

Agreement No. CE 33/2020 (EP)
Implementation of Fisheries Enhancement Measures within the Proposed
South Lantau Marine Park – Design and Construction

Draft Brief

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1. Introduction

- 1.1 This Brief is to be read in conjunction with the Memorandum of Agreement, the General Conditions of Employment for a Design and Construction Assignment, Special Conditions of Employment, Schedule of Fees, and any other detailed instructions issued by the Director’s Representative. For the avoidance of doubt but without prejudice to **Clause 7 of the General Conditions of Employment**, the performance of the Services specified herein shall be subject to **Clause 22 of the General Conditions of Employment**.

2. Description of the Project

2.1 Background

- 2.1.1 In 2013, the Government of the Hong Kong Special Administrative Region (referred to hereinafter as the “Government”) announced the “Hong Kong: Blueprint for Sustainable Use of Resources 2013-2022” to map out a comprehensive strategy with targets, policies and action plans on waste management for the 10 years from 2013. Implementation of the Integrated Waste Management Facilities (IWMF) with incineration as the core technology to treat municipal solid waste is proposed as part of the overall waste management strategy to tackle the imminent waste problem in Hong Kong.
- 2.1.2 The Environmental Impact Assessment (EIA) Report for the development of the IWMF Phase 1 was approved by the Environmental Impact Assessment Ordinance (EIAO) authority on 17 January 2012, and the Environmental Permit (EP) for developing the IWMF Phase 1 project was issued on 19 January 2012 (i.e. EP-429/2012). The variation of EP (i.e. EP-429/2012/A) and the further EP (i.e. FEP-01/429/2012/A) were subsequently issued by the EIAO authority on 14 October 2016 and 27 December 2017, respectively.

- 2.1.3 The EIA Report identified that the formation of an artificial island near Shek Kwu Chau for the IWWMF Phase 1 for treating a total of 3,000 tonnes of municipal solid waste per day would require about 11.8 hectares of reclamation and construction of 4.1 hectares of breakwater. This would lead to a permanent loss of 31 hectares of important marine habitat for Finless Porpoise (FP).
- 2.1.4 To mitigate the habitat loss, it is recommended in the EIA Report and required under Condition 2.8 of EP-429/2012/A and FEP-01/429/2012/A that the project proponent (i.e. Environmental Protection Department (EPD)) shall seek to designate a marine park with an area of at least 700 hectares in the waters between Soko Islands and Shek Kwu Chau with deployment of artificial reefs (ARs) and release of fish fry as the fisheries enhancement measures.
- 2.1.5 In order to fulfil the recommendations of the EIA Report and the requirements of the EP concerned, the EPD commissioned a consultancy study entitled “Agreement No. CE 14/2012 (EP) Provision of Compensatory Marine Park for Integrated Waste Management Facilities at an Artificial Island near Shek Kwu Chau – Investigation” (referred to hereinafter as the “Investigation Study”) in 2015 to study the detailed design of the marine park, including the proposed location and size, deployment of ARs, release of fish fry, management plan and construction programme.
- 2.1.6 The Investigation Study recommended establishing a compensatory marine park for the IWWMF Phase 1 project with an area of 797 ha in the waters between Soko Island and Shek Kwu Chau. It also recommended to combine the proposed compensatory marine park and the neighboring proposed Soko Islands Marine Park into a large single marine park of approximately 2,067 hectares, namely the South Lantau Marine Park (SLMP), with a view to achieving better synergy in the future management and operation of the marine park. The boundary of the proposed SLMP is shown in **Appendix A**.
- 2.1.7 In order to enhance the fisheries resources in the South Lantau waters as required in the EP issued for the IWWMF Phase 1 project, deployment of ARs and release of fish fry/fingerlings have been proposed as the fisheries enhancement measures for the SLMP. The Investigation Study recommended to deploy the ARs and release the fish fry/fingerlings within the core area of the proposed SLMP where all kinds of fishing activities are prohibited. The proposed location for the ARs deployment is shown in **Appendix B**.
- 2.1.8 According to the findings of the Investigation Study, the proposed deployment of ARs

will affect less than 0.35 hectares of seabed and all ARs will be deployed at least 200 away from the shoreline (high water mark) and in water depth ranging from approximately 13 to 15 m below Chart Datum with a minimum clearance of 4.5 m above the AR structures for navigational safety.

2.1.9 The deployment of ARs within the proposed SLMP is intended to be implemented after the completion of statutory process for SLMP designation and the gazette of ARs deployment in accordance with the Marine Parks Ordinance (Cap 476) and the Foreshore and Foreshore and Seabed (Reclamations) Ordinance (Cap 127), respectively. To allow time for establishment of fouling organisms and assemblages on the deployed ARs to provide potential food source for the released fish, it is proposed to conduct fish fry/fingerlings release one year after the ARs deployment. Suitable native species with affiliation to ARs such as orange-spotted group (*Epinephelus coioides*), yellowfin seabream (*Acanthopagrus latus*) and red porgy (*Pagrus major*) are proposed in the Investigation Study for the fish restocking exercise.

2.2 Scope of the Project

2.2.1 The scope of the Project comprises the following components:

- (a) implementation of fisheries enhancement measures including ARs deployment and fish fry/fingerlings release within the proposed SLMP; and
- (b) evaluation of the effectiveness of the proposed fisheries enhancement measures through appropriate monitoring programme.

3. **Objectives of the Assignment**

3.1 The objectives of the assignment are:

- (a) to evaluate the effectiveness of the SLMP through appropriate monitoring;
- (b) to review and draw up implementation programme for the deployment of ARs and release of fish fry/fingerlings;
- (c) to confirm the reference design of ARs produced under the Investigation Study and produce final design of ARs along with performance specifications and cost estimation of the deployment of ARs;
- (d) to consult relevant advisory bodies such as the Country and Marine Parks Board (and/or its relevant sub-committee) and the Advisory Committee on Agriculture and Fisheries (and/or its relevant sub-committee) for the deployment works of ARs and

- fish fry/fingerlings release;
- (e) to obtain relevant approvals or permits for the proposed fisheries enhancement measures;
 - (f) to carry out the procurement and tendering for the construction and deployment of ARs;
 - (g) to undertake contract administration and site supervision for the construction and deployment of ARs to ensure proper execution of contract requirements by the Contractor;
 - (h) to source, procure and release fish fry/fingerlings at the deployed ARs; and
 - (i) to evaluate the effectiveness of the ARs deployment and fish fry/fingerlings release by implementing the recommended monitoring programme in the Investigation Study.

4. Description of the Assignment

4.1 The Services to be provided by the Consultants for this Assignment, as set out in **Clause 6** of this Brief, are divided into the following phases:

- (a) **Phase I** – Review and Design Phase
- (b) **Phase II** – Tender Phase for ARs Construction and Deployment
- (c) **Phase III** – Construction Phase of ARs
- (d) **Phase IV** – Release of Fish Fry/Fingerlings, Analyses and Recommendation

4.2 The Consultants shall commence **Phase I** upon commencement of this Assignment. **Phases II to IV** have been designated as “Phases Subject to Incorporation” pursuant to **Clause SCE 1 of the Special Conditions of Employment**. The Consultants shall not commence and will not be paid for the services comprised within “Phases Subject to Incorporation” without written instruction to do so from the Director’s Representative. The Government shall not be held liable in any way in the event that the project does not proceed from one phase to the next.

4.3 The Assignment shall cover the following major tasks:

Phase I – Review and Design Phase

- (a) carry out one-year baseline fisheries resources monitoring in terms of distribution, abundance, biomass and species diversity within the proposed SLMP and control/reference sites before its designation (tentative in 2022) and at least two-year post-designation monitoring of fisheries resources in the SLMP and control/reference

- sites. The baseline fisheries resources monitoring should also cover the AR deployment site and its control/reference sites in order to provide updated baseline data for the deployment of ARs and evaluation of any changes in fisheries resources in respect of abundance, biomass and species diversity at the AR deployment site and its control/reference sites after the deployment of ARs as compared with the baseline;
- (b) review and confirm to the Director's Representative the findings, conclusions and recommendations of Agreement No. CE 14/2012 (EP) Provision of Compensatory Marine Park for Integrated Waste Management Facilities at an Artificial Island near Shek Kwu Chau – Investigation (the Investigation Study), including but not limited to the implementation programme of ARs deployment and fish fry/fingerlings release, details of further investigations and surveys, final design and performance specifications of ARs, method statement of fish fry/fingerlings release and monitoring programme of the fisheries enhancement measures;
 - (c) prepare cost estimates for implementation of the proposed fisheries enhancement measures and the corresponding monitoring works;

Phase II – Tender Phase for ARs Construction and Deployment

- (d) prepare screening criteria, marking scheme and tender documents for the construction and deployment of ARs which will be procured under a Construction Contract;
- (e) undertake the tendering exercise including but not limited to evaluate the technical submissions, assist and provide technical support to the Tender Assessment Panel, prepare the tender assessment and recommendation report, negotiate with tenderers if necessary; and debrief unsuccessful tenderers upon request;
- (f) prepare contract documents and arrange contract award procedure for the Employer;

