



**Contract No. EP/SP/66/12**

**Integrated Waste Management Facilities, Phase 1**

## Appendix C

Curriculum Vitae (CV) of ET's Environmental Experts

## Project Director (CV 1)

Name: Ir Dr LAM, Chun Kong Gabriel

Nationality: Chinese

Capability: Environmental Assessment and Management, Pollution Control and Prevention, Environmental Monitoring, Audit and Training, Energy and Power Engineering

Country Experience: Hong Kong S.A.R., Macao S.A.R. China, United Kingdom, Australia, Indonesia, Thailand, Malaysia, Singapore

Language: Chinese (Cantonese): Mother Tongue; Chinese (Putonghua): Fluent; English: Fluent

### **KEY EXPERIENCES**

Dr Lam has over thirty years of experiences in environmental and energy engineering work, with direct hands-on experiences in the managing of environmental issues for a large power utility company in Hong Kong.

He has specific expertise in environmental monitoring & audit and environmental impact assessment (EIA) of large-scale engineering and construction work including ecological impact assessment from inception, technical assessment through liaison with government officials and consultations with public groups and government consultative bodies to final approval. His past achievements also include the development of the first continuous air quality monitoring network in Hong Kong, the first territorial wide saturation monitoring for fine suspended particulate in Hong Kong, the Lamma Power noise alarm System which was likely to be the first of its kind in the world, the selection and commissioning of the first utility boiler flue gas desulphurization system and its associated continuous emission monitoring system in Hong Kong, successful environmental audits and indoor air quality assessments of various facilities local, China and abroad. He has successfully completed his mission as Team Leader of an international team of experts commissioned by the Asian Development Bank for environmental evaluation of the Mae Moh Power Plant and Mine in Thailand. He has also served as Environmental Team Leader and Independent Environmental Checker for a number of prestigious projects for BEAM and EIA Ordinance compliances.

He has also extensive experiences in the operation, efficiency monitoring, mechanical design & research of power plant equipment and undertaken researches and projects in renewable energy, energy recovery from waste, energy and carbon audits, environmental protection and thermo-fluids. He is the originator of the well-known low Reynolds number two-equation turbulence model in computational fluid dynamics analysis.

His work on cold meat thawing was granted a utility model patent (no. 820431) issued by the State Intellectual Property Office of The Peoples' Republic of China in 2006, and his work on seawater scrubbing was granted Hong Kong short-term patent (no. HK1170108).

He is an ex-Council Member of The Hong Kong Institution of Engineers and ex-Chairman of Environmental Engineering Discipline of the Institution.

### **EDUCATIONAL & PROFESSIONAL QUALIFICATIONS**

PhD Degree in the subject of turbulence modelling, University of Queensland, Australia.

MSc Degree in the subject of thermodynamics & fluid mechanics, University of Manchester, Institute of Science & Technology, U.K

Fellow, The Hong Kong Institution of Engineers, Hong Kong

Fellow, Hong Kong Institute of Acoustics, Hong Kong

Registered Professional Engineer (Environmental & Mechanical), Hong Kong

Qualified Service Provider for Energy-cum-carbon Audit Projects under the Buildings Energy Efficiency Funding Schemes, Hong Kong

Registered Energy Assessor under the Buildings Energy Efficiency (Registered Energy Assessors) Regulation (Cap. 610B)

Corporate Member, Institution of Mechanical Engineers, U.K.

Certificate of Competency for operation of steam boilers and steam receivers, Labour Department, Hong Kong.

### **PROFESSIONAL SERVICES**

<b>Institution</b>	<b>Nature</b>	<b>Period</b>
Institute of Acoustics, U.K. (Hong Kong Branch) & Hong Kong Institute of Acoustics	Various study groups & sub-committees including Product Noise Regulation Study Group and Noise At Work Regulation, Noise Descriptors & Harmonization	April - December 1992, February 2001
Hong Kong Institution of Engineers	Visit Secretary/Assistant Secretary/Committee Member of the Environmental Division	May 1993 – June 1999
	Council Member	July 2005 – June 2007
	Various positions from member to Chairman of the Environmental Engineering Discipline Advisory Panel	June 1995 – June 2009
Engineers Registration Board	Board Member for registration of professional engineers in Hong Kong	September 2006 – September 2010

**EMPLOYMENT HISTORY**

<b>Employer</b>	<b>Title</b>	<b>Period</b>
The Hongkong Electric Co., Ltd.	Assistant Engineer (Operations)	Aug. 1972 - Oct. 1974
C.A. Parsons & Co., Ltd, U.K.	Research Engineer	Dec. 1975 - June 1977
The Hongkong Electric Co., Ltd.	Power Plant Services Engineer	July 1980 - Dec. 1982
The Hongkong Electric Co., Ltd.	Environmental Engineer / Senior Environmental Engineer	Jan. 1983 - Aug. 1995
Ashdown Environmental (Asia)	Technical Director	Sep. 1995 - Feb. 1996
Linfair Holdings Ltd. (Stock Code: 462)	Independent Non-Executive Director	August 2004 – March 2008
Nature Technologies / Nature & Technologies (HK) Ltd	Director	March 1996 till date
The Hong Kong University of Science & Technology	Lecturer (part-time) in the subject of Energy Management in Buildings for MSc Degree	2005 and 2007
The Hong Kong Polytechnic University	Visiting Lecturer (part-time) in the Department of Civil and Structural Engineering	September – December 2006
Cheong Ming Holdings Ltd. / Cheong Ming Investments Limited (Stock Code: 1196)	Independent Non-Executive Director	December 1996 – July 2014
Global Opto Technology Development Ltd.	Independent Energy Consultant	May 2010 – March 2014
The University of Hong Kong	Adjunct Associate Professor (part-time), Lecturer (part-time), part-time researcher on energy and carbon management, and air pollution control	1994 – 1996, 2004, 2006, 2008 till date

## **WORKING EXPERIENCES**

1. Environmental work experience
  - 1.1 Environmental impact assessment & planning
    - Coal-firing and gas turbine electricity generating units with a capacity of over 3200 MW
    - Navigation channel & jetty modification to allow the berthing of Cape size vessels
    - Electrical substations with capacity up to 800 MVA & 275 KV
    - Transmission cable project totalling to 30 km of roads and tunnels
    - Independent technical review of the Environmental Impact Assessment for Route 10 – North Lantau to Yuen Long Highway, Hong Kong Special Administrative Region
    - Environmental assessment and review of traffic air and noise impacts to property and road development
    - Environmental evaluation of Mae Moh Power Plant and Lignite Coal Mines in Thailand, serving as Team Leader of a team of international experts
    - Independent review of air pollution control for diesel electricity generating units of Macau Power Station
    - Air quality and odour modelling for Lamma Power Station, To Kwa Wam Gas Production Plant, various crematoria and stone crushing plants.
    - Environmental assessment for effluent reuse in food factory development
  - 1.2 Environmental Consents & Permitting
    - Specified Processes licensing and small furnace installation approval under Air Pollution Control Ordinance of Hong Kong
    - Effluent Discharge Consents and licensing under Water Pollution Control Ordinance of Hong Kong
    - Chemical Waste Registration and disposal licensing under Waste Disposal Ordinance of Hong Kong
    - Permit application for construction works and construction equipment under Noise Control Ordinance of Hong Kong
    - Environmental Permit application under the Environmental Impact Assessment Ordinance
  - 1.3 Air Quality & Pollution Source Sampling Services
    - Ambient continuous air quality monitoring network, mobile air quality monitoring station and source emission monitoring system design, development, maintenance and operation for power stations for Hong Kong and Macau
    - Territorial wide survey of respirable and fine suspended particulate and nitrogen dioxide for Hong Kong by saturation monitoring and diffusion tubes
    - Air quality dispersion numerical and wind tunnel modelling studies for power plants, gas production plants, crematoria, ammonia plants, construction sites

Analysis of power station operation air quality impact from source and ambient environmental monitoring data

Flue gas sampling to U.S.E.P.A. and JIS Reference Methods for boilers, gas turbines, gas production and chemical plants

Indoor air quality survey and certification for bank, cinema and museum offices, restaurants and academic institutions.

#### 1.4 Noise Control & Planning

Continuous noise monitoring network and mobile noise monitoring station design, development and operation

Noise propagation mathematical modeling for power station and property development

Acoustic design, specification and testing of electrical substations, chiller plants, motors, fans, pumps, and power plant equipment, roadside noise barriers

Materials acoustic performance laboratory testing

Power Station noise alarm system development, maintenance and operation

Noise surveys and noise impact assessment of power station in-plant equipment and electricity transmission and distribution substations

Improvement work for Golden Lady (a local cafe) to meet requirements of Noise Abatement Notice No. N798015 from Government

Territorial-wide survey of background noise levels and traffic noise in Hong Kong

Review of train noise prediction models

Noise monitoring and control of Catholic Mass proceeding at the Hong Kong Stadium for the Diocesan Office for Laity Formation

#### 1.5 Waste Handling Studies

Ash management strategy study for 30 years of coal-fired power generation

Gypsum management strategy study for flue gas desulphurization facilities for coal-fired steam boilers with a total heat input of 3000 MW

Ash audit submission to Government and routine monitoring of waste quantities movement

Waste reuse and disposal arrangement for mineral oil, asbestos, transformers, generation and transmission facilities

Analysis of prospects of energy recovery of scrap tyre in Hong Kong

Preparation of waste management plans for construction sites

#### 1.6 Effluent Management

Feasibility study of upgrading effluent management system for existing 1800 MW coal-fired generating units to meet stringent Hong Kong Effluent Technical Memorandum

Design of a zero discharge effluent management scheme and environmental review of an alternative effluent management scheme for ash handling facilities and flue gas desulphurization plants waste water for coal-fired generating units amounting to a total capacity of over 1000 MW

