

PART THREE - GETTING AN EIA PROCESS STARTED

3. GETTING AN EIA PROCESS STARTED

3.1 USE OF STRATEGIC ENVIRONMENTAL ASSESSMENT AND PLANNING INFORMATION

What is a Strategic Environmental Assessment (SEA)?

SEA is a formalized, systematic and comprehensive process of evaluating the environmental implications of policy, plan or program and its alternatives, including the preparation of a written report on the findings of that evaluation, and using the findings in publicly accountable decision-making.



How to use information in SEA in the EIA mechanism

A SEA usually would have recommendations, environmental and alternative considerations. A project proponent is advised to record and keep a regular update of them in order to apply them in the EIA stage.

Objectives of a SEA

- Promoting full considerations and integration of environmental implications at the early planning stage of major strategic policies or plans; and
- Avoiding environmental problems and identifying environmentally-friendly options.

3.1.1

How Does SEA Relate to the Project Life Cycle?

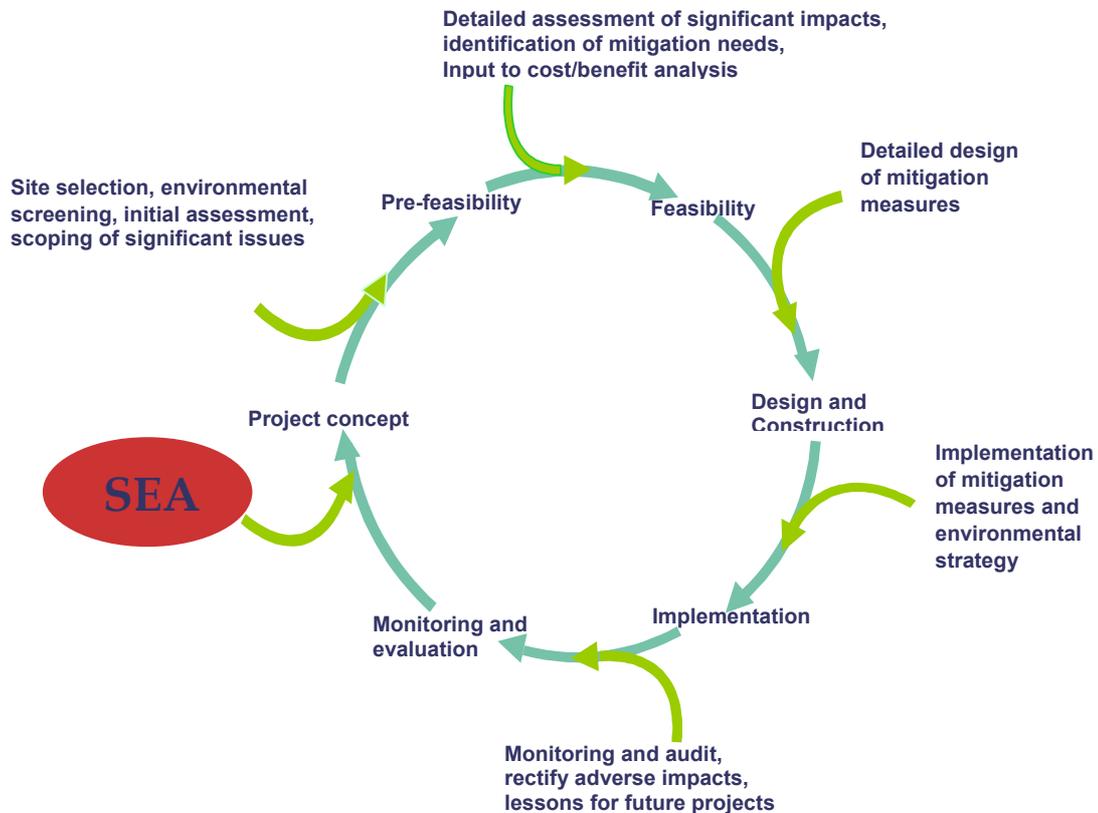


Figure 3.1 SEA and Project Life Cycle

3.1.2

The Importance of SEA

SEA is important and should be encouraged because:

