

For information

**LEGISLATIVE COUNCIL PANEL
ON PLANNING, LANDS AND WORKS**

**Proposed Amendments to the
Technical Memorandum for Supervision Plans
under the Buildings Ordinance**

Purpose

This paper outlines the proposed amendments to the existing Technical Memorandum (TM) for Supervision Plans (SP) issued under section 39A of the Buildings Ordinance (BO).

Background

2. With the enactment of the Buildings (Amendment) Ordinance 1996 on 18 July 1996, new provisions were introduced to tighten control over the safety of building works and street works. Pursuant to the newly introduced section 39A(1), the Secretary for Planning, Environment and Lands issued a TM setting out the principles, requirements and operation of SP which took effect on 22 December 1997. As defined under section 2(1) of the BO, a SP is a plan setting out the safety management of building works or street works prepared in compliance with the TM issued under section 39A of the BO. The new provisions require that the supervision of the carrying out of building works or street works should be carried out in accordance with the SP which should be lodged by the authorized person (AP) with the Building Authority (BA) before commencement of works. Under section 16(3)(bc) of the BO, the BA may refuse to give his consent to the commencement of any building works/street works if the AP has not lodged the SP for the works.

Types of supervision requirements on building works or street works

3. Section 4.2 of the existing TM stipulates that safety management comprises “site safety supervision” and “quality supervision”.

Site safety supervision

4. As defined in the existing TM, site safety supervision means the necessary site supervision required to check that the carrying out of building works or street works (including the sequence of construction, temporary works pertinent to all stages of building works or street works and the working environment) are safe, such that the hazards from these works are controlled and risks to workers on site, all persons around the site, and adjoining properties and land are mitigated.

Quality supervision

5. Quality supervision is defined in the existing TM as the necessary site supervision required to ensure that the building works or street works are in general carried out in accordance with the provisions of the BO and regulations, the relevant plans approved by the BA and any order made or condition imposed, pursuant to any provisions of the BO or its regulations.

Qualified supervision

6. In addition, section 17(1)(6)(e) of the BO empowers the BA to impose conditions, upon giving his approval of plans or consent to the commencement of works, to require ‘qualified supervision’ of the works concerned. Currently, the BA will impose such conditions in respect of foundation works, ground investigation field works, structural works and building works with significant geotechnical content such as site formation works and excavation works. The conditions will stipulate the necessary employment of qualified personnel acceptable to the BA to carry out specific supervision tasks in the course of the works concerned. The BA has issued guidelines in the form of practice notes for authorized persons and registered structural engineers (PNAP) as well as practice notes for registered contractors (PNRC) promulgating the usual

supervision requirements that will be specified through the conditions of approval.

Content of supervision requirements

7. The TM specifies different classes of supervision required for different types of building works or street works with reference to the complexity of the works as defined in the Code of Practice for Site Supervision (Code of Practice) issued by the BA. The classes of supervision are defined by virtue of the number and grades of technically competent persons (TCP) required for site safety supervision and their frequency level of inspection of the works as stipulated in Table 1 of the existing TM.

8. Under section 4.6 of the existing TM, a SP comprises two safety supervision plans namely, an outline safety supervision plan (OSSP) and a detailed safety supervision plan (DSSP). The OSSP shall provide background information on the site and the proposed development and also address special features of the site which are to be taken into account in formulating the requirements of the site safety supervision. The DSSP shall state the degree of complexity of the works concerned and the corresponding class of supervision required for the works. It also requires, inter alia, the AP, registered structural engineer, registered general building contractor and registered specialist contractor to identify the number, particulars and grades of TCP required and the frequency levels of their attendance at sites for supervision of the works. The AP is required to submit an OSSP to the BA prior to or at the time of application for consent to commence works while the DSSP has to be submitted to the BA before the actual commencement of works.

Need for revision of the Technical Memorandum

9. Although the existing TM defines both site safety supervision and quality supervision, it only sets out the site safety supervision requirements but not the quality supervision requirements. As a result, the SP required to be submitted by the TM covers site safety supervision only. For quality supervision, it has to be imposed through a

condition under section 17(1)(6)(e) of the BO. A supervision plan covering quality supervision (i.e. QSP) will be required to be submitted through the imposed conditions. Hence, several SP, i.e. the OSSP, DSSP and QSP may be required to be submitted to the BA for the same development.

10. Apart from the submission of several SP, the site safety supervision and quality supervision requirements for the same development are at present specified in different supervision plans. Moreover, each of the two types of supervision has its own distinctive purposes and different requirements in terms of the frequency of inspection and qualification and number of supervisors required. The industry and the Buildings Department (BD), therefore, consider that there is a scope for a review to look into the possibility of optimizing the resources employed by merging the two supervision systems and streamlining the procedures for the submission of SP, while maintaining safety of the works and the workers during the course of construction as well as quality of the built structures.

11. With the introduction of the mandatory requirement under the Buildings (Amendment) Ordinance 2004 for the appointment of registered geotechnical engineer (RGE) for the geotechnical elements of building works or street works, the TM should also be revised to incorporate the supervision requirements of RGEs.

Proposal of Integrated Site Supervision System under the revised Technical Memorandum

12. In order to work out a proposal acceptable to the industry, a Working Group comprising representatives from the Buildings Department, the Hong Kong Institute of Architects, Hong Kong Institution of Engineers, Hong Kong Institute of Surveyors, Real Estate Developers Association and Hong Kong Construction Association Limited was formed. The Working Group has held a total of 19 meetings to draw up the proposed amendments to the TM.

13. As a result of the review by the Working Group, we recommend that the requirements on site safety supervision as stipulated

in the existing TM as well as the requirements on quality supervision including qualified supervision as stipulated in other provisions of the BO, its subsidiary legislation and PNAP/PNRC issued by the BA should be integrated under a new system, namely the Integrated Site Supervision System (ISSS). The corresponding consolidation of supervision requirements is proposed to be set out in the revised TM and incorporated in a single SP.