Development of effluent management scheme for construction works of area up to 60,000 m<sup>2</sup>

Development of effluent monitoring programme for trade effluent and sewage discharges from power station, electrical substation, construction works and commercial premises of quantity up to 9 million m<sup>3</sup>/day flow quantity

Design study, commissioning effluent testing and operation manual preparation for Hung Shing Ye Beach building sewage treatment plant

Current and temperature surveys of marine waters covering an area of up to 40km<sup>2</sup>

Marine monitoring and bioaccumulation experiments for ash lagoon operation

1.7 Pollution control equipment/process selection, design and testing

Selection, specifications and acceptance performance testing of flue gas desulphurization process for large coal-firing electricity generating units

Specifications and testing of low NO<sub>x</sub> burners for large coal-fired utility boilers and NO<sub>x</sub> reduction water injection system for large gas turbine electricity generating units

Electrostatic precipitator performance enhancement options comparison

Fugitive dust emission control design for open storage coal stockpile of up to 0.5 million tons capacity

Selection of bottom ash handling system with ash handling water recycling facilities for 2 x 350 MW coal-fired generating unit

Method selection, conceptual design & testing for coastal power station cooling water discharge foam suppression system

Food factory waste water treatment plant and treated water reuse equipment specification, tendering and final acceptance testing

1.8 Energy/Carbon/Environmental Management Studies

Study on the potential applications of new and renewable energy for Hong Kong for Government Electrical & Mechanical Services Department

Power generation and interconnection feasibility study for the proposed Waste-to-Energy Incineration Facility by Hong Kong Government

Research on hydrogen generation, storage and energy conversion

Carbon and energy audits for catering facilities, food production factory and Hong Kong Institute of Education, various building properties, e.g. Dawning Views, Grand Promenade, Metrocity, Granville Garden, La Cite Noble, Citiplaza, Wheelock House, Whampoa Garden, etc.

Application for registration under The Hong Kong Energy Efficiency Registration Scheme for buildings for compliance with the Building Energy Codes and conduct of Energy-carbon-cum projects under the HKSAR Building Energy Efficiency Funding Schemes for St Jude's Church and various residential estates and commercial properties, e.g. Gateway, Grand Waterfront, King's Park Hill, Dawning Views, Grand Promenade, Metrocity, Granville Garden, La Cite Noble, Citiplaza, Wheelock House, Whampoa Garden, etc.

Design and built of a solar-powered wind monitoring system for engine testing facility at Chek Lap Kok

Design and built of a solar and wind power system for street lights, Display Board and fountain pump for a school in Cheung Chau

Energy options evaluation for a new food factory at Tai Po Industrial Estate

Selection of optimum electricity tariff for a number of catering facilities

Evaluation of energy savings at the Laundry and Dry Cleaning factory of Maxim's Caterer's Ltd. at Chai Wan

Preparation of environmental management plan for electrical and mechanical contractor, construction contractor and catering facility.

#### 1.9 EHS Audits, Environmental Team Leader, Independent Checker and Expert Witness

Environmental Team Leader (ETL) or Independent Environmental Checker (IEC) for the environmental monitoring & audit meeting environmental permit requirements of the Environmental Impact Assessment Ordinance for various clients:

- Construction of 132 KV Overhead Pole line and underground cable from Po Lam to Tui Min Hoi S/S - Circuit No.2 for CLP Power Hong Kong Ltd (Permit No. EP-050/2000)
- Excavation, piling and foundation work for the development of the Former Marine Police Headquarters in 2004 for Konwall Construction & Eng Co., Ltd (Permit No. EP-184/2004)
- Superstructure furnishing and Infrastructure furnishing for the development of the Former Marine Police Headquarters for Hien Lee Engineering Co Ltd (Permit No. EP-184/2004)
- Dredging work for navigation channel improvement at Lamma Power Station by The Hongkong Electric Co., Ltd. (Permit No. EP-165/2003 and subsequent variation)
- Operation of the Lamma Power Station GT57 combined cycle electricity generating unit by The Hongkong Electric Co., Ltd. (Permit No. EP-083/2000 and subsequent variations)
- Operation of the Lamma Power Station Extension gas-fired electricity generating units by The Hongkong Electric Co., Ltd. (EP-071/2000 and its variations)
- Decommissioning and Decontamination Works For the South Apron of the Former Kai Tak Airport for Maunsell Consultants Asia Ltd (Permit No. EP-285/2008)
- Decommissioning of the Remaining Parts (Ex-GFS Building and Radar Station) of the Former Kai Tak Airport for AECOM Asia Co. Ltd. (Permit No. EP-339/2009/A)
- Comprehensive Development at Yau Tong Bay in 2009 – 2015 by Main Wealth Development Limited (Permit No. EP-152/2003)
- Extension of the Convention and Exhibition Centre in 2006 – 2007 by Trade Development Council (Permit



No. EP-239/2006 and its variation)

- In-situ reprovisioning of Sha Tin Water Treatment Works (South Works) Advance Works for Water Supplies Department (Permit No. 494-2015)

Environmental team leader and specialist for over 50 property developments for HK BEAM and BEAM PLUS compliance.

IEC for government projects meeting requirements of Preliminary Environmental Reviews for construction of Cycle Parking Area at Yung Shue Wan (2015 – 2016) and for reconstruction of the Sharp Island Pier (2017 to date) by Civil Engineering and Development Department.

Verifier for independent verification of emission data for Lamma Power Station

Preparation of environmental audit manual and actual site environmental audits for Lamma Power Station coal-fired generating units and ash lagoon construction/operations.

Environmental management system review and gap analysis to ISO 14000 for Lamma Power Station 2 x 350MW coal-fired generating units.

Specialist support to ISO14001 certification audit for CLP Power System Business Group and Companhia de Electricidade de Macau-CEM (Macau Electric Co.)

Environmental review for the design office and construction works supervision for Binnie Black & Veatch HK Ltd., West Rail and a garment factory in Macau.

Support for independent verification of Environmental Report of Government Electrical & Mechanical Maintenance Service

Environmental audit for landfill site operation at Fanling

Technical advices to environmental audit for power plants in Hefei, Jiaozhou and Wuhu.

Environmental audit for Meizhou Wan Power Station in Putien of Fuzhou.

Independent review of air emission control for Coloane Power Station of Macau SAR.

EHS audit of printed circuit board and disk drive assembly facilities in Indonesia and Malaysia for Seagate Technology International.

EHS audit of manufacturing facilities for products of household cleaning, personal care and insect control for Shanghai Johnson Ltd. in Shanghai

Noise abatement design independent checker for Sheung Shui Slaughter House project.

Independent assessment of noise control design by equipment manufacturers for gas-fired combined cycle plants

Expert witness in defending successfully against a high court noise complaint case (H.C. Action No. A5214 of 1997) on water pump noise

Expert witness in Magistrate's Court in defending against an air pollution abatement notice on objectionable odour from a catering facility

1.10 Environmental and Energy Management Training

Training for general industrial representatives, a one-day training carried out twice for the Hong Kong Management Association on industrial pollution in July 1986 and August 1991.

Environmental Awareness Continuing Professional Training for young engineers, a half-day training carried out twice for The Hong Kong Institution of Engineers in April & June, 1995.

Continuing Professional Development Course in Environmental Engineering for Scheme "A" graduate trainees of The Hong Kong Institution of Engineers, a three days training carried out for The Hongkong Electric Co., Ltd. in May 1995.

Environmental Training for power plant operation engineers, a four half-day training for each operation shift in July 1995 on how to protect the environment in power plant operation.

Continuing Professional Development Course to meet training requirements of The Hong Kong Institution of Engineers in Environmental & Related Technological Matters, a one-day training on ISO14001 and Environmental Impact Assessment organized jointly with The University of Hong Kong School of Professional And Continuing Education in February and June 1997.

Environmental Management Training for the Construction Sector, held twice with PE Handley-Walker in July and October 1999, and May 2000.

Environmental Training for 600 staffs Maxim's Caterers Ltd. in October 1999,

Environmental management system implementation training course for Housing Authority in 2001.

Environmental life cycle assessment ISO14040 1-day course organized jointly with The University of Hong Kong School of Professional And Continuing Education in February 2003.

ISO14064 audit on job training for CMA Testing and Certification Laboratories, March – August 2014.

1.11 Asbestos & Site Decontamination Work

Independent Environmental Auditor for Yau Tong Bay – Decommissioning of Shipyard Sites

Independent quality assurance checking of sample analysis results for Cheoy Lee Shipyard Phase II site decontamination/remediation work at Penny's Bay

Independent environmental checker for the decommissioning and decontamination works at south apron of the former Kai Tak Airport

Successful coordination of removal/remediation work for 995 MW oil-fired electricity generating units suitable for subsequent residential development of the South Horizons

Asbestos investigation report, management & operation plan and abatement for asbestos containing materials in electrical substations and residential electrical riser mains

Specialist adviser to company strategy on air pollution and waste handling of asbestos containing materials

1.12 Radiation Work

Technical support for handling of public concerns on possible radiation from coal and ash handling in modern coal-fired power station

Study on the radiation aspects in the use of pulverized fuel ash in building materials

Study of indoor radon in private dwelling

Study on office workers safety due electromagnetic radiation from transmission antenna in Tai Po

2. Other engineering work experiences include

2.1 Mechanical performance monitoring and routine efficiency testing of oil-fired power generating units and its auxiliary equipment.

