



Sustainable Concrete Solutions

Alliance recognizes the "Building Green" need and is innovative in sustainable concrete solutions.

We help our customers to "Build Green Home with Grey Concrete", supporting creative and effective sustainable development of Hong Kong.



Enhancing Values

to our customers

improve
productivity

innovation
collaboration

enhancing
efficiency

upgrading
our product quality
control system

NO.

Alliance recognizes that the construction industry is shifting toward more cost-effective and environmentally friendly solutions and we embed customer focus as our core business strategy and our day-to-day operations.

We seek to provide product with better quality and service and deliver environmental benefits through two main themes of actions:

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Pioneer
of Green
concrete
product

Concrete Product Carbon Footprint Mark

ISO 14040:2006
Life Cycle Assessment

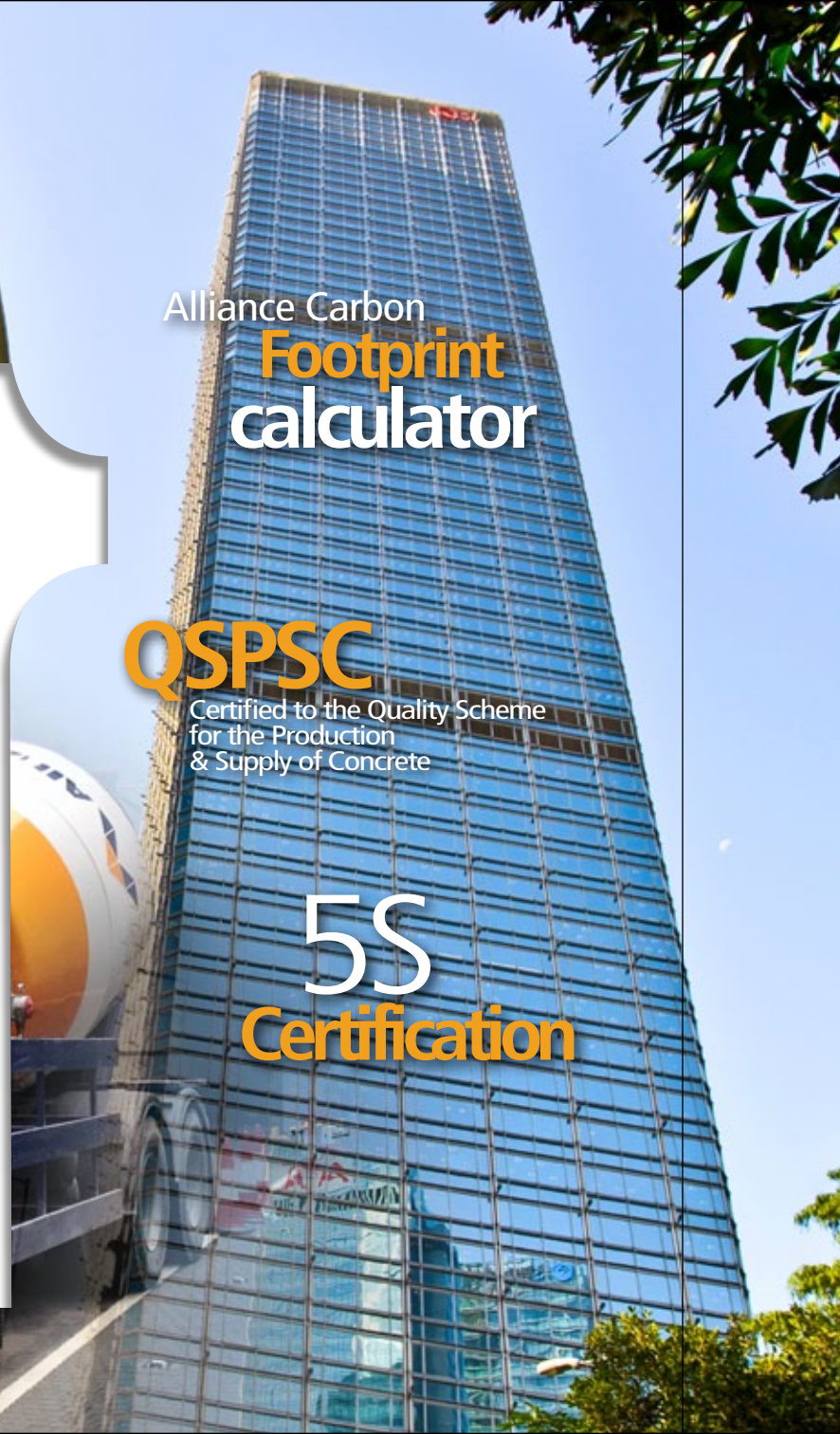
ISO 14064
Greenhouse
Gas Verification



Alliance Carbon
Footprint
calculator

QSPSC
Certified to the Quality Scheme
for the Production
& Supply of Concrete

5S
Certification



We contribute to the development of a
low carbon economy.

