This report is prepared by Hyder-Mott Connell Joint Venture for information and discussion purposes. The findings and recommendations do not necessarily represent the views of the HKSARG.

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1. INTRODUCTION

1.1 BACKGROUND

1.1.1 The first Territorial Development Strategy (TDS) was produced in 1984 to establish a broad land use-transport-environment framework to guide the physical development of Hong Kong into the 1990s. Although it had been updated twice in 1986 and 1988 to take account of changing circumstances, it was not until 1990 that a comprehensive review of the TDS was commenced. The technical work of the TDS Review was completed in late 1996 and the report was published in 1998.

1.1.2 Since the completion of the TDS Review in late 1996, some fundamental assumptions underlying the review have become outdated (e.g. population projections, economic growth rates) and some new factors having strategic planning implications have emerged (e.g. China's entry into the World Trade Organisation, the increasing socio-economic interactions between Hong Kong and the Mainland). An updated planning framework is therefore required which will recommend a long-term development strategy (referred to as HK2030) to guide the future development of Hong Kong and to provide a basis for allocating land for various land uses and investment in infrastructure.

1.1.3 The last round of TDS Review, which assumed a maximum population of 8.1 million by year 2011 identified major environmental problems, and in particular air quality. With further increase in future population, there would undoubtedly be severe additional pressure on our sensitive environment. Without a healthy environment, it is not possible to achieve the long-term vision for Hong Kong to be the world city in Asia as well as the major city in China. It might also affect investment by major international companies in Hong Kong.

1.1.4 Furthermore, given the long time frame of the study (30 years), significant changes in Hong Kong and improvements in the environment are possible through various measures and applications of new technologies. Although there may be uncertainties in the projection over 30 years, such as changes in population, transportation, housing and the provision of other facilities, efforts should be made to assess the potential changes. More importantly, the opportunity should be taken to examine innovative ideas, new technologies, options and measures that could be adopted in the future to bring about continuous and sustainable improvements to Hong Kong's living environment.

1.2 SCOPE OF WORK

1.2.1 Providing a good quality environment is a fundamental building block to enable Hong Kong to become a world city in Asia. Hong Kong also needs to respond to its regional and global environmental responsibilities. We need to establish the required environmental targets in order to achieve a good quality environment meeting people's likely future expectation, and to meet the regional and global environmental responsibilities. Given the potential environmental problems identified in the last TDS review, such as air quality and sewage and waste disposal, it is also necessary to assess our environmental capital or budget for use as a basis, among other factors, for deriving development scenarios and options.

1.2.2 To maintain Hong Kong's long term development sustainability, the Strategic Environmental Assessment (SEA) shall broadly investigate how resources, such as land, energy and materials, could be used in the most efficient way, how the carrying capacity could be increased to cater for future changes, how the increasing demand for resources could be balanced against the limited supply, and to what extent improvement in environmental efficiencies are needed to
reduce the environmental pressure. Various demand management measures, such as those effecting changes in lifestyles or those following the polluter-pays-principle, should be broadly investigated in the SEA.

1.2.3 The Main Study of the HK 2030 involves four key stages of work viz:

Stage 1: Agenda Setting, Baseline Review and Identification of Key Issues;

Stage 2: Examination of Key Issues;

Stage 3: Formulation and Evaluation of Scenarios and Options; and


1.2.4 In order to enhance public awareness and to promote ownership of the HK 2030, extensive consultations with stakeholder groups and members of the general public will be conducted throughout the entire study process.

1.2.5 The SEA will be integrated with the HK 2030 Study (i.e. Main Study) by providing strategic environmental information and suggestions to facilitate the formulation, development, and identification of scenarios and options which could meet the environmental targets of a world city in Asia.

1.2.6 Strategic evaluation methodologies/tools will be used to examine the development options in respect of their environmental sustainability implications and strategic environmental impacts. Potential issues to be examined include air quality impacts due to transportation, energy and industrial sectors; water quality implications due to sewage load increase and sewage infrastructure constraints, reclamation and increase in toxic chemicals discharge; waste management implications due to increase in resources consumption, new development and waste generation as well as construction and demolition materials; potential changes in noise levels due to transportation, port operation and future port development plans, and increase in development density; increase in greenhouse gas emission; any increase in hazards risks; and implications on the integrity of important terrestrial and marine habitats as well as on resources of landscape and heritage value. Reference will be made to the environmental part of the Study on Sustainable Development for the 21st Century (SUSDEV21) when considering and evaluating the environmental sustainability implications.

1.2.7 Apart from the developments in Hong Kong, it has long been recognised that development in the Pearl River Delta (PRD) region influences Hong Kong's environmental conditions. The recent and potential future developments in the PRD provide some indications on the environmental issues to be addressed. The SEA will therefore examine the implications of the regional development and its consequential impacts on Hong Kong's environment. Such environmental implications will be considered when formulating the development strategies with a view to provide a good quality environment in Hong Kong.

1.2.8 There are a number of relevant environmental assessment reports or studies that are either completed, on-going or to be commissioned in the near future. These reports/studies may have a bearing on this Assignment and will be reviewed where available in the context of the SEA. It should be noted that some on-going studies (such as the Wetland Compensation Study) are still at early or conceptual stages and cannot be reviewed at this time.

1.2.9 Innovative ideas and new technologies that could help solve the existing and
potential future environmental problems will also be investigated as part of the Study. The SEA Study Team will participate in the Main Study during the formulation of the development scenarios, options and strategies to ensure proper integration of environmental considerations and improvement measures into the development scenarios, options and strategies.

1.3 INCEPTION REPORT PURPOSE AND OBJECTIVES

1.3.1 The Inception Report has been prepared to address the following:

- provides a description of the understanding and appreciation of the objectives to be achieved through the undertaking of the Study as summarised in Section 2;

- provides the approach to be adopted for each of the work tasks and the methodologies to be used to achieve the stated objectives as indicated in Section 3;

- contains information of the SEA Study Team as detailed in Section 4; and

- includes a SEA Study programme in Section 5.
2. PROJECT APPRECIATION

2.1 UNDERSTANDING THE OBJECTIVES

2.1.1 Under the overall goal of conforming to sustainable development principles, the planning objective of the Main Study is to provide a good quality living environment for Hong Kong. To ensure that this is achievable, the usage and demands placed on environmental resources must be balanced against their availability and supply. An integral aspect of the Main Study is therefore a consideration of environmental implications which will be formalised as an SEA. The main objectives of the SEA are given below with a short appreciation of each objective.

a) To establish environmental targets in order to achieve a good quality environment which is in effect a fundamental building block to enable Hong Kong to become a World City in Asia.