2.2 Power plant equipment mechanical specification, design options evaluation and flow system reviews

2.3 Shop inspection of power plant equipment at manufacturers' works for new coal-fired power station

2.4 Efficient and reliable operation of electricity generating units and their auxiliary equipment

2.5 Design optimization of radial fan design to increase ventilation flow through turbogenerator windings

2.6 Model and full scale test on axial and centrifugal fan performances

2.7 Feasibility analysis of power generation from possible waste-to-energy incineration plant at four potential sites for HKSAR

2.8 Specification and tender evaluation for fuel supply, fuel pumping and storage system for Tai Po food factory

2.9 Model scale test and computational fluid simulation for improvement of turbogenerator winding temperature and flow distribution.

2.10 Air ventilation studies/computational fluid dynamics analysis for carpark and casino ventilations, condenser cooling water system and ash slurry flow surges, two phase flow in kitchen wastewater grease trap discharge

## **PUBLICATIONS**

C.K.G. Lam "Development of a Centrifugal Compressor One-Dimensional Optimization Program." *MSc Dissertation*, University of Manchester Institute of Science & Technology, October 1974.

C.K.G. Lam "Models for Isothermal and Non-Isothermal Wall Turbulence and Their Application to Fully Developed Pipe Flow in The Presence of a Ring Type Turbulence Promoter." *PhD Thesis*, University of Queensland, June 1980.

C.K.G. Lam & K Bremhorst "Prediction of Turbulent Heat Fluxes and Temperature Fluctuations." *Letters in Heat and Mass Transfer Journal*, Vol. 6, 1979.

C.K.G. Lam & K. Bremhorst "A Modified Form of The k- $\epsilon$  Model for Predicting Wall Turbulence." *Journal of Fluids Engineering*, Vol. 103, 1981.

Gabriel C.K. Lam "The Hong Kong Electric Experience - Productivity Integrated with Careful Consideration to Ensure Life Quality Improvement." *Green Productivity* September 1988. Hong Kong Productivity Council.

Andrew H.P. Lau & Gabriel C.K. Lam "Inequality Relationship for Validation of Data Collected by Automatic Continuous Sound Level Analyzers." *The Journal of Applied Acoustics*, vol. 28, 1989.

Gabriel C.K. Lam "Unsteady Tall Stack Dispersion of Chimney Emissions and Its Application to Varying Wind Directions." *Journal of Air & Waste Management Association*, Vol. 42, 1992.

Gabriel C.K. Lam "Noise Abatement of Existing Electrical Zone Substations in Stringent Hong Kong Environment." *Proceeding of the 9th Conference on the Electric Power Supply Industry 5*, November 1992.

Gabriel C.K. Lam "The Nature's Laws on Environmental Protection and Their Implications on Sustainability." *Green Productivity*, Hong Kong Productivity Council, No. 2, 1992.

Gabriel C.K. Lam & Dennis Y.C. Leung "The dependence of NO<sub>x</sub> emissions on coal & operating parameters in large coal-fired boilers", *Conference on Environmental & Related Materials Technology, Asian Industrial Technology Congress '93*, Hong Kong, 21st - 22nd May 1993.

Dennis Y.C. Leung & Gabriel C.K. Lam "Development of a Coal Stockpile Dust Suppression System", *The International Journal of Bulk Solids Handling*, Vol. 13, No.3, September 1993.

Dennis Y.C. Leung, Gabriel C.K. Lam & Gary C.K. Chang "Flue Gas Desulphurization Process Selection for Lamma Power Station L7/L8", *Hong Kong Engineer*, The Journal of The Hong Kong Institution of Engineers, Vol. 21, No. 9, September 1993.

Gabriel C.K. Lam & Raymond Fong "New Trends in Energy Management - Report on APO Study Meeting in Japan with Emphasis on Non-conventional power generation technology", *Green Productivity*, Hong Kong Productivity Council, No. 4, 1994.

Gabriel C.K. Lam "Advanced Continuous Noise Surveillance for a Modern Coal-fired Power Station", *Conference Proceedings, Polmet '94 Pollution in the Metropolitan and Urban Environment, Beijing*, November 1994.

Dennis Y.C. Leung & Gabriel C.K. Lam "Prospects for energy recovery from scrap tyres in Hong Kong", *Proceedings of the 3rd Asian-Pacific International Symposium on Combustion and Energy Utilization*, Hong Kong, December 1995.

G.C.K. Lam, D.Y.C. Leung, M. Niewiadomski, S.W. Pang, A.W.F. Lee and P.K.K. Louie, "Street-level concentrations of nitrogen dioxide and suspended particulate matter in Hong Kong", *Atmospheric Environment*, Vol. 33, No.1, 1999.

Gabriel C K Lam and Chris Yau, "EIA or ISO 14001? How About Both?", *Asia Engineer*, The Journal of The Hong Kong Institution of Engineers, June 2000.

To, W M., Ip, C.W.R., Lam, G.C.K. and Yau, T.H.C., "A Multiple Regression Model for Urban Traffic Noise in Hong Kong", *Journal of the Acoustical Society of America.*, August 2002.

Gabriel C.K. Lam, H F Chan, N. Preston and James Tam, "Use of chlorine based disinfectant in building sewerage systems", *Conference Proceedings, Polmet 2003 Pollution in the Metropolitan and Urban Environment, Hong Kong*, November 2003.

Wat, SF, Lam, Benjamin Y B & Gabriel C.K. Lam "Treating wastewater from Hong Kong's Catering Industry", *Hong Kong Engineer*, The Journal of The Hong Kong Institution of Engineers, Vol. 33, No. 1, January 2005.

Leung, M K H, Leung, D Y C, Ching, M W H, & Lam, G C K "Environmental-Friendly Cold water Thawing Practice", *ISBN: 962-85138-1-8*, December 2004.

Leung, M K H, Ching, W H, Leung, D Y C & Lam G C K "Theoretical study of heat transfer with moving phase-change interface in thawing of frozen food", *J. Phys. D: Appl. Phys.*, Vol. 38, 2005 pp.477-482.

Leung, M, Ching, W H, Leung, D Y C & Lam G C K "Fluid dynamics and heat transfer in cold water thawing", *Journal of Food Engineering*, Vol. 78, 2007 pp.1221-1227 .

Gabriel C K Lam "Wind energy conversion efficiency limit", *Wind Engineering*, Vol. 30, No. 5, December 2006.

Leung, M K H, Leung, D Y C, Chan, A H S, Cheng, D M, Shek, T, Lam G C K , Cheng, S W K, Koo, B C P, Deng Yun, "Carbon Audit Toolkit for Small and Medium Enterprises in Hong Kong", *The University of Hong Kong.*, ISBN: 978-962-85138-7-1, February 2010.

Gabriel C K Lam, "公教信仰與科學下的環保及先知態度", 神思 Spirit, A Review for Theology and Spirituality, Xavier Publishing Association Co., Ltd., Issue No.94, August 2012, in Chinese

Leung, D.Y.C. & Lam, G.C.K., "An efficient water scrubbing device with NOx reduction for marine applications", In *Environment, Energy and Applied Technology*, CRC Press Inc., ISBN 9781138026919 - CAT# K24369, January 2015, pp. 493-497

## **Project Manager (CV 2)**

Name: Mr. LI, W. M. Kevin  
Nationality: Chinese  
Experience: 15+ years  
Country: Hong Kong S.A.R., Macao S.A.R., China  
Language: Chinese (Cantonese): Mother Tongue; Chinese (Putonghua): Fluent; English: Fluent

### **MY EXPERIENCES**

Mr. Li has been actively involved in various projects of environmental consultancy and monitoring, environmental management and assessment, environmental monitoring and audit (EM&A), Independent Environmental Checker, land contamination and sediment quality assessment, indoor environmental quality assessment e.g. Indoor Air, acoustics and asbestos investigation, management and supervision for more than 10 years. Mr. Li has been environmental team leader or independent environmental checker of the EM&A projects for various Main Contacts for Airport Authority (AA) and Governmental Departments in Hong Kong. He is also a qualified Marine Mammal observer to carry out monitoring of Chinese White Dolphins during construction under AA Work Contracts and audit the implementation of land based ecological mitigation measures works for various EM&A projects. He has undergone extensive training and gained the practical experience in environmental management and engineering through the exposures to various aspects of the environmental monitoring and audit works, environment impact assessment, land contamination assessment and process infrastructure engineering.

### **EDUCATIONAL & PROFESSIONAL QUALIFICATIONS**

- Master of Philosophy, the Hong Kong Polytechnic University, Hong Kong
- Bachelor of Engineering (Honour) in Environmental Engineering, the Hong Kong Polytechnic University, Hong Kong.
- BEAM Professional under the Accreditation of Hong Kong Green Building Council (HKGBC) (BEAM Pro No.: BP2011-0586).
- Registered Asbestos Consultant under the register of Environmental Protection Department (EPD).
- Energy Institute Hong Kong Certificate on Energy Audit for Building Energy Efficiency.
- Certificate of the Hong Kong Productivity Council on ISO 50001 Energy Management System.
- Certificates of the Hong Kong Institute of Acoustics on Noise Control and Road Traffic Noise Measurement
- Certificate of Attainment on Occupational Safety and Health in Industrial Undertakings issued by the Hong Kong Polytechnic University.
- Occupational Safety & Health Council Certificate for Safety and Health Supervisor (Construction).
- Occupational Safety & Health Council Certificate in Asbestos Management.

### **PROFESSIONAL EXPERIENCES**

#### **Environmental Impact Assessment & Management**

- Project Manager for Environmental Assessment for Application of a Direct Environmental Permit for Agreement No. CE53/2014 (GE) Landslip Prevention and Mitigation Programme 2014, Package J Landslip Prevention and Mitigation Works and Provision of Emergency Works Services for Natural Terrain Landslides Occurring in Hong Kong Island East – Investigation, Design and Construction
- Project Manager for Preparation of a Project Profile for Application of a Direct Environmental Permit for Landslip Prevention and Mitigation Works at Study Area 11NE-B/SA3 at Razor Hill, Sai Kung
- Project Manager for Environmental Assessment for Application of a Direct Environmental Permit for Agreement No. CE26/2011 (GE) Landslip Prevention and Mitigation Programme 2011, Package H, Natural Terrain Hazard Mitigation Works - Investigation, Design and Construction.

