

CHAPTER 1

PROJECT PLANNING

The parts of the PAH shown in blue and bold should only be updated by Works Branch of Development Bureau.

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SYNOPSIS

This chapter gives a general view of the overall process of planning a project, from identification of the need through various stages of detailed planning to physical implementation. While the actual work involved in planning differs from one project to another, some general patterns and sequence of work are common to all projects. Proper planning saves manpower and financial resources and ensures smooth progression of a project.

This chapter also gives general guidance on the consultation required at various stages of planning, on sources of information that may be needed, and on the standard requirements for keeping essential records and reporting on progress.

A general description of the various stages of a project in the Public Works Programme is given in this Chapter. However, details of the procedures to be followed in processing a project through the Public Works Programme are given in Chapter 2 “Project Approval”.

Reference should also be made to manuals, guidelines and circulars issued by relevant authorities.

Works departments are urged to adopt the Project Management Approach in the delivery of public works projects to ensure clear accountability and allocation of responsibilities. Some measures have been introduced to streamline the delivery of public works projects. These include replacing the Client Project Brief and the Preliminary Project Feasibility Study by the Project Definition Statement and the Technical Feasibility Statement, parallel action between the EIA process and the statutory gazetting of projects, initiating works-related tendering and consultant selection procedures before funding is secured, and shortening the administrative procedures for land resumption.

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I. ABBREVIATION

- I.01 The meaning of the abbreviations assigned in this Chapter of the Project Administration Handbook for Civil Engineering Works shall only apply to this Chapter.
- I.02 The following list shows the meaning of the abbreviations for the common terms used in this Chapter of the Project Administration Handbook for Civil Engineering Works:

Abbreviation	Term
ACABAS	Advisory Committee on the Appearance of Bridges and Associated Structures
ACE	Advisory Council on the Environment
AFCDD	Agriculture, Fisheries and Conservation Department
AMO	Antiquities and Monuments Office
APE	Approved Project Estimate
ArchSD	Architectural Services Department
BIM	Building Information Modelling
C&DM	Construction and Demolition Material
CEDD	Civil Engineering and Development Department
CGE	Chief Geotechnical Engineer
CMP	Cavern Master Plan
CPLD	Committee on Planning and Land Development
DSD	Drainage Services Department
DEVB	Development Bureau
DEVB TCW No.	DEVB Technical Circular (Works) No.
DIA	Drainage Impact Assessment
DLO	District Lands Office
EEB	Environmental and Ecology Bureau
EFS	Engineering Feasibility Studies
EMSD	Electrical and Mechanical Services Department
ENB	Environment Bureau
EPD	Environmental Protection Department
EIA	Environmental Impact Assessment
EIAO	Environmental Impact Assessment Ordinance
ES	Explanatory Statement
ETWB	Environment, Transport and Works Bureau
ETWB TCW No.	ETWB Technical Circular (Works) No.
ExCo	Executive Council

Abbreviation	Term
FC No.	Financial Circular No.
FSTB	Financial Services and the Treasury Bureau
GAS	Geotechnical Area Study
GASP	Geotechnical Area Studies Programme
GEO	Geotechnical Engineering Office
GPA	Government Property Agency
HAD	Home Affairs Department
HD	Housing Department
HIA	Heritage Impact Assessment
HKIVM	Hong Kong Institute of Value Management
HKPF	Hong Kong Police Force
HKPSG	Hong Kong Planning Standards and Guidelines
HPLB	Housing, Planning and Lands Bureau
HyD	Highways Department
HyD TC No.	Highways Department Technical Circular No.
LandsD	Lands Department
LCSD	Leisure and Cultural Services Department
MD	Marine Department
MOD	money-of-the-day
OVT	Old and Valuable Tree
MTRCL	Mass Transit Railway Corporation Ltd
OZP	Outline Zoning Plan
PAH	Project Administration Handbook for Civil Engineering Works
PDS	Project Definition Statement
PFC	Public Fill Committee
PGA	Preliminary Geotechnical Appraisal
PlanD	Planning Department
PVC	Property Vetting Committee
PWP	Public Works Programme
PWPIS	Public Works Programme Information System
PWSC	Public Works Sub-committee
RAE	Resource Allocation Exercise
RAS	Resource Allocation System
SCCD	Sub-Committee on Cavern Development

Abbreviation	Term
SCVA	Strategic Cavern Area
SEE	Secretary for the Environment and Ecology
SDEV	Secretary for Development
SFST	Secretary for Financial Services and the Treasury
SMO	Survey and Mapping Office
SoA	Schedule of Accommodation
SPR	Stores and Procurement Regulations
TD	Transport Department
TFS	Technical Feasibility Statement
TGN 1	Technical Guidance Note No. 1
TIA	Traffic Impact Assessment
TLB	Transport and Logistics Bureau
TPB	Town Planning Board
VM	Value Management
WBTC No.	Works Bureau Technical Circular No.
WMCG	Works and Maintenance Committee on Greening
WSD	Water Supplies Department

II. GLOSSARY OF TERMS

II.01 Words and expressions to which meanings are assigned in this Chapter of the Project Administration Handbook for Civil Engineering Works (PAH) shall only apply to this Chapter.

II.02 In this Chapter of the PAH the following words and expressions shall have the meaning hereby assigned to them except when the context otherwise requires:

“Government” means the Government of the Hong Kong Special Administrative Region.

“project office” means the office responsible for the planning, design and construction of the project.

(Where these functions are performed by different offices at different stages, the project office shall mean the office responsible at each particular stage.)

“Contract”, “Contractor”, “Drawings”, “Employer”, “Engineer” and “Engineer’s Representative” are as defined in the General Conditions of Contract for Civil Engineering Works (1999 Edition) or the General Conditions of Contract for Term Contracts for Civil Engineering Works (2002 Edition).

“Schedule of Rates” and “Works Order” are as defined in the General Conditions of Contract for Term Contracts for Civil Engineering Works (2002 Edition).

“C&D material” is also termed as “construction waste”.

II.03 Words importing the singular only also include the plural and vice versa where the context requires.

1. OVERVIEW

1.1 GENERAL

This chapter outlines the basic planning requirements for a project. References are made to the latest Manuals, Guidelines, Handbooks, Technical and Financial Memoranda and Circulars, Departmental Instructions.

The need for a project must be established in the first place and it normally starts from an idea - a response to a problem or an opportunity. To gain a formal status in the Public Works Programmes (PWP), the Policy Bureau makes the idea the subject of a Project Definition Statement (PDS). The appropriate works department then carries out a Technical Feasibility Statement (TFS) to ascertain the viability, identify development constraints, formulate an implementation strategy, and prepare the project estimates. On completion of the TFS, the works director or his delegated Directorate Officer will sign off the TFS and seek the approval of SDEV (See FC No. 4/2012 - Requirements for Project Definition Statement and Technical Feasibility Statement for Capital Works Projects for details).

On approval of the TFS, the project will be in Category C of the PWP. Successful inclusion of the project in the Resource Allocation System (RAS) will entitle it to Category B status. When a project has achieved Category B status, the works department is entitled to carry out further planning and design on it. When the detailed design and working drawings are substantially complete, the director of the works department with the support of the corresponding policy secretary will seek funding for the project from the legislature through the presentation of the Public Works Sub-committee (PWSC) paper (See FC No. 2/2021 - User Guide on the Finance Committee, Establishment Subcommittee and Public Works Subcommittee for details). The Finance Committee's approval upgrades the project to Category A status. When a project has achieved Category A status, the works department can put out the work to tender. After receipt of competitive tenders, the authority to accept a tender shall be given from either the relevant tender board or the Controlling Officer, depending on the value of the contract and whether the contract is awarded to the highest combined price-quality scorer or not (See WBTC No. 24/2001 for details). When the authority has given its approval, the works department can accept the tender and get construction under way. In the interests of expediting the procurement process, parallel tendering may have to be adopted for inviting tenders or initiate consultants selection exercises prior to securing funding in accordance with FC No. 3/2020 – Parallel Tendering for Contracts. Details of the Public Works Programme procedures are given in Chapter 2 - Project Approval.

The works department should monitor the planning, design and construction of the works to ensure that there is adequate consultation among the parties concerned, including the maintenance department(s), on all interface and technical works implementation issues as well as the arrangement for handing over of completed works to the maintenance authority for operation and maintenance. Any unresolved issues should be promptly brought to the attention of higher-ranking directorate officers, or should the situation warrant it, the Directors of the departments concerned for an early resolution of the issues (See WBTC No. 25/2000 for details). The project department should identify and avoid environmental problems, especially in project conceptual stage, by maintaining a close liaison with EPD during the whole project lifecycle.

When the project is completed, it is handed over to the relevant department and maintenance authority for ongoing operation and maintenance.

For small-scale Category D projects, the preparation of a PDS and TFS is not required under normal circumstances, but may be advisable in certain cases. Discretion to undertake a TFS in such cases rests with the appropriate Policy Bureau.

1.2 NEED FOR A PROJECT

The need for a project may arise:

- (a) to meet planning and development requirements,
- (b) to improve existing facilities/services,
- (c) to complete an existing development programme,
- (d) to address issues raised in Policy Address and/or Policy Agenda, or
- (e) to enhance the reliability of the existing services

In order to establish the need for a project, general consideration should be given to:

- (a) the problem requiring action,
- (b) solution options, including an assessment of relative merits and demerits,
- (c) reasons for the choice of the preferred option vis-a-vis other possible solutions, and
- (d) consequences of doing nothing.

1.3 PROCEDURE FOR IMPLEMENTATION

Once the need for a project is established, the respective Bureau Secretary is required to sign off a PDS for the capital works project. This PDS explains the rationale for the project. Based on the PDS, the works department prepares the TFS to demonstrate the feasibility of the project. Successful projects are upgraded to Category C, and only these can be upgraded to Category B through the annual Resources Allocation Exercise (RAE).

The PDS and TFS are complementary processes to make sure that the projects upgraded to Category B are no longer simply ‘good ideas’, but are well defined in terms of their description, rationale, scope and implementation.

Sometimes, for expediency, convenience, economy and timing of implementation, the project may warrant entrusting to an outside body. See Chapter 2 (Project Approval) and Chapter 8 (Term Contract Works) for further information.

All Category C, B, and A projects in the Public Works Programme (PWP) must be registered in the Public Works Programme Information System (PWPIS) except subvented projects (See Chapter 2 for more details).

Departments should update their procurement plans (i.e. forecast of consultancies and works tenders to be invited in the forthcoming 12 months) and publish such forecast information on the respective website of their departments on a quarterly basis (i.e. in the 1st week of January, April, July and October) for reference by any interested parties (e.g. consultants and contractors). The website of DEVB will include hyperlinks to the forecast

information published on websites of individual departments. The link to access the forecast information in DEVB's website is given below:

https://www.devb.gov.hk/en/construction_sector_matters/tender_notices/forecast_of_consultancies_and_tenders/index.html

1.4 GENERAL PLANNING CONSIDERATIONS

1.4.1 At the Commencement of Preliminary Project Planning

At the commencement of preliminary project planning a Project Definition Statement (PDS) and a Technical Feasibility Statement (TFS) together with minor investigations should normally be carried out for all public works projects except for Category D projects or works under Head 708 or projects which themselves are purely studies, prior to funds being earmarked under the Resource Allocation Exercise (RAE).

To commission a TFS, a PDS will need to be drawn up to provide justifications and scope of each proposed capital works project and must be signed off by the Policy Secretary or his delegated Deputy Secretary. The works department acting as a works agent is expected to complete a TFS by using in-house resources within four months and without recourse to consultancy support. However, if the works director is personally satisfied that consultant input through a feasibility study is required for a proposed project before he is in a position to recommend that funding be earmarked and that the project is technically ready for upgrading to Category B in the Capital Works Programme, he can submit the relevant extract of the feasibility study in lieu of a TFS for approval. Under no circumstances should a consultant be engaged exclusively for the sake of completing a TFS.

See FC No. 4/2012 - Requirements for Project Definition Statement and Technical Feasibility Statement for Capital Works Projects for details and ETWB TCW No. 30/2003 for control of client-initiated changes for capital works projects.

1.4.2 Value Management (Subsumed from ETWB TCW No. 35/2002)

In general, whenever it is perceived that there are likely to be net benefits, a Value Management (VM) study should be conducted for every major project with an estimated project cost exceeding \$200M. Adequate support from top management must be obtained before commencing any VM study. For a complex project, the VM study should be conducted at the feasibility study stage. For a less complex project, which does not require a feasibility study, the VM study could be deferred to the earlier parts of the preliminary design stage.

The Hong Kong Institute of Value Management (HKIVM) will update from time to time the Value Management Facilitators List on the HKIVM's website (<https://hkivm.org/facilitators/>). Departments can choose from the Value Management Facilitators List on the HKIVM's website or other sources the most suitable facilitators according to the nature of the project, complexity of the problem and their own budgets. To provide a reference for project teams in selecting facilitators, project teams shall compile a report for each VM study and submit it to the departmental coordinator within 28 days after each VM workshop for the maintenance of a reference system.

The details and guidelines on the implementation of value management are given at Appendix 1.4.

1.4.3 Geotechnical Control

ETWB TCW Nos. 29/2002 and 29/2002A outline the policy and procedures on geotechnical control for man-made slopes and retaining walls in Government projects undertaken by departments or consultants. The geographical areas of GEO District Divisions are given in Appendix 1.13.

ETWB TCW No. 4/2004 outlines the policy and procedures on geotechnical control for foundation works within the Scheduled Areas of the Northwest New Territories and Ma On Shan, and in the Designated Area of Northshore Lantau in Government projects undertaken by departments or consultants.

ETWB TCW No. 15/2005 outlines the policy and procedures for geotechnical control of planning, design and construction for tunnel works undertaken by departments or consultants.

DEVB TCW No. 3/2018 outlines the policy and procedures to enhance cost effectiveness of geotechnical works of capital works projects.

GEO, CEDD should be approached at an early stage in preparing the TFS.

1.4.4 Systematic Risk Management

ETWB TCW No. 6/2005 sets out the requirements and policy on the application of Systematic Risk Management (SRM) in Public Works Projects. Works departments should start preparing the Risk Management Plan at the early stage of a project once it is identified. The Risk Register should be submitted to the headquarters of the Works departments on an annual basis from the project's inclusion in Cat C until the completion of the project.

1.4.5 Sustainability Evaluation

ENB SA No. 1/2018 sets out the detailed arrangements for the sustainability assessment (SA) system. The department responsible should include a paragraph on sustainability implications in each of its major submission proposals to the Policy Committee and the Executive Council to explain the main findings of its SA. Examples of these proposals include the regional or sub-regional planning studies, comprehensive transport studies, waste management plans, etc.

1.4.6 Handling of Request for Compensatory Works which are claimed to be Fung Shui Related in Implementation of Public Works Projects (Ref.: SDEV's memo ref. () in DEVB(W) 400/70/01 dated 25.5.2011 and 28.7.2011)

With a view to enhancing operation transparency, SDEV's memo ref. () in DEVB(W) 400/70/01 dated 25.5.2011 and 28.7.2011 provide the guidelines and procedures on handling of requests for compensatory works which are claimed to be fung shui related in implementation of public works projects (see Appendix 1.6).

1.4.7 Rock Cavern Development

DEVB TCW No. 8/2017 promulgates the policy and associated measures to promote and facilitate wider application of cavern development in Hong Kong. In brief, all new Government projects and land disposal/alienation proposals (including lease modification and land exchange) that are subject to the vetting mechanism involving Strategic Cavern Areas (SCVAs) delineated in the Cavern Master Plan (CMP) shall be submitted for vetting by the Sub-Committee on Cavern Development (SCCD). For new projects involving land uses with potential for development in rock caverns as listed in the Explanatory Statement (ES) of the CMP, early recognition of potential cavern sites which may be used as an alternative to surface land sites for the planned development will facilitate the assessment of the cavern option by the project proponent during the initial project planning stage. Cavern option assessments shall be carried out by the project proponents for three types of new Government facilities, viz. refuse transfer station, sewage treatment works and service reservoir, subject to availability of suitable cavern sites, and shall be submitted for vetting by the SCCD. In conducting planning and land development studies, the project proponents should holistically consider the option of developing caverns in suitable SCVAs to house land uses with potential for cavern development.

The CMP and its associated information is available on the websites of the CEDD and PlanD below:-

CEDD: <https://www.cedd.gov.hk/eng/topics-in-focus/index-id-27.html>

PlanD: https://www.pland.gov.hk/pland_en/resources/info_serv/cmp/index.html

1.4.8 Building Information Modelling

DEVB TCW Nos. ~~2/2021 and Amd No. 1/2025~~ 8/2021 ~~and 1/2025 Amd No. 1/2025~~ set out the policy and requirements on the adoption of Building Information Modelling (BIM) technology. The use of BIM uses in different project stages shall be observed and followed.

1.5 CONSULTATION WITHIN GOVERNMENT

During all stages of planning a project, the relevant Government departments and offices should be consulted to obtain comments and agreement to the proposals, and to ensure smooth co-ordination.

The following list, which is not necessarily exhaustive, is given for general guidance:

- | | |
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| Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS) | - on aesthetics, visual and greening of highway bridges and associated structures (See ETWB TCW No. 36/2004). |
|--|---|

Agriculture, Fisheries and Conservation Dept (AFCD)	- if vegetation inside Country Parks and Special Areas under the Country Parks Ordinance, Government woodlands established by Civil Engineering and Development Department around New Towns, vegetation on Systematic Identification of Maintenance Responsibility of Slopes are involved and on matters related to ecological conservation, and details over ecological impact assessment such as ecological important streams/rivers, etc where necessary.
Antiquities and Monuments Office (AMO) of DEVB	- if structures, objects or areas of historical and archaeological interests are affected.
Architectural Services Dept (ArchSD)	- on aesthetics design of ancillary buildings in engineering projects, other than highway bridges and associated structures, and on fixed items which are provided for leisure and amenity or the like purpose (see ETWB TCW No. 8/2005).
Civil Aviation Dept (CAD)	- if Hong Kong International Airport is affected.
Development Bureau, Greening, Landscape and Tree Management Section (GLTM Section)	- on overall greening issues for strategic projects relating to preservation of trees and landscape including greening of bridges, site coverage of greening for building projects, allocation of space for greening on roads etc.
Development Offices, Civil Engineering and Development Dept (CEDD)	- on planning, landscape and project liaison matters, and matters related to infrastructure works for New Towns and major development areas. - on the greening theme and palette of plant species developed under the district-based Greening Master Plans.
District Lands Offices (DLOs), Lands Dept (LandsD)	- on all land and land-related matters.
District Offices (DOs), Home Affairs Dept (HAD)	- on matters which affect the public interest at large and on matter of grave removal.

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| Drainage Services Dept (DSD) | - on matters related to temporary flow diversion and temporary works affecting capacity in stormwater drainage system, matters which involve or affect existing or proposed drainage and sewerage facilities, or which will alter the flow regime of a drainage basin, particularly in flood prone areas and also on matters related to DIA and Blue-Green Drainage Infrastructure (see ETWB TCW No. 5/2005, 2/2006 and DEVB TCW No. 9/2020), Drainage Reserves and flood relief paths. |
| Electrical and Mechanical Services Dept (EMSD) | - if major mechanical and electrical installations are involved. |
| Environmental Protection Dept (EPD) | - on matters related to environmental and pollution aspects, waste treatment and disposal, existing or proposed sewerage facilities, potentially hazardous installation consultation zones and landfill gas consultation zones and also on matters related to EIA (see Appendices 1.8, 1.9 and 1.10 for details), dredging and disposal of sea mud (see paragraph 4.2.1 of Chapter 4 of the PAH), use of PFA as general filling material for reclamation (see WBTC No. 14/94), establishment of a site crusher (see also Section 9.12 of Chapter 5 and Section 21.25 of Chapter 7), and application of Environmental Legislation to the Government (see GC No. 12/2016), designation of C&D materials disposal sites (see DEVB TCW No. 6/2010), incorporation of information on C&D material management in PWSC papers (see Section 3.3(i) of Chapter 2 and Section 4.13 of Chapter 4) and Environmental Management on Construction Sites (see ETWB TCW No. 19/2005). |
| Food and Environmental Hygiene Department (FEHD) | - on street cleaning and litter picking from amenity areas. |
| Fire Services Dept (FSD) | - on clearances between highway structures and adjacent buildings and if fire service installations are involved, e.g. fire hydrants, emergency accesses, etc. |

- Geotechnical Engineering Office (GEO), Civil Engineering and Development Dept (CEDD)
- if permanent geotechnical works (see ETWB TCW Nos. 29/2002 & 29/2002A), permanent tunnel works and associated temporary works (see ETWB TCW No. 15/2005), rock excavation works that involve blasting, or permanent foundation works in the Scheduled Areas in Northwest New Territories and Ma On Shan and the Designated Area of Northshore Lantau (see ETWB TCW No. 4/2004) are involved.

The project office shall agree with the GEO the scope and extent of all necessary geotechnical investigations and studies to be carried out as part of the project and shall secure adequate funding for carrying out such works.

The project office shall make due allowance in the project programme for these investigations and studies and for the time required to make submissions to the GEO for consultation and audit. For tunnel works, in particular, the project office or its consultants shall consult Hong Kong Geological Survey through CGE/Planning of the GEO to obtain geological advice, especially on identification of geological features. A maintenance agent should be identified for each geotechnical feature at an early stage.

The project office shall seek comments from GEO to enhance the cost-effectiveness of permanent geotechnical works in capital works projects (see DEVB TCW No. 3/2018).

- Government Property Agency (GPA)
- on matters related to joint-user offices and quarters, management and use of government properties and sites, optimisation of site utilisation for capital works projects (see FC No. 4/2017).
- HyD and LandsD
- if railway reserves or proposals are affected.
- Hong Kong Police Force (HKPF)
- on all traffic control aspects.
- Hospital Authority (HA)
- if hospital facilities or proposals are affected.
- Housing Dept (HD)
- if public housing proposals are affected.

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| Landscape Division of Highways Dept (HyD) | - For natural vegetations, tree preservation and landscape works within the boundary of expressway and on SIMAR slopes maintained by HyD. |
| Leisure and Cultural Services Dept (LCSD) | - on matters related to natural vegetations and landscape works and also on matters related to registration and preservation of trees (See DEVB TCW No. 4/2020 and DEVB TCW No. 5/2020), heritage (See DEVB TCW No. 1/2022), amenity, civic, community and recreational facilities etc. |
| Lighting Division, HyD | - if street lighting installations are involved. |
| Marine Dept (MD), and Port Works Division of CEDD | - if marine facilities are affected, and if reclamation works are involved and also on matters relating to Marine Traffic Impact Assessment. |
| Marine Fill Committee (MFC) and Public Fill Committee (PFC), CEDD | - on matters related to management of construction and demolition material (C&DM), fill management (see WBTC No. 12/2000 & paragraph 4.2 of Chapter 4 of the PAH) and reclamation works requiring dumping grounds and filling by using surplus C&DM or by using borrow areas (see WBTC Nos. 2/93 & 2/93B, DEVB TCW No. 6/2010 & paragraph 4.1.3 of Chapter 4 of the PAH) and also on matters related to the use of public fill in reclamation and earth filling projects (see WBTC Nos. 4/98 and 4/98A), on-site sorting and temporary storage of C&D materials (see ETWB TCW No. 19/2005) and on establishment of a site crusher (see also Section 9.12 of Chapter 5 and Section 21.25 of Chapter 7). |
| Mines Division, Geotechnical Engineering Office (GEO), Civil Engineering and Development Dept (CEDD) | - if transport, storage and use of explosives are involved; or existing quarries in operation (Anderson Road Quarry and Lam Tei Quarry) may be affected. |

Planning Department (PlanD)	- on all major projects of strategic planning importance such as major port facilities, major highway and drainage projects. For projects at the district level, the relevant District Planning Office should be consulted. - Site search for all new land development projects (see DEVB GC No. 1/2016). - For a project (or its associated facilities) involving land uses with potential for development in rock caverns as listed in the ES of the CMP, the project proponent should first explore, as appropriate, potential cavern sites for the proposed development. In handling the relevant site search request, PlanD, with the assistance of the GEO, will facilitate the identification of potential cavern sites (see DEVB TCW No. 8/2017).
Property Vetting Committee, ArchSD	- on matters of Schedule of Accommodation for specialist/ departmental buildings.
Railway Development Office, HyD	- if existing railway projects are affected and on all railway matters.
Regional Office of Highways Dept (HyD)	- consultation with Regional Office of HyD for the Utility Management System where road openings or closures are proposed.
Regional Offices and Bridges and Structures Division, HyD	- on matters involving or affecting proposed or existing public roads, tunnels and associated structures.
Research & Development Division, HyD	- on matters involving design of highway pavement.
Security Bureau, Permanent Secretary for Security	- if military land/property is affected, or on security measures for Government installations.
Sub-Committee on Cavern Development (SCCD)	- on matter related to rock cavern development or subject to the vetting mechanism as stipulated in DEVB TCW No. 8/2017.
Survey and Mapping Office (SMO) of Lands Dept (LandsD)	- on provision and collation of land survey and mapping data (see paragraph 5.4.3 of Chapter 3 of PAH), on development of BIM Data Repository (see DEVB TCW No. 2/2021) and on preservation of survey monuments and marks (see DEVB TCW No. 5/2019)

Sustainable Development Division under the Environment Bureau	- on application of sustainable assessment system on major programmes which may bring about noticeable or persistent implications on the economic, environmental and social conditions of Hong Kong.
Traffic Engineering Divisions, Transport Dept (TD)	- on traffic matters, traffic aids, road alignment and layout generally and also on matters relating to Land Traffic Impact Assessment and Tramway.
Transport Operations Divisions, TD	- if public transport is likely to be affected.
Water Supplies Dept (WSD)	- on matters related to water supply, or if water gathering grounds, waterworks reserves and waterworks installations are affected and also for incorporation of waterworks into roadworks contracts (see Appendices 1.11 and 1.12 for details).
Other departments, offices and divisions	- if their areas of responsibility are affected by the project, or if they will be responsible for the management and/or maintenance of the works when completed.

1.6 CONSULTATION WITH DISTRICT COUNCILS AND OTHERS

1.6.1 Consultation with District Councils (Ref.: ETWB TCW No. 4/2006 and Financial Circular No. 3/2011)

It is advisable that public works projects are presented to the relevant District Council and / or its committees, e.g. Transport & Traffic Committee, Environmental Improvement Committee etc., when it is considered appropriate by the project office/division and after consultation with the relevant District Office and/or the appropriate Development Office. For projects in rural areas, District Councils quite often require prior consultation with Rural Committee(s) concerned, and consultation with Heung Yee Kuk or major local interested parties may also be required as advised by the District Officer. Such presentations should be made after the proposals have been circulated and agreed within Government departments/offices/divisions. Normally for a works project, consultations will be carried out:

- (a) on the completion of the feasibility study,
- (b) on completion of EIA, TIA, DIA, HIA and other review studies,
- (c) before gazetting projects under the Foreshore and Sea-bed (Reclamations) Ordinance and Roads (Works, Use and Compensation) Ordinance, Water Pollution Control (Sewerage) Regulation and Lands Resumption Ordinance.
- (d) before tender invitation on related planting and associated landscape works with an estimated value exceeding \$10M, see DEVB TCW No. 5/2017.

However, the project officer/division may seek consultation with District Councils at early planning stage for sensitive project with social impacts.

1.6.2 Consultation with Others

Departments should take into account relevant views collected from various sectors during public consultation on Policy Address and Budget for the works in the coming fiscal year when planning related projects.

It is also advisable to conduct early consultation with the industry stakeholders during the project planning stage to gauge their views on the project, through meetings and/or focused dialogues with contractors /consultants representatives and associations.

Departments may consider conducting market research, as appropriate, at various stages of the project cycle with a view to having a better understanding of the services, technology and potential bidders available in the market. Please refer to Appendix 1.7.

Early consultation with the following bodies, as appropriate, is advisable when planning a project:

- | | |
|--|---|
| Advisory Council on the Environment (ACE) | - if the project is environmentally and/or ecologically sensitive. |
| Airport Authority | - if Hong Kong International Airport is affected. |
| Bus companies | - if bus routes and/or bus stops are affected. |
| Ferry companies | - if ferry piers and/or ferry routes are affected. |
| Harbourfront Commission | - on planning and development of harbourfront. |
| Hong Kong Tramways Co. Ltd | - if tramways are affected. |
| Mass Transit Railway Corporation Ltd (MTRCL) | - if any of the railway lines in the Hong Kong Special Administrative Region, including those new railway lines and extension lines are affected (See DEVB TCW No. 1/2019 for details). |
| Rehabilitation Associations | - if the project requires to gather and address the user's views on facilities for the Disabled. |

- | | |
|---|--|
| Rehabilitation Advisory Committee Sub-Committee on Access | - (i) the project has implications to the policy of access of disabilities (See LWBC No. 1/2011 for details); and

(ii) Road/footbridge projects that will remove the existing access for Persons with Disabilities (PWDs) without reprovisioning or with reprovisioning in other manner, or where some of the facilities for PWDs will be of non-standard design. |
| Town Planning Board (TPB) | - if the project will have major planning implications (to be advised by PlanD on the requirement for TPB consultation). |
| Utility undertakers (including CLP Power Hong Kong Ltd., Hongkong Electric Co., Hong Kong & China Gas Co., Pacific Century Cyber Works – HKT Ltd., Hong Kong Cable Television Ltd., Hutchison Global Communications Ltd., New World Telecommunications Ltd., Hong Kong Broadband Network Ltd. etc.) | - if major utilities facilities / installations proposals are affected.

- if utility supply is required to the project or other developments in connection to the project. |

The project offices should not commit a third party to performing a task, unless the third party's prior consent had been obtained, in order to avoid creating potential financial liabilities for the Government (See S for W's memo WB(CR) 172/59(2002) Pt 1 dated 8.5.2002 for details).

