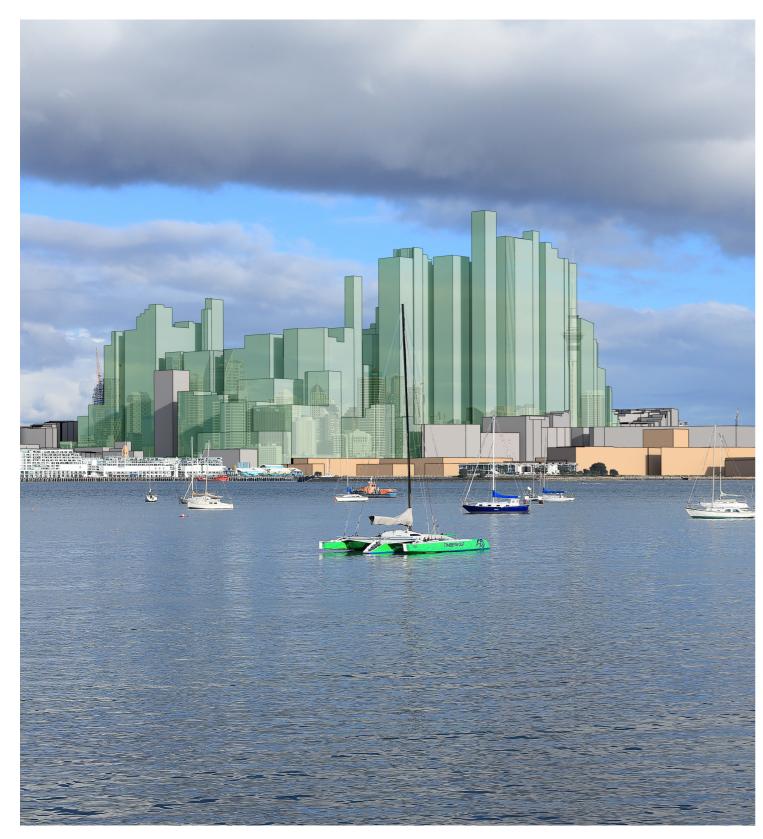
City Centre Zone

Auckland Council Visual Simulation



Alternative modelling of PC78 setback standards



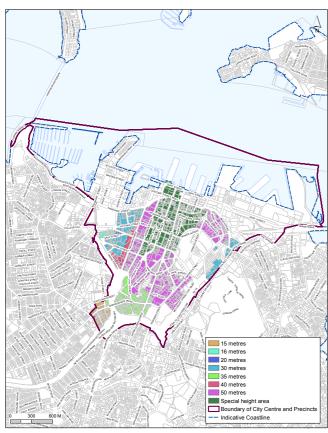
City Centre Zone

Special Height Area

Overview

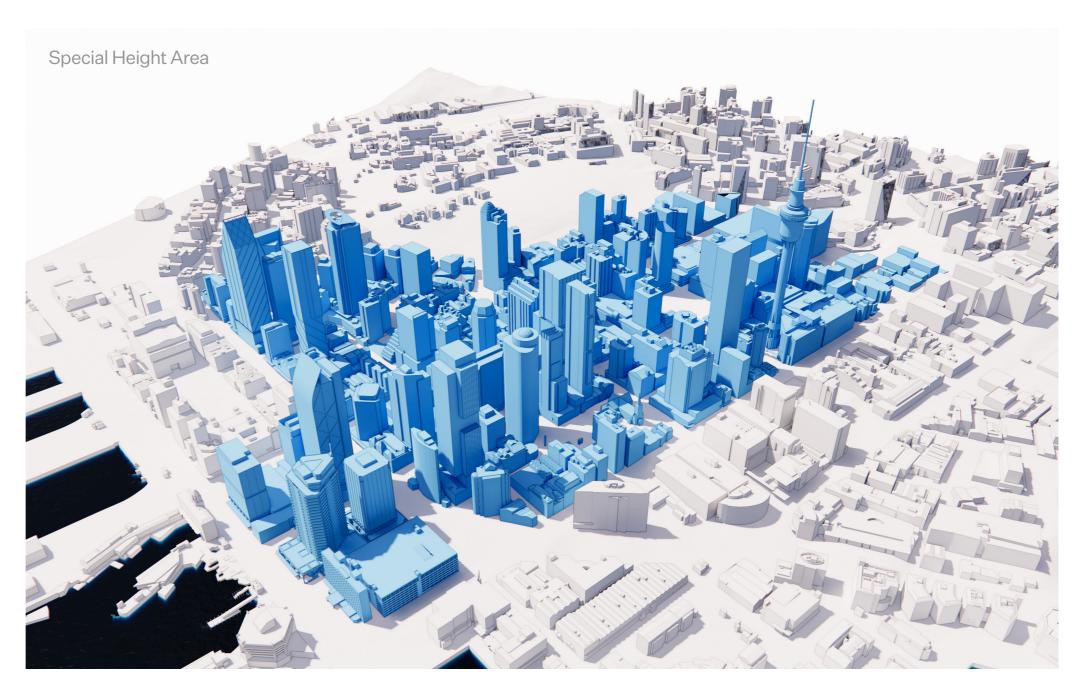
The adjacent image illustrates the existing buildings in the 'Special height area' within the city centre zone. In this area buildings are not considered to have a specific height limit other than a range of 'special height controls' (solar control plane, harbour edge standard, volcanic viewshafts etc).

For the purpose of this exercise, this Special Height Area was analysed to understand the impact and outcomes that could result from the implementation of PC78, with particular regard to the variable setback control proposed under H8.6.24.



City Centre zone: General height controls

Auckland Unitary Plan H8.11.3 City Centre Zone: General Height Controls



Site Key

Special Height Area (SHA)

City Centre Zone

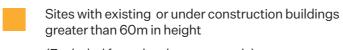
Excluded Sites

Within the special height zone there would be a number of sites that would realistically be unable to be developed in the foreseeable future. The adjacent diagram illustrated the sites that are omitted from this study on that basis. The specific categories omitted are as follow:

- Existing buildings taller than 60m
- Approved / under construction buildings taller than 60m
- Notable heritage buildings (majority of heritage sites are included within)
- Sites restricted by the volcanic view shaft (E10)

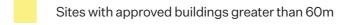


Site Key



(Excluded from development study)

Remaining special height zones for development



Sites excluded due to undevelopable heritage constraints

Sites excluded due to volcanic view shaft controls (E10)

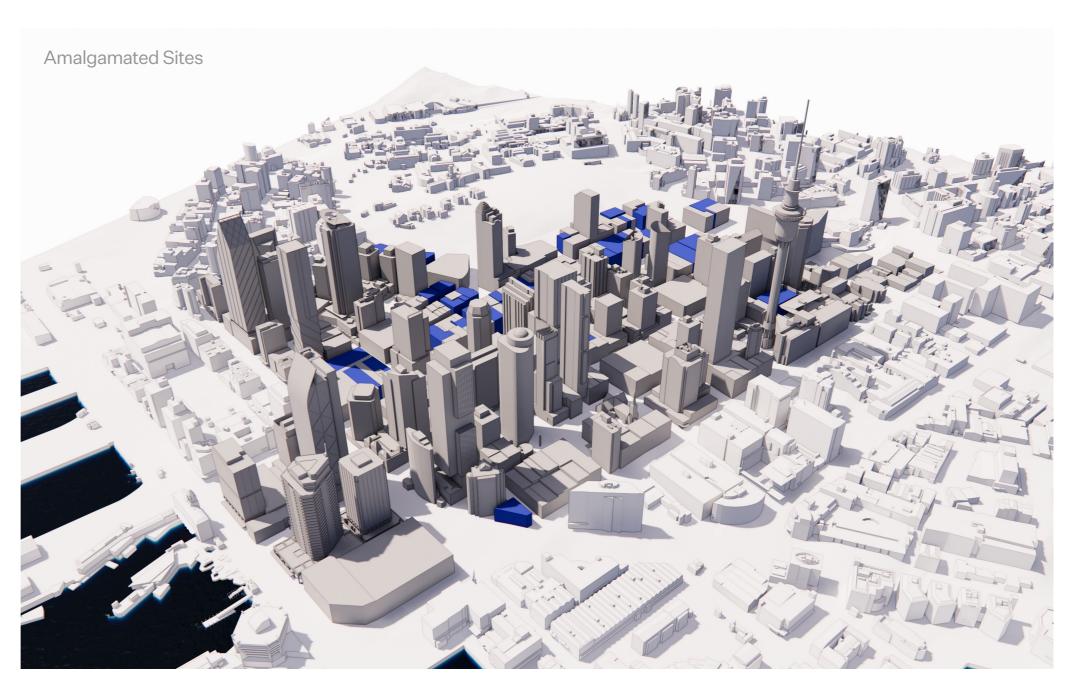
City Centre Zone

Amalgamated Sites

For the purpose of this study, the design team has assumed that current amalgamated sites are assessed as single plots, subsequently maximising their opportunity for development.

