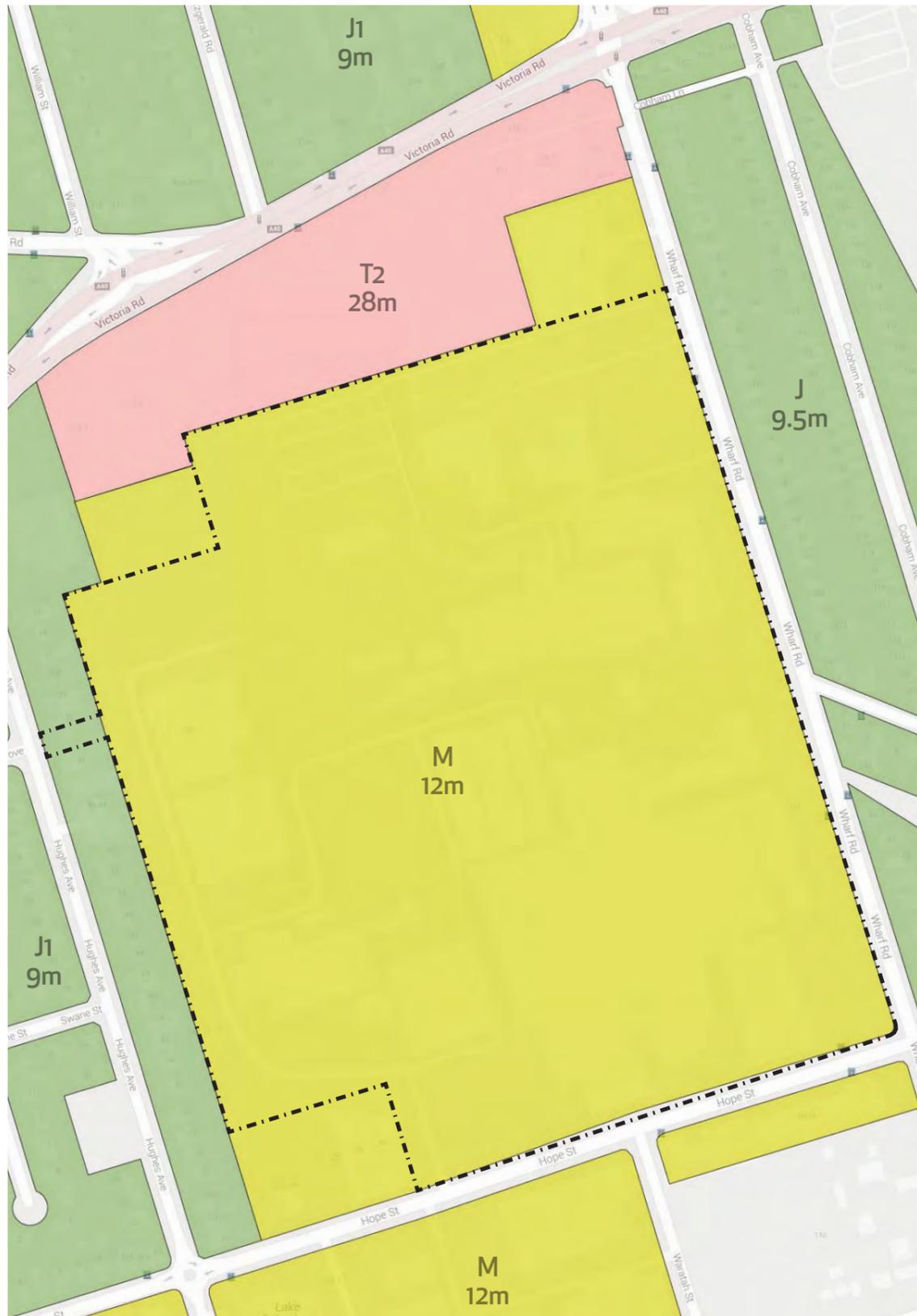
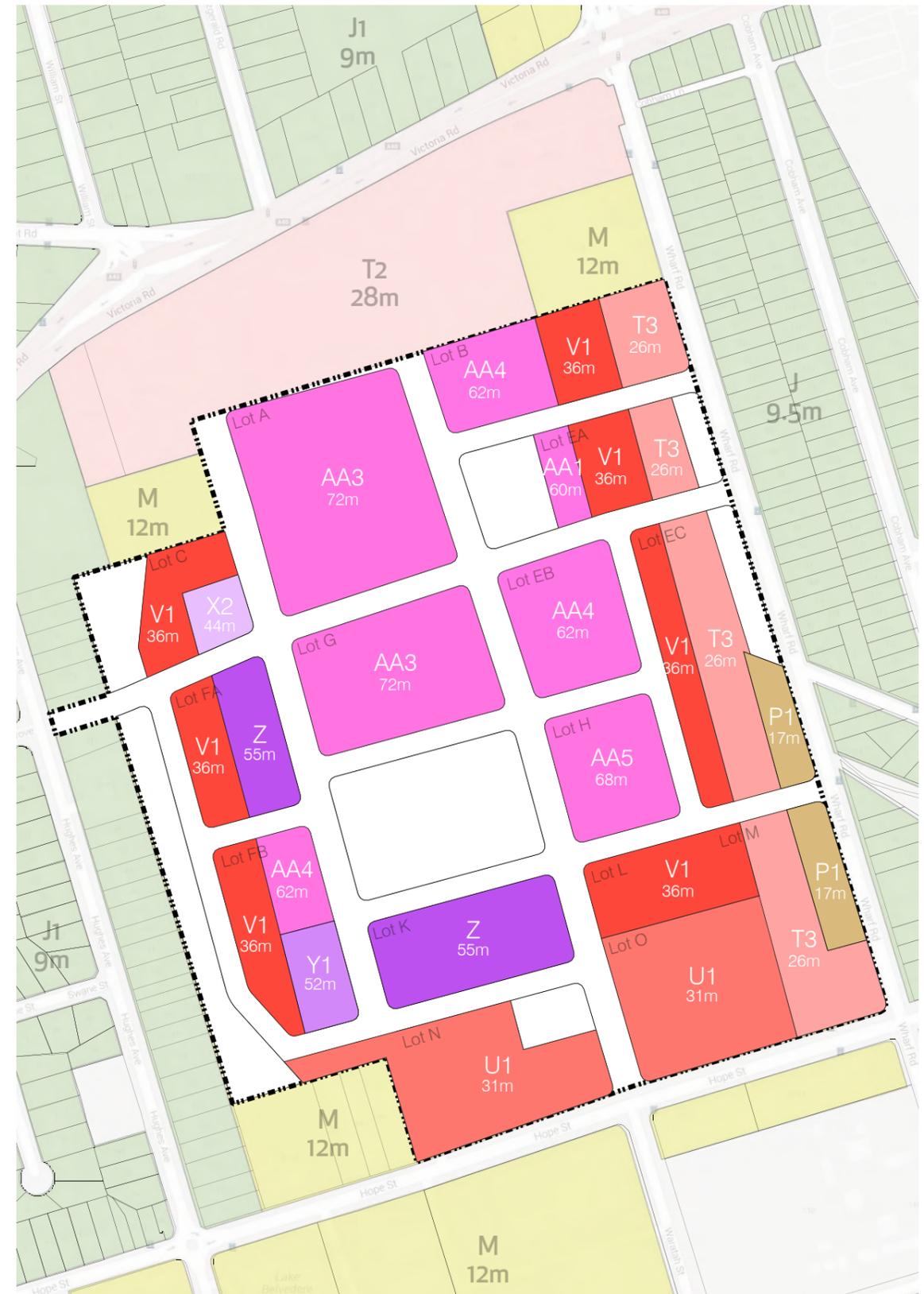