Phase III – Construction Phase of ARs

- (g) provide personnel with relevant qualifications and experience to perform the duties on behalf of the Employer as stipulated in the contract for construction and deployment of ARs and execute contract administration tasks, including but not limited to assessment of Contractor's proposals, negotiation on rates for variations processing and certifying contract payments and other cost items, handling claims and contractual issues for additional payment and extension of time;
- (h) liaise with Director's Representative, other Government departments/bureaux, public utility companies, relevant statutory authorities, consultants, contractors or public persons on matters relating to the construction and deployment of the ARs;
- (i) consult relevant advisory bodies such as the Country and Marine Parks Board (and/or its relevant sub-committee) and the Advisory Committee on Agriculture and Fisheries (and/or its relevant sub-committee) for deployment of the ARs and the post-deployment monitoring;

- (j) provide personnel with relevant qualification and experience to supervise and monitor the construction and deployment works for the ARs and report to the Director's Representative on the programme, progress, quality, environmental and safety performance, cost and payment of the Works in full compliance with contract requirements. The Consultants shall recommend options for any necessary remedy to resolve unknown problems including the associated cost of the options and effects on the completion of the ARs deployment;
- (k) carry out the post-deployment structural and fisheries resources monitoring of the ARs to evaluate the effectiveness of ARs deployment;

Phase IV – Release of Fish Fry/Fingerlings, Analyses and Recommendation

- (l) source and procure fish fry/fingerlings and carry out the fish restocking exercise at the deployed ARs;
- (m) carry out pre-release and post-release monitoring of fish fry/fingerlings including but not limited to the released species at the deployed ARs and control/reference sites; and
- (n) evaluate the effectiveness of the fish fry/fingerlings release including stock levels, site fidelity, dispersion rate and any possible interaction (e.g., competition or predation) with other species at the same or other trophic levels at the deployed ARs and control/reference sites based on the results of monitoring in this part as well as the overall analysis of pre- and post-designation monitoring of fisheries resources in the SLMP and control/reference sites as described in 4.3 (a) and recommend the way forward for the fish restocking programme.

5. Deliverables

General

- 5.1 Throughout the duration of this Agreement, the deliverables described in this **Clause 5** are to be supplied by the Consultants.
- 5.2 Unless specified otherwise, and except **Monthly Progress Reports** and **Monthly Financial Reports**, all notes, papers, reports and documents shall initially be submitted in draft form. A period of 2 weeks shall then be allowed for circulation of the draft documents to concerned authorities for comments. The Consultants shall provide responses within 1 week from receipt of comments. The Consultants shall submit to the Director's Representative the final version of the documents within 1 week of satisfactorily resolving all comments. The Consultant should also respond to queries

within 3 months after the final submission of deliverables.

- 5.3 The Consultants shall submit up to 15 copies each of the draft and approved final version of all notes, papers, reports and documents necessary for the satisfactory completion of the Assignment, including all deliverables in this Brief unless otherwise specified.
- 5.4 The Consultants shall provide any other reports, papers, submissions, programmes, estimates, calculations, certificates, plans, drawings and any other documents in connection with the Assignment and as required by the Director's Representative.
- 5.5 The Consultants shall produce documents for the purpose of compliance with statutory procedures, government procedures and consultative procedures.
- 5.6 The Consultants shall submit certificate of Insurance Policy (1 certified true copy) as described in **Clause 47 of the General Conditions of Employment** annually or upon any change in insurer or terms of the Insurance Policy.
- 5.7 The Consultants shall submit 3 copies of **Monthly Progress Report** to the Director's Representative within the first 5 working days of each month as required in **Clause 8** of this Brief.
- 5.8 The Consultants shall submit 3 copies of **Monthly Financial Reports** referred to in **Clause 9** of this Brief within the first 5 working days of the month.
- 5.9 The Consultants shall submit meeting minutes/records of every meeting convened or attended by the Consultants with other Government departments, offices, and non-Government parties on all matters relating to this Assignment including distribution of the meeting minutes to the attendees of the meetings within seven working days of the respective meeting;
- 5.10 The Consultants shall have copies of all written correspondence the Consultants have had with Government departments, offices and other non-Government parties in relation to this Assignment, properly filed, classified and indexed to enable easy reference, search and retrieval of information.
- 5.11 In addition to the number of hard copies specified, the Consultants shall also submit electronic copies of the approved final versions of all deliverables including drawings in this **Clause 5** in both editable and image formats to be agreed by the Director's Representative.

- 5.12 The Consultants shall draw to the attention of the Director's Representative any deliverables that are under licence and any pre-existing copyright or patent on any deliverables and any other restriction whatsoever affecting the Employer's use of the same and, if required by the Director's Representative, to establish the existence of any licence, copyright, patent or restriction.
- 5.13 The content and format of all deliverables prepared by the Consultants shall be subject to the satisfaction of the Director's Representative.
- 5.14 Unless otherwise specified by the Director's Representative, the Consultants shall prepare the required reports and documents in accordance with the following "green" measures:
- (a) All notes, papers, tender documents and other relevant documents including their draft forms should be of A4 size, printed on both sides of recycled paper. The use of recycled paper with not less than 50% recycled materials and not exceeding 80 gsm should be used as a general rule. Bleached papers should not be used if possible. The logo of recycled paper should be printed in prominent area of the report.
 - (b) Unnecessary or excessive use of plastic laminates, glossy covers or double covers, and blank papers in the production of the documents should be avoided as far as possible. Use of recyclable non-glossy art board paper as document covers is recommended.
 - (c) Excessive space around the borders and in between the paragraphs of all documents should be avoided as far as possible. As a general rule, a margin of 2 cm should be sufficient. Reports should be of single line spacing on both sides of the paper.
 - (d) The number of pages can be reduced by reducing the size of type face (font). For example, "Times New Roman" or "C.G. Times" font size in the range of 10-12 characters per inch (cpi) or equivalent should be used in balancing legibility and clarity against the waste reduction objective. The appearance and readability of the document can be improved by using two columns where the font size used is 12 points.
- 5.15 All documents including sketches, plans, drawings, photographs, spreadsheets, charts designed for the Assignment shall be returned to and shall become the property of the Employer with full copyright. Such information shall be returned within 4 weeks of the approval of the last deliverable of each phase as specified in this Clause to the Director's Representative.

Phase I – Review and Design Phase

5.16 The Consultant shall submit up to 15 copies the following documents to the Director's Representative for **Phase I** of the Assignment unless otherwise specified:

(a) **Draft Inception Report** within 2 weeks from the commencement of the Agreement. The draft Report shall include but not limited to the following:

- (i) statements on the Consultants' understanding and appreciation of the objectives of the Assignment;
- (ii) approach and methodology for various parts and phases to achieve the objectives of the Assignment;
- (iii) a study programme with detailed activities to be carried out, target dates for particular inputs/outputs, major tasks and key decision dates that may be required for uninterrupted progress of the Assignment, the critical path and activities shall also be identified;
- (iv) a schedule of submission of deliverables necessary for fulfilling the requirements of the Assignment; and
- (v) a summary of the organization and staffing of the study team and the curricula vitae of the key members.

(b) **Draft Project Preparation Report** within 4 weeks from the commencement of the Agreement. The Report shall include but not limited to the following:

- (i) findings of review of the findings, conclusions and recommendations of the Investigation Study;
- (ii) proposal of any additional investigations, surveys and testing required for the satisfactory completion of the Project. The proposal shall contain the extent, types, cost estimate, programme and procurement arrangement of the proposed field investigations and surveys.

(c) **Draft Final Design Report of ARs** within 2 months of the commencement of the Agreement. The Consultants shall review the reference design of ARs produced previously under the Investigation Study and confirm the ecological and engineering feasibility of the ARs design. The Consultants shall prepare draft Design Report which shall include but not limited to the following:

- (i) design assumptions, criteria, parameters, methodology used and factors considered;
- (ii) references, specification requirements, codes of practices, manuals and
- (iii) supporting documents used;

- (iv) detail descriptions, calculations and schedules associated with the design;
- (v) detailed drawings, construction and deployment method statements and the associated risks;
- (vi) material specifications and technical details;
- (vii) performance specifications of the ARs;
- (viii) implementation and monitoring programme of the deployment of ARs;
- (ix) cost estimate of the construction and deployment of ARs; and
- (x) any other relevant information necessary to explain and substantiate the design.

- (d) **Draft Monitoring, Review and Recommendation Report** within 15 working days after the fisheries resources monitoring of the SLMP and control/reference sites, detailing the monitoring results and data analyses and evaluation of fisheries resources of the SLMP.

Phase II - Tender Phase for ARs Construction and Deployment

5.17 The Consultation shall submit up to 15 copies the following documents to the Director's Representative upon instruction to proceed with Phase II of the Assignment unless otherwise specified:

- (a) **Draft tender documents, draft drawings, draft tender notifications and draft press release (if necessary) for works contract** at least 3 months prior to scheduled tender invitation date;
- (b) **Final tender documents, drawings, tender notification, press release (if necessary), and Electronic Dissemination Package for works contract** at least 2 months prior to scheduled tender invitation date;
- (c) **Final tender reports, technical assessment report (if appropriate) and associated documents for works contract** within 6 weeks after the tender closing date of works contract;
- (d) **Updated Estimate** within 4 weeks after acceptance of tender by respective tender board;
- (e) **Letters of Acceptance for works contract** within 2 days after acceptance of tender by respective tender board;
- (f) **Contract drawings** at least 2 weeks prior to scheduled date of contract signing; and
- (g) **Duplicate copies of signed contract documents and drawings for the contracts** within 2 weeks after contract signing.