14. To simplify the basis and method for the assessment of supervision requirements, we recommend that the different classes of supervision requirements with regard to the complexity of each type of building works or street works as specified in the existing TM should be replaced by different sets of supervision requirements commensurate with the types of building works which would be categorized in broad terms. These new requirements in the revised TM are outlined in paragraph 15 below.

15. The proposed amendments to the existing TM involve the following three major aspects:

- (a) integration of the site safety supervision system and the quality supervision system including the qualified supervision for building works and street works under the ISSS with the following details:
 - (i) only one SP covering the different types of supervision, where applicable, is required to be submitted in place of the different SPs submitted for different types of supervision under the current requirements;
 - (ii) the current requirement to submit an OSSP and a DSSP is dispensed with; and
 - (iii) the number of site supervisors required is reduced by merging supervisory personnel to avoid unnecessary procedures, and to limit the grades of TCP for each stream to four grades or less instead of five grades as required by the existing TM.

- (b) for simplicity, replacement of different classes of supervision with regard to the complexity of the works by different sets of supervision requirements to cater for the following types of building works or street works:
 - (i) ground investigation field works;
 - (ii) building works with significant geotechnical content¹;
 - (iii) foundation works; and
 - (iv) all other building works or street works, such as demolition, pile cap, footing, superstructure, curtain wall, cladding and alteration and addition.
- (c) incorporation of the supervision requirements of the RGE.

16. For ease of reference, a summary of the proposed amendments to the existing TM is tabulated at Annex A. The revised TM with the proposed amendments marked in revision mode is at Annex B.

Merits of the proposal

17. The integration of the site safety and quality supervision plan systems as well as the qualified supervision requirements will result in savings in resources for both preparation and processing of SP arising from the streamlining of the procedures for submission of SP.

18. There are currently separate top-up training courses provided to the site supervisors under the different supervision plan systems. When the ISSS is implemented, it is anticipated that the majority of the existing site supervisors would have already attended the required top-up training courses and be competent to operate under the new system.

19. The frequency of site inspection by the TCP as required by

¹ The building works with significant geotechnical content include site formation works, excavation works, ground treatment works, foundation works on sloping ground and tunnel works.

the TM is classified from Level 1 to Level 5, i.e. it varies from the level of 'as and when required' to that of 'full-time inspection during site working hours'. The majority of the existing site staff only play a part-time role in the site supervision as TCP required under the TM. Apart from the carrying out of the site supervision duties of a TCP, normally they would have other duties assigned by their employers within their terms of employment. Therefore, the ISSS will generally enhance the ease of deployment of site staff but will not give rise to reduction in the number of such staff.

Public Consultation

20. We have consulted the relevant professional institutions, Real Estate Developers Association, Hong Kong Construction Association Limited, Building Sub-Committee of the Lands and Building Advisory Committee, as well as Authorized Persons and Registered Structural Engineers Committee on the proposal. They all supported the proposal. We have also conducted two briefing seminars for TCPs and other workers directly engaged in site supervision work on 1 February 2005. No objection to the proposal was raised in the seminars.

Commencement of the revised TM

21. We estimate that it will take several months, after the revised TM is tabled at LegCo, for the preparation work to be completed. The preparation work includes publication of the revised TM as well as the revised Code of Practice, preparation and issue of the corresponding PNAPs and PNRCs, publicity programmes to introduce the new requirements to the industry such as seminars to the TCPs and other stakeholders of the industry. Moreover, in accordance with the Buildings (Amendment) Ordinance 2004 (Commencement) Notice 2004, the requirement for the appointment of RGE will come into operation on 31 December 2005. We therefore propose that the revised TM which incorporates the supervision requirement of RGE should come into effect on 31 December 2005.

Proposed timetable for tabling the revised Technical Memorandum

22. We propose the following timetable in respect of the amended TM:-

Publication in the Gazette	3 June 2005
Tabling at the Legislative Council	8 June 2005
End of the period (28 days + 21 days) for amendment by resolution	The 1 st meeting of 2005/2006 legislative session
Commencement	31 December 2005

23. Members are invited to note the proposed amendments to the TM in paragraphs 13 to 16 above and the proposed timetable in paragraph 22 above.

Housing, Planning and Lands Bureau
May 2005

**Summary of proposed amendments to the existing Technical Memorandum
for Supervision Plans (Paragraph 15 of paper)**

	Subject issue	Sections of the existing TM to be amended or deleted	Amended or new sections in the revised TM
1.	<p>Integration of site safety supervision, quality supervision including qualified supervision</p> <p><u>Interpretation</u></p> <p>(a) The definitions of “outline safety supervision plan” and “detailed safety supervision plan” are deleted.</p> <p><u>General principles</u></p> <p>(b) The term “a supervision plan” is defined in more details to reflect the integrated site supervision system (ISSS).</p> <p>(c) The provision of the quality supervision is added to the definition of a management structure for site supervision set out by a supervision plan.</p> <p>(d) This section is deleted as the outline safety supervision plan (OSSP) and detailed safety supervision plan (DSSP) are no longer needed under the ISSS.</p> <p><u>Site safety management structure</u></p> <p>(e) The heading is changed from “Site safety management structure” to “Safety management structure”.</p>	<p>3.1</p> <p>4.1</p> <p>4.3 to 4.4</p> <p>4.6</p> <p>5. Site safety management structure</p>	<p>3.1</p> <p>4.1</p> <p>4.3</p> <p>5. Safety management structure</p>

