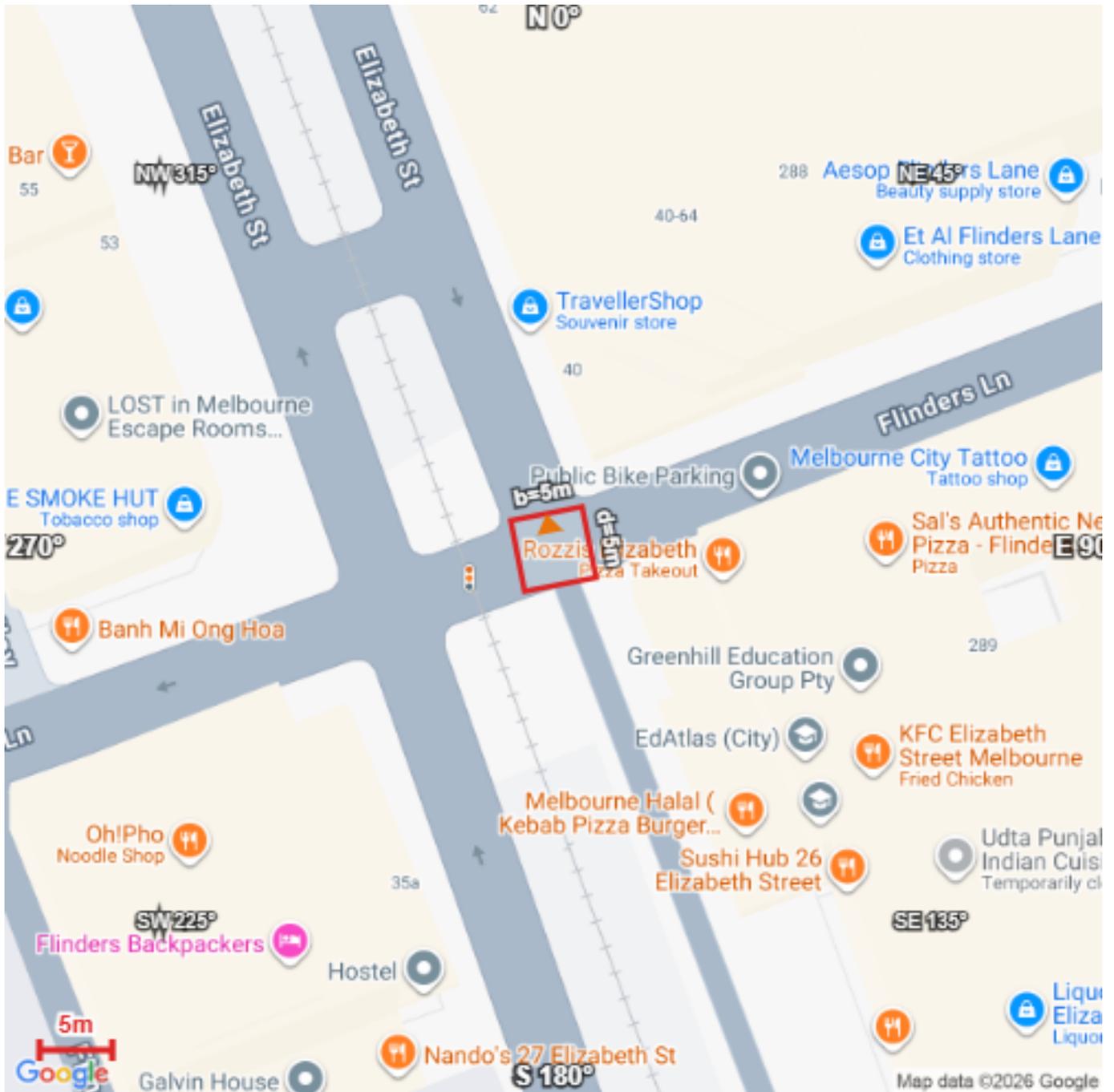


Site Details

Address	Flinders Lane, Melbourne VIC, Australia
Design Standard	AS/NZS 1170.2:2021
Wind Region	A2 — NSW/ACT east of dividing range, Vic, Tas, SA
Importance Level	IL 2
Design Working Life	50 years
APE (Ultimate)	1/500
APE (Serviceability)	1/25
Terrain Category	TC null
Shielding Ms	1.00
Topographic Mt	1.00
Climate Change Mc	1.00