05 PROPOSED PLANNING CONTROLS

HEIGHT OF BUILDINGS



EXISTING - M (12m).



PROPOSED - P (17m), T3 (26m), U1 (31m), V1 (36m), X3 (44m), Y1 (52m), Z1 (55m), AA4 (62m), AA5 (68m), AA6 (71m).



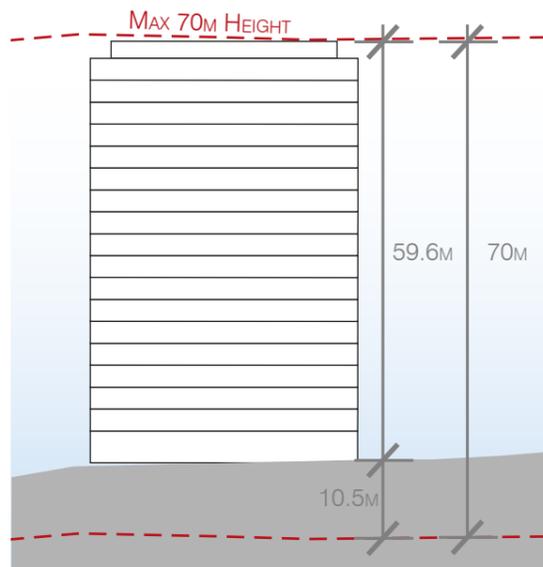
HEIGHT OF BUILDINGS - EXPLANATION MAP



SIGNIFICANT GRADING REQUIRED TO SITE



SIGNIFICANT GRADING REQUIRED TO SITE



HEIGHT OF BUILDINGS - EXPLANATIVE TYPICAL SECTION AA

The Site falls a total of 18m across 25ha. Since industrial uses rely on a series of flat platforms, this fall has resulted in abrupt falls in topography, retaining walls and cliffs throughout the Site.

Significant grading will be required to prepare the Site for business and residential uses, which will result in substantial cut and fill.

As the Local Environmental Plan (LEP) measures height from the existing ground level, areas of cut and fill have been taken into account as part of the proposed Height of Building LEP map.

The height of buildings explanation map opposite explains how the LEP heights take grading into account. It is based on grading plans undertaken by Northrop engineers as part of this Planning Proposal.

All residential buildings throughout the Masterplan are based on a 4.5m floor to floor height on the ground floor, 3.1m typical floor to floor height and a 2.4m lift overrun allowance. Commercial buildings have a 4.5m floor to floor height for the ground floor, 3.5m typical floor to floor height and 2.4m allowance for lift overrun. Retail buildings have been given a 6m floor to floor height.

LEGEND

- - - - - SITE BOUNDARY
- - - - - EXISTING GROUND LEVEL *
- █ PROPOSED GROUND LEVEL **
- PROPOSED BUILDING

* Based on Survey by LTS Lockey on 16/10/15.

** Based on concept grading plan provided by Northrop Consulting Engineers on 10th February 2016.



06 SUPPORTING STUDIES

06 SUPPORTING STUDIES

PROPOSED MASTERPLAN

MELROSE PARK YIELD SUMMARY				
	February 2016 Planning Proposal		March 2017 Amendment B	
	Area	Percentage of Site Area	Area	Percentage of Site Area
Site Area	249,980	100%	249,980	100%
Developable Area	159,930	64%	156,510	63%
Road Reserve Area	54,110	22%	59,380	23%
Public Open Space	35,940	14%	34,090	14%
Gross FSR	1.95:1		1.85:1	
Total GFA	486,220		462,470	
GFA Residential	459,120		432,470	
GFA Commercial	15,000		15,000	
GFA Community	2,500		3,000	
GFA Child Care	1,500		1,500	
GFA Retail	8,100		10,500	
Number of Dwellings	5,200		4,920	
Affordable Dwellings (Additional)	150 dwellings		150 dwellings	
Maximum Height	18 Storeys		18 Storeys	
Number of Buildings	82	100%	66	100%
0-3 storeys	5	6%	1	1%
4-7 storeys	12	15%	11	17%
8-10 storeys	46	56%	41	62%
11-15 storeys	16	20%	9	14%
18 storeys	3	3%	4	6%
Total Public Open Space Area	35,940	14%	34,090	14%
Melrose Park Area	13,130		13,180	
Oval / Common Area	4,660		4,020	
Linear Park Area	4,090		3,700	
Landscaped Zone (North)	4,230		3,480	
Landscaped Zone (South)	9,830		7,710	
Pocket Park	-		2,000	

The Masterplan opposite illustrates one way that the planning controls can be achieved in the future. It takes into account all the public benefit and design thinking discussed throughout this report and is based on the following assumptions:

