

Questionnaire Survey (Marking Scheme)
Sustainable Development of the Construction Industry of Hong Kong

The government of HKSAR continuously promoted sustainable development through media, exhibitions and public consultation between 1998-2000. This survey seeks to collect your perception and the extent of your involvement in sustainable development of the construction industry of Hong Kong.

Please tick/click on the box for each question and type your answers in the space provided _____ according to directions given.

General Information

A. What is the nature of your Company?

- Government department, public developer or quasi-government organization
- Private developer
- Contractor
- Consultant
- Other. Please specify: _____

B. What is the size of your Company?

- Less than 50 employees
- 51 – 250 employees
- 251 – 500 employees
- More than 500 employees

C. Are you affiliating to the following professional institutions?

- Yes Please check HKIA
 HKIE
 HKIS
 HKICM
 Other. Please specify: _____

No Please go to item E

D. What is your class of membership in the above professional institutions?

- Fellow
- Corporate member
- Associate member
- Graduate member
- Other. Please specify: _____

E. How many years have you practised in the construction field?

- Less than 5 years
- 5 – 10 years
- 10 – 15 years
- 15 – 20 years
- Over 20 years

F. How old are you

- 20 to 29
- 30 to 39
- 40 to 49
- 50 to 59
- 60 or older

Part I: The following is about your *Awareness* of the sustainable development movement. (ONE mark for each selected answer except otherwise specified)

1. By what means you have acquired knowledge of sustainable development? You may select **more than one** answer.

- Attending seminars arranged by the government
- Attending CPD events arranged by professional institutes
- Through working experience / on-job training
- Through self-study
- Other channels _____

2. The three attributes of sustainable development are ‘economic’, ‘social’ and ‘environmental’. In your opinion, which one is more important? You may select **more than one** answer.

- Economic (1 mark)
- Social (1 mark)
- Environmental (1 mark)
- They are equally important (3 marks)

3. Subsequent to the government consultation about sustainable development for Hong Kong between 1998 to 2000, the followings are the proposed *'key concerns'* and *'indicators'* of sustainable development for Hong Kong. Show your acknowledgement to the proposed key concerns by ticking/clicking on the box provided. You can select **more than one answer** whenever appropriate.

- Economy
- Health and Hygiene
- Natural Resources
- Society and Social Infrastructure
- Biodiversity
- Leisure and Cultural Vibrancy
- Mobility

4. Do you agree that the 'key concerns' and 'indicators' of question 3 above are the only elements that constitute the sustainability of Hong Kong?

- Yes,
- No,

If 'no', what other element(s) you wish to add _____.

5. Are you aware that there is a growing recognition of the concept of sustainable development among the people around you? You may select **more than one** answer from the following boxes.

- Your Colleague
- Your Counterpart
- Your Competitor
- Your Client
- Government Official
- Others

6. The followings are principal stakeholder groups that constitute the construction industry of Hong Kong. Each group possesses substantial power to influence sustainability output in their belonging disciplines.

Base on your opinion, please provide the weighting of influential power of each group. Your weighting of your opinion must sum up to 100%.

<u>Stakeholder Groups</u>	<u>Weighting of Influential Power</u>
Government	_____ %
Developer	_____ %
Consultant (including architect & engineer)	_____ %
Contractor (including subcontractor & supplier)	_____ %
Individual Non-professional Participants	_____ %

Total: 100 %

**Part II: The following is about your *Concerns* about sustainable development.
(Marking provisions are as indicated to each respective answer)**

Please tick/click the appropriate answers indicating the degree of your agreement on the following statements