2.1.2 Hong Kong is facing considerable environmental challenges including but not limited to:

- how to protect Hong Kong's biodiversity;
- incompatible land uses, air and water pollution, noise and waste disposal problems in the urban areas;
- significant noise from road and rail traffic due to concentrated transport networks, immense housing demand compounded by scarce habitable land, and a lack of environmental concern in the past, as well as the construction noise for residents living near development sites;
- water pollution from expedient connections and squatter houses, which is further exacerbated by the first flush during heavy rainfall, and developments in unsewered areas etc.;
- mutual environmental impact between Hong Kong and its neighbours; and
- significant loss and degradation of heritage sites and their historic environs due to incompatible land uses, planning control and building and landscape design of the rural and urban development areas.

2.1.3 In addition to the on-going effort by the Government to eradicate the existing environmental problems, planning against pollution is the most effective approach to minimise environmental problems in the future. To this end, environmental targets will be essential to guide the future development plans for Hong Kong to become perceived as a World City in Asia. It demands considerable effort and resources to achieve the environmental conditions which would match this objective. This means that realistic targets should be set. The targets should form part of the vital benchmarks for performance of policies, pollution prevention strategies and development initiatives.

b) To assess our environmental and related infrastructures’ carrying capacity and the demand that would be generated from future developments, and propose ways for balancing the demand against the limited capacity and for better management of our environmental resources.

2.1.4 The considerable environmental challenges and limited natural and heritage resources available in Hong Kong demand best management of our environmental resources, which are often in conflict with further infrastructure developments.
needed for economic and population growth. Identification of the pinch points in the existing infrastructure, the need for and timing of expansion of facilities as well as the environmental implications are a key to achieving a sustainable development strategy.

c) To integrate the consideration of environmental factors together with other considerations in the building of scenarios, development, evaluation and refinement of options, and formulation of response plans to enhance environmental sustainability and to avoid potential environmental problems.

2.1.5 A strategic plan for the next 30 years will affect all walks of life and all aspects of Hong Kong in the future and development of such a plan is bound to involve many disciplines of environmental professions, town and land use planners, the Government and in particular the public. This objective of the Study aims for an environmental input throughout the process of formulating strategic development options. This also means a close interaction is required between the SEA Study Team and the study teams of the Main Study and other relevant studies.

2.1.6 A key Study deliverable will be the Strategic Environmental Action Plan and Programme (SEAPP) which will comprise a distillation of the SEA recommendations comprising necessary actions, timing and implementation agents to preserve and protect Hong Kong’s environment over the next thirty years and means to environmentally monitor and audit the SEA recommendations. As this will be made available to the public in the SEA FR and ES it will be necessary to consult members of key stakeholders and the public on the SEAPP.

d) To identify the environmentally preferred option(s), and provide environmental input into the options refinement and selection process.

2.1.7 This is a key stage for environmental feedback to the process of formulating preferred development options. To achieve this objective, a well coordinated project management which can integrate views from various disciplines, a close interaction between the SEA and the Main Study, as well as a well-considered environmental performance indicator system will be essential.

e) To evaluate at a strategic level the potential environmental impacts and sustainability implications of the preferred option(s) under various scenarios proposed by the Main Study, and to identify any environmental mitigation measures and follow-up investigations required, including those in relation to policy and institutional arrangements.

2.1.8 This objective demands a comprehensive environmental assessment of preferred options taking into account the principles laid down in the TM of EIAO as far as is practicable and given the level of detail available. The methods used for this purpose should be scientifically sound and tools and models deployed should be fully validated. Cumulative impacts of long term developments would be assessed based on the best information available. This Study will point out if there is any options/proposals that would not be expected to meet the EIAO TM requirements. From the assessment, an SEAPP can then be developed to address the nature and extent of mitigation measures and follow-up investigations.

2.2 STUDY METHODOLOGY ISSUES

2.2.1 The Consultants have identified the following issues of concern pertinent to the carrying out of the SEA:
2.2.2 **Environmental Targets and Performance Indicators**: It is recognised that the environmental targets should have flexibility to accommodate the public's rising aspirations for a better environment, instead of simply trying to set specific numerical targets which could become out of date. So, an early requirement will be to establish agreed environmental targets and performance indicators that are appropriate to a World City in Asia. In this regard, agreements already reached on those indicators and guiding principles in the SUSDEV21 Study may be cost-effectively adopted and others developed. Ideally, it will be desirable that these are agreed for use in the HK2030 Study by all levels of HKSAR Government and also by members of the general public and key stakeholders via public consultation and liaison. However, in the absence of a comprehensive cost analysis, there will be insufficient basis for making any firm decisions.

2.2.3 **"Broad-Brush" Environmental Assessment Methodologies and Acceptable Level of Detail**: In order to prevent disagreements which could hamper later SEA Study progress, it is essential that the Inception Report describes the SEA methodologies to be used in subsequent SEA Study stage evaluations and strategic environmental assessment of selected options in detail for agreement by the Client. Critically, cumulative assessment methodologies must be aired and agreed early.

2.2.4 **Interface with the HK2030 Main Study**: It will be essential for the senior members of the SEA Study Team to have regular programmed interface with key members of the Main Study Team in the process of formulation of development scenarios, options and strategies in order to ensure that the whole HK2030 Study progresses both seamlessly and simultaneously taking on board environmental considerations and potential improvements that may eventuate from new environmental pollution control technologies or local or international policy.

2.2.5 **Extensive Public Consultation**: An essential Project requirement will be to keep Hong Kong's key stakeholders and members of the general public informed about the progress and findings of the Study through extensive public consultation throughout the entire study programme. Concomitantly, it will be necessary to ensure that the outcome of the public consultation can be taken on board, through a feedback mechanism, in subsequent Study stages that will require a built-in flexibility process.

2.2.6 **Information Scoping**: There is a wealth of information about environmental baselines, capacities and performance indicators. It is essential to identify the key messages encrypted in this information and to use them effectively.
3. APPROACH TO THE STUDY

3.1 RELEVANT REPORTS/STUDIES REVIEW

3.1.1 A constructive interface between this SEA Study and the Main Study will be essential to ensure an integrated planning process. A critical review of previous work in particular the TDSR and reference to SUSDEV21, will be a fundamental requirement.

