PROPOSED RESIDENTIAL DEVELOPMENT

86 – 88 CENTENARY DRIVE, STRATHFIELD

S 4.55 Application

Assessment of Traffic and Parking Implications

STRATHFIELD COUNCIL RECEIVED

> DA2015/100/05 25 July 2019

July 2019 (Rev D)

Reference 17233 (C)

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES
Transportation, Traffic and Design Consultants
Suite 502, Level 5
282 Victoria Avenue
CHATSWOOD 2067
Telephone (02) 9411 5660
Facsimile (02) 9904 6622
Email: info@ttpa.com.au

TABLE OF CONTENTS

1.	INT	RODUCTION	1
2.	PRO	OPOSED DEVELOPMENT SCHEME	2
	2.1	Site, Context And Existing Circumstances	2
	2.2		2
	2.3	Proposed S 4.55 Scheme	3
3.	ROA	AD NETWORK AND TRAFFIC CONDITIONS	4
	3.1	Road Network	4
	3.7	Traffic Controls	5
		Traffic Conditions	
		Transport Services	
		Pedestrians and Cyclists	
4.	TRA	AFFIC	8
5.	ACC	CESS AND INTERNAL CIRCULATION	11
6.	CON	NCLUSION	12
٠.	331		······································

APPENDIX A APPROVED PLANS
APPENDIX B S 4.55 PLANS

LIST OF ILLUSTRATIONS

	_		
_	\sim 1 1	IRE 1	LOCATION
_	(- 1	1 2 - 1	1 ()(\(\D \)

FIGURE 2 SITE

FIGURE 3 ROAD NETWORK FIGURE 4 TRAFFIC CONTROLS

1. Introduction

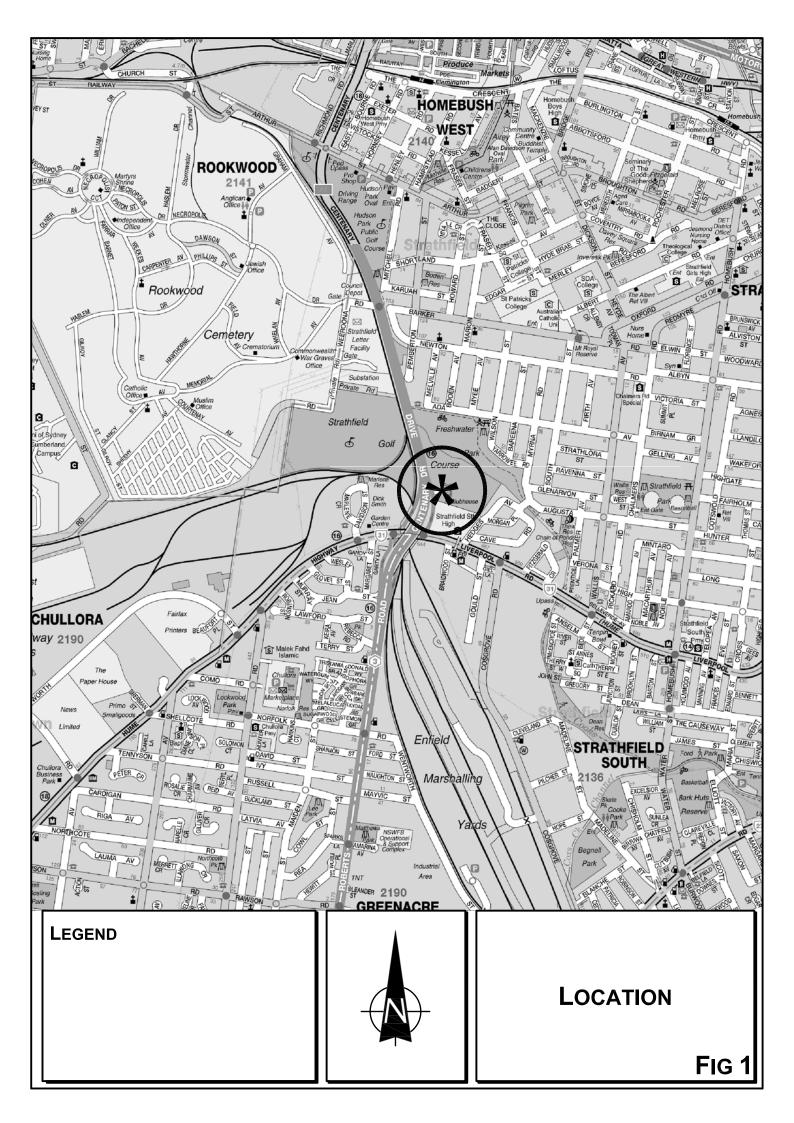
This report has been prepared to accompany a S 4.55 Application to the Strathfield Council that seeks approval to increase the approved number of residential parking spaces on a site which was formerly part of the Strathfield Golf Club site on Centenary Drive at Strathfield (Figure 1).

Many precincts throughout the Sydney Metropolitan Area are experiencing ongoing redevelopment as part of the urban consolidation process. The subject site was superfluous to the needs of the Golf Club and its subdivision and sale provided much needed funds for the club to upgrade its facilities. Consents have been granted for Medium Density Residential on the central and eastern part and High Density Residential on the western part. These consents provide for 178 residential apartments and 50 townhouses and those townhouses have been constructed.

The S 4.55 Application seeks to increase the number of approved residential apartment parking spaces for the High Density Residential apartments from 293 to 329.

The purpose of this report is to:

- * describe the site, the previous approvals and the proposed S 4.55 scheme
- describe the road network and traffic conditions on the road system serving the site
- ★ assess the potential traffic implications
- * assess the suitability of the proposed parking and internal circulation arrangements.