1	We are approaching the limit of the number of people the earth can support.	2 <input type="checkbox"/> Strongly Agree	1 <input type="checkbox"/> Agree	-1 <input type="checkbox"/> Disagree	-2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
2	The balance of nature is very delicate and easily upset.	<input type="checkbox"/> Strongly Agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly Disagree	<input type="checkbox"/> No Opinion
3	Humans have the right to modify the natural environment to suit their needs.	-2 <input type="checkbox"/> Strongly Agree	-1 <input type="checkbox"/> Agree	1 <input type="checkbox"/> Disagree	2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
4	Humankind was created to rule over the rest of nature.	<input type="checkbox"/> Strongly Agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly Disagree	<input type="checkbox"/> No Opinion
5	When humans interfere with nature it often produces disastrous consequences.	2 <input type="checkbox"/> Strongly Agree	1 <input type="checkbox"/> Agree	-1 <input type="checkbox"/> Disagree	-2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
6	Plants and animals exist primarily to be used by humans.	-2 <input type="checkbox"/> Strongly Agree	-1 <input type="checkbox"/> Agree	1 <input type="checkbox"/> Disagree	2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
7	To maintain a healthy economy we have to develop a “steady-state” economy where industrial growth is controlled.	2 <input type="checkbox"/> Strongly Agree	1 <input type="checkbox"/> Agree	-1 <input type="checkbox"/> Disagree	-2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
8	Humans must live in harmony with nature in order to survive.	<input type="checkbox"/> Strongly Agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly Disagree	<input type="checkbox"/> No Opinion
9	The earth is like a spaceship, with only limited room and resources.	<input type="checkbox"/> Strongly Agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly Disagree	<input type="checkbox"/> No Opinion
10	Humans need not adapt to the natural environment because they can remake it to suit their needs.	-2 <input type="checkbox"/> Strongly Agree	-1 <input type="checkbox"/> Agree	1 <input type="checkbox"/> Disagree	2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
11	There are limits to growth beyond which our industrialized society cannot expand.	2 <input type="checkbox"/> Strongly Agree	1 <input type="checkbox"/> Agree	-1 <input type="checkbox"/> Disagree	-2 <input type="checkbox"/> Strongly Disagree	0 <input type="checkbox"/> No Opinion
12	Humankind is severely abusing the environment.	<input type="checkbox"/> Strongly Agree	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree	<input type="checkbox"/> Strongly Disagree	<input type="checkbox"/> No Opinion

Part III: This section of the questionnaire wishes to explore whether you have actually *motivated* changes towards sustainability since 2000 within your daily duties.

(Marking provisions are as indicated to each respective answer)

Please tick/click the appropriate answers indicating you have motivated changes since 2000 (e.g. use of environmentally friendly materials and methods in construction works, caring more about safety and health issues in discharging construction duties, and the increased emphasis on the quality of products).

1	What is the extent of changes in using environmentally friendly material/green construction methods?	1 <input type="checkbox"/> Nil -10%	2 <input type="checkbox"/> 10 -20%	3 <input type="checkbox"/> 20 – 30%	4 <input type="checkbox"/> 30 -40%	5 <input type="checkbox"/> >50%
2	What extra cost would you consider paying for adopting changes to using environmentally friendly materials /green construction methods?	<input type="checkbox"/> 1%-3%	<input type="checkbox"/> 3%-5%	<input type="checkbox"/> 5%-7%	<input type="checkbox"/> 7%-10%	<input type="checkbox"/> >10%
3	What is the extent of changes in caring of safety and health issues in project design and construction process?	<input type="checkbox"/> Nil -10%	<input type="checkbox"/> 10 -20%	<input type="checkbox"/> 20 – 30%	<input type="checkbox"/> 30 -40%	<input type="checkbox"/> >50%
4	What extra cost would you consider paying for adopting changes to increase safety and health in project design and construction process?	<input type="checkbox"/> 1%-3%	<input type="checkbox"/> 3%-5%	<input type="checkbox"/> 5%-7%	<input type="checkbox"/> 7%-10%	<input type="checkbox"/> >10%
5	What is the extent of changes in emphasis of product quality?	<input type="checkbox"/> Nil -10%	<input type="checkbox"/> 10 -20%	<input type="checkbox"/> 20 – 30%	<input type="checkbox"/> 30 -40%	<input type="checkbox"/> >50%
6	What extra cost would you consider paying for adopting changes to enhance product quality?	<input type="checkbox"/> 1%-3%	<input type="checkbox"/> 3%-5%	<input type="checkbox"/> 5%-7%	<input type="checkbox"/> 7%-10%	<input type="checkbox"/> >10%
7	If you try to promote environmental issues, safety and health issues, and enhance quality in your project, what is the percentage of cost increase you would propose to your boss or your client?	<input type="checkbox"/> <1%	<input type="checkbox"/> 2%-3%	<input type="checkbox"/> 3%-4%	<input type="checkbox"/> 4%-5%	<input type="checkbox"/> over 5%
8	If you are not aware of the mentioned changes are underway, what is the main reason for that? (this question should be categorized and assessed in Section II –Awareness)	<input type="checkbox"/> I don't know the reason	<input type="checkbox"/> it is useless	<input type="checkbox"/> nobody cares about it	<input type="checkbox"/> impossible to change	<input type="checkbox"/> incur additional cost

Part IV: This section of the questionnaire wishes to explore whether you have actually *implemented* changes towards sustainability since 2000 within you daily duties.

Please tick/click the appropriate answers that indicate your implemented changes since 2000 (e.g. use of environmentally friendly materials and methods in construction works, caring more about safety and health issues, and increase emphasis upon the quality of products).