Environmental benefits have resulted
through our strategically located
batching plants throughout Hong Kong
that minimize the delivery distance
to project sites.



reducing our
Footprint

environmentally
friendly
for a
healthier
life

Contribute
**low
carbon**
economy

minimize the
**delivery
distance**
to project sites

16%
Carbon
Reduction

Carbon
**Reduction
Initiatives**

Increase the number
environmental friendly
**EURO V
trucks**

We have progressed to replace our mixer truck fleet to the environmental friendly EURO V trucks. Our energy saving initiatives and other greenhouse gas emission reduction initiatives had resulted in 16% carbon reduction (as at Dec 2012) as compare to our base-year 2007 performance.

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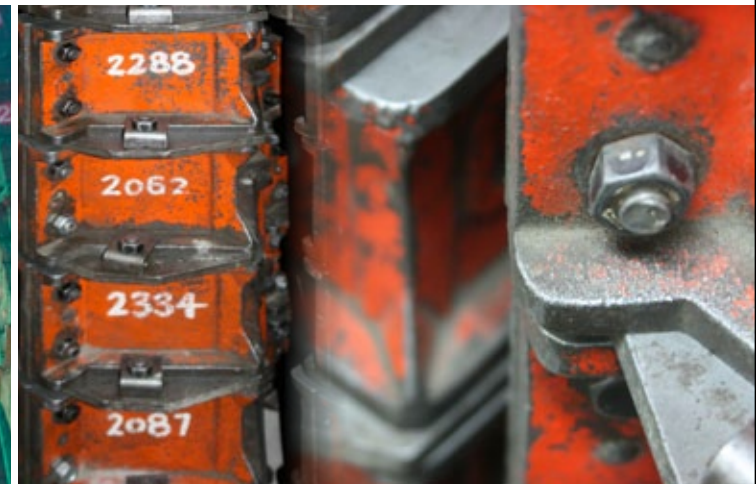
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Concrete is by far the most important, the most versatile, and most widely used building materials worldwide. By precise mixing and design engineering, our concrete products can satisfy almost any set of performance specifications for a diverse range of applications. To uphold our responsibility to climate protection we are innovating with our product development. Our High Performance Concrete products provide sustainability benefits within the life cycle of buildings and structures, while also reduce the concrete's embodied carbon.

Sustainable Concrete Solutions

- The raw materials of our concrete products are from *responsible source* and are either locally manufactured, or are regional materials *imported from within 800km from Hong Kong*.
- Our aggregate production lines *accept surplus rocks* from local development projects, turn the natural resources into useable aggregates while prevent them from being disposed to landfill sites or transported to other regions generating excessive greenhouse gases.
- Our production facilities and *design engineering* allow us to produce concrete with recycled and secondary aggregates.
- The application of supplementary cementitious materials *reduces the embodied carbon* of our concrete products.
- Our patented High Early Strength Concrete, EarlyCrete™ if applies to highway projects enables *to re-open the road within 6 hours* of traffic, greatly reduces the traffic burden from road maintenance and construction works.
- We can produce *high performance concrete* where the compressive strength over 100MPa. which help the building designer to achieve optimized space with reduced concrete structure size.





Facilitate your Green Building Rating



Green Building Standards such as BEAM Plus, LEED, Greenglobes, and En-vision are developed to assess the performance and sustainability of buildings and infrastructure. While each rating system may vary, there are similarities when evaluating building materials.

Three measurements of materials predominate:

- reduced embodied energy and carbon footprint;
- reduced resource depletion;
- and transparency in reporting environmental impacts.

