GRI Sustainability Report 2020-2021

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Tony Ip Green Architects

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Architects, who specialize in sustainable design and strive to limit global warming to 1.5°C

Tony Ip Green Architects Limited

Tony Ip Green Architects Limited "**TiP**" is a registered architectural practice in Hong Kong with community-centric architects and designers, who specialise in sustainable design and advocate the paradigm shift to green architecture and biophilic urban-scape at the tipping point of climate change. 2-1a 2-1d

TiP's interdisciplinary and integrated expertise and experience drive us to achieve de-carbonising, regenerative, climate resilient and cost-effective design ideas and project execution, especially in high-density high-rise urban contexts. Our scope of services includes urban design, master planning, architectural design and execution, landscape design, interior design and build, and green material innovation, together with sustainable design and green professionals' input throughout the whole project process.

Total number of operation: 1 (office in Hong Kong) 2-1c
Total services provided: 1 (architectural practice)
Number of employees: 13 full-time employees (as of 30 June 2021) 2-7

Governance

TiP is a private limited company. The company has no joint ventures, subsidiaries or outsourced operations. The practice is managed by Director Tony Ip, who is the founder of the company. 2-1b 2-6 2-9

TiP has obtained ISO9001:2015 and ISO14001:2015, which form the basis for the management of the majority of material topics. This is reviewed and certified by Socotec Certification Hong Kong Limited. 2-11 2-12 2-5

TiP is a Corporate Member of the Hong Kong Institute of Architects (HKIA) and under the List of Band 3 Architectural Consultants of HKIA.

Advocacy

TiP advocates:

Green Materials & Innovation:	to eliminate the use of materials with adverse impacts on humans and the ecosystem.
Zero Carbon Architecture:	to design zero carbon or super low carbon buildings to reduce embodied and operational carbon.
Urban Microclimate Design:	to adopt the passive design to guide the design, construction and operation process.
Green Neighbourhood for All:	to facilitate our children and senior citizens to play and enjoy the outdoors with neighbours and nature.
Biophilic High-rise Living:	to promote healthier and more active lifestyles and day-to-day interactions with nature at multi-levels.
Green Community Action:	to nurture the next generations to become future leaders in advocating green architecture and sustainability.

TiP has signed with BEC Low Carbon Charter – targets aligned with climate science and the goals of the Paris Agreement, and Hong Kong Zero Carbon Partnership.

The organisation's values and principles are publicly available on **TiP**'s website (www.tonyip.green/vision).

About This Report

Tony Ip Green Architects Limited (**TiP**) has reported in accordance with GRI Standards for the period from 1 July 2020 to 30 June 2021. The sustainability reporting period is aligned with the annual financial reporting period. Over the reporting period, **TiP** has operated solely in Hong Kong SAR. 2-2 2-3a 2-3b

TiP conducts sustainability reporting by adopting the Global Reporting Initiative, which provides a transparent and comparable framework for sustainability reports. This is **TiP**'s first annual sustainability report after its establishment of **TiP** in 2017 and sets the baseline year of comparison in the subsequent sustainability reporting. There is no previous reporting period, no conflict of interest in reporting and no critical concern during the reporting period. 2-4 2-15 2-16

This report is prepared in accordance with the GRI Standards, based on the Universal Standards 2021. This report is endorsed by Tony Ip, who is the Director of **TiP** and the GRI Certified Sustainability Professional. 2-14

This report was published on 30 April 2022 2-3c

For any questions regarding this report, please contact:

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Topics / Material Boundaries

The following themes have been identified as key areas within our business that should be reported on. 3-1

- Environmental Management of the Practice
- Environmental Impact of the Practice
- Culture of the Practice
- Community Engagement

The second step in defining the content of this report is the prioritisation of these themes based on their materiality and boundaries. The boundaries of the relevant topics have been identified and prioritised with stakeholders, including **TiP**'s employees and working partners, as the baseline year's scope. Additional topics will be anticipated in the subsequent reports. The material topics are as follows.