- Project Manager for Environmental Assessment for Section 16 Application for Proposed Residential Development in D.D. 92, Yin Kong Village, Kwu Tung North, N.T.
- Project Manager for Environmental Assessment for Proposed Residential Development at Various Lots in D.D.181, Pak Tin Village, Shatin, N.T.
- Project Manager for Traffic Noise Impact Assessment and Independent Environmental Monitoring and Audit Works for the Proposed Residential Development at No. 9 Shouson Hill Road.

**Environmental Monitoring and Audit Team Leader or Independent Environmental Checker (IEC)**

- Environmental, Marine Water and Mammal Monitoring for AA Contract 3203 Deep Cement Mixing Works for Three Runway System Project of Airport Authority;
- Environmental, Marine Water and Mammal Monitoring for AA Contract 3204 Deep Cement Mixing Works for Three Runway System Project of Airport Authority;
- Environmental, Marine Water and Mammal Monitoring for AA Contract 3206 Main Reclamation for Three Runway System Project of Airport Authority;
- Environmental, Marine Water and Mammal Monitoring for AA Contract P550 - Water Quality Monitoring for Marine Site Investigation Works in Contaminated Mud Pits in Sha Chau
- Contract No. EP/SP/58/08 Environmental Team for Environmental Monitoring and Auditing for Construction of Sludge Treatment Facilities in Nim Wan, Tuen Mun;
- Contract No. KLN/2016/05 – Independent Environmental Checker for Contract No. KL/2015/02 – Kai Tak Development – Stage 5A Infrastructure at Former North Apron Area;
- Contract No. KLN/2015/07 – Environmental Monitoring Works for Contact No. KL/2014/03 – Kai Tak; Development – Stage 3 Infrastructure Works for Developments at the Southern Part of the Former Runway: Deputy;
- Agreement No. CE21/2014(EP) - Environmental Monitoring and Audit (EM&A) for Operation of Tai Po Sewage Treatment Works Stage 5 Phase 2B – Investigation;
- Contract No. DC/2014/01- Environmental Monitoring and Audit (EM&A) Services for Castle Peak Road Trunk Sewer and Tuen Mun Village Sewerage;
- Contract No.SSC504 - Provision of Environmental Measures Design and Construction of New Territories West Regional Office and Water Resources Education Centre of Water Supplies Department;
- Agreement No. CE 22/2006 (HY) Cycle Tracks Connecting North West New Territories with North East New Territories – Investigation, Design and Construction Contract No. YL/2013/01 (Cycle Tracks from Tuen Mun to Sheung Shui – Stage 1);
- Contract No. CV/2013/04 Dredging Works in Kwai Tsing Container Basin and its Approach Channel;
- Independent Environmental Checker for Agreement No. CE 19/2009 - Dredging Works for Proposed Cruise Terminal in Kai Tak: Deputy IEC for the Construction Monitoring Works of Kai Tak Cruise Terminal Project for the Contract No. CE 19/2009;
- Independent Environmental Checker for Contract No. PW3/2016 Signature Project Scheme Sai Kung District Reconstruction of the Sharp Island Pier for CEDD;



## Marine Mammal Specialist (CV3)

Name: Dr. Hung Ka Yiu, Samuel

### ACADEMIC HISTORY

*Doctor of Philosophy in Division of Ecology & Biodiversity, School of Biological Sciences (2001-2008),*

University of Hong Kong, Hong Kong

Thesis Title: Habitat use of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong (Supervisors: Prof. D. Dudgeon & Dr. T.A. Jefferson; External Examiner: Prof. B. Würsig)

*Master of Science in Marine Science (1997-2000), University of San Diego, California, U.S.A.*

Thesis Title: Ranging patterns of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary, People's Republic of China (Supervisors: Prof. H. Ellis, Dr. T. A. Jefferson and Dr. B. Stewart)

*Bachelor of Arts in Biology (1992-1996), Point Loma Nazarene University, California, U.S.A.*

### PROFESSIONAL AFFILIATIONS & MEMBERSHIPS

Hong Kong Dolphin Conservation Society (Founder & Academic Advisor; Former Chairman (2003-2016))

*FormosaCetus* Research and Conservation Group (Research Associate)

Eastern Taiwan Strait *Sousa* Technical Advisory Working Group (Member)

Society of Hong Kong Nature Explorers (Executive Director & Founding Member)

### SPECIALIZED SKILLS

- Experienced in shipboard and helicopter marine mammal survey techniques, photo-identification technique, marine mammal dissection, underwater acoustic recording, passive acoustic monitoring, and shore-based theodolite tracking of marine mammals.
- Experienced in using specialized computer programs including GIS (*ArcView*® 3.1 and Animal Movement Extension), *Distance* 6.1, *Pythagoras*, *CPOD.exe*, and *EndNote*® 3.1

### MAJOR FUNDINGS ACQUIRED

- 2011-18** Agriculture, Fisheries and Conservation Department of Hong Kong SAR Government “Monitoring of Marine Mammals in Hong Kong Waters”
- 2017-18** Agriculture, Fisheries and Conservation Department of Hong Kong SAR Government  
“Provision of Services for Passive Acoustic Monitoring of Chinese White Dolphins within The Sha Chau and Lung Kwu Chau Marine Park and The Brothers Marine Park”
- 2011-12** Highways Department of Hong Kong SAR Government  
“Advanced and Baseline Chinese White Dolphin Monitoring for Hong Kong-Zhuhai-Macao Bridge Hong Kong Projects”
- 2007-11** Agriculture, Fisheries and Conservation Department of Hong Kong SAR Government  
“Monitoring of Marine Mammals in Hong Kong Waters – Data Collection”
- 2002-07** Agriculture, Fisheries and Conservation Department of Hong Kong SAR Government  
“Monitoring of Chinese White Dolphins (*Sousa chinensis*) in Hong Kong Waters – Data Collection”
- 2003-05** Agriculture, Fisheries and Conservation Department of Hong Kong SAR Government  
“Monitoring of Finless Porpoise (*Neophocaena phocaenoides*) in Hong Kong Waters”



## **WORK EXPERIENCE**

### **Director (2002 – present); Research Supervisor (1998 – 2002); Research Intern (1997-1998)**

#### *Hong Kong Cetacean Research Project*

**Job Duties:** Oversees a long-term monitoring research project on local humpback dolphins and finless porpoises in Hong Kong and adjacent waters; organizes and conducts line-transect boat surveys, helicopter surveys & land-based surveys; conducts photo-identification analysis & line-transect analysis; conducts necropsy on stranded cetaceans; performs specialized data analyses such as ranging pattern analysis & quantitative grid analysis on habitat use; trains researchers, consultants and university students to participate in cetacean research; delivers guest lectures at various universities; produces educational material and provides educational seminars

### **Marine Mammal Specialist (Sub-consultant)**

#### *China State Construction Engineering (Hong Kong) Limited (July 2017 – present)*

**Job Duties:** Coordinates and participates in dolphin monitoring and training services for the EM&A study for the Hong Kong Link Road (reclamation works) construction

#### *China State Construction Engineering (Hong Kong) Limited (July 2017 – present)*

**Job Duties:** Serves as Dolphin Specialist and coordinates training services for the EM&A study for the Hong Kong Boundary Crossing Facilities – Infrastructure Works Stage II (Southern Portion)

#### *Leighton – Chun Wo Joint Venture (November 2016 – present)*

**Job Duties:** Coordinates dolphin monitoring and training services for the EM&A study for the Hong Kong Boundary Crossing Facilities – Passenger Clearance Building

#### *ERM Hong Kong Limited (June 2016 - present)*

**Job Duties:** Coordinates and participates in marine mammal line-transect monitoring surveys and passive acoustic monitoring works in western waters of Hong Kong for the EIA study for the Hong Kong Offshore LNG Terminal *ERM Hong Kong Limited (November 2013 - present)*

**Job Duties:** Coordinates and participates in marine mammal monitoring services for the EM&A programme of the Tuen Mun-Chek Lap Kok Link Northern Connection Sub-sea Tunnel Section

#### *Gammon Construction Limited (September 2013 - present)*

**Job Duties:** Coordinates and participates in dolphin monitoring services, including the implementation of bored piling monitoring programme (i.e. land-based theodolite tracking study, underwater noise study and dolphin acoustic behavioural study), line-transect monitoring surveys, implementation of dolphin exclusion zone monitoring, for the EM&A programme of Tuen Mun-Chek Lap Kok Link Southern Connection Viaduct Section *Dragages – China Harbour – VSL Joint Venture (November 2012 – present)*

**Job Duties:** Coordinates and participates in dolphin monitoring services, including the implementation of bored piling monitoring programme (i.e. land-based theodolite tracking study and dolphin acoustic behavioural study) and line-transect monitoring surveys, for the EM&A study of the Hong Kong Link Road (viaduct section) construction

#### *Atkins China Limited (October 2012 – June 2017)*

**Job Duties:** Coordinates and participates in dolphin monitoring and training services for the EM&A study for the Hong Kong Link Road (reclamation works) construction

#### *Environ Ramboll Hong Kong Limited (March 2015 – May 2017)*

**Job Duties:** Conducts regularly line-transect monitoring surveys of Chinese White Dolphins in Southwest Lantau for the Environmental Project Office for the HZMB HKLR, HKBCF and TMCLKL for HyD *Ove Arup & Partners Limited (September 2013 – December 2016)*

