



# Carbon Reduction Verification Report

## For

### Yau Lee Construction Company Limited

(As Part of the Carbon Reduction Certificate –  
Type II – Office-Based Organisations /  
Operational Units)

Business Environment Council Limited  
商界環保協會有限公司

25 March 2020

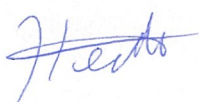


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			<b>Name</b>	<b>Signature</b>	
		<b>Prepared by</b>	Heidi Ko BSocSc (Hons)		
		<b>Checked by</b>	Tommy Szeto BEng (Hons), MSc, CEng, MIMechE		
		<b>Approved by</b>	C F Leung BEng (Hons), MSc, CEng, RPE (ENV), MHKIE, CAP, QSP		

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## 1. Executive Summary

Business Environment Council Limited was commissioned by Yau Lee Construction Company Limited (hereafter “Yau Lee” or “Client”) as the Qualified Service Provider for the purpose of the application of renewal Carbon Reduction Certificate for Yau Lee, given the carbon audit period from 1 May 2018 to 30 April 2019.

This Carbon Reduction Verification Report is to verify the result of the carbon audit covering the baseline period, previous audit period and reduction period for the Carbon Reduction Certificate which is established to recognise office-based organisations / operational units that achieved a verified absolute reduction of overall carbon emissions. As one of the certificates in the scheme of Hong Kong Green Organisation Certification, the Carbon Reduction Certificate is organised by the Environmental Campaign Committee and implemented by the Hong Kong Green Organisation Certification Technical Consultant.

In order to apply the renewal of Carbon Reduction Certificate, calculation has been conducted to evaluate the captioned office’s Greenhouse Gases emissions reduction performance. The result is summarised as the table below:

	GHG Emissions/Removals (In Tonnes of CO <sub>2</sub> -equivalent)		
	Baseline Period 01/05/2011 – 30/04/2012	Previous Audit Period 01/05/2015 – 30/04/2016	Reduction Period 01/05/2018 – 30/04/2019
Scope 1 Direct Emissions	59.509	42.904	46.809
Scope 1 Direct Removal	0.000	0.000	0.000
Scope 2 Energy Indirect Emissions	151.108	116.219	59.800
Scope 3 Other Indirect Emissions	39.895	(1.106)	6.381
Other GHG Offsets/Removals	0.000	0.000	0.000
<b>Total GHG Emissions</b>	<b>250.512</b>	<b>158.017</b>	<b>112.990</b>
<b>Carbon Reduction Against Previous Audit Period</b>	<b>28.495%</b>		
<b>Carbon Reduction Against Baseline Period</b>	<b>54.896%</b>		

Yau Lee Construction Company Limited is the participant applying for renewal of the Carbon Reduction Certificate. Provided the carbon reduction programmes implemented by Yau Lee, has achieved 28.495% carbon reduction, when comparing with previous audit period (01/05/2015 – 30/04/2016) and 54.896% cumulative carbon reduction since baseline period (01/05/2011 – 30/04/2012) which is above the requirement for renewal of the Carbon Reduction Certificate of at least another 3% reduction in overall carbon footprint against baseline, therefore, the Carbon Reduction Certificate renewal is anticipated to be awarded.

## 2. Introduction

### Background

Business Environment Council Limited (hereafter “BEC”) was commissioned by Yau Lee Construction Company Limited (hereafter “Yau Lee” or “Client”) as the Qualified Service Provider (hereafter “QSP”) for the purpose of the application of the renewal for Carbon Reduction Certificate for Yau Lee Construction Company Limited, given the carbon audit period of 1 May 2018 to 30 April 2019.

The Carbon Reduction Certificate is one of the certificates in the scheme of Hong Kong Green Organisation Certification (hereafter “HKGOC”). The Carbon Reduction Certificate is organised by the Environmental Campaign Committee (hereafter “ECC”) and implemented by the HKGOC Technical Consultant.