1.7 INTERNAL COMMUNICATION FOR MEGA-SIZE PROJECTS

For a mega-size project, there could be several project teams involved, each handling only part of the project. To guard against any possible breakdown in communication, the officer in charge of the project office, who takes up the overall responsibility for the project, should clearly define the duties and responsibilities of each project team. In addition, he should set up channels, such as regular meetings, to ensure effective communication is achieved amongst the project teams.

2. POLICIES, STANDARDS AND GUIDELINES

2.1 GENERAL POLICIES

All engineering projects are formulated and approved in accordance with the policies set down by the Government through individual policy committees or on recommendations of the appropriate advisory committee.

The following list, which is not necessarily exhaustive, is given for guidance:

Land development and Reclamation	- Committee on Planning and Land Development (CPLD) Antiquities Advisory Board Land Acquisition and Clearance Committee (LACC)
Management of Construction and Demolition Materials	- Public Fill Committee (PFC)
Marine Works	- Ports Committee Standing Committee on Waterborne Transport (SCWT)
Port development strategy and programming	- Port Progress Committee (PPC) Hong Kong Port Development Council Port Co-ordination Committee (PCC)
Potentially hazardous installations	- The Co-ordinating Committee on Land-use Planning and Control relating to Potentially Hazardous Installations (CCPHI)
Preventive or remedial works to existing slopes	- Landslip Preventive Measures Committee (LPMC)
Reclamation work involving marine fill and disposal	- Marine Fill Committee (MFC)
Road projects	- Transport Policy Co-ordinating Committee (TPCC) Transport Advisory Committee (TAC) Standing Conference on Road Use (SCRU) Advisory Committee on the Appearance of Bridges and Associate Structures (ACABAS) Antiquities Advisory Board Works and Maintenance Committee on Greening (WMCG) – for cases that deviate from requirements stipulated in relevant Technical Circulars.
Rock Cavern Development	- Sub-Committee on Cavern Development (SCCD)

Sewage Treatment / Disposal - Advisory Council on the Environment (ACE)
and Environmental issues
and mitigation measures

The terms of reference and composition of some of these permanent committees and bodies can be found in “Civil and Miscellaneous Lists” published by the Government of the Hong Kong Special Administrative Region.

2.2 GENERAL STANDARDS

The basic planning standards for development projects are given in the “Hong Kong Planning Standards and Guidelines” (HKPSG) which is mainly concerned with policy guidelines, provision standards, location factors and site requirements. The HKPSG are applicable to the three tiers of land use planning in the Hong Kong Special Administrative Region, namely territorial, sub-regional and district. They are also used in the preparation of development statements and planning briefs. Local variations to the standards and guidelines set forth may be necessary having regard to such factors as:

- (a) socio-economic structure of the population,
- (b) population density,
- (c) location, and
- (d) topography.

Wherever modifications to the stipulated standards, dimensions, site areas and location factors are deemed necessary, the relevant planning authority, the Architectural Services Department and the client department should be consulted and agreement sought as appropriate.

For detailed project planning and general design standards, reference should be made to the following:

PWP projects	- Project Administration Handbook for Civil Engineering Works
Traffic, roads and highway structures	- Structures Design Manual for Highways and Railways Transport Planning & Design Manual Hong Kong Planning Standards and Guidelines, Chapter 11, Section 7 – Use of Land Beneath Flyovers and Footbridges
Highway projects	- Highways Department Road Notes Highways Department Guidance Notes Pavement Design Manual Public Lighting Design Manual Highways Department Standard Drawings Highways Department Guidelines Highways Department Technical Circulars Code of Practice for the Lighting, Signing and Guarding of Road Works

Sewerage, stormwater drainage, sewage treatment and disposal	- DSD Practice Notes, Stormwater Drainage Manual and Sewerage Manual DSD Standard Drawings Guidelines on Aesthetic Design of Pumping Station Buildings
Port works	- Port Works Design Manual CEDD Standard Drawings Control of wave reflection in Victoria Harbour
Geotechnical works	- A list of technical guidance documents used by the GEO, CEDD as defacto geotechnical standards is given in Technical Guidance Note No. 1 (TGN 1) and CEDD Standard Drawings
Waterworks	- WSD Project Management Manual WSD Civil Engineering Design Manual WSD Project Administration Manual Hong Kong Waterworks Standard Requirements WSD Standard Drawings WSD Technical Notes WSD Departmental Instructions A note on Unit Cost Ready Reckoner System WSD Guidance Notes / Manual of Mainlaying Practice
Environmental protection	- Environmental Protection Department (EPD) Technical Memorandum on Environmental Impact Assessment Process EPD Professional Persons Environmental Consultative Committee Practice Notes (ProPECCPNs) EIAO Guidance Notes
Greening	- Hong Kong Planning Standards and Guidelines, Chapter 4, Section 2 – Greening WBTC No. 25/93 – Control of Visual Impact of Slopes WBTC No. 17/2000 – Improvement to the Appearance of Slopes DEVB TCW No. 2/2012 – Allocation of Space for Quality Greening on Roads DEVB TCW No. 3/2012 – Site Coverage of Greenery for Government Building Projects DEVB TCW No. 6/2015 – Maintenance of Vegetation and Hard Landscape Features DEVB TCW No. 5/2017 – Community involvement in Planting Works DEVB TCW No. 1/2018 – Soft Landscape Provisions for Highway Structures DEVB TCW No. 4/2020 – Tree Preservation

DEVB TCW No. 5/2020 – Registration and Preservation of Old and Valuable Trees
HyD TC No. 10/2001 – Visibility of Directional Signs
GEO Publication No. 1/2011 – Technical Guidelines on Landscape Treatment for Slopes (2011)
Greening Master Plans, CEDD
HQ/GN/15A Guidelines for Greening Works along Highways
DEVB Cyber Manual for Greening
DEVB website of Greening Landscape and Tree Management Section -
<https://www.greening.gov.hk/en/home/index.html>

2.3 REPORTS ON MAJOR STUDIES

Much useful information is contained in major study reports which have been used as a basis for formulating general policy and development guidelines for the Territory as a whole. A comprehensive listing of these reports is available in departmental libraries and in the TLB and DEVB Library.

3. PRELIMINARY STAGE

3.1 PRELIMINARY PROJECT APPRAISAL

3.1.1 Project Definition Statement (PDS)

In the preparation of a PDS, the following requirements should be observed:

- (a) the need for the project has been identified and justified,
- (b) the proposed project will meet the need in full or in part,
- (c) the proposed project will not duplicate or be in conflict with any other existing or planned projects, and
- (d) the proposed project is in line with approved policy and approved plans.

3.1.2 Technical Feasibility Statement (TFS)

The works department will carry out a TFS after an approved PDS is obtained.

A completed TFS will need to be submitted to SDEV for approval.

A TFS should contain the following information:

- (a) Project scope and description with preferred development option and outline layout plan.
- (b) Land requirements stating the location, present zoning and whether planning permission amendment to the existing zoning is required. Also, the advice from Director of Lands on whether clearance/land resumption is required and the estimated time for site hand-over should be included in the TFS (see ETWB TCW No. 27/2003 for details and DEVB GC No. 1/2016 for new projects that required site search and reservation).
- (c) Development constraints. This should include, but not limited to, the following major issues:
 - (i) Geotechnical aspects

Include a preliminary geotechnical appraisal (PGA) of the site in order to identify geotechnical constraints and risks affecting cost and programme, and man-made slopes and retaining walls which would affect or be affected by the project, and state whether geotechnical studies are required. The project office shall approach the GEO for advice at an early stage of the preparation of the TFS that contains any geotechnical content. This includes advice on the control and use of explosives, when blasting is anticipated, e.g. major site formation or tunnel works with substantial excavation in rock.

The project office shall seek comments from the GEO on the draft Consultancy Brief for Feasibility Study for a new project, which may

require blasting works. Paragraph 8 of Appendix 1.3 provides guidelines on the preparation of the PGA and TFS for projects involving blasting.

Agreement should be reached with the GEO to define the extent of man-made slopes and natural hillsides to be investigated and studied in the project, and the extent of all necessary geotechnical investigation and studies to be carried out as part of the project. Only a desk study of available information is expected to be carried out for the preliminary geotechnical appraisal. The Hong Kong Geological Survey maps and memoirs, Geoguide 2 and the relevant geotechnical guidance documents listed in GEO Technical Guidance Note No. 1 (TGN 1) provide useful information for planning purposes. Reference should also be made to Appendix 1.4, TGN 1 and GEO Report No. 138 for guidance on dealing with natural terrain hazards.

In preparing the PGA for projects involving tunnel works and in undertaking any supporting engineering feasibility studies (EFS), the project office or its consultants shall consult the Hong Kong Geological Survey through CGE/Planning of the GEO to obtain general geological advice, especially on identification of geological features. The EFS and the PGA of the project should cover geotechnical considerations such as identification of problematic ground, formulation of preliminary ground models, including the hydro-geological models, and preliminary assessment of geotechnical risks (both during construction and in the long-term when the facility is operating).

The project office shall conduct a risk assessment to determine whether the proposed tunnel works under the project would pose a significant risk to public life and property and include in the EFS and PGA the possible scope and extent of site investigations and geotechnical studies required to reduce uncertainties and risks.

The project office shall consult the GEO, take into account GEO's response in finalising these documents and submit a copy of the final versions to the GEO. GEO Technical Guidance Note 25 and Geoguide 2 provide useful information on site investigation for tunnel works and geotechnical risk assessment for tunnel works, respectively, and requirements relating to the geotechnical control for tunnel works are given in ETWB TCW No. 15/2005.

For foundation works within the Scheduled Areas in Northwest New Territories and Ma On Shan, and in the Designated Area of Northshore Lantau, GEO Technical Guidance Notes 12 and 26 provides useful information and guidance, and ETWB TCW No. 4/2004 gives the requirements in relation to geotechnical control (Requests for geotechnical advice/assistance, including that on the engineering feasibility study, if required, should be directed to CGE/Geotechnical Projects of the GEO). The project office shall submit a copy of the risk assessment related to tunnel works under the project to the Deputy Head (Mainland) of the GEO for record.

(ii) Disposal of dredged marine mud

For projects which involve the marine disposal of dredged/excavated sediment, the management framework for such sediment should be considered at an early stage. It would be beneficial to consult the Marine Fill Committee (MFC) to identify the principles for mud dredging/excavation proposals and the need for disposal sites that are required by the project. See paragraph 4.2.1 of Chapter 4 of the PAH and DEVB's memo ref. () in DEVB(W) 515/83/04 dated 6.10.2010 for details.

(iii) Management of Construction and Demolition (C&D) Material

Early consideration should be given to minimise C&D material generation and to reuse inert material generated including rock as far as possible. For reclamation and earth filling projects, the maximum use of public fill should be identified and advice from the Public Fill Committee (PFC) should be sought if necessary. For projects which involve disposal of public fill, the PFC should also be consulted on the availability of suitable public filling facilities. See WBTC Nos. 2/93, 2/93B, 4/98, 4/98A, ETWB TCW No. 19/2005 and DEVB TCW No. 6/2010, Section 9.12 of Chapter 5, Section 21.25 of Chapter 7, and paragraph 4.1.3 of Chapter 4 of the PAH for details.

(iv) Drainage aspects

Preliminarily assess the likely impacts of the project on existing and planned drainage systems, natural streams and rivers both during the construction phase and in its completed state. Early notification to DSD to determine the necessity of Drainage Impact Assessments may be required. See ETWB TCW No. 2/2006 for details. The project office should avoid any potential impact on natural streams/rivers, particularly the Ecologically Important Streams as advised by AFCD from time to time. If this is unavoidable, the project office should assess the feasibility of appropriate measures to minimize or compensate such impacts. See ETWB TCW No. 5/2005 for details.

(v) Traffic impact

Assess the major traffic impact due to construction of the project. For transport infrastructure projects, a preliminary investigation of the adequacy of the proposal in the Project Definition Statement from traffic and transport view point and any other alternative proposals should be included. Early liaison with TD on Traffic Impact Assessment may be required.

(vi) Air Ventilation

To check the requirements for air ventilation assessment in accordance with HPLB & ETWB TCW No. 1/06.

(vii) Interface problems

Anticipated major interface problems should be identified as early as possible. This is particularly important for projects which would have significant interface with other existing and/or planned projects, either carried out by Government or by a third party.

(viii) Site utilization

To seek the advice of the Leasing and Commercialization Division of GPA on the site utilization assessment in accordance with FC No. 4/2017. For any doubt on site utilization issues in a works project, subject officer may contact the Assistant Technical Secretary of GPA at tel. 3842 6892 for advice.

(ix) Other considerations

If necessary, include other development or engineering constraints that could be identified at this early stage and that may have significant cost and/or programme implications to the project. These may include project-specific issues or general technical matters, such as major impacts on waterworks installations, future installation of utility services, major utility diversion, substantial tree felling/preservation of trees of significant ecological/cultural value, preservation of survey monuments/marks, control of landscape and visual impact of the proposed works, i.e. slopes, roadside structures, scenic features etc or the use of hand-dug caissons and a summary of all further studies needed to be carried out when the project is upgraded to Cat. B.

- (d) Environmental Considerations. The works department, in consultation with DEP where necessary, should categorize the project as to whether it is a designated project or not under the Environmental Impact Assessment Ordinance (EIAO). For designated projects under the EIAO, the works departments are required to either (a) conduct an EIA study in accordance with the Technical Memorandum on EIA Process or (b) seek permission to apply directly for an Environmental Permit (See Appendices 1.8, 1.9 and 1.10 and Paragraph 4.1.3 for details). For non-designated projects, the works department's undertaking should be included to either provide the mitigation measures to implement standard pollution control measures during construction or to carry out a Preliminary Environmental Review of the project, as appropriate. See also WBTC No. 4/97 - Guidelines for Implementing the Policy on Off-site Ecological Mitigation Measures and GC No. 12/2016 - Application of Environmental Legislation to the Government. During the course of project implementation, the works agent should take a proactive role in protecting the environment.
- (e) Vetting Mechanism involving Strategic Cavern Areas. Proponents of new Government projects should take note of the CMP in the early planning stage (e.g. TFS stage) if their development proposals fall wholly or partly within the SCVAs. Possible impact on the cavern development potential of the SCVAs,

in particular along those potential portal locations, should also be considered and the layout of the development proposals should be adjusted to avoid the encroachment as far as possible. When such encroachment and/or impact on potential portal locations is/are unavoidable, the development proposals should be submitted for vetting by the SCCD as the first stage submission. The SCCD will provide the project proponents with advice on the potential conflicts and, where appropriate, recommendations on suitable provisions that could safeguard the development potential and optimise the use of the SCVAs. The project proponents should review the possibility of minimising or avoiding the conflicts by adjusting the conceptual layout, or incorporating the recommended provisions to enhance the use of the SCVAs, which is still flexible at the early project delivery stage. A summary of the SCCD's advice should be provided in the TFS, with a copy of the SCCD's reply attached as an appendix (see DEVB TCW No. 8/2017).

- (f) **Project Programme.** Attach a Gantt chart covering major activities from receipt of the PDS to physical completion, highlighting the critical path. Where an approved Schedule of Accommodation (SoA) is required for the implementation of the project, a key milestone "SoA Submission and Approval" should be included in the Gantt chart. Please refer to paragraph 4.2.6 of Chapter 1 of the PAH for details of the milestone.
- (g) **Capital Cost Estimates.** To prepare a preliminary project estimate at constant prices with rough breakdown into categories of design and related services (including consultancy fees and resident site staff cost), site investigation, construction works, energy efficient features and/ or renewable energy technologies, green government buildings as described in DEVB TC No. 2/2015 and other costs not covered by project main contracts, contract contingencies and project contingencies.
- (h) **Management of Contaminated Site.** The likelihood of encountering contaminated soil on a site should be identified at the outset of the TFS. This can be based on tracing the land-use history of the site. Where contaminated soil is encountered, the appropriate assessment and remediation measures should be considered in accordance with the "Guidance Note for Contaminated Land Assessment and Remediation" issued by EPD. As a general principle, project proponents should minimise the disposal of contaminated soil by maximising its reuse as far as possible. Owing to the limited capacity of landfills, landfill disposal should be considered as a last resort. Where landfill disposal of the contaminated soil is considered unavoidable, project proponents should consult EPD at an early project planning stage and near the time of implementing the project to establish the amount of contaminated soil that can be accepted for disposal at landfills and a tentative disposal programme as far as possible. Contaminated soil should not be disposed of at public fill reception facilities or sorting facilities (See also Paragraph 3.5.4 of Chapter 3).
- (i) **Heritage Considerations.** The works department should confirm to the Antiquities & Monuments Office (AMO) (i) whether there is/are any declared monuments, proposed monuments, sites and buildings graded by the Antiquities Advisory Board, sites of archaeological interest or Government historic sites identified by AMO within or in the vicinity of the project boundary; and (ii)

whether a Heritage Impact Assessment for the project is required to be conducted. (See DEVB TCW No. 1/2022 for details).

- (j) **Greening and Landscape Considerations.** The consideration of adequate provision of space for quality greening in form of utility free planting zone for roadside and median planting on new at-grade roads (see DEVB TCW No. 2/2012), the site coverage of greening for buildings (see DEVB TCW No. 3/2012), the quality of landscape design in an integrated approach (see Integrated Landscape Design Framework, DEVB) and tree preservation (see DEVB TCW No. 4/2020) should be confirmed at the onset of the TFS. Reference should be made to the Greening Master Plan of each district, as developed by CEDD, as appropriate in plant selection. The project office should check the extent of vegetation to be affected and ascertain the trees to be preserved in situ, felled or transplanted based on the ecological, aesthetic, historical and cultural value, the transplantability, survival rate and long term health condition of the trees, space for compensatory planting, and cost effectiveness. Special attention should be paid to the registration and preservation of Old and Valuable Trees (OVTs) (see DEVB TCW No. 5/2020) and trees such as stone wall trees (see Appendix 16 - Management Guidelines for Stonewall Trees of Handbook on Tree Management, DEVB). The provision of adequate space for healthy tree growth both above and below should be confirmed based on professional advice on landscape/arboricultural. The technical aspects of tree preservation including the change in level should be assessed with adequate professional advice.

Whenever waterworks are involved in projects that are carried out in association with new town or strategic growth areas (SGA) developments, its placement in the PWP shall follow the model as illustrated in Appendix 1.12 (Annex A). This is to determine how these waterworks projects should be grouped together with the new town or SGA works as a conglomerate PWP item.

3.2 FEASIBILITY STUDY

3.2.1 Need for a Feasibility Study

It is possible that a TFS or other planning process may conclude that a further wider feasibility study be undertaken prior to proceeding to preliminary design. Such feasibility studies may cover various aspects of engineering development, such as land development, transportation and building development.

Major proposals for land development, e.g. reclamation, have to be considered at the planning stage by the Committee on Planning and Land Development (CPLD) before a commitment to undertake a major planning or development study is entered into. A submission to CPLD explaining the purpose and the need for the study is required.

In conducting planning and land development studies, the project proponents should holistically consider the option of developing caverns in suitable SCVAs to house land uses with potential for cavern development. In case the above planning and land development studies require consideration by the CPLD, the study proposal (e.g. scope and study areas) in

respect of cavern option shall be submitted for agreement by the SCCD before submission to the CPLD for endorsement (see DEVB TCW No. 8/2017).

If major transportation planning considerations are also involved, the submission must be considered by the Development Bureau.

The need for a feasibility study may also arise when it is required to study the various options for implementing certain Government policies. As an illustration, it may be that a certain area has been earmarked for various types of future land development in an Outline Development Plan. At a later stage, a change in Government development strategy may require that the development potential for an increased population in this area be examined. A feasibility study will then need to be undertaken to estimate the development potential of the area.

Instead of a clearly defined stage, many feasibility studies form part of an on-going process from the very early stage of planning of a project. The drafting of an Outline Development Plan should always take into account the engineering feasibility of the proposals.

3.2.2 Feasibility Study In-house

Feasibility studies are usually undertaken in-house if the necessary expertise and resources are available. The activities could include the collection of background information such as maps, plans and previous investigation results, planning and design considerations, consultation with other Government departments/offices and/or outside bodies, estimation of costs and revenue, preparation of implementation programmes, etc.

3.2.3 Feasibility Study by Consultants

Consultants may be engaged to undertake a feasibility study on an important or a major development project if:

- (a) The necessary expertise cannot be found in-house, and/or
- (b) A team of multi-disciplinary professionals are involved, and/or
- (c) Sufficient manpower resources are not available in-house to carry out the study.

For projects managed by CEDD, studies are normally carried out by consultants. Reference should also be made to “Handbook on Selection, Appointment and Administration of Engineering and Associated Consultants” (EACSB Handbook), DEVB TCW No. 5/2018 – New Policy on Selection, Appointment and Management of Consultants under the Purview of the EACSB and WBTC Nos. 13/2001 & 13/2001A - Quality Management System Certification of Consultants and Contractors for Public Works Administered by the Works Group of Departments.

Studies undertaken by consultants may be broadly classified into two types:

- (a) A feasibility study on a proposal that does not fall within the scope of an existing item in the PWP. Such a study normally includes investigating the feasibility of a development or a project, considering alternatives, and searching for the best method of implementation.

- (b) A review study on a project to update the previous feasibility studies, ascertaining data integrity and updating requirements and standards. There is usually little doubt about the feasibility of the project. Such review studies will normally be undertaken to find the best method for implementing the project.

Consultancies usually begin with a Brief to the consultant stating the purpose and scope of the study, and conclude with a final report. Preliminary, interim or draft reports are normally compiled during the study and circulated to relevant Government departments/offices and outside bodies for comments. Circulation of reports to outside bodies during the study has to be carefully managed in light of the sensitivity of study findings that are still under the Government's consideration. The studies should be co-ordinated through a Steering Group chaired by the project office, and composed of representatives from selected Government departments, other parties concerned and the consultant, which meets periodically to review progress, address problems and offer advice for progressing the study to its conclusion. Methods of funding feasibility studies are described in Chapter 2.

3.2.4 Feasibility Study Report

The Feasibility Study Report should contain the following information:

- (a) The scope, purpose and background of the study. In the case where a feasibility study is undertaken by a consultant, such information is normally included in the Brief.
- (b) An executive summary of the study (in both English and Chinese).
- (c) Planning considerations, such as consideration of different options, public acceptance and problems at construction stage, population predictions, schedule of land use, marine impact, clearance/resumption requirements, land acquisition, re-provision of existing facilities, and any related social or financial implications.
- (d) Engineering considerations including consideration of different options.
- (e) Traffic and transportation considerations, such as an adequate road network, traffic impact assessment for different stages of the project, effect on external links, public transport requirements and options.
- (f) Assessment of drainage impacts of the project, and recommendations of measures to mitigate these impacts and on appropriate land reserve required for drainage facilities and mitigation measures.
- (g) Greening and landscape considerations including the provision of adequate utility free planting zone for roadside and median planting, site coverage of greening for buildings, trees for preservation, adequate means and space for tree preservation, sufficient space for compensatory planting, transplantability of trees, layout to cater for tree preservation, etc.
- (h) Recommendations for the execution of the project, including programme for implementation.

- (i) Estimates of costs and revenues.
- (j) Assessment of environmental impact at different stages of project including but not limited to air, noise, water waste, ecological, visual and landscape aspects, and recommendations of appropriate mitigation, environmental monitoring and audit measures. Viability of alternatives should also be considered to avoid and minimize impacts.
- (k) Sustainability assessment may be required for territory-wide or strategic studies and major projects.
- (l) Alternative or contingency plans.
- (m) Report drawings.

The draft, preliminary and interim reports produced throughout the study are circulated to relevant Government departments/offices and outside bodies for comments.

3.3 REVIEWS

The implementation of new town developments and major projects are usually in phases and may take more than 10 years from commencement to completion. Different phases of implementation are treated as different projects. Separate PDS and TFS have to be completed before funds can be allocated for detailed design. In the event that there is a long time lapse between the feasibility study and the detailed design, a review on the previous findings and the current situation together with ground investigation, EIA, TIA, HIA and DIA etc. should be carried out before commencing the detailed design of works in subsequent phases.

If the preliminary design of a project was carried out by consultants or entrusted works agents, it should be reviewed before proceeding with the detailed design. See ETWB TCW No. 19/2003 for details.

3.4 CLIENT-INITIATED CHANGES FOR CAPITAL WORKS PROJECT

ETWB TCW No. 30/2003 sets out the control of changes in capital works projects initiated by Client Policy Bureaux, Client departments or subvented bodies, which involve a change in the policy, user requirements or timing of the project from those originally stated in the PDS/TFS for Category B and Category C projects, or PWSC submissions not involving an increase in the Approved Project Estimates. It also contains a flow chart to illustrate the necessary procedure for easy reference.

4. STAGES IN THE PUBLIC WORKS PROGRAMME

4.1 PWP CATEGORY C STAGE

4.1.1 Definition of Project Requirements

A project is included in Category C of the PWP on completion of a TFS which is approved by SDEV. Through the TFS, the requirements of the project are defined and a rough order of cost, together with the technical feasibility of the project, is identified. The extent of works as well as a programme for implementation are also defined.

All Category C projects in the PWP, except subvented projects, must be registered in the PWPIS, which is administrated by the Public Works System Administration Section of DEVB. Works department is responsible for recording and updating of project and contract data in the PWPIS in respect of programme, estimates, expenditure and other important information. Project officers should follow the data administration procedures in PWPIS Data Administration Manual, which is issued by DEVB and posted on PWPIS web page.

4.1.2 Consideration of Resources

Under normal circumstances, the works department and enabling departments should have no works commitment at this stage. Consideration should, however, be given to the availability of resources required to undertake the project prior to the inclusion of the project in the latest six-year Capital Works Reserve Fund Resource Allocation System (CWRF RAS) exercise, i.e. upgrading to Category B. In addition, the recurrent financial and staff implications of the project after completion should also be considered.

In special cases, where justified, SFST may agree to the employment of consultants to undertake a preliminary design for projects in Category C. Expenditure for these purposes should be dealt with either by part upgrading of the project to Category A or by charging the expenditure to the appropriate block allocation as a Category D item, if the expenditure is not more than \$50M.

Should there be any change to the scope of a project after its TFS is completed and approved and/or is included in Category B, policy support should be obtained from the relevant Policy Bureau before seeking approval from DEVB.

4.1.3 Notification to EPD

Completion of the TFS will involve EPD and their comments on the project will form part of the documentation. With the EIAO coming into operation on 1 April 1998, it is necessary for a designated project to either (a) obtain an EIA study brief from EPD for the conduct of a EIA study in accordance with the Technical Memorandum on EIA Process followed by application for an Environmental Permit (EP) or (b) seek permission to apply directly for an EP (See Appendices 1.8, 1.9 and 1.10 for details) upon upgrading the project to Category B. Project profiles shall be submitted in both English and Chinese for application for an EIA study brief. For non-designated projects, the project proponents' undertaking should be included to either provide the mitigation measures to implement standard pollution control measures during construction or to carry out a Preliminary Environmental Review of the project as appropriate. The project proponent has an option to gazette a designated project

in parallel with the EIA process as long as there are sufficient EIA findings to enable the project layout to be sufficiently determined before the full completion of the EIA process, thus shortening the overall pre-construction lead-time. See Appendices 1.8, 1.9 and 1.10 for details of necessary procedures required under the EIAO. During the course of project implementation, the works agent should take a proactive role in protecting the environment.

4.1.4 Preparation for the Resources Allocation Exercise (RAE)

All Capital Works RAE bids must be accompanied by a PDS and a TFS approved by SDEV. The policy bureau concerned will need to submit other information as set out in RAE call circulars, including for instance the recurrent implications arising from the proposed project. The policy bureau, after receiving returns from works departments, will prioritise the projects in the RAE. See FC No. 7/2017 - Capital Works Programme.

Under normal circumstances, the project in Category C will automatically be deleted from PWP if it is not upgraded within three years.

4.2 PWP CATEGORY B STAGE

4.2.1 General

Projects in Category C will compete for resources under the RAS. Successful projects will achieve Category B status. The works department should, in accordance with ETWB TCW No. 4/2006 and the supplementary guidelines “Timeframe for Resolution of Public Objections” issued by the DEVB at Appendix 1.5, carry out the planning and design works. It should be noted that works departments could discuss with the enabling bureaux/departments in respect of exceptional cases to shorten the normal processing time.

This is the stage when ground investigation, detailed planning and design, tender documentation and any necessary statutory procedures are carried out. Acquisition and clearance of the land required for the project, and allocation of the works area should be requested to tie in with the target start date included in the latest CWRP RAS programme.

Consultation with other departments on anticipated problems or requirements during construction should be made. Sufficient time should be allowed for obtaining DEP’s approval of an EIA study report under the EIAO. Of particular importance is the timely gazetting and authorisation of Outline Zoning Plan (OZP), reclamations, roadworks and sewerage works under the Town Planning Ordinance, Foreshore and Sea-Bed (Reclamations) Ordinance, Roads (Works, Use and Compensation) Ordinance and Water Pollution Control (Sewerage) Regulation respectively.

A detailed estimate of the cost of the project should be prepared when detailed design is nearing completion. Where re-provisioning works for the existing installations are required, the project fund should cover the cost for the necessary re-provisioning works including any administrative costs, such as fees, expenses, etc. The estimate of recurrent consequences of the project should also be updated at this stage. (Note: agreement on the division of maintenance responsibility should be made at this stage.)

For WSD projects, detailed planning which commenced upon inclusion of the project in Category C may continue in this stage and planning reports are produced. Ground investigation, detailed design and tender documentation etc., will be implemented in accordance with the programme set out in the planning report. The relevant WSD project vote should cover the cost for any new waterworks and/or improvements to existing waterworks (See Appendix 1.11 for details).

When a project is in Category B and it is planned to call tenders for the project in the next financial year, it will be necessary to include the project in the Draft Estimates for that year and the forecast information on consultancies or works tenders as mentioned in paragraph 1.3, where suitable.