**Job Duties:** Conducts comprehensive data analysis for a detailed study of the marine park in the Brothers Islands for HyD

*ERM Hong Kong Limited (October 2015 – March 2016)*

Job Duties: Conducts comprehensive data analysis to delineate the boundaries of compensatory marine park for Integrated Waste Management Facilities at an Artificial Island near Shek Kwu Chau for EPD

*ERM Hong Kong Limited (February 2015 – December 2015)*

Job Duties: Conducts comprehensive data analysis to delineate the boundaries of Southwest Lantau Marine Park and Soko Islands Marine Park for AFCD

*ERM Hong Kong Limited (April 2015 – November 2015)*

Job Duties: Coordinates and participates in shore-based theodolite tracking at Black Point for an Environmental Study in Deep Bay

*Ove Arup & Partners Limited (January 2012 – November 2015)*

Job Duties: Provides technical review on dolphin related issues for the Planning and Engineering Study on the Remaining Development in Tung Chung – Feasibility Study for CEDD

*Ove Arup & Partners Limited (August 2013 – January 2014)*

Job Duties: Coordinates the site-specific field monitoring survey for Chinese White Dolphin under the feasibility study for Increasing Land Supply by Reclamation and Rock Cavern Development for CEDD *ERM Hong Kong Limited (February 2013 – January 2014)*

Job Duties: Coordinates and participates in marine mammal monitoring surveys around Lamma for the EIA study for GHK Submarine Gas Pipeline

*Mott MacDonald Hong Kong Limited (October 2012 – November 2013)*

Job Duties: Coordinates 14 months of line-transect vessel surveys and shore-based theodolite-tracking in North Lantau for an airport expansion project

*ERM Hong Kong Limited (February 2011 – November 2013)*

Job Duties: Coordinates and participates in dolphin monitoring surveys in Deep Bay for the EM&A study for the Black Point Gas Supply Project for CAPCO

*ERM Hong Kong Limited (December 2010 – August 2012)*

Job Duties: Coordinates and participates in line-transect surveys for an EIA study on a marina project on Lamma Island (The Baroque).

*AECOM Asia Company Limited (January 2010 – December 2011)*

Job Duties: Conducts comprehensive data analysis to delineate the potential boundary of a marine protected area for the Preliminary Study for Marine Park in the Brothers Islands for the HZMB Hong Kong Boundary Crossing Facilities for Highways Department (HyD)

*Ove Arup & Partners Limited (April 2010 – November 2011)*

Job Duties: Provides technical advice on dolphin related issues for the Boundary Crossing Facilities (Reclamation Works) – Design and Construction of the Hong Kong-Zhuhai-Macau Bridge for HyD

*ERM Hong Kong Limited (October 2009 – December 2010)*

Job Duties: Conducts desktop reviews on impact assessment on Chinese white dolphins for the Contaminated Mud Pits at South Brothers EIA study for Civil Engineering and Development Department (CEDD)

*ERM Hong Kong Limited (July 2009 – December 2009)*

Job Duties: Conducts desktop reviews on impact assessment on Chinese white dolphins for the Black Point Gas Supply Project EIA study for CAPCO.

*Ove Arup & Partners Limited (February 2009 – June 2009)*

Job Duties: Conducted desktop reviews on impact assessment on Chinese white dolphins for the Boundary Crossing Facility (BCF) Site Options for HyD.

*ENSR Asia (HK) Limited (December 2008 – November 2009)*

Job Duties: Coordinated and participated in line-transect surveys, conducted data analysis and impact assessment for an EIA study on Engineering Investigation and Environmental Studies for Integrated Waste Management Facilities Phase I for Environmental Protection Department.

*ERM Hong Kong Limited (July 2008 – July 2009)*

Job Duties: Coordinated and participated in line-transect surveys and conducted data analysis for an EIA study on site selection of an offshore windfarm in eastern and southern waters of Hong Kong for Hong Kong Electric *Maunsell Consultants Asia Limited (July 2008 – June 2009)*

Job Duties: Coordinated and participated in line-transect surveys and conducted data analysis for an EIA study on Tuen Mun-Chek Lap Kok Link for HyD

*ERM Hong Kong Limited (July 2008 – July 2009)*

Job Duties: Coordinated and participated in dolphin and porpoise monitoring surveys in East Lantau for Hong Kong Disneyland Theme Park

*Ove Arup & Partners Limited (November 2007 – January 2008)*

Job Duties: Conducted desktop review on impacts on Chinese white dolphins for a proposed contaminated mud disposal facility within the Airport East / East of Sha Chau area for CEDD

*South China Sea Fisheries Research Institute, PRC (July 2007-July 2008)*

Job Duties: Supervised and participated in 12-month large-scale line-transect surveys and photo-ID study on Chinese white dolphins & finless porpoises in western section of the Pearl River Estuary for PRC Government

*Maunsell Environmental Management Limited (September 2000 – January 2008)*

Job Duties: Coordinated and participated in dolphin and porpoise monitoring surveys for Penny's Bay Reclamation Stage I/II projects for CEDD; provides classroom and onboard training for boat surveys

*ERM Hong Kong Limited (January 2006 – September 2007)*

Job Duties: Coordinated and participated in line-transect surveys, photo-ID study and data analysis for 12-month comprehensive study of Chinese white dolphins in Pearl River Estuary and Hong Kong waters for an ecological, fisheries and water quality impact assessment study for the proposed port development at Northwest Lantau for Economic, Labour and Development Bureau (EDLB)

*ERM Hong Kong Limited (July 2005 – February 2007)*

Job Duties: Coordinated and participated in line-transect surveys, photo-ID study and data analysis for an EIA study on site selection of a liquefied natural gas (LNG) receiving terminal in Hong Kong for China Light and Power; and provided classroom and onboard training for boat surveys

*South China Sea Fisheries Research Institute, PRC (January 2005 – March 2007)*

Job Duties: Supervised and participated in 12-month large-scale line-transect surveys and photo-ID study on Chinese white dolphins in the Pearl River Estuary for preliminary impact assessment on Hong Kong-Zhuhai-Macau bridge for HZMB office

*Chinese University of Hong Kong (October 2003 – April 2005)*

Job Duties: Supervised land-based observations on the occurrence and habitat use of Chinese white dolphins within Sha Chau and Lung Kwu Chau Marine Park for AFCD; provided training course to field staff for land-based observations; analyzed land-based observation data. *Cinotech Consultants Limited (January – March 2004)*

Job Duties: Conducted field surveys and photo-ID work on humpback dolphins in the Pearl River Estuary for the Environmental Impact Assessment of Tonggu waterway channel

*ERM Hong Kong Limited (September 2001 - January 2002; February 2004)*

Job Duties: Conducted land-based observations on the occurrence and habitat use of Chinese white dolphins at Tai O Bay; conducted training course to field staff

**Publisher & Editor-in-Chief (2000 – present)**

- *Hong Kong Geographic Book Series: over 30 publications (2007-present)*
- *Hong Kong Countryside Explore Magazine (2006-09)*
- *Hong Kong Discovery Magazine (2000-05)*

**Volunteer Research Assistant (1996-1998)**

*Center of Reproduction for Endangered Species, San Diego Zoo, California, U.S.A.*

**TEACHING EXPERIENCE**

- Regular guest lecturer on Hong Kong's cetacean conservation issues, environmental impact assessment, ecotourism, and marine mammals in captivity at: University of Hong Kong, Chinese University of Hong Kong, Hong Kong University of Science and Technology, City University of Hong Kong, Hong Kong Baptist University, Hong Kong Institute of Education, Hong Kong Polytechnic University, Open University of Hong Kong, Hong Kong Institute of Vocational Education, College of International Education of HKBU, and Community College of City University
- Co-organizer and instructor of an interuniversity field course (*Dolphin and Whale Biology and Conservation in Tropical Asia*) in the Ontario Universities Program in Field Biology for senior undergraduate and graduate students and hosted by Trent University
- Organizer and instructor of university students training programmes at Chinese University of Hong Kong and City University of Hong Kong
- Trained over 20 research assistants and 30 research interns for various marine mammal survey techniques in Hong Kong and China
- Trained over 30 marine mammal observers for implementation of dolphin monitored exclusion zone and dolphin watching plan for various development project

**PUBLICATIONS**

38. **Hung, S. K.**, Araújo-Wang, C. C., Kallamaa, M. Q., Lui, G. and Wang, J. Y. In prep. Trends in abundance of Indo-Pacific humpback dolphins (2001-2014) in Hong Kong: implications for conservation and management.
37. Araújo, C. C., Wang, J. Y., **Hung, S. K.**, White, B. N., Currey, R. J. and Brito, D. In review. Coastal development and the viability of the Indo-Pacific humpback dolphin (*Sousa chinensis*) in the Pearl River Estuary, southern China. Submitted to *Aquatic Conservation*.
36. Hoffman, J. M., **Hung, S. K.**, Wang, J. Y. And White, B. N. 2017. Regional differences in the whistles of Australasian Humpback Dolphins (Genus *Sousa*). *Canadian Journal of Zoology* 95: 515-526 (DOI: 10.1139/cjz-2016-0204).
35. **Hung, S. K.** 2017. Final Report on Monitoring of Marine Mammals in Hong Kong Waters (2016-17). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department of Hong Kong SAR Government, 162 pp.