2. Proposed Development Scheme

2.1 SITE, CONTEXT AND EXISTING CIRCUMSTANCES

The total development site (Figure 2) is a consolidation of 3 lots being a large irregular shaped area of some 2.16ha with frontage to the eastern side of Centenary Drive. The site is bound to the south by Strathfield South High School and to the north by the golf course and the surrounding uses include:

- the residential development extending to the north and east
- the industrial area and Enfield Marshalling Yards to the south
- * the mixed residential, industrial and commercial uses extending along the highway
- Rookwood Cemetery which extends to the west

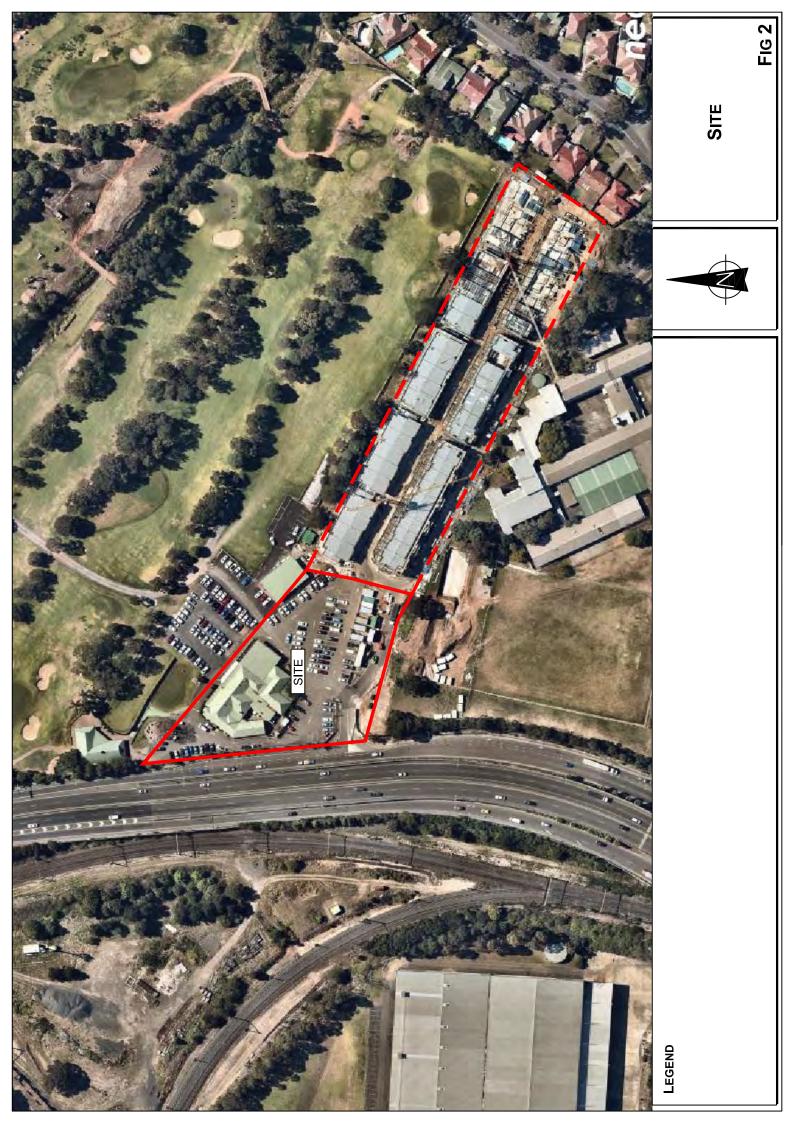
The current uses on the site comprise the Golf Clubhouse and car park located on the western part (which is the subject of this Application) and the constructed townhouses on the central and eastern part. Vehicle access is provided by a left turn IN/OUT connection to the Off Ramp from Centenary Drive to Hume Highway.

2.2 APPROVED DEVELOPMENT

Consent has been granted for development comprising 178 apartments with 298 parking spaces in 2 basement levels (as well as the 50 approved townhouses).

The Clubhouse will be relocated to another part of the Golf Course landholding with its own separate vehicle access while the development will utilise the existing access on Centenary Drive.

Details of the approved development are provided on the revised plans prepared by Woods Bagot Architects which are provided in part in Appendix A.



2.3 Proposed S 4.55 Scheme

This scheme retains the same number of apartments x bedrooms but provides a 3rd basement level which increases the number of parking spaces by 31 which will provide more of the 122 two-bedroom apartments with 2 parking spaces each. The total parking provision will be 329 spaces including 27 accessible spaces and 36 visitor spaces.

Details of the proposed basement levels are provided on the plans which accompany the application and are reproduced in Appendix B.

