwg. no. _____ to _____) involve changes to the latest approved plans of the affected areas in the following aspects :

- Fire safety - means of access, means of escape in case of fire, fire resistance, compartmentation
- Health and environment - lighting, ventilation, open space
- Minor changes to structural elements of the building
- Drainage system of the building

and that such changes as shown on the said drawings comply with the provisions of the Buildings Ordinance.

4. A Form BA8A applying for your consent to the commencement and carrying out of the A&A works mentioned in paragraph 1 above is enclosed.

Date

Signature of Authorized Person

(Name in full)

Signature of Registered Structural Engineer

tick the appropriate boxes

(Name in full)

**Fast Track Processing of Proposal
for Two-Storey Warehouse**

The Efficiency Office (EffO) operates a One Stop Centre for receiving submissions and coordinating joint inspections for two-storey warehouse proposals on behalf of relevant Government departments (including BD) and utility companies. Details of the scheme are available from EffO's website at <https://www.effo.gov.hk>.

2. Submission of a proposal for building a two-storey warehouse via the EffO's One Stop Centre to the BD should include all relevant plans such as GBP, structural plans, drainage plans, demolition plans, site supervision plans and hoarding plans, and the corresponding consent application. Alternatively, such submission may be made to the BD directly.

3. For building proposals satisfying the following criteria, concurrent approval and consent may be applied for:

- (a) The proposed building is a warehouse for general storage, of not more than two storeys and has no basement;
- (b) The site is a Class A, B or C site and emergency vehicular access is provided in compliance with regulation 41D of the Building (Planning) Regulations and the Code of Practice for Fire Safety in Buildings;
- (c) No compartment in the building shall exceed 28,000m³ nor 10,500m²; and
- (d) The criteria as set out in PNAP ADM-19 are satisfied.

4. For proposals satisfying the criteria in paragraph 3 above and irrespective of whether the submission is made via the EffO's One Stop Centre or directly to the BD, the BD undertakes to process the concurrent applications for fast track approval and consent within 45 days from the date of submission and to conduct inspection of the foundation bearing strata within one working day upon receipt of notification.

**Fast Track Processing for Repair Works of Curtain Wall,
Window Wall¹ and Cladding**

To enable BD to process the application for fast-track approval and consent within 30 days², the following shall be submitted concurrently:

- (a) A supervision plan for the curtain wall, window wall or cladding works, where applicable, prepared by the AP, RSE and Registered General Building Contractor (RGBC) in accordance with the Technical Memorandum for Supervision Plans and the Code of Practice for Site Supervision;
- (b) If tempered glass is to be installed, the RSE shall submit the following documents as stipulated in PNAP APP-37-
 - (i) quality supervision plan prepared by the RSE and RGBC for the quality supervision of manufacturer's heat soak process, and
 - (ii) a copy of Quality Assurance Scheme issued by the manufacturer;
- (c) If the thermal transmittance characteristics of the replaced external wall materials regarding insulation is inferior to the approved one, provisional Overall Thermal Transfer Value report under PNAP APP-67 and, where applicable, provisional energy efficiency report under PNAP APP-156³; and
- (d) If the repair works involve a change/upgrading of the approved materials, full justifications of their structural adequacy, non-combustibility, fire resisting properties in compliance with the relevant current Building Regulations, design standards and codes of practice.

(2/2021)

¹ Window wall, including glass wall and glass shop front, refers to window and wall formed by structural glass elements spanning between floors.

² Paragraph 31 of PNAP ADM-19 refers.

³ Applicable to developments previously approved subject to the Building (Energy Efficiency) Regulation or PNAP APP-156.