3.1.2 We will firstly collate the relevant studies to review the information. Discussions with relevant Government departments including PlanD, EPD, CED, EMSD, AMO and AFCD to collect relevant study reports have commenced. The Study Director and Study Manager will circulate the relevant reports/information to Task Leaders and Discipline Specialists for the preparation of SEA reports. The SEA Coordinator will be responsible for coordinating the two-way flow of information between the management team and Task Team Leaders / Discipline Specialists.

3.1.3 To support short, medium and long term planning, the latest technological developments and applications will be considered. Our approach involves deploying a highly experienced and knowledgeable Study Team.

3.2 ASSESSMENT PRINCIPLES AND METHODOLOGIES

3.2.1 The primary objective of the Study is to examine the environmental consequences of development options and plans for Hong Kong up to Year 2030. The ultimate goal is to formulate development strategies which can respond to changes in the short, medium and longer term which will be able to be realised in a sustainable manner taking full cognisance of the strategic implications of the proposals and individual components thereof.

3.2.2 Perceptive and intuitive identification of the key issues and concerns and identification of opportunities for sustainable growth and natural constraints and definition of "no-go" (and perhaps other restrictive land use zoning for environmental / conservation purposes) areas will be pivotal to the successful outcome of the Study.

3.2.3 The Study can essentially be considered as the sum of various parts, as illustrated on Figure 3.1. The first three work tasks underpin the entire Study as the outcomes seek to:

- propose the environmental targets for Hong Kong;
- provide a benchmark for future comparison and assessment of performance of the strategies against the targets set;
- fundamentally incorporate flexibility into the targets so that they can be re-evaluated at different time horizons and can be modified to reflect improvements in pollution control technologies, baseline conditions, policy initiatives and public's rising aspirations;
- determine the environmental framework within which the development scenarios are to be set and in particular with reference to the wider area of influence beyond the boundaries of the SAR; and
- identify constraints on development with respect to environmental
carrying capacities.

The technical approach is to have seamless transitions between the Main Study and individual work tasks under the SEA.

3.2.4 These objectives could be achieved, through a variety of ways including:

- Regular exchanges of views, opinions and technical knowledge and information to allow informed decisions to be made in the formulation of development strategies;
- Regular team meetings;
- Extensive use of email and intranet facilities;
- Consultation with interested parties;
- Introduction of "Consensus Building" workshops to reach decisions on key components of the Study such as environmental targets or development options; and
- Involvement of members of the International Review Panel at pivotal points in the Study - with the aim of seeking a wider view on pertinent issues.

3.2.5 As the information required to be generated from this Study is immense, the latest in-house GIS technology will be deployed throughout this Study to facilitate the collation of information and presentation of the Study results.

3.2.6 Inception Report

3.2.6.1 The Inception Report has been prepared to outline the work tasks to be carried out, the key documents to be reviewed and utilised in the Study.

3.2.6.2 Team leaders have been assigned to each of the primary tasks and the methodology for carrying out these requirements to the full satisfaction of the Client is given below.

3.2.7 Task 1: Environmental Targets for Hong Kong to be a World City in Asia

3.2.7.1 Hong Kong's role as a cosmopolitan city commenced around 150 years ago when it transformed from being a generally isolationist entity to a regional centre. Development has inevitably been cyclical and is a reflection of economic performance not only in the region but globally.

3.2.7.2 Without question Hong Kong can already lay claim to the title "World City". The challenge which faces decision, policy makers and all who live and work in Hong Kong however is "how to contribute to improving the environment and living conditions to keep apace with development and economic pressures".

3.2.7.3 This Study seeks to address some of the issues. One of the issues to be addressed is that of defining "what are the targets we are aiming for?".

3.2.7.4 For almost two decades EPD has been planning for improvement in living and working conditions through legislation, policy statements and provision of mitigation measures. The fundamental targets are set down in law as the Water
Quality Objectives, the Air Quality Objectives, the Noise Criteria and various standards. In addition to legislative controls in Hong Kong, the PRC legislation (which has a significant influence in the regional context) is comprehensive and encompasses a suite of legislation for sustainable development and its enforcement. Without doubt the controls and regulations are in place with the overarching concept being "not to exceed" the set standards.

3.2.7.5 *This Study needs to reach concordance on what are the targets to aim for.*

3.2.7.6 In order to answer this question - which is the driver of the Study - we need to examine the current situation, consider past lessons learnt in development and the consequential changes to the environment over the last two decades (and increments thereof), and to explore how other nations tackle the issue of resolving conflicts between economic developments versus environmental protection. Hence, the setting of long-term targets will take into account the international trend/experience in the use of technology for environmental improvement.

3.2.7.7 The proposed approach is to agree with all stakeholders and decision makers exactly what criteria are to be used to define environmental targets. We propose this will be the subject of a "Consensus Building" workshop involving key task leaders with input from the International Panel Review.

3.2.7.8 Before such discussions can commence a review of all relevant literature, and taken from our international database which has been prepared for other similar long-term strategic planning studies will be carried out.

3.2.7.9 Baseline data will make specific reference to that formulated under the TDSR, SUSDEV21 and other strategic assessments which have been carried out for air quality, water quality, waste management and ecological, natural and heritage resources. Updating of the database will be necessary as the Study progresses as information becomes available from the concurrent "Study on Landscape Value Mapping of Hong Kong" and possibly upon the completion of the review of nature conservation policy.

3.2.7.10 Much information already exists, including the historical baselines which can be used to assess the extent of changes in response to developments over say the last 5 or 10 years. Caution must however be exercised when drawing conclusions as there are many factors which influence the environment both directly and indirectly.

3.2.7.11 A comprehensive profile of baseline conditions will be established which will embed current conditions, planned or committed developments, key concerns and international standards. The criteria, which will be established to benchmark the performance of Hong Kong's environment in response to developments, will also be included with reference given to the indicators promulgated in SUSDEV21 and other international standards.

3.2.7.12 Encompassed within the literature review will also be a section on emerging technologies for pollution control and equipment (including minimising and control of pollution at source). This detail will be particularly pertinent when assessing the potential impacts of key components of the development strategies such as road based transport versus rail, and the energy policies (coal fired power stations versus oil fired or nuclear or hydro - further afield in China, Philippines, Thailand, Vietnam etc).

3.2.7.13 While the proposing of environmental targets has been set out as Task 1 in the
Study Brief, the Consultants consider it appropriate that Hong Kong's environmental capital/budget as well as the constraints and opportunities should provide essential information and guidance to the setting of targets. Hence, it is proposed that Tasks 2 and 3 should proceed before Task 1. Using the information compiled on the baseline and the international standards and criteria, appropriate environmental targets will be proposed.