Phase III - Construction Phase of ARs

- 5.18 The Consultants shall submit up to 15 copies of each the following documents to the Director's Representative for Phase III of the Assignment unless otherwise specified:
- (a) **Draft Quality Site Supervision Plan (QSSP)** within 4 weeks after award of the Construction contract, and in accordance with **Clause 6.4.13**;
 - (b) **Draft documents for the purpose of compliance with government procedures and consultative procedures** at least 3 months prior to scheduled dates for ARs deployment;
 - (c) **Monthly Construction Safety and Quality Audit Reports** within 5 working days at the beginning of each monthly period during the construction and deployment of the ARs, detailing the safety records and performance of the Contractor in safety aspects as well as the findings of the quality audits on the Contractor's work, testing or inspections as stipulated in **Clause 6.4.16**.
 - (d) **Draft Review Report on Contractor's Plans** within 10 working days after checking and reviewing the Contractor's draft or revised Plans, detailing the comments and assessment on the Contractor's Plans with respect to the Contract's requirements and making recommendation to the Director's Representative on approving the Plans as stipulated in **Clause 6.4.21**.
 - (e) **Draft Observation Reports** within 10 working days after completion of the deployment of ARs. The Report shall include all necessary site records and survey results detailing the assessment on the fulfilment of performance specifications of the deployed ARs.
 - (f) **Draft Monitoring, Review and Recommendation Report** within 15 working days after the proposed monitoring period, detailing the monitoring results and assessment of the ARs performance and giving advice on further appropriate monitoring works if necessary.

Phase IV - Release of Fish Fry/Fingerlings, Analyses and Recommendation

- 5.19 The Consultants shall submit up to 15 copies of each the following documents to the Director's Representative upon instruction to proceed with Phase IV of the Assignment unless otherwise specified:
- (a) **Draft Proposal on the Fish Restocking Implementation** within 4 weeks after instruction to proceed with Phase IV. The proposal shall contain the detailed plan for the release of fish fry/fingerlings including but not limited to the restocking programme, fish species to be released, quantity of fish fry/fingerlings, restocking procedures, monitoring programme and cost estimate with reference to requirements in international guidelines and provisions such that the restocking exercise would not

pose any unacceptable adverse impact to the marine environment.

- (b) **Draft Monitoring, Review and Recommendation Report** within 15 working days after the proposed monitoring period, summarizing statistical analyses of data collected at the release and control / reference sites during the pre- and post-monitoring periods for assessment of the effectiveness of fish fry/fingerlings restocking. The Consultant shall give advice on further appropriate monitoring works if necessary and the way forward for the fish fry/fingerlings restocking programme.

6 Services to be provided by the Consultants

6.1 General

- 6.1.1 The services to be provided by the Consultants shall be as defined in the General Conditions of Employment, the Special Conditions of the Employment and as amplified, extended and set out in this Brief. The services as described in all sub-clauses to **Clause 6.1** of this Brief below shall, where applicable, apply to all phases of this Assignment.
- 6.1.2 The services to be provided by the Consultants shall include such additions, modifications and exceptions as agreed between the Director's Representative and the Consultants.
- 6.1.3 The Consultants shall provide personnel with appropriate qualifications and relevant experience to manage all tasks and shall direct, control and undertake, where appropriate, the services detailed in all sub-clauses to **Clause 6** of this Brief.
- 6.1.4 The Consultants shall carry out all necessary communications, liaison, researches, studies, investigations, site visits, computation, analysis and reports which are required for the satisfactory completion of the Assignment.
- 6.1.5 The Consultants shall comply with all reasonable instructions of the Director's Representative. The Consultants shall identify, take cognizance of and comply with all Government Handbooks, Manuals (in particular the Port Works Design Manual), Circular, Standing Instructions, Code of Practice, Technical Memorandum, Legislations and Government Regulations relevant to the Assignment. The Consultants shall identify and take cognizance of the findings, conclusions, recommendations and interfacing issues of all completed, on-going and planned studies related to or having implication on the Assignment.
- 6.1.6 The Consultants shall provide all relevant information relating to the Project as may from

time to time be required by the Director's Representative.

6.1.7 The Consultants shall give due consideration to all planning, environmental, engineering, economic, transport, drainage impact, land, utilities, safety, security, legal, social, operational, contractual and financial implications of their proposals and recommendations.

6.1.8 The Consultants shall provide the services as detailed in the following Phases:

Phase I - Review and Design Phase

Phase II - Tender Phase for ARs Construction and Deployment

Phase III - Construction Phase of ARs

Phase IV - Release of Fish Fry/Fingerlings, Analyses and Recommendation

6.2 **Phase I - Review and Design Phase**

Fisheries Resources Monitoring of the proposed SLMP and control/reference sites

6.2.1 The Consultants shall liaise with AFCD on the designation programme of the proposed SLMP so as to carry out fisheries resources monitoring within the proposed SLMP and control/reference sites before and after its designation to evaluate the effectiveness of the proposed marine park. The Consultants shall provide the details of fisheries resources monitoring for the SLMP, including monitoring methods, required monitoring data, monitoring stations, monitoring frequency and duration, etc. by making reference with the recommendations of the Investigation Study and in consultation with AFCD. Upon commencement of this Assignment and after seeking AFCD's agreement on the details of monitoring, the Consultants shall carry out the one-year baseline fisheries resources monitoring of the proposed SLMP and control/reference sites with an aim to tie in with the designation programme of the proposed SLMP. The baseline fisheries resources monitoring should also cover the AR deployment site and its control/reference sites in order to provide updated baseline data for the deployment of ARs. The post-designation monitoring of fisheries resources in the SLMP should be carried out for, at least, two years. The Consultants shall perform statistical analyses for data collected within SLMP as compared with control/reference sites and liaise with AFCD on analyses and interpretation of the monitoring results and make recommendation on whether more monitoring would be needed.

Project Preparation

6.2.2 The Consultants shall review all the findings, assumptions and recommendations of the Investigation Study in relation to the proposed fisheries enhancement measures. The

documents prepared under the Investigation Study include but not limited to “Detailed Design of Marine Park”, “Reference Design of Artificial Reefs” and “Final Report”.

- 6.2.3 The Consultants shall collate and review relevant completed investigations and surveys, including but not limited to fisheries resources surveys, geophysical survey and marine ground investigation carried out under the Investigation Study. The Consultants shall review and recommend the need for any additional surveys for the satisfactory completion of the Project.
- 6.2.4 In the event that additional surveys are required to be carried out under this Assignment, the Consultants shall determine, plan, design, supervise and control the additional investigations, surveys, testing, etc. as necessary for the satisfactory completion of the Project. The additional surveys required are reimbursable upon prior approval of the Director’s Representative.
- 6.2.5 The Consultants shall prepare a **Project Preparation Report** as per the requirements stipulated under **Clause 5.16(b)** of this Brief.

Design of ARs

- 6.2.6 The Consultant shall review the reference design of ARs produced previously under the Investigation Study and confirm the ecological and engineering feasibility of the ARs design. The Consultant shall identify any change on the engineering design of ARs and produce the final design of ARs. The design of ARs shall include but not limited to details of the design basis and assumptions, implementation methodologies, material, plants and equipment to be employed together with cost estimates, implementation programme, monitoring and auditing requirements to assess the effectiveness of the ARs.
- 6.2.7 When reviewing the design of ARs, the Consultants shall take into consideration the comments of Marine Parks Committee (MPC) members on the ARs design raised in the MPC meeting on 12 March 2019, which included but not limited to the suggestions of using materials of lower pH value and with rougher surface for making eco-friendly AR units, and incorporating additional features to the AR units such as ropes with hanging oyster shells to accelerate the recruitment of marine organisms, etc. All special features including composition of materials, surface texture as well as additional features such as holes or attachment points for hanging ropes with oyster shells should be documented and reported.
- 6.2.8 In the AR design stage, the Consultants shall seek comments from relevant Government

departments/bureaux on the final design of ARs. In particular, Marine Department should be consulted on the marine safety issues in relation to the ARs. The Consultants shall explain and answer to queries raised and incorporate all relevant comments to finalize the AR design.

- 6.2.9 The Consultants shall update the AR deployment programme according to the latest development of the Project. The Consultants shall liaise with AFCD on the designation programme of the proposed SLMP with an aim to deploying the ARs right after the designation of SLMP.
- 6.2.10 The Consultants shall liaise and agree with AFCD on the monitoring programme for AR performance proposed under the Investigation Study in terms of monitoring method, parameter and frequency, and revise the programme if necessary.
- 6.2.11 The Consultant shall prepare a **Final Design Report of ARs** as per the requirements stipulated under **Clause 5.16(c)**. The final design of ARs shall include sufficient details for the subsequent construction stage of ARs.

6.3 Phase II - Tender Phase for ARs Construction and Deployment

- 6.3.1 Upon written instruction from the Director's Representative to proceed with Phase II of the Assignment, the Consultant shall prepare all tender documents for the construction and deployment of ARs, which shall be procured through a Construction Contract between the Government and the Contractor. The tender documents shall include, but not limited to, Conditions of Contract, specifications, drawings, bills of quantities, schedules of rate, schedules of quantities, schedules of particulars and cost estimate together with all documents, matters or things that may be necessary or required to enable the Employer to invite tenders or otherwise place order for the works.
- 6.3.2 The Consultants shall advise the Director's Representative of the need, if any, to deviate from or vary the General Conditions of Contract for Civil Engineering Works and normal Government procedures for calling tenders. The General Condition of Contract shall remain unaltered. Any necessary amendments required shall be by means of Special Conditions of Contract authorized in writing by the Director's Representative. The Consultants shall also explain in reasons for any Special Conditions of Tender, Special Conditions of Contract, Particular Specification Clauses and Particular Preambles to the Bills of Quantities to embody any deviations into the tender documents.
- 6.3.3 The Consultants shall seek comments from relevant Government departments/bureaux on

the draft tender documents. The Consultants shall explain and answer to queries raised and incorporate all relevant comments to finalize the tender documents.