- SEA can take up a pro-active role to steer development towards environmentally “robust” direction or avoid damaging environmentally sensitive areas;
- SEA at a higher level can oversee the cumulative impacts of relevant projects;
- SEA at a policy level can test alternatives before proceeding with site specific projects; and
- SEA can be a central step to achieve sustainable development by incorporating the principles of sustainable development into the policies and plans of development for guiding it on to sustainable tracks.

3.1.3

The Use of SEA and Planning Studies in EIA

As mentioned earlier, a project proponent and consultants can make use of existing database or other best available information from the strategic planning studies, sectoral policy studies and other sub-regional plans to identify environmental constraints for specific projects. Alternative scenarios or development options can then be developed to avoid environmental problems through rigorously applying the cardinal principle of EIA, viz, avoidance-minimization-mitigation.

Findings of strategic planning studies or SEA could be used to identify environmental preferred options for the development of recommended strategy for certain development projects. The use of integrated planning and engineering feasibility studies could avoid incompatible land uses and excessive mitigation measures.

With the appropriate strategic environmental input to the decision making process, various potential environmental damages and problems can be avoided. It should be noted that strategic environmental factors could influence the formulation and selection of strategies and regional development options as illustrated in *Figure 3.2*.

The findings of SEA or planning studies could then be summarized and integrated into the project specific EIA Report to demonstrate that alternative proposals have been considered and positive environmental outcomes, such as impact avoidance and minimization, have been achieved. Better use of planning information at the earlier stage of the project implementation would contribute to the success in maintaining Hong Kong's environmental sustainability.