When detailed design and tender documentation are substantially complete, legal procedures are cleared and the project is ready in every respect for tenders to be called, steps should be taken to upgrade the project to Category A.

4.2.2 Public Works Programme Information System (PWPIS)

All the data administration procedures are set out in the Data Administration Manual for the PWPIS. The project manager of every project is responsible for maintaining the updatedness of the data under the project in the PWPIS.

4.2.3 Consideration of Resources for Project Implementation (CEDD, DSD, HyD and WSD Projects)

Consideration should be given to the availability of staff resources to undertake detailed planning, design, and construction management, taking into account the urgency of the project and the proposed programme of implementation.

In cases where the necessary resources or expertise are not available in the works department, the employment of consultants to undertake the work may be considered, provided that the necessary financial resources can be found and the agreement of the head of department is sought. Entrustment of the project to an outside body (such as MTRCL) may also be considered where overall economy, urgency of completion and/or engineering constraints of the project justify this method of implementation. Prior approval from SFST is necessary before entering into any commitment with an outside body (See Chapter 2 for more details). Clear recommendations on proposals for employment of consultants or for entrustment should be made in the TFS.

4.2.4 Partial Upgrading for Consultant's Fees and Ground Investigation Costs (CEDD, DSD, HyD and WSD Projects)

Where the need to employ consultants to carry out detailed design and ground investigation on CEDD, DSD, HyD and WSD projects has been established, funds for these purposes can routinely be obtained from a separate Category D item if the total cost of the pre-construction works of the project is not more than \$50M, or by part upgrading to Category A if such cost is more than \$50M.

The same procedures apply to undertaking ground investigations for projects carried out in-house.

4.2.5 Charging of Consultants' Fees for CEDD Projects

Detailed design for infrastructure works for New Towns and major development areas, and associated feasibility studies are normally undertaken by consultants. However, before making a decision to employ consultants, development offices should request relevant works departments to consider undertaking the project in-house in accordance with the planned programme. In the case of existing ongoing agreements with consultants, the fees for detailed design and investigation are charged to either a design and investigation item already in Category A of the PWP or to the relevant Category A project vote as appropriate. Depending on circumstances, a part of the relevant PWP item may be upgraded to Category A in advance of the main works to fund the consultants' fees for detailed design and ground investigation.

4.2.6 Preparation and Submission of the Schedule of Accommodation

For projects that involve the provision of specialist/ departmental buildings to accommodate operational staff, plant installations, storerooms etc., a SoA should be prepared by using the latest standard SoA form available at the SoA website in the Central Cyber Government Office Portal below and submitted to the Property Vetting Committee (PVC) by e-mail to obtain approval of the size of functional parts of the building.

<http://gpa.host.ccgo.hksarg/schedule-of-accommodation.html>

A specimen e-mail submission by the project Engineer (not the Consultant of the Project) to the Chairman, PVC is given at Appendix 1.1. The preparation of the SoA should normally be made in consultation with the works and maintenance departments, and the schedule should include, where required, the staff it is intended to accommodate in the building.

The draft SoA should be submitted to the PVC for vetting at least (i) nine months before the target tender invitation date of parallel tendering; or (ii) nine months before the target PWSC submission date, whichever is earlier. To allow sufficient time for PVC to vet and approve the SoA before proceeding with parallel tendering or seeking funding from Finance Committee, project proponents should plan in advance and adhere to the above timeframe of submitting SoA. They should ensure adequacy of the information contained in the SoA application and respond promptly to PVC's enquiries with a view to concluding the process as soon as possible within the specified timeframe. Incomplete information provided by project proponents, major/ frequent revisions of submitted SoA, and unduly long response time of project proponents may prolong the vetting timeframe.

In an exceptional case where a project proponent is unable to submit the SoA application by the stipulated timeframe, the project proponent concerned should alert PVC as soon as possible and provide explanations cleared by a directorate officer at D2 level or above, with a copy to the responsible officer of the respective policy bureau. Project proponents should be reminded that a case will not warrant special treatment unless justified.

The standard space entitlement for Government offices is set out on the Central Cyber Government Office Portal under Schedule of Accommodation of the Accommodation Regulations section. The project Engineer should refer to the said SoA website when preparing the draft SoA.

4.3 PWP CATEGORY A STAGE

Projects in Category A of the PWP are normally funded by corresponding subheads in the Capital Works Reserve Fund and such funds are approved by the Finance Committee. The works department should ensure that all planning and design requirements, including the preparation of working drawings and contract documents, are complete, that the project site and works area (if required) are available, and that the necessary statutory procedures have been complied with. Once upgraded to Category A, the projects should be started and completed as soon as possible with minimum interruptions. It should be noted that only works falling within the scope of the project as set out in the approved PWSC paper may be undertaken.

Apart from projects that have been completed with account finalised, a PWSC paper, addressed to PWSC, copied to the DEVB and other relevant policy bureaux, is required for proposals to change the scope of the project. Works departments of the capital works projects will prepare draft PWSC papers to Client Policy Bureaux for their processing and copy to DEVB for comments. The policy bureaux will comment and revise the draft PWSC paper before submitting to FSTB for further submission to PWSC. Works departments should ensure that all works are completed and there are no outstanding claims/disputes and other financial commitments for a project that is proposed for deletion.

The implementation plan for a Category A project is first baselined when the project is in Category B. When the project is upgraded to Category A, the implementation plan recorded within the PWPIS must match the proposals endorsed by the PWSC and approved by the Finance Committee. If the FC approves the PWSC paper then the date of upgrade to Category A is the date of the FC decision.

It is necessary to control the timing of upgrading the projects to Category A so that it should not coincide with the summer recess of Legislative Council, which normally runs from July to September.

4.4 PWP CATEGORY D PROJECTS

For projects with pre-construction works that cost not more than \$50M, the scale and timing of the works usually do not warrant the effort required for routing the projects through the normal public works procedures. Provision has therefore been made for such projects to be listed under a separate Category D of the PWP.

Minor works and investigations costing not more than \$50M can be carried out as Category D items.

The works department should ensure that there are available funds and staff resources to allow the Category D project to start within 6 months of it being approved and complete the project as soon as possible. See Chapter 2 and FC No. 7/2017 - Capital Works Programme and SDEV's memo ref. (3) in L/M in DEVB(CR)(W) 1-106/33 (2009) Pt.1 dated 22.04.2009 for more details.

5. PLANNING OF LAND MATTERS

5.1 LAND REQUIREMENTS IN PROJECT PLANNING

For matters relating to land reservation, allocation, acquisition and clearance, see Chapter 3. This section only sets out the skeleton of the procedures involved and the major considerations required for project planning.

Any project will be associated with land requirements either temporarily or permanently. Even if the project falls within Government Land, allocation of the area from the relevant District Lands Office (DLO) will have to be given. Reclamation projects will have to be gazetted under the Foreshore and Sea-bed (Reclamations) Ordinance. Construction of roads will involve the Roads (Works, Use and Compensation) Ordinance. Construction of sewerage will involve the Water Pollution Control (Sewerage) Regulation and the Sewage Tunnels (Statutory Easements) Ordinance. If private lots are affected, land resumption, re-housing, and clearance will be required. As the lead time required for securing the necessary works site and works areas is usually very long, early preparatory work in this aspect is important. For projects with average size resumption and clearance involvement, the time required for resolving land issues may be up to 560 working days. Reference should also be made to Lands Administration Office TC No. 715.

Reference should also be made to ETWB TCW No. 27/2003 concerning prioritisation of projects that require Lands Department's input in respect of land acquisition, land clearance and compensatory assessments. Reference should be made to DEVB GC No. 1/2016 for site search and site reservation, and FC No. 4/2017 concerning optimisation of site utilisation for capital works projects respectively.

Reference should also be made to the Inter-departmental Guidelines for Land Resumption under the Lands Resumption Ordinance (Cap. 124) published by DEVB, if the project office intends to use Cap. 124 to resume land for road/sewerage/railway works project.

5.2 LAND MATTERS IN DIFFERENT STAGES OF THE PROJECT

In the preparation of the TFS, the preliminary land requirement will have to be sent to the relevant DLO for consideration of their involvement, programme, capital outlay, staff resources required to meet the project requirements etc. The DLO will advise on the land status with regard to any land resumption/clearance requirements and the estimated time for site hand-over from the submission of the final Clearance Application Form. A land requirement plan together with a land requirement report are required for all new projects other than new Landslip Prevention and Mitigation Programme (LPMitP), Rural Planning and Improvement Strategy (RPIS), Private Street Improvement Scheme (PS), Non-development Clearance (NDC) Projects and other projects that involve minimal input from LandsD (see ETWB TCW No. 27/2003). The land requirement report is needed for prioritisation of projects that require Lands Department's input to acquire/clear land.

When the project is in Category C, up-to-date information on the land required for a PWP project must be recorded in the PWPIS.

When a project is in the Category B stage, a preliminary project plan will have to be prepared containing the finalised site boundaries agreed by departments concerned. This plan together with the Clearance Application Form will have to be sent to DLO for further processing of gazettals, land resumption clearance, and allocation.

The works sites and works areas are handed over to the contractor for construction works. The project office will have to ensure the proper management of the site by the contractor during the period concerned under the terms and conditions of the contract documents.

On completion of works, the contractor will have to vacate the sites and hand them over as required under the contract documents. A joint site inspection is normally required before the handing over.

5.3 EXCAVATION IN UNLEASED LAND OTHER THAN STREETS UNDER LAND (MISCELLANEOUS PROVISIONS) ORDINANCE (LMPO)

The LMPO came into operation on 1 April 2004 on control of excavation in unleased land. LandsD is responsible for control of excavation in unleased land other than streets whilst Highways Department (HyD) is responsible for control of excavation in unleased land which is a street maintained by HyD. The implementation arrangements relating to LandsD are set out in Lands Administration Office TC Nos. 737 and 737A.

For new works project, the project office shall during the planning stage apply to the respective DLOs for simplified temporary land allocation (STLA) of the works site (excluding any public roads or existing GLAs) and /or temporary land allocation (TLA) of the works area. To shorten the processing time of STLA, the project office shall provide plans showing the works limit / scheme boundary for attachment to the allocation memo.

For works involving minor excavation in unleased land other than streets, exemption may be made under Section 10B(2) of LMPO. The authority of exemption has also been delegated to AFCD, ArchSD, CEDD, DSD, EMSD, HAD, HD, HyD, LCSD & WSD.

For cases of special nature which cannot be covered by land allocation or not within the category of exemption under Section 10B(2) of LMPO, government contractors shall apply to the respective DLO for an excavation permit under Section 10A of LMPO. A prescribed fee will be charged under the Ordinance. DSD has been delegated the relevant authorities for issuance and administration of excavation permit in respect of areas of DSD contracts.

6. FINANCIAL CONSIDERATIONS

6.1 FORECAST OF NON-RECURRENT EXPENDITURE

The process of project planning should include an estimate of the non-recurrent cost of the project and a forecast of the phasing of expenditure in the TFS for inclusion in Category C. Successful bidding of funds in the RAS will enable the project to be upgraded to Category B. Guidance on estimating costs is given in Chapter 4. For details of charging arrangements for services provided to/by the Trading Funds, see FC No. 3/2013.

A forecast of non-recurrent expenditure should be made when the project is in the TFS stage, and updated at appropriate intervals and immediately prior to upgrading to Category A. Initially, the forecast of expenditure should be based on the programme for detailed design, contract documentation, tender procedures and the anticipated rate of expenditure during the construction stage. The forecast should subsequently be updated in the light of actual progress on detailed design and project implementation. This forecast is required in the PWSC paper seeking upgrading to Category A and also in every subsequent submission. If parallel tendering is adopted for contracts, in particular less controversial ones, the forecast in funding applications to FC/LegCo should duly reflect the tender sums, see FC No. 3/2020.

The non-recurrent expenses for projects are met from the Capital Works Reserve Fund which in turn is credited from the General Revenue. In order to limit expenditure to within budgetary provision, a forecast of non-recurrent expenditure for all public works projects, whether on-going or proposed, is required. This usually includes:

- (a) forecast of expenditure for on-going projects requiring funding in the next and subsequent financial years,
- (b) forecast of expenditure for new projects proposed for a start in the next year, and
- (c) forecast of expenditure under block votes.

The forecast is usually co-ordinated by departmental headquarters and forms the basis for preparing the RAE, and for preparing the Draft Estimates for the following year.

6.2 FORECAST OF RECURRENT CONSEQUENCES OF PROJECTS

For most types of engineering projects, the completion of the capital investment usually carries with it an implication of recurrent expenditure. For example, a highway requires maintenance work such as minor resurfacing or repairing movement joints after a certain time, and a sewage treatment plant requires staff to operate and maintain it, plus there are charges for electricity etc. The forecast of the recurrent consequences of a project is an important part of the project planning process. The recurrent consequence for landscape works should also be ascertained by the maintenance party and be duly incorporated in the forecast. It is pointless to implement the project if:

- (a) the necessary expertise in operating and/or maintaining the facility cannot be found, or
- (b) sufficient manpower or financial resources will not be available for the facility to function properly.

PWP procedures require an appraisal of the recurrent consequences of a project to be carried out:

- (a) while the project is in Category B and when detailed design and cost estimates become available,
- (b) when seeking upgrading of the project to Category A, and
- (c) when applying for a change in the scope of a project in Category A.

The format of the appraisal and other details are set out in FC No. 2/2005. Any revenue generated should also be assessed.

6.3 LIMITATION ON COMMITMENT

Expenditure on projects in the PWP is met from the Capital Works Reserve Fund and within the resources available in the Fund, expenditure on each project in Category A or D is limited by its approved project estimate. See FC No. 2/2012 Procedures for making changes to the Estimates of the Capital Works Reserve Fund and FC No. 3/2011 Capital Works Reserve Fund Delegated authorities in respect of block allocations.

It is Government's intention that once a project is upgraded to Category A, work should start as soon as possible. While the actual start date is determined having regard to financial implications and to the estimated expenditure for the year, the upgrading of a project to Category A is in effect a commitment to provide funds for it, as required, within the approved project estimate. For Category D projects, it is necessary to note the requirement stated in FC No. 3/2011 that the works department should ensure that staff resources and funds are available to allow the project to start within 6 months.

7. SOURCES OF INFORMATION

7.1 STRATEGIC STUDIES

The development trend in the Territory is determined by studies at a strategic level. Approved recommendations from these studies will form the framework for development in the years to come. Reference should be made to these studies to gain understanding of the background information, the needs and the justifications/reasons leading to their recommendations. Currently available study reports include:

- (a) The Third Comprehensive Transport Study (CTS-3) and Hong Kong Major Transport Infrastructure Development Blueprint (2023),
- (b) Port Development Strategy Review (PDSR) 2001 and Action Plan on Maritime and Port Development Strategy (2023),
- (c) Railway Development Strategy 2014 (RDS 2014) and Second Railway Development Study (RDS-2),
- (d) Harbour Area Treatment Scheme (HATS),
- (e) Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030,
- (f) Study on Sustainable Development for the 21st Century (SUSDEV 21), and
- (g) Northern Metropolis Development Strategy and Northern Metropolis Action Agenda 2023.

It is common that a strategic study would include strategic environmental assessment (SEA) to assist the formulation of the preferred option/framework. EPD's website has included a specific SEA website (under "EA & Planning" and strategic Environmental Assessment") covering much information on SEA, including an SEA Manual, which provides a systematic guidance with examples on the SEA process.

7.2 TOWN PLANS

7.2.1 General

Information regarding the broad or detailed outline land use patterns and road system of particular areas can be obtained from town plans prepared by the Planning Department (PlanD). These plans can be grouped into two main categories, namely:

- (a) statutory plans, and
- (b) departmental plans.

7.2.2 Statutory Plans

Statutory plans include Outline Zoning Plans (OZP) and Development Permission Area Plans (DPA plans). Statutory plans are prepared by Town Planning Board (TPB) under the directive of the Chief Executive. Under the Town Planning Ordinance, the Chairman of the TPB may require the Director of Planning to prepare the plans.

OZPs are normally prepared within the framework of the Sub-regional Development Strategies which translate territory-wide goals of the Territorial Development Strategy (TDS) into sub-regional objectives. Further details of these are given in the publication "Town

Planning in Hong Kong” issued by Planning Department. The majority of the OZPs are drawn on a scale of 1:5000 for districts in main urban areas and 1:10000 for New Towns in the New Territories. OZPs for the rural areas (Rural OZPs) are on a scale of 1:7500 while DPA plans are on a scale of 1:5000. All the Notes on the plans are given in both English and Chinese. They show the broad land use pattern and major road systems of the planning areas. In general, areas are zoned for residential, commercial, industrial, Government/ institution/ community, open space, green belt or other specified uses.

Any OZP, once gazetted, has legal effect. According to the Buildings Ordinance, the Building Authority may refuse to give its approval to any building plan which would contravene any approved or draft plan prepared under the Town Planning Ordinance.

DPA plans were introduced with the enactment of the Town Planning (Amendment) Ordinance 1991 for areas (mainly rural areas in the New Territories) which require immediate planning control prior to the preparation of OZPs. Unlike OZPs, DPA plans may contain large areas without any definitive zoning. Any development in these areas, other than a permitted use stated in the Notes, will require permission from the Town Planning Board. It should be noted that DPA plans are to remain effective for three years from the date of first publication and will be replaced by OZPs within the period.

7.2.3 Departmental Plans

(1) General

Departmental plans are used mainly within the Government for administrative purposes as details on these plans may be subject to frequent changes. Although such plans have no statutory effect, they are binding on all Government departments. The major uses of departmental plans are as follows:

- (a) As the basis for formulating lease conditions and conditions of grant for new development areas.
- (b) As the basis for formulating development programmes.
- (c) If no OZP exists for the area, they will provide the basis for any OZP which may subsequently be prepared for the area.

Departmental plans generally comprise Outline Development Plans and Layout Plans.

(2) Outline Development Plan

Outline Development Plans (ODPs) show greater details of development proposals when compared with OZPs such as more specific land use designations, roads and footbridges, density restrictions and disposition of sites. If an OZP exists for the area, the function of the ODP is to supplement the former and to show the land use and road framework in greater detail. In addition, the ODP serves as a guide for land sales and for inter-departmental reservation and allocation of Government sites. These plans are normally drawn to a scale of 1:2500.

(3) Layout Plan

Layout plans usually indicate detailed land use and development proposals for an area covered by an OZP or an ODP, but in some circumstances they may be prepared independently. They are usually of local significance and are prepared mainly for unformed and newly formed land or for re-development areas that require comprehensive planning. These plans usually show in more detail the planning proposals for the area, including information such as road and formation levels, disposition of land uses and development restrictions on individual lots or buildings. They are also used as a basis for land sales and allocations as well as for the implementation of land formation projects, construction of roads, and other engineering and building works. Such plans are normally drawn to a scale of 1:1000 and 1:500.

7.3 CAVERN MASTER PLAN

The CMP is a planning tool providing a broad strategic planning framework to guide and facilitate territory-wide cavern development in Hong Kong. The CMP delineates SCVAs that are well placed for developing rock caverns to meet the existing or future development needs. The objectives of the CMP are:

- (i) Facilitation of territory-wide cavern development – to delineate SCVAs that could facilitate wider application of cavern development in the territory;
- (ii) Promulgation of information – to disseminate and publicise information on SCVAs that could enable both government departments and private sector organisations to identify suitable cavern sites for their developments; and
- (iii) Optimal utilisation of SCVAs – to optimise the use of land resources through a pragmatic vetting mechanism for managing cavern and other subsurface developments in SCVAs, without compromising beneficial surface land use and developments.

The CMP is a non-statutory plan serving as user guidelines for cavern development, and does not exempt cavern development, no matter within or outside SCVAs, from any relevant statutory requirements. It consists of a territory-wide plan showing the location and boundary of all the SCVAs, an Explanatory Statement (ES) and, for each SCVA, a set of Information Notes (IN). The ES provides the key information on the CMP. It sets out the objectives of the CMP, outlines the rationale and methodology of delineating SCVAs, and highlights key issues for project implementation. A list of land uses with potential for development in rock caverns is also appended to the ES.

The CMP enables and facilitates project proponents to search suitable SCVA for potential cavern development. In conducting planning and land development studies for sites with SCVAs nearby, project proponents should duly explore the feasibility of developing caverns for accommodating suitable land uses so as to reduce the surface land-take and create synergy through better integrating cavern development with the surface and subsurface developments (see DEVB TCW No. 8/2017).

7.4 LAND SURVEY INFORMATION

7.4.1 General

The Survey and Mapping Office (SMO) of the survey, mapping and geospatial data agency of the Government. The survey and mapping products of SMO are available to government departments that need them for their projects. The details of SMO products can be found on Lands Department's website below:

<https://www.landsd.gov.hk/en/survey-mapping.html>

7.4.2 Main Survey Control

All surveys are related to the Hong Kong 1980 Grid (HK 1980 Grid) which has its origin at the south-west of the Territory so that all the co-ordinates are positive. All engineering surveys must use the HK 1980 Grid to facilitate inter-relationship between surveys and various existing and proposed works.

The major triangulation system was readjusted in 1980, and co-ordinate values subsequent to this readjustment may be recognised in that the first digit of both easting and northing values is 8. The datum of levels for Hong Kong is known as "Hong Kong Principal Datum" (HKPD). This is related, through tide gauges, to mean sea level and is typically used in engineering surveys. Bench Marks related to HKPD have been established throughout the Territory and these should be used as the origin of level surveys. See DEVB TCW 5/2019 - Preservation of Survey Monuments and Marks for details.

[Caution: Horizontal and vertical survey control marks have been established territory-wide based on the HK 1980 Grid and HKPD by SMO. However, these ground control marks (Triangulation Stations, Main and Minor Traverses and Bench Marks) are at the mercy of rapid territory-wide development. Missing control marks may not be replenished immediately. Therefore, engineering offices and consultants may need to establish necessary control for projects in hand, if control marks have been destroyed.]

The following survey data are available from SMO via the link:
<https://www.geodetic.gov.hk/en/gi/keymaps.htm>.

- (a) Trigonometrical Station
- (b) Traverse Station
- (c) Bench Mark Station
- (d) GPS Control Station
- (e) Satellite Positioning Reference Station

The Steel Band/GNSS/EDM Calibration Baselines information are available from the link:

https://www.geodetic.gov.hk/en/geod_services.htm.

For works in the border areas that would involve cross-border liaison with neighbouring regions such as Shenzhen and Macao, early agreement on the survey control/datum is very important.

7.4.3 Aerial Photographs

SMO is responsible for taking aerial photographs in the territory which is covered by large format vertical and oblique aerial photographs taken from fixed-wing aircraft and supplemented by small format oblique aerial photographs taken from helicopters. These aerial photographs can be enlarged if required.

Whenever weather permits, large format vertical aerial photography will be carried out according to an Aerial Photography Program. Photographs at 1/6000 scale, 1/16000 scale and 1/40000 scale covering the whole territory are usually produced in the winter annually.

Upon request from government departments, small format oblique aerial photography for reconnaissance, progress reports, project publicity, etc. will be carried out. Government departments can also approach the Government Flying Service for using the helicopters to take small format photographs.

In emergency survey cases for landslide, flooding, aircraft crash, etc. large format vertical aerial photographs or small format oblique aerial photographs for subsequent measurement and investigation can be provided.

The indexes of all aerial photographs are available at the website of Hong Kong Map Service 2.0 (HKMS 2.0) below for easy searching. Large format aerial photographs index can also be found on the HKSAR Geospatial Information Hub.

HKMS 2.0: <https://www.hkmapservice.gov.hk/OneStopSystem/home>

The Photogrammetric and Aerial Survey Section (PASS) of SMO employs the aerial photographs and photogrammetric survey techniques to supply digital mapping and digital elevation model data to government departments. Those government departments requesting photogrammetric survey may be required to provide the necessary survey control.

7.4.4 Digital Map

The Digital Map covering the whole Territory is being continuously updated and the map details are represented as points, lines, or polygons. The co-ordinates of the Digital Map are in HK 1980 Grid, and heights are in metres above the HKPD. The data, except for image products can be supplied in Geographic Information System. Major products include:

- (a) iB1000 (1:1000 Digital Topographic Map)
- (b) iB5000 (1:5000 Digital Topographic Map)
- (c) iB10000 (1:10000 Digital Topographic Map)
- (d) iB20000 (1:20000 Digital Topographic Map)
- (e) iC1000 (1:1000 Digital Land Boundary Map)
- (f) iG1000 (Building Name & Address, Site Polygon and Road Centre Line)
- (g) Digital Aerial Photo in TIFF
- (h) Digital Orthophoto DOP5000 Series in TIFF
- (i) GeoCom (Geo-Community Database)
- (j) 3D Spatial Data

[Caution: 1:1000 Digital Topographic Map (iB1000) is the general mapping over the territory prepared to the scale of 1:1000. The ground features shown thereon are

surveyed or digitized from old survey sheets with varying positional accuracies. Works departments and/or their consultants should conduct land survey on site for accurate measurement, instead of deducing measurement using iB1000.]

7.4.5 Paper Maps, Aerial Photographs and Survey Information

Major products include:

- (a) HP1C (1:1000 Large Scale Basic Maps)
- (b) HP5C (1:5000 Medium Scale Derived Map)
- (c) HM50CL (1:50000 Topographic Map)
- (d) HM100CL (1:100000 Topographic Map)
- (e) HM200CL (1:200000 Topographic Map)
- (f) Print and enlargement of Aerial Photograph
- (g) Orthophoto Map Series (OPM50 and OPM100)
- (h) Horizontal and Vertical Control Points
- (i) Survey Record Plans
- (j) Land Boundary Plans
- (k) Lot Index Plans

7.4.6 Request for Survey and Mapping Products

- (a) Open Digital Map

Open Digital Maps mentioned in paragraphs 7.4.4(a) – (j) are available for free browsing and downloading at HKMS 2.0 - (www.hkmapservice.gov.hk). Users can download those Open Digital Maps at HKMS 2.0 free of charge for either commercial or non-commercial use.

- (b) Digital Map (Excluding Open Digital Map)

Officer of the department with a set of completed standard order forms and undertakings which can be downloaded from <https://www.landsd.gov.hk/mapping/en/download/form.htm>.

Departments intending to supply the Digital Map, excluding the Open Digital Map, from SMO to their consultants/contractors must give prior notice to Map Publications Centre/Hong Kong, LandsD to ascertain whether the data within the project areas is available. SMO will then supply the required data to the department upon request. See paragraph 5.4.3 of Chapter 3 of PAH for details. Upon completion of project, the consultants/contractors shall erase all the supplied Digital Map to them and return the duly signed undertakings, which can be downloaded from above reference link, to Map Publications Centre/Hong Kong, LandsD via the Project Officer of the department.

Arrangement has been made for Highways Department, CEDD, Water Supplies Department and Drainage Services Department to supply all types of Digital Map directly to the consultants/contractors working for them. Consultants/contractors of these four departments can download Open Digital Map from HKMS 2.0 or make direct requests for any types of Digital Map via Project Officers to the Survey Division/Section of the respective departments.

(b) Paper Maps, Aerial Photographs and Survey Information

Requests for paper maps and aerial photographs can be made by memo addressed to Map Publications Centre/Hong Kong. Requests for special aerial survey services can be addressed to Senior Land Surveyor/Photogrammetry of the PASS, LandsD (through the Divisional Land Surveyors, if applicable, in respective departments).

The Hong Kong Map Service 2.0 Government Account Users can also order Paper Map Products free of charge. The application form for the Account can be downloaded from below. They may also contact Map Publications Centre/Hong Kong, LandsD for details.

<https://www.hkmapservice.gov.hk/OneStopSystem/form-download>

7.4.7 Enquiries

For enquires regarding Lands Department Digital Map, Paper Map and general matters, please contract Map Publication Centre, Hong Kong.

Tel: 2231 3187

Email: smosale@landsd.gov.hk

7.5 MARINE SURVEY INFORMATION

7.5.1 Marine Survey Data

Whilst the CEDD Survey Division is responsible for the in-house engineering works' sounding surveys. The Hydrographic Office of Marine Department (MDHO) is responsible for bathymetric survey and the production of nautical navigational charts covering the Hong Kong waters.

Other marine related data, comprising:

- (a) pipelines (as shown on charts kept by MDHO);
- (b) cables (as shown on charts kept by MDHO);
- (c) aids to navigation lights and buoys (as shown on charts kept by MDHO);
- (d) marine borrow areas (kept by GEO, CEDD);
- (e) dumping grounds (kept by GEO, CEDD); and
- (f) reclamation records (kept by CEO, CEDD).

Hong Kong nautical paper charts and Electronic Navigational Chart covering the entire Hong Kong waters are available and can be purchased at the MD Headquarters' Shroff Office.

Real-time tide information at eleven locations around Hong Kong waters is available on the MDHO web site (<https://www.hydro.gov.hk>). Past information on tide levels, including records of surge levels during typhoons and current tidal records are also available from the Hong Kong Observatory.

7.6 GEOLOGICAL AND TERRAIN INFORMATION

7.6.1 Geological Survey

Fifteen first edition 1:20000-scale geological maps covering the entire land and sea area of the Hong Kong Special Administrative Region and the accompanying descriptive memoirs are available. Archival data collected during the geological survey, including rock samples, thin sections and photographs can be inspected in the offices of the Hong Kong Geological Survey, GEO.

The 1:20000-scale geological maps are being progressively updated in digital form. Three updated geological maps (Map Sheet 7 - Sha Tin; Map Sheet 11 - Hong Kong and Kowloon; Map Sheet 15 - Hong Kong South and Lamma Island) and accompanying geological reports are currently available. Geological datasets which have been used for the update are available on request to the CGE/Planning, GEO, CEDD.

