



GREEN BUILDING: CHALLENGES AND OPPORTUNITIES

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PERFORMANCE AMONGST TOP SD LEADERS



1st in Asia
Rank 8th globally



Top Company



**Global Sector
Leader**
5-star Rating

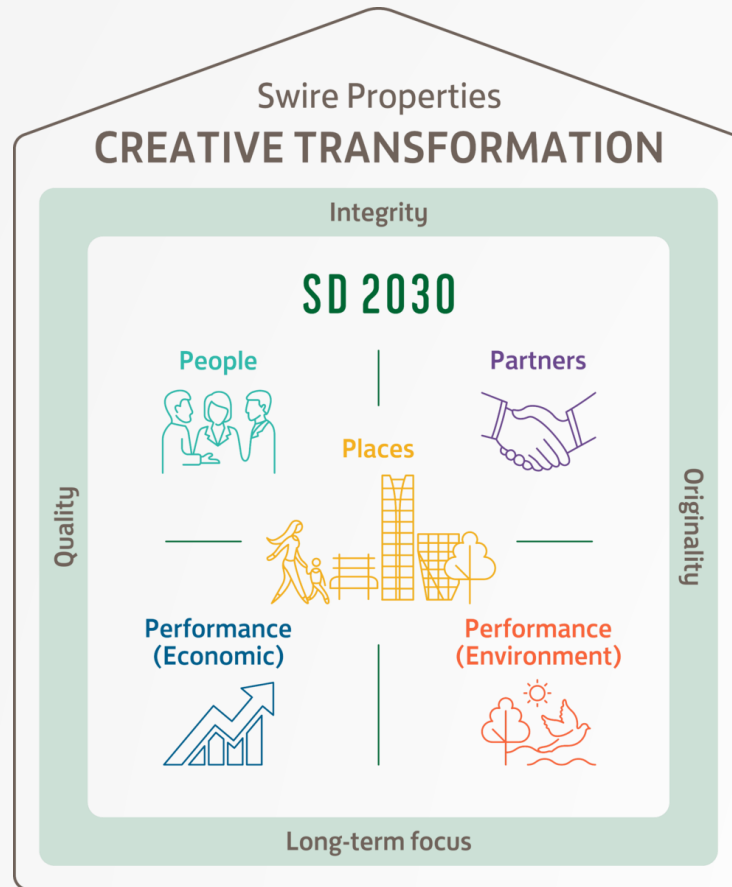


'AAA' rating (2019)¹

The only HK and Mainland China
developer listed (2019)