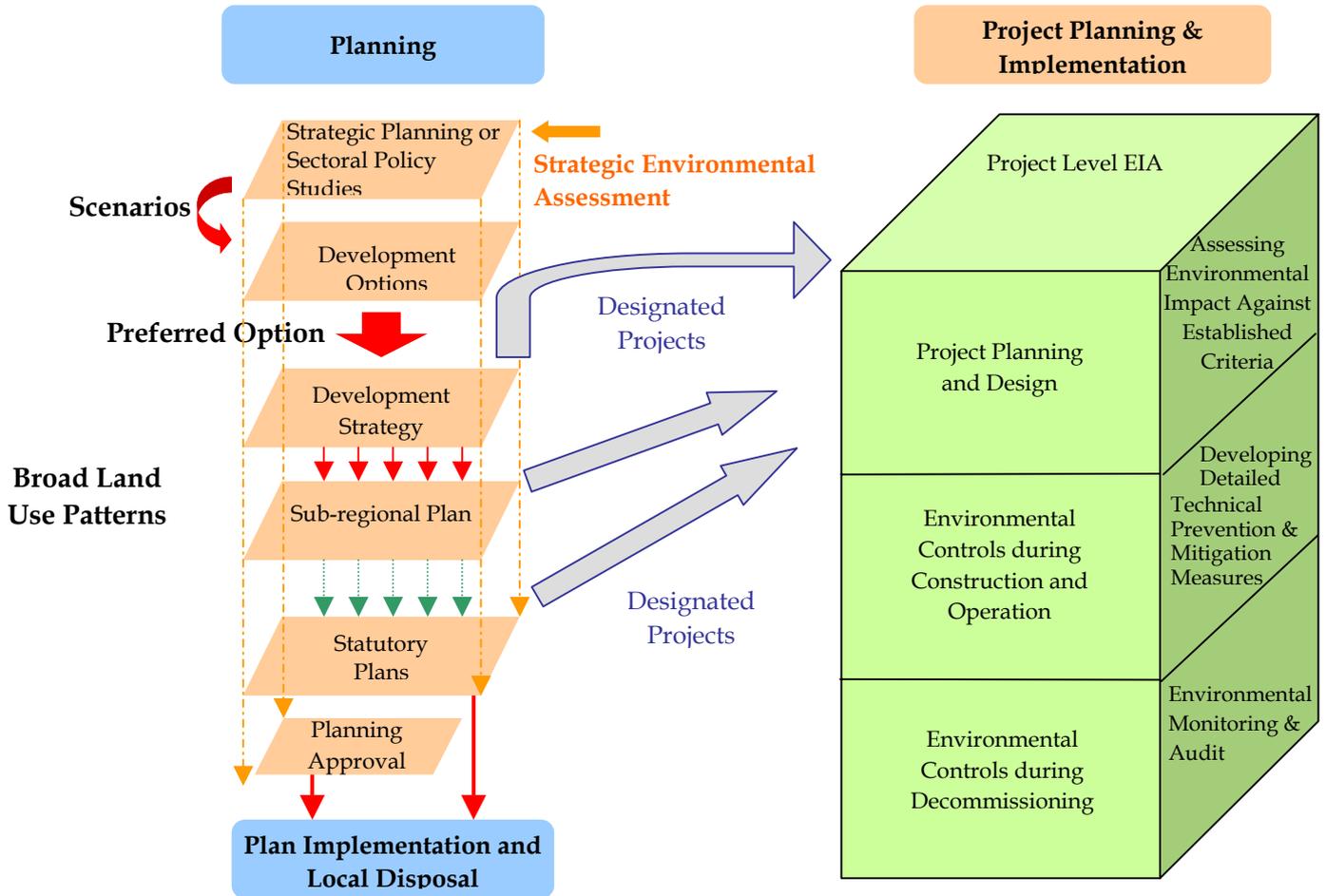


Figure 3.2 Interaction Between Planning and EIA

An example of SEA in Hong Kong is provided below.

Territorial Development Strategy Review 1996

Type of Strategic Environmental Assessment (SEA)

Strategic level environmental assessment of the medium term and long term territorial development strategies.

Nature and Scope of the Proposal

Strategic land use - transport - environment framework for Hong Kong up to year 2011 to cater for a total of 8.1 million population.

Basis of SEA Requirement

A requirement to provide information on environmental implications in the submissions to the highest level decision making body (the Executive Council) in Hong Kong.

Downstream EIA requirements for individual projects arising from the strategy.

Alternatives or Options Assessed

2 scenarios and more than 22 options were assessed.

Methods and Techniques

Environmental Baseline Study on environmental carrying capacity and sustainability.

Territory-wide models to assess cumulative environmental implications on sewage, water quality, noise, air quality, waste disposal and ecology.

Key Environmental Outcomes or Influences:

1. Major policy issues were raised at the highest level of the Hong Kong Special Administrative Region Government.
2. Elimination of major environmentally unacceptable and undesirable development options, such as the filling up of Rambler Channel.
3. Identification of environmental constraints and potential adverse impacts due to the preferred options, such as the identification of potential air quality and sewage problems, and recognition of the conservation value of various environmentally sensitive areas.
4. Consideration of indicative mitigation requirements and outline environmental follow up plans and sectoral policies, such as vehicle emission control, sewage infrastructure provision, and better transport planning.
5. Provided key input to informed public debate raising the awareness on the need for environmentally sustainable development.
6. Commitment from the highest level obtained to embark on a comprehensive sustainable development study - Study on Sustainable Development for the 21st Century (SUSDEV 21).

Reference: http://www.epd.gov.hk/epd/english/environmentinhk/eia_planning/sea/ebook1_7.html

“Screening” is a process of determining whether an EIA is required for a project. Screening often is the first stage of the EIA process when a decision is made on whether an EIA is required.

The list of Designated Projects (DPs) is listed out in Schedule 2 & 3 of the EIAO.