Two summary memoirs and a set of 1:100000-scale geological and thematic maps that synthesise current interpretations of the geology of Hong Kong are also available. A list of publications, including geological memoirs, geological map sheets and reports, produced by the Hong Kong Geological Survey can be accessed below:

<https://www.cedd.gov.hk/eng/publications/geo/hong-kong-geological-survey/index.html>

Geological maps at 1:5000 scale and accompanying reports for key development areas comprise:

- (a) Yuen Long area - 20 maps and report
- (b) Chek Lap Kok - map and report
- (c) Tsing Yi - 2 maps and report
- (d) North Lantau and Ma Wan - 6 maps and report
- (e) Ma On Shan area - map and report

The geology of the offshore areas was compiled using information from seismic reflection profiling, ground investigation boreholes, geological survey boreholes and seabed grab samples, as well as reports of the offshore surveys. These records, which also include information on the location of offshore sources of sand for reclamation fill, are retained by the offices of the Hong Kong Geological Survey and are available for inspection on request to the CGE/Planning, GEO, CEDD.

7.6.2 Geotechnical Area Studies Programme Reports

The Geotechnical Area Study (GAS) Programme undertaken in the early to mid 1980's by the Planning Division of the GEO provided terrain evaluation and geotechnical information to assist planning, management and engineering feasibility assessment in the Territory on a regional scale.

A series of eleven GAS Reports at 1:20000 scale provides complete coverage of the Territory. A further series of nine GAS District Reports at 1:2500 contains much more detailed terrain information for nine selected areas. These reports have been distributed to relevant Government departments.

The eleven GAS Reports were published for sale to the public in edited form as a series of twelve Geotechnical Area Studies Programme (GASP) Reports. GASP Report XII is a summary compilation of all the information contained in the other eleven reports.

All GAS and GASP reports are available in the Civil Engineering Library of CEDD.

Terrain mapping and engineering geology mapping have been carried out at a scale of 1:5000 for Northern Lantau. The maps and engineering geology study reports are available from the Planning Division of GEO.

7.6.3 Other Geotechnical Information

The Geotechnical Information Unit (GIU) is a part of the Civil Engineering Library of CEDD. The GIU holds a comprehensive collection of geotechnical data from ground investigations throughout the Hong Kong SAR. The GIU comprises Public and Government Sections.

The Public Section of GIU contains factual geotechnical information, including the following:

- (a) ground investigation reports, including geophysical surveys and some groundwater monitoring data;
- (b) reports on laboratory testing of soil and rock and some reports on chemical and biological testing for soils;
- (c) landslip record cards;
- (d) an inventory of boulder fields;
- (e) an inventory of landslides on natural terrain;
- (f) location plans for government slopes and hillside catchments which have been upgraded and mitigated or which are included in current Works contracts under the Landslip Prevention and Mitigation Programme (LPMitP); and
- (g) AGS data for some ground investigation reports and soil and rock laboratory testing reports.

The Government Section contains interpretative geotechnical documents. These documents are accessible by government staff and consultants or personnel employed on government projects.

In addition, the Civil Engineering Library of CEDD contains a comprehensive collection of periodicals, books, conference proceedings, manuals, standards, codes of practice, geotechnical reports, maps and documents submitted to the GEO in support of private developments, and documents produced by or for government departments.

The Geotechnical Information Infrastructure System (GInfo) is a computerised geographic information system platform indexing the geotechnical information available in the GIU. The system enables users to locate documents and ground investigation field work and laboratory test data quickly. It also contains basic information on geotechnical reports and ground investigation stations.

Further details of GIU, including address, service hours and facilities can be found in CEDD's library webpage (<https://www.cedd.gov.hk/eng/public-services-forms/geotechnical/library/index.html>).

The GEO has published a number of reports and publications related to geotechnical engineering in Hong Kong. Copies of these can be obtained from the Publication (Sales) Office of the Information Services Department by individual departments. An updated list of the GEO publications is available from the CEDD's webpage (<https://www.cedd.gov.hk/eng/publications/geo/index.html>).

Further sources of geotechnical information can be found in CEDD's publication webpage.

7.7 TRAFFIC DATA

Traffic data can be obtained from various reports published by the TD, in particular the Annual Traffic Census Reports and the Monthly Traffic and Transport Digests which are available from TD's website. Various traffic data are also available at the website below:
<https://data.gov.hk/en/>

7.8 CEDD DEVELOPMENT STUDIES

A Development Study is a comprehensive feasibility study covering planning, engineering, traffic and transport, environmental, drainage and other related aspects. It also forms a preliminary planning framework with an overall budget and implementation programme. It will provide the overall design criteria and parameters. Sometimes, an integrated Planning and Development Study is carried out jointly by PlanD and CEDD to formulate a comprehensive development proposal for a development area.

7.9 MISCELLANEOUS INFORMATION FROM VARIOUS GOVERNMENT DEPARTMENTS

Useful information can be obtained from various Government departments. For example:

- (a) Records of roads, except for those within Hong Kong International Airport which comes under the jurisdiction of Airport Authority, and highways structures can be obtained from HyD.
- (b) Drainage records, except for those within Airport Area which comes under the jurisdiction of Airport Authority, and plans showing the extents of Drainage Tunnel Protection Areas and Sewerage Tunnel Protection Areas can be obtained from DSD.
- (c) Approved plans showing the road widening lines can be obtained from TD.
- (d) Watermains records and water gathering grounds plans can be obtained from WSD.
- (e) Population data can be obtained from the reports on population projects and distribution compiled and issued annually by the Working Group on Population Distribution Projects headed by Planning Department.

- (f) The project proponent can refer to ecological database managed by the AFCD and other approved EIA reports / Study Briefs / Environmental Permits (accessible from the EIAO Register Office at 27/F, Southorn Centre, 130 Hennessy Road, Wan Chai, Hong Kong; and EPD's EIAO webpage at <https://www.epd.gov.hk/eia/english/register/index.html>) to identify sensitive uses being affected by a proposed project.
- (g) The greening theme and palette of plant species developed under the Greening Master Plans should be obtained from CEDD.

7.10 OTHER GOVERNMENT PUBLICATIONS

Much useful information is contained in Government publications, such as the Hong Kong Annual Report and departmental annual reports. Reports published by the Hong Kong Observatory and the Department of Census and Statistics often contain information relevant to engineering projects.

There are also engineering and study reports which are directly related to engineering projects other than those mentioned in Chapter 2, and these can be broadly grouped into the following categories:

- (a) Regional - this refers mainly to regional feasibility and development studies, e.g. Tseung Kwan O New Town Study, Ma On Shan Transport Study etc.
- (b) Statistical - this refers to statistical and data reports, e.g., Data Report Monitoring of Local Waters and Sewage Characteristics, Traffic and Transport Digest etc.
- (c) Technical - this refers to technical reports on special subjects and design guidelines, e.g. Tuen Mun Sea Wall Report on Concrete Facing Blocks (Dec 84), Deep Excavation Design and Construction (GEO Publication No. 1/2023).

7.11 OTHER SOURCES

Other useful information can be obtained from technical and research reports and publications issued through journals, periodicals, research papers, etc. Enquiries should be addressed to the Technical Secretary of the relevant office.

8. PROGRESS REPORTING & RECORDS

8.1 PROJECT FILE

The project files are designed and used to record the whole of project from conception to its completion/deletion from the PWP. These are official records which should be kept by the office general registry. Where a project is split from a parent item, cross reference should be clearly made in both project files.

8.2 PROJECT HANDBOOK

8.2.1 Purpose

The project handbook is designed to provide a handy reference as to the current status of a project and to the significant events/ procedures that have occurred. With properly updating, the project handbook will serve as:

- (a) a record of the essential procedures undertaken in progressing the project to its current status,
- (b) a reminder of the outstanding procedures that are necessary to bring the project to completion,
- (c) a record of cost estimation and the programme of the works, and
- (d) a dossier of essential information for another officer to take up the project.

The project handbook contains copies of important document, and it is an official record similar to other project files. However, it is normally kept by the project engineer instead of the general registry to facilitate periodical updating.

8.2.2 Contents

Project handbooks should contain only essential information, i.e. those considered as milestones in the life of a project, and must not become a duplicate of the project file. In essence, they should contain the kind of information that an officer would need for a quick understanding of the stage that a project has attained, including the procedures completed and those required to bring the project to completion, and relevant background information on major events and decisions. The following list will serve as a guide to the type of material that should be kept in a typical project handbook, but it should be noted that each handbook should be constructed to serve the needs of the particular project:

- (a) Project Definition Statement,
- (b) Technical Feasibility Statement,
- (c) copies of all PWSC submissions,
- (d) documents related to policy rulings,
- (e) essential information related to land matters (e.g. Chapter 3 para. 5.3),
- (f) statutory and technical submissions, e.g. EIA reports required under the EIAO, GEO Checking Certificate for Slopes and Retaining Walls in accordance with ETWB TCW No. 20/2004, tunnel works design under ETWB TCW No. 15/2005, DIA reports under ETWB TCW No. 2/2006 or TIA reports etc.,
- (g) basis of cost estimates used in PWSC submissions including record of checking of cost estimates,

- (h) changes in the scope of the project with justifications,
- (i) latest programme for the project,
- (j) essential checklists (e.g. Chapter 6 para. 1, Chapter 7 paras. 1 & 2),
- (k) essential drawings,
- (l) review of financial implications for CWRF RAS exercise,
- (m) agreement on the division of maintenance responsibility,
- (n) forecast of recurrent consequences,
- (o) Status of Excavation Permit (XP) and Simplified Temporary Allocation (STLA) applications,
- (p) handing over records of various portions of works,
- (q) list of files, and
- (r) list of contact.

8.2.3 Updating and Checking

A Project handbook should be created when a Project Definition Statement for a project is prepared and should be kept at least until the project is completed and deleted from the PWP.

Project handbooks are normally kept by the project engineer. They should be updated by the project engineer as the need arises, but not less than once every quarter. A project handbook must always be updated whenever the project is transferred from one project engineer to another, or when responsibility for the project is transferred from one office/division to another.

Project handbooks shall be checked quarterly by the relevant chief engineer/senior engineer to ensure that they are properly updated.

8.3 QUARTERLY REPORTS

8.3.1 Quarterly Report on the PWP

Quarterly Report on selected Category A projects of the PWP has been produced using data recorded within the PWPIS. In addition, there is another quarterly report on PWP Projects namely 'Quarterly Report on High Impact Category B PWP Projects'. These reports are presented to works directors, policy secretaries and SFST. The former report will also be routinely distributed to the Financial Secretary and members of LegCo.

An example of Quarterly Report on selected Category A projects of the PWP is shown at Appendix 1.2.

8.4 PROJECT SURVEILLANCE SYSTEM FOR CAPITAL WORKS PROJECTS

DEVB TCW No. 9/2018 promulgates the Project Surveillance System (PSS) for Category A projects under the Capital Works Programme (CWP). The PSS is established based upon the cashflow data of over 600 projects completed in the past 20 years, and has taken into account all the typical characteristics of the projects under the CWP. It is a powerful tool for monitoring project progress and can provide predictive analysis for forecasting the cost and time performance of on-going projects. The PSS is generally applicable to all capital works projects including projects with multiple works contracts, works contracts using NEC, etc.

The objective of the PSS is for facilitating works departments to foresee challenges or potential problems of on-going projects and providing early warning signals to the senior management for necessary early step-in. (see DEVB TCW No. 9/2018).

9. REFERENCES

WBTC No. 2/93	Public Dumps
WBTC No. 2/93B	Public Filling Facilities
WBTC No. 25/93	Control of Visual Impact of Slopes
WBTC No. 14/94	Use of PFA as General Fill in Reclamation
WBTC No. 4/97	Guidelines for Implementing the Policy on Off-site Ecological Mitigation Measures (PELBTC No. 1/97)
WBTC No. 4/98	Use of Public Fill in Reclamation and Earth Filling Projects
WBTC No. 4/98A	Use of Public Fill in Reclamation and Earth Filling Projects
WBTC No. 12/2000	Fill Management
WBTC No. 17/2000	Improvement to the Appearance of Slopes
WBTC No. 25/2000	Resolving Interdepartmental Issues in Relation to Implementation of Public Works Projects
WBTC No. 13/2001	Quality Management System Certification of Consultants and Contractors for Public Works Administered by the Works Group of Departments
WBTC No. 13/2001A	Quality Management System Certification of Consultants and Contractors for Public Works Administered by the Works Group of Departments
WBTC No. 24/2001	Simplified Tendering Arrangement for Capital Works
ETWB TCW No. 29/2002	Geotechnical Control for Slopes and Retaining Walls
ETWB TCW No. 29/2002A	Geotechnical Control for Slopes and Retaining Walls
ETWB TCW No. 19/2003	Review of Preliminary Design Before Proceeding with the Detailed Design
ETWB TCW No. 27/2003	Land Acquisition Prioritization Exercise
ETWB TCW No. 30/2003	Control of Client-Initiated Changes for Capital Works Projects
ETWB TCW No. 4/2004	Checking of Foundation Works in the Scheduled Areas of Northwest New Territories and Ma On Shan and the Designated Area of Northshore Lantau
ETWB TCW No. 20/2004	GEO Checking Certificate for Slopes and Retaining Walls
ETWB TCW No. 36/2004	The Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)
ETWB TCW No. 5/2005	Protection of natural streams/ivers from adverse impacts arising from construction works
ETWB TCW No. 6/2005	Implementation of Systematic Risk Management in Public Works Projects
ETWB TCW No. 8/2005	Aesthetic Design of Ancillary Buildings in Engineering Projects
ETWB TCW No. 15/2005	Geotechnical Control for Tunnel Works

ETWB TCW No. 19/2005	Environmental Management on Construction Sites
ETWB TCW No. 2/2006	Drainage Impact Assessment Process for Public Sector Projects
ETWB TCW No. 4/2006	Delivery of Capital Works Projects
DEVB TCW No. 6/2010	Trip Ticket System for Disposal of Construction & Demolition Materials
DEVB TCW No. 2/2012	Allocation of Space for Quality Greening on Roads
DEVB TCW No. 3/2012	Site Coverage of Greenery for Government Building Projects
DEVB TCW No. 2/2015	Green Government Buildings
DEVB TCW No. 6/2015	Maintenance of Vegetation and Hard Landscape Features
DEVB TCW No. 5/2017	Community Involvement in Planting Works
DEVB TCW No. 8/2017	Rock Cavern Development
DEVB TCW No. 1/2018	Soft Landscape Provisions for Highway Structures
DEVB TCW No. 3/2018	Enhancing Cost Effectiveness of Geotechnical Works of Capital Works Projects
DEVB TCW No. 5/2018	New Policy on Selection, Appointment and Management of Consultants under the Purview of the Engineering and Associated Consultants Selection Board
DEVB TCW No. 9/2018	Project Surveillance System for Capital Works Projects
DEVB TCW No. 1/2019	Railway Protection
DEVB TCW No. 5/2019	Preservation of Survey Monuments and Marks
DEVB TCW No. 4/2020	Tree Preservation
DEVB TCW No. 5/2020	Registration and Preservation of Old and Valuable Trees
DEVB TCW No. 9/2020	Blue-Green Drainage Infrastructure
DEVB TCW No. 2/2021	Adoption of Building Information Modelling for Capital Works Projects in Hong Kong
DEVB TCW No. 8/2021	Building Information Modelling Harmonization Guidelines for Capital Works Projects in Hong Kong
DEVB TCW No. 1/2022	Heritage Impact Assessment Mechanism for Capital Works Projects
<u>DEVB TCW No. 1/2025</u>	<u>Adoption of Building Information Modelling for Capital Works Projects in Hong Kong</u> Amd No. 1/2025
DEVB GC No. 1/2016	Site Search and Site Reservation
FC No. 2/2005	Recurrent Consequences of Capital Projects
FC No. 3/2011	Capital Works Reserve Fund Delegated authorities in respect of block allocations
FC No. 2/2012	Procedures for making changes to the Estimates of the Capital Works Reserve Fund

FC No. 4/2012	Requirements for Project Definition Statement and Technical Feasibility Statement for Capital Works Projects
FC No. 3/2013	Charging Arrangements for Trading Funds
FC No. 4/2017	Optimisation of Site Utilisation for Capital Works Projects
FC No. 7/2017	Capital Works Programme
FC No. 3/2020	Parallel tendering for contracts
FC No. 2/2021	User Guide on the Finance Committee, Establishment Subcommittee and Public Works Subcommittee
GC No. 12/2016	Application of Environmental Legislation to the Government
HPLB & ETWB TCW No. 1/06	Air Ventilation Assessments
HyD TC No. 10/2001	Visibility of Directional Signs
LAO TC No. 715	Streamlined Procedures and Time Frame on Land Resumption and Clearance for Public Works Projects in the New Territories
LAO TC No. 737	Excavation in unleased land other than streets under Land (Miscellaneous Provisions) (Amendment) Ordinance 2003 (LMPAO)
LAO TC No. 737A	Excavation in unleased land other than streets under Land (Miscellaneous Provisions) Ordinance (Cap. 28)
LWBC No. 1/2011	Providing a Barrier-free Environment in Government Premises and Facilities for Persons with Disabilities
ArchSD's memo ref. (34) in ASD TA/MEE/4 V dated 21.7.1992	-
S for W's memo ref. () in WB(CR) 172/59(2002) Pt. 1 dated 8.5.2002	Prudent Project Management
SDEV's memo ref. (3) in L/M in DEVB(CR)(W) 1-106/33 (2009) Pt.1 dated 22.4.2009	Minor Works
DEVB's memo ref. () in DEVB(W) 515/83/04 dated 6.10.2010	Control Measures for Management of Dredged/Excavated Contaminated Sediment
SDEV's memo ref. () in DEVB(W) 400/70/01 dated 25.5.2011	Guidelines for 'Handling of request for compensatory works which are claimed to be fung shui related in implementation of public works projects'
SDEV's memo ref. () in DEVB(W) 400/70/01 dated 28.7.2011	Guidelines for 'Handling of request for compensatory works which are claimed to be fung shui related in implementation of public works projects'
DEVB's email dated 14.10.2014	Timeframe for Resolution of Public Objections

GEO Technical Guidance Note No. 1	Technical Guidance Documents
GEO Technical Guidance Note No. 12	The Designated Area of Northshore Lantau
GEO Technical Guidance Note No. 25	Geotechnical Risk Management for Tunnel Works
GEO Technical Guidance Note No. 26	Supplementary Guidelines for Foundation Design in Areas Underlain by Marble and Marble-bearing Rocks
GEO Publication No. 1/2011	Technical Guidelines on Landscape Treatment for Slopes
GEO Publication No. 1/2023	Deep Excavation Design and Construction
GEO Report No. 138	Guidelines for Natural Terrain Hazard Studies
Geoguide 2	Guide to Site Investigation
ENB SA No. 1/2018	Guidelines on Sustainability Assessment
HyD HQ/GN/015A	Guidelines for Greening Works along Highways
CEDD Publication	https://www.cedd.gov.hk/eng/publications/index.html
DEVB Cyber Manual for Greening	http://devb.host.ccgo.hksarg/en/introduction/index.html
DEVB Greening Guidelines	https://www.greening.gov.hk/en/home/index.html
DEVB Tree Management Guidelines	https://www.greening.gov.hk/en/home/index.html
Handbook on Tree Management	https://www.greening.gov.hk/en/home/index.html
EPD Technical Memorandum on Environmental Impact Assessment Process	https://www.epd.gov.hk/eia/english/legis/index3.html
EPD Professional Persons Environmental Consultative Committee Practice Notes (ProPECCPNs)	https://www.epd.gov.hk/epd/english/resources_pub/publications/pub_propeccpns.html
EPD EIAO Guidance Notes	https://www.epd.gov.hk/eia/english/guid/index.html
EPD Homepage	https://www.epd.gov.hk/epd/
GPA Accommodation Regulations	http://gpa.host.ccgo.hksarg/accommodation-regulations.html
PlanD Hong Kong Planning Standards and Guidelines	https://www.pland.gov.hk/pland_en/tech_doc/hkpsg/index.html
TD Free Publications	https://www.td.gov.hk/en/publications_and_press_releases/publications/free_publications/index.html
Map Publications Centre/Hong Kong, LandsD	https://www.hkmapservice.gov.hk/OneStopSystem/form-download

APPENDICES

APPENDIX 1.1 SPECIMEN EMAIL FOR “SCHEDULE OF ACCOMMODATION” SUBMISSION

From : The subject engineer or an officer of comparable civil service rank
To: Property Vetting Committee (c/o EO/Projects/B, ArchSD) at e-mail address
eo.p.b@archsd.gov.hk
c.c. CE/ST, DSD

Subject: SoA application for 4ND – Tsing Yi Sewage Disposal Plant Stage I

Our ref.: () in XXX XXXX

Dear Sir / Madam,

The target tender invitation date/ PWSC submission date for Item 4ND is in [Month Year]. It comprises the construction of a sewage treatment works and a twin submarine sewage pipeline. The plant is designed to provide primary sedimentation treatment to sewage from the Tsing Yi Development.

2. In accordance with Accommodation Regulations, I attach the technical feasibility statement approved by the Development Bureau (including a proforma on site utilisation assessment issued by GPA per the Financial Circular No. 4/2017) and a draft Schedule of Accommodation concerning the provision of buildings for your vetting and approval. CE/ST, DSD, who will eventually take over the plant for operation, has been consulted.

()
for Chief Engineer/Sewerage Projects
Drainage Services Department

APPENDIX 1.2 QUARTERLY REPORT ON THE PUBLIC WORKS PROGRAMME (For July – September 2002)

Projects under Secretary for Housing, Planning and Lands' Control

Project No.	Project Title		Project Estimate (\$M)	Project Start Date	Project Completion Date	Notes on Progress of Project and variance in project estimate, start date and completion date
7483 CL	Pak Shek Kok reclamation for dumping, stage II	Approved by F.C. Current forecast	246.800 233.183	01/98 02/98	05/01 05/04	The works were 85% completed. The project estimate was reduced due to low tender prices. The start and completion dates were deferred as the priority for the use of public filling material was given to the completion of the adjacent more urgent projects.
7112CL	Peng Chau development, package 3 - design and stage I engineering works	Approved by F.C. Current forecast	135.000 128.191	02/83 02/83	09/02 06/03	Additional reclamation and site formation of land together with the associated roads and drainage works were required. An increase in APE to cover these additional works was approved by FC on 12 May 2000. These additional works are now under construction under Contract No. IS 11/2000 which commenced in September 2000.
7193CL	Peng Chau development, package 4 - engineering works	Approved by F.C. Current forecast	167.300 102.687	02/99 03/99	08/01 02/03	The delay in completion was due to inclement weather and that more time had been taken in the construction of the revetment and utilities diversions. The problem has been resolved. The project estimate was reduced due to lower tender prices.

Secretary for Housing, Planning and Lands (printed by CRS)

Page No. (2) printed (16/10/02)

APPENDIX 1.3 GUIDELINES ON THE PRELIMINARY GEOTECHNICAL APPRAISAL REQUIRED TO BE CARRIED OUT IN THE PREPARATION OF TECHNICAL FEASIBILITY STATEMENTS AND PREPARATION OF OPTIONS UNDER FEASIBILITY STUDIES

1. This Appendix provides guidelines on the preparation of Preliminary Geotechnical Appraisal (PGA) required to be carried out in the preparation of Technical Feasibility Statements (TFSs). It should be read in conjunction with Financial Circular No. 4/2012.
2. In Section 3 of TFS, in addition to the discussion on issues as listed in the Financial Circular, two sets of the latest topographical plans (one of 1:5000 and the other of 1:1000 scale) should normally accompany the PGA. The Hong Kong Metric Grid references and the contours should be clearly shown on the plans. For proposed developments with a few relatively small sites, a set of 1:1000 scale plans showing the areas examined in carrying out the PGA may be sufficient. The boundaries and reference numbers of all existing man-made slope features (i.e. slopes and retaining walls registered in the Slope Catalogue) which could affect or be affected by the proposed project should be marked up on the plans. This will allow the readers to see the slopes/areas to be dealt with in relation to the developments/facilities proposed as part of the project. For proposed developments covering a large area, a key location plan say of 1:5000 scale, with the boundaries of the areas examined in carrying out the PGA and the boundaries of the developments/facilities proposed as part of the project superimposed, should be added.
3. If there is any natural hillside sloping at more than 15 degrees within 100m horizontally upslope of any development/facility proposed as part of the project, the Project Department should indicate the location of such a hillside on the plans. The department should seek GEO's views as to whether a natural terrain landslide and boulder/rock fall hazard study is needed for the hillside under the project. If a study is considered necessary, the GEO will advise the department the area of the natural terrain catchment to be included in the study and to be marked up on the plans.
4. As a conclusion of the PGA, a statement should be included that all existing man-made slope features and natural terrain catchments shown on the plans submitted under Section 3 of the TFS will be studied and necessary slope works and hazard mitigation measures would be carried out as part of the project. A statement should also be given that a geotechnical assessment (GA) will be carried out for the preferred development option at the Study/Investigation/Preliminary Design Stage to define the scope and programme of necessary slope works and hazard mitigation measures to be carried out under the project. The study area for the GA should be indicated on a set of plans submitted under Section 3 of the TFS.
5. In Section 5 of the TFS, adequate allowance should be made in the Project Programme for the GA and any ground investigation and topographical survey works required for slope stability assessment and design of slope works and hazard mitigation measures.
6. In Section 6 of the TFS, adequate funding provision should be allowed for in the Capital Cost Estimates for the GA and any necessary ground investigation and topographical survey works required, as well as for the geotechnical works.

7. In preparing the PGA for projects involving tunnel works and in undertaking any supporting engineering feasibility studies (EFS), the project office or its consultants shall consult the Hong Kong Geological Survey through CGE/Planning of the GEO to obtain general geological advice, especially on identification of geological features. The EFS and the PGA of the project should cover geotechnical considerations such as identification of problematic ground, formulation of preliminary ground models including the hydrogeological models, and preliminary assessment of geotechnical risks (both during construction and in the long-term when the facility is operating). The project office shall conduct a risk assessment to determine whether the proposed tunnel works under the project would pose a significant risk to public life and property and include in the EFS and PGA the possible scope and extent of site investigations and geotechnical studies required to reduce uncertainties and risks. (Requests for geotechnical advice/assistance, including that on the engineering feasibility study, if required, should be directed to CGE/Geotechnical Projects of the GEO). The project office shall consult the GEO, take into account GEO's response in finalising these documents and submit a copy of the final versions to the GEO. (See ETWB TCW No. 15/2005).
8. Rock excavation by blasting can adversely affect the stability of nearby geotechnical features (such as slopes, retaining walls, boulders, tunnels, caverns, etc.) and the integrity of nearby buildings, structures, railways and utility services in the vicinity through ground vibrations and other effects such as fly rock and air-overpressure. The transport, storage and use of explosives for blasting also pose a safety hazard to the public. The project office shall ensure that adequate and necessary protective and precautionary measures will be provided to prevent the works from causing injury to workers and the public, significant disruption to traffic, undue vibration and movement to existing structures and services, or any other nuisance to the public.

The PGA should, therefore, assess whether blasting for rock excavation will be required, and if so, identify the key potential hazards and sensitive receivers, and the major constraints relevant to the transport, storage and use of explosives for the proposed blasting works. It should also include the possible scope and extent of investigations and geotechnical studies required to reduce uncertainties and risks, and to demonstrate the practicability of satisfying any constraints identified. The project office should consult the GEO and incorporate their comments in finalising the PGA and the TFS.

APPENDIX 1.4 INTRODUCTION TO VALUE MANAGEMENT AND GUIDELINES ON IMPLEMENTATION ISSUES (Subsumed from ETWB TCW No. 35/2002)

Purpose

1. This set of guidelines provides guidance to departments in the implementation of value management.

Value management

2. VM is an organized methodology applied to the analysis of functions, components, goods and services, from the point of view of the system as a whole, to satisfy the required functions of the project at the lowest total cost without compromising quality and standard of performance.
3. The most fundamental ingredients to the VM study is the examination of 'function' on a system basis. This characterizes VM and differentiates it from other project management tools.
4. Typically, the VM process involves the holding of VM workshops. A VM workshop is a tool which can be used to improve the definition of capital works projects, such as for the derivation of a Project Definition Statement or the preparation of a feasibility study report. Alternatively it can also be employed in a specific manner, like comparing design options, evaluating construction methods, choosing sites, deciding on access points etc. Contrary to common belief, a VM workshop can often be most useful when it appears that the problem encountered seems insurmountable or when the difference in opinion sounds irreconcilable.

Value management workshop

5. Some of the most well known definitions of VM are:

"Structured and analytical process which seeks to achieve value for money by providing all the necessary functions at the lowest total cost consistent with required levels of quality and performance."

– Australian/New Zealand Standard for Value Management, AS/NZS 4183:1994

"A structured process of dialogue and debate among a team of designers and decision makers during an intense short-term conference"; and

"The primary objective of value management is to develop a common understanding of the design problem, identify explicitly the design objectives and synthesize a group of consensus about the comparative methods of alternative course of action."

*– Dr. S.D.Green
University of Reading, U.K.*

6. Based on the above, the key elements of a VM workshop are:
 - well structured with set goals and objectives;
 - multi-disciplinary, professional and specialist input;
 - professionally facilitated;
 - shared understanding;
 - group decision and evaluation to create innovative solutions; and
 - ownership and commitment.
7. At first sight, a VM workshop might appear to be costly and time consuming, costing some 20-50 professional-days on top of approximately \$100,000 fees for the professional facilitator for a two-day workshop. However in the long run, these costs have proven to be well spent in terms of:
 - updating standards, criteria and objectives;
 - promoting innovation;
 - optimizing resources;
 - eliminating unnecessary items and costs;
 - finding solutions that best fit the project objectives;
 - breaking dead-lock situations;
 - saving time; and
 - ensuring ownership and commitment by all parties.
8. VM should however be understood as a tool and not a panacea. Therefore, it can co-exist with and supplement other management tools like cost planning, cost engineering, quality assurance, project auditing, process re-engineering, partitioning, risk management etc. It should best be seen as a useful tool in our overall assets management functions (in this case the delivery of PWP items).