The Carbon Reduction Certificate is established to recognise those office-based organisations / operational units that achieved a verified absolute reduction of overall carbon emissions, in order to:

- Encourage local offices to identify, and take measures to reduce their carbon footprints;
- Provide recognition to participants according to their respective levels of achievements in carbon footprint reduction; and
- Facilitate reporting of third-party verified achievements of overall carbon footprint reduction.

In order to provide a systematic and scientific analysis, the latest standards stated in the “Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purposes) in Hong Kong 2010” (hereafter “HK Guidelines 2010”) are adopted for the carbon audit for the Carbon Reduction Certificate.

### Objectives

The objectives of this Carbon Reduction Verification Report are to quantify the GHG emissions within the physical and operational boundaries and verify the carbon reduction performance against the baseline period and previous audit period after the implementation of carbon reduction programmes. The production of this report is aimed to attain the Carbon Reduction Certificate, hence reflect the contribution of reporting entity in reducing GHG emissions.

### Structure of this Report

This Carbon Reduction Verification Report presents the verified result of the carbon audit covering the baseline period, previous audit period and the reduction period for the renewal of Carbon Reduction Certificate.

The remaining parts of this report cover:

- i. Name of the reporting entity;
- ii. Description of the reporting entity;
- iii. Reporting period;
- iv. Scope of physical boundary chosen;
- v. Scope of operational boundary chosen;
- vi. Methodologies for quantifying emissions and removals;
- vii. Information on GHG emissions;
- viii. Information on GHG reduction programmes;
- ix. Contact person of the reporting entity;
- x. List of data sources and references;
- xi. Total and breakdown of carbon footprint;
- xii. Calculated reduction of carbon footprint; and
- xiii. Declaration of Qualified Service Provider.

### **3. Name of the Reporting Entity**

The name of the reporting entity is **Yau Lee Construction Company Limited**.

### **4. Description of the Reporting Entity**

Yau Lee Construction Company Limited is located at 10/F, Tower 1, Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Hong Kong. The premises comprise a total area of 1,143 m<sup>2</sup>, accommodating about 100 staff members during the audit period.

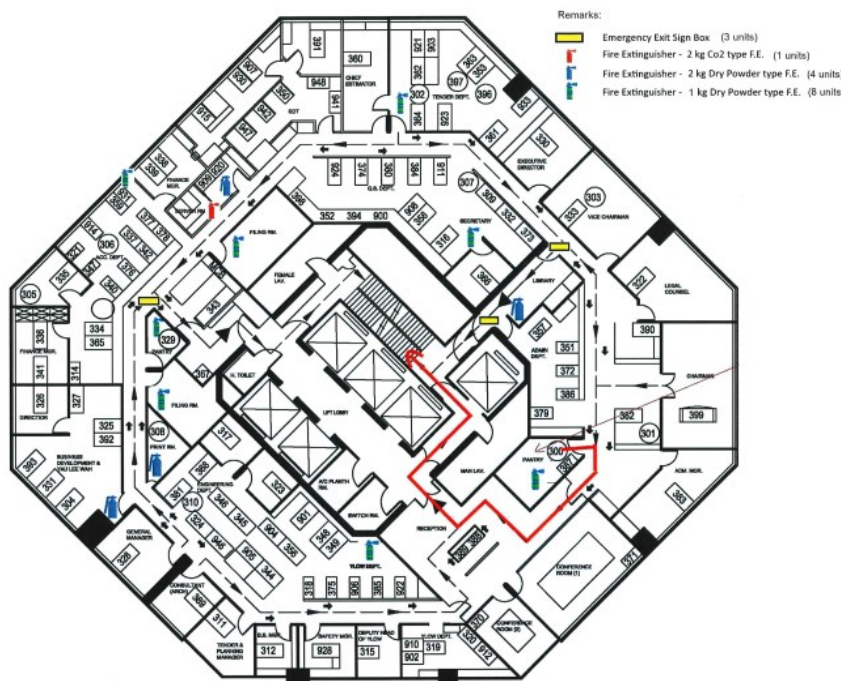
### **5. Reporting Period**

The reporting period covers a baseline period, previous audit period and a reduction period of 12 months respectively:

- Baseline Period: 1 May 2011 to 30 April 2012;
- Previous Audit Period: 1 May 2015 to 30 April 2016 and
- Reduction Period: 1 May 2018 to 30 April 2019.