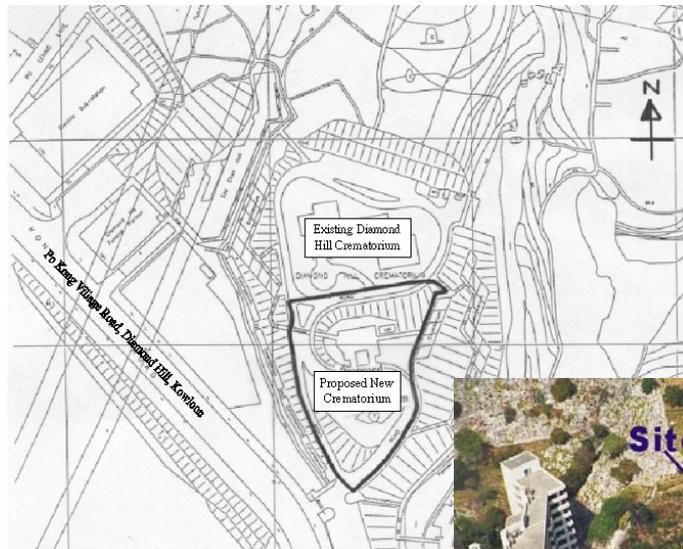
If a project is a DP, a project proponent has to get through the EIAO.

Examples of Designated Projects are provided below.

Project: Reprovisioning of Diamond Hill Crematorium

Works: A crematorium proposing 6 new cremators to replace 6 existing cremators

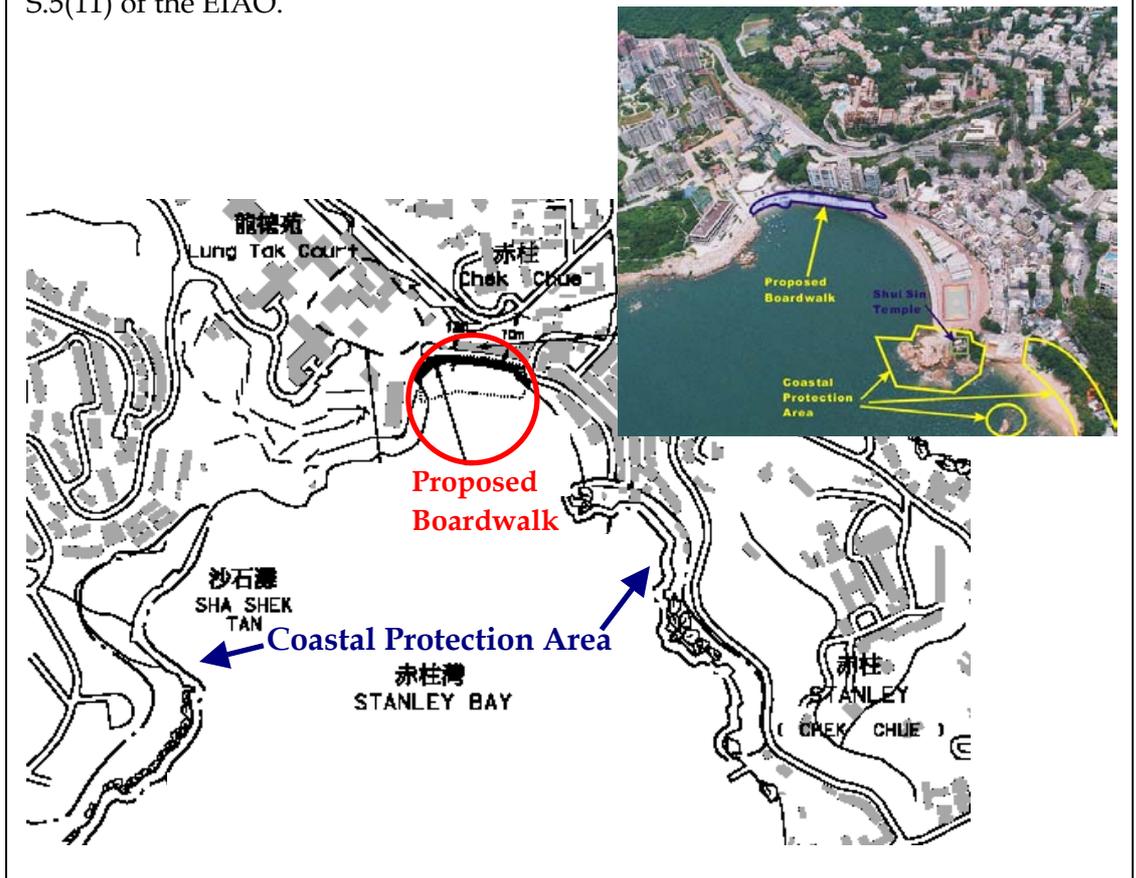
A crematorium is a Designated Project under N.4, Schedule 2 of the EIAO. An application for an EIA Study Brief was submitted on 25 March 2002 with a Project Profile (No. PP-166/2002).