- + **Site Area** is 249,982m² or roughly 25ha;
- + For **residential uses**, Gross Floor Area (GFA) is 75% of Gross Building Area (GBA);
- + For **commercial and community uses**, GFA is 85% of GBA;
- + For **retail uses**, GFA is 95% of GBA, excluding loading docks;
- + Apartment yields are based on an **average apartment size** of 88.1m² GFA;
- + **Communal Open Space** is minimum 25% of superlot area, as per Apartment Design Guide (ADG);
- + **Deep Soil Zone** is minimum 15% of superlot area, as per the ADG stretch target;
- + **Residential floor to floor heights** are: 4.5m ground, 3.1m typical and 2.4m additional lift overrun allowance;
- + **Commercial floor to floor heights** are: 4.5m floor to floor height for the ground floor, 3.5m typical and 2.4 additional lift overrun allowance;
- + **Retail floor to floor heights** are 6m;
- + **Building separation** for residential flat buildings is consistent with ADG requirements;
- + The **solar requirement to residential apartments** is a minimum of 2 hours solar access in mid-winter, as per ADG requirements;
- + The **solar requirement to communal open space** is that a minimum of 50% of the communal open space should receive direct access for 2 hours in mid-winter as per ADG requirements;
- + The **solar requirement to public open space** is assumed to be the same as the communal open space above.