3.2.8 Task 2: Baseline Review and Environmental Capital/Budget

3.2.8.1 The baseline review will take cognisance of the Environmental Baseline Report and the four Environmental Survey Reports of SUSDEV21 Study. The subdivision of the components into primary and secondary components and their inter-relationship with the relevant guiding principles will be reviewed and updated to reflect the latest concerns and situations.

3.2.8.2 The findings of the latest strategic assessments on air quality, cumulative updates on water quality and the study into the sources of marine pollution and sediment quality will be included in the database with an impartial view.

3.2.8.3 Key factors to be taken into account in the update include the influence of the developments in the wider regional and trans-regional context. The information collected by Mott Connell for the Pearl River Delta, on behalf of the World Bank, and that gathered by the cooperative studies between China and the US on regional air pollution using satellite techniques will be considered in the context of the existing information. No new field data will be collected per se but existing data sources, which are available to our team, will be interrogated for this Study.

3.2.8.4 Presentation methods for the database will be agreed with the Client, but could either be via the PlanD GIS system or a dedicated website or Study specific database.

3.2.8.5 SUSDEV 21 identified that natural resources capital stock in Hong Kong is under some threat from future development proposals. Ways to overcome these constraints and to utilise the environmental stock more efficiently have been suggested and will be reviewed in the overall context of the update of the baselines and in light of future development options.

3.2.8.6 Environmental capital stock will be elaborated upon with reference to international standards and reference criteria - all the while taking account of the specific local conditions particular to Hong Kong.

3.2.8.7 Carrying capacity was a concept promulgated through TDSR and used as a means for allocating "budgets" to different forms of pressures and budgets. The definition to be adopted for this Study will be agreed on at the same time as the environmental targets and the relevant strategic indicators will be defined. These will make reference to generic indicators given in SUSDEV 21.

3.2.8.8 Areas for environmental savings, economies and efficiencies will be defined and will be referenced to specific indicators and targets.

3.2.8.9 Elements of environmental capital such as waste disposal facilities are under tremendous pressures at present and it will only worsen in future - unless measures and policies are put in place to alleviate the stresses. Another area where the environmental capital stock is under threat pertains to ecological resources. Provision of a comprehensive nature conservation policy and
integration of programmes for protection of the natural resources will be required in order to better manage the capital stock.

3.2.8.10 All of the components which make up Hong Kong's capital stock need to be appraised both in terms of local context and further afield. This not only allows clear reference points to be set and guidelines to be drawn up but will allow the whole issue of sustainability to be considered in a wider context.

3.2.9 Task 3: Identification of Constraints, Opportunities and Key Issues

3.2.9.1 Environmental constraints on land use planning will be defined using the information collated under the preceding task.

3.2.9.2 Key environmental concerns are well documented and relate to air pollution problems associated with strategic (and local) road connections, interface issues associated with residential developments located within the area of influence of the major roads (noise, air pollution and visual impacts), compatibility of adjacent uses and impacts of development on environmental infrastructure and other sewage facilities, i.e. potential overloading of existing sewage infrastructure including sewer systems, pumping stations and treatment works, limited natural resources (such as potable water) expansion of power generation and supply facilities or proximity to potentially hazardous installations. It is recognised that upgrading of the capacity of major sewerage systems/facilities (such as the HATS deep sewage tunnels) will be problematic and represent a constraint.

3.2.9.3 Reference will be made to all existing planning statements, guidelines, principles and intentions, studies and proposed development plans. Broad "no-go" areas will be defined with consideration in various aspects, and areas to be examined under Task 4 will be set out. Reference will also be made to the guiding principles set out in SUSDEV 21.

3.2.9.4 Under Task 4, potential opportunities will also be examined to determine the environmental implications of developing, for example conservation policies or rail based transport strategies (and these strategies will be discussed) versus combined road and rail based transport systems.

3.2.10 Task 4: Examination of Key Issues

3.2.10.1 The main objective of this task is to identify influencing factors for each environmental key issue (as identified in Task 3) in preparation for evaluation of the environmental performance of development options.

3.2.10.2 We will focus on ways to conserve and to enhance the environmental capacity (e.g. definition of "no-go" areas and maximum utilisation of solution spaces). We have built up significant amount of knowledge databases from our previous relevant regional studies such as TDSR and CWQHE. We will interrogate those knowledge databases to evaluate these factors in terms of their impact on the environmental capacities in HKSAR and to identify the relevant critical aspects of these factors to be investigated in the option evaluation in Stage 3. We will also identify mitigation or enhancement measures for each of those factors with a view to providing environmental input to the refinement of development options. Issues and factors as identified in SUSDEV21 study will be taken into account. A tabulated output summarising all major influencing factors will be produced for each of the key issues and we will ensure that the definition of influencing factors and the format of the output from this task are compatible with those deployed in the CASET to facilitate the evaluation of development.
Regional Developments

3.2.10.3 Regional developments already have a significant impact on Hong Kong's air quality under the influence of northerly winds and similarly the Pearl River's wet season discharges contribute greatly to the water quality of western Hong Kong waters. In the next thirty years, the scale, extent and consequence of this present influence will increase as the region's economic significance increases and thus it will be necessary to rigorously appraise the changing scale of this effect on Hong Kong's environment in each of the three ten-year-time periods. It will then be necessary to critically identify the necessary actions to be taken by the HKSAR Government to ensure such an influence does not adversely affect Hong Kong's environmental quality and economic potential.

3.2.10.4 The major factors to be considered will primarily be those of trans-boundary effects such as:

- population growth and economic development which will affect the overall water pollution load;
- population and economic development distribution which will have implications on the distribution of water pollution load;
- transport systems and strategies which will affect the overall air pollution emission;
- industrial flue gas emissions from the PRD Region affecting the overall air pollution;
- coastline changes which will affect water flow conditions and therefore water quality;
- developments near the boundary area such as in Deep Bay and Mirs Bay;
- environmental policy and standards in both HKSAR and Guangdong Province; and
- study findings and agreements of Hong Kong-Guangdong Joint Working Group on Sustainable Development and Environmental Protection.

3.2.10.5 Hong Kong also needs to respond to its global responsibility. Attention will be paid to those specific aspects such as the RAMSAR site in the Mai Po and Deep Bay area which is an ecological conservation area of international importance.

3.2.10.6 We will identify the potential implications on Hong Kong's environment in a regional and global sense, and any environmental opportunities offered by the regional developments.