Project: Stanley Waterfront Improvement Project – Construction of Boardwalk

Works: Dredging operation about 140m from an existing coastal protection area in Stanley

A dredging operation which is less than 500m from the nearest boundary of an existing or planned coastal protection area is a Designated Project under C.12(a)(vii), Schedule 2 of the EIAO. A Project Profile (No. DIR-084/2003) was submitted on 2 July 2003 to apply directly for an Environmental Permit under S.5(11) of the EIAO.



3.3

HOW TO PREPARE A GOOD PROJECT PROFILE?

A Project Profile can be used for:

- Application of Study Brief; or
- Application for permission to apply directly for Environmental Permit (EP).



Project Profile for Application of Study Brief

Some Tips

- A Project Profile should contain information specified in Annex 1 of the EIAO TM for the Director of Environmental Protection to identify what environmental issues are required to be addressed in the EIA report.
- A Project Profile may cover more than one designated projects.

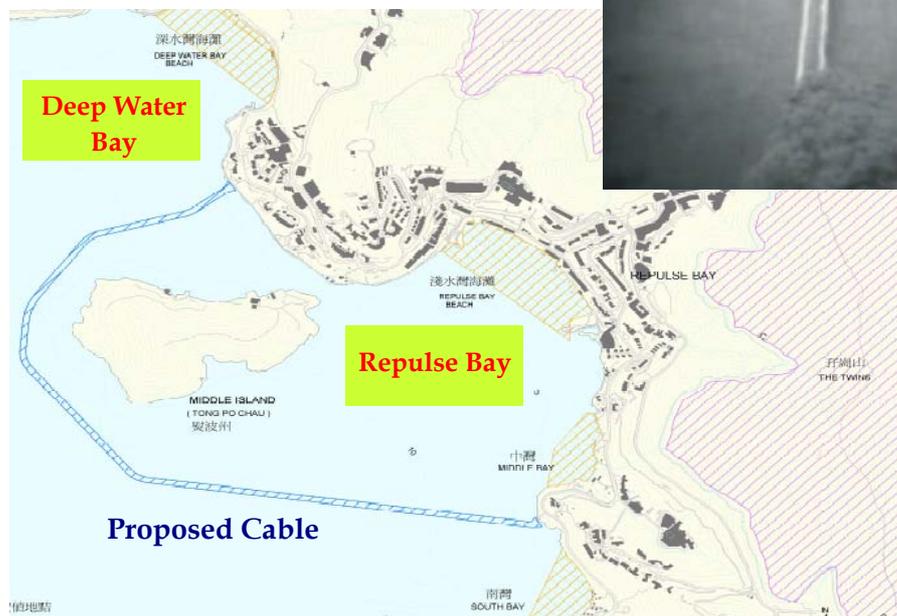
Project Profile for Permission to Apply Directly for Environmental Permit

- Readers can draw necessary reference from the EIAO Register.
- Examples are given below.