	Subject issue	Sections of the existing TM to be amended or deleted	Amended or new sections in the revised TM
1.	<p>(f) The term “site safety management structure” in all sub-sections in section 5 are changed to “safety management structure”.</p> <p>(g) The requirements of quality supervision are added to the safety management functions of corresponding streams in relevant sections.</p> <p>(h) A new section “Quality supervision tasks” is added to elaborate the requirements for quality supervision.</p> <p>(i) The “site safety supervision reports” is changed to the “site supervision reports”.</p> <p><u>Form and content of a supervision plan</u></p> <p>(j) The form and content of a supervision plan is amended as separate supervision plans, the OSSP and DSSP, are no longer required. A new part on the supervision requirements by the registered geotechnical engineer is added.</p> <p>(k) The procedures for submission of supervision plans are generally amended as the submission of separate OSSP and DSSP is no longer required under the ISSS.</p>	<p>5.</p> <p>5.1.1 5.1.2 5.1.3</p> <p>5.17 & 5.18</p> <p>7.1 to 7.36</p> <p>8.1 to 8.7</p>	<p>5.</p> <p>5.1.1 5.1.2 5.1.4</p> <p>5.10</p> <p>5.19 & 5.20</p> <p>7.1 to 7.21</p> <p>8.1 to 8.3</p>

	Subject issue	Sections of the existing TM to be amended or deleted	Amended or new sections in the revised TM
1.	<p><u>List of Tables</u></p> <p>(l) “Appendix 1” is deleted and the Standard forms of supervision plans is transferred to the Code of Practice for Site Supervision.</p>	List of Tables	
2.	<p>Replacement of supervision requirements to accord with the types of building works or street works to be carried out</p> <p><u>Interpretation</u></p> <p>(a) The definitions of “class of supervision”, “complexity of works” and “project attributes” are deleted.</p> <p><u>Classes of supervision</u></p> <p>(b) The heading is changed from “Classes of supervision” to “Supervision requirements”.</p> <p>(c) The details stating the “Assessment of the complexity” of the works and “classes of supervision” are deleted and replaced by the details stating different sets of supervision requirements to accord with the types of building works or street works.</p> <p>(d) The phrase “having due regard to the degree of complexity” is deleted and the “tunnel works” is added after item (a)(x).</p>	<p>3.1</p> <p>6.Classes of supervision</p> <p>6.1 to 6.6</p> <p>6.9</p>	<p>3.1</p> <p>6. Supervision requirements</p> <p>6.1</p> <p>6.4</p>

	Subject issue	Sections of the existing TM to be amended or deleted	Amended or new sections in the revised TM
3.	(f) Addition of the wording of 'RGE'.	6.10 6.11 6.12 6.14	6.5 6.6 6.7 6.9
	<u>Form and content of a supervision plan</u> (g) A new part on the supervision requirements of the registered geotechnical engineer is added.	7.1	7.1, 7.14 to 7.17
	<u>Circumstances in which minor deviations from a supervision plan may be notified in retrospect</u> (h) Addition of the wording of 'RGE'. <u>List of Tables</u> (i) "Table 1 - Minimum requirements for different classes of supervision" is replaced by "Table 1 – Minimum supervision requirements for different types of building works and street works" in order to cater for the mandatory requirement for appointment of RGE when it comes into operation.	9.1 Table 1	9.1 Table 1

**TECHNICAL MEMORANDUM FOR
SUPERVISION PLANS
2005**

**Issued By
Secretary for Housing, Planning and Lands
under
section 39A of the Buildings Ordinance
Cap. 123**

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PART I PRELIMINARY

1. Citation and commencement

- 1.1 This Technical Memorandum is the Technical Memorandum for Supervision Plans issued by the Secretary for Housing, Planning and Lands under section 39A of the Buildings Ordinance (Cap. 123).
- 1.2 This Technical Memorandum replaces the Technical Memorandum published in Special Supplement No. 5 to Gazette No. 9 Vol. 1 on 29 August 1997 and amended by the resolution of the Provisional Legislative Council passed under section 39A(3) of the Buildings Ordinance on 28 September 1997 which came into operation on 22 December 1997. This Technical Memorandum shall commence to have effect on 31 December 2005 .

2. Application and scope

- 2.1 This Technical Memorandum supplements the provisions of the Buildings Ordinance governing the supervision of building works and street works.
- 2.2 This Technical Memorandum sets out the principles, requirements and operation of supervision plans. It deals in particular with -
 - (a) the principles for the preparation of supervision plans;
 - (b) the form and content of a supervision plan;
 - (c) the method statement of various types of building works and street works, the types of precautionary and protective measures required to be undertaken for the safety of the site, the workers and the public, and such other details relating to site safety as the Building Authority may consider necessary;
 - (d) the classes of supervision that the Building Authority identifies as appropriate to various types of building works and street works having regard to the complexity of the building works or street works, the manpower required and level of supervision required for each of the classes of supervision;

- (e) detailed supervision requirements for various types of building works and street works including the management structure required to ensure site safety, the manpower required for each element of the management structure, the qualifications and experience of the personnel involved and the specific tasks to be associated in each element of the management structure;
- (f) the general responsibilities of the site supervision personnel for the various types of building works and street works;
- (g) the qualifications and experience required for technically competent persons to be appointed for supervisory work under supervision plans;
- (h) the procedure, timing and sequence for the submission of supervision plans;
- (i) the circumstances in which an authorized person, registered structural engineer, registered geotechnical engineer, registered contractor is permitted to notify in retrospect for minor deviations from a supervision plan;
- (j) the method and timing of notification of, and the amendment procedures for, a proposed or actual deviation from a supervision plan, including deviations caused by an emergency; and
- (k) the circumstances in which a supervision plan is not required for building works or street works.

- 2.3 For detailed requirements and guidance on the preparation of supervision plans, the Code of Practice, the relevant practice notes for authorized persons and registered structural engineers and the relevant practice notes for registered contractors issued from time to time by the Building Authority should be referred to.