34. Wright, K. A., Wang, J. Y., **Hung, S. K.**, Riehl, K. N., Yang, S. C. and White, B. N. 2017 (in press). Preliminary sex differentiation of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River estuary and eastern Taiwan Strait using scarring of dorsal fins. Accepted by *Marine Mammal Science*.
33. Hoffman, J. M., Ponnampalam, L. S., Araújo-Wang, C., Kuit, S. H., **Hung, S. K.** and Wang, J. Y. 2017. Description of whistles of Irrawaddy dolphin (*Orcaella brevirostris*) from the waters of Matang, Peninsular Malaysia. *Bioacoustics* 26: 15-24 (DOI: 10.1080/09524622.2016.1169558)
32. Munger, L., Lammers, M., Cifuentes, M., Würsig, B., Jefferson, T. A. and **Hung, S. K.** 2016. Spatial and temporal variation of Indo-Pacific humpback dolphins in Hong Kong waters from year-round passive acoustic monitoring. *Journal of the Acoustical Society of America* 140: 2754-2765 (DOI: 10.1121/1.4963874)
31. Hoffman, J. M., Ponnampalam, L. S., Araújo, C. C., Wang, J. Y., Kui, S. H. and **Hung, S. K.** 2015. Comparison of Indo-Pacific humpback dolphins (*Sousa chinensis*) whistles from two areas of western Peninsular Malaysia. *Journal of the Acoustical Society of America* 138: 2829-2835 (DOI: 10.1121/1.4934254)
30. Wang, J. Y., Yang, S. C. and **Hung, S. K.** 2015. Diagnosability and description of a new subspecies of Indo-Pacific humpback dolphin *Sousa chinensis* (Osbeck, 1765) from Chinese waters. *Zoological Studies* 54:36 (DOI: 10.1186/s40555-015-0115-x).
29. Marcotte, D., **Hung, S. K.** and Caquard, S. 2015. Mapping cumulative impacts on Hong Kong's pink dolphin population. *Ocean & Coastal Management* 109: 51-63.
28. Yeung, R. L. K., Li, A. H. F. and **Hung, S. K.** 2015. Monetising social and environmental costs in infrastructure evaluation: the case of Hong Kong's third international airport runway. *Asia Pacific Journal of Public Administration* 37(3): 207-215 (DOI: 10.1080/23276665.2015.1075530).
27. Yeung, R., Li, A., Chan, W., Lai, A., **Hung, S. K.**, Wong, V. T., Chau, M. And Lay, B. 2015. Study on Social Return on Investment (SROI) for Hong Kong Third Runway Project: Final Report, 110 pp.
26. Araújo, C. C., Wang, J. Y., **Hung, S. K.**, White, B. N. and Brito, D. 2014. Viability of the Critically Endangered Eastern Taiwan Strait population of Indo-Pacific humpback dolphin, *Sousa chinensis*. *Endangered Species Research* 24: 263-271.
25. Slooten, E. Wang, J. Y., Dungan, S. Z., Forney, K. A., **Hung, S. K.**, Jefferson, T. A., Riehl, K. N., Rojas-Bracho, L., Ross, P. S., Wee, A. N., Winkler, R., Yang, S. C. and Chen, A. 2013. Impacts of fisheries on the Critically Endangered humpback dolphin (*Sousa chinensis*) in the eastern Taiwan Strait. *Endangered Species Research* 22: 99-114.
24. Dungan, S. Z., **Hung, S. K.**, Wang, J. Y. and White, B. N. 2012. Two social communities in the Pearl River Estuary population of Indo-Pacific humpback dolphins (*Sousa chinensis*). *Canadian Journal of Zoology* 90: 1031-1043.
23. Jefferson, T. A., **Hung, S. K.**, Robertson, K. M. and Archer, F. I. 2012. Life history of the Indo-Pacific humpback dolphin (*Sousa chinensis*) in the Pearl River Estuary, southern China. *Marine Mammal Science* 28: 84-104 (DOI: 10.1111/j.1748-7692.2010.00462.x).
22. Piwetz, S., **Hung, S. K.**, Wang, J. Y., Lundquist, D. and Würsig, B. 2012. Influence of vessel traffic on movements of Indo-Pacific humpback dolphins (*Sousa chinensis*) off Lantau Islands, Hong Kong. *Aquatic Mammals* 38: 325-331.
21. Sims, P., **Hung, S. K.** and Würsig, B. 2012. High speed vessel sounds in West Hong Kong waters and their contributions relative to Indo-Pacific humpback dolphins (*Sousa chinensis*). *Journal of Marine Biology* Volume 2012: Article ID 169103, 11 pages (doi:10.1155/2012/169103).
20. Chen, T., Qiu, Y., Jia, X., **Hung, S. K.** and Liu W. 2011. Distribution and group dynamics of Indo-Pacific humpback dolphins in the western Pearl River Estuary, China. *Mammalian Biology* 76: 93-96.
19. Sims, P., Vaughn, R., **Hung, S. K.** and Würsig, B. 2011. Sounds of Indo-Pacific humpback dolphins (*Sousa chinensis*) in west Hong Kong: a preliminary description. *Journal of the Acoustical Society of America* 131: EL48-EL53 (doi: 10.1121/1.3663281).



18. Ross, P. S., Dungan, S., **Hung, S. K.**, Jefferson, T. A., MacFarquhar, C., Perrin, W., Riel, K. N., Slooten, E., Wang, J., White, B., Würsig, B., Yang, S. and Reeves, R. 2010. Averting the Baiji syndrome: characterizing habitat for critically endangered dolphins in Eastern Taiwan Strait. *Aquatic Conservation: Marine and Freshwater Ecosystems* 20: 685-694.
17. Chen, T., **Hung, S. K.**, Qiu, Y., Jia, X. and Jefferson, T. A. 2010. Distribution, abundance and individual movements of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary, China. *Mammalia* 74: 117-125.
16. Jefferson, T. A., **Hung, S. K.** and Würsig, B. 2009. Protecting small cetaceans from coastal development: Impact assessment and mitigation experience in Hong Kong. *Marine Policy* 33: 305-311.
15. **Hung, S. K.** 2008. Habitat use of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong. Ph.D. dissertation. University of Hong Kong, Hong Kong, 266 p.
14. Jefferson, T. A. and **Hung, S. K.** 2008. Effects of biopsy sampling on Indo-Pacific humpback dolphins (*Sousa chinensis*) in a polluted coastal environment. *Aquatic Mammals* 34: 310-316.
13. Wang, J. Y., **Hung, S. K.**, Yang, S. C., Jefferson, T. A. and Secchi, E. R. 2008. Population differences in the pigmentation of Indo-Pacific humpback dolphin, *Sousa chinensis*, in Chinese waters. *Mammalia* 72: 302-308.
12. Wang, J. Y., Yang, S. C., **Hung, S. K.** and Jefferson T. A. 2007. Distribution, abundance and conservation status of the Eastern Taiwan Strait population of Indo-Pacific humpback dolphins, *Sousa chinensis*. *Mammalia* 71: 157-165.
11. Jefferson, T. A. and **Hung, S. K.** 2007. An updated, annotated checklist of the marine mammals of Hong Kong. *Mammalia* 71: 105-114.
10. Hung, C. L. H., Lau, R. K. F., Lam, J. C. W., Jefferson, T. A., **Hung, S. K.**, Lam, M. H. W. and Lam, P. K. 2007. Risk assessment of trace elements in the stomach contents of Indo-Pacific humpback dolphins and finless porpoises in Hong Kong waters. *Chemosphere* 66: 1175-1182.
9. Jefferson, T. A., **Hung, S. K.** and Lam, P. K. S. 2006. Strandings, mortality, and morbidity of Indo-Pacific humpback dolphins in Hong Kong, with emphasis on the role of organochlorine contaminants. *Journal of Cetacean Research and Management* 8: 181-193.
8. Hung, C. L. H., Xu, Y., Lam, J. C. W., Jefferson, T. A., **Hung, S. K.**, Yeung, L. W. Y., Lam, M. H. W., O'Toole, D. K. and Lam, P. K. S. 2006. An assessment of the risks associated with polychlorinated biphenyls found in the stomach contents of stranded Indo-Pacific humpback dolphins (*Sousa chinensis*) and finless porpoises (*Neophocaena phocaenoides*) from Hong Kong waters. *Chemosphere* 63: 845-852.
7. Leung, C. C. M., Jefferson, T. A., **Hung, S. K.**, Zheng, G. J., Yeung, L. W. Y., Richardson, B. J. and Lam, P. K. S. 2005. Petroleum hydrocarbons, polycyclic aromatic hydrocarbons, organochlorine pesticides and polychlorinated biphenyls in tissues of Indo-Pacific humpback dolphins from south China waters. *Marine Pollution Bulletin* 50: 1713-1744.
6. **Hung, S. K.** and Jefferson, T. A. 2004. Ranging patterns of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary, People's Republic of China. *Aquatic Mammals* 30: 157-172.
5. Jefferson, T. A. and **Hung, S. K.** 2004. A review of the status of the Indo-Pacific humpback dolphin in Chinese waters. *Aquatic Mammals* 30: 147-156.
4. Wang, J. Y., **Hung, S. K.** and Yang, S. C. 2004. Records of Indo-Pacific humpback dolphins, *Sousa chinensis* (Osbeck, 1765), from the waters of western Taiwan. *Aquatic Mammals* 30: 187-194.
3. Jefferson, T. A. and **Hung, S. K.** 2004. *Neophocaena phocaenoides*. *Mammalian Species* 746: 1-12.
2. Jefferson, T. A., **Hung, S. K.**, Law, L., Torey, M. and Tregenza, T. 2002. Distribution and abundance of finless porpoises in waters of Hong Kong and adjacent areas of China. *Raffles Bulletin of Zoology (Supplement)* 10:43-55.
1. **Hung, S. K.** 2000. Ranging patterns of Indo-Pacific humpback dolphins (*Sousa chinensis*) in the Pearl River Estuary, People's Republic of China. M.Sc. thesis. University of San Diego, USA, 187 p.