These sites are identified primarily using Auckland Council Rating data, with additional amalgamations identified through specific case-by-case review.

These amalgamated sites are illustrated in the adjacent diagram (note - the amalgamated sky city site has been omitted from this diagram due to the site falling under the E10 volcanic viewshaft zone).



Site Key



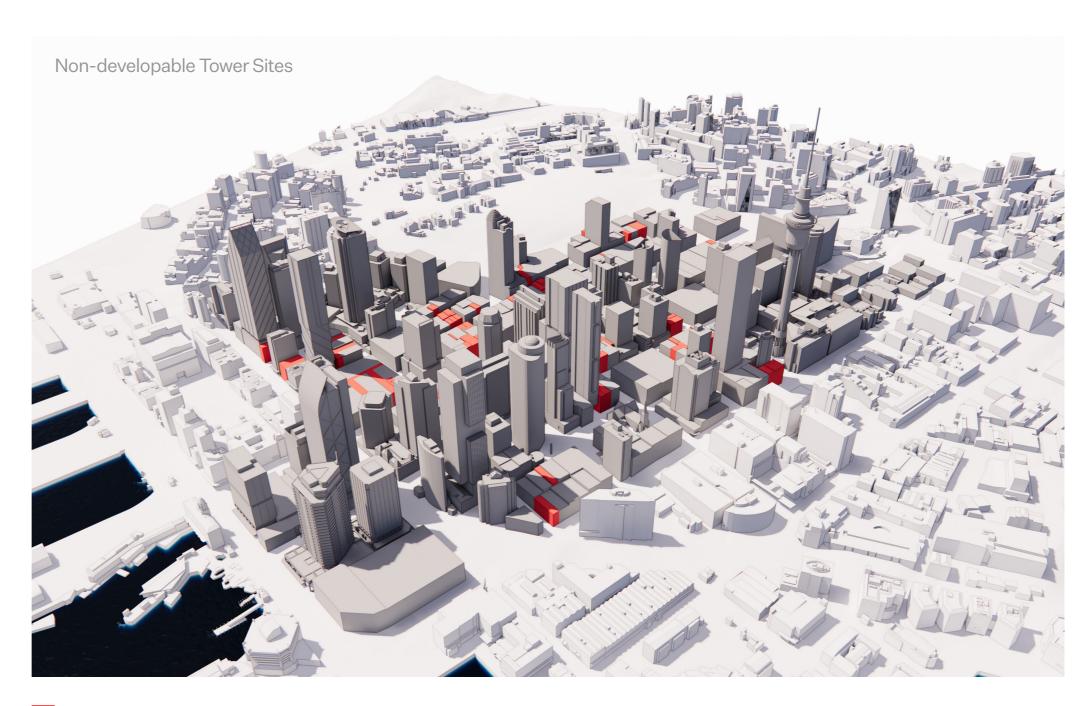
Amalgamated Site Parcels

(Assessed as amalgamated parcels for this analysis)

City Centre Zone

Non-developable Sites

Based on the PC78 requirement for tower forms to have a minimum 6m setback on all sides, the sites indicated adjacent are deemed to be undevelopable tower sites due to a tower footprint with 6m setbacks being unachievable on the proposed site (i.e., a site dimension smaller than 12m)



Nor

Non-developable tower sites

(tower form with 6m setback from boundary cannot be created)

City Centre Zone

+28m | 6m Boundary Offset

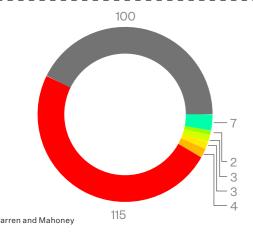
The adjacent imagery and below figures illustrate the tower footprint sizes that are able to be used from the top of podium level (28m) assuming 6m setbacks on all side.

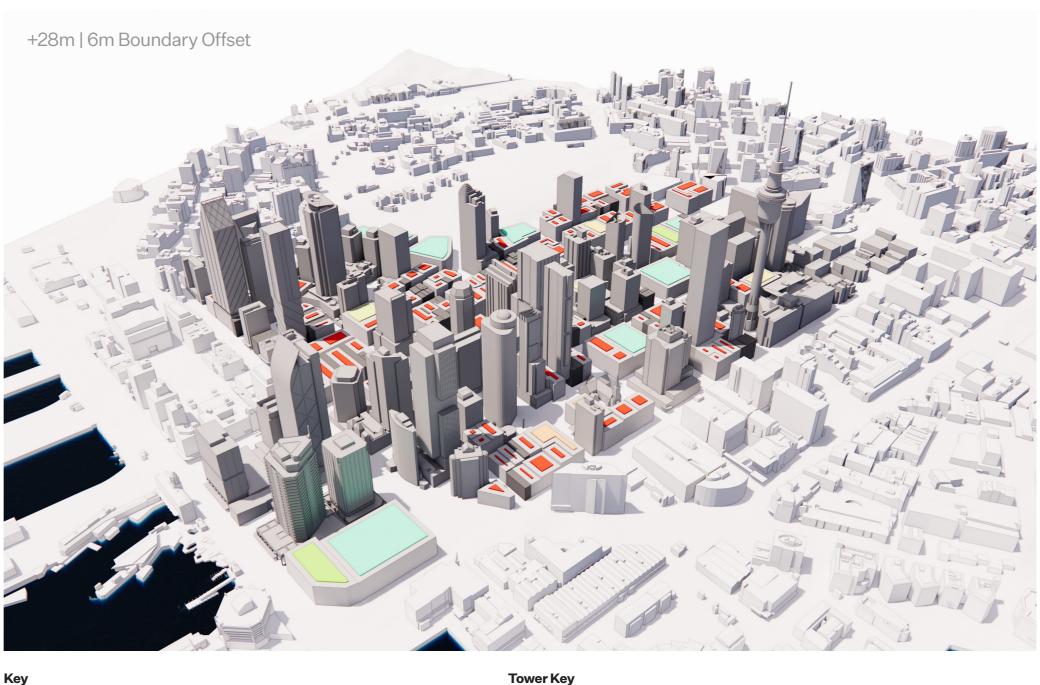
Metrics

Total no. of Sites	234	
Non-developable Tower Sites	100	42.7%
Theoretically Dev. Tower Sites	134	57.3%
Feasible Dev. Tower Sites (>600m²)	19	8.1%

Theoretically Developable Tower Sites

S	< 600 m ²	115	49.1%
r Sites	600 - 800 m²	4	1.7%
Tower 	800 - 1000 m ²	3	1.3%
ev. 7	1000 - 1200 m ²	3	1.3%
ble D	1200 - 1400 m²	2	0.9%
Feasible	> 1400 m ²	7	3.0%





Tower Key

Non-developable Tower Sites (tower form with 6% setback cannot be created due to site

All buildings on sites excluded from study

< 600 m² floorplate 600-800 m² floorplate 800-1000 m² floorplate

1000-1200 m² floorplate

1200-1400 m² floorplate

> 1400 m² floorplate

City Centre Zone

+100m | 6m Boundary Offset

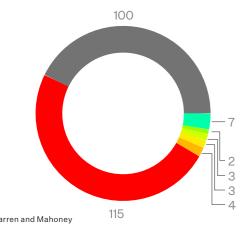
Modelling of the capacity of the Special Height Area (SHA) within the City Centre. Existing buildings greater than 60m are excluded from development potential, as are notable heritage buildings and sites impacted by volcanic viewshafts (E10). Floorplates smaller than 600m² are considered unfeasible and are excluded from development potential.

Metrics

Total no. of Sites	234	
Non-developable Tower Sites	100	42.7%
Theoretically Dev. Tower Sites	134	57.3%
Feasible Dev. Tower Sites (>600m²)	19	8.1%

Theoretically Developable Tower Sites

S	$< 600 \text{m}^2$	115	49.1%
r Sites	600 - 800 m ²	4	1.7%
Tower	800 - 1000 m ²	3	1.3%
٠	1000 - 1200 m ²	3	1.3%
easible Dev.	1200 - 1400 m ²	2	0.9%
Feasi	> 1400 m ²	7	3.0%





To

Non-developable Tower Sites (tower form with 6% setback cannot be created due to site dimensions)

All buildings on sites excluded from study

Key



City Centre Zone

+100m (> 600m² Towers Only)

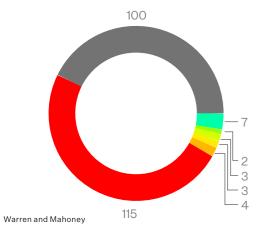
The adjacent imagery illustrates the feasible development sites at 100m in height, with undevelopable sites less than 600m² omitted.