- 6.3.4 The Consultants shall assist the Director's Representative in the invitation of tenders for the proposed works, prepare draft tender notifications, letter of invitation, advertisement and press releases, distribute tender documents, prepare and issue tender addenda, answer queries on tender documents and carry out pre-tender briefing if required. The Consultants shall prepare electronic copies of the tender documents for dissemination to the tenderers in accordance with the provision of the ETWB TC(W) No.11/2005 or its subsequent revisions. The Consultants shall note that Hong Kong SAR has acceded to the Agreement on Government Procurement of the World Trade Organization (WTOGPA), and the requirements under the WTOGPA and relevant Government procedures, if applicable, shall be complied with.
- 6.3.5 The Consultants shall assess the tenders received, make recommendation and prepare Tender Assessment Reports and associated documents in accordance with the Government's "Stores and Procurement Regulations" requirements and procedures.
- 6.3.6 The Consultants shall assist the Director's Representative to seek approval from the relevant tender board on the recommended tenderer for the works contract and provide any other services and advices that are incidental necessary for the Employer to accept the recommended tender and to award the works contract.
- 6.3.7 Concurrent with the completion of the draft tender documents, the Consultants shall prepare an Estimate of the total cost of the proposed works. The Consultants shall prepare an Updated Estimate of the total cost of the proposed works and a Tender Rate Analysis within 4 weeks after acceptance of tender.
- 6.3.8 The Consultants shall assist the Director's Representative to provide feedback to the tender bidders including debriefing to the unsuccessful bidders in accordance with ETWB TC(W) No.42/2002 or its subsequent revision.
- 6.3.9 The Consultants shall prepare and provide letter of acceptance and other necessary documents to the Director's Representative for the award of works contract to the successful tenderer.
- 6.3.10 The Consultants shall prepare, bind and provide contract documents (including, inter alia, Articles of Agreement, other documents, relevant correspondence and drawings) for signature and for retention by both the Director's Representative and the Contractor. The

Consultants shall also check and carry out all formalities required under ETWB TC(W) No. 54/2002 for executing the Articles of Agreement.

6.3.11 The Consultants shall prepare, bind and submit duplicated copies of the whole set of signed contract documents (including drawings in A1 size, and/or reduced to A2 or A3 sizes as agreed with the Director's Representative). The Consultants shall check with due care and diligence the correctness and completeness of the duplicated copies and certify so on each of the duplicated documents provided under this sub-clause.

6.4 Phase III - Construction Phase of ARs

6.4.1 Upon receipt of written instruction from the Director's Representative to proceed with Phase III of the Assignment, the Consultants shall carry out the duties specified under this **Clause 6.3** for the construction, deployment and performance monitoring of ARs.

Contract Administration and Project Management

6.4.2 When the Government enters into the Construction Contract with the Contractor for the deployment of ARs, the Consultants shall, with powers delegated from the Director's Representative in writing, take full responsibility to administer and manage the Contract, supervise the works and services, certify the Contractor's payment applications, liaise with relevant bodies or persons for or in connection with the Contract works and services until all the contractual obligations of the Contractor are fulfilled to the satisfaction of the Director's Representative.

6.4.3 The Consultants shall provide site supervision required to attain the quality assurance objectives and to meet with the necessary management needs for the construction, fabrication, supply, delivery, deployment and testing of the ARs.

6.4.4 The Consultant shall provide a professional staff to assume the role of the **Employer's Representative** as stipulated in the Contract to perform the duties on behalf of the Employer and provide the Director's Representative with expert views and advice on implementing the ARs deployment. The Consultants shall provide personnel with appropriate qualifications and relevant experience to manage all tasks and shall direct, control and undertake, where appropriate, the services detailed in the following sections.

6.4.5 The Consultants shall appoint an **Employer's Representative** who shall report to the Director's Representative or such other person as may be authorized by the Director in writing and notified to the Consultants.

- 6.4.6 The **Employer's Representative** shall carry out such duties and may exercise such powers as are assigned to him under the Contract and as may be delegated to him by the Director's Representative.
- 6.4.7 The **Employer's Representative** shall act for overall control of the works and perform all contract management, contract administration tasks and engineering duties in regards to the construction and deployment of the ARs described **in relevant sub-clauses under Clause 6.3** to ensure the cost-effectiveness of the Project and that the Contractor's Works are in full compliance with the Contract.
- 6.4.8 The Consultants shall appraise the performance of the Contractor and submit the performance appraisal reports of the Contractor to the Director's Representative at quarterly intervals.
- 6.4.9 The Consultants shall check the Contractor's programme and monitor the progress with an aim to ensuring that the scheduled programme of the construction and deployment of the ARs can be achieved. The Consultants shall submit **Monthly Progress Reports** with progress photos describing the Contractor's progress. The Consultants shall also be required to report immediately to the Director's Representative any significant slippage of the Contractor's progress.
- 6.4.10 The Consultants shall arrange and conduct monthly progress meetings, or meetings as requested by the Director's Representative, with the Contractor to resolve matters in respect of construction, deployment, safety and environmental performance, performance monitoring, etc. The Project Director of the Consultants shall chair the monthly progress meetings.
- 6.4.11 The Consultants shall be required to deal with claims and negotiate rates for variations in connection with the Contract and assist the Employer in settling disputes or differences between the Employer and the Contractor. For mediation, litigation and arbitration of disputes between the Employer and the Contractor relating to matters which arise before the completion of this Assignment, appropriate assistance shall be provided by the Consultants to the Employer, and if any input in these regards are agreed between the Consultants and the Director's Representative as additional services, payment of such would be in accordance with the Schedule of Fees.
- 6.4.12 The Consultants shall be responsible for monitoring the Contract's expenditure and checking the progress with respect to certifying payments regarding the construction,

deployment and monitoring works to the Contractor. The Consultants shall also be required to prepare estimates of expenditure for the Works.

Construction and Deployment of ARs

6.4.13 The Consultants shall prepare and submit a draft **QSSP** within 4 weeks upon commencement of the Contract. The draft **QSSP** shall include but not limited to the following details:

- (a) a detailed site supervision arrangement, including arrangements for supervision of construction and deployment activities that are required to be carried out outside the normal working hours of the site staff;
- (b) a list of critical construction, testing and deployment activities and structural elements that require special attention together with the associated supervision requirements for such items, where appropriate the level of supervision and the rank of staff who should perform the supervision of such items and/or sign the Request for Inspection Form (or a purposely made inspection form for a particular activity or test);
- (c) if necessary, the consultants shall also specify for any critical construction, testing and deployment activities, structural elements and particular aspects or details that should be noted by the inspection officer on the Request for Inspection Form for future reference;
- (d) a guideline on the details of inspection to be recorded for specialist works or critical elements; and
- (e) in case it is envisaged that construction or fabrication works will be carried out outside Hong Kong, the Consultants shall formulate supervision requirements and inspection arrangement for such works. The Consultants shall also prepare comprehensive guidelines to be followed by the specialists who need to conduct inspection outside Hong Kong. The Guideline shall include the three minimum requirements as given in **Appendix C**.

6.4.14 The Consultants shall conduct regular review of the **QSSP**, and as the need arises, make necessary updating and modification in order to suit the actual circumstances. The Consultants shall report in the **Monthly Progress Reports** the status of implementing the **QSSP** and any major modification of it as result of a review. The Consultants shall submit a revised **QSSP** to the Director's Representative if there is a major revision and as requested by the Director's Representative.

6.4.15 The Consultants shall prepare relevant documents, including but not limited to presentation and briefing materials, discussion papers, etc. for consulting relevant

advisory bodies such as the Marine Parks Committee and the Country and Marine Parks Board for the deployment works of ARs within the proposed SLMP.

- 6.4.16 The Consultants shall audit the quality and workmanship of the Contractor' works by carrying out monthly quality audits on the site works as well as the quality records of the Contractor. The Consultants shall submit **Monthly Construction Safety and Quality Audit Reports** to the Director's Representative detailing their findings.
- 6.4.17 The Consultants shall advise the Director's Representative of any unsatisfactory works and materials.
- 6.4.18 The Consultants shall advise the Director's Representative on the necessity of ordering of any change of the works.
- 6.4.19 The Consultants shall give professional advice to the Director's Representative on any change proposed by the Contractor.
- 6.4.20 The Consultants shall ensure the compliance of the safety plan submitted by the Contractor and the implementation of the safety measures under the Contract by carrying out safety audit. The Consultants shall submit Safety Audit Reports to the Director's Representative detailing the findings and giving recommendation on enhancement of safety on Site. The frequency of the safety audits shall be proposed by the Consultants for the agreement of the Director's Representative.
- 6.4.21 The Consultants shall review and comment on the Contractor's Plans with respect to the Contract's requirements, provide expert advice and make recommendation to the Director's Representative to comment or give consent to the plans, and submit the Review Report to the Director's Representative. The Consultants shall be required to provide comments and conduct assessments to the revised Plans as regularly reviewed and updated by the Contractor. The Contractor's Plans shall include, but not limited to, the followings:
- (a) Project Management Plan;
 - (b) Works Plan;
 - (c) Environmental Management Plan;
 - (d) Safety & Health Plan;
 - (e) Quality Assurance Plan;
 - (f) Emergency Procedures Plan.