Building Geometry & Orientation

Width (b)	5.0 m
Depth (d)	5.0 m
Height (h)	10.0 m
Roof Type	Flat
Roof Pitch	0.0°
Orientation	349°



ULS — Ultimate Limit State Wind Speeds

Dir	Md	VR×Md	Mz,cat	Ms	Mt	Vsit (m/s)	qz (kPa)
N	0.85	38.3	0.69	1.00	1.00	30.0	0.54
NE	0.75	33.8	0.69	1.00	1.00	30.0	0.54
E	0.85	38.3	0.86	1.00	1.00	32.9	0.65
SE	0.95	42.8	0.86	1.00	1.00	36.8	0.81
S	0.95	42.8	0.83	1.00	1.00	35.5	0.76
SW	0.95	42.8	0.86	1.00	1.00	36.8	0.81
W	1.00	45.0	0.69	1.00	1.00	31.0	0.58
NW	0.95	42.8	0.69	1.00	1.00	30.0	0.54

SLS — Serviceability Limit State Wind Speeds

Dir	Md	VR×Md	Mz,cat	Ms	Mt	Vsit (m/s)	qz (kPa)
N	0.85	31.4	0.69	1.00	1.00	24.7	0.37
NE	0.75	27.8	0.69	1.00	1.00	24.7	0.37
E	0.85	31.4	0.86	1.00	1.00	27.0	0.44
SE	0.95	35.1	0.86	1.00	1.00	30.2	0.55
S	0.95	35.1	0.83	1.00	1.00	29.2	0.51
SW	0.95	35.1	0.86	1.00	1.00	30.2	0.55
W	1.00	37.0	0.69	1.00	1.00	25.5	0.39
NW	0.95	35.1	0.69	1.00	1.00	24.7	0.37

Pressure Coefficients — Section 5

h/d ratio	2.00
d/b ratio	1.00
a dimension	1.00 m
Kc,e (external)	0.9
Kc,i (internal)	1.0
Ka	1.0 (general surfaces)

Wall Cp,e Values

Surface	Cp,e	Reference
Windward wall	0.73	Table 5.2(A)
Leeward wall	-0.50	Table 5.2(B)
Side wall (0.0–5.0 m)	-0.65	Table 5.2(C)

Wall Pressures — ULS North

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Front (Windward)	0.73	-0.3	0.9	0.540	0.356	0.518
Back (Leeward)	-0.50	0.0	0.9	0.540	-0.243	-0.243
Side wall (worst zone)	-0.65	0.0	0.9	0.540	-0.316	-0.316
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.540	0.535	0.697
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.540	-0.474	-0.474
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.540	-0.632	-0.632

North-East

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Right (Windward)	0.73	-0.3	0.9	0.540	0.356	0.518
Left (Leeward)	-0.50	0.0	0.9	0.540	-0.243	-0.243
Side wall (worst zone)	-0.65	0.0	0.9	0.540	-0.316	-0.316
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.540	0.535	0.697
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.540	-0.474	-0.474
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.540	-0.632	-0.632

East

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Right (Windward)	0.73	-0.3	0.9	0.649	0.429	0.623
Left (Leeward)	-0.50	0.0	0.9	0.649	-0.292	-0.292
Side wall (worst zone)	-0.65	0.0	0.9	0.649	-0.380	-0.380
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.649	0.643	0.838
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.649	-0.570	-0.570
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.649	-0.760	-0.760

South-East (Critical)

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Back (Windward)	0.73	-0.3	0.9	0.811	0.535	0.779
Front (Leeward)	-0.50	0.0	0.9	0.811	-0.365	-0.365
Side wall (worst zone)	-0.65	0.0	0.9	0.811	-0.474	-0.474
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.811	0.803	1.046
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.811	-0.712	-0.712
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.811	-0.949	-0.949

South

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Back (Windward)	0.73	-0.3	0.9	0.755	0.499	0.725
Front (Leeward)	-0.50	0.0	0.9	0.755	-0.340	-0.340
Side wall (worst zone)	-0.65	0.0	0.9	0.755	-0.442	-0.442
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.755	0.748	0.974
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.755	-0.663	-0.663
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.755	-0.884	-0.884