3. Road Network and Traffic Conditions

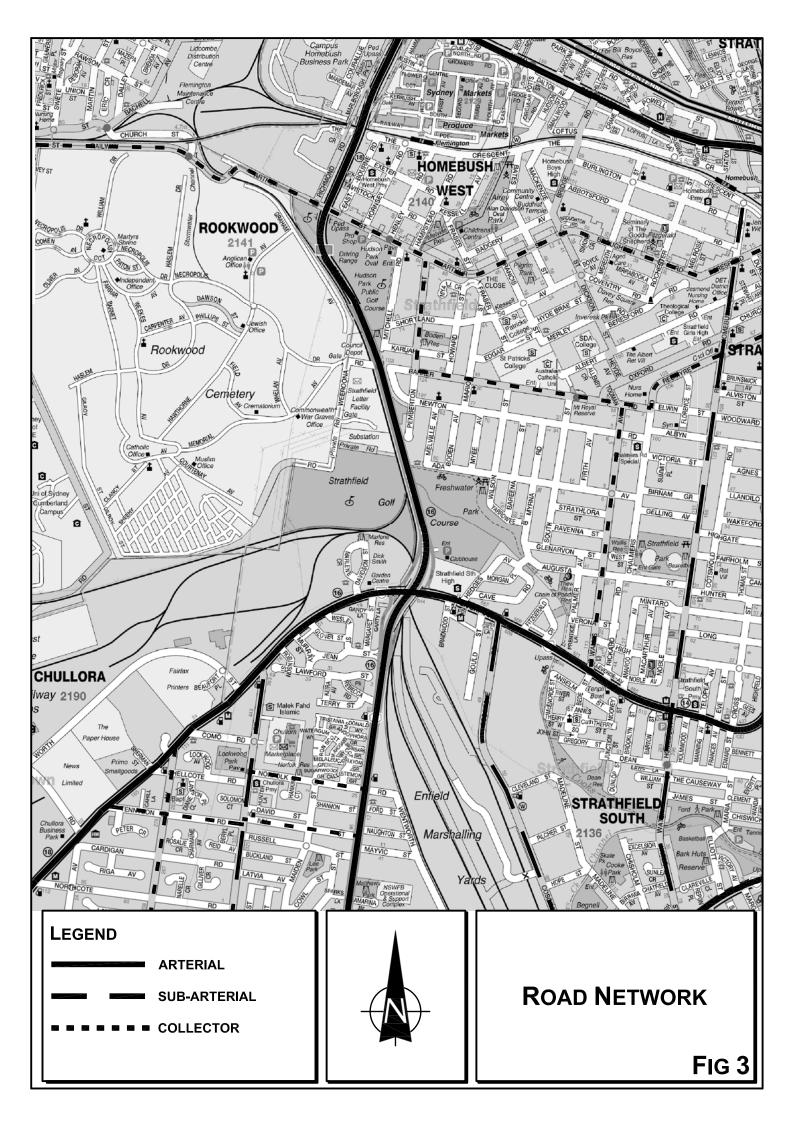
3.1 ROAD NETWORK

The road network serving the site (Figure 3) comprises:

- * A3 Homebush Bay Drive/Centenary Drive/Roberts Road etc. a State Road and north-south arterial route connecting across the Metropolitan Area between Pymble and Blakehurst
- * A22 Liverpool Road (Hume Highway) a State Road and east-west arterial route connecting between the City and Liverpool
- Cosgrove Road a Regional Road and major collector road route connecting between Punchbowl Road and Hume Highway
- Homebush Road a Regional Road and collector road connecting between Lidcombe Road and Strathfield
- * Arthur Street a Regional Road and collector road route connecting between Lidcombe Road and Strathfield
- * Pemberton Street, Barker Road and Wallis Avenue minor collector roads running through the area to the north of the site
- ★ Hedges Avenue and Augusta Street local access roads to the east of the site

Centenary Avenue in the vicinity of the site comprises:

- * 2 through lanes in each direction travelling to/from the Hume Highway over pass
- * Separate ON and OFF ramps with the OFF ramp along the site frontage comprising:





TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

- Left turn deceleration lane for site access
- 1 southbound lane with a bike lane developing into 3 lanes to the south (1
 left turn and 2 right turn at the highway intersection) see details overleaf

3.2 TRAFFIC CONTROLS

The traffic controls on the road network in the area (Figure 4) include:

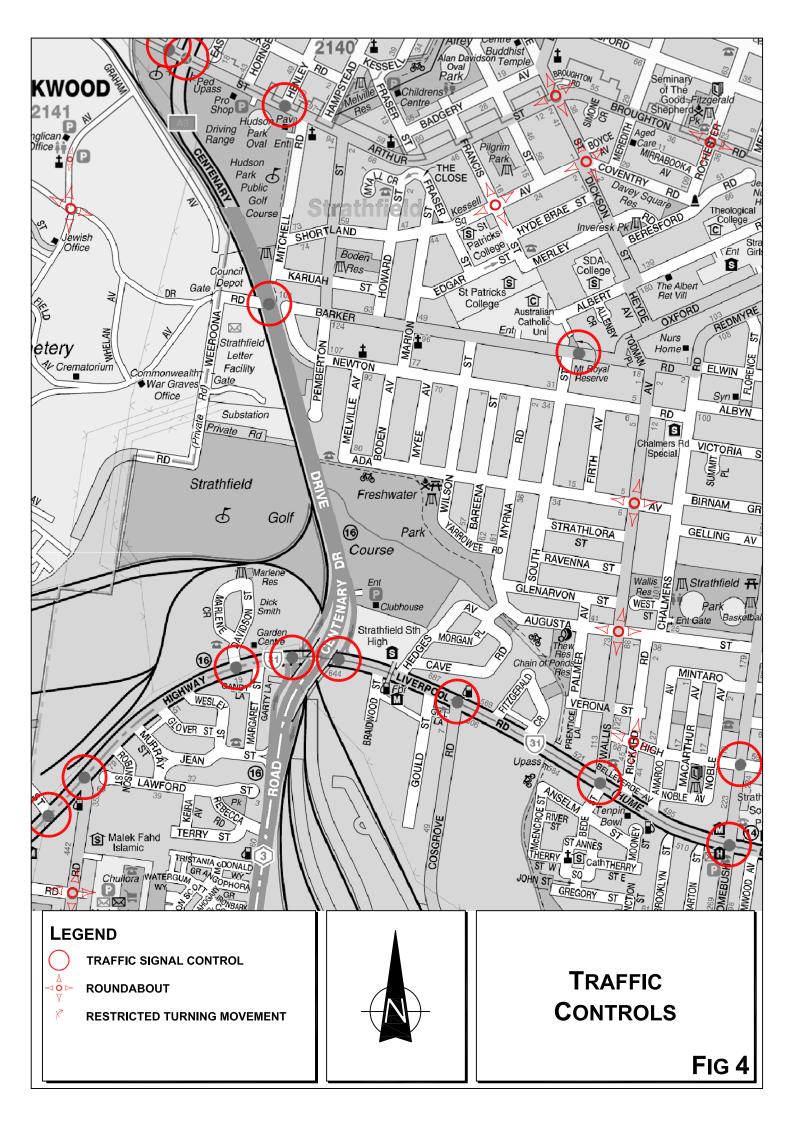
- * the traffic signals at the Hume Highway and the Centenary Drive ON & OFF ramp intersections
- * the other traffic signals along the highway including the Cosgrove Road and Wallis Avenue intersections
- * the traffic signals along Centenary Road including the Rockwood Centenary access and Arthur Street intersections
- * the roundabouts along Wallis Avenue at the Ada Avenue and Augusta Street intersections
- * the 70 kmph speed limit on Centenary Drive south bound traffic movement

There is a pedestrian bridge over the Hume Highway on the western side of the Hedges Avenue intersection with adjacent bus stops.