To commit our responsible stewardship of the environment and to satisfy our customers' need to their project green building rating, we managed to reduce the environmental impacts which may have in the entire life cycle of the concrete. We provide verified Carbon Footprint data of both embodied Carbon of our concrete products and the greenhouse gas emissions from our operations to our customers. Through the self-developed Carbon Footprint Calculator we assist our customers to make green purchasing choices. We also disclose our environmental performance through our Sustainability Report.

we use **Local** **Regional** **Manufactured** **Materials**

Alliance operates 8 concrete batching plants in Hong Kong with 14 production lines supplying diverse range of concrete products to the local construction projects. While our concrete products are produced locally, the raw materials we are using are either manufactured locally, or are Regional Manufactured Materials which manufactured within 800km from our sites; reduced the environmental impacts arising from transportation.



Concrete Product **Carbon Footprint Mark**

We are pleased to be the first construction materials company in Hong Kong to be able to provide the certified Carbon Footprint Mark for its Ready-mixed Concrete. The Product Carbon Footprint was calculated by SGS Hong Kong Limited in accordance with ISO14040:2006 Life Cycle Assessment - Principles & Framework. The Carbon Footprint Mark shows that the corresponding cradle-to-gate Greenhouse Gas emissions of a cubic meter of Ready-mixed Concrete, accounting for raw materials acquisition and delivery, manufacturing, to internal transportation to mixer truck, is 340kgCO₂e.

Greenhouse gas emissions of this Ready-mixed Concrete (without any packaging) are 340kgCO₂e. The calculation is based on the data collected in March 2013 from cradle to gate.

SGS Report No. HK12129

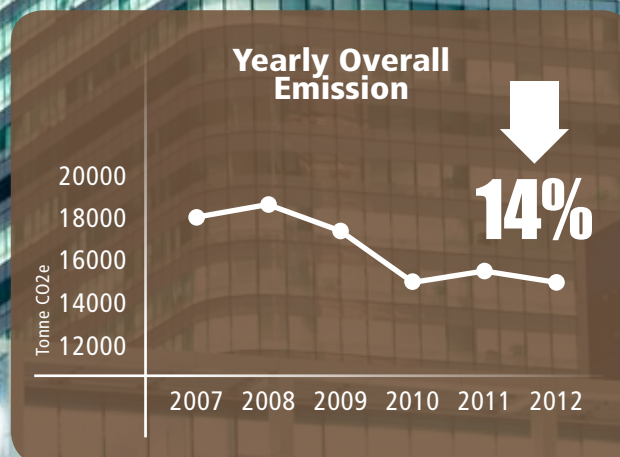
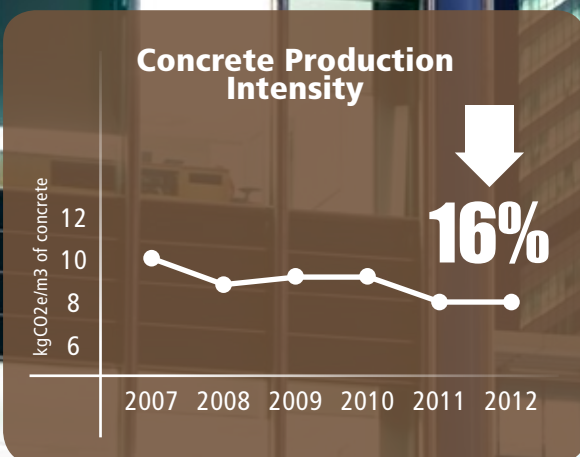


商界減碳建未來 CarbonSmart

Being a partner of the CarbonSmart Program, Alliance commissioned an independent verification by SGS Hong Kong Limited to assure the reported Greenhouse Gas emissions, as arising from production and supply of aggregates and concrete products. The verification assured the reporting boundary, the appropriateness of the conversion factors being applied and the accuracy of the data. It ensures the most comprehensive, accurate and transparent disclosure of our Carbon impacts, while offers us opportunities for reducing our emissions.



CO₂



Our Carbon Reduction Initiatives

Alliance initiated to Carbon Footprint our operations in 2008 with an aim to quantify our Carbon impact and to explore any reduction opportunities. We determined our Carbon Reduction goals driving the innovations for energy saving in the entire stream from our quarry operations to the concrete manufacturing and delivery.

By end of 2012 we have achieved a 16% reduction of the Carbon Intensity of our concrete operations and also reduced our Greenhouse gas emission volume by 14% as compared to the base year 2007.