South-West

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Left (Windward)	0.73	-0.3	0.9	0.811	0.535	0.779
Right (Leeward)	-0.50	0.0	0.9	0.811	-0.365	-0.365
Side wall (worst zone)	-0.65	0.0	0.9	0.811	-0.474	-0.474
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.811	0.803	1.046
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.811	-0.712	-0.712
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.811	-0.949	-0.949

West

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Left (Windward)	0.73	-0.3	0.9	0.578	0.382	0.555
Right (Leeward)	-0.50	0.0	0.9	0.578	-0.260	-0.260
Side wall (worst zone)	-0.65	0.0	0.9	0.578	-0.338	-0.338
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.578	0.573	0.746
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.578	-0.508	-0.508
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.578	-0.677	-0.677

North-West

Surface	C _{p,e}	C _{p,i}	K _{c,e} / K _l	q _z (kPa)	pe (kPa)	p _{net} (kPa)
Front (Windward)	0.73	-0.3	0.9	0.540	0.356	0.518
Back (Leeward)	-0.50	0.0	0.9	0.540	-0.243	-0.243
Side wall (worst zone)	-0.65	0.0	0.9	0.540	-0.316	-0.316
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.540	0.535	0.697
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.540	-0.474	-0.474
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.540	-0.632	-0.632

Wall Pressures — SLS

North

Surface	C _{p,e}	C _{p,i}	K _{c,e} / K _l	q _z (kPa)	pe (kPa)	p _{net} (kPa)
Front (Windward)	0.73	-0.3	0.9	0.365	0.241	0.350
Back (Leeward)	-0.50	0.0	0.9	0.365	-0.164	-0.164
Side wall (worst zone)	-0.65	0.0	0.9	0.365	-0.214	-0.214
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.365	0.361	0.471
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.365	-0.320	-0.320
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.365	-0.427	-0.427

North-East

Surface	C _{p,e}	C _{p,i}	K _{c,e} / K _l	q _z (kPa)	pe (kPa)	p _{net} (kPa)
Right (Windward)	0.73	-0.3	0.9	0.365	0.241	0.350
Left (Leeward)	-0.50	0.0	0.9	0.365	-0.164	-0.164
Side wall (worst zone)	-0.65	0.0	0.9	0.365	-0.214	-0.214
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.365	0.361	0.471
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.365	-0.320	-0.320
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.365	-0.427	-0.427

East

Surface	C _{p,e}	C _{p,i}	K _{c,e} / K _l	q _z (kPa)	pe (kPa)	p _{net} (kPa)
Right (Windward)	0.73	-0.3	0.9	0.439	0.290	0.421
Left (Leeward)	-0.50	0.0	0.9	0.439	-0.198	-0.198
Side wall (worst zone)	-0.65	0.0	0.9	0.439	-0.257	-0.257
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.439	0.435	0.566
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.439	-0.385	-0.385
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.439	-0.514	-0.514

South-East (Critical)

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Back (Windward)	0.73	-0.3	0.9	0.548	0.362	0.526
Front (Leeward)	-0.50	0.0	0.9	0.548	-0.247	-0.247
Side wall (worst zone)	-0.65	0.0	0.9	0.548	-0.321	-0.321
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.548	0.543	0.707
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.548	-0.481	-0.481
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.548	-0.641	-0.641

South

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Back (Windward)	0.73	-0.3	0.9	0.511	0.337	0.490
Front (Leeward)	-0.50	0.0	0.9	0.511	-0.230	-0.230
Side wall (worst zone)	-0.65	0.0	0.9	0.511	-0.299	-0.299
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.511	0.506	0.659
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.511	-0.448	-0.448
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.511	-0.598	-0.598

South-West

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Left (Windward)	0.73	-0.3	0.9	0.548	0.362	0.526
Right (Leeward)	-0.50	0.0	0.9	0.548	-0.247	-0.247
Side wall (worst zone)	-0.65	0.0	0.9	0.548	-0.321	-0.321
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.548	0.543	0.707
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.548	-0.481	-0.481
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.548	-0.641	-0.641