3.3 TRAFFIC CONDITIONS

An indication of the traffic conditions on the road network in the area is provided by the RMS published AADT data and other relevant traffic data. The recorded data is as follows:

Hume Highway East of Centenary Drive 53,000 approx.
Homebush Bay Drive North of Parramatta Road 95,000 approx.



TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

Centenary Drive OFF Ramp:

	AM PEAK	PM PEAK
LT to Hume Highway	560	481
RT to Hume Highway	712	798
U turn	3	19
Total:	1,275 vph	1,298 vph

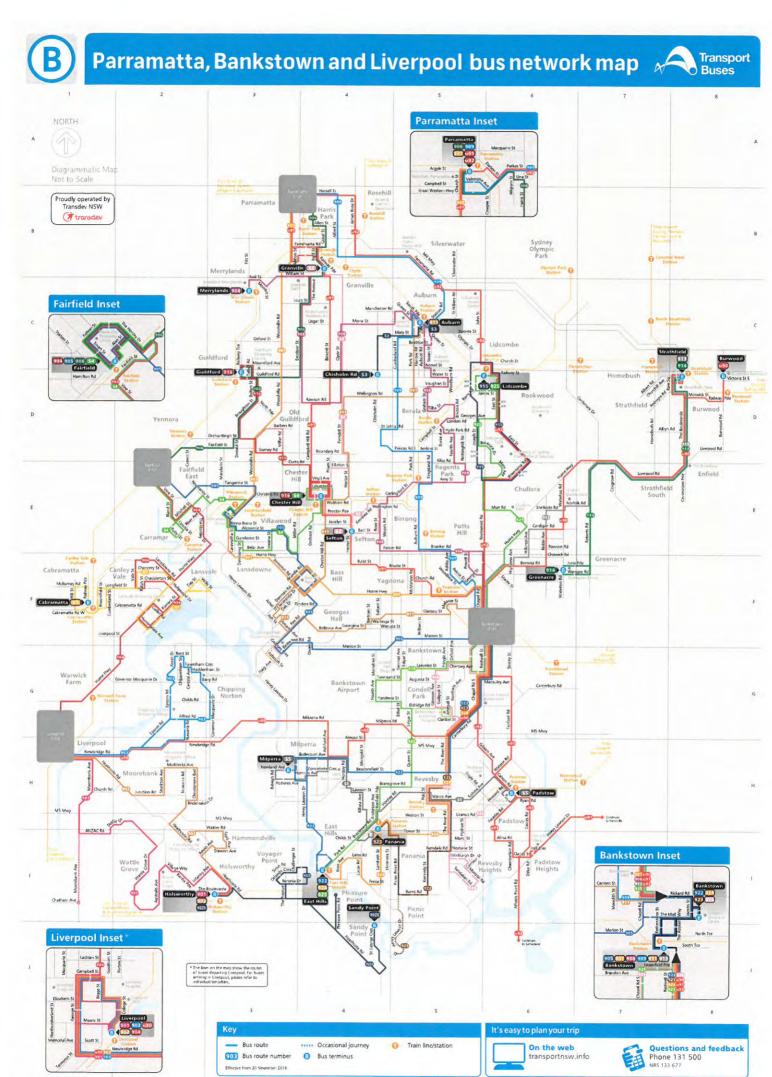
Vehicle speeds along the OFF Ramp are constrained in the morning and afternoon peak periods and queues extend back from the Hume Highway intersection generally for some 120 to 150 m while the Golf Course access is located some 190 m north of the intersection. Surveys of the egress movement from the Golf Course access reveal average delays in the peak period of only some 20 seconds with maximum delays less than 60 seconds. As is the case with most busy arterial roads, drivers are able to echelon into the through flows in low speed circumstances with some reliance on the courtesy of the main stream drivers.

3.4 TRANSPORT SERVICES

There are high frequency local and regional bus services operating along the Hume Highway immediately south of the site (with bus stops located just to the east of the Centenary Drive off-ramp). Buses operate the following routes along the Hume Highway:

- Route M90 between Liverpool and Burwood;
- Route 913 between Bankstown and Strathfield; and
- Route 914 between Greenacre and Strathfield