## 6. Scope of Physical Boundary Chosen

The chosen scope of physical boundary includes all area of the office spaces, which is shown in **Figure 1**.



**Figure 1** Floor Plan of the Premises

## 7. Scope of Operational Boundary Chosen

The premises serve as the headquarters to provide all necessary logistic and clerical supports to all employees of the Client.

To separately account for direct and indirect emissions, different types of emissions are categorised into “scopes” as follows:

Sources/ Removals	Descriptions	Chosen Scopes of Yau Lee Construction Company Limited	
Scope 1 – Direct Emissions and Removals			
Stationary Sources Combustion	Combustion of fuels in stationary sources (excluding electrical equipment) to generate electricity, heat or steam.	N/A	No diesel fuel combusting emergency generator in the reporting entity.



<b>Mobile Sources Combustion</b>	Combustion of fuels in mobile sources controlled by the reporting entity and dedicated to the office concerned to transport materials, products, waste and employees to and/or from the office concerned or used within the physical boundary of the office.	Yes	Fuel combusting company vehicles are owned and operated by the reporting entity.
<b>Release from Equipment and Systems</b>	Intentional or unintentional GHG releases from equipment and system.	N/A	Central air conditioning was supplied to reporting entity as well as the whole building and other tenants. Relevant refrigerant consumption records were not provided by property management of Enterprise Square. Therefore, Yau Lee cannot estimate the amount of GHG emissions for refrigeration/air-conditioning at the reporting entity.
<b>Assimilation of CO<sub>2</sub> into Biomass</b>	Through planting trees in addition to those already in existence before the operation of the concerned office.	N/A	No soft landscape in the reporting entity.
<b>Scope 2 – Energy Indirect Emissions</b>			
<b>Purchased Electricity</b>	Electricity purchased from power companies.	Yes	Electricity purchased from The China Light and Power Hong Kong Limited (hereafter “CLP”) for the operation of the reporting entity.
<b>Purchased Towngas</b>	Towngas purchased from the Hong Kong and China Gas Company.	N/A	No Towngas is purchased and consumed by the reporting entity.

<b>Scope 3 – Other Indirect Emissions</b> <small>Note 1</small>			
<b>Paper Waste Disposal</b>	Methane gas generation at landfill in Hong Kong due to disposal of paper waste.	Yes	Methane gas generation at landfill in Hong Kong due to the paper consumed for the operation of reporting entity.
<b>Fresh Water</b>	GHG emissions due to electricity used for fresh water processing by the Water Supplies Department (hereafter “WSD”).	N/A	Although the indirect emissions from electricity used for fresh water processing by the Water Supplies Department and electricity used for sewage processing by the Drainage Services Department are listed as mandatory elements for Type II applicants of the Carbon Reduction Certificates Scheme, Yau Lee has proposed to exclude both elements
<b>Sewage Discharge</b>	GHG emissions due to electricity used for sewage process by the Drainage Services Department (if the sewage collected within physical boundary is treated by the Drainage Services Department (hereafter “DSD”).	N/A	from its carbon inventory as: (1) property management of Enterprise Square was unable to provide a breakdown of water usage for Yau Lee; and (2) freshwater consumption and sewage treatment from the reporting entity’s operations only made insignificant contributions to Yau Lee’s overall GHG footprint. From this point of view, it was revealed that such exclusion should be justified and accepted.

**Note 1:** With reference to the HK Guidelines 2010, Scope 3 is optional for reporting. However, paper waste disposal is mandatory in calculation of the carbon footprint for Carbon Reduction Certificate.