West

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Left (Windward)	0.73	-0.3	0.9	0.391	0.258	0.375
Right (Leeward)	-0.50	0.0	0.9	0.391	-0.176	-0.176
Side wall (worst zone)	-0.65	0.0	0.9	0.391	-0.229	-0.229
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.391	0.387	0.504
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.391	-0.343	-0.343
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.391	-0.458	-0.458

North-West

Surface	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Front (Windward)	0.73	-0.3	0.9	0.365	0.241	0.350
Back (Leeward)	-0.50	0.0	0.9	0.365	-0.164	-0.164
Side wall (worst zone)	-0.65	0.0	0.9	0.365	-0.214	-0.214
Windward wall edge (0–1.0 m)	1.10	-0.3	1.5	0.365	0.361	0.471
Side wall edge (0–1.0 m)	-0.98	0.0	1.5	0.365	-0.320	-0.320
Side wall corner (0–0.5 m)	-1.30	0.0	2.0	0.365	-0.427	-0.427

Roof Pressures — ULS

North

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.540	-0.729	-0.729
Upwind (h–2h)	-1.00	0.0	0.9	0.540	-0.486	-0.486
Upwind (>2h)	-0.50	0.0	0.9	0.540	-0.243	-0.243
Downwind	-0.70	0.0	0.9	0.540	-0.340	-0.340
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.540	-1.094	-1.094
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.540	-1.458	-1.458
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.540	-2.187	-2.187

North-East

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.540	-0.729	-0.729
Upwind (h–2h)	-1.00	0.0	0.9	0.540	-0.486	-0.486
Upwind (>2h)	-0.50	0.0	0.9	0.540	-0.243	-0.243
Downwind	-0.70	0.0	0.9	0.540	-0.340	-0.340
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.540	-1.094	-1.094
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.540	-1.458	-1.458
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.540	-2.187	-2.187

East

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.649	-0.876	-0.876
Upwind (h–2h)	-1.00	0.0	0.9	0.649	-0.584	-0.584
Upwind (>2h)	-0.50	0.0	0.9	0.649	-0.292	-0.292
Downwind	-0.70	0.0	0.9	0.649	-0.409	-0.409
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.649	-1.315	-1.315
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.649	-1.753	-1.753
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.649	-2.629	-2.629

South-East (Critical)

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.811	-1.095	-1.095
Upwind (h–2h)	-1.00	0.0	0.9	0.811	-0.730	-0.730
Upwind (>2h)	-0.50	0.0	0.9	0.811	-0.365	-0.365
Downwind	-0.70	0.0	0.9	0.811	-0.511	-0.511
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.811	-1.642	-1.642
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.811	-2.190	-2.190
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.811	-3.285	-3.285

South

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.755	-1.020	-1.020
Upwind (h–2h)	-1.00	0.0	0.9	0.755	-0.680	-0.680
Upwind (>2h)	-0.50	0.0	0.9	0.755	-0.340	-0.340
Downwind	-0.70	0.0	0.9	0.755	-0.476	-0.476
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.755	-1.530	-1.530
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.755	-2.040	-2.040
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.755	-3.059	-3.059

South-West

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.811	-1.095	-1.095
Upwind (h–2h)	-1.00	0.0	0.9	0.811	-0.730	-0.730
Upwind (>2h)	-0.50	0.0	0.9	0.811	-0.365	-0.365
Downwind	-0.70	0.0	0.9	0.811	-0.511	-0.511
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.811	-1.642	-1.642
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.811	-2.190	-2.190
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.811	-3.285	-3.285

West

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.578	-0.781	-0.781
Upwind (h–2h)	-1.00	0.0	0.9	0.578	-0.521	-0.521
Upwind (>2h)	-0.50	0.0	0.9	0.578	-0.260	-0.260
Downwind	-0.70	0.0	0.9	0.578	-0.364	-0.364
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.578	-1.171	-1.171
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.578	-1.562	-1.562
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.578	-2.343	-2.343

North-West

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.540	-0.729	-0.729
Upwind (h–2h)	-1.00	0.0	0.9	0.540	-0.486	-0.486
Upwind (>2h)	-0.50	0.0	0.9	0.540	-0.243	-0.243
Downwind	-0.70	0.0	0.9	0.540	-0.340	-0.340
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.540	-1.094	-1.094
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.540	-1.458	-1.458
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.540	-2.187	-2.187