Lot/Building No.	Development Lot Area (m ²)	Zoning	Resi %	Non-Resi %	Resi GBA per floor (m ²)		Number of Storeys	GFA per building (m ²)				New Dwellings	
					Resi	Retail		Comm-ercial	Comm-unity	Total GFA			
Lot A 19,977													
A1		B2	0%	100%	1,050	0	3	0	0	2,620	0	2,620	0
A2		B2	0%	100%	1,115	0	7	0	0	6,630	0	6,630	0
A3		B2	0%	100%	12,900	0	1	0	10,000	0	2,000	12,000	0
A4		B2	0%	100%	1,050	0	7	0	0	6,250	0	6,250	0
A5		B2	100%	0%	587	440	7	3,082	0	0	0	3,082	35
A6		B2	100%	0%	853	640	17	10,876	0	0	0	10,876	115
Total	19,977				17,555	1,080		10,000	15,500	2,000	27,500	0	
FSR 13,958 Affordable Housing 2,08:1 150													
Lot B 12,161													
B1		B4	100%	0%	938	704	15	10,553	0	0	0	10,553	120
B2		B4	100%	0%	485	364	10	3,422	0	0	0	3,422	40
B4		B4	100%	0%	1,013	760	10	7,598	0	0	0	7,598	90
B5		B4	100%	0%	1,033	775	8	6,198	0	0	0	6,198	72
B6		B4	100%	0%	458	344	6	2,061	0	0	0	2,061	24
B7		B4	100%	0%	1,011	758	4	3,033	0	0	0	3,033	36
Total	12,161				4,938	3,704		32,864	0	0	0	32,864	382
FSR 2.7:1													
Lot C 6,049													
C1		B4	100%	0%	1,089	817	8	6,534	0	0	0	6,534	72
C2		B4	100%	0%	815	611	8	4,890	0	0	0	4,890	56
C3		B4	100%	0%	1,027	770	10	7,703	0	0	0	7,703	90
Total	6,049				2,931	2,198		19,127	0	0	0	19,127	218
FSR 3.16:1													
Lot EA 7,326													
EA1		B4	98%	2%	1,026	751	12	9,013	0	0	250	9,263	108
EA2		B4	100%	0%	558	419	8	3,348	0	0	0	3,348	40
EA3		B4	100%	0%	551	413	6	2,480	0	0	0	2,480	30
EA4		B4	100%	0%	658	494	8	3,948	0	0	0	3,948	48
EA5		B4	100%	0%	552	414	6	2,484	0	0	0	2,484	30
Total	7,326				3,345	2,490		21,273	0	0	250	21,523	256
FSR 2.94:1													
Lot EB 8,203													
EB1		R4	100%	0%	233	175	10	1,748	0	0	0	1,748	20
EB2		R4	99%	1%	900	669	15	10,037	100	0	0	10,137	120
EB3		R4	100%	0%	564	423	10	4,230	0	0	0	4,230	50
EB4		R4	100%	0%	769	577	10	5,552	0	0	0	5,552	60
EB5		R4	100%	0%	1,012	759	10	7,590	0	0	0	7,590	90
Total	8,203				3,478	2,603		29,156	100	0	0	29,256	340
FSR 3.57:1													
Lot EC 15,040													
EC1		R4	100%	0%	1,051	788	8	6,306	0	0	0	6,306	72
EC2		R4	100%	0%	748	561	6	3,366	0	0	0	3,366	36
EC3		R4	85%	15%	665	425	6	2,551	0	500	0	3,051	30
EC4		R4	100%	0%	858	644	8	5,148	0	0	0	5,148	56
EC5		R4	100%	0%	379	284	6	1,706	0	0	0	1,706	18
EC6		R4	96%	4%	794	573	4	2,294	100	0	0	2,394	28
EC7		R4	100%	0%	877	658	8	5,262	0	0	0	5,262	56
EC8		R4	100%	0%	818	614	8	4,908	0	0	0	4,908	56