Project: 132 kV Submarine Cable Installation for Wong Chuk Hang - Chung Hom Kok 132 kV Circuits

Works: Dredging operation less than 500m from an existing bathing beach in the Deep Water Bay

A dredging operation less than 500m from an existing or planned bathing beach is a Designated Project under C.12(a)(iii), Schedule 2 of the EIAO. A Project Profile (No. DIR-063/2002) was submitted on 21 Jan 2003 to apply directly for an Environmental Permit under S.5(11) of the EIAO.



Project: Design and Construction of Causeway Bay Flyover

Works: Construction of a two-lane flyover to replace the existing one-lane flyover in Causeway Bay

A primary distributor road is a Designated Project under A.1, Schedule 2 of the EIAO. A Project Profile (No. DIR-082/2003) was submitted on 23 April 2003 under S.5(10) of the EIAO to apply directly for an Environmental Permit for a material change to an exempted designated project.



Project: 10-Year Extended Landslip Preventive Measures Project, Phase 2

Works: Slope works within Lantau South Country Park

Projects within a country park are Designated Projects under Q.1, Schedule 2 of the EIAO unless they fall into exceptions. A Project Profile (No. DIR-070/2002) was submitted on 22 Aug 2002 to apply directly for an Environmental Permit under S.5(11) of the EIAO.



3.3.1

Key Information in a Project Profile

The information to be included in a Project Profile is specified in Annex 1 of the EIAO TM:

Basic Information

- Purpose and nature of the Project, Proponent's contact information, location/scale/history of site, number and types of DP covered in PP

Outline of Planning and Implementation Programme

- Project time-table

Possible Impacts on the Environment

- Outline any process involved
- Describe environmental impacts/issues arose during construction, operation or decommissioning of the Project

Major Elements of the Surrounding Environment

- Outline existing and planned sensitive receivers which might be affected by the Project
- Outline major elements of the surrounding environment and/or relevant past land use(s) on site which might affect the Project

Environmental Protection Measures

- Describe measures to minimise environmental impacts
- Comment on possible severity, distribution and duration of environmental effects

Use of Previously Approved EIA Reports

3.3.2

Merits of a Good Project Profile

- Early identification of environmental issues (apply "avoid-minimise-mitigate" principle in project design);
- Early public awareness of the potential implications to the environment and the community (can promote good public relation);
- Facilitate preparation of an EIA Study Brief.

“Scoping” is a process for determining what environmental issues to be covered, assessed and addressed in an EIA Report.

Broadly speaking, scoping in the EIA process helps EIA be focus and effective to assess at least:

- Key environmental impacts of a project;
- Alternatives to a project; and
- Any other matters that may be of public concerns.

In general, results of a scoping exercise is documented in a Study Brief. For this reason, a Study Brief is a key document in an EIA process.

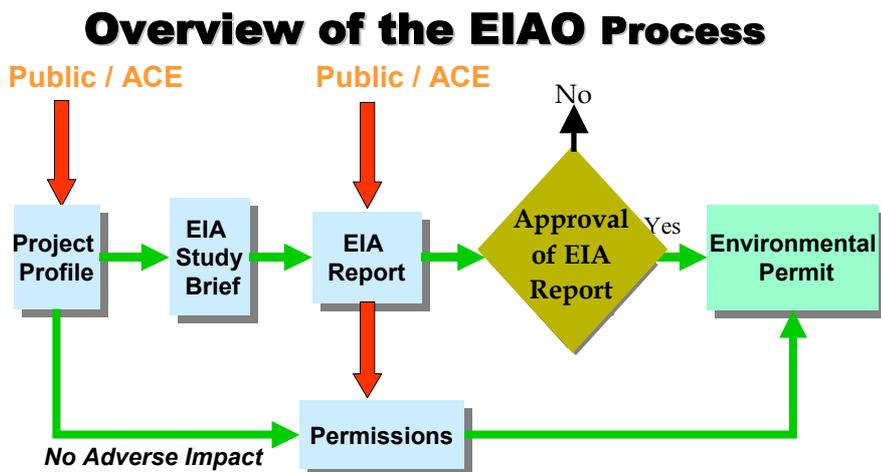


Figure 3.3

3.4.1 *Identifying Possible Environmental Impacts*

The primary objective of scoping is not to undertake the full EIA studies but to identify possible environmental impacts for further assessments. Many different techniques and tools, such as Checklist and Matrix, have been developed to proceed with the scoping exercise. These tools provide a systematic way of thinking through the potential interactions between a project and its environment.