Topic	Boundary	Materiality (including material entities and limitations)
Materials	Within	On-going consumables & appliances in TiP office
Energy	Within	Direct energy consumption of TiP office
Emissions	Within	Direct (scope 1) emissions, energy indirect (scope 2) emissions and other indirect (scope 3) emissions

3-2

Materials

TiP Office Operation

Within the organisation, **TiP** has adopted 5R principles (rethink, reduce, reuse, replace and recycle) in material purchasing and usage. The key environmental attributes are:

- Minimise the use of virgin materials
- Reduce energy and water consumption
- Avoid the use of toxic substances
- Adopt green certified products or products from environmentally certified processed
- Reuse and recycle products at the end of their life
- Use products with minimised packaging
- Dispose of waste in a proper way

Green purchasing of on-going consumables and office appliances is as follows:

Printing paper	FSC Certified, coating free, chlorine free
Paper towel	non-chlorine bleached paper, recycled paper
Toner cartridge	refillable
Computers	Energy Star
Lighting	LED Lighting
Paint	VOCs free, water-based, CIC Green Product Certified (HK G-PASS)
Refrigerator	Grade 1 Energy Label

TiP has established a material library which includes material samples and catalogues with the indication of environmentally friendly building materials and certified green products.

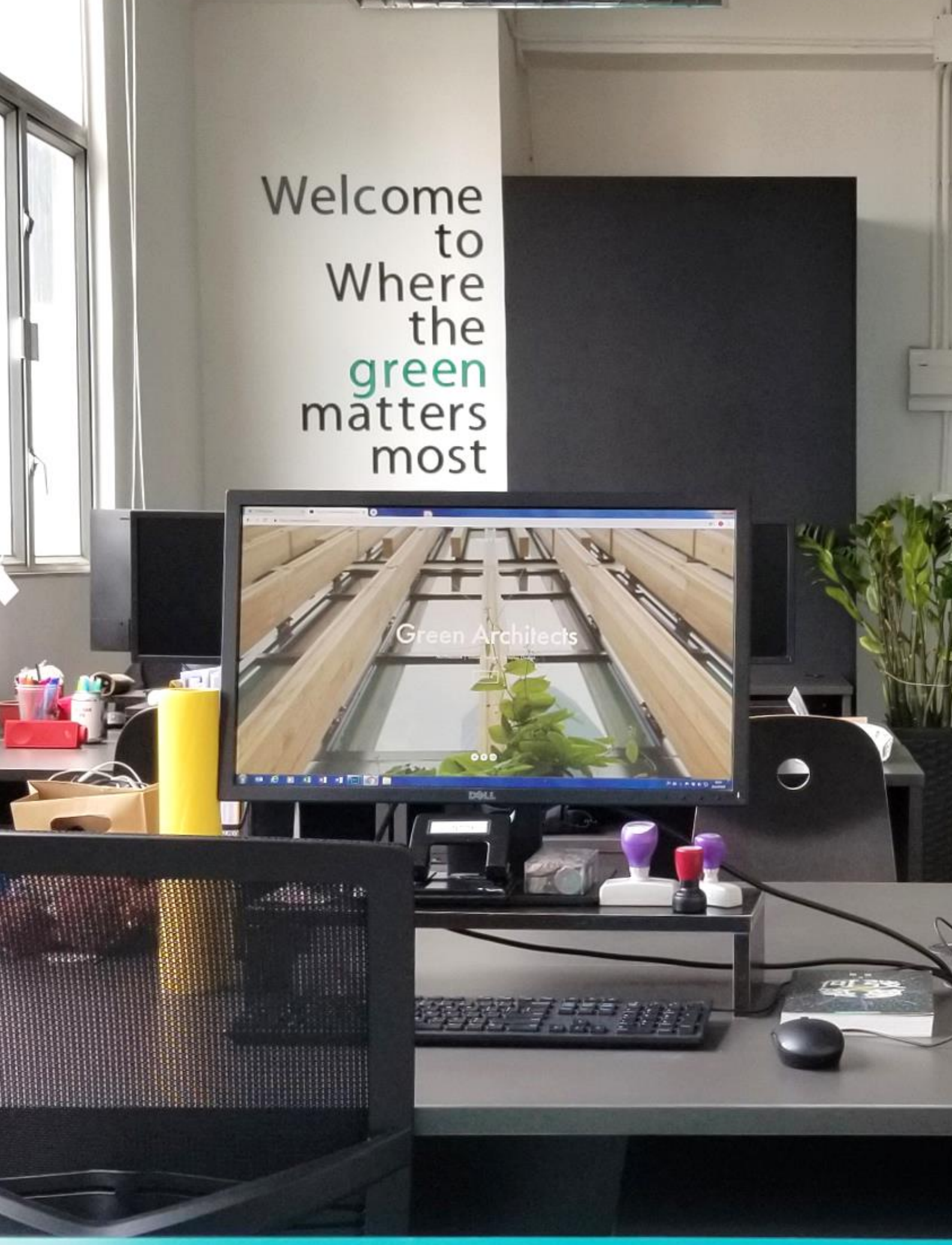
TiP Project Missions

TiP envisions eliminating the use of materials with adverse impacts on humans and the ecosystem in the projects. The key strategies for the selection of building materials for the projects are:

- Reused / Recycled Materials
- Regional Materials
- Certified Green Products
- Rapidly Renewable Materials
- Prefabrication / Modular Integration

Material strategies adopted for the **TiP** projects completed within the reporting period are highlighted as follows.