1	Extent of changes in using environmentally friendly material/green construction method you would consider?	1 <input type="checkbox"/> Nil -10%	2 <input type="checkbox"/> 10 -20%	3 <input type="checkbox"/> 20 – 30%	4 <input type="checkbox"/> 30 -40%	5 <input type="checkbox"/> >50%
5	What is the percentage of extra cost you would recommend to your boss or your client to pay for using environmentally friendly materials/ green construction methods	<input type="checkbox"/> <1%	<input type="checkbox"/> 2%-3%	<input type="checkbox"/> 3%-4%	<input type="checkbox"/> 4%-5%	<input type="checkbox"/> over 5%
2	Extent of changes in applying care for safety and health issues in project design and construction process you would consider?	<input type="checkbox"/> Nil -10%	<input type="checkbox"/> 10 -20%	<input type="checkbox"/> 20 – 30%	<input type="checkbox"/> 30 -40%	<input type="checkbox"/> >50%
4	What is the percentage of extra cost you would recommend to your boss or your client to pay for increasing safety and health in project design and construction process?	<input type="checkbox"/> <1%	<input type="checkbox"/> 2%-3%	<input type="checkbox"/> 3%-4%	<input type="checkbox"/> 4%-5%	<input type="checkbox"/> over 5%
3	Extent of changes achieved in the area of enhancing product quality?	<input type="checkbox"/> Nil -10%	<input type="checkbox"/> 10 -20%	<input type="checkbox"/> 20 – 30%	<input type="checkbox"/> 30 – 40%	<input type="checkbox"/> >50%
6	What is the percentage of extra cost you would recommend to your boss or your client to pay for enhancing product quality?	<input type="checkbox"/> <1%	<input type="checkbox"/> 2%-3%	<input type="checkbox"/> 3%-4%	<input type="checkbox"/> 4%-5%	<input type="checkbox"/> over 5%
7	If your boss or your client is reluctant to accept your change proposal in sustainable construction, what will you do?	<input type="checkbox"/> leave it as it is	<input type="checkbox"/> leave it for other project	<input type="checkbox"/> try again when condition is allowed	<input type="checkbox"/> try to convince them	<input type="checkbox"/> insist your change proposal
8	In what way have you encouraged your boss or your client to gradually adopt such changes? (this question should be categorized and assessed in Section II – Awareness)	<input type="checkbox"/> leave it as it is	<input type="checkbox"/> one step at a time	<input type="checkbox"/> follow statutory requirements	<input type="checkbox"/> step by step beyond statutory requirements	<input type="checkbox"/> whenever I think fit

Part V: Change in Perception

This question tries to obtain the *shift* of cultural perception of sustainable development since 2000 and compare that with the current year.

On a scale of 5, circle/click the number of the following conditions that best represents your perception of the role of a construction professional in the following sustainable development issues (1 represents negligible significance and 5 represents extremely significant. Please **circle the scale in both columns** to indicate whether you have changed your perception.) :-

1 = 1 mark, 2 = 2 mark and so on.

Questions 1, 2, 3 are used to measure the shift of Awareness from year 2000 to 2004 in Part II of this questionnaire survey. Questions 4, 5, 6 are for Concern in Part III. Questions 7, 8, 9 are for Motivation in Part IV and questions 10, 11, 12 are for Implementation in Part V.

Changes of your Perception	2000	2002	2004
1. I believe sustainable development is important to the world.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
2. Use of environmentally friendly materials and green construction methods will eventually help to preserve natural resources.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
3. I am aware that sustainable development is getting more recognition among my colleagues and co-workers.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
4. Caring about safety and health in the project design & construction process, and an emphasis of quality of products is a sign of recognising the importance of the socio-economic equity of sustainable development.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
5. I believe that using environmentally friendly materials and green construction methods, caring for safety & health, and emphasising product quality will increase construction cost and time.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
6. On the contrary, the use of environmentally friendly materials and green construction methods, caring of safety & health, and enhancing product quality would reduce construction cost and time.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
7. Even if there is an increase in the construction cost and time, I intended to apply sustainable construction methods in Hong Kong.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
8. Even if there is an increase in the construction cost and time, I have noticed that my colleagues and co-workers intended to apply sustainable construction methods in Hong Kong.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□

9. Even if there is an increase in the construction cost and time, I have noticed that my clients intended to apply sustainable construction methods in Hong Kong.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
10. I have implemented sustainable development principles in my work and will practice the same continuously.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
11. I have found that my colleagues and co-workers have implemented green ideas and added socio-economic equity elements in their work.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□
12. I have found that my clients have implemented green ideas and added socio-economic equity elements in their proposed projects.	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□	1 2 3 4 5 □□□□□

Thank you!