Roof Pressures — SLS

North

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0-h)	-1.50	0.0	0.9	0.365	-0.493	-0.493
Upwind (h-2h)	-1.00	0.0	0.9	0.365	-0.329	-0.329
Upwind (>2h)	-0.50	0.0	0.9	0.365	-0.164	-0.164
Downwind	-0.70	0.0	0.9	0.365	-0.230	-0.230
Roof edge (0-1.0 m)	-2.25	0.0	1.5	0.365	-0.739	-0.739
Roof corner (0-1.0 m)	-3.00	0.0	2.0	0.365	-0.986	-0.986
Roof corner (0-0.5 m)	-4.50	0.0	3.0	0.365	-1.479	-1.479

North-East

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0-h)	-1.50	0.0	0.9	0.365	-0.493	-0.493
Upwind (h-2h)	-1.00	0.0	0.9	0.365	-0.329	-0.329
Upwind (>2h)	-0.50	0.0	0.9	0.365	-0.164	-0.164
Downwind	-0.70	0.0	0.9	0.365	-0.230	-0.230
Roof edge (0-1.0 m)	-2.25	0.0	1.5	0.365	-0.739	-0.739
Roof corner (0-1.0 m)	-3.00	0.0	2.0	0.365	-0.986	-0.986
Roof corner (0-0.5 m)	-4.50	0.0	3.0	0.365	-1.479	-1.479

East

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0-h)	-1.50	0.0	0.9	0.439	-0.593	-0.593
Upwind (h-2h)	-1.00	0.0	0.9	0.439	-0.395	-0.395
Upwind (>2h)	-0.50	0.0	0.9	0.439	-0.198	-0.198
Downwind	-0.70	0.0	0.9	0.439	-0.277	-0.277
Roof edge (0-1.0 m)	-2.25	0.0	1.5	0.439	-0.889	-0.889
Roof corner (0-1.0 m)	-3.00	0.0	2.0	0.439	-1.185	-1.185
Roof corner (0-0.5 m)	-4.50	0.0	3.0	0.439	-1.778	-1.778

South-East (Critical)

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0-h)	-1.50	0.0	0.9	0.548	-0.740	-0.740
Upwind (h-2h)	-1.00	0.0	0.9	0.548	-0.493	-0.493
Upwind (>2h)	-0.50	0.0	0.9	0.548	-0.247	-0.247
Downwind	-0.70	0.0	0.9	0.548	-0.345	-0.345
Roof edge (0-1.0 m)	-2.25	0.0	1.5	0.548	-1.110	-1.110
Roof corner (0-1.0 m)	-3.00	0.0	2.0	0.548	-1.480	-1.480
Roof corner (0-0.5 m)	-4.50	0.0	3.0	0.548	-2.221	-2.221

South

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.511	-0.689	-0.689
Upwind (h–2h)	-1.00	0.0	0.9	0.511	-0.460	-0.460
Upwind (>2h)	-0.50	0.0	0.9	0.511	-0.230	-0.230
Downwind	-0.70	0.0	0.9	0.511	-0.322	-0.322
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.511	-1.034	-1.034
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.511	-1.379	-1.379
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.511	-2.068	-2.068

South-West

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.548	-0.740	-0.740
Upwind (h–2h)	-1.00	0.0	0.9	0.548	-0.493	-0.493
Upwind (>2h)	-0.50	0.0	0.9	0.548	-0.247	-0.247
Downwind	-0.70	0.0	0.9	0.548	-0.345	-0.345
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.548	-1.110	-1.110
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.548	-1.480	-1.480
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.548	-2.221	-2.221