3. *Interpretation*

- 3.1 In this Technical Memorandum the following definitions apply -
“author” means the authorized person, registered structural engineer, registered geotechnical engineer or authorized signatory who is responsible for preparing a supervision plan;

“authorized signatory” (AS) means the person appointed by the registered contractor to act for it for the purposes of the Buildings Ordinance, and authorized by the registered contractor to act on his behalf to exercise overall control of the registered contractor’s safety management structure for the project. The AS should be -

- (a) if the registered contractor is a body corporate, a person appointed by the registered contractor as referred to in section 8B(2)(d) of the Buildings Ordinance; or
- (b) if the registered contractor is a partnership, a partner appointed by all the partners for the purpose of section 8B(2)(d) of the Buildings Ordinance; or
- (c) if the registered contractor is a sole proprietorship, the registered contractor himself.

- *“Code of Practice”* means the code of practice for site supervision of building works and street works issued by the Building Authority;

“designated area” means the area with complex geological or groundwater conditions as specified in the practice notes issued by the Building Authority.

“method statement” means a document setting out working procedures and sequences including those necessary to ensure safety management;

“non-conformity” means a situation where the conditions on site, the methods or measures adopted or the completed works do not conform to the provisions of this Technical Memorandum, or the Code of Practice, or the Supervision Plan or supplementary documents such as the approved plans, method statements or statements of precautionary and protective measures;

“permanent works” means the construction activities or completed works which constitute a complete and permanent form of the building works or street works;

“practice notes for authorized persons and registered structural engineers” means the practice notes issued by the Building Authority from time to time to provide guidance to authorized persons , registered structural engineers and registered geotechnical engineers for various aspects of building works and street works;

“practice notes for registered contractors” means the practice notes issued by the Building Authority from time to time to provide guidance to registered contractors for various aspects of building works and street works;

“quality supervision” means the necessary site supervision required to ensure that the building works or street works are carried out in general accordance with the provisions of the Buildings Ordinance and regulations, the plans approved in respect of such building works or street works by the Building Authority and any order made or condition imposed, pursuant to any provision of the Ordinance or regulations in that behalf, by the Building Authority;

“registered contractor” means a person whose name is for the time being on the registers maintained under section 8A of the Buildings Ordinance, who is appointed to carry out building works or street works on a site;

“scale” means an assessment of the size or extent of the building works or street works falling within the supervision plan under consideration;

“site safety supervision” means the necessary site supervision required to check that the carrying out of building works or street works, including the sequence of construction, temporary works pertinent to all stages of building works or street works and the working environment are safe, such that the hazards from these works are controlled and risks to workers on site, all persons around the site, and adjoining properties and land are mitigated;

“technically competent person” (TCP) means a person whose academic or professional qualifications or experience of building works or street works satisfy the requirements set out in this Technical Memorandum for a particular

type of site supervision or management tasks. There are 5 grades as defined in this Technical Memorandum;

“temporary works” means the activity or construction which enables, supports or protects the permanent construction works, and which will be removed or become redundant on completion of the permanent construction works. Temporary works may include a particular sequence of activity within a method statement; and

“works” means the whole or a part of the works which is the subject of an application for consent to commence works and which is the subject of a supervision plan.

- 3.2 Unless the context otherwise requires, where applicable the terms and expressions in this Technical Memorandum shall have the same meaning assigned to them under the Buildings Ordinance.

PART II THE SUPERVISION PLAN

4. *General principles*

- 4.1 A supervision plan is defined under section 2(1) of the Buildings Ordinance. It is a plan setting out the plan of safety management of building works or street works. It should be drawn up by the authorized person (AP), the registered structural engineer (RSE), the registered geotechnical engineer (RGE), the AS of the registered contractor appointed for the building works or street works and any other person as necessary, to address quality supervision and characterise the particular site safety related features and hazards of the whole works. It should include details of the grade and number of TCP required for supervision.
- 4.2 For the purpose of preparing a supervision plan and supervising the carrying out of building works or street works by an AP, RSE and RGE under section 4(3)(a) of the Buildings Ordinance and by a registered contractor under section 9(5)(a) and 9(6)(a) of the same Ordinance respectively, safety management of building works or street works comprises -
- (a) ensuring that the building works or street works are carried out in general accordance with the provisions of the Buildings Ordinance and regulations, the plans approved in respect of such building works or street works by the Building Authority and any order made or condition imposed, pursuant to any provision of the Ordinance or regulations in that behalf, by the Building Authority, hereafter referred to as quality supervision; and
 - (b) controlling hazards from building works or street works so as to mitigate the risk to -
 - (i) the workers on site;
 - (ii) all persons around the sites; and
 - (iii) adjoining buildings , structures and land.

hereafter referred to as site safety supervision.

- 4.3 A supervision plan shall set out a management structure for site supervision which provides for -
- (a) adequate safety measures to be implemented to assure a safe physical working environment on site;
 - (b) adequate measures to be taken to check proper structural support for plant and machinery being operated on site;
 - (c) adequate control to be exercised on the sequence of construction works and temporary works to check that all intermediate stages of building works or street works are safe; and
 - (d) adequate measures to be taken to check that the building works or street works are carried out in accordance with the provisions of the Buildings Ordinance and regulations, the plans approved by the Building Authority and any order made or condition imposed by the Building Authority.
- 4.4 A supervision plan is required to be lodged with the Building Authority prior to or at the time of application for consent to the commencement of works or as a result of carrying out urgent works. The supervision plan is a pre-requisite to the issue of consent by the Building Authority for the carrying out of the building works or street works referred to in the plan.

5. *Safety management structure*

Safety management roles

5.1 The AP, RSE, RGE, AS of the registered contractors and the TCP they appoint shall each have a role to play in safety management. TCPs are organized in four streams led respectively by the AS, RSE, RGE and AP and shall carry out the duties assigned to them. In carrying out functions for safety management, all persons shall adopt the current practice as set out in the Code of Practice, and where applicable and practicable, shall also adopt the best practice established by their respective professions from time to time.

5.1.1 The safety management functions of the registered contractor and his stream are -

- (a) to exercise all reasonable skill, care and diligence in following the part of the supervision plan prepared by the AS; to carry out safety management measures and actions during the course of the works in order to meet the objectives of section 4.3; and
- (b) to check that the building works or street works are carried out in accordance with the provisions of the Buildings Ordinance and regulations, the plans approved by the Building Authority and any order made or condition imposed by the Building Authority.