Key Success Factors

9. One of the critical factors for a successful VM study is the commitment of those involved. A VM team should comprise a disparate group of representatives from the client (policy bureaux and/or client departments), works agents (works departments and/or consultants), enabling agencies (e.g. PlanD, EPD and/or DLO), specialist consultant and other stakeholders. A typical size of 15 to 20 people should be able to achieve the appropriate multi-stakeholder and multi-disciplinary representation on a major project. Two points need to be noted though. Firstly, it is essential to invite the correct level of representatives who can make both contributions with authority and recommendations with credibility. Secondly, representative of the right bureau/department must be secured. In particular, the participation of the representatives of policy bureaux could bring about a significant benefit in refining or redefining the project objectives. Also, enabling departments like PlanD, LandsD and EPD's representatives usually have an irreplaceable role to play in providing input in respect of their own individual areas.
10. Adequate support from top management must be obtained before commencing any VM study. Otherwise, should the findings and recommendations from a VM study is later to be vetoed by the top management of any individual party, the credibility of future VM workshops will be lost.

11. Thorough planning, good facilitation and also proper follow up actions are vital to the success of VM studies. These are further elaborated in paragraphs 12 to 27 below.

Criteria of conducting VM workshops

12. Costs and benefits are the prime considerations. With experience gained over the years in applying VM, the departments should by now have a better feel of the costs and benefits of VM workshops. Since the benefits are mostly project specific, the project department is best placed to evaluate whether there would be net benefits and to decide whether a VM workshop should be conducted.

13. In general VM studies shall be conducted whenever it is perceived that there are likely to be net benefits. In view of the commonly accepted fact that there should be net benefits for major projects and the relatively small cost of a VM workshop, departments should consider the suitability of conducting VM workshops for every major and complex project. It should be noted that net benefits (which may be in terms of time, cost or quality of solution) is the key consideration rather than the mere size of a project. For this purpose, a major project means one having an estimated project cost exceeding \$200 million.

14. With departments' recognition of the benefits of VM studies and the comparatively small cost of a VM workshop, it is expected that there would be a marked increase in the number of VM studies to be carried out. Departments should plan ahead and draw up yearly plans on the application of VM.

The form and duration of VM workshops

15. The typical duration of a VM workshop from commencement, pre-workshop, workshop to conclusion is about 6 weeks to 4 months. The actual workshop itself varies according to its purpose and could range between one and five days. From the experience in its application to PWP projects, a VM workshop usually lasts between one and two days.

16. There is no single preferred form. Workshops of longer duration allow more time for in-depth studies of the issues. They may, however, tend to discourage senior personnel of the stakeholders from attending. Departments may consider a two-stage approach with officers having in-depth knowledge making recommendations in the first stage and senior officers attending the second stage to ratify the recommendations. The choice of the form of a VM workshop depends on the particular needs of a project. It is up to a project team to select one which best suits its needs.

17. Alternatively, departments may consider applying a shortened VM study to small scale projects. Similarly, a shortened VM study may be employed for the purpose of resolving specific problems or less complex issues.

Timing of conducting VM workshops

18. VM studies can be conducted at any stage during the life cycle of a project. Obviously, there can be more than one study for a project. However, the most benefits would be derived if they are conducted as early as possible in the process.

19. For a complex project, a feasibility study is likely to be required before preparation of a Technical Feasibility Statement (TFS). The feasibility study stage is the time when issues are to be identified, ideas generated, options selected and priorities set. The most benefits of a VM study will therefore be derived if it is conducted at this stage. In those situations where a project steering group is to be set up for a proposal, it would be useful to turn the first "meeting" into a VM workshop, and logically to task the project steering group to follow up the recommendations and conclusions of the VM study.

20. For a less complex project which does not require a feasibility study before the preparation of a TFS, the four-month period and the no-consultancy support requirements for the TFS make it difficult for a VM study to be conducted within the same period. Since the project requirements for such projects are likely to be more straight forward, VM studies could be deferred to the earlier parts of the subsequent preliminary design stage. A VM study is still useful at this stage as it serves to refine or redefine requirements and to confirm the selected option.

Facilitation of a VM Workshop

21. The job plan for a VM workshop usually comprises five phases:

- information phase;
- analysis phase;
- creativity phase;
- judgement phase; and
- development phase.

22. A good VM facilitator will ensure the steering of the workshop team effectively through these phases. The choice of the facilitator will therefore be of fundamental importance to a successful study. In terms of practical qualifications, the facilitator should have:

- group management skills;
- communication skills;
- analytical skills;
- interpretation skills;
- questioning skills; and
- lateral thinking skills.

23. The Hong Kong Institute of Value Management (HKIVM) will update from time to time the Value Management Facilitators List on the HKIVM's website (<https://hkivm.org/facilitators/>). Departments are at their discretion to choose the most suitable facilitators from the Value Management Facilitators List on the HKIVM's website or other sources. The experience and qualification of the candidates should be taken into account in choosing facilitators, particularly for those not included on the Value Management Facilitators List.

24. In general, the employment of a facilitator not from the project department is preferred as a clear signal of independency. A drawback is that these external facilitators may not appreciate the implications of complex technical issues. This can be overcome by a pre-briefing by the project team. The employment of an internal co-

facilitator can also help discussions under these circumstances and is encouraged for major projects and complex issues. Internal co-facilitation is also useful in providing experience and training to in-house officers toward the goal in becoming future VM manager or facilitators.

25. With more and more in-house officers trained to become facilitators, the employment of "external" facilitators from another department could be considered. Departments should avoid relying solely on internal facilitators for major projects and complex issues.

Follow-up actions after VM workshops

26. Follow-up actions mainly focus on how to ensure the implementation of an action plan which has been concluded in the last phase (i.e. development phase) of the VM workshop. The VM facilitator should prepare a report immediately after the workshop with the following items:

- study background,
- study findings,
- refined or redefined project rationale and objectives,
- summary outlines of key functions, with implications in terms of project scope, programme and cost,
- descriptions of value improvement options with implications,
- outline of action plan, and
- other information as necessary in relation to the action plan.

27. Departments should set up their own procedures to monitor the progress of implementing the action plan. This is particularly relevant in order to ensure the realization of the perceived benefits. Departments have so far been unable to quantify the benefits derived from VM studies. It is recognized that some of the benefits are intangible and that it is not easy to put a percentage saving against them. In cases where it is possible to quantify the benefits, such as redefining project objectives through VM studies, it is useful to have a measure of the benefits in terms of percentage saving of the construction cost. In such cases, departments are advised to consider incorporating into the action plan some systems for measuring cost benefits.

Training of officers

28. In formulating their training plans, departments should be aware that there are two levels of training: to run workshops more effectively and also to be facilitators and co-facilitators. As mentioned in paragraph 24, co-facilitation by an in-house officer provides valuable experience and training opportunities. Departments should maintain a list of officers who are qualified to act as a facilitator or co-facilitator.

Report on the use of VM facilitators

29. To provide a reference for project teams in selecting facilitators, project teams shall compile a report for every VM study and departments shall maintain a referencing system. The reporting and referencing system shall work as follows: -

- (i) Each department appoints a coordinator who will handle all reporting matters within the department.**
- (ii) Each project team submits to the departmental coordinator a report on the use of VM facilitator in a standard format as in Annex A within 28 days after each VM workshop.**
- (iii) When there is a need to obtain background information on a candidate, a project team can approach the coordinator of its own department to check whether the candidate has acted as a facilitator and, if necessary, ask the departmental coordinator concerned for a copy of the report.**
- (iv) If required, the project team may approach the relevant departmental coordinator or the contact persons for particular reports for further details about the VM workshops conducted and the facilitators employed.**

Annex A - Report on use of value management facilitator

- (1) **Department:** _____
- (2) **PWP No. or any other relevant reference no. (e.g. Block vote no. or contract no.):** _____
- (3) **Project Title:** _____

- (4) **Brief description and stage of project:** _____

- (5) **Name of value management facilitator :** _____
- (6) **Qualification and experience of facilitator:** _____

- (7) **Name of co-facilitator (if any)** _____
- (8) **Value management workshop held on:** _____
- (9) **Duration of workshop:** _____
- (10) **Cost of facilitator (including travel and other expenses, if applicable):** _____
- (11) **Cost of venue:** _____
- (12) **Contact details:**
Name : _____
Designation: _____
Telephone No.: _____

APPENDIX 1.5 TIMEFRAME FOR RESOLUTION OF PUBLIC OBJECTIONS **(Ref.: ETWB TCW No. 4/2006 and DEVB's email on 14.10.2014)**

Purpose

This note promulgates further guidelines in respect of the timeframe for resolution of public objections with a view to expediting project delivery. It should be read in conjunction with paragraphs 16 - 18 of ETWB TCW No. 4/2006.

Guidelines

2. Works Departments (WDs) are required to step up control and monitoring procedures for resolution of public objections. In this connection, the steering group (SG) to be set up, as required in paragraph 18 of the ETWB TCW No. 4/2006, should be chaired by an officer at D2 instead of D1 level.
3. If all the objections cannot be resolved and the ExCo paper cannot be submitted to the Clerk to ExCo within the first 4 months after expiry of the objection period, the SG may extend the objection resolution period to 7 months.
4. Further extension of the objection resolution period from 7 months to the full period of 9 months as allowed in the relevant ordinance is subject to the agreement of the Director. It should only be considered under very special circumstances or in case of exceptional complicated objections.
5. WDs should note that the above 4-month, 7-month and 9-month periods are counted from the expiry date of the objection period to the date of submission of the ExCo paper to the ExCo Clerk. These time periods are inclusive of the time required by the respective enabling bureaux/department (i.e. EEB, TLB and LandsD) to process the draft ExCo paper. The normal processing time is 40 working days for EEB, 8 weeks for both TLB and LandsD (or 5 weeks for LandsD with their prior agreement in respect of exceptional cases).
6. A pragmatic approach with flexibility should be adopted in seeking agreement to extend the time for objection resolution. The SG may determine the most appropriate time to seek the Director's agreement for extending the objection resolution period. Upon receipt of the Director's agreement to the time extension, the SG should forward a copy to DEVB(WB) for information.

DEVB (WB)
October 2014

APPENDIX 1.6 GUIDELINES FOR HANDLING OF REQUEST FOR COMPENSATORY WORKS WHICH ARE CLAIMED TO BE FUNG SHUI RELATED IN IMPLEMENTATION OF PUBLIC WORKS PROJECTS

1.0 Purpose

1.1 This Note summarises the current situation of the issues involved, sets out policy and proposes guidelines and procedures to handle requests for compensatory works which are claimed to be fung shui related in implementation of public works projects¹.

2.0 Background

2.1 In undertaking public works projects, affected indigenous villages in the New Territories may demand the payment of Tun Fu (薨符) ex-gratia allowance for the purpose of conducting Tun Fu ceremony to mitigate the adverse impact of fung shui and ex-gratia allowances for clearance of graves, kam taps (金塔) and shrines. There are established procedural guidelines of Lands Department (LandsD) in handling such claims.

2.2 There are also cases where affected local communities (not necessarily limited to indigenous villages of the New Territories) may demand the execution of certain works which they consider would mitigate the negative impact brought by the public works projects. Sometimes such works requested by the local communities are considered by them as related to fung shui. For the purpose of this note, these works are called ‘compensatory works’ to distinguish them from the two ex-gratia allowances mentioned in para. 2.1 above.

3.0 Policy to handle local concern

3.1 Public consultation to ascertain the local concern

3.1.1 Relevant policy bureau, client department and works department are required to consult the affected local residents on the details of their projects to accommodate different needs and to address local concerns during project planning and conceptualisation.

3.1.2 For large or complicated projects, a well structured and comprehensive public consultation and/or engagement programme is the foundation to consensus building and is critical to the smooth implementation of a project.

¹ Technical advice should be given to subvented projects under Head 708 to follow the principles of this guideline in handling requests for compensatory works which are claimed to be fung shui related.

3.2 Ex-gratia allowances related to fung shui claims

3.2.1 There are two types of ex-gratia allowances related to fung shui claims. These are ex-gratia allowance for Tun Fu ceremonial fees and ex-gratia allowances for clearance of graves, kam taps and shrines payable to indigenous villages affected by the public works projects. These are managed under an established system administered by LandsD in accordance with established guidelines for processing and approval of the claims.

3.3 Compensatory works requested by the local communities which are claimed to be fung shui related

3.3.1 In planning public works projects, works departments will seek to protect the local environment, greening as well as culture and history of the communities, so as to minimise impacts on surrounding environment and local communities. The community facilities affected by the works will be reprovided as far as possible. Works departments follow the same principle in implementing public works projects in both urban and rural areas.

3.3.2 However, there may be cases where the works will cause unavoidable adverse impact or inconvenience to the neighbourhood. In such cases, to ensure smooth implementation of the projects as well as to address the concerns of the residents and to maintain a harmonious relationship with them, certain community facilities may be provided or the existing ones to be improved to alleviate the adverse impact of the public works projects.

3.3.3 Sometimes, residents may claim that these compensatory works are related to fung shui. However, fung shui is actually not a consideration of the departments when these requests are being handled.

3.3.4 It must be stressed that each case has to be considered in the light of its particular circumstances. Throughout the process, the client department, closely supported by the works department, LandsD and relevant District Office, shall discuss the details of the proposed compensatory works with the local community to work out a reasonable solution acceptable to all. The District Office concerned would arrange for and facilitate the liaison, consultation and assessment of local sentiments as necessary. And where applicable, relevant District Office would provide supplement on community, cultural and historical issues relating to the compensatory works.

3.3.5 The guidelines and procedures to handle requests for compensatory works which are claimed to be fung shui related are set out in Annex.

Works Branch

Development Bureau

May 2011

Annex

**Handling of requests for compensatory works
which are claimed to be fung shui related
in implementation of public works projects**

Guidelines and procedures

1.0 General

1.1 This Annex provides guidelines and procedures on the handling of requests for compensatory works in which affected local communities may claim that their fung shui are affected by the public works projects, and demand the execution of certain works which they consider would mitigate the negative impact.

2.0 Addressing requests for compensatory works which are claimed to be fung shui related by the local communities

2.1 Requests from local communities for compensatory works normally relate to a unique location with its own environmental setting, natural terrain, local character, culture or historical background. As these are all intangible elements, each case should be considered on its own merits and would inevitably involve subjective value judgment. There is no quantifiable standard in deciding the intangible benefits of such claims, but in general, due consideration will need to be given to the natural environment, existing traffic/ pedestrian circulation and access pattern, local tradition, social character, and cultural history of the area in which the works are to be carried out, and a judgement will need to be made on whether the works will facilitate smooth implementation of the projects, bring any benefit or improvement to the neighbouring community, and the financial implications are justifiable and reasonable.

2.2 The need to protect the natural environment and promote greening is important. It is also vital to consider the perception of the local community, including any socio-economical activities that may be affected. As the assessment of the compensatory works will inevitably deal with intangible issues and involve subjective judgement, local consultation by the client department, closely supported by the works department, LandsD and relevant District Office, shall be carried out at an early stage to tap the views of the affected local residents. The requirements of any compensatory works identified at the early stage shall be included into the scope of the respective project.

3.0 Assessment procedures

3.1 Currently, for projects involving significant or a large number of compensatory works, LandsD, relevant District Office and works department will on a need basis form a working group to handle requests for the compensatory works.

3.2 To regularise this arrangement, on receiving any request for compensatory works which is claimed to be fung shui related, LandsD, being the convenor, shall co-ordinate with the relevant client department, works department and District Office and decide to

set up an interdepartmental working group (IWG) to consider, process and make recommendation on the requests for compensatory works in a structured manner as follows : --

- (i) Ensure that all claimed items must be originated from local communities being affected by the public works project.
- (ii) Require the claimant to give an account on how they think the public works project would affect them.
- (iii) Require the claimant to provide information and explanation on how the proposed compensatory works can help minimise the adverse effect brought about by the works and hence give positive results to the affected local community.
- (iv) Each claim and the proposed compensatory works will be assessed on its own merit. Before such proposed compensatory works are accepted in principle for further study, ensure that the amount and value of compensatory works are, prima facie, commensurate with the negative impact caused by the particular public works project.
- (v) If the proposed compensatory works are accepted in principle for further study, the IWG shall consider whether the proposed works will facilitate implementation of the projects, bring any benefit or improvement to the neighbouring community, and whether the surrounding environment, greening effect as well as the character, culture or tradition of the area can be preserved or enhanced, and whether the financial implications are justifiable and reasonable. The related works will also be passed to works department for further studies including the exploration of technical feasibility of the proposed works, identifying funding source, addressing land issues, programme of the works, procurement strategy, and also maintenance and management of the facilities after completion.
- (vi) Notices may be posted in parallel to seek the views of the local residents to facilitate the IWG to assess whether the proposed works will bring any benefit or improvement to the neighbouring community. Other detail arrangement concerning posting of notices and how to collect views from the local residents will be worked out and decided by the IWG depending on the particular circumstances of each individual case.
- (vii) Based on the findings of the works department on the technical feasibility and assessment of the compensatory works as detailed in item (v) above, and also taking into account views sought in item (vi), the IWG will decide whether the requests for compensatory works shall be recommended for the approval by the Vote Controller of the funding source for the compensatory works.
- (viii) With approval by the Vote Controller or his/her representative, the works department will implement the compensatory works in strict compliance with established administrative rules including funding control and tendering procedures under Stores and Procurement Regulations. If the requested compensatory works is a stand-alone project to be carried out separately from

the public works project concerned, the funding requirements of such compensatory works will need to be sought in accordance with the established procedures for resources allocation.

3.3 In case consensus cannot be reached, the IWG shall seek the steer of the responsible policy bureau of the public works project concerned.

3.4 The works departments and LandsD shall keep records of all the cases processed by the IWG set up under respective public works projects. The record would serve as internal reference in handling similar cases in the future to ensure consistency in the recommendations made by different IWGs.

3.5 If the claimant only requests for the two ex-gratia allowances as stated in para. 3.2 of the Note, setting up of the IWG is not required as there are already established procedures and guidelines under LandsD to deal with the matter.

3.6 A flowchart for assessment of compensatory works is at Appendix A. An outline of the Terms of Reference for the IWG is at Appendix B.

4.0 Assessment guidelines

4.1 Preserving or restoring the environment in its original state shall be considered as far as practicable to avoid any adverse impact that may be caused.

4.2 However, if owing to site constraints and other factors, preservation or restoration is not feasible and changes to the local environment is unavoidable, this must be fully justified with alternative options or design proposals, to confirm the impracticability of preservation or restoration and to explore other possible solutions to the problem. The alternative options will be presented to the IWG to facilitate consideration of the proposed compensatory works. The alternative options can also be used for local consultation.

4.3 The recommended option endorsed by the IWG should facilitate smooth implementation of the public works project, and balance the interest of preserving the natural environment, local tradition, social character and cultural history of the area. The local sentiment against the compensatory works, if any, the benefit that it may bring to the community, and reasonableness of the financial implications of such works should also be considered as a whole.

4.4 An assessment template containing the information submitted by the claimant together with assessment of the works departments is at Appendix C for easy reference.

4.5 More project specific and detailed assessment criteria can be developed by the working group to suit particular project need before processing the requests received.

5.0 Design and implementation of compensatory works

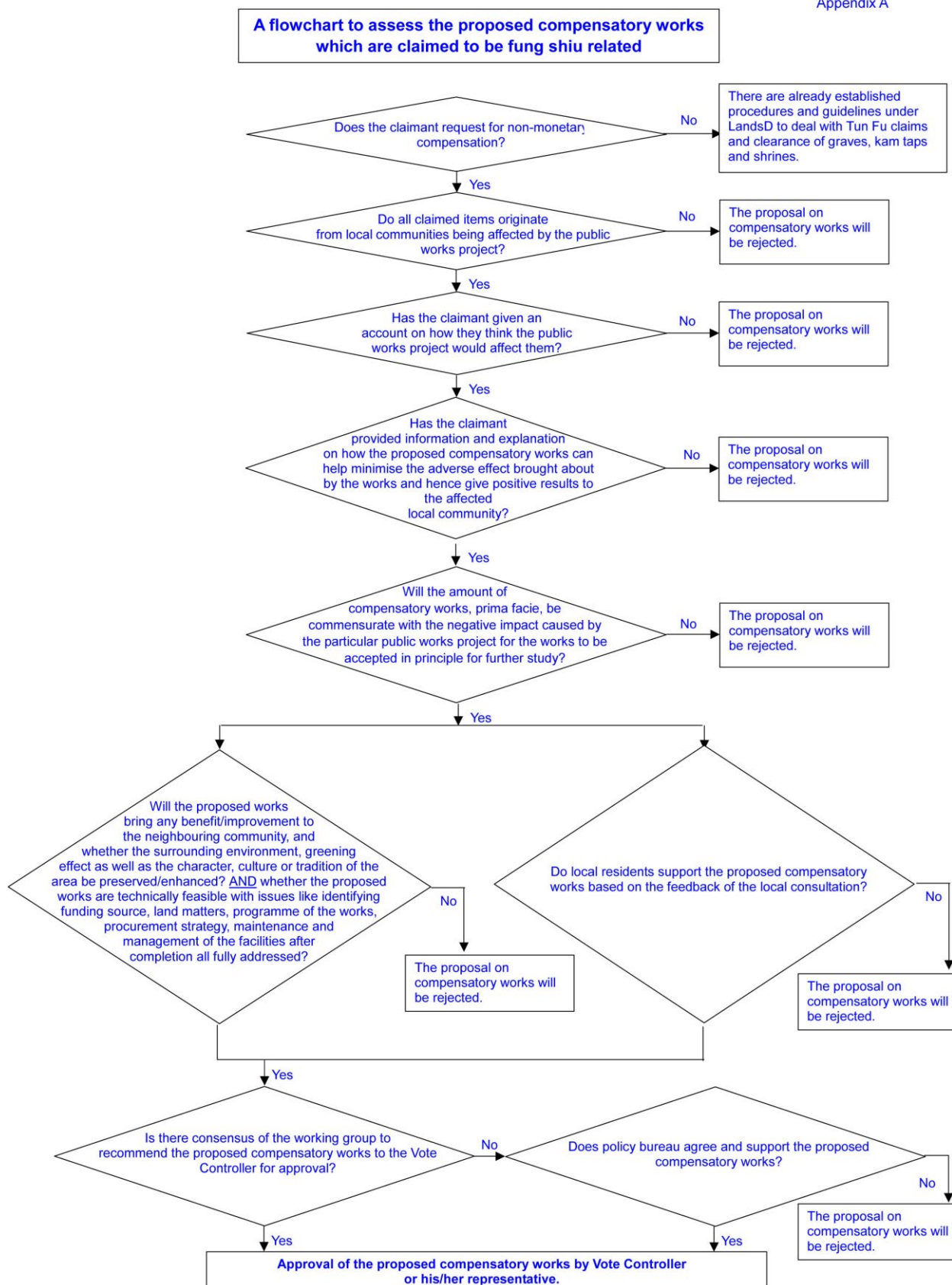
5.1 Design of the compensatory works, including layout, external treatments, colour, texture and choice of materials shall be worked out with consultation of the affected

residents to ensure compatibility with the local environment and its being conducive to the style, character, local tradition, social environment, and cultural history of the area.

5.2 A practical programme, funding proposal, procurement strategy, and a maintenance and management plan for the recommended compensatory works shall also be provided by the works department as part of the assessment by the IWG.