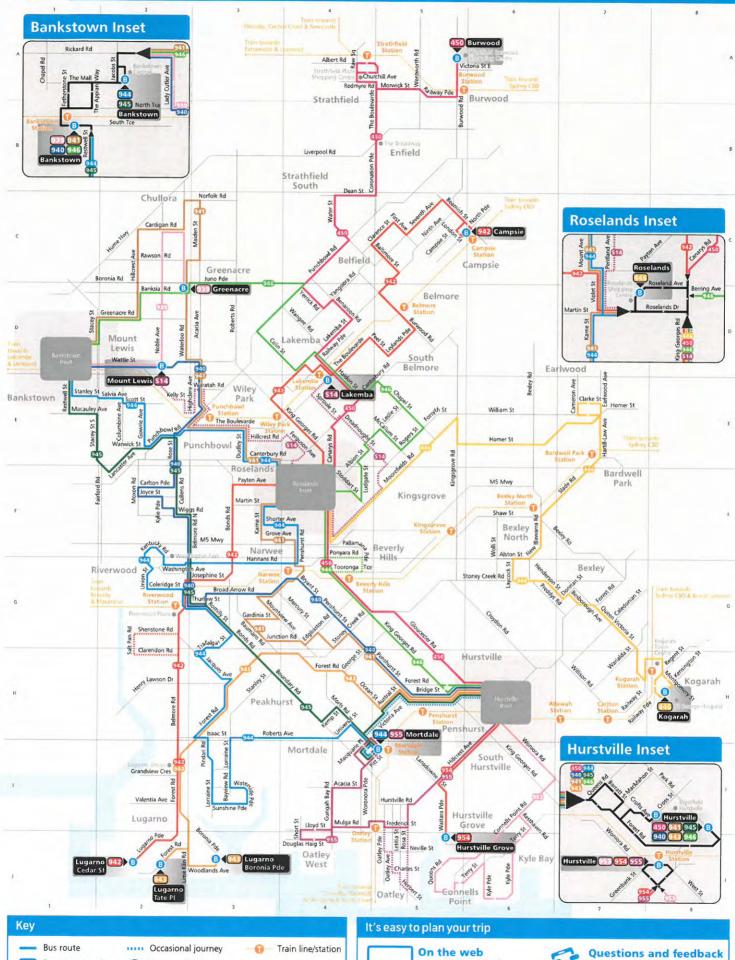
Route M90 provides 10 minute services in both directions during peak commuter periods with service frequencies reducing to 15-20 minutes during other periods and the service provides key connections to rail services at Liverpool, Bankstown, Strathfield and Burwood. The local routes operate at a lower frequency on weekdays, but also provide key connections to rail interchanges.





Hurstville, Roselands, Bankstown and Strathfield bus network map





944 Bus route number Bus terminus





3.5 PEDESTRIANS AND CYCLISTS

The Bay to Bay shared path route runs through Freshwater Park immediately to the north of the site connecting to the Regional cycle and pedestrian network. The existing footway along the OFF Ramp (together with the pedestrian bridge over the Highway) provides convenient access between the site and the bus stops on the highway.

4. TRAFFIC

The traffic assessment undertaken for the 2013 Rezoning and Planning Proposal envisaged a traffic outcome generated by some 100 dwellings, the Golf Club and Mixed Use development of some 8,100m². A detailed assessment of this potential development outcome was provided in the subsequent Traffic Assessment¹ for the initial approved Development Application as follows:

	AM PEAK	PM PEAK
Residential	30	30
Golf Club	50	60
Mixed Use	40	40
Total	120 vtph	130 vtph

That assessment also identified a projected traffic generation for the proposed residential development as follows:

	AM PEAK	PM PEAK
50 Townhouses	15	21
178 Apartments	50	73
Total	65 vph	94 vtph

This assessment adopted the RMS published data² for high density development at Liberty Grove of 0.28 vtph and 0.41 vtph per apartment for the AM and PM peaks respectively. However, the RMS data shown on the extract overleaf is flawed for a number of sites.

Proposed Residential Development Centenary Drive Strathfield Traffic Impact Assessment ARC Traffic + Transport August 2015 (supp. Jan 2016)

² High Density Residential Trip Generation Survey Data Analysis Report GHD September 2012

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

The aggregated RMS data specifies a traffic generation of 0.19 vtph per apartment in the AM and 0.15 vtph in the PM whilst the 3 sites shown overleaf have results which vary markedly from the "norm" and the reasons for this are:

- The Liberty Grove site has an error in the analysis. The peak traffic generation is designated as the traffic generation which occurs during the 1 hour peak traffic movement on the adjacent road system. The data provided in the study for the adjacent road (which is supported by the data for the adjacent Homebush Bay Drive) shows that the PM peak is clearly 5.0-6.0pm. Yet the selected PM peak on Table 32 is 6.0-7.0pm while the recorded traffic generation for 5.0-6.0pm is 12vt which for the 64 apartments equates to a generation of 0.19 vtph per apartment.
- The Rockdale and Parramatta sites have retail/commercial elements with related onsite parking which were not taken into account

The earlier former RTA study for High Density Residential included sites which were remote from a railway station (e.g. 2 sites at Sans Souci) and the criteria of 0.29 vtph per apartment is considered to be appropriate to the Strathfield circumstance and this also equates to the recorded Liberty Grove generation for the PM peak period of 5.30-6.30pm. Application of that criteria to the proposed 183 apartments indicates the following projected traffic generation outcome.

	AM PEAK	PM PEAK
Townhouses	15	21
Apartments	53	53
Total	68 vph	74 vph

Thus, the traffic generation outcome for the approved development scheme was in reality somewhat less than that assessed for the rezoning scheme (AM & PM) and less than that (in the PM) of the earlier approved development.

TRANSPORT AND TRAFFIC PLANNING ASSOCIATES

Thus, the projected traffic generation outcome for the approved development was somewhat lower than that for development under the previous approvals. There is no published study which I am aware of which demonstrates that the provision of additional parking (e.g. 2 spaces per 2 Bed apartment) results in an increased traffic generation during the on-street peak periods. One reason for this is that many families have 2nd car for recreational use or use by one partner during the middle of the day or on weekends.

It is conceivable that a circumstance of severe constraint on parking provision may result in a lower traffic generation rate per apartment but this is usually a factor in a CBD circumstance where there are frequent high capacity public transport services available. My own experience comes from my involvement with a Land and Environment Court matter No. 10498 of 2003 for a proposed resident apartment development at St Leonards where the issue of traffic generation in relation to constrained and unconstrained parking provision was dealt with. Surveys were undertaken of some 400 apartments in buildings along Herbert Street which have "constrained" parking (average of 1 space each under the Willoughby Council DCP) and some 187 apartments in buildings in Lithgow Street which have 2 parking spaces each. A comparison of the survey results revealed virtually no difference in the traffic generation rate per apartment in the AM and PM peak periods for the "constrained" and "unconstrained" parking circumstances.