5.1.2 The safety management functions of the RSE and his stream are -

- (a) to check and satisfy, in accordance with the frequency set out in the supervision plan, that the registered contractor's safety management system complies with the part of the supervision plan prepared by the AS;
- (b) to verify that conditions on site are consistent with assumptions made in the design of the permanent works and in the design of those method statements and temporary works which are shown on the prescribed plans;
- (c) to check that the building works or street works are carried out in general accordance with the provisions of the Buildings Ordinance and regulations, the plans approved by the Building Authority and any order made or condition imposed by the Building Authority; and

- (d) to supervise, in accordance with the frequency set out in the supervision plan, that the method statements and temporary works shown on the prescribed plans are adhered to.

5.1.3 The safety management functions of the RGE and his stream are -

- (a) to check and satisfy, in accordance with the frequency set out in the supervision plan, that the registered contractor's safety management system complies with the part of the supervision plan prepared by the AS;
- (b) to verify that conditions on site are consistent with assumptions made in the design of the permanent works and in the design of those method statements and temporary works which are shown on the prescribed plans;
- (c) to check that the building works or street works are carried out in general accordance with the provisions of the Buildings Ordinance and regulations, the plans approved by the Building Authority and any order made or condition imposed by the Building Authority; and
- (d) to supervise, in accordance with the frequency set out in the supervision plan, that the works shown on the prescribed plans are adhered to.

5.1.4 The safety management functions of the AP and his stream are -

- (a) to check and satisfy, in accordance with the frequency set out in the supervision plan, that the registered contractor's safety management system complies with the part of the supervision plan prepared by the AS;
- (b) to check that the building works or street works are carried out in general accordance with the provisions of the Buildings Ordinance and regulations, the plans approved by the Building Authority and any order made or condition imposed by the Building Authority; and
- (c) to compile and prepare non-conformity reports to the Building Authority under the circumstances set out in section 5.21.

5.1.5 For the types of building works or street works which do not require the appointment of an RSE and/or RGE, the AP is to appoint TCPs who meet the requirements of the streams of the RSE and/or RGE in order to carry out the duties and functions in sections 5.1.2, 5.1.3, 5.12 and 5.13.

- 5.2 Within each stream of the registered contractor, the RSE, the RGE and the AP, TCPs of the appropriate grades shall be appointed, either full time or part time depending on the type of building works or street works involved. The TCPs shall exercise all reasonable skill, care and diligence in carrying out the duties and specific tasks and undertaking the responsibilities which are set down in this Technical Memorandum and Code of Practice.
- 5.3 The AP, RSE, RGE and registered contractor shall each appoint a representative to assist in carrying out their respective safety management functions.
- 5.4 The AS, AP, RSE and RGE shall be responsible for the operation of the respective parts of the supervision plans prepared by them and shall carry out such site inspection as may be necessary to satisfy themselves that the requirements of the supervision plans are implemented, and that their respective representatives and TCPs carry out their duties under the supervision plan and as required by this Technical Memorandum.

Common responsibilities of TCPs

- 5.5 In addition to the specified responsibilities set out in the Code of Practice, all TCPs shall have common responsibilities which are -
- (a) to keep records and to report on their own work; and
 - (b) to co-operate with and communicate with the TCPs in other streams.

Site safety supervision tasks

- 5.6 Within each stream of the registered contractor, the RSE, the RGE and the AP, the TCP's tasks shall be grouped into two types of supervision - engineering safety supervision and routine safety supervision.
- 5.7 Engineering safety supervision is carried out by TCPs of grades T4 and/or T5. Engineering safety supervision requires judgement and includes but is not confined to -

- (a) consideration of the principles of working methods being used on site and their suitability for the conditions encountered;
- (b) checking that specified aspects of work comply with design requirements where these are related to site safety;
- (c) checking that site works comply with the supervision plan including method statements and precautionary and protective measures;
- (d) verifying that the provisions of method statements and precautionary and protective methods are valid for the conditions as encountered on site;
- (e) notifying the designer of method statements and precautionary and protective measures of variations in site conditions which are inconsistent with assumptions made in the designer's design; and
- (f) ensuring that systems are in place and followed to record that safety supervision has been properly executed.

5.8 Routine safety supervision is carried out by the TCPs of grades T1 to T3. Routine safety supervision includes but is not confined to -

- (a) monitoring that the site operations and working methods meet safety standards set out in the Buildings Ordinance and codes of practice and that unsafe practices are not being followed;
- (b) checking that general and minor safety aspects of the building works or street works are properly carried out;
- (c) checking that work carried out on site complies with the approved, accepted or submitted method statements and precautionary and protective measures.

5.9 Specific tasks for each type of site safety supervision include but are not confined to those set out in the tables in the Code of Practice, under the following headings:

- (a) General safety measures and minor safety aspects of building works and street works;
- (b) Structural support for plant and machinery; and
- (c) Temporary works and intermediate stages of the building works and street works.

Quality supervision tasks

- 5.10 Quality supervision includes but is not confined to –
- (a) checking that the works are carried out in general accordance with the provisions of the Buildings Ordinance and regulations;
 - (b) checking that the works are carried out in accordance with the plans approved by the Building Authority and any order made or conditions imposed; and
 - (c) checking that the design assumptions agree with the actual site conditions.

AP's safety management structure

- 5.11 The AP shall appoint a TCP in his stream to be his representative who shall assist him in carrying out safety management functions as set out in section 5.1.4. The duties of the AP's representative and the TCPs in the AP's stream are set down in the Code of Practice.

RSE's safety management structure

- 5.12 The RSE shall appoint a TCP in his stream to be his representative who shall assist him in carrying out safety management functions as set out in section 5.1.2. The duties of the RSE's representative and the TCPs in the RSE's stream are set down in the Code of Practice.