	Reused / Recycled Materials	Regional Materials	Certified Green Products	Rapidly Renewable Materials	Prefab / Modular Integration
CIC-ZCP Zero Carbon Park Renovation	●	●	●	●	●
I.Park Cheung Chau Information Centre	●	●			
HKSKH LMC Jockey Club Kwai Wah Health and Wellbeing Centre		●	●	●	
TiP New Office	●	●	●		●



TiP Office (2019-2021) at Unit 909, Metro Centre, Kowloon Bay

Energy

TiP Office Operation

3-3

Electricity is consumed by air-conditioning, lighting, computers, a printer, a refrigerator, an electric water dispenser, electric cooking appliances and small appliances in the office. Electricity consumption within the reporting period is summarised as follows. The data is extracted from the monthly electricity bills.

Month	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021
Electricity (kWh)	1,421	1,139	1,238	1,224	889	657	706	593	1,149	1,227	1,449	1,514
Energy (MJ)	5,116	4,100	4,457	4,406	3,236	2,365	2,542	2,135	4,136	4,417	5,216	5,450

The total amount of electricity consumption in the reporting period is 13,216 kWh (47,578 MJ). 302-1

The numbers of full-time employees in the reporting period are listed below. Interns, who worked full-time in the office in particular months, are also indicated for the better elaboration of the energy intensity of the office operation.

Month	Jul 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	Mar 2021	Apr 2021	May 2021	Jun 2021
No. of Full-time Employees	10	10	11	11	11	11	11	11	11	12	12	13
No. of Full-time Employees & Interns	15	15	11	11	11	11	11	11	11	12	13	18

The average annual amount of electricity per full-time employee is 1,183 kWh/person. The average annual amount of electricity per full-time employee (including full-time employees & interns) is 1,056 kWh/person. 302-3

TiP Project Missions

TiP envisions reducing reliance on fossil fuels and hence, lower greenhouse gas emissions in the projects. In the reporting period, **TiP** completed two projects with the adoption of pioneering renewable technologies for non-fossil fuel energy, as featured below:

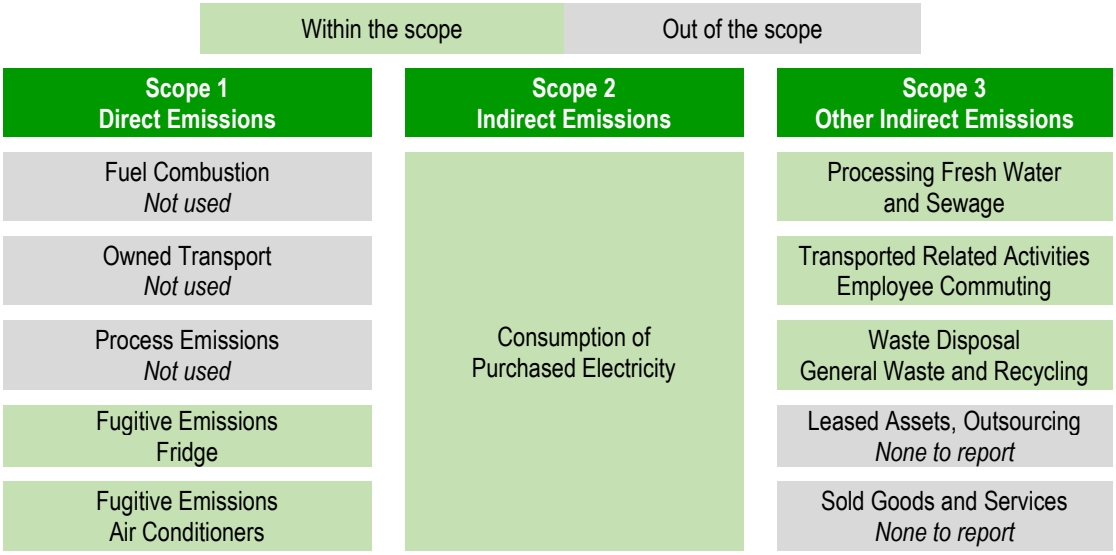
Air Improvement Photo-Voltaic (AIPV) Canopy – the first application of AIPV in Hong Kong, by generating renewable energy from sunlight through Cadmium Telluride nano thin-film photovoltaic technology. The nano-coating system decomposes PM2.5 and VOCs with a self-cleansing effect and reduces the maintenance cost.

emMiC Stormwater for Air-conditioning – a pilot project to provide energy-efficient cooling and heating by adopting box culvert stormwater as heat rejection/absorption media at CIC-ZCP and applying the modular integration construction (MiC) method.

Air Improvement Photo-Voltaic Canopy at CIC Zero Carbon Park

Emissions

The assessment boundary of **TiP**'s greenhouse gas (GHG) emissions is shown below. 3-3



Scope 1 – Direct GHG Emissions

305-1

Scope 1 refers to direct GHG emissions from sources that are owned or controlled by the organisation. No fuel combustion and no process emissions are from the **TiP**'s office, and **TiP** does not own or lease any vehicle. Fugitive emissions from the fridge (purchased by **TiP**) and the air conditioners (installed by the landlord) are considered in the scope 1 emissions.

	Fridge Model No.: FDG252M185 Refrigerant: R600a	Air Conditioners Model No.: PUMY-P112YKM Refrigerant: R410A
Amount of refrigerant, capacity (kg)	0.045	10.9
Global Warming Potential GWP	4	1,725
Installation emission factor (% of capacity)	1	1
Operating emissions (% of capacity/year)	0.5	10
Direct GHG emissions (tCO2e)	0.0000027	2.068

TiP Direct (Scope 1) GHG Emissions are **2.07 tCO2e**.

Scope 2 – Energy Indirect GHG Emissions

Scope 2 refers to indirect GHG emissions that result from the generation of purchased or acquired electricity, heating, cooling, and steam consumed by the organisation. **TiP**'s office electricity is supplied by the power company, CLP Power Hong Kong Ltd. CLP emission factor for 2020 is 0.37 kgCO2e/kWh. Hong Kong's territory-wide default emission factor is 0.7kgCO2e/kWkh.

	Energy Indirect GHG Emission (Power company specific)	Energy Indirect GHG Emission (Territory-wide default value)
Amount of purchased electricity (kWh)	13,216	13,216
Emission factor (kgCO2e/kWh)	0.37	0.70
Indirect GHG emissions (tCO2e)	4.89	9.25

TiP Energy Indirect (Scope 2) GHG Emissions (market-based approach) are **4.89 tCO2e**.
TiP Energy Indirect (Scope 2) GHG Emissions (location-based approach) are **9.25 tCO2e**.

Scope 3 – Other Indirect Emissions

305-3

Scope 3 refers to indirect GHG emissions not included in energy indirect (Scope 2) GHG emissions that occur outside of the organisation, including both upstream and downstream. In this report, upstream Scope 3 emissions under the following categories are considered.