RMS uses multiple regression statistical analysis of the survey data and the analysis for High Density Residential concluded that "No. of apartments" was a far more relevant indicator of traffic generation than "No. of spaces".

It is apparent that providing more of the Two Bedroom apartments with 2 parking spaces would not result in any perceptible increased peak traffic generation and this is particularly relevant when traffic assessments for earlier phases of the Development process projected a higher traffic generation outcome than that for the current approval.

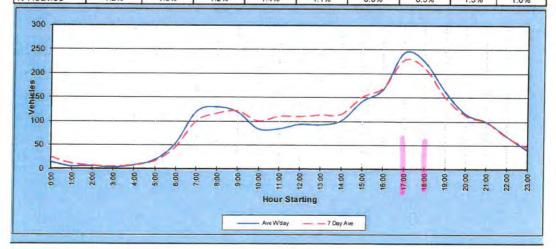
Table 4 - Summary of Surveyed Trip Generation Rates

		Sydney Metropolitan Area														
Site No.	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 10								
Location	St Leonards	Chatswood	Cronulla	Rockdale	Parramatta	Liberty Grove	Strathfield	Pyrmont								
Weekday					2000											
AM Peak Vehicle Trips per Unit	0.14	0.14	0.07	0.32	0.27	0.28	0.10	0.18								
PM Peak Vehicle Trips per Unit	0.07	0.12	0.11	0.18	0.12	0.41	0.06	0.10								

3.2.6 Site 5: 10 Wentworth Drive, Liberty Grove

Road	10 Wentworth Drive	Average Weekday	2223
Location	Liberty Grove	7 Day Average	2265
Site No.	7	Weekday Heavy's	1.3%
Start Date	Sunday 13-May-12	7 Day Heavy's	1.0%
Direction	Combined		

				ay of Week					
	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Ave	7 Day
Time	14-May	15-May	16-May	17-May	18-May	19-May	13-May	W'day	Ave
AM Peak	130	144	116	143	138	181	175		
PM Peak	192	236	252	232	312	219	173		
0:00	16	15	14	17	18	42	60	16	26
1:00	7	4	9	2	11	31	25	7	13
2:00	10	9	5	11	4	13	8	8	9
3:00	5	3	6	4	4	13	10	4	6
4:00	10	5	7	11	13	9	10	9	9
5:00	21	21	19	20	21	16	7	20	18
6:00	58	60	47	56	50	29	28	54	47
7:00	121	117	110	119	138	54	53	121	102
8:00	130	135	115	143	134	97	68	131	117
9:00	118	144	116	127	96	136	121	120	123
10:00	89	87	87	70	93	170	118	85	102
11:00	80	76	98	77	96	181	175	85	112
12:00	79	108	97	97	94	160	143	95	111
13:00	89	100	89	92	100	165	166	94	114
14:00	96	102	107	91	118	174	128	103	117
15:00	154	146	144	136	135	207	142	143	152
16:00	140	172	157	156	215	195	161	168	171
17:00	192	236	252	229	312	219	163	244	229
18:00	192	220	251	232	228	182	173	225	211
19:00	128	203	155	141	187	132	110	163	151
20:00	108	105	126	127	116	100	110	116	113
21:00	91	104	114	113	77	97	97	100	99
22:00	65	62	71	67	83	81	49	70	68
23:00	. 26	37	35	37	69	82	34	41	46
tal	2025	2271	2231	2175	2412	2585	2159	2223	2265
Heavies	1.2%	1.5%	1.2%	1.4%	1.1%	0.6%	0.3%	1.3%	1.0%



HOMEBUSH BAY DR, MR200

CONCORD WEST-S OF MR200, CONCORD RD

									WEEKDAY	S	WEEKEN	ID (+HO	LIDAYS)		WHOLE	WEEK
HOUR	MON	TUE	WED	THU	FRI	SAT	SUN									
comm.	12/08	13/08	14/08	15/08	16/08	17/08	18/08	TOTAL	MEAN	8	TOTAL	MEAN	*	TOTAL	MEAN	8
0	160	143	159	160	187	326	398	809	162	0.46	724	362	1.43	1533	219	0.67
1	90	84	87	95	111	212	246	467	93	0.26	458	229	0.90	925	132	0.40
2	96	79	94	113	112	127	170	494	99	0.28	297	149	0.58	791	113	0.35
3	98	105	95	118	125	121	162	541	108	0.30	283	142	0.56	824	118	0.36
4	212	215	226	239	207	164	121	1099	220	0.62	285	143	0.56	1384	198	
5	753	688	773	772	765	443	195	3751	750	2.11	638	319	1.26	4389	627	
6	2481	2552	2451	2499	2554	1292	418	12537	2507	7.06	1710	855	3.37	14247	2035	6.24
7	3450	3289	3333	3358	3322	1253	482	16752	3350	9.43	1735	868	3.42	18487	2641	8.09
8	3200	3166	3185	3467	3311	1524	697	16329	3266	9.19	2221	1111	4.37	18550	2650	8.12
9	1980	2447	2851	2329	2259	1747	1074	11866	2373	6.68	2821	1411	5.55	14687	2098	6.43
10	2456	1855	1953	1777	1961	1829	1352	10002	2000	5.63	3181	1591	6.26	13183	1883	5.77
11	1533	1685	1739	1743	1888	2016	1596	8588	1718	4.83	3612	1806	7.11	12200	1743	5.34
12	1669	1589	1680	1702	1846	2076	1831	8486	1697	4.78	3907	1954	7.69	12393	1770	5.43
13	1655	1652	1737	1857	2005	2038	1787	8906	1781	5.01	3825	1913	7.53	12731	1819	5.57
14	1710	1887	1867	1925	2134	1939	1769	9523	1905	5.36	3708	1854	7.30	13231	1890	5.79
15	1960	2145	2257	2140	2255	1885	1871	10757	2151	6.06	3756	1878	7.40	14513	2073	6.35
16	2246	2390	2386	2368	2384	1861	2166	11774	2355	6.63	4027	2014	7.93	15801	2257	6.92
17	2805	2855	2987	2956	2863	2034	1884	14466	2893	8.14	3918	1959	7.71	18384	2626	8.05
18	2166	2135	2287	2260	2265	1485	1366	11113	2223	6.26	2851	1426	5.61	13964	1995	6.11
19	1140	1281	1272	1254	1498	1048	946	6445	1289	3.63	1994	997	3.93	8439	1206	3.69
20	702	801	751	850	904	671	798	4008	802	2.26	1469	735	2.89	5477	782	2.40
21	619	721	750	850	1098	612	721	4038	808	2.27	1333	667	2.62	5371	767	2.35
22	498	553	632	609	825	600	538	3117	623	1.75	1138	569	2.24	4255	608	1.86
23	293	309	304	358	500	542	356	1764	353	0.99	898	449	1.77	2662	380	1.17
			Salak	وتوريد						*****						
DAY																
TOT	33972	34626	35856	35799	37379	27845	22944	177632	35526	100.00	50789	25395	100.00	228421	32632	100.00
MAX	3450	3289	3333	3467	3322	2076	2166	AWT =	35526		AWE =	25395		ADT =	32632	