## 8. Methodologies for Quantifying Emissions and Removals

### 8.1 Approach and Procedures

The following actions have been undertaken by BEC for conducting comprehensive GHG emissions study:

- i. **Coordination and Management of GHG Emissions Study** – BEC has coordinated with the project team to set the assessment target, on-going programme and timeframe;
- ii. **Identification of the Assessment Scopes and Boundaries** – Project team has provided the entity's background information, including space area, emission sources, operation boundary etc. to BEC for identifying the assessment scope and boundary;
- iii. **Data Collection and Checking** – BEC has issued checklists for the project team to provide the entity's data, including electricity bills, paper consumption and recycling records, fuel consumption records for company vehicle, etc. in order to verify the given information; and
- iv. **Carbon Audit Reporting** – BEC has compiled the Carbon Reduction Verification Report to present the details of the study and calculation in quantifying the carbon footprint incurred during the reporting period.

### 8.2 GHG Emissions Evaluation Methodologies and Calculations

The GHG emissions quantification methodologies stated in HK Guidelines 2010 jointly published by the Electrical and Mechanical Services Department and the Environmental Protection Department are followed for the carbon audit. The applied calculation equations and procedures are summarised in below.

#### Scope 1 – Direct Emissions and Removals

##### GHG Emissions from Stationary Combustion Sources

Emission (CO<sub>2</sub>) =  $\sum$  Amount of Fuel Consumed x Emission Factor of CO<sub>2</sub>

Emission (CH<sub>4</sub>/N<sub>2</sub>O) =  $\sum$  Amount of Fuel Consumed x Emission Factor of (CH<sub>4</sub>/N<sub>2</sub>O) x Relative Global Warming Potential (hereafter "GWP")

where

- Emission, in terms of tonnes of CO<sub>2</sub>-equivalent, is summed over all types of fuel used; and
- Amount of fuel consumed is in terms of volume (i.e. litre).

## Scope 2 – Energy Indirect Emissions

### Indirect Emissions from Electricity Purchased

GHG Emissions = Quantity of Purchased Electricity x Emission Factor

where

- Purchased electricity is measured in kilowatt-hours (kWh)

## Scope 3 – Other Indirect Emissions

### GHG Emissions from Paper Waste Disposed at Landfills

$E = (P_s + P_i - P_r - P_e) \times \text{Emission Factor (estimated at 4.800 kg CO}_2\text{-e/kg)}$

where

- E = Emissions from paper waste disposed at landfills
- $P_s$  = Paper inventory at the beginning of the reporting period (in storage) (kg)
- $P_i$  = Paper added to the inventory during the reporting period (kg)
- $P_r$  = Paper collected for recycling purpose (kg)
- $P_e$  = Paper inventory at the end of the reporting period (in storage) (kg)

## 9. Information on GHG Emissions

### 9.1 Baseline Period

The amount of GHG emissions from the Yau Lee during the baseline period of **1 May 2011 – 30 April 2012** are shown in Table 1 to Table 3 below:

**Table 1: GHG Emissions from Mobile Sources Combustion (1 May 2011 – 30 April 2012)**

Step 1	Step 2		Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
A	B	C	D	E	F	G	H	I
Source description with location (by different vehicle and fuel types)	Fuel Information		CO <sub>2</sub> emission factor	CO <sub>2</sub> emissions in tonnes of CO <sub>2</sub> -equivalent ((BxD)/1000)	CH <sub>4</sub> emission factor	CH <sub>4</sub> emissions in tonnes of CO <sub>2</sub> -equivalent ((BxF)/(1000x1000)xGWP)	N <sub>2</sub> O emission factor	N <sub>2</sub> O emissions in tonnes of CO <sub>2</sub> -equivalent ((BxH)/(1000x1000)xGWP)
	Amount of fuel (in litres)	Fuel type						
Passenger Cars	18,301.930	ULP	2.360	43.193	0.253	0.097	1.105	6.269
Private Van	3,661.040	ULP	2.360	8.640	0.203	0.016	1.140	1.294
<b>Total</b>				<b>51.833</b>		<b>0.113</b>		<b>7.563</b>

**Note 1:** CO<sub>2</sub> emission factor for Unleaded Petrol (ULP) is 2.360; CH<sub>4</sub> emission factor of passenger car (ULP) and private van are 0.253 and 0.203 respectively; N<sub>2</sub>O emission factor of 1.105 and 1.140 respectively, which are referred from HK Guideline 2010 Table 2.