Category 1 – Purchased goods and services (i.e., papers, water)

	Papers
Amount of paper purchased (sheet)	35,500
Amount of paper purchased (kg)	177.50
Emission factor for papers (kgCO2e/kWh)	1.55
Indirect GHG emissions (tCO2e)	0.28

	Water
Amount of fresh water consumed (m3)	36
Emission factor for processing fresh water by Water Supplies Department (kgCO2e/kWh)	0.7
Indirect GHG emissions (tCO2e)	0.03

Category 2 – Capital goods (i.e., computers)

	Computers
Amount of desktop computers purchased (set)	4
Emission factor for desktop computer (kgCO2e/kWh)	318.467
Indirect GHG emissions (tCO2e)	1.27

Category 5 – Waste generated in operations (i.e., paper waste disposal, sewage)

	Paper Waste
Amount of paper used (sheet)	35,363
Amount of paper used (kg)	176.81
Amount of paper for recycling (kg)	69.12
Amount of paper waste disposed at a landfill (kg)	107.69
Emission factor for paper waste disposal (kgCO2e/kWh)	4.8
Indirect GHG emissions (tCO2e)	0.52

	Wastewater
Amount of wastewater discharged (m3)	36
Emission factor for processing sewage by Drainage Services Department (kgCO2e/kWh)	0.7
Indirect GHG emissions (tCO2e)	0.03

Category 6 – Business travel

	Business Travel
Taxi: Amount of Indirect GHG emissions (kgCO2e)	377.97
Mass Transit: Amount of Indirect GHG emissions (kgCO2e)	122.86
Total Indirect GHG emissions (tCO2e)	0.50

Category 7 – Employee commuting

	Employee Commuting
Bus: Amount of distance travelled (km)	12,576
Emission factor for distance (kgCO2e per km)	0.0295
Amount of Indirect GHG emissions (kgCO2e)	370.99
Minibus: Amount of distance travelled (km)	5,760
Emission factor for distance (kgCO2e per km)	0.0642
Amount of Indirect GHG emissions (kgCO2e)	369.79
Mass Transit: Amount of distance (km)	32,688
Emission factor for distance (kgCO2e per km)	0.0072
Amount of Indirect GHG emissions (kgCO2e)	235.35
Total Indirect GHG emissions (tCO2e)	0.98

TiP Other Indirect (Scope 3 Upstream) GHG Emissions are **3.61 tCO2e**.

TiP Scope 1 + Scope 2 (market-based) + Scope 3 (Upstream) GHG Emissions are **10.57 tCO2e**.
TiP Scope 1 + Scope 2 (location-based) + Scope 3 (Upstream) GHG Emissions are **14.93 tCO2e**.

GHG Emissions Intensity

305-4

Scope 1 and Scope 2 (market-based) GHG Emissions are 6.96 tCO2e.
Scope 1 and Scope 2 (market-based) GHG Emissions Intensity is **0.62 tCO2e/staff.**

Scope 1 and Scope 2 (location-based) GHG Emissions are 11.32 tCO2e.
Scope 1 and Scope 2 (location-based) GHG Emissions Intensity is **1.01 tCO2e/staff**.

Reduction of GHG Emissions

305-5

TiP aims to adopt Science Based Targets using the Absolute Contraction approach, which requires a reduction in absolute emissions (tCO2e) rather than emissions intensity (tCO2e/staff), and is aligned with a 1.5°C global warming scenario.

The target reduction trajectory equates to 5% per annum, or 50% by 2030/2031 (10 years), assuming a baseline year of 7/2020 – 6 /2021.

7/2020-6/2021	7/2021-6/2022	7/2022-6/2023	7/2023-6/2024	7/2024-6/2025	7/2025-6/2026	7/2026-6/2027	7/2027-6/2028	7/2028-6/2029	7/2029-6/2030	7/2030-6/2031
0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%

These reduction targets cover Scope 1 and Scope 2 GHG Emissions.

Tony Ip Green Architects Limited commits to reduce absolute scope 1 and scope 2 GHG emissions 50% by 2030 from a 2020 base year, and to measure and reduce its scope 3 emissions.