HOURLY TRAFFIC VOLUMES for Week commencing MON 12/08/02

Station No. 29.001.S

HOMEBUSH BAY DR, MR200 CONCORD WEST-S OF MR200, CONCORD RD

HOUR	MON	OUT TES	r.mm	min.	EDT	0.75	CIRI	ī.	EEKDAY	S	WEEKEN	ID (+HO	LIDAYS)		WHOLE	WEEK
	100000	TUE	WED	THU	FRI	SAT	SUN									
comm.		13/08	14/08		16/08	17/08	18/08	TOTAL	MEAN	8	TOTAL	MEAN	96	TOTAL	MEAN	96
				*****		*****										
0	210	265	319	286	368	479	501	1448	290	0.80	980	490	1.82	2428	347	1.04
1	169	139	158	175	195	267	370	836	167	0.46	637	319	1,18	1473	210	0.63
2	159	102	138	165	166	253	226	730	146	0.41	479	240	0.89	1209	173	0.52
3	146	148	172	158	212	211	196	836	167	0.46	407	204	0.75	1243	178	0.53
4	267	204	265	220	308	209	141	1264	253	0.70	350	175	0.65	1614	231	
5	567	509	547	558	592	419	172	2773	555	1.54	591	296	1.10	3364	481	
6	1398	1451	1400	1397	1413	854	356	7059	1412	3.92	1210	605	2.24	8269	1181	3.53
7	2669	2675	2664	2613	2610	1225	680	13231	2646	7.35	1905	953	3.53	15136	2162	6.47
8	2802	2835	2903	2756	2750	1716	1020	14046	2809	7.80	2736	1368	5.07	16782	2397	7.17
9	2088	2259	2173	2094	2240	1995	1440	10854	2171	6.03	3435	1718	6.36	14289	2041	6.11
10	1612	1777	1901	1876	2078	2211	1853	9244	1849	5.14	4064	2032	7.53	13308	1901	5.69
11	1619	1691	1720	1892	1998	2315	2137	8920	1784	4.96	4452	2226	8.25	13372	1910	5.72
12	1698	1813	1835	1814	2135	2244	2082	9295	1859	5,16	4326	2163	8.02	13621	1946	5.82
13	1824	1928	1932	1983	2144	2280	1824	9811	1962	5.45	4104	2052	7.60	13915	1988	5.95
14	1963	2061	2117	2055	2434	2059	1685	10630	2126	5.91	3744	1872	6.94	14374	2053	6.14
15	2588	2758	2703	2834	2852	1970	1708	13735	2747	7.63	3678	1839	6.82	17413	2488	7.44
16	2739	2848	2875	2906	2931	1774	1536	14299	2860	7.94	3310	1655	6.13	17609	2516	7.53
17	2812	2935	2921	2974	3010	1899	1756	14652	2930	8.14	3655	1828	6.77	18307	2615	7.82
18	2529	2584	2766	2546	2792	1544	1268	13217	2643	7.34	2812	1406	5.21	16029	2290	6.85
19	1379	1446	1501	1458	1798	999	949	7582	1516	4.21	1948	974	3.61	9530	1361	4.07
20	951	953	1090	1122	953	670	771	5069	1014	2.82	1441	721	2.67	6510	930	2.78
21	828	892	914	1023	746	624	737	4403	881	2.45	1361	681	2.52	5764	823	2.46
22	628	710	723	793	773	722	577	3627	725	2.02	1299	650	2.41	4926	704	2.11
23	400	429	454	490	666	695	349	2439	488	1.36	1044	522	1.93	3483	498	1.49
										848644						
DAY																
TOT	34045	35412	36191	36188	38164	29634	24334	180000	36000	100.00	53968	26984	100.00	233968	33424	100.00
MAX	2812	2935	2921	2974	3010	2315	2137	AWT =	36000		AWE =	26984		ADT =	33424	

3.1.6 Site 6: 10 Wentworth Drive, Liberty Grove

Table 32 - Site 6 Survey Results (Weekday Hourly)