West

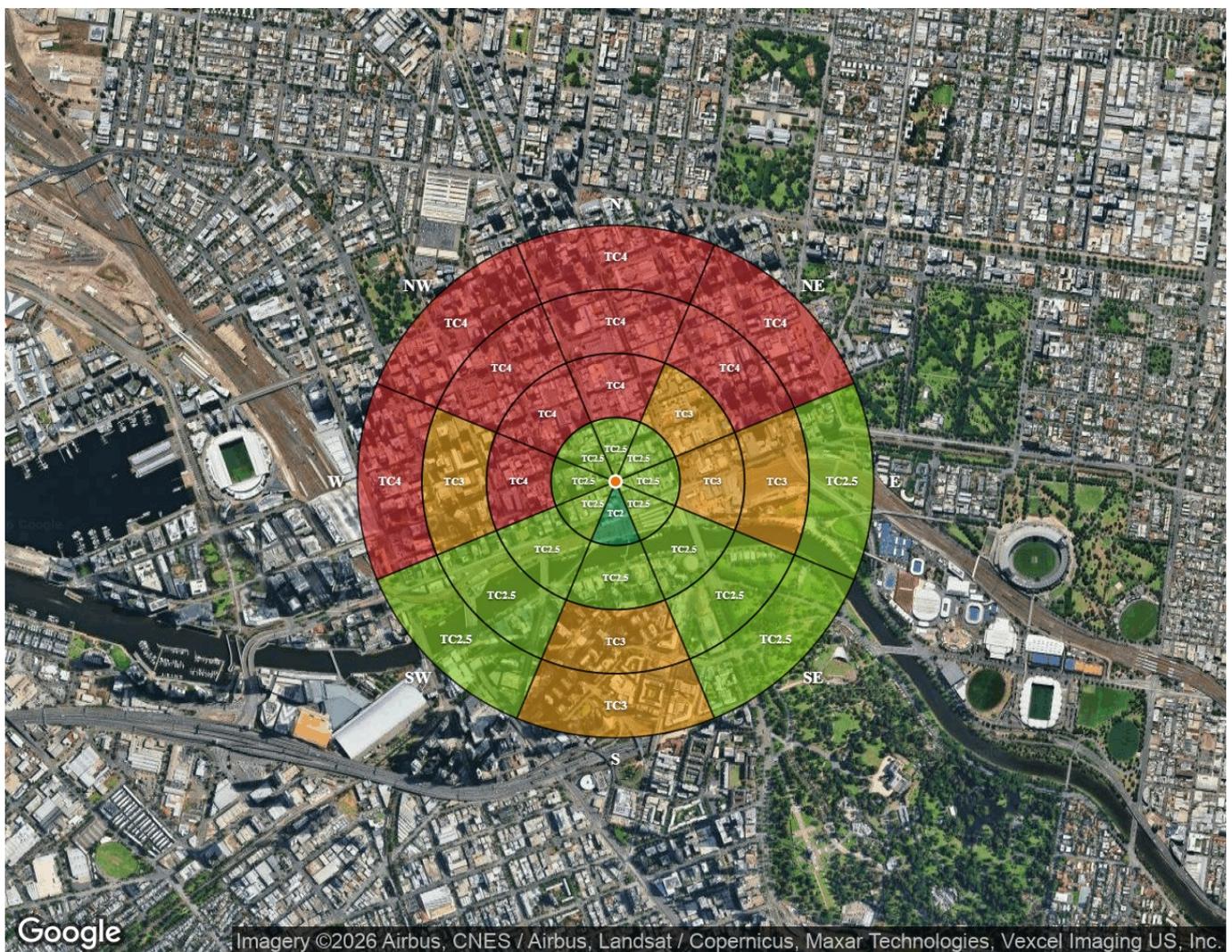
Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.391	-0.528	-0.528
Upwind (h–2h)	-1.00	0.0	0.9	0.391	-0.352	-0.352
Upwind (>2h)	-0.50	0.0	0.9	0.391	-0.176	-0.176
Downwind	-0.70	0.0	0.9	0.391	-0.246	-0.246
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.391	-0.792	-0.792
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.391	-1.056	-1.056
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.391	-1.584	-1.584

North-West

Zone	Cp,e	Cp,i	Kc,e / Kl	qz (kPa)	pe (kPa)	pnet (kPa)
Upwind (0–h)	-1.50	0.0	0.9	0.365	-0.493	-0.493
Upwind (h–2h)	-1.00	0.0	0.9	0.365	-0.329	-0.329
Upwind (>2h)	-0.50	0.0	0.9	0.365	-0.164	-0.164
Downwind	-0.70	0.0	0.9	0.365	-0.230	-0.230
Roof edge (0–1.0 m)	-2.25	0.0	1.5	0.365	-0.739	-0.739
Roof corner (0–1.0 m)	-3.00	0.0	2.0	0.365	-0.986	-0.986
Roof corner (0–0.5 m)	-4.50	0.0	3.0	0.365	-1.479	-1.479