**Table 2: GHG Emissions from Electricity Purchased from Power Companies (1 May 2011 – 30 April 2012)**

Step 1	Step 2	Step 3	Step 4
A	B	C	D
Facility/source description (i.e. area/facilities the electricity bill is reporting)	Amount of electricity purchased (kWh)	Emission factor (kg/kWh)	Indirect GHG emissions in tonnes of CO <sub>2</sub> -equivalent (BxC/1000)
		Territory-wide default value	Territory-wide default value
Purchased electricity used for common facilities and air-conditioning	215,869.000	0.700	151.108
<b>Total</b>			<b>151.108</b>

**Table 3: Methane Generation at Landfill in Hong Kong due to Disposal of Paper Waste (1 May 2011 – 30 April 2012)**

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
A	B	C	D	E	F	G
Source description (i.e. area/floor)	Amount of paper in storage at the beginning of the reporting period (kg)	Amount of paper purchased during the reporting period (kg)	Amount of paper collected for recycling during the reporting period (kg)	Amount of paper in storage at the end of the reporting period (kg)	Emission factor (kg CO <sub>2</sub> -e/kg of waste) <small>Note 1</small>	Indirect emissions in tonnes of CO <sub>2</sub> -equivalent (B + C - D - E) x F/1000
Office	0.000	9,333.020	1,021.500	0.000	4.800	39.895
<b>Total</b>						<b>39.895</b>

**Note 1:** For simplifying the accounting process, the default emission factor assumes that the total raw amount of CH<sub>4</sub> emitted throughout the whole decomposition process of the paper waste disposed at landfills will be emitted into the atmosphere within the same reporting period as paper waste collected. In addition, the default value does not take into account the reduction in emission due to collection, recovery and utilisation of landfill gas due to management practices at landfills. This emission factor is referred from HK Guideline 2010 Table 7.

## 9.2 Reduction Period

The amount of GHG emissions from the Yau Lee during the reduction period of **1 May 2018 – 30 April 2019** are shown in Table 4 to Table 6 below:

**Table 4: GHG Emissions from Mobile Sources Combustion (1 May 2018 – 30 April 2019)**

Step 1	Step 2		Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
A	B	C	D	E	F	G	H	I
Source description with location (by different vehicle and fuel types)	Fuel Information		CO <sub>2</sub> emission factor	CO <sub>2</sub> emissions in tonnes of CO <sub>2</sub> -equivalent ((BxD)/1000)	CH <sub>4</sub> emission factor	CH <sub>4</sub> emissions in tonnes of CO <sub>2</sub> -equivalent ((BxF)/(1000x1000)xGWP)	N <sub>2</sub> O emission factor	N <sub>2</sub> O emissions in tonnes of CO <sub>2</sub> -equivalent ((BxH)/(1000x1000)xGWP)
	Amount of fuel (in litres)	Fuel type						
Passenger Cars	9,734.540	ULP	2.360	22.974	0.253	0.052	1.105	3.335
Private Van	7,524.730	ULP	2.360	17.757	0.203	0.032	1.140	2.659
<b>Total</b>				<b>40.731</b>		<b>0.084</b>		<b>5.994</b>

**Note 1:** CO<sub>2</sub> emission factor for Unleaded Petrol (ULP) is 2.360; CH<sub>4</sub> emission factor of passenger car (ULP) and private van are 0.253 and 0.203 respectively; N<sub>2</sub>O emission factor of 1.105 and 1.140 respectively, which are referred from HK Guideline 2010 Table 2.