5.3 Established financial control, project delivery, contract administration and tendering procedures shall be followed when the compensatory works are implemented. In particular, Government procurement principles of open and fair competition for the best value of money shall be adhered to. Works Department will be responsible for preparing the tender documents and tender assessment. Under no circumstances shall the claimants be involved in the tendering process to avoid the risk of collusion.

~~~~~



**Appendix B**

**Inter-departmental Working Group (IWG)**  
**to handle requests for compensatory works which are claimed to be fung shui related in**  
**implementation of public works projects**

**Terms of Reference**

1. To closely liaise between the departments concerned on the handling of requests for compensatory works which are claimed to be fung shui related in implementation of public works projects.
2. To consider, assess and make a recommendation to the Vote Controller for approval of the proposed compensatory works.
3. To keep records and handle enquiries of all the cases processed by the IWG and make such information available for future reference.
4. To refer unresolved matters to the relevant policy bureau to make a decision on the recommendation for the proposed compensatory works for the Vote Controller's approval.

**Appendix C**

To: Vote Controller

via Working Group<sup>1</sup> on [XXXX]

Assessment on proposed compensatory works for  
*(project title)*

As requested by the Working Group on [XXXX], we have completed the assessment on the proposed compensatory works for [project title]. The key findings are set out below --

**1. Project scope and description**

*(Describe the project scope, and attach the outline layout plan indicating the local community being affected by the project and the location of the proposed compensatory works.)*

**2. Compensatory works proposed by the claimant<sup>2</sup>**

The claimant proposes the following works to be carried out --

*(Describe the details of the proposed compensatory works with drawings as necessary.)*

**3. Benefit of the proposed compensatory works as submitted by the claimant<sup>3</sup>**

According to the submission from the claimant, the proposed compensatory works will bring the following benefits --

*(Provide details of the benefit of the proposed compensatory works that may bring to the neighbouring community as submitted by the claimant.)*

Assessment of the information submitted by the claimant is provided in detail in para. 11.

**4. Assessment on the proposed compensatory works<sup>4</sup>**

*(Describe the details of the effect of the proposed compensatory works on the environment based on the assessment criteria (as endorsed by the working group) as follows --*

---

<sup>1</sup> Membership of the working group comprises Lands D as the convenor, together with the relevant works department, client department and District Office.

<sup>2</sup> Details under para 2 is based on the information provided by the claimant.

<sup>3</sup> Details under para 3 is based on the information provided by the claimant. Assessment is provided in para 11.

<sup>4</sup> Details under para 4 are the assessment by works department based on the assessment criteria endorsed by the working group.

- (i) *Location and distance between the local community claimed to be affected and the public works project concerned.*
- (ii) *Location, distance and numbers of the proposed compensatory works and their relation with the affected local community, such as proximity with the residential sites, burial grounds or other areas/facilities with local significance.*
- (iii) *Whether the proposed compensatory works can help facilitate smooth implementation of the project.*
- (iv) *Whether and how the proposed compensatory works can enhance the character and distinctiveness of the area.*
- (v) *Whether and how the proposed compensatory works can help to address local sentiment arising out of the change in the natural environment, local tradition, social character and cultural history of the area resulting from the project.*
- (vi) *Effects on any areas with acknowledged special interests/values or with special local significance.*
- (vii) *Whether the proposed compensatory works involve constructing, removing and rebuilding, improving, repairing and refurbishing any special features which may contribute to the significant style, character, existing traffic/pedestrian circulation and access pattern, local tradition, social environs, and cultural history of the area.*
- (viii) *Whether the cost of the proposed compensatory works are justifiable and reasonable.*

*Note: More project specific assessment criteria can be included (such as the request of particular groups of residents) to give a comprehensive view to facilitate the assessment.)*

## **5. Alternative options**

*(State whether preserving or restoring the environment in its original state is possible. Set out alternative options or design proposals to confirm the impracticability of preservation or restoration and to explore other possible solutions to the problem.)*

## **6. Land Requirements**

*(State the implications of the compensatory works from a land perspective, including availability, location, present zoning and whether planning permission/amendment to the existing zoning is required.)*

**7. Local consultation**

*(In consultation with the relevant District Office, state the following -*

- (i) Describe the local consultation process with dates and state the key points of concern raised by the local community, if any.*
- (ii) Whether the proposed compensatory works are supported by the local community.)*
- (iii) Assessment on local reaction if the proposed compensatory works are rejected.*

**8. Project Programme and procurement strategy**

*(Attach the implementation programme barchart for the proposed compensatory works.)*

*(Describe the procurement strategy on how the proposed compensatory works would be implemented.)*

**9. Capital Cost Estimate**

*(State a rough order of cost as follows.)*

- (a) The preliminary cost estimate is \$[ ] at September [ ] price level to be funded under [state the source of funding.]*
- (b) A rough breakdown of the capital cost estimate is as follows –*

|                           |            |
|---------------------------|------------|
|                           | \$ million |
|                           | (MOD)      |
| Design & Related Services | XXX        |
| Resident Site Staff       | XXX        |
| Site Investigation        | XXX        |
| Building works            | XXX        |
| Contingencies             | XXX        |
| Total                     | XXX        |

- (c) The annual cash flow is as follows –*

|                |            |
|----------------|------------|
| Financial Year | \$ million |
|                | (MOD)      |
| e.g. 20XX-XX   | XXX        |
| 20XX-XX        | XXX        |
| 20XX-XX        | XXX        |
| Total          | XXX        |

**10. Maintenance and management responsibilities**

*(State the detailed arrangement of the maintenance and management responsibilities. State the source/detailed arrangement of funding of recurrent costs, if applicable.)*

**11. Overall assessment**

*(State whether on balance, the proposed compensatory works are effective in resolving the negative impact caused by the works project as claimed. And state whether the works are recommended for approval by the Vote Controller.)*

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Works Department
[Month Year]

c.c. Policy Bureau

APPENDIX 1.7 MARKET RESEARCH GUIDELINES FOR PUBLIC WORKS PROCUREMENT

(Ref: SPR 350(e) and FAQ for Procurement Matters)

1. Purpose

- 1.1 In general, the purpose of market search is to provide procuring departments with relevant, accurate, reliable, valid and current information for conducting a procurement exercise.**
- 1.2 Market research and analysis helps procuring departments to better understand the services likely to be available in the market, technology trends, number of potential bidders, etc. to determine project delivery strategy and tendering strategy.**

2. Need to conduct market research

- 2.1 Procuring departments may conduct market research to (i) determine project delivery strategy and (ii) tendering strategy.**
- 2.2 At project planning and design stage, procuring departments may conduct market research to acquire information to determine the mode of procurement. Better understanding of the market allows procuring departments to make informed decision for design options, works implementation programme, cost estimates and procurement method.**
- 2.3 In preparation of the tender specification, procuring departments should ensure an adequate number of potential tenderers satisfying the minimum requirements stipulated in the tender so as to maintain sufficient competition. In particular, market research should be conducted to identify reasons of low response rate of previous tenders of similar nature. An appropriate balance should also be struck against the acquired quality level of the service, the associated cost of the services and the competition.**

3. Ways to conduct market research

- 3.1 There are many ways to obtain information about the market. Departments may decide the appropriate ways of conducting market research to suit specific needs of the project. The following sample avenues are not meant to be exhaustive :**
 - Desktop study via internet research**
 - Experience from previous procurement of similar nature**
 - Public works procurement data from Public Works Programme Information System, Contractor Management Information System, Public Works Manpower Estimation System, Public Works Programme Construction Site Safety and Environmental Statistics System, relevant tender boards and consultants selection boards etc.**
 - Market research exercise from relevant stakeholders such as trade associations**

and professional bodies

- 3.2 Departments may also make reference to Section V of “Frequently Asked Questions for Procurement Matters” published by GLD in conducting market research exercise from relevant stakeholders. (The document is available at Central Cyber Government Office (CCGO) Portal: http://gld.host.ccgo.hksarg/gld/faq_proc/faq_proc.html)**

**APPENDIX 1.8 GUIDELINES AND PROCEDURES FOR ENVIRONMENTAL
IMPACT ASSESSMENT OF GOVERNMENT PROJECTS AND
PROPOSALS**
(Subsumed from ETWB TCW No. 13/2003)

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THE ENVIRONMENTAL IMPACT ASSESSMENT ORDINANCE

1.1 Commencement of the Ordinance

1.1.1 The Environmental Impact Assessment Ordinance (Cap. 499) (EIAO) was enacted on 4 February 1997. The Technical Memorandum on Environmental Impact Assessment (EIA) Process (the Technical Memorandum) passed the negative vetting of Legislative Council (LegCo) in June 1997. The EIA (Fees) Regulation and the EIA (Appeal Board) Regulation were also endorsed by the Provisional Legislative Council in November 1997.

1.1.2 EIAO came into operation on 1 April 1998.

1.2 Application of the Ordinance

1.2.1 The purpose of EIAO is to avoid, minimize and control the adverse impact on the environment arising from projects classified as "designated projects" under the Ordinance, which are listed in Schedules 2 and 3 of the Ordinance, through the application of EIA process and environmental permit (EP) system.

1.2.2 Designated projects in Schedules 2 and 3 have to go through EIA process, but only those listed in Schedule 2 require EP. The general guidance to EIAO is provided in the booklet "A Guide to the EIAO" published by Environmental Protection Department (EPD), which can be viewed in EPD's web-site: <https://www.epd.gov.hk/eia>.

1.2.3 EIAO binds the Government. All government projects or proposals that fall within the description under Schedule 2 or 3 of EIAO shall follow the procedure laid down in the Ordinance when seeking approval of EIA report and/or issue of EP from EPD. No designated project listed in Schedule 2 shall be constructed, operated or decommissioned without a valid EP under EIAO or contrary to the conditions given in the EP unless the designated project has been approved or authorized under those Ordinances and Regulations listed in sections 9(2) and 9(3) of EIAO or has commenced construction or been in operation before 1 April 1998. Notwithstanding, the proponent would still have to comply with the environmental mitigation measures or requirements recommended in earlier studies of the project, and this appendix if appropriate.

1.2.4 The provisions on offences under sections 26 and 27 of EIAO do not apply to government officers. If any government officer acts in contravention of the Ordinance and such action is not terminated immediately to the satisfaction of the Director of Environmental Protection (DEP), DEP shall report such case to the Chief Secretary for Administration. If any person not being a government officer, such as a consultant or an agency, handles the EIA process and/or its implementation for a government project, then he will be liable to the proceedings taken against him for any offence under sections 26 and 27 of EIAO.

1.3 An Overview of the Statutory Requirements

1.3.1 EIAO provides the framework for assessing environmental impacts of a designated project defined under the Ordinance and for making implementation of prevention and mitigation measures enforceable through the EP system. DEP, in consultation with other relevant authorities, is responsible for regulating and enforcing the EIA process under EIAO.

1.3.2 For a designated project under Schedule 2 of EIAO where EP is required before the construction, operation or decommissioning of the project can commence, the proponent is required (pursuant to section 5(2) of EIAO) to submit a project profile either to:

- (a) apply for EIA study brief for conducting EIA studies and seek approval of the EIA report from DEP under EIAO; or
- (b) seek permission to apply directly for EP according to the provisions laid down in sections 5(9) to 5(11) of EIAO.

1.3.3 Unless DEP permits the proponent to apply directly for EP for case (b) of paragraph 1.3.2 above, the proponent shall follow the procedure for case (a) above pursuant to section 5(7) of EIAO to apply for a study brief for conducting the EIA study and preparing the EIA report for DEP's approval. If the EIA report is approved by DEP after the public consultation as explained below, it will be placed in the register pursuant to section 8(5) of EIAO and the proponent¹ can apply for EP under section 10(1) of EIAO.

1.3.4 EIAO also requires proponents of engineering feasibility studies of major development that falls within the description set out in Schedule 3 of EIAO to conduct EIA study and submit EIA report for approval by DEP. Proponents have the option of carrying out detailed assessments on individual projects listed under Schedule 2 within the study area to a level sufficient for the issuing of an EP thus obviating the need for carrying out further individual EIAs at a later stage. In that case once the Schedule 3 EIA is approved and placed on the Register, the proponents of the individual projects can apply under section 5(9) of EIAO for permission to apply directly for EP.

1.3.5 The Advisory Council on the Environment (ACE) and the public will be consulted in EIA process. There is an opportunity for ACE and the public to comment on the project profile submitted by a proponent before the EIA study brief is issued by DEP, or before permission is given to the proponent to apply directly for EP. ACE and the public will also have an opportunity to comment on the EIA report before decision is made by DEP on whether the report should be approved or not. The arrangement for these two opportunities is given below:

¹ For the purpose of this Appendix, "proponent" means government department or its consultant, or may be an outside agency who is responsible for the implementation of a particular stage of a project. Proponent can vary at different stages of a project in question.

(a) Project Profile

On the day following the submission of the project profile to DEP, the proponent is required under EIAO to advertise in two generally circulated newspapers (one in Chinese and the other in English) the availability of the project profile. ACE and the public may comment on the project profile on the environmental issues covered by the Technical Memorandum within 14 days.

(b) EIA Report

When DEP considers that the EIA report meets the requirements of the EIA study brief and the Technical Memorandum, the proponent is required to advertise the availability of the EIA report (with the Executive Summary in English and Chinese as stated in Annex 11 of the Technical Memorandum) once every 10 days during the 30-day public inspection period and make it available at specified locations for the public to comment during this period. At the same time, the proponent will be advised whether a submission to ACE is required. ACE may give its comments on the EIA report to DEP within a period of 60 days in parallel to the 30-day public inspection period.

1.3.6 Comments from ACE and the public will be taken into account by DEP before issuing the EIA study brief, approving the EIA report or permitting the proponent to apply directly for EP. All decisions taken by DEP will be placed on a Register set up under EIAO. The Register is open to the public for inspection during normal office hours and on EPD's web site. As part of the Register, DEP maintains a list of EIA reports approved before EIAO came into operation.

1.4 Material Changes to Exempted Designated Project

1.4.1 Under section 9(4) of EIAO, a material change to an exempted project¹ requires an EP under the Ordinance unless it is subsequently exempted. The application for exemption shall follow the statutory procedures and requirements under EIAO. "Material change" as defined in Schedule 1 of EIAO means a physical addition or alteration to a designated project, which results in an adverse environmental impact as defined in section 6.1 of the Technical Memorandum.

1.4.2 For a material change to an exempted project, the proponent can apply under section 5(10) of EIAO for permission to apply directly for EP if the impact of the material change and the mitigation measures described in the project profile meet the requirements of the Technical Memorandum.

1.5 Seeking Confirmation on Contiguous Government Projects

¹ Material change to a designated project or to an environmental impact is further elaborated in section 6 of the Technical Memorandum.

1.5.1 An application can be made under section 4(5) of EIAO to seek confirmation from DEP whether certain contiguous government projects are to be treated as a designated project. DEP shall reply within 14 days upon receipt of the application with a copy to SEE. If agreed, a written specification for such contiguous projects for being treated as a designated project will be passed to the relevant proponent in DEP's reply.

1.6 Arrangement for Incorporation of Environmental Permit into Contract

1.6.1 Depending on the nature of the project and the recommendations in the EIA report, proponent may choose to apply for a single EP for a project or separate EPs for various stages of a project, such as construction, operation and decommissioning.

1.6.2 For a complicated project to be implemented in different phases, such as new town development or major trunk road system, it is advisable to have separate EPs for different phases of the project development in order to maintain flexibility. Furthermore, proponent may choose to have separate EPs for different works contracts even under the same phase of the project development.

1.6.3 To maintain overall programme control and continuity, it is recommended that proponent shall apply for the necessary EP(s) before the commencement of project construction and hold the EP(s) throughout the construction period. Such arrangement will ensure the EP is in place immediately after the award of the contract and hence the contractor can rely on the EP issued to the proponent to commence works on the site without the need to apply for a further EP under section 12 of EIAO. The arrangement will also enable the proponent to have direct control of the application for variation of EP conditions when it is necessary to do so. Even though the permit holder is the proponent and not the contractor, the contractor shall remain fully liable under EIAO for compliance with the conditions of the EP provided that the contractor has been notified about the permit conditions.

1.6.4 To ensure that the contractor has the full knowledge of the conditions of the EP, a copy of the EP issued to the proponent shall be included in the Particular Specification to form part of the tender document and hence the contract. As part of the standard conditions of the EP, the contractor shall display the EP at the site throughout the construction period. The proponent shall notify the contractor any subsequent change or variation to the conditions of EP.

1.6.5 To safeguard against any unnecessary claims for extension of time and additional costs from the contractor due to application for a further EP or any subsequent variation to the conditions of EP, the following standard clauses shall be included in the Particular Specification for works contracts where EP has been obtained by the proponent for the works.

"The Contractor shall observe and abide by the conditions set out in the environmental permit attached at Annex xx [to be inserted by the Architect/Engineer] when carrying out the Works [or Section yy of the

Works where appropriate]. The Contractor shall display the environmental permit (or any revision thereto as may be provided to him by the Employer) at the Site throughout the construction period. The Contractor needs not apply for a further environmental permit for the Works. The Architect/Engineer will coordinate any application for variation of the EP conditions where it is necessary and shall notify the contractor upon any change or variation approved by DEP. If the Contractor chooses to apply for and hold a further environmental permit for the Works for any reasons, he can do so but will be at his own risks and he will not be entitled to an extension of time or to any compensation or cost."

1.6.6 In the event that the contractor applies for a further or a variation to an EP, DEP will notify the holder of the said EP upon receipt of such application.

1.7 Variation of Environmental Permit Conditions

1.7.1 Environmental monitoring and audit programme, if required, will help to identify the need for variation of EP conditions during project implementation, and where necessary consultation can be made with DEP during the environmental monitoring and auditing of the project.

1.7.2 Where there is a need for the variation of EP conditions, the proponent shall apply for such variation of the EP under section 13 of EIAO. For those variations where the environmental performance requirements set out in the EIA report of the project may be exceeded or violated even though the mitigation measures have been in place, DEP may require the proponent to submit an EIA report for the variations sought. In such cases, the proponent shall follow the statutory procedures to apply for a study brief and to prepare the EIA report as set out in sections 5 to 8 of EIAO. For cases where EIA report is not required, DEP will issue an amended EP within 30 days. The proponent shall give a copy of the amended EP to the contractor for compliance and display at the site.

2. PROGRAMMING CONSIDERATION FOR PUBLIC WORKS PROGRAMME UNDER EIAO

2.1 General

2.1.1 Notwithstanding the document exchange procedures set out herein for the fulfilment of EIA process, proponent must appreciate the importance of making use of every opportunity for early consultation (formally or informally) with EPD, ACE, District Councils (DC), green groups and all interested parties, including those whose livelihoods might be affected by the project (Continuous Public Involvement (CPI) as promoted by DEP). The consultation can start long before the checking on whether the project is a designated project or in the project profile preparation stage etc.. Early consultation is particularly important for large-scale projects where matters such as alignment, choice of site or orientation may be significant in terms of environmental impact. Proponent should treat EIA process as part of the design process for ensuring that a project does not adversely affect the environment, rather than some extra procedures that must be followed. Proponent should provide adequate support to EIA process to avoid, minimize and control the adverse impact on the environment due to the project works. A spirit of concern for the environment on the part of the proponent is essential to the smooth passage through EIA process.

2.1.2 **Annex A** to this Appendix (for simplicity, "annex" hereinafter referred to in this Appendix means the annex to this Appendix) shows how the Public Works Programme (PWP) procedures can dovetail with the requirements of EIAO for a project which is a designated project under the Ordinance and is not exempted from it. It reflects the procedures for submitting a project profile during the Technical Feasibility Statement (TFS) stage or after its completion.

2.1.3 When preparing TFS for a project, proponent shall, in consultation with DEP, state whether the project is a designated project. If the project is a designated project, the proponent shall submit a project profile to DEP who shall, in accordance with the procedures under EIAO, either issue an EIA study brief for the project or grant the permission to apply directly for EP whichever is appropriate. Alternatively, the proponent may submit the project profile to DEP after completion of TFS, which shall contain a statement that the procedures and requirements under EIAO shall be followed.

2.1.4 EIA study for a designated project, if required, shall be carried out and approved before the construction of a project is upgraded to Category A. For a Category D project which is also a designated project under EIAO, EIA study should be carried out and approved before the project is included in Category D. The key conclusions of the approved EIA report or the conditions attached to the permission to apply directly for EP shall be stated in the Environmental Implications (EI) paragraph of the PWSC paper when the project is upgraded to Category A or included in Category D where appropriate. For design and build or build-operate-transfer projects, the outline procedures are laid down in **Annex B**.

2.1.5 Examples of paragraphs with typical environmental implications that may be incorporated in TFS or PWSC paper for designated projects of government are given in section 5 of this Appendix.

2.2 Parallel Actions on Gazetting and EIA Process

2.2.1 To streamline the public works procedures and bring forward the delivery of public works, it was decided that with effect from 20 December 2001, the statutory gazetting of a project under the relevant Ordinances, i.e. the Foreshore and Seabed (Reclamation) Ordinance, Roads (Works, Use and Compensation) Ordinance, Railways Ordinance and Town Planning Ordinance, can be done in parallel with EIA process. A bar chart demonstrating this concept with a sample project is shown at **Annex C**.

2.2.2 Works director for a designated project under EIAO should consider positively the option of gazetting the project before the full completion of EIA process, as soon as there are adequate EIA findings to enable the project layout to be sufficiently determined for the purpose of gazetting.

2.2.3 The option of parallel gazetting should not however undermine the need to ensure that the finally adopted project scheme is in full compliance with EIAO. The EIA report will continue to be subjected to inspection and consultation with ACE and the public under EIAO. All comments received will be taken into account by DEP in deciding whether the EIA report is to be approved. Where a project is gazetted but subsequent changes are found necessary as a result of EIA process, such changes should be made even if it might necessitate re-gazetting of the project. Hence, in deciding whether or not to gazette a proposed project in parallel with EIA process, works director should exercise his judgment on the benefits of time saving against the risk of having to make subsequent alterations and re-gazette the project should a change be necessary upon the completion of EIA process. It should be handled with great caution if it is envisaged that any environmental issues of the project would arouse public concern.

2.2.4 Despite the availability of the option of parallel gazetting, works director for a designated project should not seek authorization of the proposed project under the respective Ordinances before the EIA report is approved by DEP or permission has been obtained from DEP to apply directly for EP. Proponent should note the stipulated time frame required within which the authorization of the Executive Council (ExCo) should be obtained after gazetting and ensure that the EIA report is approved or permission to obtain from DEP to apply directly for EP is granted within this time frame.

2.3 Consultation with ACE before Completion of EIA Process

2.3.1 For major project or project involving complex or controversial environmental issues, proponent is encouraged to arrange briefings with ACE or its EIA Subcommittee on the initial findings of EIA studies before the full completion of EIA process, whether or not parallel gazetting as mentioned in paragraph 2.2 above is intended. ACE in general welcomes early dialogue with proponent on project involving major or controversial environmental issues. Its

EIA Subcommittee is also prepared to have informal dialogues with proponent upon request on a non-committal basis.

2.4 Application for Environmental Permit

2.4.1 Upon approval of EIA report, proponent may at any time apply to DEP for EP, which in any case should be obtained prior to the commencement of the construction. The arrangement for incorporation of EP into a contract is given in section 1.6 above. The EP Conditions should be included in the contract documents and/or consultancy briefs if appropriate.

