## Tall Buildings in Numbers

# Green Walls in High-Rise Buildings

For centuries, green walls have been used to shade building walls and atriums, to shield buildings from wind, and to cultivate agricultural plants. Now, as the world population urbanizes, green walls have become a significant tool in the quest for greater sustainability in the tall-building field. The latest CTBUH technical guide, Green Walls in High-Rise Buildings, provides a thorough investigation of the methods used around the world for implementation of vertical vegetation at height. In commemoration of the release of this important quide, Tall Buildings in Numbers profiles the 18 case study buildings included.

To purchase your copy of Green Walls in High-Rise Buildings visit: https://store.ctbuh.org

### **Location of Case Studies and Size/Percentage** of their Green Coverage



Building Height: 48 meters

Largest green coverage on a single façade: 159 m² (9%)

Hotel Intercontinental

Building Height: 52 meters

Total surface area of green

Largest green coverage on a

Green coverage of total

single façade: 1,302 m² (60%)

coverage: 1,590 m<sup>2</sup>

Santiago, 2011

Stories: 16



Green Walls in

High-Rise Buildings

Bosco Verticale

Milan, 2013 Building Height: 112 meters Stories: 27

Total surface area of green coverage: 10,142 m<sup>2</sup>

Largest green coverage on a single façade: 1,735 m² (47%)

Green coverage of total façade: 42%



Total surface area of green coverage: 264 m<sup>2</sup> Largest green coverage on a single façade: 264 m² (49%) Green coverage of total façade: 15%

Consorcio Santiago

coverage: 2,293 m<sup>2</sup>

Building Height: 58 meters

Total surface area of green

Largest green coverage on a

single façade: 2,066 m² (43%)

Green coverage of total

Santiago, 1993

Stories: 17



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# The Met

Singapore, 2011 Building Height: 79 meters Stories: 15

Total surface area of green coverage: 3,065 m<sup>2</sup>

Largest green coverage on a single façade: 1,449 m² (N/A) Green coverage of total façade: 15%



**Newton Suites** Singapore, 2007 Building Height: 120 meters Stories: 36

Total surface area of green coverage: 1,274 m<sup>2</sup>

Largest green coverage on a single façade: 734 m² (21%)

Green coverage of total façade: 10%



School of the Arts Sinaapore, 2010 Building Height: 56 meters Stories: 10

Total surface area of green coverage: 6,446 m<sup>2</sup>

Largest green coverage on a single façade: 1,434 m² (53%)

Green coverage of total facade: 26%



Bangkok, 2009 Building Height: 231 meters Stories: 69

Total surface area of green coverage: 7,170 m<sup>2</sup> Largest green coverage on a

single façade: 3,385 m² (18%) Green coverage of total façade: 14%



IDEO Morph 38 To Bangkok, 2013 Building Height: 134 meters Stories: 32

Total surface area of green coverage: 5,850 m<sup>2</sup>

Largest green coverage on a single façade: 1,276 m² (66%)

Green coverage of total



**Building Functions** 

Hote

ACROS Fukuoka Fukuoka, 1995 Building Height: 60 meters Stories: 14

Total surface area of green coverage: 5,326 m<sup>2</sup>

Largest green coverage on a single façade: 5,326 m² (84%) Green coverage of total façade: 28%



Across the 18 case studies, there are four

different types of building functions. Green walls are thus clearly applicable across multiple building types and functions.

Pasona Headquarters Tokyo, 2010 Building Height: 34 meters Stories: 9

Total surface area of green coverage: 1,224 m<sup>2</sup>

Largest green coverage on a single façade: 720 m² (37%)

Green coverage of total façade: 20%



Total surface area of green coverage: 189 m<sup>2</sup> Largest green coverage on a single façade: 138 m² (1%) Green coverage of total façade: 0.4%



### PARKROYAL on Pickering

Singapore, 2012 Building Height: 89 meters Stories: 15

CH2 Council House 2

Building Height: 42 meters

Total surface area of green coverage: 420 m<sup>2</sup>

Green coverage of total façade: 7%

Largest green coverage on a single façade: 420 m² (19%)

Melbourne, 2006

Stories: 10

Total surface area of green coverage: 4,827 m<sup>2</sup> Largest green coverage on a single façade: 2,257 m² (16%) Green coverage of total façade: 11%



#### Trio Apartments Sydney, 2009

Building Height: 39 meters Stories: 16

Total surface area of green coverage: 139 m<sup>2</sup>

Largest green coverage on a single façade: 139 m² (5%)

Green coverage of total façade: 0.7%



Helios Residences

coverage: 1,652 m<sup>2</sup>

Building Height: 94 meters

Total surface area of green

Largest green coverage on a

Green coverage of total façade: 7%

single façade: 1,142 m² (15%)

Singapore, 2011

Stories: 20





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