RGE's safety management structure

- 5.13 The RGE shall appoint a TCP in his stream to be his representative who shall assist him in carrying out safety management functions as set out in section 5.1.3. The duties of the RGE's representative and the TCPs in the RGE's stream are set down in the Code of Practice.

Registered contractor's safety management structure

- 5.14 The registered contractor shall appoint a TCP in his stream to be his representative who shall assist his AS in carrying out safety management functions as set out in section 5.1.1. The duties of the AS, the registered contractor's representative and the TCPs in the registered contractor's stream are set down in the Code of Practice.

Interstream communication

- 5.15 Interstream communication shall include all communication arising out of the TCP's responsibility to co-operate and communicate with the TCPs in other streams.
- 5.16 The TCPs are deemed to have a duty to communicate directly with the TCPs in other streams with a priority no less than they would apply to communication within their own stream.

Reports

- 5.17 Two types of reports must be prepared:
- (a) site supervision reports; and
 - (b) non-conformity reports.
- 5.18 The procedures for preparing and submitting reports, including reports to the Building Authority if required, are set out in the following sections.

Site supervision reports

- 5.19 Site supervision reports shall be prepared by all the TCPs whenever they carry out supervision on site, including daily reports for full time TCPs. These reports shall be filed and maintained in the site office.
- 5.20 The site supervision report shall cover the following items:
- (a) the items of works that have been inspected;
 - (b) the results of inspection; and
 - (c) notes of non-conformity.

Non-conformity Reports

- 5.21 Non-conformity reports shall be compiled and prepared by the AP and submitted to the Building Authority. When the AP notes or is made aware of the non-conformity, he shall, under the following circumstances, compile and prepare the non-conformity report for submission to the Building Authority:

- (a) the non-conformity shall pose an imminent danger; or
- (b) the non-conformity shall cause a material concern for safety or quality and the registered contractor fails to comply with the rectification instruction .

5.22 The Code of Practice sets out how non-conformity is dealt with at the level of TCPs.

6. *Supervision requirements*

6.1 The classes of supervision appropriate to a type of building works or street works are defined by means of the number and grades of TCP and their frequency level of inspection of the works. The minimum requirements on the grades of TCP and frequency level of inspection appropriate to various types of building works or street works are set out in Table 1. The number of TCP and their frequency level of inspections should be increased with the complexity of the works. Complexity should be assessed on the basis of the criteria including the types of building works or street works, the construction and span of structure, the locality and the effect of the works to adjacent buildings, structures, lands, streets and utilities. Details of the method of assessment of complexity and the extent that the number of TCP and their frequency level of inspections should be increased are set out in the Code of Practice.

6.2 The minimum qualifications and experience required for each grade of TCP are set out in Table 2.

6.3 From time to time, the Building Authority may review the details in the Code of Practice including an assessment of the supervision requirements for different types of building works or street works, the qualifications and experience of the TCPs and their frequency of attendance on site so as to reflect good practice of the building industry and profession current at the time.

Types of works

6.4 Subject to section 11, for the following types of building works or street works, supervision plans are required to be submitted :

- (a) types of building works
 - (i) demolition
 - (ii) ground investigation field works
 - (iii) foundation
 - (iv) site formation
 - (v) excavation and lateral support
 - (vi) cap / footing / basement
 - (vii) superstructure
 - (viii) curtain wall / cladding
 - (ix) addition and alteration
 - (x) slope / retaining wall / buried services repairs
 - (xi) tunnel works
- (b) street works

Flexible deployment of TCPs

6.5 If more than one TCP is required under any stream of supervision, the AP, RSE, RGE or registered contractor may assign one or more TCP to cover the duties and responsibilities of more than one role provided that -

- (a) the TCP(s) who is appointed satisfies the requirements of the highest grade of TCP specified; and
- (b) the TCP undertakes inspections at a frequency no less than the frequency derived in accordance with the Code of Practice.

6.6 For the streams of the AP, RSE and RGE, the AP, RSE and RGE may appoint the same TCP to cover the roles in two or three streams, as the case may be, provided that -

- (a) the TCP satisfies the grade requirements under all the related streams;
- (b) the TCP satisfies the requirements of the highest grade of TCP specified; and

- (c) the TCP undertakes inspections at a frequency no less than the frequency derived in accordance with the Code of Practice.

- 6.7 The AP, RSE or RGE cannot combine supervision duties with the AS.
- 6.8 One supervision plan may cover more than one type of building works or street works provided that the respective plans of the building works or street works have been approved by the Building Authority. In the case of such a combined supervision plan, the separate TCP roles may be combined together into the duties of one or more persons provided that the requirements for qualifications and experience are satisfied and the combined inspection frequency is not less than that under the separate supervision plans.
- 6.9 When there is an existing supervision plan for a type of building works or street works, and additional or new work of the same type is to be carried out under the same AP, RSE, RGE and AS, an amended supervision plan may be submitted incorporating the work currently supervised under one or more existing supervision plans.

7. *Form and content of a supervision plan*

- 7.1 A supervision plan comprises different parts to be prepared by different authors as set out below:

	Part	Author
(a)	Preamble	AP
(b)	Part I	AP
(c)	Part II	RSE
(d)	Part III	RGE
(e)	Part IV	AS

Standard forms for the above types of supervision plans are set out in the Code of Practice.

- 7.2 The plan is to be drawn up by the respective authors to form a fully co-ordinated and documented supervision plan with supporting appendices.

Preamble

- 7.3 Item (1) shall provide background information on the site and the proposed building works or street works known at the time of preparation.
- 7.4 Item (2) requires the AP, RSE, RGE and AS to undertake that their supervision will be carried out in accordance with the plan, this Technical Memorandum and the Code of Practice. It also requires them to undertake that the management and execution of site supervision of the works covered by the plan will be carried out in the manner prescribed by the provisions of the Buildings Ordinance and regulations.