回收膠樽特色牆
用回收重用的膠樽組合而成的特色牆
提醒大眾減少使用即棄塑膠及減輕堆
填區負擔的重要性。膠樽以低揮發性
有機物質油漆塗上不同顏色，避免造
成環境污染。
FEATURE WALL- REUSED
PLASTIC BOTTLE
The feature wall is created from discarded
water bottles and painted with low VOC paint.
The wall symbolises the importance of plastic
waste reduction and draws attention to the
landfill saturation problem.

Community Engagement

TiP envisages that the role is not just that of an architect, but a facilitator for community engagement, a collaborator for inter-disciplinary innovation and an advocator for human-nature interactions in the green building and neighbourhood design process.

Serving the Advisory Board & Committees for the HKSAR Government

2-28

- Lantau Conservation Fund Advisory Committee, Development Bureau
- Environment and Conservation Fund Committee, Environment Bureau
- Chairman, Environmental Education & Community Action Projects Vetting Sub-committee, Environmental Campaign Committee
- Antiquities Advisory Board, Development Bureau
- Environmental Campaign Committee, Environment Bureau
- Support Group on Long-term Decarbonization Strategy, Council for Sustainable Development

Serving the Profession & NGOs

- Director, Hong Kong Green Building Council
- Director, Construction Industry Council – Zero Carbon Building
- Chairman, Materials Aspects Expert Panel, BEAM Society Ltd.
- Convener, Steering Committee of BEAM Plus for Schools, BEAM Society Ltd.
- Convener, Green Product Taskforce, Hong Kong Green Building Council
- Chairman, Hong Kong Architecture Centre
- Executive Committee, Kowloon Technical School Alumni Association
- Advisor, New Campus of Hong Kong Taoist Association Wun Tsuen School
- Director, Young Men's Christian Association (YMCA) of Hong Kong
- School Manager, YMCA of Hong Kong Christian College
- Chairman, Facilities Maintenance & Development Committee, YMCA of Hong Kong
- Jury Panel Member, HKIP Annual Award 2020, Hong Kong Institute of Planners
- Jury Panel Member, Young Architect Award 2019, Hong Kong Institute of Architects (HKIA)
- Advisor & Committee Member, Environment & Sustainable Development Committee, HKIA

Speaking at International Conferences

2020.11.03 Paper presenter, "Experimental Interactions with Nature in the City" and "Urban Living with Nature: Design for Human-nature Interactions in Communal Green Spaces at Residential High-rises", *The World Sustainable Built Environment Conference 2020, Gothenburg.*

2020.08.01 Honourable speaker, "Green Neighbourhood in High-density High-rise Cities", *Guest Lecture, School of Architecture, D Y Patil University, India.*

Sharing at Local Forums, Seminars and Talks

2-29

2021.06.19 Speaker, "BEAM Plus – Materials and Waste Aspects", *Quality Assurance Workshop for BEAM Assessor 2021, BEAM Society Ltd.*

2021.05.17 Speaker, "Life and Career Planning in Building Professions", *Kiangsu-Chekiang College (Kwai Chung).*

2021.05.13 Speaker, "Nature in the City", *Niccolo Lectures on Clubhouse, The Murray.*

2021.05.08 Speaker, "Assemble, Cultural Citizens! Sunset Harbour Dialogue Bar", *Via North Point, Hong Kong Arts Centre.*

2021.04.24 Speaker, "Green Neighbourhood in High-density High-rise Contexts", *Seminar 2021 – Shaping a Sustainable Eco-City – Liveability, Harmonisation, Regeneration, Graduates and Students Division, Institution of Civil Engineers Hong Kong Association.*

2021.04.17 Speaker, "BEAM Plus – Materials and Waste Aspects", *BEAM Assessor Candidate Training 2021, BEAM Society Ltd.*

2021.04.01 Speaker, "Senior Dwelling Design", *CPD Seminar on CPD Research Fund Awardees Sharing, Hong Kong Institute of Architects.*

2021.03.15 Speaker, "Interactions with Nature in the City", *Public Lecture, Division of Landscape Architecture, The University of Hong Kong.*

2021.02.23 Speaker, "First Electrical and Mechanical Modular Integrated Construction (emMiC) and Air Improvement Photovoltaic (AIPV) System in Hong Kong", *technical webinar, Electrical Division, The Hong Kong Institution of Engineers.*