SUSTAINABLE DEVELOPMENT (SD) 2030 STRATEGY



*SD Vision –
“To be the leading SD performer in our
industry globally by 2030”*

SD Integration into Business



Business Performance



Corporate Risk Register



Annual Budget Planning



Employee Performance
Goals Setting

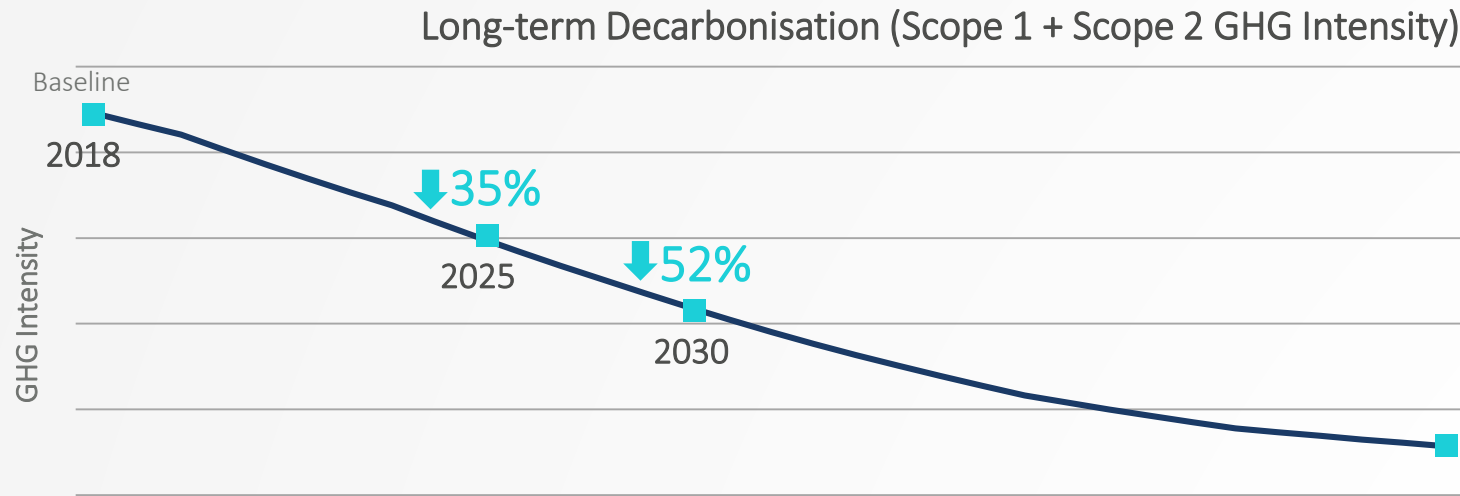


Investment Decisions

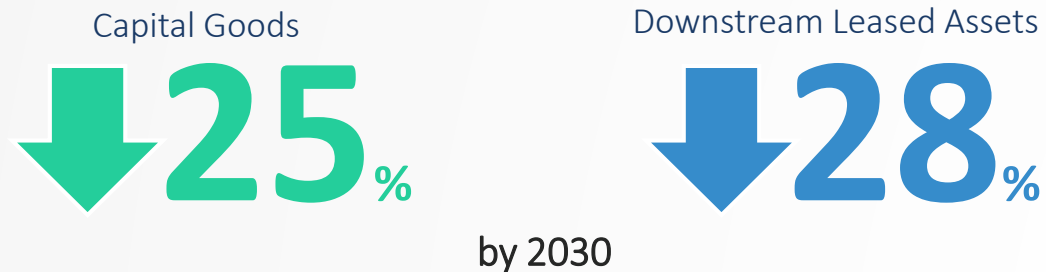


CARBON PERFORMANCE

MARKET LEADER IN DECARBONISATION STRATEGY



GHG Intensity/Decarbonisation – Scope 3 GHG Intensity



1st & Only Developer in HK & Mainland China – approved SBTs



SCIENCE
BASED
TARGETS

Scope 1 + Scope 2

Technological Innovation
On and Off-site Renewable Energy
Joint Research with Tsinghua University

Scope 3 - Upstream

New Projects Development
embodied carbon reduction target

Scope 3 - Downstream

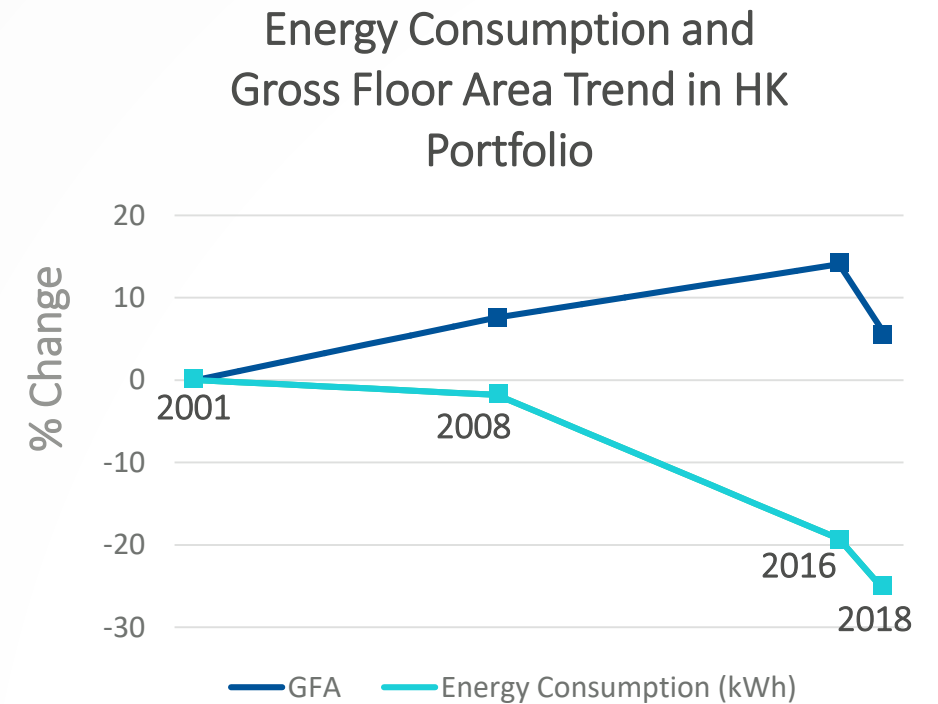
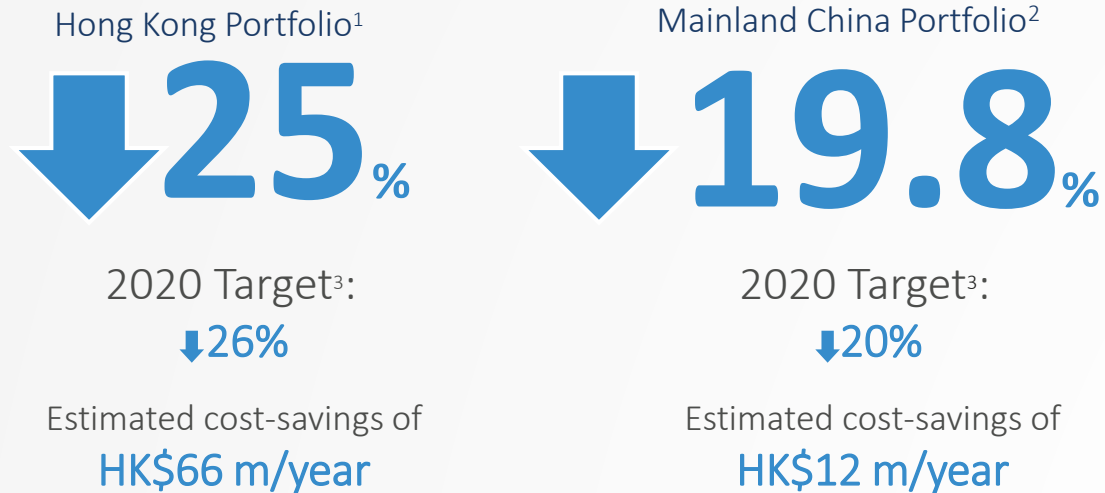
Tenant Engagement
tenant carbon reduction target