6.4.22 The Consultants shall respond to enquiries and investigate all complaints including but not limited to those from members of the public, District Councils, local organizations, green groups and the like regarding the Contract works and report to the Director's Representative.

6.4.23 The Consultants shall provide personnel with relevant qualification and experience to supervise the construction and deployment works of ARs to ensure proper quality control and compliance with the Contract requirements. After completion of deployment of ARs by the Contractor, the Consultants shall submit an **Observation Report** with all necessary records detailing the assessment on fulfilment of performance specifications of the deployed ARs to the Director's Representative.

Performance Monitoring, Review and Recommendation

6.4.24 The Consultants shall carry out the monitoring works in accordance with the proposed monitoring programme recommended during the review and design phase, including but not limited to, the post-deployment structural and fisheries resources monitoring for at least two years. The structural monitoring should include the structure and location of the ARs and the available water depth over the ARs. The Consultants shall review the monitoring results, perform statistical analyses and evaluate the effectiveness of ARs. The Consultants shall liaise with AFCD on the monitoring results, data analyses and interpretation, and make recommendation, in consultation with AFCD, on whether more monitoring would be needed.

6.4.25 The Consultants shall submit a **Monitoring, Review and Recommendation Report** providing summary of the monitoring results, statistical analyses, assessment of the effectiveness of ARs and recommendation on the way forward of monitoring works.

6.5 Phase IV - Release of Fish Fry/Fingerlings, Analyses and Recommendation

Implementation of Fish Fry/fingerlings Release

6.5.1 Upon receipt of written instruction from the Director's Representative to proceed with Phase IV of the Assignment, the Consultants shall carry out the duties specified below for the release of fish fry/fingerlings.

6.5.2 The Consultants shall source, procure and release fish fry/fingerlings at the deployed ARs. The Consultant shall provide Specialist(s) to be responsible for leading a team to carry out the fish restocking exercise. The Specialist(s) shall have extensive knowledge and

experience in conducting fish release for restocking programme; have expert knowledge in the identification of local fauna and flora, in particular fish species; have the necessary diving certifications and knowledge of local diving conditions; and have knowledge and experience in statistical analyses of fisheries resources data for evaluation of the effectiveness of the fish fry/fingerlings release programme.

- 6.5.3 The Consultants shall review the recommendations in relation to the fish fry/fingerlings release of previous Investigation Study, including but not limited to, the implementation programme, the proposed fish species to be released, the quantity and size of fish fry/fingerlings, the location for restocking, the restocking procedures and the monitoring programme, and advise the Director's Representative if any change on the previous recommendations is required for the satisfactory completion of the Project. The Consultants shall liaise and agree with AFCD on the selection of fish species and the monitoring programme for evaluating the effectiveness of fish restocking. The Consultant shall prepare a **Proposal on the Fish Restocking Implementation** as per the requirements stipulated under **Clause 5.19(a)**.
- 6.5.4 With reference to international guidelines and provisions, the Consultants shall source the supply of fish fry/fingerlings of the fish species selected for this restocking exercise and perform the restocking such that the exercise would not pose any unacceptable adverse impact to the marine environment. The fish fry/fingerlings should be sourced from reputable hatcheries with broodstock originated from the South China Sea. The fish fry/fingerlings should have undergone quarantine procedures for common fish diseases and acclimatised in local waters to ensure good health condition by proper inspection before release. The fish fry/fingerlings to be released should be acclimatised on-site to minimise handling stress (e.g. transporting the fish fry/fingerlings from the water surface slowly to the underwater site). The Consultant should provide full details of the fish hatchery (including the address and contact person and number) from which the fish fry/fingerlings were sourced. Relevant document(s) including hatchery operation permit issued by the relevant management authority; a statement on the broodstock management of the fish hatchery; and information on the origin of the broodstock should be provided 1 month before shipment of fish fry/fingerlings to Hong Kong.
- 6.5.5 The Consultants shall provide species identification test results (e.g. Polymerase chain reaction (PCR) test) proving that the fish fry/fingerlings supplied are the selected species for restocking. Species identification test results shall be provided at least 14 days before shipment of fish fry/fingerlings to Hong Kong.
- 6.5.6 The fish fry/fingerlings should be in good health and meet appropriate standards to be

provided in the proposal with reference to the species selected and targeted size of fish fry/fingerlings.

- 6.5.7 The Consultants should provide a health report from the relevant management authority (e.g. Entry-exit Inspection and Quarantine Bureau of PRC) supporting that the fish fry/fingerlings do not contain major parasites (e.g. Benedeniasis, Cryptocaryoniasis, Dactylogyrosis and Copepods) and bacteria (e.g. Vibriosis), harmful substances and foreign substances regulated in the hatchery's location and Hong Kong. Health report should be provided 14 days before shipment of fish fry/fingerlings to Hong Kong.
- 6.5.8 The Consultants shall note that, depending on the species of release, live prey of suitable size may be given to fish fry/fingerlings to develop their feeding skills at least one week before shipment to Hong Kong and feeding of fish fry/fingerlings should be completely stopped at least 2 days prior to shipment.
- 6.5.9 The Consultants should handle the fish fry/fingerlings carefully including but not limited to place the fish fry/fingerlings in plastic bags inside insulated polystyrene boxes to maintain the cool temperature during transportation (e.g. surrounded by ice bags or frozen gel packs to lower the water temperature to 15-20°C). The packing density should not exceed 50-60 g fish fry/fingerlings per litre of water. Each bag should be one third full of water with the remaining void filled with pure oxygen. Plastic bags should have enough packing water to cover the fish fry/fingerlings. Pure oxygen should be injected by holding an oxygen tube at the bottom of the bag, pressing out air from inside of the bag, bubbling oxygen through the water to inflate the bag. The top of each bag should be twisted, folded over and secured with an elastic band. Other additional measures to reduce the possible stress of the fish should also be considered.
- 6.5.10 The Contractor should propose and arrange a temporary storage facility, agreed by the Director's Representatives, in Hong Kong for acclimatisation of the fish fry/fingerlings at least 1 – 2 weeks in Hong Kong waters before release of the fish fry/fingerlings. The cost of using the temporary storage facility should be covered by the Consultants. Physical parameters of water in the temporary storage facility should be monitored. The Consultants should consult the hatchery for further information of the physical parameters of water for the fish.
- 6.5.11 The Consultants shall monitor the health of the fish fry/fingerlings during local acclimatization by observing swimming behavior and body surface for any symptoms of sickness. Sick fish fry/fingerlings shall be isolated as soon as possible to prevent outbreak of diseases. Any treatment of sick fish fry/fingerlings shall not violate the

relevant legislation in Hong Kong. The entire stock of fish fry/fingerlings shall be rejected if it fails to comply with the standards stated in **Clause 6.4.8** or mortality was found >10% upon reception. The Consultants is responsible to provide replacement as soon as possible.

6.5.12 The Consultants shall certify, in the presence of the Director's Representative, the number of healthy fish fry/fingerlings to be released and deduct the number of dead / unhealthy fish fry/fingerlings for calculation of the actual payment by the Director's Representative by reimbursement.

6.5.13 The Consultants shall be responsible for applying necessary permits for conducting the fish fry/fingerlings release.

6.5.14 The Consultants shall carry out pre-release monitoring in accordance with the proposed monitoring programme recommended in the **Proposal on the Fish Restocking Implementation**.

6.5.15 The Consultants shall transport and release fish fry/fingerlings at the deployed ARs of SLMP. The fish fry/fingerlings should undergo on-site underwater acclimatization before releasing them into the waters to minimize stress.

6.5.16 The Consultants should carry out one-year post-release fisheries resources monitoring in accordance with the proposed monitoring programme recommended in the **Proposal on the Fish Restocking Implementation** to collect data for the evaluation of the effectiveness of the fish restocking programme.

6.5.17 The Consultants should evaluate the effectiveness of fish restocking based on the monitoring results and statistical analyses of data collected at the release station as compared with those collected at the control/reference station during the pre- and post-release periods. The Consultants should liaise with AFCD on the monitoring results and make recommendation, in consultation with AFCD, on the way forward for the fish restocking programme.

6.5.18 The Consultants should submit a **Monitoring, Review and Recommendation Report** providing summary of the monitoring results, statistical analyses for assessment of the effectiveness of fish restocking and recommendation on the way forward for this fish restocking programme.

6.6 Quality Assurance and Quality Control Requirements

6.6.1 The Consultants shall:

- (a) develop rigorous Quality Assurance/Quality Control (QA/QC) procedures to ensure that the data collected and deliverables prepared for this Assignment are of suitable quality for the approval of the Director's Representative.
- (b) the QA/QC procedures to be developed shall take account of the objectives of the studies and comprise appropriate comparison activities, use of appropriate reference materials, procedures for assessing the ability of laboratories and survey companies, and criteria to be applied in the assessment of resulting data;
- (c) ensure that all data obtained are subject to proper quality assurance and quality control. The estimate accuracy and uncertainty in all field measurements must be provided when results are reported; and
- (d) arrange additional field works for data collection necessary to supplement any abnormal or unsatisfactory results of field investigation and surveys.