Landscape and Ecological Conservation

3.2.10.7 Hong Kong has a substantial amount of land (approx. 40%) within designated areas of conservation importance. Despite this some significant parts of Hong Kong's ecological resources lie outside these areas such as, for example
various wetlands identified in SUSDEV21. This may be partly because historically, designation of the Country Parks was driven primarily by issues of water catchment, controlling game hunting and providing recreation areas for the public, rather than ecological protection, (Talbot 1965) (although the subsequent designation and statutory purpose of Country Parks are for conservation, recreation and education). In addition to which, many of those ecologically important areas of ecological importance which lie outside of Country Parks area are protected from adverse development impacts via zoning controls under the Town Planning Ordinance.

3.2.10.8 Despite the above, there are still some parts of Hong Kong's ecological resources lying outside the protected areas, such as various wetlands identified in SUSDEV21. At times, there has been considerable conflict between Green Groups and government at a project level partly due to different divergent expectations and since the fact that areas under debate may not be as adequately protected as desired by the Green Groups. This raises the question on whether the current policy framework is sufficient or requires strengthening given the changes in circumstances over the last decade. A review of the nature conservation policy by the EFB is underway which will consider options to better address present day conservation concerns is underway.

3.2.10.9 Marine ecological resources are not as well documented as terrestrial systems and yet, they are a key issue for Hong Kong's future. Land-based activities affect marine environments in a host of direct and indirect ways and the coastline of Hong Kong is under constant pressure as well as being a significant draw-card for the city. The SEA Study Team includes members that actively work and help manage Hong Kong's marine ecological resources, including the fledgling Marine Parks and Reserves. This study will use and build on existing work to ensure that key terrestrial and marine ecological sites are protected.

3.2.10.10 Ensuring a balance between protection of marine and terrestrial ecosystems and further development within Hong Kong will be critical. This can be achieved through protection and habitat enhancement in key areas to increase carrying capacity in these areas and compensate for losses elsewhere. A strategic plan for Hong Kong must include a core ecological component if a more cohesive approach to conservation is to be developed. In this way, valuable ecological resources can be more effectively conserved within a territory-wide planning context. This issue will be critically reviewed by the SEA Study Team as a worthy environmental target. Building upon recommendations of studies such as the Wetland Compensation Study (AFCD) and the Review of Nature Conservation Policy (EFB) will therefore be important.

3.2.10.11 Our approach to the Study will include a consideration of current overseas developments to gauge their usefulness and effectiveness locally. Some of the likely issues are:

- data collection, handling and access;
- Eco-tourism;
- attribution of relative significance to ecological and landscape resources;
- integration of ecological and landscape resource conservation into planning concepts; and
• planning mechanisms as preservation and conservation tools.

Cultural Heritage Conservation

3.2.10.12 Cultural heritage is increasingly becoming an issue for the public, with strong demands to conserve and enhance the remaining cultural heritage resources in Hong Kong. To achieve this, the study will consider cultural heritage policies and approaches in other World Cities overseas. The likely issues include:

• data collection, handling and access;
• cultural heritage tourism;
• integration of historical resources into planning concepts; and
• planning mechanisms as preservation and conservation tools.

Air Quality

3.2.10.13 One of the major environmental concerns is undoubtedly the air pollution, which is partially emitted from Hong Kong’s many diesel-powered commercial-use vehicles despite the efficiency of the transport system. It is foreseeable that in the near future, air pollution may continue to be a major environmental concern and act as a deterrent to overseas visitors and investors. We will explore ideas and initiatives from relevant local studies such as the PRD Air Quality Study, Electronic Road Pricing Feasibility Study, SEA Report of the CTS-3 and Territory-wide Air-cooled Chillers Study with particular attention to emerging technologies.

Thresholds and Capacity

3.2.10.14 It is implicit in the environment that certain thresholds or capacity exist which, if exceeded, will lead to environmental damage. This may take many forms, such as the number of divers visiting a coral reef or the quantity of a particular chemical waste discharged into an estuary. What we define as "damage" and whether or not that damage actually matters will be a key issue.

Environmentally Friendly Strategic Options

3.2.10.15 As indicated above, the focus of this Task will be to identify ways to conserve and to enhance the environmental capacity in the HKSAR. We will approach this task by studying the lessons learned from the past and by referencing international practices and experience such as "The Assessment of the Effects of Certain Plans and Programmes on the Environment (Directive 2000/5685/00 of the European Parliament and of the Council)". We will explore the initiatives such as:

3.2.10.16 Precautionary Principle - which would mean the taking of thoughtful action in advance of scientific proof that if an act would lead to damage to the environment, leaving ecological space as room for ignorance, care in management and shifting the burden of proof to the developer;

3.2.10.17 Polluter Pays Principle - which is already partially in practice in Hong Kong;

3.2.10.18 Life Cycle Analysis - a technique for studying the environmental aspects and potential impacts associated with a product along the continuum of the product’s life (‘cradle to grave’) from raw material acquisition, through
production and use, to disposal; and

3.2.10.19 Integrated Coastal Zone Management (CZM) - a multidisciplinary process which brings all those involved in the development, management and use of the coastal area within a framework which facilitates the integration of their interests and responsibilities, a concept recently adopted internationally to plan all aspects of developments and activities on land and in the sea as an integrated entity.

3.2.10.20 Overarching guiding principles used throughout TDSR which aimed at protection of environmental resources will be reviewed to determine whether or not these are still applicable or have been superseded by more recent studies or events. These include:

- The scale and type of developments should be commensurate with the environmental and infrastructure thresholds.
- Committed and planned infrastructure should be optimised wherever possible to avoid creation of new interface issues (or bad neighbours in the case of sewage treatment plants for example).
- Preference should be given to high-density concentrated development in the Metro area as this increases efficiency in use of facilities/infrastructure.
- Emphasis being placed on rail-based developments for moving people and goods around and off roads.
- Providing opportunities for "cleaning up" those areas where uncoordinated development has burgeoned over the last decade (e.g. in the New Territories where the new towns are springing up adjacent to container storage yards).
- Providing a choice of developments to satisfy a broad range of requirements for residential, commercial, industrial and transport needs.
- Enhancing the roles of each sub-region in the broader context - which are reflected in the sub-regional plans completed or under preparation.

3.2.10.21 By means of an environmental indicator system which will be further elaborated in Task 5 and through the identification and examination of key environmental issues, we will also be able to draw up a list of best practices ranking. A list to suggest the environmentally friendly strategic options (including strategic physical development, policy, institutional and technology options, features, measures and principles) that could potentially enhance the environmental conditions and facilitate achievement of the environmental targets, in particular for those areas where improvements in environmental efficiency are needed, will be recommended.