**Table 5: GHG Emissions from Electricity Purchased from Power Companies (1 May 2018 – 30 April 2019)**

Step 1	Step 2	Step 3	Step 4
A	B	C	D
Facility/source description (i.e. area/facilities the electricity bill is reporting)	Amount of electricity purchased (kWh)	Emission factor (kg/kWh)	Indirect GHG emissions in tonnes of CO <sub>2</sub> -equivalent (BxC/1000)
		Territory-wide default value	Territory-wide default value
Purchased electricity used for common facilities and air-conditioning	85,428.000	0.700	59.800
<b>Total</b>			<b>59.800</b>

**Table 6: Methane Generation at Landfill in Hong Kong due to Disposal of Paper Waste (1 May 2018 – 30 April 2019)**

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7
A	B	C	D	E	F	G
Source description (i.e. area/floor)	Amount of paper in storage at the beginning of the reporting period (kg)	Amount of paper purchased during the reporting period (kg)	Amount of paper collected for recycling during the reporting period (kg)	Amount of paper in storage at the end of the reporting period (kg)	Emission factor (kg CO <sub>2</sub> -e/kg of waste) <small>Note 1</small>	Indirect emissions in tonnes of CO <sub>2</sub> -equivalent (B + C - D - E) x F/1000
Office	0.000	6,586.272	5,257.000	0.000	4.800	6.381
<b>Total</b>						<b>6.381</b>

**Note 1:** For simplifying the accounting process, the default emission factor assumes that the total raw amount of CH<sub>4</sub> emitted throughout the whole decomposition process of the paper waste disposed at landfills will be emitted into the atmosphere within the same reporting period as paper waste collected. In addition, the default value does not take into account the reduction in emission due to collection, recovery and utilisation of landfill gas due to management practices at landfills. This emission factor is referred from HK Guideline 2010 Table 7.

## 10. Information on GHG Emissions Information on GHG Reduction Programmes

To reduce the GHG emissions level, the reporting entity has identified and implemented carbon reduction programmes within the defined physical and operational boundaries. The carbon reduction programmes are outlined as follows:

- i. Posted paper saving reminders near the photocopying machine or at individual desktops;
- ii. Encouraged staff to reuse papers;
- iii. Use of electrical appliances with energy labels;
- iv. Posted energy saving labels and/or reminders (e.g. switch off unused lightings, set the air-conditioning temperature at 25.5 Degree Celsius) in office to encourage energy saving behavior;
- v. Provided proper maintenance to company vehicle.

## 11. Contact Person of the Reporting Entity

The information of the contact person of the reporting entity is listed below:

Ms Shirley Lee

Senior Management System Officer – Quality Department & Environmental Protection Department  
Yau Lee Construction Company Limited

Tel: 3473 3726

Email: [shirleylee@yaulee.com](mailto:shirleylee@yaulee.com)

## 12. List of Data Sources and References

The information below was collected and referred during the carbon audit process:

- i. Fuel consumption records from Yau Lee for determining the amount of fuel consumed by company vehicles;
- ii. Electricity bills of Yau Lee issued by CLP for determining the amount of electricity consumed;
- iii. Paper purchased and recycling records provided by Yau Lee.

### 13. Total and Breakdown of Carbon Footprint

#### 13.1 Baseline Period

Information on GHG emissions and removals of Yau Lee during the baseline period of **1 May 2011 – 30 April 2012**:

Description (by sources, areas, etc.)	Emissions by gas type (in litres of CO <sub>2</sub> -equivalent)					
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous Oxide (N <sub>2</sub> O)	Hydrofluoro-carbons (HFCs)	Perfluoro-Carbons (PFCs)	Total
<b>Scope 1 Direct Emissions</b>						
<b>Stationary Combustion Sources</b>						
Emergency Electricity Generator	N/A	N/A	N/A	N/A	N/A	N/A
<b>Mobile Combustion Sources</b>						
Passenger Cars	43.193	0.097	6.269	N/A	N/A	49.559
Private Van	8.640	0.016	1.294	N/A	N/A	9.950
<b>Fugitive Emissions</b>						
HCFC-R134a	N/A	N/A	N/A	N/A	N/A	N/A
<b>Other Direct Emissions</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Scope 1 Emissions Total</b>	<b>51.833</b>	<b>0.113</b>	<b>7.563</b>	<b>N/A</b>	<b>N/A</b>	<b>59.509</b>