Part I

- 7.5 Item (3) requires the AP to state the type of building works or street works, the date of approval of plans and the assessment of the scale of the works.
- 7.6 Item (4) requires the AP to identify the supervision input of different grades of TCPs, and provide the combined supervision input of the TCPs for one or more types of building works or street works under one supervision plan prepared by the AP. Detailed requirements are set out in the Code of Practice.

- 7.7 Item (5) requires the AP to identify the particulars and frequency level of site inspection of respective grade of TCPs for site supervision. Detailed requirements are set out in the Code of Practice.
- 7.8 Item (6) requires the AP to identify the particulars and inspection frequency of respective grade of TCPs for site supervision during critical stages of the works. Detailed requirements are set out in the Code of Practice.
- 7.9 Item (7) requires the AP to declare that the plan is in compliance with this Technical Memorandum, the Code of Practice and the requirements of the Buildings Ordinance and regulations, and he has also read and confirmed the Preamble of the plan.

Part II

- 7.10 Item (8) requires the RSE, taking into account the type of works specified in Part I of the plan, to identify the supervision input of different grades of TCPs, and provide the combined supervision input of the TCPs for one or more types of building works or street works under one supervision plan prepared by the RSE. Detailed requirements are set out in the Code of Practice.
- 7.11 Item (9) requires the RSE to identify the particulars and frequency level of site inspection of respective grade of TCPs for site supervision. Detailed requirements are set out in the Code of Practice.
- 7.12 Item (10) requires the RSE to identify the particulars and inspection frequency of respective grade of TCPs for site supervision during critical stages of the works. Detailed requirements are set out in the Code of Practice.
- 7.13 Item (11) requires the RSE to declare that the plan is in compliance with this Technical Memorandum, the Code of Practice and the requirements of the Buildings Ordinance and regulations, and he has also read and confirmed the Preamble of the plan.

Part III

- 7.14 Item (12) requires the RGE, taking into account the type of works specified in Part I of the plan, to identify the supervision input of different grades of TCPs, and provide the combined supervision input of the TCPs for one or more types of building works or street works under one supervision plan prepared by the RGE. Detailed requirements are set out in the Code of Practice.
- 7.15 Item (13) requires the RGE to identify the particulars and frequency level of site inspection of respective grade of TCPs for site supervision. Detailed requirements are set out in the Code of Practice.
- 7.16 Item (14) requires the RGE to identify the particulars and inspection frequency of respective grade of TCPs for site supervision during critical stages of the works. Detailed requirements are set out in the Code of Practice.
- 7.17 Item (15) requires the RGE to declare that the plan is in compliance with this Technical Memorandum, the Code of Practice and the requirements of the Buildings Ordinance and regulations, and he has also read and confirmed the Preamble of the plan.

Part IV

- 7.18 Item (16) requires the AS, taking into account the type of works specified in Part I of the plan, to identify the supervision input of different grades of TCPs, and provide the combined supervision input of the TCPs for one or more types of building works or street works under one supervision plan prepared by the AS. Detailed requirements are set out in the Code of Practice.
- 7.19 Item (17) requires the AS to identify the particulars and frequency level of site inspection of respective grade of TCPs for site supervision. Detailed requirements are set out in the Code of Practice.

7.20 Item (18) requires the AS to identify the particulars and inspection frequency of respective grade of TCPs for site supervision during critical stages of the works. Detailed requirements are set out in the Code of Practice.

7.21 Item (19) requires the AS to declare that the plan is in compliance with this Technical Memorandum, the Code of Practice and the requirements of the Buildings Ordinance and regulations, and he has also read and confirmed the Preamble of the plan.

8. *Procedures for submission of supervision plans*

8.1 The supervision plan shall be lodged with the Building Authority by the AP prior to or at the same time as the application for the first consent for commencement of building works or street works.

8.2 If the proposals for subsequent stages of the work change or if there is new information which invalidates the submitted supervision plan, then a revised supervision plan shall be lodged. There is no prescribed time frame for the submission of the revised supervision plan.

8.3 If there is a change of TCP other than those cases referred to under section 9 below, the AP, RSE, RGE or AS, as the case may be, shall submit a revised supervision plan to the Building Authority within 14 days of the change and only the amendment of the relevant part of the supervision plan needs to be submitted without the other parts of the supervision plan.

9. *Circumstances in which minor deviations from a supervision plan may be notified in retrospect*

9.1 If a TCP is absent or is likely to be absent because of accident, illness or emergency, a replacement TCP of equal or better qualifications and experience shall be posted to the site within 48 hours. The name and identity card number of the replacement TCP shall be entered into the site register until such time as a

further appointment is made or until the original TCP returns to duty. The AP, RSE, RGE or AS, as the case may be, shall notify the Building Authority of such arrangements within one month.

- 9.2 If a TCP is absent for reasons other than those described in section 9.1, the representative of his stream shall check that an entry is made in the site register explaining the circumstances which have arisen and the action which is to be taken.

10. *The method and timing of notification of, and the amendment procedures for, a proposed or actual deviation from the supervision plan, including deviations caused by an emergency.*

- 10.1 Should any urgent work, accident, emergency or other special circumstances render it impracticable to comply with the requirements of a supervision plan, then the plan may be deviated from for a maximum period of 48 hours after which time alternative arrangements shall be made which are equivalent to or better than the original requirements of the supervision plan. The Building Authority shall be notified within 48 hours after such work has been commenced. The AP, RSE, RGE and AS shall prepare a revised supervision plan as a result of the urgent works.

- 10.2 An increase in the number of TCPs provided is not a deviation from a supervision plan.

11. *Circumstances in which a supervision plan is not required for building works or street works*

A supervision plan is not required for building works which satisfy the criteria set out below.