Metrics

Total no. of Sites	234	
Non-developable Tower Sites	100	42.7%
Theoretically Dev. Tower Sites	134	57.3%
Feasible Dev. Tower Sites (>600m²)	19	8.1%

Theoretically Developable Tower Sites

S	< 600 m ²	115	49.1%
r Sites	600 - 800 m ²	4	1.7%
Tower	800 - 1000 m ²	3	1.3%
	1000 - 1200 m ²	3	1.3%
easible Dev.	1200 - 1400 m ²	2	0.9%
Feasi	> 1400 m ²	7	3.0%





Non-developable Tower Sites (tower form with 6% setback cannot be created due to site

All buildings on sites excluded from study

600-800 m² floorplate 800-1000 m² floorplate 1000-1200 m² floorplate

1200-1400 m² floorplate

> 1400 m² floorplate

City Centre Zone

+100m (> 600m² Towers Only) | Sunlight Controls

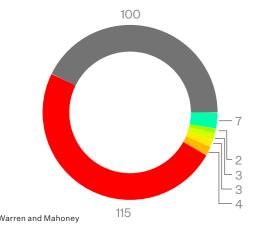
The adjacent imagery illustrates the feasible development sites at 100m in height, with the zones limited by AUP sunlight controls identified. Additional sunlight access standards recently proposed within PC78 are <u>not</u> modelled. Whilst the AUP sunlight controls do not impact tower floorplate areas, it should be noted that the vertical development opportunity for the available tower forms is reduced.

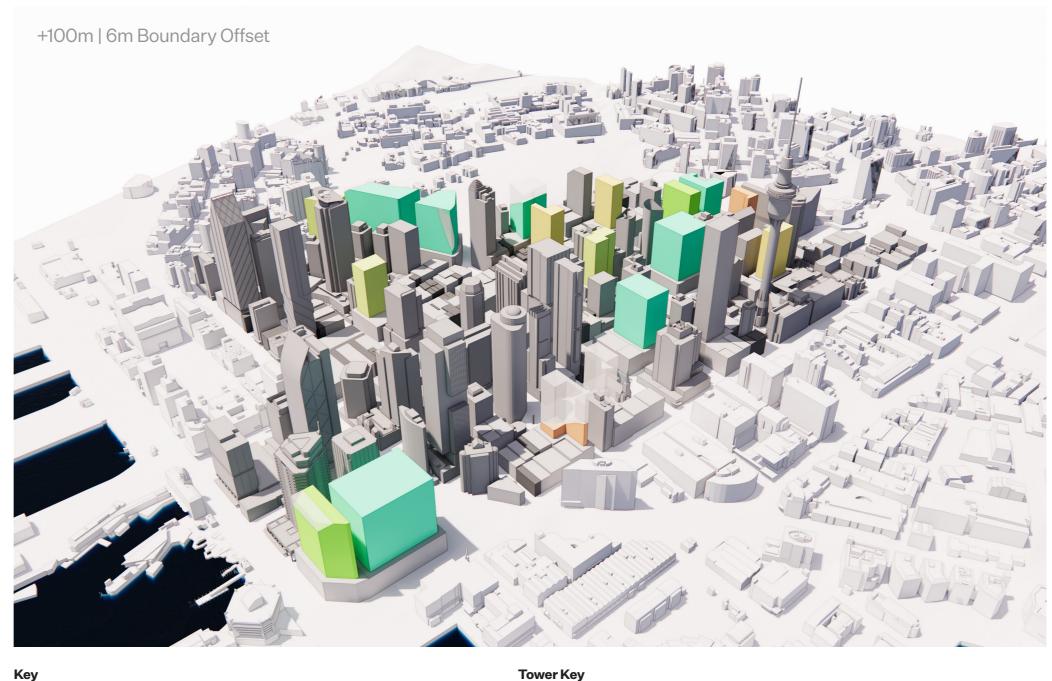
Metrics

Total no. of Sites	234
Non-developable Tower Sites	100 42.7%
Theoretically Dev. Tower Sites	134 57.3%
Feasible Dev. Tower Sites (>600m²)	19 8.1%

Theoretically Developable Tower Sites

S	$< 600 \text{m}^2$	115	49.1%
r Sites	600 - 800 m²	4	1.7%
Tower	800 - 1000 m ²	3	1.3%
	1000 - 1200 m ²	3	1.3%
easible Dev.	1200 - 1400 m ²	2	0.9%
Feasi	> 1400 m ²	7	3.0%





Non-developable Tower Sites (tower form with 6% setback cannot be created due to site dimensions) All buildings on sites excluded from study Tower Key 1000-1200 m² floorplate 600-800 m² floorplate 800-1000 m² floorplate > 1400 m² floorplate

City Centre Zone

+150m | 9m Boundary Offset

As per the previous slides, modelling of the capacity of the Special Height Area (SHA) within the City Centre at a height of 150m. At 150m in height, proposed towers would be required to have a 9m setback on all sides.

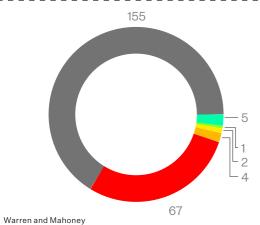
Metrics

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Total no. of Sites	234	
Non-developable Tower Sites	155	66.2%
Theoretically Dev. Tower Sites	79	33.8%
Feasible Dev. Tower Sites (>600m²)	12	5.1%

Theoretically Developable Tower Sites

S	$< 600 \text{m}^2$	67	28.6%
r Sites	600 - 800 m ²	4	1.7%
Tower 	800 - 1000 m ²	2	0.9%
	1000 - 1200 m ²	0	0%
easible Dev.	1200 - 1400 m ²	1	0.4%
Feasi	> 1400 m ²	5	2.1%





Tower Key

Non-developable Tower Sites (tower form with 6% setback cannot be created due to site dimensions)

All buildings on sites excluded from study

Key

< 600 m² floorplate

1000-1200 m² floorplate

600-800 m² floorplate

1200-1400 m² floorplate

800-1000 m² floorplate

> 1400 m² floorplate

City Centre Zone

+150m (> 600m² Towers Only)

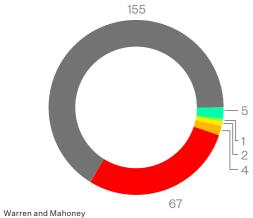
As above, this slides demonstrates the development opportunity with 150m tall buildings. The adjacent diagram omits towers with floorplates less that 600m² for clarity.

Metrics

Total no. of Sites	234
Non-developable Tower Sites	155 66.2%
Theoretically Dev. Tower Sites	79 33.8%
Feasible Dev. Tower Sites (>600m²)	12 5.1%

Theoretically Developable Tower Sites







1000-1200 m² floorplate (tower form with 6% setback cannot be created due to site 1200-1400 m² floorplate 600-800 m² floorplate

> 1400 m² floorplate

All buildings on sites excluded from study

Non-developable Tower Sites

800-1000 m² floorplate

City Centre Zone

+150m (> 600m² Towers Only) | Sunlight Controls

As above, this slides demonstrates the development opportunity with 150m tall buildings, with the zones limited by sunlight controls identified. Whilst the AUP sunlight controls do not impact tower floorplate areas, it should be noted that the vertical development opportunity for the available tower forms is reduced.

