

## 5. Energy and Carbon Emission Audit

For the purpose of social responsibility and pursuit of environmental excellence, ACI carries out Energy Audit for variety of premises to review their energy consumption, operating cost and associated energy management opportunities according to the EMSD "Code of Practice for Building Energy Audit" under Building Energy Efficiency Ordinance Chapter 610.

Besides, the Carbon Audit services can be carried out by means of desk-top analysis and on-site walkthrough inspections by our Auditor. It will be conducted with reference to the Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong issued by the EMSD & EPD.



## 6. Marine Environmental Services and Consultation



As the marine industry being increasingly regulated and operating in the major ports around the world, we have the responsibility to protecting the marine environment.

ACI have a fully qualified team of consultants who provide expert advice on all aspects of marine environmental services.

## 7. Structural Design, Noise Control Design

The primary function of noise barriers is to shield receivers from excessive noise generated by road traffic. Many factors need to be considered in the detailed design of noise barriers, such as, locations, dimensions, types and shapes, which are normally determined and defined in statutory Environmental Impact Assessment (EIA) studies or other non-statutory Noise Impact Assessment (NIA) studies.

ACI have a fully qualified team of experts who provide professional advice on all aspects of noise control services.



## 8. Building services Noise & Vibration Control and Measurement



We provide noise measurement service in accordance with HKSAR Government Regulations, Chapter 400 – Noise Control Ordinance Section 10 & 13 and statutory procedures in TM for the assessment of Noise from places other than domestic premises, public places or construction sites. Recommended remedial measures are supervised by our expertise during installation and followed by commission test to ensure design intent is achieved.

## 9. Traffic noise measurement according to Environmental Impact Assessment Ordinance (EIAO)

Road projects or improvement work which requires an Environmental Permit under the EIAO. The Environmental Impact Assessment Ordinance (EIAO) has provided an important platform for striking a balance between environmental protection and development.

It provides a systematic, clear and transparent framework for assessing the environmental impacts arising from major development projects and for implementing effective prevention and mitigation measures.

ACI offer a professional service and reporting on Traffic noise measurement with our specialists.



## 10. Co-operation with various Laboratories



ACI co-operates with various laboratories to offers environmental testing, and providing professional recommendations on environmental quality of construction sites, buildings and indoor environment. We strive for high quality services in all areas for our clients.

# ACI provides Environmental Health Assessment, Investigation, Risk Management and Training Services

## 1. Environmental Review, Environmental Monitoring and Audit (EM&A) and Environmental Impact Assessment (EIA)

Environmental Impact Assessment (EIA) aims to review and evaluate the possible environmental impacts from the implementation of development projects. All of the project parties should take the responsibility for Environmental Protection, an effective Environmental Monitoring and Audit (EM&A) is needed, to ensuring the optimum environmental performance of the project and the requirement arising from the EIA process are fully implemented at all relevant project stages, such as design, construction, operation and decommissioning.

An EM&A is a programmed that used to oversee the environmental performance of the development projects and provides a framework to identify and contain potential adverse impacts and apply appropriate measures to ameliorate them.

ACI have a fully qualified team to provide a professional service on environmental services



## 2. Green Building and Sustainability Assessments including BEAM Plus Certification, BEAM Construction Management & LEED Certifications



Leadership in Energy and Environmental Design (LEED) also is the widely used green building rating system which is provides a framework for healthy, highly efficient, and cost-saving green buildings.

The purposes of LEED are:

- to help building user meets their ESG goals;
- to decrease operation cost;
- to increase asset value; and
- to ensure productivity, comfort and health, etc.

ACI offers inspection, reporting and expertise for the BEAM and LEED certification process on the requested construction site.

Hong Kong Building Environmental Assessment Method (HK-BEAM) provides building users with a single performance label that demonstrates the overall qualities of a building. The environmental assessment can be applied on new or existing building, from single buildings to large-scale development, regardless of whether they are residential, commercial, industrial or other types.

BEAM PLUS credit performance is sub divided into following categories:

- Integrated Design & Construction Management (IDCM);
- Sustainable Sites (SS);
- Energy Use (EU);
- Water Use (WU);
- Health & Wellbeing (HWB);
- Innovations & Additions (IA); and
- Materials & Waste (MW).

Benefits of BEAM PLUS:

- Improve the quality of the indoor environment, and therefore benefit the health, wellbeing and productivity of its occupants;
- Minimise pollution to the external environment;
- Promote and encourage energy-efficient buildings, systems and equipment, including the use of renewable energy; and
- Reduce the unsustainable consumption of increasingly scarce resources such as water and tropical timber, etc.

## 3. Indoor Environmental Quality and Built Environment Assessment

With people generally spending 70% time indoor, and buildings are being more tightly constructed, the indoor environment become a more important issue. Indoor environmental quality (IEQ) is a performance indicator used to demonstrate the effectiveness of healthy and quality living environment. Factors such as noise, lighting quality, and air quality impacts to the occupants are the main features of quality of indoor environment.

ACI indoor environmental quality team can carry out a workings conditions inspection to ensure the health and enhance the productivity of our organization.

A better indoor environmental quality can enhance the wellbeing of buildings occupants. It also can lead to a decrease in employee's complaints and increase in productivity.



## 4. Indoor Air Quality (IAQ) Assessment

Problems related to poor IQA have existed ever since human beings started buildings shelters to protect themselves from the harshness of the natural environmental. There is increasing amount of scientific evidence indicating that a range of health problems and complaints are associated with poor IQA.

The Factor affecting Indoor Air Quality:

- Temperature;
- Air Movement;
- Airborne particles; and
- Combustion gases, etc.

In response to the importance of IAQ and the establishment of IAQ certification scheme, ACI offers IAQ assessment services. We provide walk-through and on-site inspection in order to survey and measure the air quality at the premises. We are responsible to consolidate measurement results for diagnosis and analysis of the IAQ and provide professional recommendations for mitigations.