6.7 Other Services

6.7.1 The Consultants shall draw to the attention of the Director's Representative the need to consider any legal implications and consequences arising out of or in relation to the recommendations provided under this Assignment.

6.7.2 The Consultants shall report to the Director's Representative or any other delegated person on day-to-day administration of the Assignment and shall attend, serve or report to progress meetings at monthly or any other intervals as agreed with the Director's Representative.

6.7.3 The Consultants shall attend up to 15 external meetings to brief/explain the findings and recommendations of the Assignment on the request of the Director's Representative. The Consultants shall attend external meeting requested prior to a date three months after the final submission of the deliverables required under the Agreement at no additional charge to the Assignment. Such date shall be confirmed in writing to the Consultants by the Director's Representative. Further requirement of such services beyond the said period or attendance at more than the said number of external meetings shall be paid for as additional service. The external meetings shall include meetings with Advisory Council on the Environment (ACE), LegCo Environmental Affairs Panel, District Councils, the Country and Marine Parks Board (and/or its relevant sub-committee) and the Advisory Committee on Agriculture and Fisheries (and/or its relevant sub-committee) public discussion forums, community/public consultations and any other meetings as required by the Director's Representative in connection with the Assignment. The Consultants

shall also allow fees for all progress meetings, technical meetings and liaison meeting with relevant departments or authorities in the fee proposal. These meetings shall not be considered as part of the external meetings.

- 6.7.4 The Consultants shall take cognizance of the findings, conclusions, recommendations and interfacing issues of all completed, on-going and planned studies related to or having implications on the Assignment.
- 6.7.5 The Consultants shall consult all authorities having rights or powers in connection with the Assignment relating to the location of services, including consultation with the public utility companies and other authorities, bodies or persons affected by the Assignment.
- 6.7.6 The Consultants shall communicate and correspond direct with relevant Government bureaux/departments and agencies, and all other parties involved in this and any other projects or developments likely to be affected by this development, and to obtain information in connection with the Assignment. Any problems in communication or liaison should be referred to the Director's Representative for assistance. Any correspondence, notes or minutes arising from this communication or liaison shall be copied to the Director's Representative. In particular, the Consultants will be required to liaise with and seek input from the AFCD.

7 Programme of Implementation

- 7.1 The due date for commencement of the Agreement is XXXXXX.
- 7.2 The Agreement is expected to be completed within 40 months from the commencement. The indicative time frame for each phase of the Assignment is as follows:

	(i) Tentative Commencement Time <i>(commencing from and including the date for commencement of the Consultancy Agreement)</i>	(ii) Tentative Completion Time <i>(calculated from and including the date for commencement in column (i))</i>
Phase I	Date of the commencement of the Agreement	37 months
Phase II	2 months	7 months
Phase III	8 months	40 months
Phase IV	15 months	40 months

7.3 Pursuant to **Clause 26(B) of the General Conditions of Employment**, the Consultants shall submit the draft programme and revised draft programme and the Director's Representative shall agree, or instruct, within the following periods:

Submission of the draft programme	Within 2 weeks of the due date for commencement of the Agreement
Agreement of the draft programme	Within 2 weeks from receipt of the draft programme or instruction for submission of a revised draft programme
Submission of revised draft programme	Within 2 weeks from the instruction of the Director's Representative

The draft programme and revised draft programme shall detail the activities to be carried out, target dates for particular tasks and any decision dates that may be required for the uninterrupted progress of the Assignment. The Consultants shall discuss with the Director's Representative during the above periods to agree the timing of submission of reports, other documents and plans for each of the main elements of the Assignment, for inclusion in the draft programme and revised draft programme as appropriate.

7.4 The key dates referred to in **Clause 7.3** of this Brief shall include but not limited to the followings:

- (a) The date of submission of the Project Preparation Report;
- (b) The date of submission of the Final Design Report of ARs;
- (c) The date of submission of the contract documents for tendering for the construction and deployment of ARs;
- (d) The date of contract award for the construction and deployment of ARs;
- (e) The date of submission of the Proposal on the Fish Restocking Implementation;
- (f) The dates of submission of the Final Monitoring, Review and Recommendation Report for the SLMP, deployment of ARs and release of fish fry/fingerlings; and
- (g) The date of completion of this Assignment.

7.5 The Consultants shall endeavor to ensure that the Assignment is carried out in accordance with the agreed programme and shall submit regular programme review as part of the Progress Reports referred to in **Clause 8** of this Brief.

8 Progress Reports

8.1 The Consultants shall submit to the Director's Representative Progress Reports within the

first 5 working days of each calendar month on all aspects of the Services relating it to the Programme referred to in **Clause 7** of this Brief, including where appropriate those parts of works under the Contracts for the deployment of ARs and the release of fish fry/fingerlings. The Progress Report shall include a list of those parts of the Services under the Assignment and those parts of works under the Contracts of which the execution is behind the Programme, together with proposals to expedite progress so as to complete the works on time. The Progress Reports shall also include the records if the milestone payment up to the end of the previous month. The Progress Reports shall also include updated expenditure forecasts in accordance with **Clause 9** of this Brief. The content and form of the Progress Reports shall be subject to the satisfaction of the Director's Representative.

9 Financial Management

- 9.1 At monthly intervals or at such other intervals as the Director's Representative may require, the Consultants shall submit a report on the current and the forecast expenditure on the various elements of the Assignment and the fees due to the Consultants, in a form to be agreed by the Director's Representative. In addition, where necessary the Director's Representative may from time to time require the Consultants to submit a report on the current and the forecast expenditure on the Assignment and the fees due to the Consultants.
- 9.2 The Consultants shall closely monitor progress and expenditure on any works contracts and be alert to the possibility of the approved contract sum being exceeded. They shall advise the Director's Representative immediately if there is any likelihood of the approved contract sum being exceeded. To ensure sufficient time to obtain the necessary authorities and make funds available, the Consultants shall give the Director's Representative at least four months' notice in writing of the need to increase the approved contract sum to meet contractual payments and shall provide the supporting information, except that if the need cannot be foreseen so far ahead, then the Consultants shall give as much notice as is possible in the circumstances. The following information shall be provided :-
- (a) full details of the proposed net increase broken down into the following categories:-
 - (i) price fluctuation payment under the contracts. An arithmetical derivation based on the projected percentage and the estimated final effective value of work done is required;

- (ii) additional works and savings arising from the bills of quantities items and variation orders. Reasons shall be given for increases and decreases in the earlier estimates; and
 - (iii) claims from the contractors. These shall be the Consultants' estimates of the amounts which will be certified for payment.
- (b) an assessment of increase in consultancy fees and site staff costs if the contract period is likely to be extended or additional site staff are required; and
- (c) a revised projected monthly cash flow pattern of contract payments, consultancy fees and site costs.

10 Standards and Specifications

- 10.1 The Consultants shall adopt such standards and specifications as are in current use by Government departments or, if non-existent, British Standard Codes of Practice and Specifications, IEE Regulations or equivalent. Should instances arise for which suitable standards or specifications do not exist or for which the current standards or specifications appear to require modification or if by the adoption of current standards the Consultants would incur additional expenses not within reasonable contemplation, the Consultants shall submit recommendations on appropriate alternatives to the Director's Representative for agreement.
- 10.2 The Consultants shall comply with and observe all Ordinances, by-laws, regulations and rules for the time being in force in the Hong Kong SAR.

11 Checking and Certification of the Design

- 11.1 The Consultants shall submit to the Director's Representative in accordance with **Clause 5** of this Brief, a full set of design calculations including a statement of the standards, procedures and codes of practice adopted. It shall be accompanied by a certificate that the design calculations have been checked by another qualified independent designer in the Consultants' employ and that the drawings are in accordance with the calculated designs. The standard form of 'Design Certificate' set out in Appendix 4.7 of the EACSB Handbook shall be used for this purpose wherever applicable.

12 Variations and Other Commitments

- 12.1 The value of a variation to the Contract Works or other expenditure commitment for the purpose of **Clause 24 of the General Condition of Employment** is \$0.
- 12.2 All variations to the Contract Works shall be covered by a variation order in a form to be agreed by the Director's Representative, except that no variation order will be required for increase or decrease in quantities arising from remeasurement of the items in the bills of quantities.
- 12.3 The Director's Representative shall advise the Consultants of his approval or otherwise under **Clause 24 of the General Conditions of Employment** within 14 days of submission. The reasons for non-approval, which may include insufficiency of supporting information provided with the submission, will be provided to the Consultants at the same time. If, because of the need for consultation or referral elsewhere, the Director's Representative is unable to give his decision within the period stated then he shall inform the Consultants immediately and advise them of when he will give his decision. Provided that, in any case, a different period can be applied by mutual agreement.
- 12.4 Under **sub-clause (iii) of Clause 25 of the General Conditions of Employment**, the Consultants shall report all claims to the Director's Representative within 14 days of their receipt. The Director's Representative shall provide the views to the Consultants within 60 days of receipt of the Consultants' principles of assessment of a claim.
- 12.5 Under **sub-clause (iv) of Clause 25 of the General Conditions of Employment**, the Consultants shall report all delays to the Director's Representative within 14 days of the delay being identified. The Director's Representative shall provide the views to the Consultants within 28 days of receipt of the Consultants' assessment of extension of time.