## **SELECTED PRESENTATIONS**

- 2016** Threats and Conservation Issues on Chinese White Dolphins in Hong Kong. Oral presentation at the Chinese White Dolphin Population Viability Analysis Workshop, Hong Kong, 30 March - 1 April 2016.
- 2015** Impacts of coastal development on the Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong. Oral presentation at the International Conference on Biodiversity, Ecology and Conservation of Marine Ecosystems, Hong Kong, 1-3 June 2015.
- 2014** Conservation issues of Pearl River Estuary population of *Sousa chinensis* with special reference on fisheries interaction. Oral presentation at the Symposium on Sustainable Fisheries and Conservation of the Eastern Taiwan *Sousa* Population, Tainan, 28-29 April 2014.
- 2013** Impacts of high-speed ferry traffic on Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong. Oral presentation at the Twentieth Biennial Conference on the Biology of Marine Mammals, Dunedin, New Zealand, 9-13 December 2013.
- 2012** Biology and conservation status of Indo-Pacific bottlenose dolphins (*Tursiops aduncus*). Oral presentation at the International Conference for the Release of Captive Dolphins, Seoul, South Korea, 9 May 2012.
- 2011** Temporal trends in abundance of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong waters (2001-2010). Oral presentation at the Nineteenth Biennial Conference on the Biology of Marine Mammals, Tampa, Florida, 27 November-2 December 2011.
- 2010** Long-term monitoring of Hong Kong Cetaceans – Implications for conservation and management. Oral presentation at the Workshop on Diversity of Marine Mammals Along the Asian Coasts, Tokyo, Japan, 26-28 August 2010.
- 2008** Habitat use of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong. Paper presented at the Symposium on Cetacean Research and Conservation across Taiwan Strait, Wuhan, China, 31-27 October 2008.
- 2005** Quantitative analysis of habitat use of Indo-Pacific humpback dolphins (*Sousa chinensis*) in Hong Kong waters. Poster presented at the 16<sup>th</sup> Biennial Conference on the Biology of Marine Mammals, San Diego, California, 12-16 December 2005.
- 2005** A review of the status of finless porpoises (*Neophocaena phocaenoides*) in Hong Kong waters. Paper presented at the Small Cetacean Subcommittee of the International Whaling Commission, Ulsan, South Korea, 31 May – 7 June 2005.
- 2004** Research Studies and Conservation Effort to protect Indo-Pacific Humpback Dolphins in HK and PRC. Papers presented at the 1<sup>st</sup> Symposium & Workshop on the Conservation and Research of *Sousa chinensis* in Taiwan, NMMBA, Taiwan, 23-27 February 2004.
- 2002** A review of cetacean research in Hong Kong and adjacent waters. Paper presented at the Second International Conference on the Marine Mammals of Southeast, Dumaguete City, Philippine, 22-26 April 2002.
- 2001** Records of Bryde's Whales (*Balaenoptera c.f. edeni*) along the coast of China. Poster presented at the Fourteenth Biennial Conference on the Biology of Marine Mammals, Vancouver, 28 November-3 December 2001.
- 2001** A review on biology and conservation of Chinese white dolphins (*Sousa chinensis*) and finless porpoise (*Neophocaena phocaenoides*) in Hong Kong waters. Paper presented at the Symposium on Conservation of Cetaceans in PRC, Shanghai, 11-15 March 2001.
- 1999** Home range characteristics of Indo-Pacific hump-backed dolphins in the Pearl River Estuary, PRC. Poster presented at the Thirteenth Biennial Conference on the Biology of Marine Mammals, Maui, 29 November-3 December 1999.

## Marine Mammal Specialist (CV4)

Name: Dr. Lindsay Porter

### **ACADEMIC HISTORY**

*The University of Hong Kong, Hong Kong S.A.R.,*

*Ph.D. 1993-1999*

*The Taxonomy, Ecology and Conservation of *Sousa chinensis* (Osbeck, 1765) (Cetacea: Delphinidae) in Hong Kong waters.*

*The University of Glasgow, Scotland*

*B.Sc. (HONS) 1988-1992 Aquatic Bioscience*

### **PROFESSIONAL AFFILIATIONS & MEMBERSHIPS**

*IUCN SSC-Cetacean Specialist Group*

*International Whaling Commission (IWC) Scientific Committee: Small Cetaceans Sub-Committee (Chair)*

*United Kingdom Government National Science Team (small cetaceans)*

*Marine Mammal Society: Awards and Scholarships Committee (Chair)*

*South East Asian Marine Mammal association (SEAMMAMS): Senior Advisor*

*Asian Marine Mammal Stranding Network: Collaborative Research Committee (Co-Chair)*

*Centre for Research on Indian Ocean Marine Mammals (CRIOMM):*

*International Advisory Panel (Member)*

*Society of Conservation Biology (SCB): Marine Liaison Officer Asia Section*

*Association for Tropical Biological and Conservation (ATBC): Treasurer*

*World Wide Fund for Nature (WWF): Advisor to the Board (Marine Policy)*

### **WORK EXPERIENCE**

#### **Senior Research Scientist (2010 – present)**

*SMRU Hong Kong (The University of St. Andrews)*

**Job Duties:** In the last twenty years, Lindsay has worked primarily within eastern hemisphere waters, leading projects in Hong Kong, China, Australia, Maldives, Sri Lanka, Vietnam, Cambodia, Malaysia, Indonesia, East Timor and South Africa. In Hong Kong, Lindsay has conducted primary research on both Chinese white dolphin (*Sousa chinensis*) and finless porpoise (*Neophocaena phocaenoides*) and is a specialist in these species. She has extensive experience consulting on major infrastructure projects and is fully versed in Hong Kong Environmental Permit requirements and the provision of professional environmental monitoring and mitigation practises. Lindsay has extensive experience using a variety of marine mammal research tools and techniques and has led surveys which have incorporated;

- photo-identification,
- visual and acoustic line transects,
- static passive acoustic monitoring,
- theodolite tracking,
- video surveillance,
- aerial transects (drones, helicopters and fixed wing)
- biopsy collection
- tag attachment.



Since 2001, Dr. Porter has delivered workshops on marine mammal surveys techniques with colleagues from the University of St Andrews, which is home to the Sea Mammal Research Unit, an internationally renowned marine mammal research institute. These workshops have included line transect and DISTANCE software courses; photo-ID procedures and databasing; passive acoustic monitoring systems and their deployment; and biopsy and sample collection. Lindsay is also a qualified marine mammal observer (MMO) and passive acoustic monitoring (PAM) operator trainer and holds MMO/PAM qualifications specific to Europe/the America's, Asia and Australia/New Zealand. Currently, Lindsay is focusing on three areas; the impact of several major construction projects in Hong Kong; the status of coastal marine mammal and turtle populations of Malaysia and, the impact of offshore windfarm development in Taiwan on Eastern Taiwan White dolphin (*S. chinensis taiwanensis*). These projects incorporate baseline status of important marine mammal species, assessment of impact from proposed construction works and development and implementation of monitoring and mitigation strategies for construction activities.

### **Dolphin Conservation Officer (2001-2009)**

*The World Wide Fund for Nature Hong Kong: Dolphin Conservation Officer.*

Job Duties: Lindsay held a variety of positions within WWF; volunteer, consultant and member of staff. She generated most of the funding required to support her various research and community capacity projects. Her role was both to continue research on Chinese populations of marine mammals and to facilitate the dissemination of conservation information to the scientific community and the general public. In 2003, her role expanded to collaborate with regional WWF offices and authorities, including Indonesia, Timor-Leste, Australia, the Maldives and Sri Lanka. In this time, Lindsay conducted extensive offshore research surveys in the shared aquatic regions of Indonesia, Timor Leste and northern Australia.

## **PUBLICATIONS**

### **Journal articles, book chapters and other published papers**

- Parsons, E.C.M., Felley, M and Porter, L. 1995. An annotated checklist of cetaceans recorded from Hong Kong's territorial waters. *Asian Marine Biology* 12: 79-100.
- Ross, G.J.B., Heinsohn, G.E., Cockcroft, V.G., Parsons, E.C.M., Porter, L.J. and Preen, A. 1996. Review of the taxonomic status of the humpbacked dolphins, genus *Sousa*. Working paper UNEP/SEA95/WP19. 25pp. In Report of the Workshop on the Biology and Conservation of Small Cetaceans and Dugongs of Southeast Asia, Dumaguete, June 1995. (Ed. W.F. Perrin, M.L. Dolar, and M.N.R. Alava). UNEP (W)/EAS WG.1/2. Bangkok: United Nations Environment Programme.
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- Porter, L. 2002. A re-description of *Sousa chinensis* (Osbeck, 1765) (Mammalia: Delphinidae) and designation of a neotype. *Bulletin of the Natural History Museum of London (Zool.)* 68(1): 27-37.
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- Porter, L. 2008. The Indo-Pacific humpback Dolphin. In *Australian Mammals* ed. S. van Dyck. Sydney: New Holland 836-7.
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- Wenzhi Lin, Ruilian Zhou, Lindsay Porter, Jialin Chen and Yuping Wua 2010. Evolution of *Sousa chinensis*: A scenario based on mitochondrial DNA study. *Molecular Phylogenetics and Evolution* doi:10.1016/j.ympev.2010.07.012
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- Van Bresse M.F., Minton G., Sutaria D., Kelkar N., Peter, C., Zulkarnaen, M., Mansur, R.M., Porter, L., Rodriguez Vargas, L. and Rajamani, L. 2014. Cutaneous nodules in Irrawaddy dolphins: an emerging disease in vulnerable populations. *Dis Aquat Org* 107:181-189
- Priyadarshana, T., Randage, S.M., Alling, A., Calderan, S., Gordon, J., Leaper, R. and Porter, L., 2015. Distribution patterns of blue whale (*Balaenoptera musculus*) and shipping off southern Sri Lanka. *Regional Studies in Marine Science*.
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- Pine, M.K., Wang Ding, Porter, L. & Wang, K. 2018. Investigating the spatio-temporal variation of fish choruses to help identify important foraging habitat for Indo-Pacific humpback dolphins, *Sousa chinensis*. *ICES Journal of Marine Science*