2.5 Consultation with DC and ACE after completion of EIA Report

2.5.1 Under section 7 of EIAO, there are requirements for EIA report to be exhibited to the public for inspection and, if required, submitted to ACE for comments. Proponent will be notified on the need to submit EIA report to ACE at the time when it is advised by DEP that the EIA report is suitable for exhibition to the public for inspection under EIAO.

2.5.2 Although there are no legal requirements under EIAO to consult bodies other than ACE, proponent is advised to liaise with relevant District Officers for arranging consultation with relevant DC and other affected sectors on the findings of EIA study, in parallel with the inspection of EIA report. Where necessary, proponent should also liaise with other relevant advisory bodies on the findings of EIA study during the same period. Proponent should also send copies (of suitable media) of the approved EIA report to the reference libraries of the Hong Kong Public Libraries, the Public Enquiry Service Centre of relevant District Office(s) and the library of the LegCo Secretariat.

2.6 Consent from SEE for Matters under EIAO

2.6.1 Proponent under section 5(11) of EIAO to seek approval for applying directly for EP requires the consent of SEE before DEP can give the permission. If DEP is satisfied that the environmental impact of the designated project is unlikely to be adverse and the mitigation measures meet the requirements of the Technical Memorandum, DEP will submit his recommendation together with the proponent's submissions to the Administrative Assistant to Secretary for the Environment and Ecology (AA/SEE) to seek the consent of SEE at least 15 days before the expiry of the 45 day period under section 5(7) of EIAO. DEP will keep the proponent informed of the progress.

2.6.2 In addition, the consent of SEE is required for cancellation or variation of an EP and cessation order under sections 14(1) and 24 of EIAO respectively. DEP will notify the proponent and other departments involved in these actions.

3. MANAGEMENT OF EIA PROCESS IN PUBLIC WORKS PROGRAMME FOR DESIGNATED PROJECT

3.1 General

3.1.1 In order to identify potential environmental problems, to work out effective measures to avoid or address the problems at an early stage of a project and to ensure greater efficiency and certainty in project delivery, communication among all parties concerned throughout the EIA process is essential. Any problems that cannot be resolved at the working level should be escalated to the appropriately senior level for resolution in a timely fashion.

3.2 Role of EPD

3.2.1 To facilitate the EIA process of government projects, EPD should, without compromising its statutory functions under EIAO, enhance its advisory role and provide, in a proactive manner, advice to proponents on the procedures and requirements under EIAO, the related Technical Memorandum and any other environmental issues arising from EIA process. This will help identify potential environmental problems and work out effective measures to smooth out EIA process. Currently EPD has set up an EIA Helpdesk direct hotline 2802 3111 for enquiries over EIAO procedures and other general matters including training programmes.

3.2.2 EPD should be as specific as possible in drafting EIA study brief, in giving advice and in requesting further information from proponent so as to enable proponent to have better and clearer picture on how to comply with EIA requirements.

3.3 Role of Proponent

3.3.1 The responsibility for ensuring an efficient and effective EIA process lies not only with EPD but also with proponent. It is therefore essential that the EIA studies should not be on the critical path of the project programme. Apart from integrating environmental concern in project planning and implementation, proponent should take a proactive role and start an early dialogue with EPD, ACE and other relevant authorities under EIAO to identify potential environmental problems and work out effective measures to avoid or minimize environmental impacts at an early stage. Proponent should assume the full ownership of his project throughout the EIA process.

3.4 Environmental Study Management Group

3.4.1 EPD has formed Environmental Study Management Groups (ESMG) and will convene meetings upon request of proponent. Such meeting provides an effective forum for

examining environmental problems, drawing up proposed mitigation measures and discussing and resolving, where possible, differences between EPD and proponent.

3.4.2 To make use of the system, consideration should be given to form such ESMG on the initiative of either EPD or proponent at the early stage of a project even before the formal EIA process begins. ESMG should comprise EPD's officers and the proponent at an appropriately senior level if the project is strategically important and time-critical. DEP would be the convenor of ESMG meeting and where necessary, representatives from other relevant authorities will also be invited to attend the meeting.

3.4.3 ESMG meetings, if convened before the proponent's formal submission under EIAO, are conducted on administrative and advisory basis to help proponent to comply with the requirements under EIAO. Except for those matters that require specific written approval as set out in the EIA study brief, no detail written responses, except for the meeting notes, shall be produced by relevant authorities to any informal submission from the proponent. The discussion before the formal submission shall not absolve the proponent from his responsibilities under EIAO.

3.4.4 Under section 9.1 of the Technical Memorandum, DEP shall take advice from other relevant authorities on matters prescribed in the Technical Memorandum. Therefore, it will be necessary for DEP and other relevant authorities to give priority to application or report submitted by proponent under EIAO to speed up the EIA process. Except for straightforward cases, DEP would normally convene ESMG meeting among the relevant parties concerned to discuss the EIA report submitted by the proponent.

3.5 Establishment of Early Warning System and Conflict Resolution Mechanism

3.5.1 According to past experience, most conflicts arising from EIA process could be satisfactorily resolved if they are brought to the attention of senior management of EPD and proponent at the earliest possible stage. To avoid deadlocks at working level, DEP and the senior management of proponent at a level of D2 or above must be made aware of these conflicts so that they could come in timely to try to resolve them. In this connection, EPD, proponent and other relevant authorities involved under EIAO should set up an early warning system and the corresponding communication mechanism for the senior management to discuss all contentious EIA-related issues related to the project. In addition, a conflict resolution mechanism should be established so as to resolve contentious issues as early as possible.

3.5.2 Close monitoring and early warning system for proponent and the corresponding conflict resolution mechanism as mentioned in paragraph 3.5.1 above should include the following arrangements:

- (a) Project staff at working level should establish a constant channel of communication with EPD staff at an early stage of a project, which can be as early as before the preparation of TFS, and should maintain the dialogue for the subsequent stage of EIA process. Consideration should be given to make use of ESMG meeting to establish such communication channel with EPD where appropriate.
- (b) Regular meetings (say, monthly) should be held amongst project officers and the directorate officer about project implementation and identification of the likely problems that will be encountered in EIA process. Should the problem be serious, the directorate officer should liaise or organise a meeting at a suitable level with EPD to solve the problem at an early stage.
- (c) There should also be regular meetings between proponent and EPD at Deputy Director level to discuss problems on EIA studies of projects. Unresolved issues should be referred to DEP and heads of the works department/agency concerned.
- (d) Notwithstanding the regular meetings and communication channels mentioned above, any urgent cases on EIA related issues should be resolved at all appropriate levels on ad-hoc basis.
- (e) The progress on EIA process of individual projects should be reflected in the Public Works Management System (PWMS) for monitoring and control of works programmes. Works Departments shall ensure to update the information in PWMS sufficiently, frequently and regularly.
- (f) There are other regular forums such as EIAO User Liaison Groups to discuss and communicate on EIA issues. Proponent should make use of these forums to communicate and resolve general EIA issues with EPD.

3.5.3 Some issues may involve conflicting policy considerations such that the differences or conflicts may not be able to resolve at departmental level. When such situation arises, any unresolved conflict would be referred to the corresponding Permanent Secretary(ies) in EEB to seek ways for a resolution.

3.6 Attending Meeting of ACE

3.6.1 Proponent may be invited to attend meeting and make presentation to ACE or its EIA Subcommittee for discussion of his EIA report during the consultation process. Before attending the meeting, proponent should make sure that his representatives (including those of consultants and works departments) are well prepared and fully understand all the environmental issues involved and the solutions identified. They should be fully conversant with the content of the EIA report submitted, and be able to respond to the

concerns/queries raised at the meetings. For project with controversial issues, proponent should organize a pre-meeting amongst the representatives before attending the meeting of ACE or its EIA Subcommittee where appropriate.

4. PROCEDURES FOR DEALING WITH ENVIRONMENTAL IMPLICATIONS OF GOVERNMENT PROJECTS OR PROPOSALS NOT COVERED BY EIAO

4.1 Non-designated Projects

4.1.1 Projects that do not fall within the requirements of EIAO are classified as non-designated projects, which however may also have a potential to cause adverse impacts to the environment. The community has a high expectation to proponents to be environmentally conscious and responsible for the design, construction and operation of a project, irrespective of whether it is a designated or non-designated project under EIAO. Therefore, proponents, including their consultants and contractors, should give sufficient regards to protecting the environment during design, construction and operation particularly for activities with possible impacts on sensitive areas of the environment. The relevant guidelines issued by EPD should be observed so that all necessary precautionary measures could be made to avoid potential environmental damage and, if avoidance is not practicable, to minimize adverse environmental effects.

4.1.2 Subject to the advice of DEP, site investigation work which is for the purpose of detailed design and is not considered as the first phase of a designated project can be classified as a non-designated project. The streamlined procedures set out in para. 4.2 below for non-designated projects are therefore applicable for site investigation works. Special attention should be given to checking against whether the proposed site investigation work is within the sensitive areas listed in section Q of Schedule 2 of EIAO. If the proposed site investigation work falls within the environmentally sensitive areas, such work may become a designated project and the proponent should follow the statutory procedure to obtain permission for direct application for EP under section 5(1)(b) of EIAO.

4.2 Streamlined Procedures for Non-designated Projects

4.2.1 The streamlined procedures set out below aim to simplify the handling of environmental implications for non-designated projects under PWP, while at the same time meet the environmental requirements laid down by the Finance Committee and the Executive Council.

4.2.2 A summary of the streamlined procedures for non-designated projects is given in the flowchart at **Annex D**. Proponent may adopt one of the following approaches to meet the environmental requirements for a project:

- (a) to adopt the standard pollution control measures for projects with limited potential for environmental impacts;
- (b) to adopt the class assessment approach based on streamlined procedures to deal with the Preliminary Environmental Review (PER) for a certain class of projects; or

- (c) to conduct PER for individual non-designated project for vetting and agreement by DEP.

4.2.3 **Annex E** lists out the examples of non-designated projects that would generally have limited potential of giving rise to adverse environmental impacts if the proponent implements the standard pollution control measures promulgated by DEP during construction. Proponent needs not prepare PER for projects listed in **Annex E** but has to identify carefully the environmental impacts associated with the project particularly for works carried out in environmentally sensitive areas, and to confirm environmental acceptability if the standard pollution control measures are adopted for the work.

4.2.4 Proponent should refer to the latest version or substitute of the following guidelines in establishing pollution control measures for non-designated projects:

- (a) “Environmental Guidance Note for Rural Planning and Improvement Strategy (RPIS) – Minor Projects” which was designed to guide project proponents to avoid and minimize environmental impacts arising from RPIS projects;
- (b) “Recommended Pollution Control Clauses for Construction Contracts”;
- (c) Chapter 9 of the “Hong Kong Planning Standard and Guidelines”;
- (d) “Examples of Environmentally Friendly Drainage Channel Design Arising from Environmental Impact Assessments”;
- (e) “Environmental Guidance Note for Sewage Pumping Station which is not a Designated Project”;
- (f) Professional Persons Environmental Consultative Committee Practice Notes (ProPECC) PN No. 1/94, Construction Site Drainage.

4.2.5 A class assessment approach can be applied to a class of projects that will give rise to or be subject to similar environmental impacts. This approach would enable proponent to work out standard and generic measures for similar projects, without duplicating the effort for the need to go through the same procedure for each and every project. This would save the time and effort on the part of proponent and ensure greater consistency in the application of mitigation measures.

4.2.6 **Annex F** lists out the examples of non-designated projects that can be subject to the class assessment approach. Proponent can standardize and define the mitigation measures for these projects for agreement by DEP. It is considered that the environmental impacts associated with such projects are likely to be mitigated to meet the established criteria if proper mitigation measures are taken during design, construction and operation stages.

4.2.7 Proponent is encouraged to adopt the class assessment approach and submit a class assessment document by providing the required information set out in **Annex G** for agreement by DEP. The class assessment document can cover many projects of different categories or at different locations provided that they are of a similar class. Once the class assessment document is agreed, proponent can refer to it in preparing TFS. PER for projects that have been covered by the agreed class assessment document is deemed to be agreed by DEP. There is no need to submit the PER for vetting by DEP and the proponent will be responsible for implementing the agreed mitigation measures.

4.2.8 For non-designated projects not covered by **Annex E** or class assessment documents that have been agreed by DEP, they would be subject to the requirement of PER as set out in Financial Circular No. 4/2012 – Requirements for Project Definition Statement and Technical Feasibility Statement for Capital Works Projects. The required PER should be sent to DEP for vetting at the design stage.

4.2.9 The findings of PER, if required, would be used to identify environmental impacts associated with a non-designated project, to confirm environmental acceptability, to determine the necessary mitigation measures for relatively simple cases, and to ascertain the need for whether additional environmental studies are required for complex cases.

4.2.10 For most non-designated projects, proponent is expected to identify the environmental impacts associated with the project and to adopt the necessary mitigation measures during the preparation of PER without the need for additional environmental studies.

4.2.11 Under exceptional cases, DEP may require proponent to carry out additional environmental studies, which may include investigation and calculation, to confirm environmental acceptability and to determine the appropriate mitigation measures. The scope of additional environmental studies would be stated in the comments on the PER given by DEP. The primary aim of the additional environmental studies, if required, is to work out the suitable mitigation measures for addressing the complex environmental impacts listed in the PER, and the findings after the study shall be submitted to DEP for agreement.

4.2.12 Proponent is responsible for the full implementation of the mitigation measures identified in PER or other environmental studies, as well as taking remedial measures against any unacceptable environmental impacts during construction and operation of a project.

4.3 Resolution of Disagreement

4.3.1 The model of early warning and conflict resolution mechanism mentioned in Section 3.5 is also applicable to non-designated projects.

5. PROCEDURES FOR ENVIRONMENTAL APPRAISAL OF GOVERNMENT PROJECTS OR PROPOSALS SUBMITTED TO THE PUBLIC WORKS SUBCOMMITTEE OF LEGISLATIVE COUNCIL OR THE EXECUTIVE COUNCIL

5.1 General

5.1.1 Article 119 of the Basic Law states that “The Government of the Hong Kong Special Administrative Region shall formulate appropriate policies to promote and co-ordinate the development of various trades, such as manufacturing, commerce, tourism, real estate, transport, public utilities..., and pay regard to the protection of the environment.”

5.2 Consideration of Environmental Implications in Project Management for PWSC Submission

~~5.2.1 Financial Circular No. 9/2000 requires government departments to provide an "Environmental Implications" (EI) section in their submission to the Public Works Subcommittee (PWSC). The Users' Guide to the PWSC provides that:~~

~~“... [EI] section should set out in concise fashion whether or not the proposal has environmental implications and if so, what the proposed mitigation measures are. It should cover whether and when the Environmental Protection Department or others had carried out either an environmental review or an environmental impact assessment and what the findings or recommendations were ...”~~

~~SETW has delegated the authority to DEP to clear the issue for the contents of EI section of PWSC papers.~~

5.2.1 Under the current PWP procedures, a project entering into Category C of PWP requires proponent to complete TFS in which the “Environmental Considerations” section should be prepared in consultation with EPD. In the event that the project is entrusted to private developer, proponent shall be responsible for ensuring that all the environmental considerations associated with the project are fully addressed.

5.2.2 Examples of paragraphs with typical environmental implications that may be incorporated into TFS or PWSC paper for designated projects of government are given in **Annex H**. That for TFS is reproduced from Financial Circular No. 4/2012.

5.2.3 When submission is made to PWSC for upgrading a project to Category A or to other major decision making bodies, proponent shall make reference to the environmental implications of a project and the agreed mitigation measures according to the environmental information generated under this Appendix, state the funding arrangement for the mitigation measures, and include a commitment to implement those measures. The

Financial Circular on clearance of "Environmental Implications" section of PWSC papers shall apply.

5.3 Procedures for Environmental Appraisal of Proposal Submitted to the Executive Council

5.3.1 The Executive Council (ExCo) Procedures Manual requires the incorporation of “EI” section in all ExCo memoranda where there are likely to be environmental issues or impacts, including benefits, involved. The procedures set out below aim to assist policy bureaux in identifying environmental impacts and paying regard to the protection of the environment when formulating policies, so that requirements in the Basic Law and ExCo Procedures Manual can be met.

5.3.2 Annex L of ExCo Procedures Manual specifies that a section on environmental implications is required in all memoranda concerning:

- (a) proposal for new policy or strategy, or amendment to existing policy or strategy;
- (b) specific matters involving environmental issues;
- (c) proposals or projects for which EIA has been carried out; and
- (d) environmental policies, strategies or proposals.

5.3.3 For proposal that is likely to cause environmental impacts, EI section should include the following information:

- (a) the likely impact of the proposal on the environment;
- (b) major elements of surrounding environment which may have impact on the proposal;
- (c) elements of surrounding environment which may be affected; and
- (d) environmental protection measures incorporated in the proposal.

5.3.4 Where EIA has been carried out because the proposal involved is a designated project under EIAO, the EI section should describe briefly the main issues and findings, and indicate whether the final report has been presented to ACE and endorsed by DEP and, whether the recommended measures for protecting the environment will be implemented, and whether funds are available. If the proposal mainly deals with environmental issues and environmental implications have been fully addressed in the main text of the submission, then the EI section would only require a short statement saying that environmental implications have been reported in the main text. For proposal that is unlikely to contain any significant environmental implications, this must be stated clearly.

5.4 Applying Environmental Checklist when preparing EI Section

5.4.1 An environmental checklist is given in **Annex I** to help those drafting ExCo memoranda to identify environmental concerns in a structured and systematic manner. Going through the environmental checklist as well as paying due regard to the associated environmental concerns will aid Bureaux and departments to identify the need for early

consultation with EPD and expedite the subsequent drafting and clearance of EI sections in ExCo Memoranda.

5.4.2 The environmental checklist is intended to assist policy bureau in establishing the connection between policy or strategy proposal and environmental implications. For proposal on new policy or strategy, or amendment to existing policy or strategy, the policy bureau concerned should complete a list of questions and/or checklist, if applicable, at the earliest possible stage of policy or strategy formulation. Policy bureau or department concerned is strongly encouraged to consult DEP on issues or concerns arising from the environmental checklist.

5.5 Coverage of EI Section

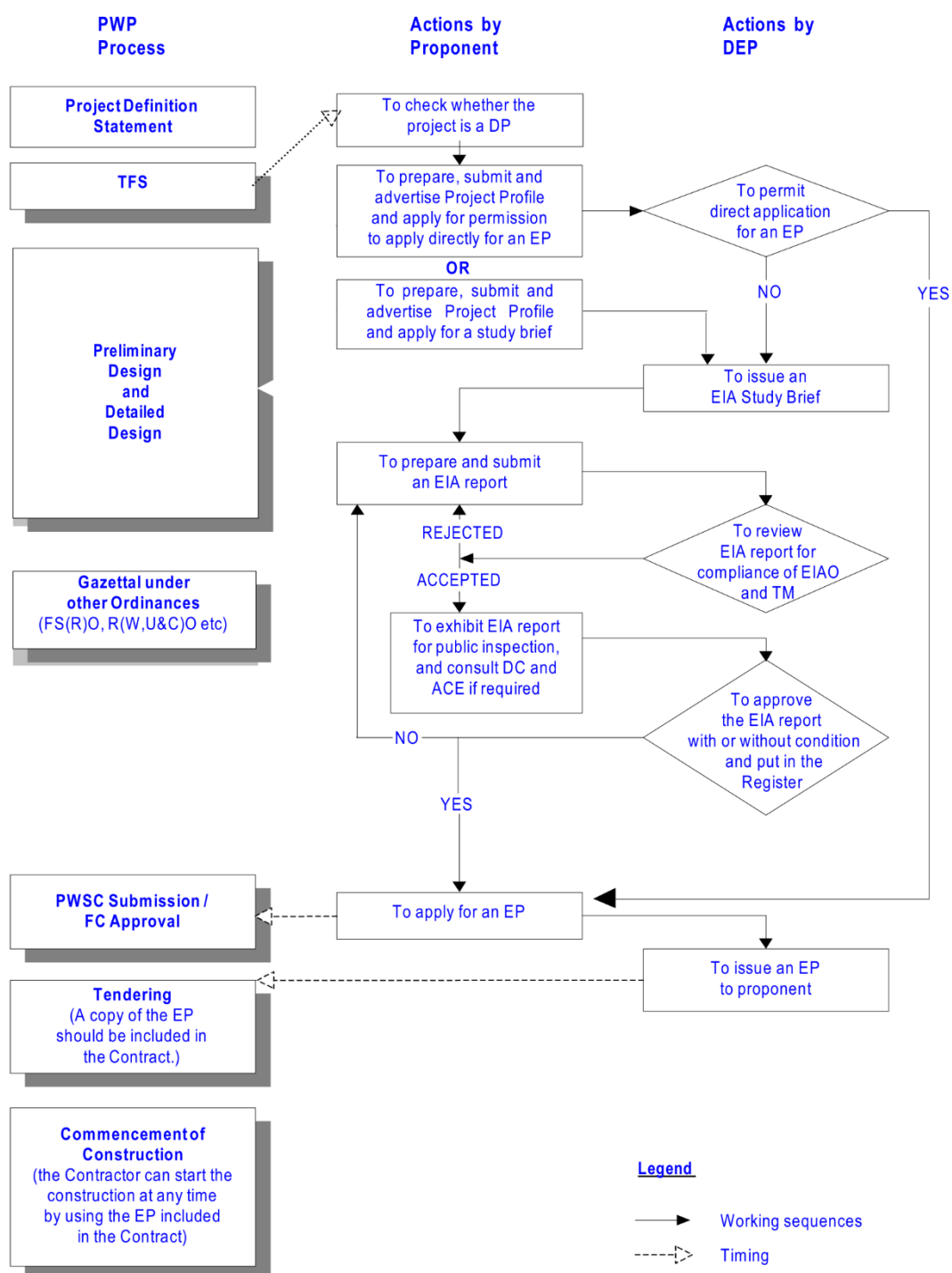
5.5.1 The first draft of EI section should be prepared by the responsible policy bureau or department. EI section should report the findings of the environmental appraisal set out in the environmental checklist as well as EPD's advice.

5.5.2 For project related matters and environmental policies, EI section should specify the outcome of the consultation with ACE, if applicable.

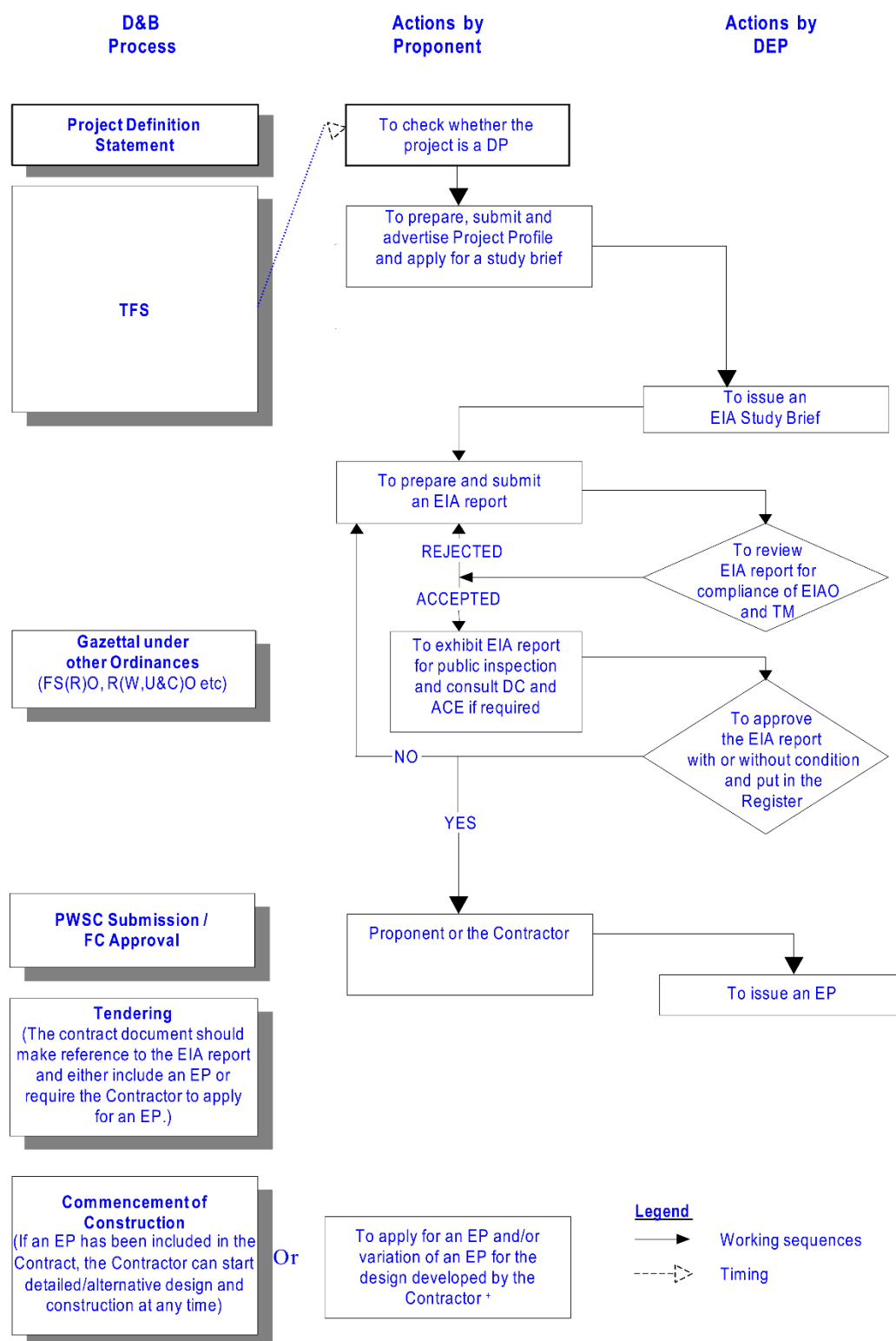
5.6 Clearance of EI Section

5.6.1 According to the ExCo Procedures Manual, EI section of the draft final submission to ExCo has to be cleared by SEE. The draft ExCo Memorandum should be addressed to AA/SEE. Under normal circumstances, the proponents should allow a minimum of *eight working days* for the clearance of EI section as the Bureau will normally wish to consult DEP before giving advice.

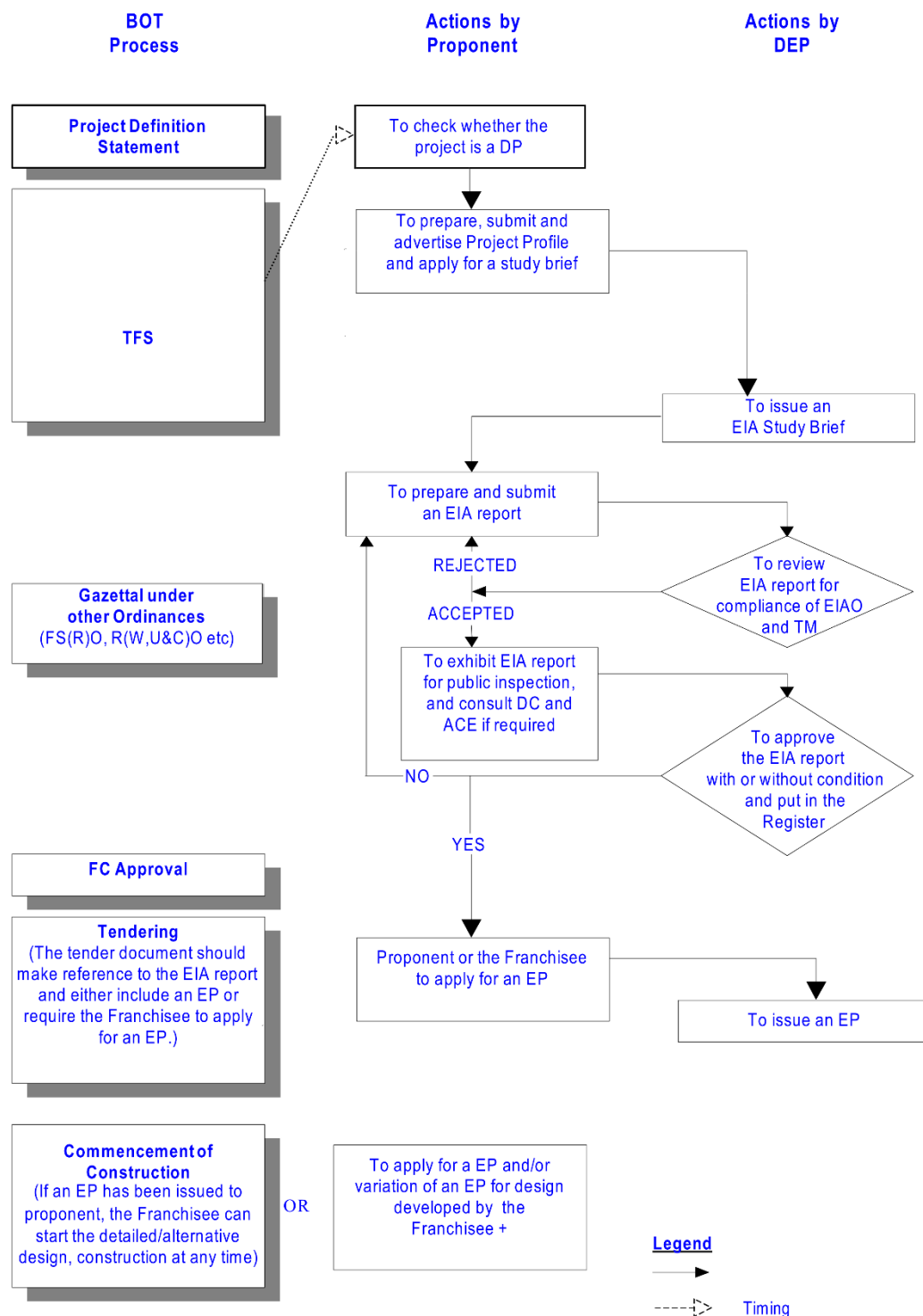
5.6.2 All draft ExCo Memoranda with EI sections for clearance by SEE should be copied to DEP, marked for the attention of the Assistant Director (Environmental Assessment). At the same time, policy bureau or department concerned is recommended to forward to SEE and copy to DEP the completed checklist mentioned in paragraph 5.4.1 above to facilitate early clearance of the ExCo Memorandum.

Relationships between EIAO and PWP Procedure

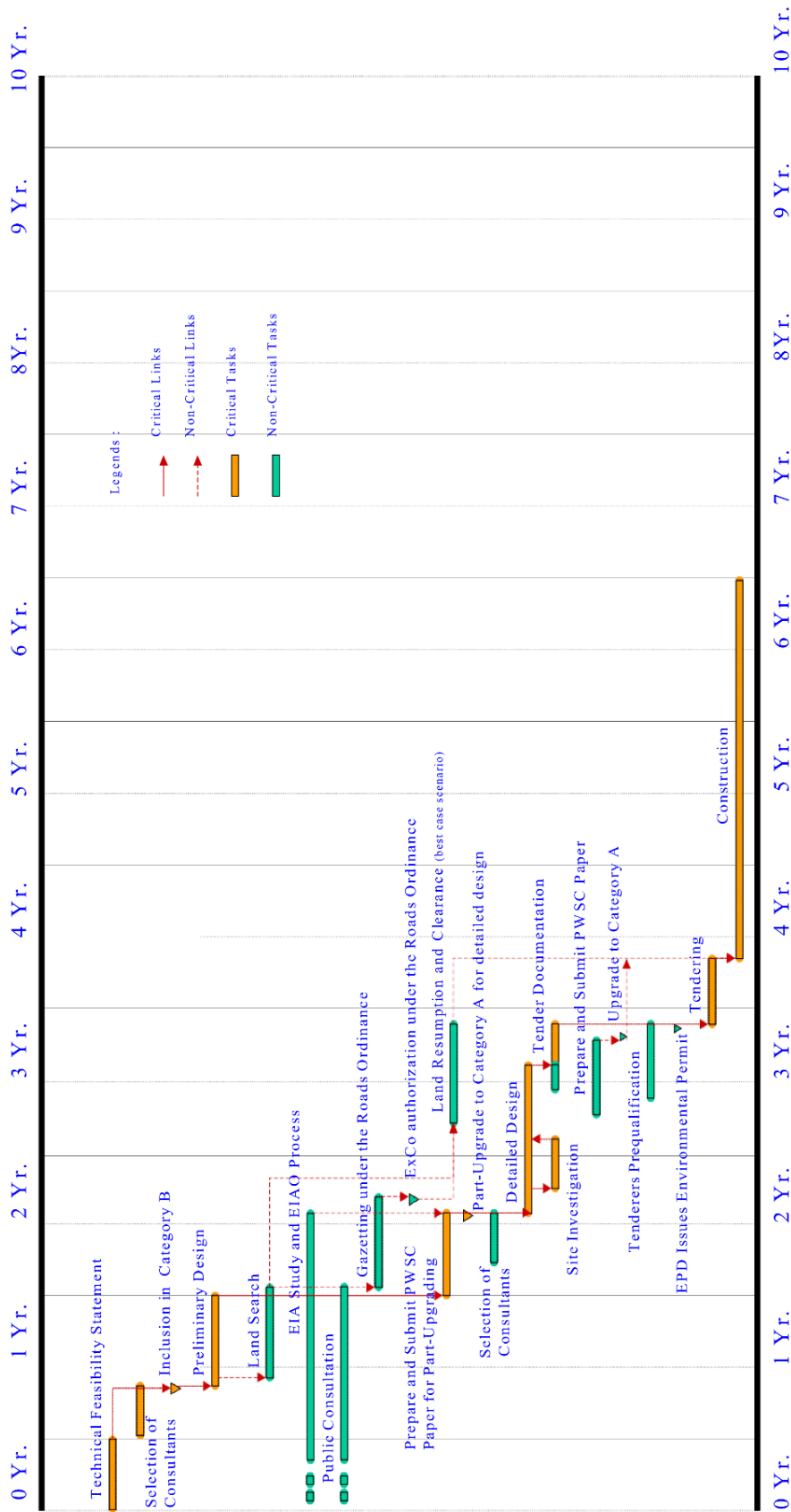
Relationship between EIAO and Design & Build (D&B) Procedure



Relationship between EIAO and Build-Operate-Transfer (BOT) Procedure

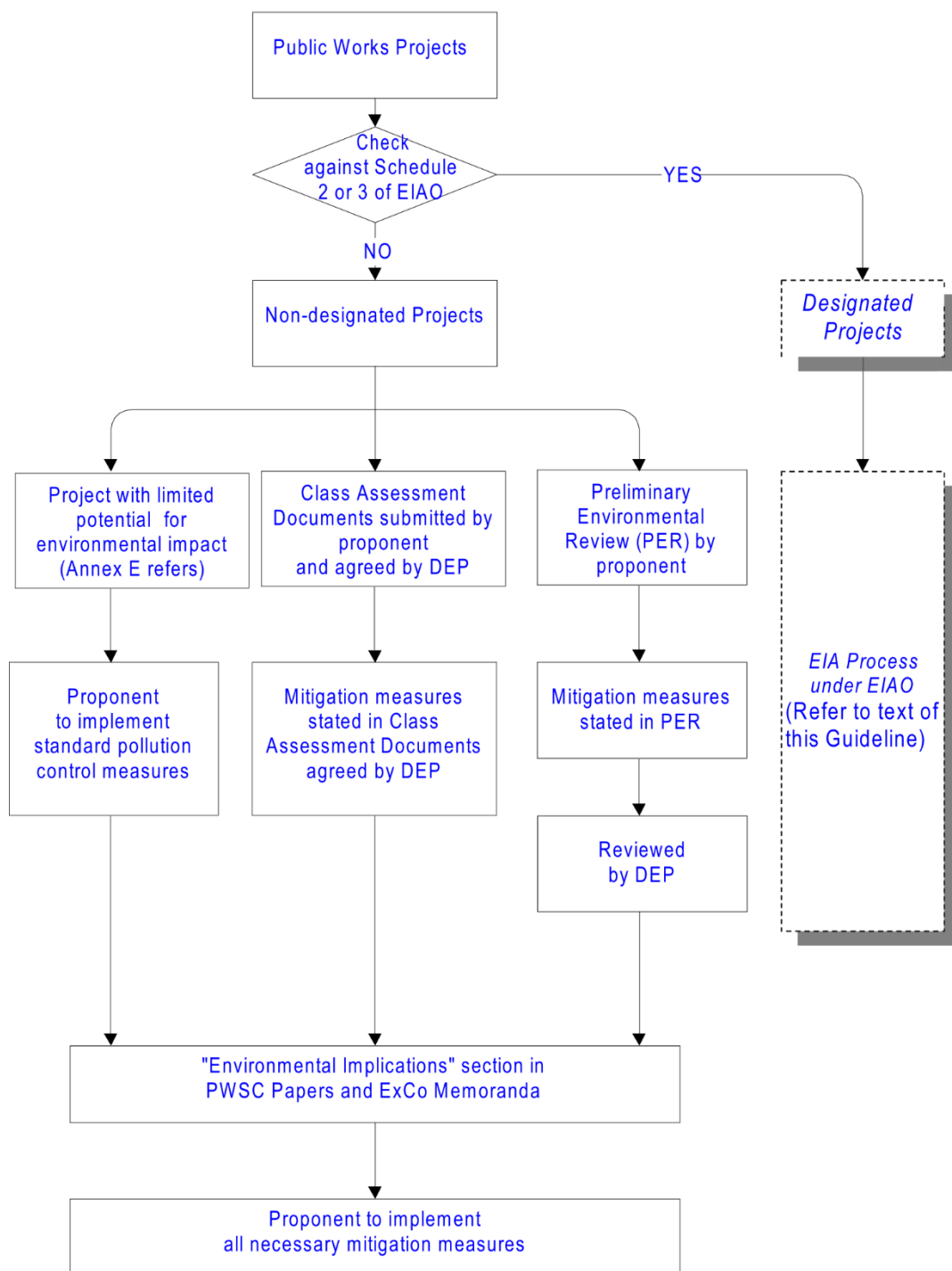


⁺ In the event that the design developed by the proponent changes, the proponent should instruct the contractor/franchisee by way of appropriate contractual arrangement, such as supplemental agreement, to incorporate such design change into the design developed by the contractor/franchisee and to initiate necessary action as required under EIAO for obtaining approval of related variation to the environmental permit in force.



Expedited Programme for a Typical Medium Size Project

EIAO activities should not be on the critical path. To expedite the process, consult DEP early.

Flow Chart for Streamlined Procedures for Non-designated Projects

**List of Non-designated Projects where
Standard Pollution Control Measures would suffice**

The following non-designated projects would generally have limited potential for environmental impacts provided that proponent implements the standard pollution control measures during work:

- i. libraries, government offices, tertiary teaching institutes;
- ii. game halls and community halls;
- iii. museums, theatres and courts of law;
- iv. slope maintenance works;
- v. major renovation of buildings, repairing works and installation of building utilities;
- vi. footbridges, footpaths and amenities;
- vii. water pipes, sewers and stormwater pipes under 1200mm in diameter and outside environmentally sensitive areas;
- viii. major traffic signs and surveillance equipment;
- ix. at-grade local roads not involving turning cul-de-sac into a link road; or
- x. open space projects.

The above list is not exhaustive. Proponents are encouraged to agree with DEP over additional items.

Typical “Environmental Implications” Paragraph in PWSC Paper:

"The project will not cause long term environmental impact. We have included in the project estimates the cost to implement suitable mitigation measures to control short term environmental impacts."

**List of Non-designated Projects that might be amenable
to Class Assessment Approval**

Proponent can consider submitting a class assessment document for agreement by DEP regarding a class of similar non-designated projects for which mitigation measures can be standardized or readily defined:

The type of non-designated projects might include, but is not limited to:

- xi. maintenance depots, fire and ambulance stations;
- xii. clinics and medical centres;
- xiii. small sewage pumping stations;
- xiv. primary and secondary schools (subject to rail and road traffic noise);

The above list is not exhaustive. Proponent is encouraged to consult DEP regarding the types of projects that might be amenable to class assessment approach.

Typical “Environmental Implications” Paragraph in PWSC Paper:

“The xxxx Department (or the consultants employed by xxxx Department) has completed and the Environmental Protection Department has agreed to a class assessment document which sets out the mitigation measures necessary for this class of projects. With such mitigation measures in place, the project would not have long term environmental impacts. We have included in the project estimates the cost to implement all necessary measures to mitigate the environmental impacts.”

**Outline of Information in Class Assessment Document
for Non-designated Projects**

For similar non-designated projects that have limited potential to give rise to unacceptable environmental impacts, a proponent can consider submitting a class assessment document for the agreement of DEP for a class of projects. A class assessment document should include at least the following information:

Type and Nature of the Class of Projects:

- (a) the identity of project proponents;
- (b) the type, scope and category of non-designated projects covered by the class assessment document. The possible variations among different categories of projects within the same class;
- (c) the typical planning, construction and operational procedures for the class of projects covered by the document;

Likely Environmental Issues and Proposed Mitigation Measures:

- (d) different categories of environmental issues for the class of projects;
- (e) descriptions of environmental impacts associated with the class of projects;
- (f) the environmental criteria to be complied with;
- (g) the type of mitigation measures to be provided including:
 - generic measures to be adopted;
 - mitigation measures for different categories of projects or activities;
 - mitigation measures to deal with special circumstances;

Justification of the Adequacy of Proposed Mitigation Measures:

- (h) previous agreements or justifications of the adequacy of the proposed mitigation measures to meet relevant criteria, with calculations or substantiation by way of examples wherever necessary, or by reference to any relevant studies conducted previously;

Implementation of Mitigation Measures:

- (i) the commitment from a proponent to implement those mitigation measures in the class assessment document; and