EC9		R4	100%	0%	711	533	4	2,133	0	0	0	2,133	24
Total	15,040				6,901	5,080		33,673	100	500	0	34,274	376
FSR 2.28:1													
Lot FA 7,904													
FA1		R4	100%	0%	379	284	6	1,706	0	0	0	1,706	18
FA2		R4	100%	0%	786	590	8	4,716	0	0	0	4,716	56
FA3		R4	100%	0%	1,206	900	10	8,726	50	0	1	8,777	100
FA5		R4	100%	0%	296	222	6	1,332	0	0	0	1,332	18
FA6		R4	100%	0%	444	333	8	2,664	0	0	0	2,664	32
FA7		R4	100%	0%	313	235	10	2,348	0	0	0	2,348	30
FA8		R4	100%	0%	700	525	15	7,875	0	0	0	7,875	90
Total	7,904				4,124	3,089		29,366	50	0	1	29,417	344
FSR 3.72:1													
Lot FB 10,346													
FB1		R4	100%	0%	368	276	6	1,656	0	0	0	1,656	18
FB2		R4	100%	0%	552	414	8	3,312	0	0	0	3,312	40
FB3		R4	100%	0%	361	271	10	2,708	0	0	0	2,708	30
FB4		R4	100%	0%	1,199	897	18	16,143	50	0	0	16,192	180
FB5		R4	100%	0%	365	274	6	1,643	0	0	0	1,643	18
FB6		R4	100%	0%	551	413	8	3,306	0	0	0	3,306	40
FB7		R4	100%	0%	703	527	10	5,273	0	0	0	5,273	60
FB8		R4	100%	0%	1,160	870	12	10,440	0	0	0	10,440	120
Total	10,346				5,259	3,942		44,479	50	0	0	44,529	506
FSR 4.3:1													
Lot G 12,668													
G1		R4	100%	0%	813	610	8	4,878	0	0	0	4,878	56
G2		R4	100%	0%	813	610	8	4,878	0	0	0	4,878	56
G3		R4	100%	0%	1,002	752	12	9,018	0	0	0	9,018	108
G4		R4	100%	0%	535	401	10	3,905	0	0	0	3,905	40
G5		R4	100%	0%	1,102	827	18	14,877	0	0	0	14,877	162
G6		R4	100%	0%	382	287	10	2,649	0	0	0	2,649	30
G7		R4	100%	0%	1,158	869	15	13,028	0	0	0	13,028	150
Total	12,668				5,805	4,354		53,232	0	0	0	53,232	602
FSR 4.2:1													
Lot H 7,491													
H1		R4	100%	0%	151	113	10	1,133	0	0	0	1,133	10
H2		R4	100%	0%	1,070	803	18	14,445	0	0	0	14,445	162
H3		R4	100%	0%	321	241	10	2,168	0	0	0	2,168	20
H4		R4	100%	0%	770	578	10	5,775	0	0	0	5,775	70
H5		R4	100%	0%	765	574	8	4,590	0	0	0	4,590	56
H6		R4	100%	0%	700	525	10	5,010	0	0	0	5,010	60
Total	7,491				3,777	2,833		33,120	0	0	0	33,120	378
FSR 4.42:1													
Lot K 9,295													
K1		R4	100%	0%	1,319	989	10	9,387	0	0	0	9,387	90
K2		R4	100%	0%	559	419	4	1,677	0	0	0	1,677	20
K3		R4	93%	7%	414	288	4	1,154	100	0	0	1,254	12
K4		R4	100%	0%	1,060	795	15	11,465	0	0	0	11,465	125
K5		R4	100%	0%	1,059	794	12	9,065	0	0	0	9,065	91
K6		R4	100%	0%	259	194	8	1,554	0	0	0	1,554	16
K7		R4	100%	0%	484	363	4	1,452	0	0	0	1,452	16
K8		R4	100%	0%	415	311	4	1,245	0	0	0	1,245	16
Total	9,295				5,569	4,155		36,998	100	0	0	37,098	386
FSR 3.99:1													