Metrics

Total no. of Sites

Non-developable Tower Sites

Theoretically Dev. Tower Sites

Feasible Dev. Tower Sites (>600m²)

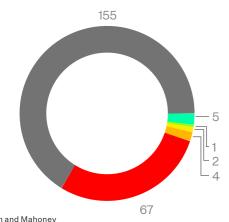
Total no. of Sites

155 66.2%

79 33.8%

Theoretically Developable Tower Sites

SS	< 600 m ²	67	28.6%
r Sites	600 - 800 m ²	4	1.7%
Tower	800 - 1000 m ²	2	0.9%
	1000 - 1200 m ²	0	0%
easible Dev.	1200 - 1400 m ²	1	0.4%
Feasi	> 1400 m ²	5	2.1%





Tower Key Non-developable Tower Sites (tower form with 6% setback cannot be created due to site dimensions) All buildings on sites excluded from study Tower Key 1000-1200 m² floorplate 600-800 m² floorplate 1200-1400 m² floorplate > 1400 m² floorplate

City Centre Zone

+200m | 12m Boundary Offset

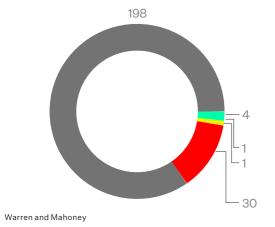
As per the previous slides, modelling of the capacity of the Special Height Area (SHA) within the City Centre at a height of 200m. At 200m in height, proposed towers would be required to have a 12m setback on all sides.

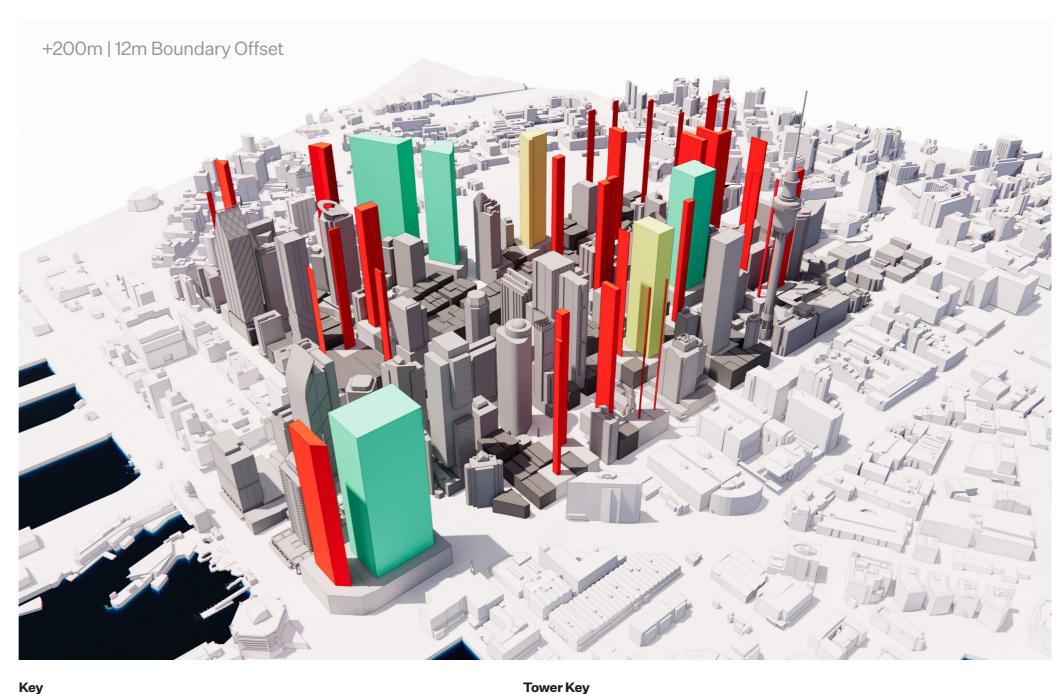
Metrics

Total no. of Sites	234	
Non-developable Tower Sites	198	84.6%
Theoretically Dev. Tower Sites	36	15.4%
Feasible Dev. Tower Sites (>600m²)	6	2.6%

Theoretically Developable Tower Sites

S	< 600 m ²	30	12.8%
r Sites	600 - 800 m²	0	0%
Tower	800 - 1000 m ²	1	0.4%
	1000 - 1200 m ²	1	0.4%
easible Dev.	1200 - 1400 m ²	0	0%
Feasi	> 1400 m ²	4	1.7%

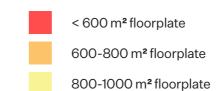




Non-developable Tower Sites (tower form with 6% setback cannot be created due to site

All buildings on sites excluded from study

Tower Key



1000-1200 m² floorplate

1200-1400 m² floorplate > 1400 m² floorplate

City Centre Zone

+200m (> 600m² Towers Only)

As above, this slides demonstrates the development opportunity with 200m tall buildings. The adjacent diagram omits towers with floorplates less that 600m² for clarity.

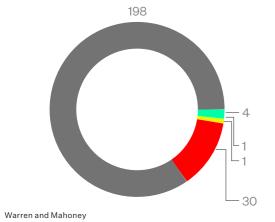
Metrics

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Total no. of Sites	234
Non-developable Tower Sites	198 84.6%
Theoretically Dev. Tower Sites	36 15.4%
Feasible Dev. Tower Sites (>600m²)	6 2.6%

Theoretically Developable Tower Sites

S	$< 600 \text{m}^2$	30	12.8%
r Sites	600 - 800 m ²	0	0%
Fower 	800 - 1000 m ²	1	0.4%
ev. 7	1000 - 1200 m ²	1	0.4%
ble D	1200 - 1400 m ²	0	0%
Feasibl	> 1400 m ²	4	1.7%





Tower Key Non-developable Tower Sites (tower form with 6% setback cannot be created due to site dimensions) All buildings on sites excluded from study Tower Key 1000-1200 m² floorplate 1200-1200 m² floorplate 1200-1400 m² floorplate > 1400 m² floorplate

City Centre Zone

+200m (> 600m² Towers Only)

As above, this slides demonstrates the development opportunity with 200m tall buildings, with the zones limited by sunlight controls identified. Whilst the AUP sunlight controls do not impact tower floorplate areas, it should be noted that the vertical development opportunity for the available tower forms is reduced.

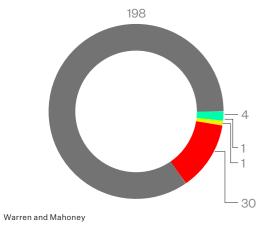
Metrics

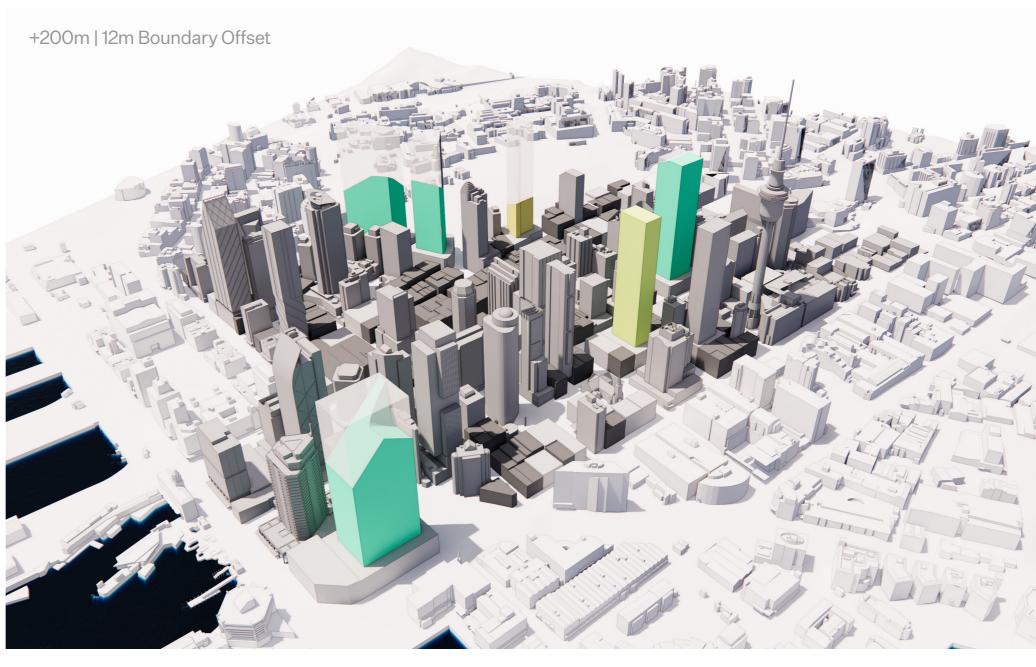
Total no. of Sites 234 **198** 84.6% Non-developable **Tower Sites 36** 15.4% Theoretically Dev. **Tower Sites** Feasible Dev. Tower **6** 2.6%

Theoretically Developable Tower Sites

Sites (>600m²)

S	< 600 m ²	30	12.8%
r Sites	600 - 800 m ²	0	0%
Tower	800 - 1000 m ²	1	0.4%
	1000 - 1200 m ²	1	0.4%
easible Dev.	1200 - 1400 m ²	0	0%
Feasi	> 1400 m ²	4	1.7%





Tower Key

Non-developable Tower Sites (tower form with 6% setback cannot be created due to site

All buildings on sites excluded from study

Key

1000-1200 m² floorplate 600-800 m² floorplate 1200-1400 m² floorplate 800-1000 m² floorplate > 1400 m² floorplate

Maximum Height Scenarios

City Centre Zone

Maximum Tower Heights Per Site | PC78 | > 600m²

(Nominal 250m Height Limit)

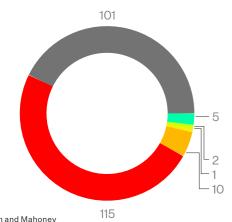
The adjacent diagram illustrates the tallest tower possible for each site, determined by the greatest height and in turn setback achievable without the floorplate area dropping below 600m².