**Information on GHG emissions and removals of Yau Lee during the baseline period of 1 May 2011 – 30 April 2012 (con't):**

Description (by sources, areas, etc.)	Emissions by gas type (in litres of CO <sub>2</sub> -equivalent)					
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous oxide (N <sub>2</sub> O)	Hydrofluoro- carbons (HFCs)	Perfluoro-Carbons (PFCs)	Total
<b>Scope 2 Energy Indirect Emissions</b> (To be reported in general without being classified into specific gas type)						
Electricity Purchased from Power Companies						151.108
Towngas Purchased						N/A
<b>Scope 2 Emissions Total</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>151.108</b>
<b>Scope 3 Other Indirect Emissions</b>						
<b>Methane Generation at Landfill due to Disposal of Paper Waste</b>						
Office	N/A	39.895	N/A	N/A	N/A	39.895
<b>Electricity for Processing Fresh Water</b> (To be reported in general without being classified into specific gas type)						
Amount of water consumed as listed on the water service bill						N/A
<b>Electricity for Processing Sewage</b> (To be reported in general without being classified into specific gas type)						
Amount of water consumed as listed on the water service bill						N/A
<b>Others</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Scope 3 Emissions Total</b>	<b>N/A</b>	<b>39.895</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>39.895</b>

**Information on GHG emissions and removals of Yau Lee during the baseline period of 1 May 2011 – 30 April 2012 (con't):**

Description (by sources, areas, etc.)	Emissions by gas type (in litres of CO <sub>2</sub> -equivalent)					
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous oxide (N <sub>2</sub> O)	Hydrofluoro- carbons (HFCs)	Perfluoro-Carbons (PFCs)	Total
<b>Other GHG Offsets / Removals</b>						
<b>On-site Renewable Energy Sources for Off-site Uses</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Off-site GHG Reduction Projects in Hong Kong</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Off-site GHG Reduction Projects outside Hong Kong</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A

## 13.2 Reduction Period

### Information on GHG emissions and removals of Yau Lee during the reduction period of 1 May 2018 – 30 April 2019:

Description (by sources, areas, etc.)	Emissions by gas type (in litres of CO <sub>2</sub> -equivalent)					
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous oxide (N <sub>2</sub> O)	Hydrofluoro- carbons (HFCs)	Perfluoro-Carbons (PFCs)	Total
<b>Scope 1 Direct Emissions</b>						
<b>Stationary Combustion Sources</b>						
Emergency Electricity Generator	N/A	N/A	N/A	N/A	N/A	N/A
<b>Mobile Combustion Sources</b>						
Passenger Cars	22.974	0.052	3.335	N/A	N/A	26.361
Private Van	17.757	0.032	2.659	N/A	N/A	20.448
<b>Fugitive Emissions</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Other Direct Emissions</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Scope 1 Emissions Total</b>	<b>40.731</b>	<b>0.084</b>	<b>5.994</b>	<b>N/A</b>	<b>N/A</b>	<b>46.809</b>

**Information on GHG emissions and removals of Yau Lee during the reduction period of 1 May 2018 – 30 April 2019 (con't):**

Description (by sources, areas, etc.)	Emissions by gas type (in litres of CO <sub>2</sub> -equivalent)					
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous oxide (N <sub>2</sub> O)	Hydrofluoro- carbons (HFCs)	Perfluoro-Carbons (PFCs)	Total
<b>Scope 2 Energy Indirect Emissions</b> (To be reported in general without being classified into specific gas type)						
Electricity Purchased from Power Companies						59.800
Towngas Purchased						N/A
<b>Scope 2 Emissions Total</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>59.800</b>
<b>Scope 3 Other Indirect Emissions</b>						
<b>Methane Generation at Landfill due to Disposal of Paper Waste</b>						
Office	N/A	6.381	N/A	N/A	N/A	6.381
<b>Electricity for Processing Fresh Water</b> (To be reported in general without being classified into specific gas type)						
Amount of water consumed as listed on the water service bill						N/A
<b>Electricity for Processing Sewage</b> (To be reported in general without being classified into specific gas type)						
Amount of water consumed as listed on the water service bill						N/A
<b>Others</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Scope 3 Emissions Total</b>	<b>N/A</b>	<b>6.381</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>6.381</b>