Lot/Building No.	Development Lot Area (m ²)	Zoning	Resi %	Non-Resi %	Resi GBA per floor (m ²)		Number of Storeys	GFA per building (m ²)				New Dwellings	
					Resi	Retail		Comm-ercial	Comm-unity	Total GFA			
L1		R4	100%	0%	809	607	10	6,068	0	0	0	6,068	70
L2		R4	100%	0%	357	268	8	2,142	0	0	0	2,142	24
L3		R4	100%	0%	809	607	10	6,068	0	0	0	6,068	70
Total	4,454				1,975	1,481		14,277	0	0	0	14,277	164
FSR 3.21:1													
Lot M 4,867													
M1		R4	100%	0%	809	607	8	4,854	0	0	0	4,854	56
M2		R4	100%	0%	508	381	6	2,286	0	0	0	2,286	24
M3		R4	100%	0%	788	591	4	2,364	0	0	0	2,364	28
Total	4,867				2,105	1,579							

06 SUPPORTING STUDIES

SEPP 65 ASSESSMENT

State Environmental Planning Policy No 65 – Design Quality of Residential Apartment Development (SEPP 65) sets out the NSW Government’s policy direction for residential apartment development in NSW. It aims to improve the design quality of residential flat development and establishes nine design quality principles to be applied to the design and assessment of residential apartment developments.

The following preliminary assessment of the nine principles has been undertaken to demonstrate that the Proposal is consistent with SEPP 65.

Principle 1: Context and Neighbourhood Character

The Site has been an industrial estate grafted into a residential neighbourhood for decades. The Proposal will enhance the residential character of the surrounding neighbourhood while retaining jobs on Site.

Features that positively contribute to the neighbourhood have been retained while undesirable features have been improved wherever possible. For example, heritage items and mature trees along Wharf Road have been retained and enhanced, while the re-grading of the Site aimed to remove retaining walls along existing roads and better integrate the Site into its neighbourhood.

Principle 2: Built Form and Scale

Built form will be set out in a hybrid perimeter block and point tower configuration. This will help define and address the streets and the new open spaces as well as encourage passive surveillance of public open spaces.

Taller built forms are proposed at the centre of the Site while sensitive transitioning occurs on the Site’s boundaries to address the existing neighbourhood’s scale on Wharf Road, Hope Street and Hughes Avenue.

Principle 3: Density

The development endeavours to become a density done well benchmark in Western Sydney by co-locating jobs with residences, retail and community uses, providing new high quality public spaces and parks, upgrading existing infrastructure and augmenting the area’s existing public transport.

The Proposal will include 3.4ha of new public open spaces (and an additional 4.8ha of communal open space) as well as contributions to nearby George Kendall Reserve and the Parramatta River Cycleway. New jobs are proposed to be created and co-located with 10,000m² of retail and 2,000m² of community space.

Four new Electric/Hybrid buses are proposed to link residents to Meadowbank Rail Station and Ferry Wharf. Two new private ferries are proposed to loop to Parramatta from the upgraded Wharf at the end of Wharf Road.

Principle 4: Sustainability

Water sensitive Urban Design measures are proposed throughout the new development, and deep soil zones will be in excess of the Apartment Design Guide (ADG) minimum requirement. A significant amount of vegetation is proposed in both public and private ownership.

Smart City initiatives are also proposed to help new residents develop sustainable habits and better understand their energy usage.

Principle 5: Landscape

Public open space will be equitably distributed through the development and will benefit the surrounding suburb, enhancing the character of Melrose Park as a whole. Each public space will have its own unique character and uses.

The new road network will deliver a clear road hierarchy with distinctive landscape features for each road type contributing to the character of the new development. For example, use of different tree species such as Cherry Blossom and Jacaranda trees will differentiate the streets aiding way finding and contributing to the new developments unique sense of place.