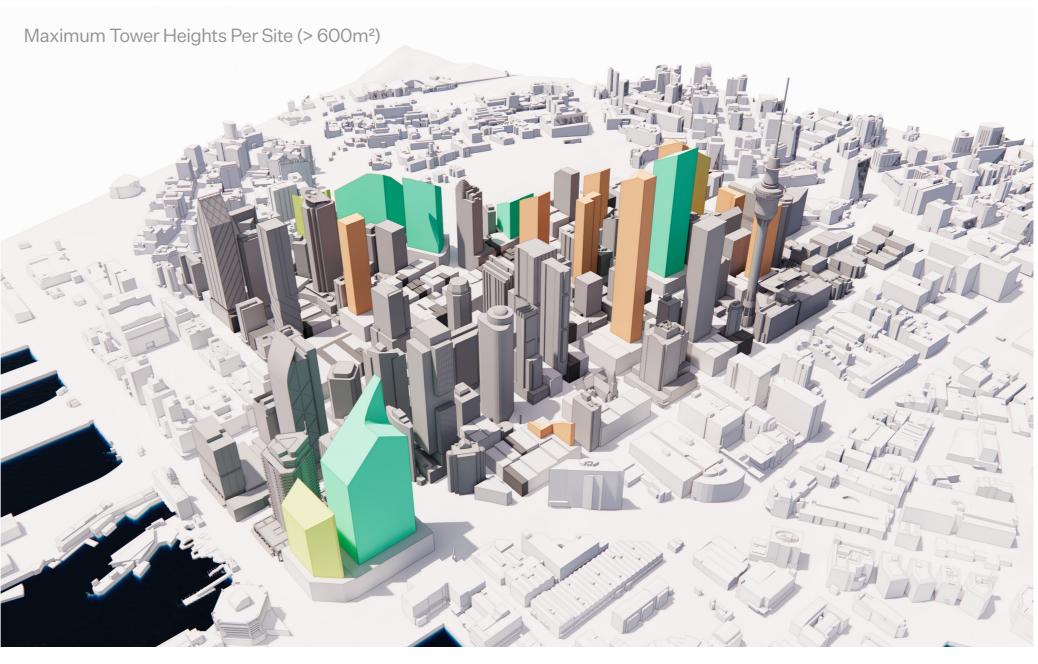
Metrics

Total no. of Sites	234	
Non-developable Tower Sites	101 4	43.2%
Theoretically Dev. Tower Sites	133	56.8%

Theoretically Developable Tower Sites

	Feasible Dev. Tower Sites (>600m²)	18	7.7%
y I	< 600 m ²	115	49.1%
ower Sites	600 - 800 m²	10	4.3%
o i	800 - 1000 m²	1	0.4%
- ' -	1000 - 1200 m²	2	0.9%
easible Dev.	1200 - 1400 m²	0	0%
reasi	> 1400 m ²	5	2.1%





 Key
 Tower Key

 Non-developable Tower Sites (tower form with 6% setback cannot be created due to site dimensions)
 1000-1200 m² floorplate

 All buildings on sites excluded from study
 800-1000 m² floorplate
 > 1400 m² floorplate

City Centre Zone

Maximum Tower Heights Per Site | AUP 6m Setback | (> 600m² Towers Only)

(Nominal 250m Height Limit)

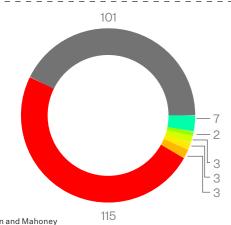
The adjacent diagram illustrates the tower forms achievable with the current planning controls. This assumes a constant 6m setback across all sites, and doesn't factor in any limitations to height such as floorarea-ratio (FAR). AUP sunlight controls are considered in the adjacent diagram.

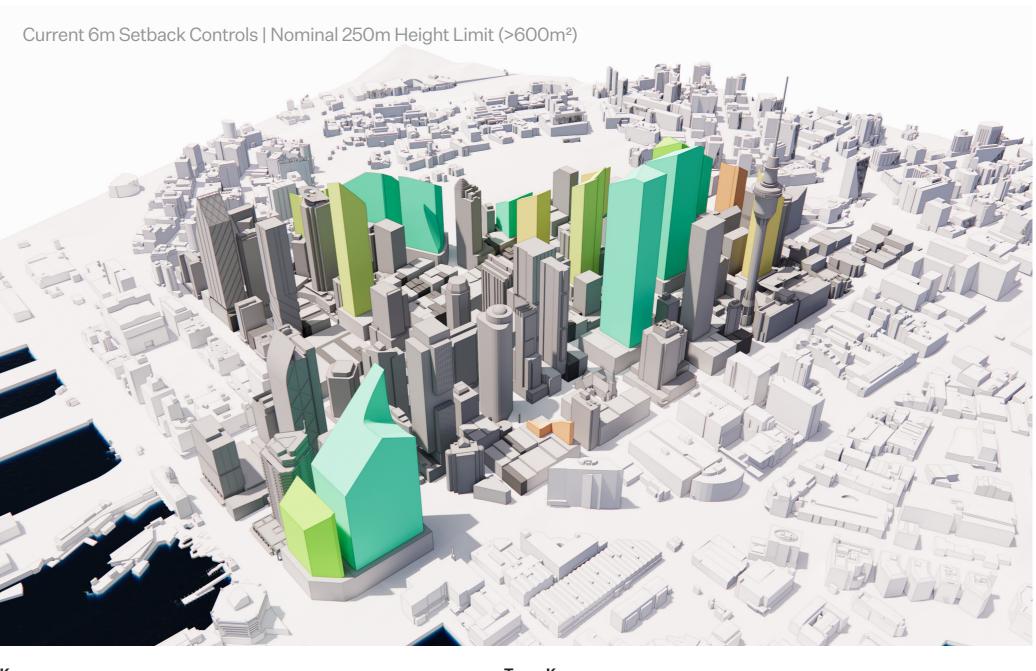
Metrics

Total no. of Sites	234	
Non-developable Tower Sites	101	43.2%
Theoretically Dev. Tower Sites	133	56.8%

Theoretically Developable Tower Sites

Feasible Dev. Tower Sites (>600m²)	18	7.7%
< 600 m ²	115	49.1%
600 - 800 m²	3	1.3%
800 - 1000 m ²	3	1.3%
1000 - 1200 m ²	3	1.3%
1200 - 1400 m ²	2	0.9%
> 1400 m ²	7	3.0%
	< 600 m ² 600 - 800 m ² 800 - 1000 m ²	Sites (>600m²) < 600 m² 600 - 800 m² 800 - 1000 m² 3