13 Not Used

14 Director's Representative

- 14.1 The Director's Representative as defined in the General Conditions of Employment shall be the Assistant Director (Waste Infrastructure Planning) of the EPD or such other person as may be authorized by the Director in writing and notified to the Consultants. The Director's Representative may delegate any of the powers and functions vested in him to

other officers. If the Consultants are dissatisfied with a decision or instruction of any such officer the matter shall be referred to the Director's Representative for a ruling.

- 14.2 During the course of the Agreement, the Consultants shall report directly to the Director's Representative.

15 Control of the Project and Assignment

- 15.1 On commencement of the Assignment, the Consultants shall notify the Director's Representative the names of the Project Director and the Project Manager for the Assignment supplement with an organization chart of the project team.
- 15.2 The Assignment will be managed by a Project Steering Group and, if necessary, a Working Group formed within the Government. These Groups shall be the forum for liaison within Government bureau/ departments and agencies, providing guidance to the Consultants, and for comment and review on the work and outputs of the Assignment.
- 15.3 A Project Steering Group will be established under the chairmanship of the Director's Representative or his representative, and attended by the Consultants' Project Director and representatives of relevant Government bureau/ departments.
- 15.4 A Working Group will be set up and meeting will be held on as-needed basis to provide general and technical guidance to the Consultants and to facilitate the exchange of information. The Consultants shall attend these Working Group meetings as requested by the Director's Representative.
- 15.5 In addition to their duties under **Clause 13 of the General Conditions of Employment**, the Consultants' Project Director and other appropriate staff of the Consultants are expected to attend, serve or report to all Steering and Working Groups meetings as necessary during the Assignment period. The Consultants may be required to prepare minutes for the meetings stated in this Clause. Formal decisions and minutes of these meetings will be advised to the Consultants by the Director's Representative.

16 Information and Facilities Provided by the Employer

- 16.1 All available information relevant to the Assignment will be provided to the Consultants. Relevant documents including reports, drawings and other background materials are

listed at **Appendix D** to this Brief. The Consultants shall indicate for guidance those documents which they currently hold and those of which a copy may be needed, should the Assignment be awarded to them. A copy of each of the documents indicated will be arranged on loan from the Director's Representative, if available, on request from the Consultants except those currently available from the Publications Sales Section of the Information Services Department. In the case of plans and drawings, two prints of each plan or drawing shall be provided free of charge if requested by the Consultants.

- 16.2 No information collated by, or transferred to the Consultants for the purposes of this Assignment shall be released to any third party without the prior approval of the Director's Representative. The Consultants shall return all planning data, which has been obtained from Government departments in connection with the Assignment, to the Director's Representative after completion of the Assignment.

17 Consultants' Office and Staffing

- 17.1 The Consultants shall maintain for the duration of this Agreement an office in Hong Kong under the control of the Project Director of the Consultants who shall be responsible for the Assignment. Under the direction of and within the responsibilities delegated to him by the management of the Consultants, the Project Director shall be responsible for overall management of the study team of the Consultants, other professional, technical and administrative support staff involved, in all relevant disciplines and in connection with the Assignment, in order to ensure progress to the satisfactory of the Director's Representative.
- 17.2 The Consultants shall provide the staff and manpower input in accordance with the Technical Proposal which was submitted with the Consultants' tender for this Assignment, or the quarterly manpower input updates as stated in sub-clause 6 below if available. The Director's Representative shall have the right to check the time-log record of the Consultants' staff deployed for the Assignment.
- 17.3 If the Director's Representative considers that the performance of the Consultants is not satisfactory due to inadequate staffing and manpower input allocated to the Assignment, the Consultants shall, upon the request of the Director's Representative, forthwith submit to the Director's Representative the time-log record of the staff deployed for the Assignment for the Director's Representative to check against the Technical Proposal, or the quarterly manpower input updates as stated in sub-clause 6 below if available.

- 17.4 The Consultants' failure to adhere to their staffing proposal, in particular the employment of core personnel of the Consultants and their sub-consultants, thus causing an adverse impact on the performance of the Services, shall be duly reflected in the Employer's performance report on the Consultants.
- 17.5 If the Consultants are unable to maintain any of the core personnel specified in the Technical Proposal, the Consultants shall as soon as possible report this to the Director's Representative and propose, for the Director's Representative's approval, a revised personnel arrangement which is equivalent to or better than the existing personnel arrangement, in terms of qualifications, experience and competence.
- 17.6 The Consultants shall follow the relevant requirements stipulated in Development Bureau Technical Circular (Works) No. 5/2018 or its latest revision or replacement and submit to the Director's Representative quarterly updates on the manpower input deployed and/or to be deployed by the Consultants under the Assignment for checking and monitoring with the use of Public Works Consultants Resources Allocation Register (PWCRAR) in accordance with the relevant mechanism mentioned in the same technical circular. The Consultants shall provide clarifications on the manpower input to the Director's Representative upon request.
- 17.7 The Consultants agree that the quarterly updates as mentioned in sub-clause 6 above would be inputted into the PWCRAR for purposes as mentioned in the personal information collection statement to be sent to the Consultants with the templates for the quarterly updates, which shall include but not limited to the following:
- (a) activities relating to the management of the status of the Consultant under the List of Consultants (the List) under the purview of the Engineering and Associated Consultants Selection Board (EACSB) of the Government, including any regulating actions against the Consultant such as downgrading, suspension or removal from the List;
 - (b) activities relating to the award of consultancies including but not limited to the assessment of the Consultant's tenders for consultancies;
 - (c) activities relating to management of consultancies including but not limited to the monitoring of manpower resources provided and the assessment of Consultant's performance; and
 - (d) compilation of statistical report and diagnosis of problems with or concerning PWCRAR or the management of consultants to help the Government to improve.

18 Specialist and Sub-consultant Services

- 18.1 The Consultants shall provide all specialist and sub-consultant services required for the satisfactory completion of the Assignment. No additional fees or expenses for the provision of such services rendered locally or overseas shall be payable by the Employer except as otherwise provided for in the Schedule of Fees.
- 18.2 Without derogating from the generality of **Clause 38(i) of the General Conditions of Employment**, the Consultants shall, upon the award of this Agreement and save as otherwise agreed by the Director's Representative, appoint the sub-consultants as proposed in their Technical Proposal for the Assignment. The Director's Representative shall have the right to check the sub-consultancy agreements. If the Director's Representative considers that the performance of the Consultants is not satisfactory due to inadequate staffing and manpower input allocated to the Assignment, the Consultants shall, upon the request of the Director's Representative, forthwith submit to the Director's Representative a certified copy of any or all of the sub-consultancy agreements.

19 Surveys

- 19.1 Two prints of topographical mapping at 1:1000, 1:5000 and 1:20000 scales prepared by the Survey and Mapping Office of the Lands Department, where available for the area covered by the Project of which the Assignment forms a part, can be obtained free of charge on application to the Director's Representative.
- 19.2 The Consultants may apply for the supply of the series of Digital Map products from Lands Department for the exclusive use of this Assignment free of charge. Applications should be made to the Director's Representative by completing and submitting the form "Undertakings by Consultant/Contractor on the Use of Digital Map from Land Information Centre" (SMF-0096) together with a list of the Digital Map products required. The Consultants are required to provide the storage media for the supply of the Digital Map product files unless Lands Department advises the otherwise.
- 19.3 All the mapping information provided shall be for the exclusive use of this Assignment. In using the Digital Map products supplied by Lands Department, the Consultant shall abide by the terms and conditions as stipulated in the undertaking form. Upon completion of the Assignment, the Consultant shall destroy immediately the supplied Digital Map products and confirm the destruction to Lands Department by completing and returning the form "Confirmation by Government's Consultant/Contractor on the

Cessation of the Use of Digital Map from Land Information Centre” (SMF-0097) to the Director’s Representative within two weeks upon completion of the Assignment.

- 19.4 All the lot boundary information provided is for identification of approximate location of lot only and is subject to amendments by the Lands Department without prior notice. The Consultants shall refer to the District Survey Offices of the Lands Department for the most up-to-date lot boundary information.
- 19.5 The Consultants shall be responsible for verifying the accuracy and, where necessary, updating all survey and mapping information provided. Unless otherwise provided for in the Assignment, all field survey work required for the proper execution of the Assignment shall be the duty of the Consultants. A copy of field notes, field data and resultant plans arising from these surveys shall be handed over to the Director's Representative in hardcopy (paper, transparency and/ or microfilms) and MicroStation (DGN) file format upon completion of the Assignment. The accuracy as well as presentation of these surveys shall be of a standard agreed by the Director's Representative.
- 19.6 The Consultant shall be responsible for carrying out as-built surveys (including records of positions and levels on all underground pipelines, etc.) and submission of a set of as-built survey plans in both hardcopy and soft copy to the Director’s Representative. The as-built drawings shall be submitted upon phase completion of the Project. The Consultant shall be responsible for submitting survey information which was presented in an acceptable professional standard and in an appropriate scale specified by the Director’s Representative. A copy of field notes, field data and resultant plans arising from these surveys shall be handed over to the Director’s Representative in hardcopy (paper, transparency and/or microfilms) and digital format upon completion. The Consultants are responsible to rectify and re-submit the corrected set of as-built survey plans if errors were found in any survey audits by the Director’s Representative. After the Director’s Representative has accepted the survey results, the Consultants shall forward a set of the as-built survey plans in hardcopy and softcopy to the Land Information Centre of the Survey and Mapping Office of the Lands Department.
- 19.7 The Consultants shall be responsible for submitting drawing computer files which shall be delivered on compact disc in MicroStation (DGN) file format unless otherwise specified by the Director’s Representative. The survey drawings shall be in compliance with the CAD Standard for Works Project (CSWP) version 1.03.00 (or later versions as agreed by the Director’s Representative) as posted on the Development Bureau’s web-site and the Drafting Specification for Engineering Survey Rev 2.0 (or later versions as agreed

by the Director's Representative) as posted on Civil Engineering and Development Department's web-site.