The Community Gardens will run along the entire Western edge of the development, creating a wildlife corridor which will be enhanced by proposed nurseries.

Principle 6: Amenity

The Proposal will contribute to a high level of amenity for existing and future residents, including high quality accessible public spaces and streets, new community spaces, improved public transport access, a genuine mixed use Town Centre and a dedicated employment area.

Principle 7: Safety

The development aims to maximise passive overlooking of streets, public spaces and communal open space. A vibrant and active Town Centre will contribute to the activity of the entire precinct. Public open spaces will clearly be differentiated from private open spaces and will have clear, public street addresses.

Principle 8: Housing Diversity and Social Interaction

The Proposal will achieve a mix of apartment types, sizes and orientations.

Ground floors throughout the precinct have been calculated at 4.5m, allowing the ground floor of each building to be adapted to small-office-home-office (SOHO), commercial or retail uses in the future.

A minimum of 150 affordable/ key worker dwellings are proposed as part of the development.

Principle 9: Aesthetics

The Proposal aims to foster cohesion through the Site using controls such as consistent street setbacks, while allowing for a diversity of character between buildings to create interest and variety. Buildings are envisaged to be designed by a variety of architects ensuring a variety of aesthetic outcomes. The built form will reflect contemporary themes which will add to a pleasant and liveable community environment. To improve design quality of Residential Flat Buildings, SEPP65 is closely linked to the ADG and its objectives.



Precedent - Geelong Waterfront.



Precedent - Hastings Street, Noosa.



The Masterplan was designed to meet the following additional ADG Objectives:

Objective 3D-1: Communal Open Space

ADG Objective: Communal open space has a minimum area equal to 25% of the Site.

Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9am and 3pm on 21st June (mid winter).

Communal open space exceeds minimum area requirements in each lot and is provided as a range of ground floor communal gardens, publicly accessible gardens (through-site links) and roof or podium gardens.

A computation script was used to measure the amount of sunshine on communal open spaces and the spaces provided and each lot surpassed minimum requirements.

For more information, see pages 71,74 & 75.

Objective 3E-1: Deep Soil Provision

ADG Objective: Deep soil zones provide areas on the Site that allow for and support healthy plant and tree growth. They improve residential amenity and promote management of water and air quality. Deep soil zones are to meet the following minimum requirement: site area greater than 1,500m², 6m minimum dimensions and minimum deep soil zone of 7% of Site area.

On some sites it may be possible to provide larger deep soil zones... 15% of the Site as deep soil on sites greater than 1,500m².

With a developable area of 136,500m², the deep soil zone requirements for the Site are:

- + 9,757m² for minimum compliance (7% of site area), or
- + 20,909m² as a stretch target (15% of site area).

The Masterplan achieves 21,179m² which is beyond the stretch target of 15%. Further, this has been achieved on a lot-by-lot basis.

The development also provides an additional 34,090m² deep soil in public open spaces. When this is added to the private open space deep soil zones, the total increases to 55,269m² or 22% of the Site.

For more information, see page 71.

Objective 4A-1: Solar Access

ADG Objective: Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9am and 3pm at mid winter.

A computation script was used to measure the amount of sunshine on all the building façades in the Masterplan with living rooms and private open spaces.

76.9% of the total building façade area achieves over 2 hours of sunlight between 9am and 3pm at mid-winter.

06 SUPPORTING STUDIES

OVERSHADOWING ASSESSMENT - MID-WINTER

OVERSHADOWING ASSESSMENT - MID WINTER

A shadow study was undertaken to determine the effects of overshadowing during the middle of winter (June 22nd) between 9am and 3pm. The results indicate the following:

- + The Proposal will create some overshadowing to existing residential properties along Hughes Avenue at 9am. However, after 10am there is no overshadowing of these properties;
- + At 3pm, existing residential properties along Wharf Road will begin to be affected by overshadowing of the Proposal;
- + Between 12-2pm, approximately 60% of the Central and approximately 50% of the Common are not affected by overshadowing;
- + The assessment clearly illustrates that due to the orientation and size of the proposed building envelopes that building shadows will move quickly across the Site between the hours of 9am-3pm.



21 June - 9am



21 June - 10am



21 June - 11am



21 June - 12pm



21 June - 1pm



21 June - 2pm



21 June - 3pm



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