City Centre Zone

Maximum Building Height (PC78) | Harbour



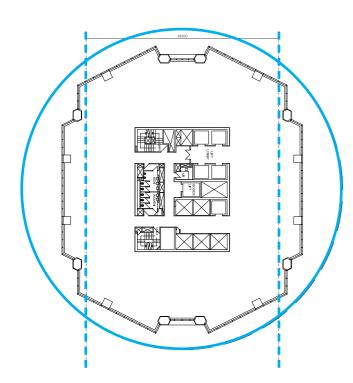
City Centre Zone

Maximum Building Height (AUP - No F.A.R.) | Harbour



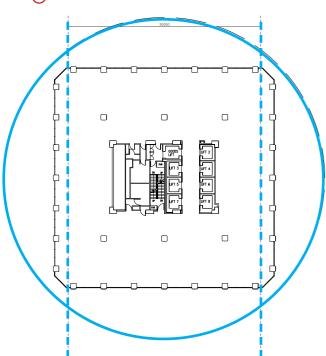
Benchmarks - Office Towers

Benchmarks - Office Towers Auckland



135 Albert St - Auckland Tower Plan Area ~1,400m² GFA | Height 116m Year Complete: 1991

- H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension



AON House

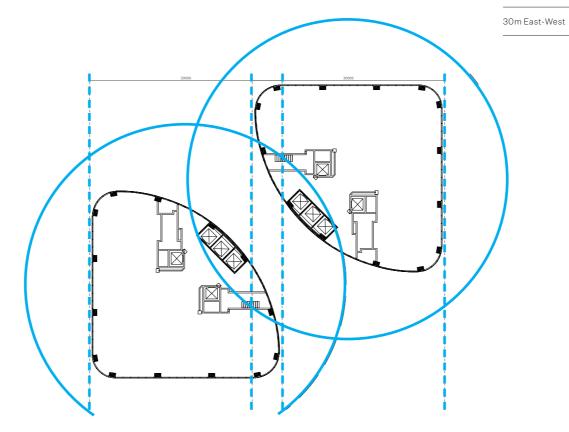
Warren and Mahoney

29 Custom St West - Auckland

Tower Plan Area ~1,170m² GFA | Height 92m

Year Conmplete: 1984

- H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension

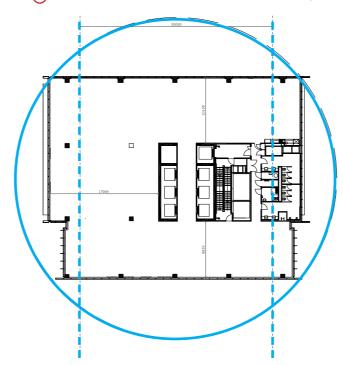


205 Queen St - Auckland

Tower Plan Area ~700m² GFA per Tower | Height 104m/88m

Year Complete: 1990

- H8.6.24 Maximum Tower Dimension (individual tower)
- H8.6.24A Maximum East-West Tower Dimension (combined tower)



Deloitte Centre

80 Queen St - Auckland

Tower Plan Area ~1,220m² GFA | Height 100m

Year Complete: 2009

- H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension

Minor non-compliance

<u>-</u>

Non-compliance

×

ANZ Centre

0

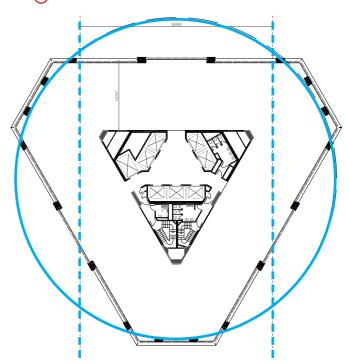
 \bigcirc

23 Albert St, Auckland

Tower Plan Area ~1,150m² GFA | Height 151m

Year Complete: 1991

- H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension



HSBC Tower

188 Quay St - Auckland

Tower Plan Area ~1,455m² GFA | Height 114m/139m (Mast)

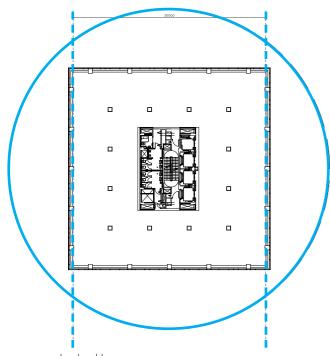
- Year Complete: 2002

 * H8.6.24 Maximum Tower Dimension
- ⋉ H8.6.24A Maximum East-West Tower Dimension

December 2023 | Revision A

50m Radius

Benchmarks - Office Towers Auckland



Jarden House

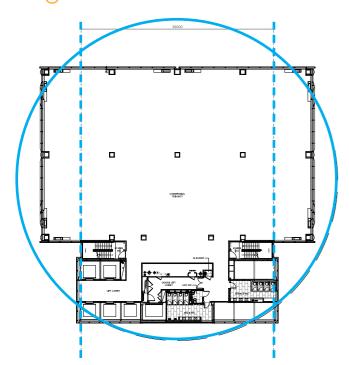
21 Queen St - Auckland

Tower Plan Area ~990m² GFA | Height 71m

Year Complete: 1975

H8.6.24 Maximum Tower Dimension

H8.6.24A Maximum East-West Tower Dimension



PwC Tower

15 Customs St West - Auckland

Tower Plan Area ~1,550m² GFA | Height 180m

Year Complete: 2020

▶ H8.6.24 Maximum Tower Dimension

(*) H8.6.24A Maximum East-West Tower Dimension

One Queen

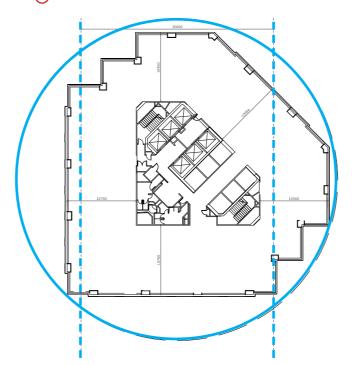
1 Queen St - Auckland

Tower Plan Area ~1,375m2 GFA | Height 83 m

Year Complete: 1966

▶ H8.6.24 Maximum Tower Dimension

(x) H8.6.24A Maximum East-West Tower Dimension



Vero Centre

48 Shortland St - Auckland

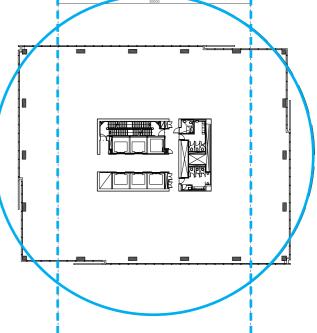
Tower Plan Area ~1,375m2 GFA | Height 170m

Year Complete: 2000

H8.6.24 Maximum Tower Dimension

(x) H8.6.24A Maximum East-West Tower Dimension

Compliance Minor non-compliance Non-compliance



Lumley Centre

0

50m Radius

30m East-West

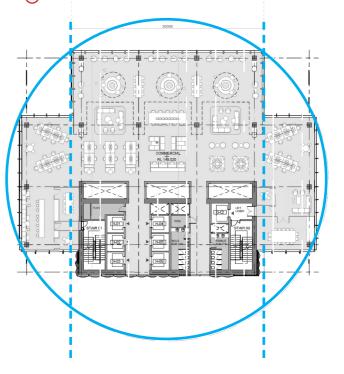
88 Shortland St - Auckland

Tower Plan Area ~1,425m² GFA | Height 125m

Year Complete: 2005

▶ H8.6.24 Maximum Tower Dimension

H8.6.24A Maximum East-West Tower Dimension



Federal & Wolfe

5-15 Albert St - Auckland

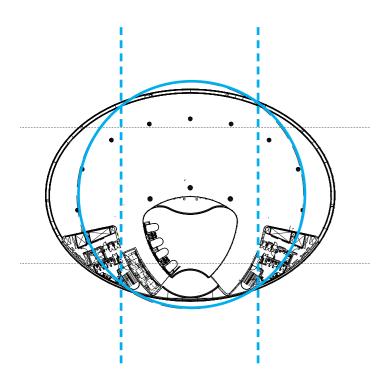
Tower Plan Area ~1,385m2 GFA | Height 169m

Year Complete: TBC

H8.6.24 Maximum Tower Dimension

(x) H8.6.24A Maximum East-West Tower Dimension

Benchmarks - Office Towers Australia

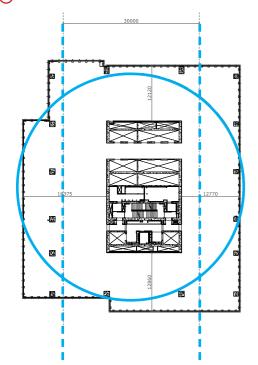


1 Bligh St - Sydney

Tower Plan Area -2,350m² GFA | Height 139m

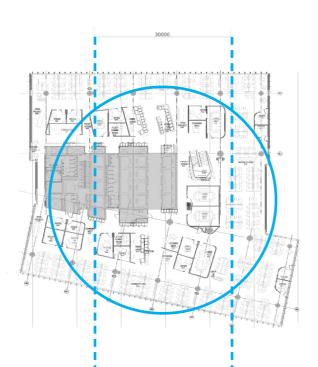
Year Complete: 2008

- ★ H8.6.24 Maximum Tower Dimension
- ★ H8.6.24A Maximum East-West Tower Dimension