Scoping Checklist is a more simple, systematic and widely accepted approach for such purpose. It is designed to help users to identify the likely environmental effects of the proposed projects during the scoping exercise. In most cases, a Scoping Checklist is helpful to identify all the activities or sources of impacts that could arise from construction, operation and/or decommissioning of the project, to reveal the characteristics of the project environment that could be affected and to study the interaction between them, if any. The findings of the scoping exercise (i.e. information recorded in the Scoping Checklist) provide a list of potential environmental issues, which should be considered and assessed in detail in the subsequent EIA.

An example of a simplified Scoping Checklist is given in *Table 3.1*.

Table 3.1 Identification of Potential Environmental Impacts by Scoping Checklist

Type of Potential Impact	Construction Phase	Operational Phase
<i>Air Quality</i>		
Gaseous, Dust or Odour emission	<input type="checkbox"/>	<input type="checkbox"/>
<i>Noise</i>		
Noisy operation	<input type="checkbox"/>	<input type="checkbox"/>
Night-time operation	<input type="checkbox"/>	<input type="checkbox"/>
<i>Water Quality</i>		
Liquid effluent, discharge or contaminated run-off	<input type="checkbox"/>	<input type="checkbox"/>
<i>Solid Waste</i>		
Generation of waste by-products (i.e. chemicals, asbestos)	<input type="checkbox"/>	<input type="checkbox"/>
Disposal of wastes/spoil materials at the landfill or public fill	<input type="checkbox"/>	<input type="checkbox"/>
Land contamination	<input type="checkbox"/>	<input type="checkbox"/>
<i>Ecology</i>		
Loss of native species or genetic diversity	<input type="checkbox"/>	<input type="checkbox"/>
Deterioration to area of high conservation value (e.g. with endangered/rare/protected flora and/or fauna species)	<input type="checkbox"/>	<input type="checkbox"/>
Stress on Ramsar Site, SSSI, Country Parks, Marine Parks/Reserve or Conservation Area	<input type="checkbox"/>	<input type="checkbox"/>
Damage or removal of important habitats (e.g. woodland, wetland, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
<i>Fisheries</i>		
Jeopardising to the maricultural zones by traveling or operating dredger	<input type="checkbox"/>	<input type="checkbox"/>
Discharge close to maricultural zones/fish ponds	<input type="checkbox"/>	<input type="checkbox"/>
<i>Visual and Landscape</i>		
Unightly visual appearance	<input type="checkbox"/>	<input type="checkbox"/>
<i>Sites of Cultural Heritage</i>		
Damage to the site of cultural heritage by excavation works	<input type="checkbox"/>	<input type="checkbox"/>
Structural vibration of the historical buildings or structures	<input type="checkbox"/>	<input type="checkbox"/>
<i>Hazards</i>		
Explosions, spillage, fires, etc. of hazardous materials during storage, handling, transport or disposal	<input type="checkbox"/>	<input type="checkbox"/>
Pollution or hazard resulted from risk of accidents	<input type="checkbox"/>	<input type="checkbox"/>
The site is within the consultation zone of landfill or PHIs	<input type="checkbox"/>	<input type="checkbox"/>
Note:		
✓	the activity likely to result in environmental impact	
✘	the impact not expect to occur	
?	It is uncertain at this stage whether the impact will occur or not	

Alternatives are, essentially, different ways in which the project proponent can meet the project's objectives, for example by carrying out a different type of action, choosing an alternative location or adopting a different technology or design for the project. Alternatives and mitigation measures therefore cover a spectrum ranging from a preliminary review to very detailed aspects of project design.