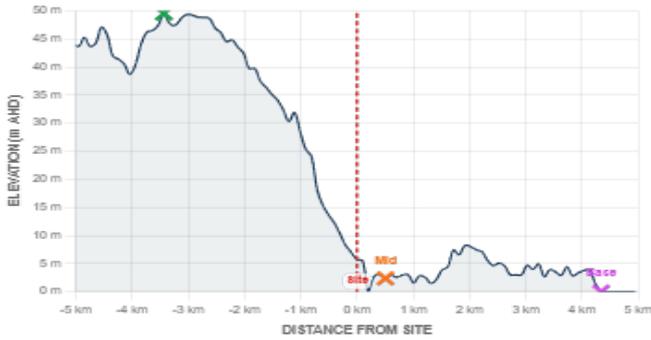
Terrain Category Zones — Per Direction

Dir	0–250 m	250–500 m	500–750 m	750–1000 m
N	TC 2.5	TC 4	TC 4	TC 4
NE	TC 2.5	TC 3	TC 4	TC 4
E	TC 2.5	TC 3	TC 3	TC 2.5
SE	TC 2.5	TC 2.5	TC 2.5	TC 2.5
S	TC 2	TC 2.5	TC 3	TC 3
SW	TC 2.5	TC 2.5	TC 2.5	TC 2.5
W	TC 2.5	TC 4	TC 3	TC 4
NW	TC 2.5	TC 4	TC 4	TC 4



Topography Profiles — Section 4.4

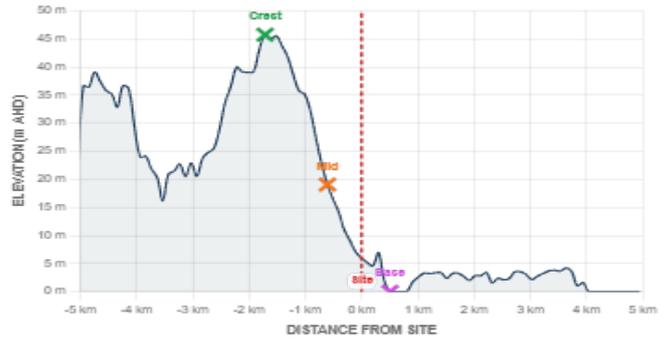
South (180)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	13.6	505.1	-505.1	0.01	1.00
±1000m	Flat	28.4	505.1	-1010.1	0.03	1.00
±2500m	Flat	46.9	1818.2	-2525.3	0.01	1.00
±5000m	Flat	49.5	2626.3	-3434.3	0.01	1.00

Governing Mh = 1.00

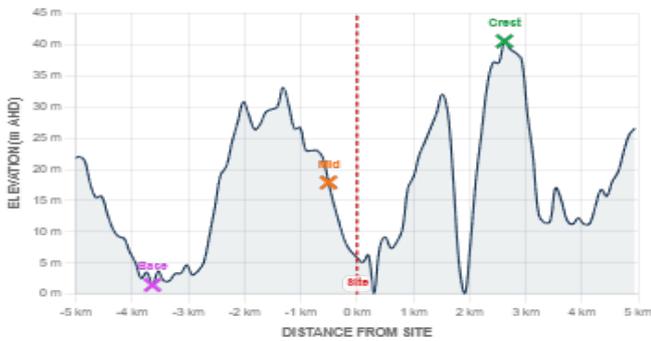
South-West (225)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	16.4	404.0	-505.1	0.02	1.00
±1000m	Flat	35.2	505.1	-1010.1	0.03	1.00
±2500m	Flat	45.7	1010.1	-1717.2	0.02	1.00
±5000m	Flat	45.7	1010.1	-1717.2	0.02	1.00

Governing Mh = 1.00

South-East (135)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	17.9	303.0	-505.1	0.03	1.00
±1000m	Flat	26.7	707.1	-1010.1	0.02	1.00
±2500m	Escarpment	31.2	303.0	2424.2	0.05	1.00
±5000m	Flat	39.0	505.1	2626.3	0.04	1.00