* Scope 1 emissions are direct greenhouse gas ("GHG") emissions from sources that are owned or controlled by Swire Properties, such as emissions from natural gas, diesel and town gas burned onsite.
Scope 2 emissions are indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by Swire Properties.
Scope 3 emissions are all indirect emissions that occur in the value chain of the reporting company, including both upstream and downstream emissions.

ENERGY PERFORMANCE

DECOUPLING GFA GROWTH AND ENERGY CONSUMPTION

Energy Reduction



¹ Hong Kong portfolio is our office, retail portfolios and hotels in Hong Kong.

² Mainland China portfolio is our office and retail portfolio in Mainland China, excluding hotels.

³ Energy consumption refers to purchased electricity for the provision of shared services for and in the common parts of our buildings with reference to the BAU baseline level in 2008 for our Hong Kong portfolio, and the BAU baseline level in the first year for which a complete calendar year of data was available for projects in our Mainland China portfolio.

* All figures are calculated based on 2018 data.

GREEN BUILDING PERFORMANCE

SHAPING INDUSTRY STANDARDS FOR OVER 20 YEARS

Achieve the highest environmental building assessment scheme rating for all projects under development

100% 
of projects under development¹
achieved **highest** green building
certification ratings

92% of all existing buildings²
are **certified green buildings**, of which
75% achieved **highest ratings**

GREEN BUILDING PERFORMANCE

SHAPING INDUSTRY STANDARDS FOR OVER 20 YEARS

BEAM Plus (HK)



- **37** buildings with BEAM / BEAM Plus certification including **18** buildings with BEAM Plus Existing Building V2.0 Final Platinum

LEED (HK, Mainland China, US)



- **33** buildings with LEED

WELL



- Asia's 1st commercial Building – One Taikoo Place achieved **Final Platinum**
- Two Taikoo Place achieved **Pre-certified Platinum**