Alliance

Carbon Footprint Calculator

To help our customers moving to a low-carbon economy, we developed a comprehensive Carbon Footprint Calculator which enabled us to let our customers know the carbon impact of our concrete products. The tool has been developed according to PAS2050:2011 and ISO14040:2006; and has verified data on the embodied carbon of the raw materials, the manufacturing and delivery processes.

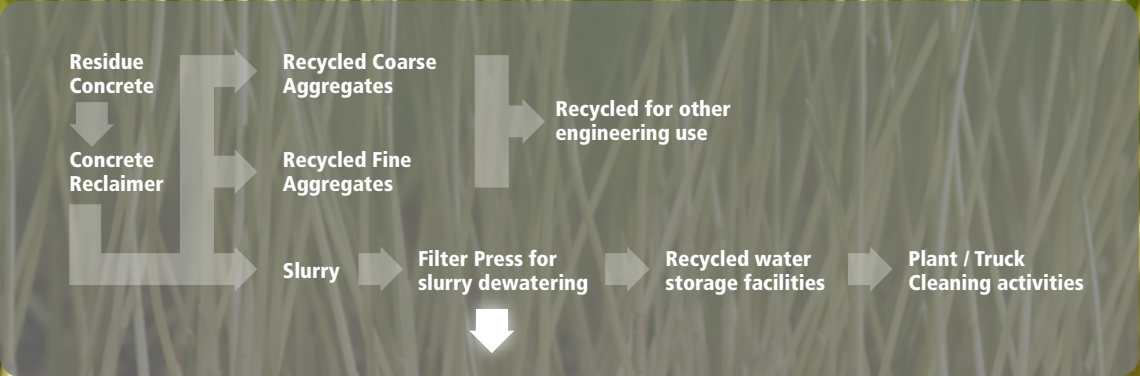
The Carbon Footprint Calculator helps customers to:

- Understand the carbon impact of the concrete products they are buying;
- Have most accurate data for managing their project carbon footprint;
- Make low carbon choices actively.

Note: 1) GGBS* (30% GGBS, 70% OPC) imported from regions of 1,000km from Hong Kong
2) Compressive strength classes of concrete is extracted from EN206
3) Concrete column scenario is extracted from Specifying Sustainable Concrete published by the Concrete Centre of the MPA UK

We continuously looking for innovative ways to lessen our environmental footprint and as such commit to the responsible stewardship of the environment in all our activities. In waste reduction and water conservation which are the integral parts of Alliance’s sustainability strategy as well as the major environmental concerns of the wider Hong Kong community, we invested in our concrete batching plants the concrete reclaimer and the slurry treatment plant which recycle the aggregates from the concrete waste while dewater the slurry before its disposal.

Our Sustainable Practices



SOLID WASTE
-21%

- Certified to the Quality Scheme for the Production & Supply of Concrete (QSPSC)
- ISO9001:2008 Certification
- ISO14001:2004 Certification
- OHSAS18001:2007 Certification
- 5S Certification

Recognitions & Selected Awards

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| 2012 | Silver Award (Manufacturing) - Hong Kong Awards for Environmental Excellence Silver Award - Hang Seng Pearl River Delta Environmental Award Merit Award - Productivity & Quality, Hong Kong Awards for Industries HKCA Environmental Merit Award |
| 2011 | Merit Award (Manufacturing) - Hong Kong Awards for Environmental Excellence Bronze Award - Hang Seng Pearl River Delta Environmental Award Silver Award - 2nd Outstanding Corporate Citizenship Award OSH Annual Report Award - OSHC Hong Kong Occupational Safety & Health Award CSR Advocate Mark - HSBC HKQAA CSR Index |
| 2009-2012 2009 | Green Medalist - Hang Seng Pearl River Delta Environmental Award Silver Award - The HK Federation of Insurers Award for Excellence in OSH HKCA Safety Gold Award |
| 2008 & 2011-2012 2008 & 2010 2007-2008 2007 2006 & 2009-2012 2004-2012 | Class of Excellence WasteWise Label - Hong Kong Awards for Environmental Excellence HKCA Construction Safety Innovation Award Silver Award - OSHC Good Housekeeping Award HKCA Hong Kong Construction Environmental Award OSHC Safety Performance Award HKCA Proactive Safety Contractor Award |