2021.02.04 Speaker, "Green Architecture", *guest lecture to civil engineering students, Institute of Vocational Education (Morrison Hill).*

2021.01.29 Speaker, "Green Recovery – Green Architecture", *Green Recover Webinar, Jockey Club Community Sustainability Fund- Green Recover for Community programme, CarbonCare InnoLab.*

2021.01.16 Speaker, "Community Farming", *Sustainability Development Goals Eco-Village Webinar, Professional Green Building Council.*

2020.12.06 Speaker, "綠建 TEAM 嗆【綠建專才 X 環保少年】", *online talk on green architecture, Hong Kong Green Building Week 2020, Hong Kong Green Building Council.*

2020.11.29 Speaker, "Closing the Loop within Our City Systems", *GreenFest Seminar, Hysan.*

2020.11.24 Speaker, "Innovate for a Sustainable Future", *HKPolyU Conference on Enlighten@PolyU Serie, The Hong Kong Polytechnic University.*

2020.09.16 Speaker, "WELL Building Standards & Green Architecture", *webinar for professionals in the building materials and services industry, Architectural Intelligence.*

2020.08.14 Speaker, "Urban Farming & Green Buildings", *the course of "Urban Farm Planning & Management for Professionals", Rooftop Republic and Business Environmental Council.*

2020.07.18 Speaker, "Urban Micro-climate • Green Architecture", *STEM Education Enriching Knowledge Series, seminar for secondary school teachers, Education Bureau, HKSAR.*

2020.07.12 Speaker, "Green Architecture" *themed book sharing with the public, Hong Kong Trade Development Bureau and Hong Kong Architecture Centre.*

Media Interviewed, Featured and Reported

2021.04.27 《龍行天下》：《30/60》—《新動能》 <鳳凰衛視>

2021.04.22 參與式預算帶來的想像 如何真正促成公民參與？ <香港 01>

2020.12.10 中環出更：綠色建築 葉頌文：連結社區嘅重要橋樑 <東方日報>

2020.11.10 中環出更：葉頌文：善用地下雨水 冬暖夏涼又環保 <東方日報>

2020.08.13 中環出更：想城市有活力 葉頌文：街坊要參與 <東方日報>

TiP Family on 19 November 2020

GRI Content Index

Statement of Use	**Tony Ip Green Architects Limited** has reported in accordance with the GRI Standards for the period from 1 July 2020 to 30 June 2021.
GRI 1 Used	GRI 1: Foundation 2021
Applicable GRI Sector Standard	-

GRI Standard	Disclosure	Page
General Disclosures		
GRI 2: General Disclosures 2021	2-1 Organisational details	3
	2-2 Entities included in the organisation's sustainability reporting	4
	2-3 Reporting period, frequency and contact point	4
	2-4 Restatements of information	4
	2-5 External assurance	3
	2-6 Activities, value chain and other business relationships	3
	2-7 Employees	3
	2-9 Governance structure and composition	3
	2-11 Chair of the highest governance body	3
	2-12 Role of the highest governance body in overseeing the management of impacts	3
	2-14 Role of the highest governance body in sustainability reporting	4
	2-15 Conflicts of interest	4
	2-16 Communication of critical concerns	4
	2-22 Statement on sustainable development strategy	3
	2-23 Policy commitments	3
	2-24 Embedding policy commitments	3
	2-27 Compliance with laws and regulations	3
	2-28 Membership associations	14
	2-29 Approach to stakeholder engagement	14
Material Topics		
GRI 3: Material Topics 2021	3-1 Process to determine material topics	5
	3-2 List of material topics	5
Energy		
GRI 3: Material Topics 2021	3-3 Management of material topics	8
GRI 302: Energy 2016	302-1 Energy consumption within the organisation	8
	302-2 Energy consumption outside of the organisation	8
	302-3 Energy intensity	8
	302-4 Reduction of energy consumption	8
Emissions		
GRI 3: Material Topics 2021	3-3 Management of material topics	10
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	10
	305-2 Energy indirect (Scope 2) GHG emissions	10
	305-3 Other indirect (Scope 3) GHG emissions	11
	305-4 GHG emissions intensity	11
	305-5 Reduction of GHG emissions	11

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