3.2.10.22 We will participate actively in the Main Study in formulating the development options to ensure proper integration of the identified environmentally friendly options in the formulation, development and refinement of the development scenarios, options and strategies under the Main Study.

3.2.11 Task 5: Strategic Environmental Performance of Development Options
3.2.11.1 From this Task, we will produce a qualitative ranking of the development options to be examined in terms of their strategic environmental performance, so that preferred options can be identified for further detailed assessment. A broad-brush assessment of the strategic environmental performance is therefore sufficient for the purpose and will be carried out, based on the environmental targets, baseline and capacity established from Tasks 1 and 2 with a focus on the key issues as identified from Tasks 3 and 4. Both direct and indirect impacts of implementing each of the development options will be assessed, taking into account the level of detail in the development options.

**Performance Indicator System**

3.2.11.2 For this purpose, the deployment of a comprehensive indicator system of environmental performance is a most effective approach, and will be developed specifically for this Study. At the very beginning of the indicator system development, we will initiate a consultation process with PlanD, EPD and other relevant Government departments, organisations and the Main Study Team in particular. It is recognised that the development of such a system requires sound information and specialist input from all relevant environmental disciplines including for example, management of C&D materials. It is also recognised that there is a wealth of information about environmental performance. It is essential to identify the key messages encrypted in this information and to use them effectively. We will interrogate our knowledge databases accumulated from our previous relevant studies. Reference will be made to TDSR, ESDSTTI, SUSDEV21, and those recently completed or on-going relevant studies as well as the environmental indicator systems which have been successfully developed and applied elsewhere. We will also draw on our extensive international experience and the principles of Environmental Performance Evaluation Guidance Standards (e.g. ISO14031) in evaluating the performance of development options. Particular attention will be paid to the following aspects in the development of the indicator system so that it is:

- comprehensive to incorporate all major environmental factors;
- sensitive to distinguish the significant difference between different options;
- robust to achieve consistency in option evaluation;
- simplistic to allow for speed evaluation;
- compatible with CASET; and
- flexible so that it can be easily expanded for future needs.

3.2.11.3 We recognise the limitations of such an indicator system that many inputs of the system will have to rely heavily on individual's judgement. To this end, we will take full advantage of our expertise in specialist disciplines and knowledge databases, with further detailed methodologies described below.

**Air Quality Impact**

3.2.11.4 The environmental performance of the base case and the development options will be assessed using a number of indicators defined in the SUSDEV21 Study.

3.2.11.5 For air, these indicators are a composite index for criteria air pollutants based on percentage of the Air Quality Objectives, a composite index for toxic air pollutants based on percentage of acceptable risk, and quantity of carbon
dioxide emitted per year.

3.2.11.6 Where required, for the evaluation of development options, the PATH model will be deployed and the input parameters, boundary conditions and output to be generated will be agreed with PlanD and EPD before commencement of the modelling. It is particularly important to note that the SEA is a strategic assessment and the prediction of air quality impacts arising from long-term development strategies must be used with caution. The PATH model must be used as a tool to assist in the evaluation of various options or components thereof rather than as a definitive tool.

Water Quality Impact

3.2.11.7 The water quality impact of the development options will be assessed by examining their likely impact on the pollution load and flow regime. Specialist knowledge of the flow and water quality regime in HKSAR waters and in the Pearl River Estuary Region will enable a reliable ranking of the development options in terms of their impact on the water quality in HKSAR and in the context of the Pearl River Estuary Region. The requirement for pollution load reduction will be estimated and the most cost-effective corresponding measures for pollution reduction, such as the types of treatment process and disposal schemes will be recommended.

3.2.11.8 These indicators are percent of EPD's river monitoring stations ranked "excellent" or "good" using the EPD River Water Quality Index, composite index of marine water quality pollutants based on percentage of the Water Quality Objectives, and number of beach-days per year ranked "good" or "fair".

Solid Waste

3.2.11.9 For each option, we will identify the different types of wastes and their quantities and ways in which they can be prevented, reduced and reused in their original forms for same or different purposes. All the current and planned initiatives being considered by Government in connection with the waste reduction, recovery and reuse of materials (such as management of C&D materials) will be considered in connection with the long-term strategies. It will be particularly important to recognise that this is an issue which is attracting much attention at present, however the benefits may only be accrued in the long term. Cognisance will be given to international practices which have been successful in achieving waste reduction and the reasons/rationale behind the success.

Noise Impact

3.2.11.10 For noise, the percentage of population exposed to excessive noise from transportation and industries will be considered. Similar modelling methodologies as established by EPD's study on the "Review of the Acoustical Environment Due to Infrastructure projects in Hong Kong" will be used.

3.2.11.11 The predicted values with the development options will be compared with the base case scenario to determine whether there will be a positive or negative environmental impact of these options. This enables us to identify potential environmental issues that may require mitigation measures for a development option being considered.

Ecological Impacts
3.2.11.12 Development options will be assessed using established indicators (the Sustainability Indicators for Biodiversity from the SUSDEV 21 Study as included in the revised list of indicators after the review by the SDU). Further indicators may be derived after discussions with relevant parties during the Study.

3.2.11.13 Development options will be ranked and problematic areas identified. Ecological impacts will be flagged and issues that need to be addressed at detailed EIA studies will be specifically listed.

3.2.11.14 The established indicators will be Area of Hong Kong of High Terrestrial Ecological Value, Area of Hong Kong of High Marine Ecological Value, Area of Managed Terrestrial Habitat for Conservation, and Area of Managed Marine Habitat for Conservation.

Cultural Heritage and Landscape Impacts

3.2.11.15 Particular focus will be placed on landscape and cultural heritage resources that will be affected by development options. The Study Team will identify both acceptable and unacceptable landscape and cultural heritage impacts and recommend mitigation measures. These impacts will be identified utilising the following general methodology:

- identify landscape and cultural heritage resources that will be affected by development options;
- access the integrity and conditions of the landscape and cultural heritage resources; and
- predict the change based on level of details of the development options.

3.2.11.16 The cultural heritage indicators proposed by SUSDEV21 for use in CASET applications may require expansion in order that they can reflect the scale and status of the cultural heritage capital and its sensitivities. A methodology will be developed, with the agreement of AMO, to produce quantifiable indicators not only of heritage resource sustainability but also benefits.