Demolition

- the building is not located in area number 1 of the scheduled areas specified in the Fifth Schedule of the Buildings Ordinance;
- the total height of the building does not exceed 10m;
- the storey height of the building does not exceed 5m;
- the span of any structural element of the construction does not exceed 6m;
- there are no cantilever structures exceeding 1m in span in the building;
- there are no prestressed concrete elements in the building;
- the building is not retaining any ground level difference exceeding 1.5m; and
- there are no other buildings or streets within 5m of the building.

Site Formation

- a maximum gradient across the lot from boundary to boundary is not more than 15 degrees;
- the overall gradient of an area bounded by lines 10m outside the lot boundary in any direction is less than 15 degrees;
- there is no slope within the area 10m outside the lot boundary steeper than 30 degrees or higher than 1.5m;
- there is no retaining wall or terrace wall either within the lot or within the area 10m outside the lot which is higher than 1.5m;
- no retaining walls or terrace walls higher than 1.5m are to be constructed; and
- no slopes steeper than 30 degrees nor higher than 1.5m are to be constructed.
- the combined height of retaining wall and slope constructed shall not exceed 1.5 m;
- the retaining height to breadth ratio of retaining walls constructed shall not be greater than two; and
- the retaining walls shall be constructed of masonry or concrete.

Excavation for pile cap/footing

- the depth of excavation is less than 2.5m; and
- there are no roads, buildings, other structures, slopes steeper than 30 degrees or water-mains of 75mm or greater in diameter within the profile described by a line drawn at 45 degrees to the horizontal from the perimeter of the base of excavation to the ground surface.

Superstructure

- the total height of the building does not exceed 10m;
- the span of any structural element of the building does not exceed 6m;
- the structural elements are constructed of reinforced concrete; and
- the construction floor area of the building is less than 500 square metres.

Drainage

- all drainage works.
(Note that trench excavation of significant depth is covered by the rules for excavation and lateral support works)

Alteration and Addition Works

- work not requiring demolition or structural alteration.

Building Repairs

- all building repairs.

PART III MISCELLANEOUS INFORMATION

List of Tables

Table 1	Minimum supervision requirements for different types of building works or street works
Table 2	Minimum qualifications and experience required for each grade of TCP for site supervision

Table 1 Minimum supervision requirements for different types of building works or street works

		Grades of TCP and Minimum Inspection Frequency Levels																							
Type of building works and street works		Registered Contractor's Stream						AP's Stream						RSE's Stream						RGE's Stream					
		T1	T2	T3	T4	T5	AS	T1	T2	T3	T4	T5	AP	T1	T2	T3	T4	T5	RSE	T1	T2	T3	T4	T5	RGE
Ground investigation field works		5	-	-	4	-	1	-	-	3	-	-	1	-	-	-	-	-	-	-	-	5	-	4	1
Building works with significant geotechnical content (Note 4)	Foundation (Note 5)	5	5	-	4	-	1	-	-	4	2	-	1	-	-	5	-	4	1	-	-	5	-	4	1
	Others	5	4	-	4	-	1	-	-	4	2	-	1	-	-	4	-	3	1	-	-	5	-	4	1
Foundation works (other than foundation works with significant geotechnical content)		5	5	-	4	-	1	-	-	4	2	-	1	-	-	5	-	4	1	-	-	-	-	-	-
All other building works or street works		5	-	4	4	-	1	-	-	4	2	-	1	-	-	4	-	3	1	-	-	-	-	-	-

Notes to Table 1

1. Level 1 = As and when required
 Level 2 = Monthly inspection
 Level 3 = Fortnightly inspection
 Level 4 = Weekly inspection
 Level 5 = Full-time inspection during site working hours
2. For frequency levels 1 to 4, more frequent site inspection up to full time may be required at critical stages; refer to the Code of Practice for guidance.
3. For the qualification and experience required for each grade of TCP, refer to Table 2.
4. The type of building works that are regarded as building works with significant geotechnical content are set out in the Code of Practice.
5. The type of foundation works, including those in the designated area, that are regarded as building works with significant geotechnical contents are set out in the Code of Practice.

Table 2 Minimum qualifications and experience required for each grade of TCP for site supervision

Grade of TCP	Minimum qualifications and experience for each grade of TCP for site supervision
T1	A certificate or diploma holder with minimum total relevant working experience of 2 years to the satisfaction of the Building Authority.
T2	A higher certificate or higher diploma holder with minimum total relevant working experience of 3 years to the satisfaction of the Building Authority.
T3	A higher certificate or higher diploma holder with minimum total relevant working experience of 5 years, or a degree holder with minimum total relevant working experience of 2 years to the satisfaction of the Building Authority.
T4	A degree holder with minimum total relevant working experience of 4 years to the satisfaction of the Building Authority or a registered professional of a recognised discipline.
T5	A registered professional with minimum total relevant working experience of 5 years to the satisfaction of the Building Authority.

Notes to Table 2

- (1) “relevant working experience” - means such working experience as may from time to time be recognised by the Building Authority as being relevant to the duties of a TCP of appropriate grade under each stream of supervision, and
- “total relevant working experience” - means relevant working experience aggregated by a method recognised by the Building Authority
- “recognised” - means recognised by the Building Authority in accordance with criteria and guidelines stipulated in the Code of Practice, Practice Notes for Authorized Persons and Registered Structural Engineers or Practice Notes for Registered Contractors.
- (2) A person who satisfies the Building Authority by reason of his training, experience and skill in safety management that he is a fit and proper person to be qualified for a particular grade of TCP shall be deemed to be so qualified for the purpose of employment in safety management as required in this Technical Memorandum. Further guidance is given in the Code of Practice.
- (3) For some grades of TCP, the absence of recognised qualifications may be compensated for by extra relevant working experience according to guidelines to be determined by the Building Authority. Further guidance is given in the Code of Practice, Practice Notes for Authorized Persons and Registered Structural Engineers or Practice Notes for Registered Contractors.
- (4) Details of the minimum qualifications and experience required for each grade of TCP for site supervision are given in the Code of Practice.