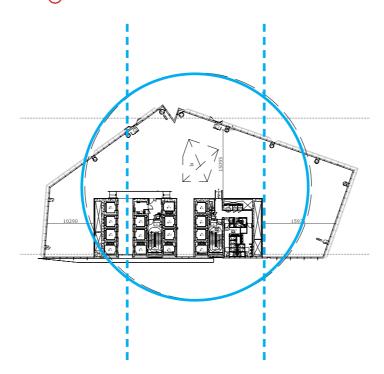
NAB Brookfield Place 2 Carrington St - Sydney Tower Plan Area ~2,500m² GFA | Height 134m Year Complete : 2021

- ▶ H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension



4 Parramatta Square
12 Darcy St - Sydney
Tower Plan Area ~2,715m² GFA | Height 158m
Year Complete: 2020

- ▶ H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension



Salesforce Tower

180 George St - Sydney

Tower Plan Area ~1,690m² GFA | Height 263m

Year Complete: 2022

- ▶ H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension

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Non-compliance

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EY Centre

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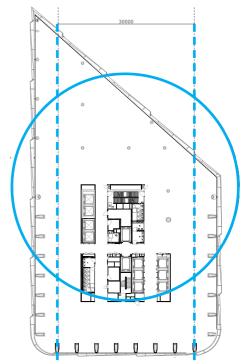
50m Radius

30m East-West

200 George St - Sydney

Tower Plan Area ~1,450m² GFA | Height 155m Year Complete: 2016

- ▶ H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension

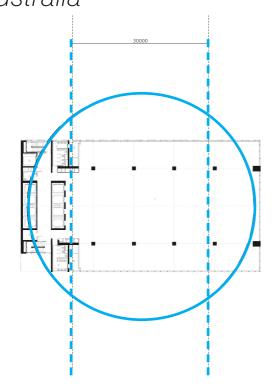


Quay Quarter
50 Bridge St - Sydney
Tower Plan Area ~2,300m² GFA | Height 188m
Year Complete: 2022

- ★ H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension

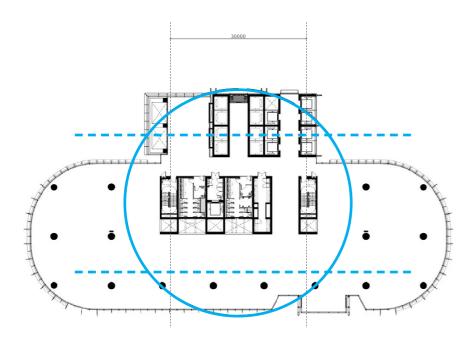
Warren and Mahoney December 2023 | Revision A

Benchmarks - Office Towers Australia



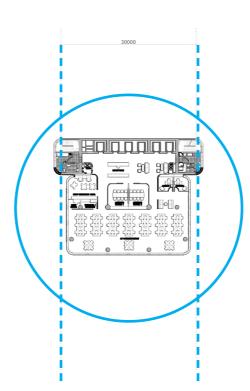
100 Mount Street, North Sydney Tower Plan Area: ~1,500m² GFA | Height 147m Year Complete: 2019

- ▶ H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension



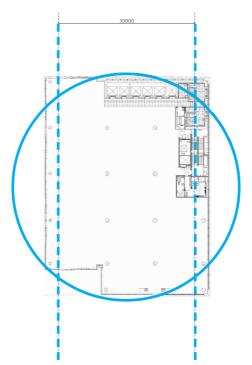
International Tower 1 Barangaroo, Sydney Tower Plan Area: ~3,300m² GFA | Height 217m Year Complete: 2016

- ★ H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension



88 Walker Street, North Sydney Tower Plan Area: ~740m² GFA | Height 180m Year Complete: 2023

- H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension



80 Collins Street, Melbourne Tower Plan Area: ~1,650m2 GFA | Height 216m Year Complete: 2020

- ▶ H8.6.24 Maximum Tower Dimension
- (x) H8.6.24A Maximum East-West Tower Dimension

Poly Centre

Minor non-compliance

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Non-compliance

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50m Radius

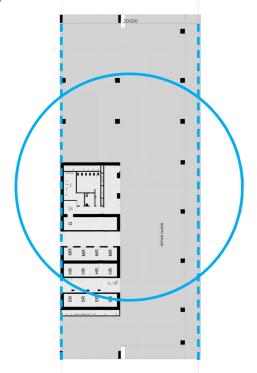
30m East-West

210 George Street, Sydney

Tower Plan Area: ~900m² GFA | Height 107m

Year Complete: 2022

- H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension



Olderfleet

477 Collins Street, Melbourne

Tower Plan Area: ~2,350m² GFA | Height 168m

Year Complete: 2020

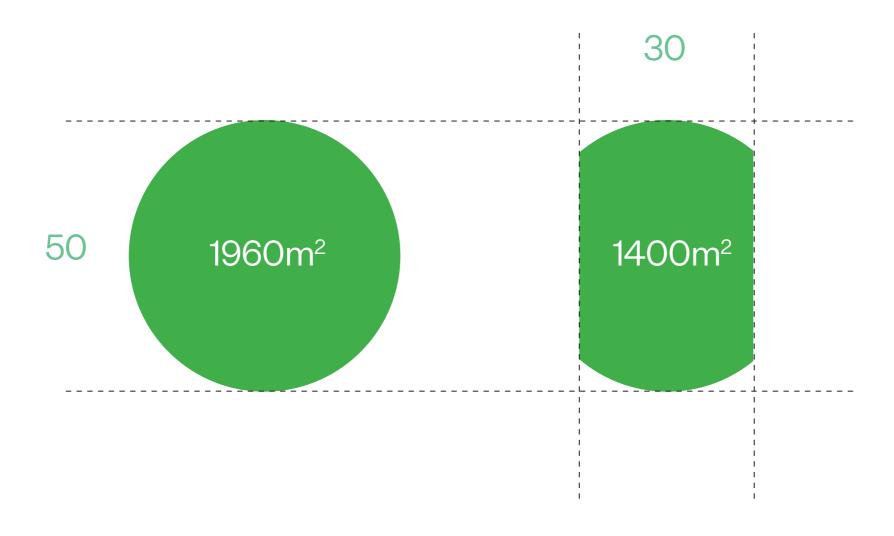
- ▶ H8.6.24 Maximum Tower Dimension
- H8.6.24A Maximum East-West Tower Dimension