- (j) the arrangement for the implementation of the proposed mitigation measures.

**Examples of “Environmental Implications” or
“Environmental Considerations” Paragraphs for TFS and PWSC Paper**

Typical “Environmental Considerations” Paragraphs for Submission of TFS:

[In consultation with DEP, the proponent should categorize the project along one of the following lines –

**This is a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). We undertake to prepare an EIA report to meet the requirements under EIAO.*

**This is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and is covered by a Class Assessment Document approved by the Director of Environmental Protection. We undertake to provide the mitigation measures set out in the Class Assessment Document as part of the project.*

**This is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). It belongs to one of the categories listed in Annex E of Appendix 1.8 of Chapter 1, Project Administration Handbook for Civil Engineering Works, that have very little potential for giving rise to adverse environmental impacts. We undertake to implement the standard pollution control measures during construction, as promulgated by the Director of Environmental Protection.*

**This is not a designated project under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). We undertake to carry out a Preliminary Environmental Review for the project at the design stage and agree the findings with the Director of Environmental Protection.]*

Typical “Environmental Implications” Paragraphs in Public Works Subcommittee (PWSC) Paper for Designated Projects:

Proponent may wish to submit PWSC paper before or after applying for the environmental permit. A typical “Environmental Implications” paragraph may be as follows:

- (a) For case that requires environmental permit, except for applications under section 5(1)(b) of EIAO:

The project is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) and an environmental permit is required for the construction and operation (or decommissioning) of the project. In xx 20xx, the EIA report for the project was approved (or approved with conditions) under EIAO. The EIA report concluded that the environmental impact of the project can be controlled to within the criteria under EIAO and the Technical Memorandum on EIA Process. We shall implement the measures recommended in the approved EIA report. The key measures include..... We estimate the cost of implementing the

environmental mitigation measures to be \$xx million. We have included this cost in the overall project estimate.

- (b) For case that requires environmental permit, but meets the requirements under sections 5(1)(b) and 5(9) of EIAO:

The project is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap.499) and an environmental permit is required for the construction and operation (or decommissioning) of the project. The environmental impact of the project has been adequately assessed in an approved EIA report in the Register established under EIAO, and the findings are relevant. We shall implement the measures recommended for the project in the approved EIA report. We estimate the cost of implementing the environmental mitigation measures to be \$xx million. We have included this cost in the overall project estimate.

- (c) For case that requires environmental permit, but meets the requirements under sections 5(1)(b) and 5(10) of EIAO:

The project requires an environmental permit under the Environmental Impact Assessment (EIA) Ordinance (Cap. 499) for the construction and operation (or decommissioning) of the project. Having regard to the project profile, the Director of Environmental Protection is satisfied that the impact of the project and the mitigation measures meet the requirements of the Technical Memorandum on EIA Process. The permission to apply directly for an environmental permit was granted in xx 20xx with (or without) conditions. We shall implement the mitigation measures set out in the project profile and as required by the Director of Environmental Protection. We estimate the cost of implementing the environmental mitigation measures to be \$xx million. We have included this cost in the overall project estimate.

- (d) For case that requires environmental permit, but meets the requirements under sections 5(1)(b), 5(9) and 5(11) of EIAO:

The project is a designated project under Schedule 2 of the Environmental Impact Assessment (EIA) Ordinance (Cap. 499). Having regard to the project profile, the Director of Environmental Protection is satisfied that the environmental impact of the project can meet the requirements of the Technical Memorandum on EIA Process. With the consent of the SEE, the permission to apply directly for an environmental permit was granted in xx 20xx. We shall implement the mitigation measures set out in the project profile and as required by the Director of Environmental Protection. We estimate the cost of implementing the environmental mitigation measures to be \$xx million. We have included this cost in the overall project estimate.

Reference should also be made to other information to be included in the “Environmental Implications” Paragraph in PWSC Paper such as that required in Paragraph 4.1.3 of Chapter 4, *Project Administration Handbook for Civil Engineering Works*, about management of construction and demolition materials.

Annex I

Checklist for Environmental Appraisal of Policy or Strategy submitted to the Executive Council

Policy Bureau:			Policy Title:			
Scope of Policy or Strategy:						
Screening of Policy Scope	Previous Environmental Issues Raised by the Public, LegCo or ACE	Linkage with Environmental Initiative in CE's Address and Environmental White Paper and the HKSAR's International Environmental Commitments	Previous Environmental Studies or Consultation	Changes associated with the Policy	Interaction with the Environment	Environmental Management
1. Is the policy or strategy ☐ a new one? ☐ an amendment to an existing policy? 2. Will the policy eventually involve physical infrastructure development? ☐ no ☐ yes What are they? _____ _____ _____ 3. Is it possible that the policy or strategy may lead to changes in environmental policies or initiatives? ☐ yes ☐ no ☐ not sure at the stage	4. Has there been any complaints from the public or the Ombudsman on the environmental issues associated with the policy or strategy? ☐ yes ☐ no If yes, what are the environmental concerns? _____ _____ 5. Has the policy matter been the subject of discussion in the Environmental Affairs Panel of the Legislative Council or ACE? ☐ yes ☐ no If yes, what are the environmental concerns? _____ _____ 6. Has the policy matter or the strategy been the subject of the discussion at the District Councils in respect of the previous matter cases? ☐ yes ☐ no If yes, what are the environmental concerns? _____ _____ _____	7. Does the subject matter of the policy or strategy relate to any environmental goals set out in the Chief Executive's Policy Address? ☐ yes ☐ no If yes, would the policy or strategy enhance or contradict the environmental goals and initiative and in what ways? Please describe. _____ _____ _____ 8. Does the subject matter of the policy or strategy relate to any environmental initiative or actions set out in the White Paper on pollution and its subsequent review? ☐ yes ☐ no If yes, what are they? _____ _____ 9. Would the policy or strategy relate to any environmental commitments made by HKSAR under the Hong Kong Guangdong Environmental Protection Liaison Group, APEC and other international agreements? ☐ yes ☐ no If yes, what are they? _____ _____ _____	10. Has the subject matter been the subject of any previous studies? ☐ yes ☐ no If yes, when was the study undertaken? What are the key environmental concerns or solution identified? _____ _____ _____ 11. Has the policy or strategy been the subject of consultation with ACE? ☐ yes ☐ no 12. Have any other studies covered the environmental aspects of the policy or strategy in question? ☐ yes ☐ no If yes, please state the environmental conclusions or findings. _____ _____ _____ 13. Has ExCo previously stipulated any environmental issues that need to be studied or any environmental conditions for the policy or strategy? ☐ yes ☐ no If yes, what are they? _____ _____ _____ _____	14. The Policy may lead to changes in: ☐ land uses/housing supply/redevelopment ☐ industrial structure (size, type, location, changes in technology) ☐ the planning of infrastructures such as roads, railways & reclamation ☐ choice of transport modes and routes for passengers, or goods vehicles or containers ☐ the loss of or impairment to ecologically sensitive areas or fishery resources ☐ sewage collection, treatment and disposal facilities ☐ wastes & refuse collected (e.g. domestic, chemical, livestock, construction, clinical and radioactive wastes) ☐ waste collection & disposal facilities (e.g. landfills, marine dumping & incineration) ☐ *production / import / export of chemical & refuse or other wastes ☐ power supply and fuel options (e.g. gas Vs coal fired) ☐ energy consumption or demand side management ☐ potentially hazardous installations ☐ none of the above, please describe : _____ _____ _____ _____	15. Changes initiated from the policy may result in: ☐ incompatible land uses (housing estates/schools next to polluting uses, such as factories & highways) resulting from land use changes ☐ change in the transport pattern (e.g. traffic volume / composition / routes) due to land use and transport planning that lead to environmental impacts ☐ change in the quality of marine waters, inland and potable waters resulting from discharge or reclamation ☐ change in the population exposed to *traffic / railway / aircraft noise from transport routes ☐ change in the population exposed to aerial emissions from vehicles and other industrial sources ☐ change in the waste disposal facilities such as landfills, public dumps and incinerators ☐ disturbance of ecologically sensitive areas or causing a loss of flora and fauna, wildlife, aquatic & marine environment ☐ degradation / improvement in energy efficiency ☐ global climate & atmospheric changes due to emissions of greenhouse gases such as carbon dioxide ☐ environmental impacts outside of Hong Kong or in a regional context ☐ none of the above, please describe : _____ _____ _____	16. The Policy has included or will include: ☐ strategic environmental assessment or EIA or other environment study nature & likely timing of the study _____ _____ ☐ inclusion of environmental initiative in the policy . They are: _____ _____ ☐ provision of environmental infrastructure ☐ provision of measures to mitigate adverse environmental impacts during the detailed planning and design ☐ monitoring and audit programme ☐ corporate environmental management programme ☐ funding for environmental studies or measures ☐ matters regulated by EIAO ☐ none of the above ☐ not applicable 17. Checklist completed by Name : _____ Post : _____ Tel. No. : _____ Fax No. : _____

APPENDIX 1.9 MITIGATION OF RESIDUAL TRAFFIC NOISE IMPACTS FROM NEW ROADS ON PLANNED USES (Subsumed from ETWB TCW No. 13/2003)

This section sets out the requirements for relevant departments to incorporate the off-site mitigation measures agreed during the EIA process into the land use plan and/or the land sale mechanisms to address the residual traffic noise impact of a new road, after the road proponents implement all practicable traffic noise mitigation measures on roads as identified in an EIA study.

2. Proponents of road projects are required to assess, among other things, noise impacts on both the existing and planned noise sensitive uses, identify suitable alignments, consider options to prevent and mitigate traffic noise impacts, and propose the best practicable package of noise mitigation measures to protect both existing and planned sensitive uses.

3. As a general principle, equitable redress in the form of direct mitigation measures will be provided wherever practicable to protect existing and planned sensitive uses which would otherwise be exposed to traffic noise exceeding the planning guidelines. Indirect mitigation measures such as acoustic insulation and air conditioning will be provided to existing sensitive receivers to protect them from residual noise impacts after adoption of direct mitigation measures on the roads and subject to ExCo's approval on the merits of the case. If additional measures include setback and/or building disposition, even after the adoption of all practicable mitigation measures at source, the EIA process would evaluate and confirm their practicality. The agreed environmental requirements on future adjacent sensitive uses and any development constraints identified during the EIA process should be taken into account when assessing the development potential of the sensitive uses and be made known to potential developers.

4. The following step-by-step procedures shall apply:

- (a) the proponent of a new road is required to implement all practicable direct mitigation measures at source to abate the traffic noise impacts;
- (b) if, after the implementation of all practicable measures at source, the residual noise impacts are envisaged to exceed the established criteria, the proponent of the new road should define the environmental constraints and the mitigation measures at planned sensitive receivers, and assess the practicality and feasibility for implementation by developers;
- (c) as future developers have to implement mitigation measures at receivers, the Planning Department and Lands Department will agree with the road proponents, during the EIA process, to the site constraints and/or the findings about the feasibility and the practicability for developers to implement the measures at planned sensitive uses.

This agreement, which will be recorded during the EIA process, is particularly important when the layout designs might affect development parameters of the affected sites. During the EIA study, the road proponents should ensure, to their best endeavour, that the development potential of a site would not be affected;

- (d) once agreed, Planning Department will incorporate the constraints into the land uses plans and, where applicable, submit the necessary amendment plan to the Town Planning Board for approval. Lands Department will also incorporate the constraints and mitigation measures agreed during the EIA process into the realistic calculation of the development potential;
- (e) Lands Department shall make known of the agreed constraints and measures to the developers before the sale or grant of lands. Lands Department should incorporate appropriate clauses in the lease or grant conditions such that the agreed measures will be implemented by the developers.

5. If there is a conflict about the measures at planned sensitive uses that cannot be resolved, the conflict shall be referred by DEP to SEE to resolve the matter with other Policy Secretaries.

[NB. The procedures mentioned above are subject to review at the time promulgation of this Appendix to consider wider options in designs of noise mitigation measures for new roads apart from tackling at source. This Appendix will be subject to revision if there is any change to the procedure after the review.]

APPENDIX 1.10 GUIDELINES AND PROCEDURES FOR ENVIRONMENTAL IMPACT ASSESSMENT OF GOVERNMENT PROJECTS AND PROPOSALS PLANNING FOR PROVISION OF NOISE BARRIERS

(Subsumed from ETWB TCW No. 13/2003A)

Purpose

- 1. This appendix sets out additional guidelines on the planning for provision of noise barriers in project programmes.**

Background

- 2. In relation to the construction of noise barriers, Director of Audit (D of A) highlighted the following cases of which some led to heavy financial loss by government:**

- a) Case 1 – Due to the change of the development proposal, noise barriers for a road widening project were no longer required and had to be deleted from the contract. As a result, government had to pay hefty compensation to the contractor. D of A considered that the compensation could have been avoided if an incremental approach had been adopted in the design and procurement process to cater for the possible planning and development changes.**
- b) Case 2 - Application for a variation of Environmental Permit (EP) to defer provision of noise barrier due to delay of the development would require conduction of a separate EIA study and public consultation. In view that the noise barriers would ultimately be required, the project proponent chose to construct the noise barriers as scheduled but was subsequently requested to remove them due to aesthetics reasons. D of A considered that the removal of the noise barriers could be avoided if the application for a variation of EP was put up promptly upon noticing the possible delay of the planned development.**
- c) Case 3 - Noise barriers were built despite a delay in the associated development resulting in the noise barrier standing useless for several years. D of A suggested that flexible terms should be incorporated in future works contracts for the provision of noise barriers for planned developments, such as providing the footing or foundation for the noise barriers only and the panels as provisional items.**
- d) Case 4 - The obligation on a developer to build noise barriers for a development to abate the noise impact from the planned road in future was stipulated in the land grant condition prior to land sale. With the EIAO coming into operation in April 1998, the provision of the noise barriers was included in the roadwork project. As a result, the developer was relieved of his obligations, but government was unable to recover the cost of the noise barriers under the project from the developer. D of**

A considered that the obligation under the land grant condition should not be released without an agreement with the developer for the compensation of the noise mitigation works under the project.

Policy

3. On 23 January 2003, the Administration informed the Transport Panel of the Legislative Council of the following five guiding principles for implementation of the policies on installation of noise barriers (Paper No. CB(1)755/02-03(01)) -

- Principle 1: Compliance with existing statutory requirements
- Principle 2: Timely implementation of mitigation measures
- Principle 3: Setting priority for existing roads in the retrofit programme according to excessive noise levels
- Principle 4: For existing roads, cost effectiveness of noise barriers
- Principle 5: Paying due attention to aesthetic design of noise barriers

In particular cases where the implementation of noise barriers is related to future developments, works departments shall give due consideration of the above Principles 1 and 2 and observe the following guidelines:

Incremental Approach

- a) Where appropriate, project proponent should adopt an incremental approach in the design and procurement for the provision of noise barriers to dovetail with the actual occupation of the planned sensitive uses.
- b) If possible, the work shall be designed to be modular and suitable for excision from the provision to any extent where necessary. As a general rule, only the minimum (such as foundation, or just the space, if possible) shall be provided to meet the uncertain developments.

Contractual Mechanisms for the Avoidance of Claims

- c) In addition, contractual provisions should be included to enable the Architect/Engineer to omit or excise the work in any manner without allowing the contractor to lodge a claim. Where the noise barriers are related to some developments which are highly uncertain, they shall be included in the contract as provisional items and be ordered only when the development is ascertained.

Beware of Change in Development Programmes

- d) Project proponents should closely liaise with LandsD and PlanD about

government's future land sales programme and any proposed changes in land use or development parameters etc. to determine if the installation of noise barriers should be proceeded any further in a contract.

Time for Variation to EP

- e) When drawing up implementation plans for works contracts involving EP, allowance should be made for the time necessary for the compliance with the statutory requirements and procedures (including public consultation) should a variation of EP conditions be necessary due to the change of the planned environmentally sensitive uses. Where the need for such variation is uncertain, foresight should be exercised to have the need ascertained at the earliest possible moment with close liaison for action with the relevant authority(ies). Directorate officers should always be involved if there is programming implication.
- f) Once a decision for a variation of EP is made, the project proponent should act promptly and closely liaise with DEP at directorate level to expedite the approval of variation to the EP so as to minimize the impact to the work programme. If a variation of EP sought for involves a reduction of mitigation works, the affected work if it has already commenced should be stopped in order to avoid the possible request for subsequent removal after construction.

Avoidance of Duplication of Environmental Noise Barriers with Private Developments

- g) On receipt of an EIA report about the installation of any noise barriers, project proponents should ascertain, with assistance from LandsD and EPD as necessary, whether such measures would have an effect of relieving a third party's contractual obligation to government embodied in a legally enforceable instrument, such as a clause in the land grant/land sale conditions in the nearby private developments. Where such situation occurs, the project proponent should liaise with LandsD and EPD for the purpose to decide if the measures in the EIA report are still necessary, and decide which party is the most appropriate to provide noise mitigation measures (not limited to noise barriers).
- h) In principle, if it is decided that the noise barriers shall be provided under the works project, the project proponent should assist the relevant authorities concerned to negotiate with the third party for an agreement to compensate government of the cost of such provision to the extent he is relieved of such duty under the legal instrument, by providing the necessary project cost

information. Under circumstances where the use of public funds is justified for the noise barriers without appropriate compensation from the third party, the project proponent should provide the information in the funding proposal.

APPENDIX 1.11 PROCEDURE FOR INCORPORATION OF WATERWORKS INTO OTHER CAPITAL WORKS CONTRACTS

(Subsumed from WBTC No. 29/93)

Purpose

When roadworks and related waterworks have been undertaken together, past practice was usually for two contractors, to be employed under different contracts and supervised by different works departments, working on the same site. This resulted in conflicts, contractual disputes and delays.

2. Experience has shown that where the use of two contractors on the same site is avoided by incorporating the installation of waterworks into the roadwork contracts, contractual claims have diminished.

Options at the Planning and Design Stage

3. At the planning or design stage, the project office responsible for any contract having associated waterworks should consider the significance of the waterworks involved and the consequences of delay. The project office shall agree with WSD whether the waterworks are to be undertaken :-

- (a) as advance work by WSD, prior to the start of the main contract; or
- (b) as part of the main contract; or
- (c) concurrently under a separate WSD contract, under arrangements to be agreed between the project office and WSD (such as dates for stage possession of Portions of the Site or early completion of Sections of the Works) which shall be included in the documents for both contracts.

Procedures and Guidelines

4. Option 3(c) shall only be used when options 3(a) & 3(b) are impractical. If option 3(c) is used, care shall be taken to ensure that the risk of delay is minimised, taking into account available lead time, scope of the waterworks, previous experience on similar works, workload and performance of the WSD contractor etc.

5. If option 3(b) is used, the following conditions shall apply:-

- (a) The Contract shall require the Contractor to supply the waterworks materials. Under very special circumstances, where the materials are not readily available locally, or where a lengthy delivery time is envisaged and the lead time could not reasonably be accommodated within the Contractor's programme, the project office shall either procure the waterworks materials in advance of the contract or approach WSD to do so, or in liaison with WSD, decide whether the Contractor is to supply the waterworks materials in whole or in part.

- (b) The cost of diverting existing waterworks, including any administrative costs, such as fees, expenses etc, shall be borne by the project office. Where new waterworks and/or improvements to existing waterworks are involved the cost of the work (including related diversions of existing waterworks) shall be charged to the relevant WSD project vote, including any administration costs, unless otherwise agreed by the project office.
- (c) The Contractor shall either be on the List of Approved Contractors for Public Works in the Waterworks category and in the appropriate Group or if not, shall be required to enter into a written sub-contract with a contractor who is so listed.
- (d) The Contract shall include the provision for carrying out the waterworks to WSD's satisfaction. (Standard special conditions of contract and specifications for waterworks to be provided by WSD.)
- (e) The project office shall provide facilities to WSD for checking, examining and testing the waterworks to WSD's requirements.
- (f) For Works that are to be administered 'in-house' by the project office, WSD shall carry out the design, preparation of drawings and tender documents for the mainlaying part of the Works and forward them to the project office for incorporation into the Contract. WSD shall second staff (usually on a part time basis) to assist in site supervision and site measurements, but the ultimate responsibility of the work must rest on the project office. Suitable contractual arrangements, if considered necessary, may be made to delegate appropriate powers to the WSD staff to enable site supervision to be properly carried out.
- (g) If the project office employs a consultant to administer the Works, the consultant's Brief should require the consultant to prepare and submit to WSD for comment all the design calculations, drawings and specifications for the waterworks part of the Works. The consultant should also be required by the Brief to employ an engineer with suitable experience in designing waterworks and shall submit the name and curriculum vitae of the engineer for prior agreement by WSD. Depending on the scale of the waterworks involved, the resident site staff employed by the consultant for the waterworks shall include appropriate number of engineers, inspectors and works supervisors, who are experienced in supervising waterworks, unless prior arrangements have been made with WSD for them to provide site supervisory staff. WSD shall be consulted with regard to the establishment of the site staff as well as their suitability prior to appointment. The project office or its consultants shall also maintain close liaison with WSD and shall endeavor to facilitate WSD in the monitoring of the quality of waterworks. The project office or its consultants shall

arrange regular coordination meetings with WSD, at intervals to be agreed with WSD, for timely handling of site issues.

6. WSD will nominate a Project Coordinator, with the assistance from a Liaison Engineer, for each contract who will give assistance if required by the project engineer or the resident engineer.

7. All connections to the existing distribution system (live mains) are to be carried out by WSD.

APPENDIX 1.12 MODEL FOR PLACING WATERWORKS PROJECTS IN THE PWP WHEN CARRIED OUT IN ASSOCIATION WITH NEW TOWN OR STRATEGIC GROWTH AREA DEVELOPMENTS (Subsumed from WBTC No. 4/2001)

Purpose

There are often close interfaces between a new town or Strategic Growth Area (SGA) development and new waterworks proposals which are to be carried out in the same locality whether for the purpose of serving the new town or SGA development or not. There is thus a need to promulgate a standard model to guide whether and how these waterworks projects should be grouped together with the new town or SGA works as a conglomerate PWP item.

Procedures and Guidelines

2. Where a new waterworks project is proposed in an area of new town or SGA development or in association with such development, its placement in the PWP shall follow the model as illustrated in Annex A.

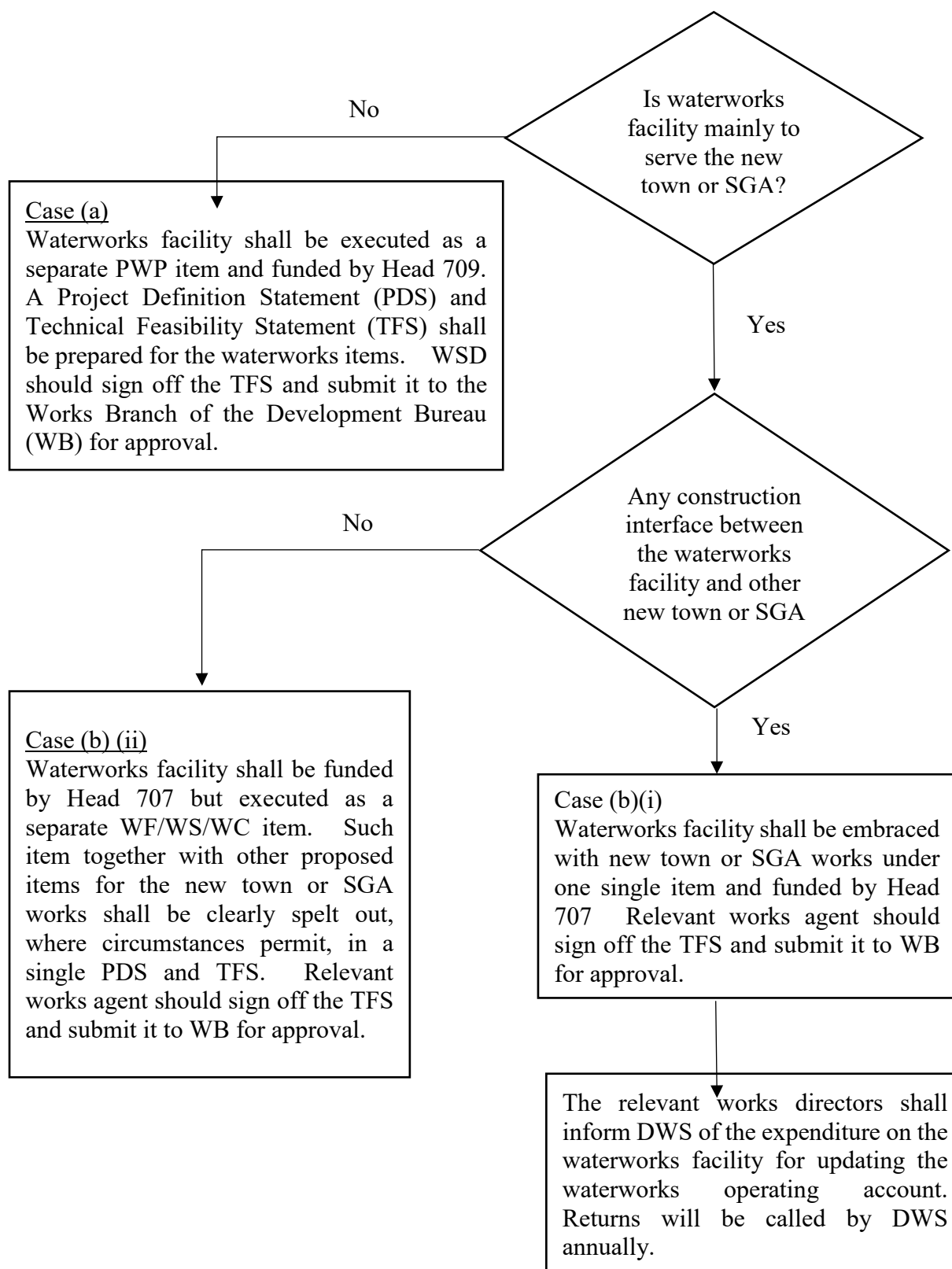
Reporting of expenditure on waterworks facilities which are embraced within the scope of new town or SGA works projects

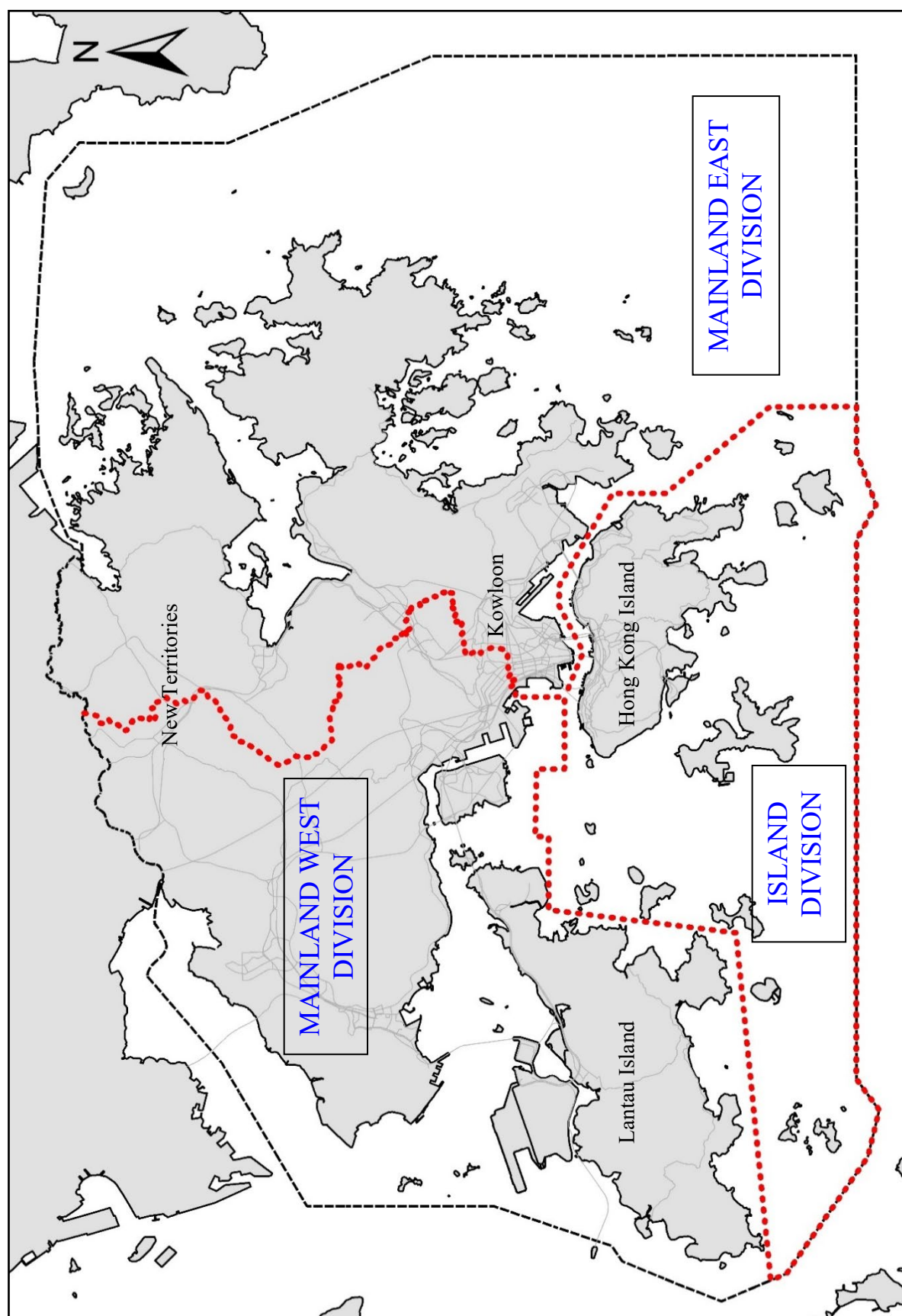
3. Where waterworks facilities are embraced within the scope of a new town or SGA works project, i.e. case (b)(i) in Annex A, the expenditure on such facilities shall be reported by the relevant directors to DWS so as to facilitate the preparation of the Water Authority Operating Accounts and the Five Year Projections of the Operating Accounts. In this connection, DWS shall call the necessary returns from the relevant directors in around May of each year setting out the types and format of the information required.

PWSC Submission

4. Also for case b(i) in Annex A, a paragraph on the financial implication on water charges, similar to the one currently required for waterworks projects, shall be included in the PWSC submission when seeking to upgrade the project to Category A. Details for inclusion in that paragraph shall be provided by DWS.

Annex A

Model for Placing Waterworks Projects in the PWP when carried out in association with new town or SGA developments

APPENDIX 1.13 GEOGRAPHICAL AREAS OF GEO DISTRICT DIVISIONS

GEOGRAPHICAL AREAS OF GEO DISTRICT DIVISIONS