Hazard Assessment

3.2.11.17 A review of the existing PHI QRAs will be undertaken in connection with the proposed development potential for areas or strategies. The implications for development within the Consultation Zones will be summarised, in light of the individual PHI strategic plans identified previously. It must be emphasised that there will be no detailed assessment of each PHI site as this is beyond the scope of this strategic study. Rather the intention is to determine the potential for releasing land within the Consultation Zones as part of the appraisal of the development strategies/scenarios. We will consult the Government and relevant industry to establish long term strategic plans for PHI sites which may constrain future development options. Opportunities to reduce the number of PHI sites, for example via use of safer technologies, amalgamation of sites, and importing materials from the Mainland rather than having a local storage site will be identified and evaluated in broad terms.

3.2.12 Task 6: Refinement of Development Options

3.2.12.1 This is a key stage of this Study where findings, conclusions and recommendations of SEA are integrated into the Option Refinement. From the environmental capacity, future environmental targets and the potential environmental impacts, we will then be able to identify the critical aspects for
each development option with regard to its potential environmental risks or poor environmental performance.

3.2.12.2 We will conduct consultations at this stage with the Main Study team with a view to identifying measures to improve environmental performance and assessing the technical feasibility and practicalities of the measures. The refined options will be re-tested using the Performance Indicator System developed from Task 5 to confirm effectiveness of the refinement. As this could involve several rounds of discussions and re-testing, the adoption of an iterative process will be the approach where necessary.

3.2.13 **Task 7: Strategic Environmental Performance of Development Strategies**

3.2.13.1 We will conduct an assessment of the preferred development options. A rigorous Performance Evaluation will be made for the preferred options formulated from Task 6. This is analogous to the steps undertaken by the Project Manager in the ESDSTTI (which was based on the relevant guidance of Agenda 21).

3.2.13.2 Wherever possible, the impacts, benefit, costs and risks of the preferred options will be quantified using the state-of-the-art tools such as the Updated Model (developed from CWQHE and currently being used by Hyder) which will be deployed for water quality assessment. For the assessment reference will be made to the EIAO. However, unlike a conventional EIA, we will focus on the identification of environmental sustainability, feasibility, specific concerns, constraints and opportunities. Our assessment will include both direct and indirect effects from implementing the development options and will consider secondary, cumulative, short and long-term, permanent and temporary, positive and negative effects.

3.2.14 **Task 8: Strategic Environmental Action Plan and Programme**

3.2.14.1 Based on the findings and conclusions from the above tasks, we will draw up Action Plans for each of the three time horizons which will provide an environmental guideline for the implementation of the preferred development options for all stakeholders involved. The issues such as policies, further investigations, expenditure and prerequisites will be included and particular reference will be made to the ESDSTTI, the only Environmentally Sustainable Development SEA in Hong Kong.

3.2.14.2 The Action Plan will include a Strategic Environmental Monitoring and Audit Plan with focus on the evaluation of how well the preferred development options are performing with regard to the environmental targets and benchmark and set of environmental constraints as established and identified above. The concept in the environmental management systems such as EMAS and ISO14001 will be followed in the preparation of the Strategic Environmental Monitoring and Audit Plan.
4. STUDY MANAGEMENT STRUCTURE

4.1 THE CONSULTANT’S TEAM

4.1.1 General

4.1.1.1 In responding to the unique challenges of this Study, the Consultants have formulated a multi-disciplinary Study Team with extensive relevant experience and local knowledge and with a structure to facilitate an efficient and effective execution of the Study. An Organisation Chart showing the key Study Team members is presented in Figure 4.1.

4.1.2 Management Team

4.1.2.1 The Study Management Team comprising Study Director, Study Manager, Study Coordinator and Study Quality Assurance Manager, will be supported by Task Leaders and Discipline Specialists with advice given during Consensus Building Workshops by International Advisory and Review Panel Members. This combination will ensure that the full resources of the Hyder-Mott Connell JV will be available to provide the wide range and depth of skills needed for this Study.

4.1.2.2 The Study Director - Richard Ko will:

- provide a high level of management,
- ensure all necessary resources are allocated and available as required to ensure client satisfaction;
- be available for direct client contact; and
- provide overall direction for the Study.

4.1.2.3 The Study Manager (SM) - Tom Chapman will:

- provide overall project management;
- be responsible for technical, financial and resource management and monitoring;
- be responsible for programme and technical quality of deliverables; and
- assist respective specialists in maintaining their focus and technical direction to ensure high quality and timely completion of deliverables.

4.1.2.4 The Study Coordinator - Dr. Anne Watker-Zeris will assist the SM to undertake the above duties. In addition to this, she will be responsible for coordinating the two-way flow of information between the Management Team and the Task Team Leaders / Discipline Specialists.

4.1.2.5 The Study Quality Assurance Manager (QAM) - Shirley Tsui will provide management support to the SM in day-to-day project control. During the Study life cycle of this SEA, the QAM will monitor and audit the compliance performance of this project against the Hyder Quality Management System. The QAM will assist the SM to review project progress and revise the project programme where necessary as part of the monthly progress review exercise.
4.1.3 Task Leaders

4.1.3.1 The Management Team will be supported by four Task Leaders (Dr. Anne Watker-Zeris for Tasks 1, 2 and 3; Dr. Guiyi Li for Tasks 4, 5 and 7; Tom Chapman for Task 6 and Dr. Tim Peirson-Smith for Task 8) who are responsible for the key technical aspects of the respective tasks required by this SEA. They have been selected on the basis of their technical strength as well as breadth of local and world-wide knowledge and long term availability to this Study.

4.1.4 Discipline Specialist Team

4.1.4.1 The Task Leaders will be supported by the Discipline Specialist Team and Specialist Sub-consultants. The Discipline Specialist Team Leader for each environmental discipline will be responsible for carrying out the necessary assessment work and necessary modelling work. Whereas the Specialist Sub-consultants will provide support to cover issues of ecology, archaeology, risk, policy and planning issues.

4.1.4.2 The JV's in-house engineers, GIS and other specialists will provide expert advice where appropriate.

4.1.4.3 The specialist sub-consultants have all previously worked successfully with the JV on previous environmental assessment studies (many of these on recent relevant projects in HK). Consequently there will be no familiarisation or administrative problems in the lead consultant/specialist sub-consultant relationship.

4.1.5 Advisory Panel

4.1.5.1 The Study Team will be advised by Dr. Julian Galloway, Christine Loh, Iris Tam and Prof. Barry Sadler. They are all internationally and locally renowned professionals and environmental scientists in strategic planning and assessment. The Team will provide invaluable advice and guidance on key issues such as:

- Strategic Environmental Assessment Approach;
- Sustainable Development;
- Town and Country Planning; and
- Policy and Public Interest.