Warren and Mahoney

December 2023 | Revision A

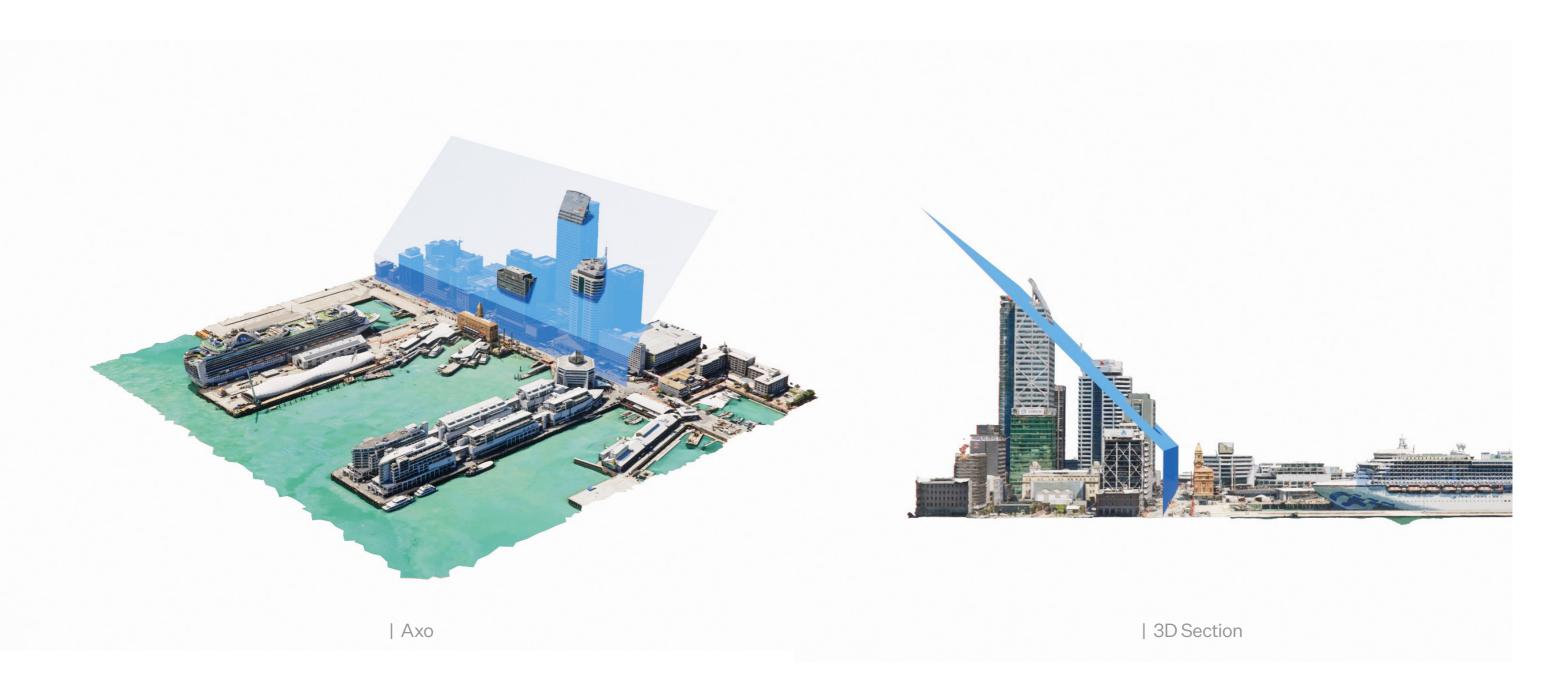
PC78 floorplate standards

City Centre Zone



City Centre Zone

Harbour Edge Height Control - 40m + 45°



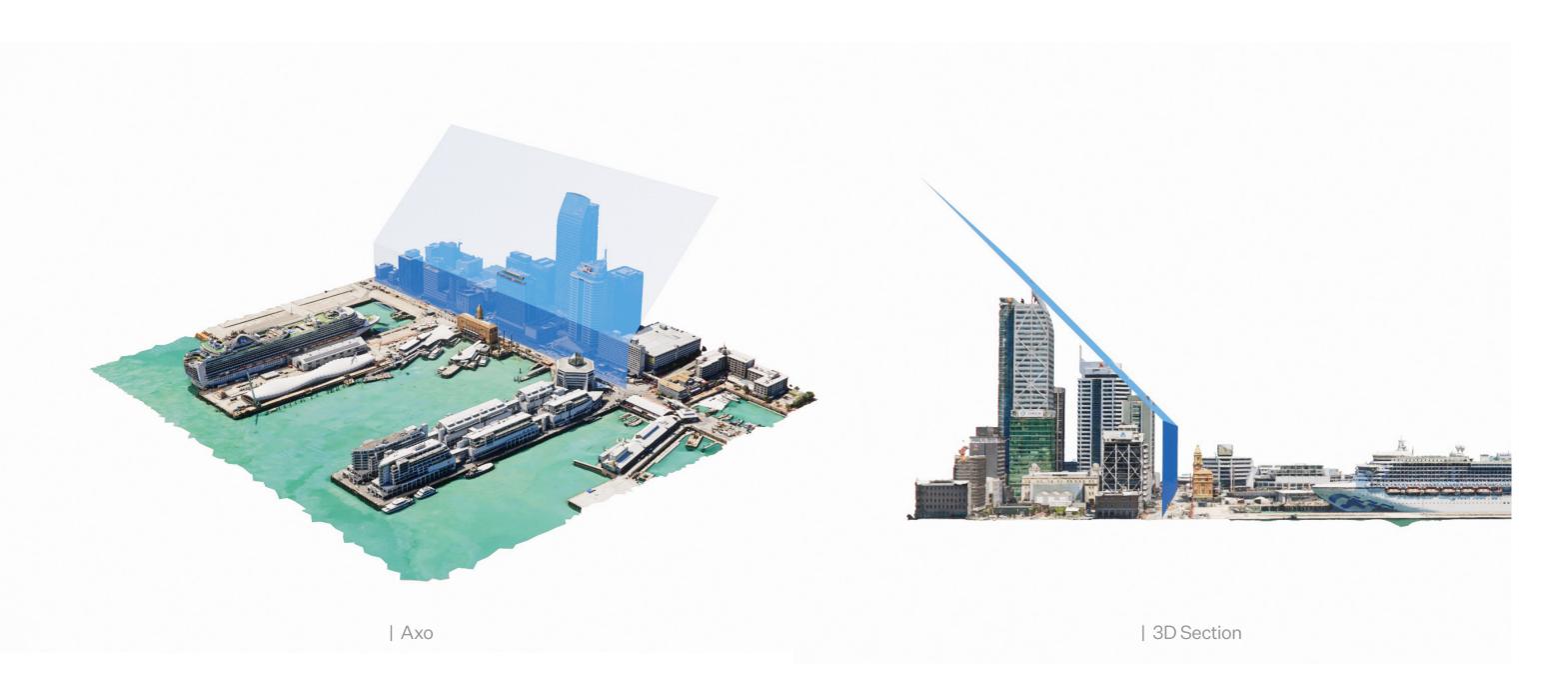
Site Key



Harbour edge height control - $60m + 45^{\circ}$

City Centre Zone

Harbour Edge Height Control - 60m + 45°



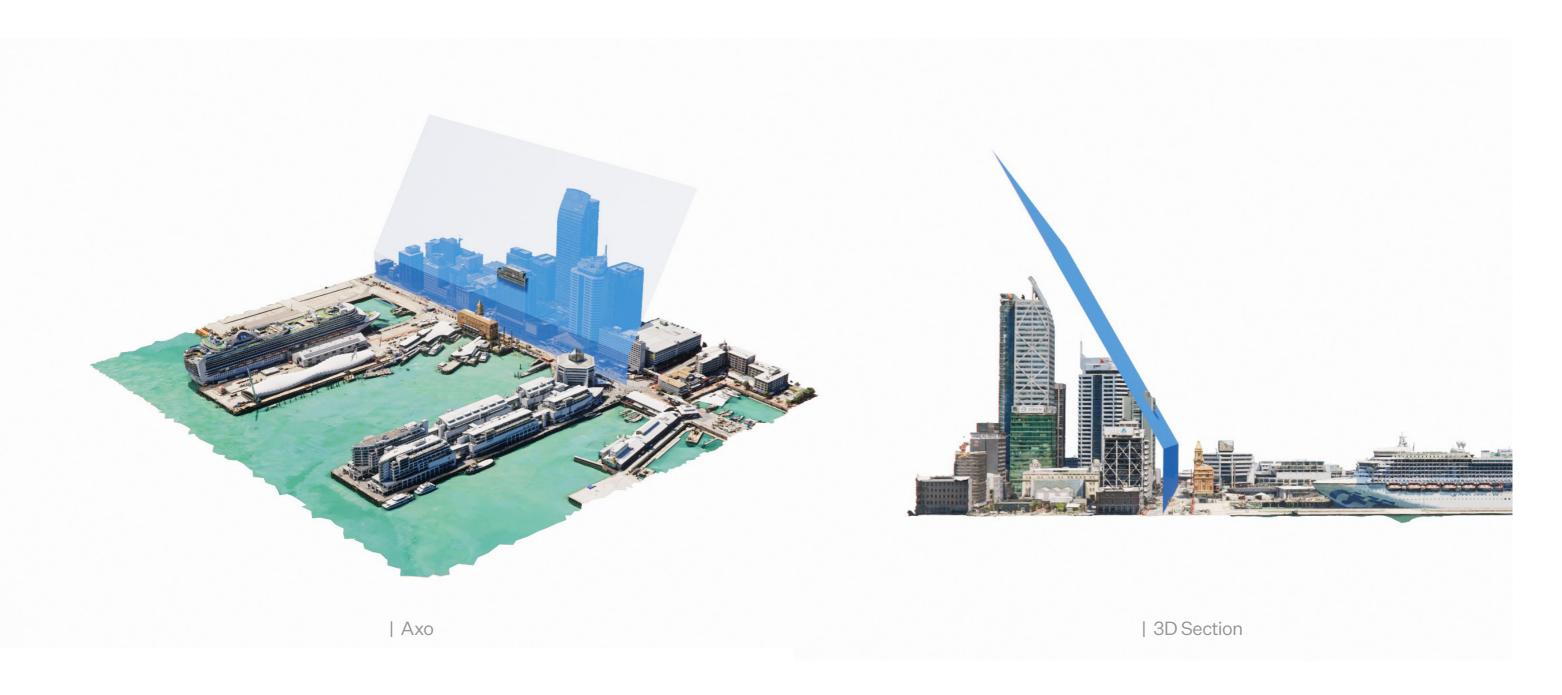
Site Key



Harbour edge height control - $60m + 45^{\circ}$

City Centre Zone

Harbour Edge Height Control - 40m + 60°



Site Key



Harbour edge height control - $60m + 45^{\circ}$