ONE TAIKOO PLACE – ADOPTING NEW GREEN BUILDING TECH

ONE TAIKOO PLACE

FEATURING STATE-OF-THE-ART GREEN BUILDING TECH



HK 1st commercial
building -
Biodiesel tri-generation
system



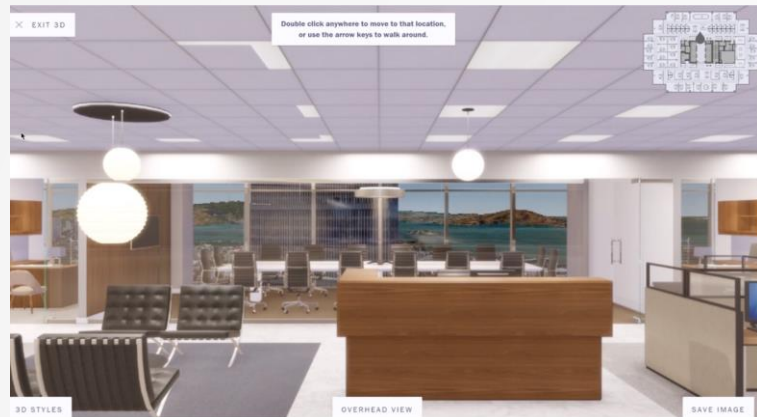
Combined green roof
and solar PV system



HK 1st AI-enabled smart
building

TECHNOLOGICAL INNOVATION

INNOVATING TO ENHANCE BUILDING PERFORMANCE



New Ventures



NEW

Digital Transformation of
Technical Services



NEW

UrbanLab

RETRO-COMMISSIONING OF HVAC SYSTEMS

ENHANCING BUILDING ENERGY EFFICIENCY



Partnership with Tsinghua
University –
Monitoring-based
commissioning of HVAC system



Electronically-commutated
(EC) plug fan replacement



Variable speed drive chiller
replacement



Taikoo Place

BUILDING THE MOMENTUM OF GREEN FINANCE

GREEN FINANCING

DIVERSIFICATION OF FUNDING SOURCE AND INTEREST COST SAVINGS



Green Bond Impact Report

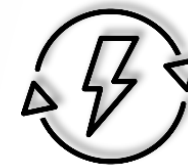


Allocation of funds and environmental impact on:

- Green buildings
- Renewable Energy
- Energy Efficiency
- Sustainable Water and Wastewater Management

Year-on-Year SD Performance

MEMBER OF
Dow Jones Sustainability Indices
In collaboration with 
a RobecoSAM brand






- Retains listing on the DJSI World Index
- Achieves a target reduction in energy intensity each year for Hong Kong portfolio

ESTIMATED ENVIRONMENTAL PERFORMANCE

ONE TAIKOO PLACE



Category	Highlights of Green Elements	Estimated Environmental Impact
Renewable Energy 	<ul style="list-style-type: none"> Dual-level roof fitted with an integrated solar photovoltaics (PV) system and green roof Bio-diesel tri-generation system to supply heating, cooling and electricity. Used cooking oil from tenants is converted into biodiesel by third-party recyclers to power this system 	<ul style="list-style-type: none"> Total renewable energy generated annually: 468,300 kWh, which is equivalent to an annual carbon emissions avoidance¹ of 370 tonnes of CO₂e
Energy Efficiency² 	<ul style="list-style-type: none"> Air handling units with electronically commutated (EC) plug fans to enhance efficiency Highly optimized chiller control system with powerful data analytics Energy efficient lighting and control system 	<ul style="list-style-type: none"> Annual energy savings exceeding BEAM Plus³ and LEED⁴ baseline performance by 33% and 28% respectively
Sustainable Water and Wastewater Management 	<ul style="list-style-type: none"> Harvest rainwater for irrigation and recycle grey water for flushing Low-flow sanitary fittings 	<ul style="list-style-type: none"> Freshwater savings exceeding BEAM Plus baseline performance by >40%

¹ Calculated by using the 2017 emission factor of Hong Kong Electric

² Expenditures relating to energy efficiency element of One Taikoo Place are included in "Green Buildings" Category


³ Based on Building Energy Code 2012 Edition as baseline

⁴ Based on ASHARE 90.1.2007 as baseline (LEED 2009 for Core and Shell Development)

ESTIMATED ENVIRONMENTAL PERFORMANCE

ENERGY EFFICIENCY PROJECTS IN HK PORTFOLIO



Category	Highlights of Green Elements	Estimated Environmental Impact
Energy Efficiency 	<ul style="list-style-type: none"> High efficiency chiller system at Taikoo Place and Pacific Place Energy efficient lighting including LED at Taikoo Place, Pacific Place and Cityplaza Variable speed drive (“VSD”) for condensing water pumps at Taikoo Place and Cityplaza to enhance energy efficiency EC Plug fans in air handling units at Taikoo Place and Pacific Place to enhance energy efficiency¹. Pilot testing of EC plug fans estimated that the use of fan energy could be reduced by up to 30% 	<ul style="list-style-type: none"> Annual energy saving: <ul style="list-style-type: none"> Cityplaza: 165,900 kWh Taikoo Place: 3,375,200 kWh Pacific Place: 2,899,900 kWh Total: 6,441,000 kWh Annual carbon emissions avoided: <ul style="list-style-type: none"> Cityplaza: 131 tonnes of CO₂e Taikoo Place: 2,666 tonnes of CO₂e Pacific Place: 2,291 tonnes of CO₂e Total: 5,088 tonnes of CO₂e