**Information on GHG emissions and removals of Yau Lee during the reduction period of 1 May 2018 – 30 April 2019 (con't):**

Description (by sources, areas, etc.)	Emissions by gas type (in litres of CO <sub>2</sub> -equivalent)					
	Carbon Dioxide (CO <sub>2</sub> )	Methane (CH <sub>4</sub> )	Nitrous oxide (N <sub>2</sub> O)	Hydrofluoro- carbons (HFCs)	Perfluoro-Carbons (PFCs)	Total
<b>Other GHG Offsets / Removals</b>						
<b>On-site Renewable Energy Sources for Off-site Uses</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Off-site GHG Reduction Projects in Hong Kong</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A
<b>Off-site GHG Reduction Projects outside Hong Kong</b>						
NIL	N/A	N/A	N/A	N/A	N/A	N/A

**14. Calculated Reduction of Carbon Footprint****Summary of Results**

	<b>GHG Emissions/Removals</b> <b>(In Tonnes of CO<sub>2</sub>-equivalent)</b>		
	<b>Baseline Period</b> <b>01/05/2011 –</b> <b>30/04/2012</b>	<b>Previous Audit Period</b> <b>01/05/2015 –</b> <b>30/04/2016</b>	<b>Reduction Period</b> <b>01/05/2018 –</b> <b>30/04/2019</b>
Scope 1 Direct Emissions	59.509	42.904	46.809
Scope 1 Direct Removal	0.000	0.000	0.000
Scope 2 Energy Indirect Emissions	151.108	116.219	59.800
Scope 3 Other Indirect Emissions	39.895	(1.106)	6.381
Other GHG Offsets/Removals	0.000	0.000	0.000
<b>Total GHG Emissions</b>	<b>250.512</b>	<b>158.017</b>	<b>112.990</b>
<b>Carbon Reduction Against Previous Audit Period</b>	<b>28.495%</b>		
<b>Carbon Reduction Against Baseline Period</b>	<b>54.896%</b>		

Yau Lee Construction Company Limited is the participant applying for renewal of the Carbon Reduction Certificate. Provided the carbon reduction programmes implemented by Yau Lee, has achieved 28.495% carbon reduction, when comparing with previous audit period (01/05/2015 – 30/04/2016) and 54.896% cumulative carbon reduction since baseline period (01/05/2011 – 30/04/2012):

<b>Minimum Requirement for Participants applying for renewal of the certificate</b>	<b>Yau Lee Construction Company Limited Carbon Reduction Level</b>
At least maintain previous year's carbon footprint and achieved at least another 3% reduction in overall carbon footprint against baseline within 3 consecutive years	28.495% carbon reduction since previous audit period 54.896% cumulative carbon reduction since baseline year

It is above the requirement for participants applying for renewal of Carbon Reduction Certificate of at least another 3% reduction in overall carbon footprint against baseline within 3 consecutive years, therefore, renewal of Carbon Reduction Certificate is anticipated to be awarded.

## 15. Declaration of Qualified Service Provider

Details of the Qualified Service Provider of this Carbon Reduction Verification Report is shown as below:

Name: Ir LEUNG Chi Fung

Director – Operations

Business Environment Council Limited

Address: 2/F, 77 Tat Chee Avenue, Kowloon Tong, Hong Kong

Tel: (852) 2784-3945

Email: [cfleung@bec.org.hk](mailto:cfleung@bec.org.hk)

  
(Ir LEUNG Chi Fung)