Governing Mh = 1.00

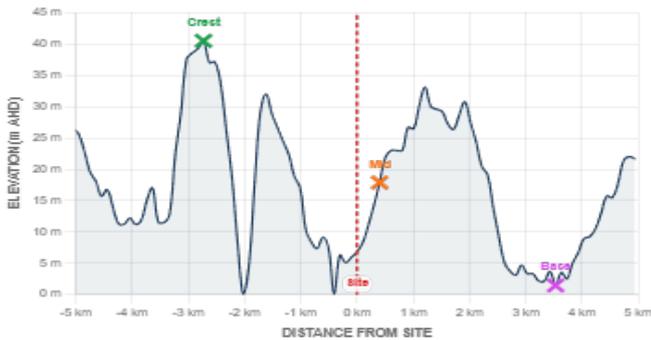
North (0)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	15.3	505.1	505.1	0.02	1.00
±1000m	Flat	31.8	505.1	1010.1	0.03	1.00
±2500m	Flat	48.6	1818.2	2525.3	0.01	1.00
±5000m	Flat	49.5	2626.3	3333.3	0.01	1.00

Governing Mh = 1.00

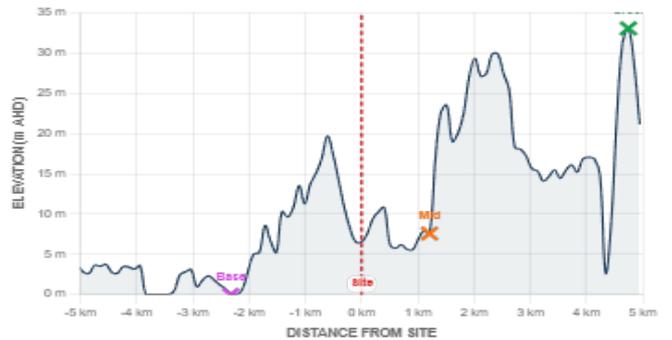
North-West (315)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	21.9	404.0	505.1	0.03	1.00
±1000m	Flat	26.7	707.1	909.1	0.02	1.00
±2500m	Escarpment	30.3	303.0	-2525.3	0.05	1.00
±5000m	Flat	39.0	505.1	-2727.3	0.04	1.00

Governing Mh = 1.00

East (90)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	11.2	202.0	-505.1	0.03	1.00
±1000m	Flat	14.1	303.0	-606.1	0.02	1.00
±2500m	Flat	29.9	1212.1	-2424.2	0.01	1.00
±5000m	Hill	33.1	303.0	4747.5	0.05	1.00

Governing Mh = 1.00

Topography Profiles (continued)

West (270)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	13.2	303.0	505.1	0.02	1.00
±1000m	Flat	14.1	303.0	505.1	0.02	1.00
±2500m	Flat	29.9	1212.1	-2525.3	0.01	1.00
±5000m	Hill	33.1	303.0	-4848.5	0.05	1.00

Governing Mh = 1.00

North-East (45)



Range	Type	H	Lu	x	Slope	Mh
±500m	Flat	17.1	404.0	505.1	0.02	1.00
±1000m	Flat	35.7	606.1	1010.1	0.03	1.00
±2500m	Flat	45.7	1010.1	1616.2	0.02	1.00
±5000m	Flat	45.7	1010.1	1616.2	0.02	1.00

Governing Mh = 1.00

General

Critical direction	SE (Md = 0.95)
Max V_{sit} (ULS)	36.8 m/s
a dimension	1.00 m

Wall Pressures — Summary

Parameter	Value
Max +ve ULS	0.78 kPa (SE)
Max -ve ULS	-0.47 kPa (SE)
Max +ve SLS	0.53 kPa
Max -ve SLS	-0.25 kPa
Max local ULS (with KI)	-0.95 kPa (SE)

Roof Pressures — Summary

Parameter	Value
Max -ve ULS	-1.09 kPa (SE)
Max -ve SLS	-0.74 kPa
Max local ULS (with KI)	-3.28 kPa (SE)

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- Internal pressure coefficients assume either dominant opening or enclosed building conditions.
- Pressures are calculated at the roof height only; height-varying pressures for tall buildings require detailed analysis.
- Dynamic response factor (Cdyn) is not included — this tool applies to structures where $C_{dyn} = 1.0$.

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