As a commonly adopted practice, **the “Avoidance-Minimization-Mitigation” approach is regarded as a preferable procedure to tackle the environmental problems.**

In a typical EIA mechanism, particularly at the SEA stage, when considering mitigation measures, a project proponent shall give priority to avoidance of impacts and the adverse effects shall be avoided to the maximum practicable extent as far as possible. A project proponent should avoid the environmental problems at the conceptual or planning stage, since early focus on major adverse environmental consequences could save huge amount of efforts and/or costs that may otherwise arise from expensive or time consuming remedial works at a later stage.

Where unavoidable impacts are anticipated associated with the project, the project proponent shall minimise/mitigate the impacts by taking appropriate and practicable measures. As such, the impacts could be minimised to an acceptable level (i.e. comply with the legislation).

Examples of alternatives and mitigation measures that had been used throughout a project life cycle including:

- **different strategies of implementation** e.g. to improve existing facilities/infrastructure to meet the demand rather than develop a new one;
- **different sites or routes for all or part of the project** e.g. the sites or routes should be designed to avoid and minimise possible environmental impacts;
- **different technologies/working methods and raw materials** e.g. construction of a combined cycle gas turbine power plant rather than a coal fired power station;
- **alternative layouts or designs** e.g. locating noisy activities away from sensitive receivers; and
- **environmental measures incorporated into the project design** e.g. low energy consumption equipment in the facility.

The practicality and validity of alternatives and mitigation measures considered in scoping stage against envisaged environmental impacts should be reviewed and confirmed in the later EIA stage if any.

For an in-depth understanding of the alternative considerations, readers can refer to the Judgment of the Appeal for Sheung Shui to Lok Ma Chau Spur Line in the EIAO Register.

3.5 *HOW TO SELECT AND MANAGE EIA CONSULTANTS?*

Tools for Consultancy Management

From a consultant's perspective, an EIA Study Brief clarifies technical scope of an assignment, they generally require further details for their communications. These include:

- technical objectives
- management objectives
- "political" objectives
- simple answers to obvious questions
- concise and precise Inception Report



Management Objectives

A consultant generally expects a client to tell them *exactly* what he wants and what is important (and what is not)

- programme
- least cost solution
- wide spread community acceptance
- minimal conditions

From a Consultant's Perspective

Report on Consultants' Performance – key elements to look for ...

The Consultant drew up an EIA Report with very thoughtful consideration on practical site application. They were very proactive and readily available in assisting client office to prepare submission for ACE Sub-committee consultation. They addressed promptly and effectively to queries on the EIA Report during ACE consultation. Their advice was always constructive. This ultimately led to the EIA Report smoothly endorsed and approved by ACE and the EPD respectively.

The Consultant's key staff were competent and very initiative and responsive to client's requests and concerns. They had worked in full collaboration with the client office in this quarter. Their principal was directive and positive in resolving problems.

A Competent Team



Keys to success:

- Experienced EIA project manager
- In-house EIA resources (*Successful EIAs require a coherent multi-disciplinary team and should avoid a sub-sub consultant arrangement!*)
- Clear demarcation of roles and responsibilities

Relationship of Consultants and Project Proponents

- More than a simple contractual relationship
- Team effort to meet common objectives
- Key areas of collaboration:
 - Establishing a common vision for the project
 - Liaison with other government departments
 - Meeting programme on Response to Comment
 - Balancing permitting and design considerations



Best Practices....

- Start the process as soon as possible, preferably before the Project Profile is submitted, if possible.
- Have a clear vision of messages to be communicated.
- Emphasis on the positives.
- Listen and assimilate legitimate concerns.
- Maintain dialogue to resolve issues as they arise.