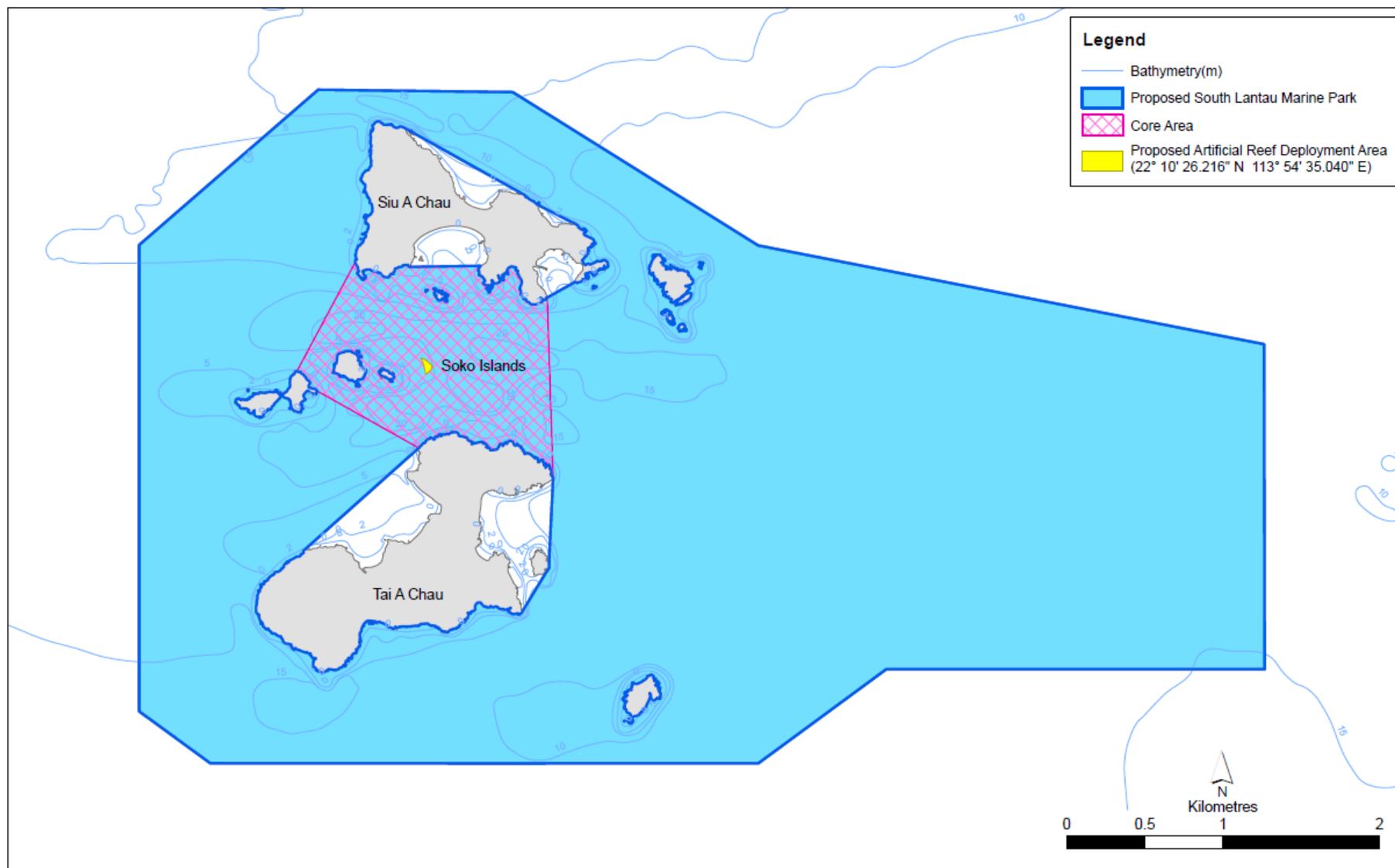
- 19.8 **Appendix E** specifies the division of responsibility for other surveying between the Consultants, the Lands Administration Office and Survey and Mapping Office as well as the relevant sub-offices at district level of the Lands Department.

20 Insurance

- 20.1 The amount of insurance cover to be maintained in accordance with **Clause SCE 12 of the Special Conditions of Employment** shall be HONG KONG Dollars _____ (*equal to the 2 x Lump Sum Fee, subject to a minimum of HK\$ 5 million and a maximum of HK\$ 75 million*).

--- End ---

Proposed Location for the Artificial Reefs Deployment



Guideline to Specialists Who Need to Conduct Inspection Visits outside Hong Kong

1. In the event that production activities in a works contract are undertaken outside Hong Kong, the supervisory staff conducting inspections on the production sites outside Hong Kong shall, to the best of their knowledge, declare to the Director's Representative for the Contract if the main contractor, the sub-contractor for the production activities, or any of their employees is his spouse, family member, or close relatives.
2. Such inspection visits shall also be subject to the approval of the Consultants. Where the Contractor makes arrangement for transportation, accommodation and entertainment including meals, such arrangement shall be agreed to by the Director's Representative for the Contract beforehand. Other than the agreed arrangement, supervisory staff shall not be allowed to receive any form of hospitality or entertainment from the Contractor during such inspection visits.
3. Should the supervisory staff incur reimbursement expenses in the course of inspection, all claims for reimbursement should all be made to the Consultants in accordance with the prevailing rules and regulations for such. The Consultants will in turn seek reimbursement from the contractor where applicable. Under no circumstances should all the staff seek reimbursement direct form the Contractor.

List of Documents Available for Reference

The following is a non-exhaustive list of documents relevant to the Assignment available for the Consultants' reference:

1. Environmental Impact Assessment (EIA) Report of *Development of the Integrated Waste Management Facilities Phase 1* (EIA Register No. : AEIAR-163/2012)
2. Environmental Permit for *Development of the Integrated Waste Management Facilities Phase 1* (Permit No. : FEP-01/429/2012/A)
3. Relevant deliverables under Agreement No. CE 14/2012 (EP) – Provision of Compensatory Marine Park for Integrated Waste Management Facilities at an Artificial Island near Shek Kwu Chau – Investigation

Responsibility for Survey Work

The division of responsibility among the Consultants, the Lands Administration Office, and the Survey and Mapping Office of the Lands Department for surveying required in connection with the Assignment shall be as follows :-

	<u>Task</u>	<u>Responsibility of</u>
(1)	(a) Provision of basic horizontal and vertical survey control	Survey and Mapping Office (Consultants to download from www.geodetic.gov.hk)
	(b) Checking of given control point values and establishment of survey control net-work(s) based on survey control given vide (a)	Consultants
(2)	(a) Provision of topographic map (at 1:1000 or other standard scales relevant to the Assignment)	Survey and Mapping Office (excluding those specified as to be provided by the Consultants in the Assignment)
	(b) Provision of available Digital Map products relevant to the Assignment	Land Information Centre, Survey and Mapping Office
	(c) Updating and verification of accuracy of information supplied vide (a) and (b) as necessary in relation to the Assignment	Consultants
	(d) Carrying out detailed surveys for site investigation and for preparation of design and contract documents as necessary in relation to the Assignment	Consultants
(3)	Supply of existing cadastral plans and records and co-ordinate data	District Survey Office

<u>Task</u>	<u>Responsibility of</u>
(4) Computation of detailed dimensioned layouts of roads, drainage and waterworks reserves, platforms, etc.	Consultants (checked and accepted by District Survey Office)
(5) Determination of site/lot boundaries, calculation of areas, etc. in connection with the agreed dimensioned layouts	District Survey Office (in liaison with District Lands Office)
(6) (a) Processing of resumption and surrender for privately owned land in Development Area	District Lands Office (in liaison with District Survey Office and Consultants)
(b) Resumption and surrender plans and demarcation of lands to be resumed	District Survey Office (in liaison with District Lands Office and Consultants)
(7) (a) Setting-out of roads, drainage works, formation areas, etc.	Contractors (checked and accepted by Consultants, usually by resident site staff under their supervision.)
(b) Initial site survey, and interim and final payment surveys	Consultants, usually by resident site staff under their supervision (joint survey with contractors or agreed survey with contractors)
(8) Preparation of proposal plans for Government land allocations and other land grants relevant to the Assignment	District Survey Office (in liaison with District Lands Office)
(9) Preparation of dimensioned plans and setting out of boundaries of sites and lots for Government land allocation and other land grants relevant to the Assignment	District Survey Office
(10) As-built surveys (including records of positions and levels on all underground pipelines, etc.)	Consultants, usually by resident site staff under their supervision

Task

Responsibility of

(11) Supply a set of as-built survey plans in both hardcopy and softcopy to the Land Information Centre of the Survey and Mapping Office of the Lands Department

Consultants, usually by resident site staff under their supervision