#### Conference and working papers

- Porter, L. 1995. Surveys of *Sousa chinensis* in the estuary of the Pearl River by boat and helicopter. In the proceedings of The Conference on Conservation of Marine Mammals in Fujian, Hong Kong and Taiwan. (Ed. Huang Zongguo, S. Leatherwood, J. Woo and Liu Wenhua). *Journal of Oceanography in the Taiwan Strait (Special Publication 4)*. 32-4 [In Chinese].
- Cockcroft, V.G., Leatherwood, S., Goodwin, J. and Porter, L. 1997. The phylogeny of humpback dolphins Genus *Sousa*: insights through mtDNA analyses. Presented at The 49th International Whaling Commission Meeting, Scientific Committee Annual Meeting, Bournemouth, United Kingdom, September-October 1997. SC/49/SM25
- Porter, L., Parsons, E.C.M. and Morton, B.S. 1997. The Status and Biology of the Chinese White Dolphin (Indo-Pacific Humpback dolphin: *Sousa chinensis*) in Hong Kong: Recommendations for its Conservation and Management. Hong Kong: Hong Kong University. 300pp.
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- Porter, L. 2002. Epimeletic Behaviour in *Sousa chinensis*: Implications for Management. Presented at The 54th International Whaling Commission Meeting, Scientific Committee Annual Meeting, Shimonoseki, Japan May – June 2004. SC/54/SM16.
- Porter, L. 2004. The Abundance and Distribution of Indo-Pacific Humpback dolphin (*Sousa chinensis*) within the Pearl River Estuary. Final Report prepared for the State Oceanic Administration of the Peoples Republic of China. [In Chinese and English].
- Porter, L. 2004. Co-operation under the auspices of Convention of Migratory Species; An example of multiple country collaboration in the Timor Sea Marine Mammal Research Initiative. In Conserving Whales and Dolphins in Australian Waters: National Research Partnerships Workshop, Ballina, Australia 2-4 May, 2004.

- Porter, L. and Azeez, A. 2004. The Importance of The Maldivian Atoll System for Marine Mammals. Presented at Biology in Asia Conference, National University of Singapore, December 7-10, 2004.
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- Porter, L. and Corkeron, P. 2006. The Conservation of Lesser Known Tropical Marine Delphinids. A workshop report at the Sixteenth Biennial Conference of the Biology of Marine Mammals, San Diego, 2005. 20pp.
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- Porter, L.J., Wood, J and Davies, R. 2015. The Indo-Pacific Humpback Dolphin and The Hong Kong-Zhuai- Macao Bridge: Building Bridges Between Science and Management. The Twenty First Biennial Conference of the Biology of Marine Mammals, San Francisco, 2015.
- Porter, L.J. and Ruxton, J. 2017. A Journey from Analogue to Digital: the Intertwining Paths of Scientific Investigation and Media Reporting Across a Twenty Years Study of Hong Kong's Iconic Dolphin. The Twenty Second Biennial Conference of the Biology of Marine Mammals, Halifax, 2017
- Porter, L.J., Lai, H.Y. Le Double, S. and Scheidat, M. 2017. The Habitat Use and Behavior of Indo-Pacific finless porpoise (*Neophocaena phocaenoides*) in Hong Kong SAR waters. The Twenty Second Biennial Conference of the Biology of Marine Mammals, Halifax, 2017
- Brannan, N. and Porter, L.J. 2017. Skin disorders in critically endangered Irrawaddy dolphins (*Orcaella brevirostris*) in the Mekong River. The Twenty Second Biennial Conference of the Biology of Marine Mammals, Halifax, 2017.
- Porter, L.J. 2018. Dams and Dolphins: Investigating Impacts and Making Management Decisions. The ATBC Asia Pacific Meeting, Kuching, Sarawak, Malaysia.
- Porter, L.J. and Meng, Y. 2018. Investigating Preferred Prey and Habitat Use of Blue Whales from Sri Lankan Waters. The Society of Conservation Biology, The 5th International Marine Conservation Congress (IMCC5), Kuching, Sarawak, Malaysia.
- Porter, L.J. and Nian, L.S. 2018. People, Dolphins and Fishes of the Kinabatangan River, Sabah. The Society of Conservation Biology, The 5th International Marine Conservation Congress (IMCC5), Kuching, Sarawak, Malaysia.
- Porter, L.J., Lee, K.M. and Pine, M. 2018. Habitat use and behavior of Indo-Pacific humpback dolphins (*Sousa chinensis*) and Indo-Pacific finless porpoise (*Neophocaena phocaenoides*) in Hong Kong SAR waters. The Society of Conservation Biology, The 5th International Marine Conservation Congress (IMCC5), Kuching, Sarawak, Malaysia.

## Marine Mammal Specialist (CV5)

Name: Ms. Julia Chan

### ACADEMIC HISTORY

*The University of Hong Kong, Hong Kong S.A.R.,  
M.Sc. 2001-2003 Environmental Management.*

*The University of Hong Kong, Hong Kong S.A.R.,  
B.Sc. (HONS) 1996-1999 Environmental Science*

### PROFESSIONAL AFFILIATIONS & MEMBERSHIPS

*Environmental Management Association of Hong Kong (EMAHK): Member  
Chartered Institute of Water and Environmental Management(CIWEM): Member  
Hong Kong Institute of Qualified Environmental Professionals(HKIQEP): Member*

### WORK EXPERIENCE

#### **Associate Director - Environment (2009 – present)**

*Mott MacDonald Hong Kong Limited*

Job duties: Specialised in nature and wetland conservation, ecological and fisheries monitoring, ecological and fisheries impact assessment, stream conservation and eco-enhancement channel design. Project management and coordination of environmental assessment and experience in stakeholders consultation.

#### **Ecological Surveyor (2002-2005)**

*Agriculture, Fisheries and Conservation Department*

#### **Assistant Environmental Scientist (1999-2002)**

*Black & Veatch*

### Project Experience

*Expansion of Hong Kong International Airport (HKIA) into a Three-Runway System (3RS)*

Job duties: As Environmental Team Leader and Marine Ecology Specialist, assist in updating EM&A Manual and event action plan regarding Chinese White Dolphin monitoring. Provide training to Dolphin Observers in implementation of dolphin exclusion zone (DEZ) as part of the 3RS project mitigation measures. Support professional liaison group and green non-governmental organisations round table meeting consultation

*Development at Siu Ho Wan and the Associated Transport Infrastructures (Feasibility Study)*

Job duties: As Project Manager, co-ordinate the terrestrial ecological review and 12-month marine mammal monitoring by land-based theodolite tracking at Siu Ho Wan and Lung Kwu Tan areas.

*Improvement Dredging for Lamma Power Station Navigation Channel Pre-construction Phase*

Job duties: As Qualified Ecologist, provide ecological advice and review of the ecological (finless porpoise, green turtle, corals, inter-tidal communities and sub-tidal benthos) and fisheries baseline of the study area, for the fulfil of environmental permit conditions prior to the commencement of marine dredging works.

*Engineering Feasibility and Environmental Assessment Study for Airport Master Plan 2030*

Job duties: As Marine Ecology Team Leader, co-ordinate the marine ecological assessment for the project, conducting marine mammal land-based surveys trained by international dolphin experts and giving advices on the options selection

through the analysis of marine ecological baseline findings and recommends mitigation measures for any adverse marine ecological impacts identified. The project involves intensive study in selecting the most desirable option of the 3RS.

*Expansion of Hong Kong International Airport into a Three-Runway System – Dolphin Exclusion Zone (DEZ) Monitoring for Site Investigation Works of HDD in Sha Chau*

Job duties: As DEZ Monitoring Team Leader, lead the DEZ monitoring team to implement a 250m radius DEZ for 3 borehole locations within Sha Chau and Lung Kwu Chau Marine Park during the course of the SI works. Marine Ecology Team Leader responsible for preparing the specifications for dolphin monitoring for the implementation of DEZ for the site investigation works.

*Expansion of HKIA into a Three-Runway System (3RS) EIA*

Job duties: As Environmental Specialist, responsible for coordinating and design of methodology for marine ecological surveys and fisheries baseline surveys and carry out marine ecological and fisheries impact assessment. Provide recommendations on mitigation measures (including marine park establishment, marine traffic diversion, eco- shoreline enhancement), marine ecological and fisheries enhancement strategy, providing technical input and participating in technical briefing groups for dolphin and marine ecology, green groups consultation, public forum and other stakeholders' engagement activities.

*Preliminary Environmental Review for Reconstruction of Pak Kok Pier on Lamma Island*

Job duties: As Marine Ecology and Fisheries Specialist, conduct PER for the support of reconstruction of existing pier, recommendation of environmental monitoring and mitigation measures, supervise and oversee the marine ecological and fisheries impact assessment.

*Project Formosa – Critical Habitat Assessment, Taiwan*

Job duties: As Marine Mammals Specialist, conduct a critical habitat assessment for the project, which has identified the subpopulation of Indo-pacific humpback dolphin of Eastern Taiwan Strait that may trigger the categorization of critical habitat as defined in the International Finance Corporation (IFC).

*Guidelines for Risk Assessment and Mitigation of Developing Offshore Wind Farms in Taiwan*

Job duties: As Ecologist responsible for conducting research on risks relating to the development of offshore wind farms on endangered marine species (especially green sea turtle and white dolphin) and marine species of conservation concern in Taiwan. Provide guidelines for mitigating the potential high risk on marine ecology due to the construction and operation of the proposed development