4.1.6 Review Panel

4.1.6.1 The Review Panel, comprising two Technical Reviewers (Robin J Whalley and K M Yeung) have exceptional experience in Strategies and Polices as well as Planning. They will be mainly responsible for reviewing the technical aspects.

4.1.7 Mainland Liaison

4.1.7.1 The importance of this is fully appreciated from our recent and current experience in the Modelling Study for CWQHE and other private projects. To address this issue we have included in the team staff with many years of experience of cross-boundary liaison and administrative and technical procedures on the Mainland. These include Dr. Guiyi Li (Hyder), Coleman Ng (Hyder) and K M Yeung (Mott Connell). Their inputs will particularly related to the identification of environmental
targets, baseline and action plans.

4.1.8 Integrated Team Approach

4.1.8.1 As the Study progresses from data collection, option evaluation to recommendation of action plans, it is essential that knowledge and experience from previous tasks are carried through and incorporated into subsequent tasks. To facilitate this process and to increase the effectiveness of the teams, we have included key staff in more than one task teams. For example, Dr. Guiyi Li is in both the assessment and modelling teams.

4.2 ENVIRONMENTAL STUDY MANAGEMENT GROUP

4.2.1 Membership and Terms of Reference

4.2.1.1 An Environmental Study Management Group (ESMG) will be established to review and guide the progress of this Project. It will be chaired by the Deputy Director of Environmental Protection or his representative and potential membership and all relevant Government parties have been invited.

4.2.1.2 The Terms of Reference for the ESMG are:

- To co-ordinate activities related to the environmental aspect of the Study to achieve timely completion
- To provide guidance on technical aspects related to the environmental aspects of the Study
- To resolve any differences in opinion between various government offices and relevant parties that cannot be resolved at the working level, and, if necessary, seek guidance and resolution from the Steering Group.
- To consider and endorse environment related Working Papers/Reports to be prepared under the Study
- To consider environmental components of the documents for consultation purposes

4.2.2 Project Quality Assurance

4.2.2.1 Both Hyder and MCL prepare Project Quality Plans (PQP’s) as standard operating procedures in accordance with their respective ISO 9000 certification. MCL also prepares the documents to accord with their global QA system which has been developed under ISO 14000. Accordingly, the Study will be conducted in full accordance with the project quality plans already prepared.
5. STUDY PROGRAMME

The time estimate for the completion various tasks as mentioned in Chapter 3 is given in the following table:

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Time Estimate for Task Completion (months)</th>
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<tbody>
<tr>
<td>Inception Report</td>
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</tr>
<tr>
<td>Tasks 1, 2 &amp; 3 - Environmental Baseline &amp; Targets</td>
<td>3.0</td>
</tr>
<tr>
<td>Task 4 - Examination of Key Issues</td>
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<tr>
<td>Tasks 5 &amp; 6 - Evaluation of Development Options</td>
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<tr>
<td>Tasks 7 &amp; 8 - Assessment of Preferred Option(s) &amp; Strategic Environmental Action Plan &amp; Programme</td>
<td>2.5</td>
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<tr>
<td>Final SEA Report</td>
<td>1.5</td>
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## Figure 5.1 SEA Programme

### SEA Study Programme

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- **Inception Report**
- **Tasks 1, 2 & 3 - Environmental Baseline & Targets**
- **Task 4 - Examination of Key Issues**
- **Tasks 5 & 6 - Evaluation of Development Options**
- **Tasks 7 & 8 - Assessment of Preferred Option(s) & Strategic Environmental Action Plan & Programme**
ABBREVIATIONS

AFCD  Agriculture, Fisheries and Conservation Department
AMO   Antiquities and Monuments Office
AQO   Air Quality Objectives
C&D   Construction and Demolition
CAP   Contamination Assessment Plan
CASET Computer Aided Sustainability Evaluation Tool
CED   Civil Engineering Department
CTS-3 Third Comprehensive Transport Study
CWQHE Cumulative Water Quality and Hydrological Effect of Coastal Developments and Upgrading of Assessment Tool
CZM   Coastal Zone Management
DSD   Drainage Services Department
EFB   Environment and Food Bureau
EIA   Environmental Impact Assessment
EIAO  Environmental Impact Assessment Ordinance
EMAS  Environmental Management and Auditing Scheme
EMSD  Electrical and Mechanical Services Department
EPD   Environmental Protection Department
EPI   Environmental Performance Indicators
ES    Executive Summary
ESDSTTI Environmentally Sustainable Development Strategy for Hong Kong Travel and Tourism Industry
ESMG  Environmental Study Management Group
FR    Final Report
GHG   Green House Gas
GIS   Geographic Information System
HKPSG Hong Kong Planning Standards and Guidelines
HKSAR Hong Kong Special Administrative Region
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tr>
<td>JV</td>
<td>Hyder Consulting Limited - Mott Connell Limited Joint Venture</td>
</tr>
<tr>
<td>MCL</td>
<td>Mott Connell Limited</td>
</tr>
<tr>
<td>PHI</td>
<td>Potentially Hazardous Installations</td>
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<td>PlanD</td>
<td>Planning Department</td>
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<td>PRD</td>
<td>Pearl River Delta</td>
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<td>QRAs</td>
<td>Quantitative Risk Assessments</td>
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<td>R&amp;D</td>
<td>Research &amp; Development</td>
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<td>RAMSAR</td>
<td>City in Iran, on the Shores of the Caspian Sea, where the Convention on Wetlands was signed on 2 February 1971, thus the Convention's informal nickname, &quot;Ramsar Convention on Wetland&quot;</td>
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<td>Strategic Environmental Assessment</td>
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<td>SEAPP</td>
<td>Strategic Environmental Action Plan and Programme</td>
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<td>SPUR</td>
<td>Support Programme for the Urban Rehabilitation of Shanghai</td>
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<td>SSDS</td>
<td>Strategic Sewage Disposal Strategy</td>
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<td>SSSI</td>
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<td>SUSDEV21</td>
<td>Sustainable Development for the 21st Century</td>
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<td>TD</td>
<td>Transport Department</td>
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<td>TDSR</td>
<td>Territorial Development Strategy Review</td>
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<tr>
<td>TM</td>
<td>Technical Memorandum</td>
</tr>
<tr>
<td>TTS</td>
<td>Tiered Testing System</td>
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Figure 3.1: Project Structure
Figure 4.1 Study Team Organisation Chart