		CHANGE	Comme ehicle		0	ccupar	nts	Commercial Vehicles			Occupants			Tota	al Veh	icles	Tot (pe	Visito rs Cars Outsi		
		IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	
6:00 -	7:00	1	15	16	1	19	20	0	0	0	0	0	0	1	15	16	2	27	29	0
6:15 -	7:15	1	14	15	1	18	19	0	0	0	0	0	0	1	14	15	2	27	29	0
6:30 -		1	24	25	1	31	32	0	0	0	0	0	0	1	24	25	2	41	43	0
6:45 -	7:45	2	35	37	2	42	44	0	0	0	0	0	0	2	35	37	3	56	59	0
7:00 -	8:00	1	37	38	1	47	48	0	0	0	0	0	0	1	37	38	2	64	66	0
7:15 -		2	35	37	2	47	49	0	0	0	0	0	0	2	35	37	2	66	68	0
7:30 -	8:30	7	28	35	7	36	43	0	0	0	0	0	0	7	28	35	7	66	73	0
7:45 -	8:45	6	18	24	6	24	30	0	0	0	0	0	0	6	18	24	6	49	55	0
8:00 -	9:00	6	12	18	6	14	20	0	0	0	0	0	0	6	12	18	6	40	46	0
8:15 -	9:15	5	14	19	5	15	20	0	0	0	0	0	0	5	14	19	7	47	54	0
8:30 -	9:30	0	12	12	0	16	16	0	0	0	0	0	0	0	12	12	2	38	40	0
8:45 -	9:45	4	11	15	5	15	20	0	0	0	0	0	0	4	11	15	7	34	41	0
9:00 -	10:00	5	10	15	6	14	20	0	0	0	0	0	0	5	10	15	10	28	38	0
9:15 -	10:15	6	8	14	7	12	19	0	0	0	0	0	0	6	8	14	9	16	25	0
9:30 -	10:30	9	6	15	13	7	20	0	0	0	0	0	0	9	6	15	17	12	29	0
9:45 -	10:45	5	4	9	8	5	13	0	0	0	0	0	0	5	4	9	15	9	24	0
10:00 -	11:00	6	3	9	10	4	14	0	0	0	0	0	0	6	3	9	15	8	23	0
10:15 -	11:15	7	2	9	11	12	23	0	0	0	0	0	0	7	2	9	17	23	40	0
10:30 -	11:30	4	2	6	5	12	17	0	0	0	0	0	0	4	2	6	9	20	29	0
10:45 -	11:45	6	3	9	7	13	20	0	0	0	0	0	0	6	3	9	8	24	32	0
11:00 -	12:00	6	5	11	7	16	23	0	0	0	0	0	0	6	5	11	13	26	39	0
11:15 -	12:15	4	4	8	5	5	10	0	0	0	0	0	0	4	4	8	13	9	22	0
11:30 -	12:30	5	4	9	6	5	11	0	0	0	0	0	0	5	4	9	15	10	25	0
11:45 -	12:45	4	4	8	5	5	10	0	0	0	0	0	0	4	4	8	17	7	24	
12:00 -	13:00	5	4	9	7	4	11	0	0	0	0	0	0	5	4	9	15	6	21	0
12:15 -	13:15	5	3	8	7	3	10	0	0	0	0	0	0	5	3	8	12	7	19	0
12:30 -	13:30	4	6	10	6	5	11	0	0	0	0	0	0	4	6	10	10	8	18	0
12:45 -	13:45	5	7	12	8	6	14	0	0	0	0	0	0	5	7	12	9	9	18	0
13:00 -		2	5	7	3	4	7	0	0	0	0	0	0	2	5	7	3	7	10	0
13:15 -		4	5	9	7	4	11	0	0	0	0	0	0	4	5	9	7	4	14	0
13:30 -	14:30	5	3	8	9	4	13	0	0	0	0	0	0	5	3	8	10	_	10	0
13:45 -	14:45	4	1-1	5	7	2	9	0	0	0	0	0	0	4	1	5	10	2	14	0
14:00 -	15:00	5	3	8	9	4	13	0	0	0	0	0	0	5	3	8		4	23	0
14:15 -	15:15	6	6	12	9	9	18	0	0	0	0	0	0	6	6	12	14	9	24	0
14:30 -	15:30	6	6	12	8	8	16	0	0	0	0	0	0	6	6	12		11	38	0
14:45 -	15:45	8	9	17	12	12	24	0	0	0	0	0	0	8	9	17	22 34	15	49	0
15:00 -		11	7	18	17	10	27	0	0	0	0	0	0	11	7			13	45	0
15:15 -		8	4	12	13	5	18	0	0	0	0	0	0	8	4	12	32	22	57	0
15:30 -		9	5	14	15	9	24	0	0	0	0	0	0	9	5		35	22	57	0
15:45 -	16:45	10	4	14	15	9	24	0	0	0	0	0	0	10		14	29	23	52	0
16:00 -		9	5	14	14	10	24	0	0	0	0	0	0	9	5	17		31	64	0
16:15 -		10	7	17	15	13	28	0	0	0	0	0	0	10	7	19	33 46	27	73	0
16:30 -		11	8	19	17	15	32	0	0	0	0	0	0	11	8	_	41	24	65	0
16:45 -	17:45	7	7	14	12	12	24	0	0	0	0	0	0	7	7	14	34	26	60	0
17:00 -	,	5	7	12	7	13	20	0	0	0	0	0	0	5	7	15	36	20	56	0
17:15 -		9	6	15	13	12	25	0	0	0	0	0	0	9	6	19	33	17	50	0
17:30 -	10.00	14	5	19	17	9	26	0	0	0	0	0	0	14	5				57	0
17:45 -	10.10	16	7	23	20	14	34	0	0	0	0	0	0	16	7	23	33	24	58	0
18:00 -	19:00	18	8	26	23	14	37	0	0	0	0	0	0	18	37	26	36 46	66	73	0

Peak 1-hour period for car trips/person trips

Morning Peak Hour on Adjacent Road

Evening Peak Hour on Adjacent Road

5. Access and Internal Circulation

The design of the car park with the additional basement level of parking will continue to comply with the requirements of AS2890.1 and 6.

6. Conclusion

The S 4.55 Application seeks to increase the number of residential parking spaces. Assessment of the proposal has concluded that:

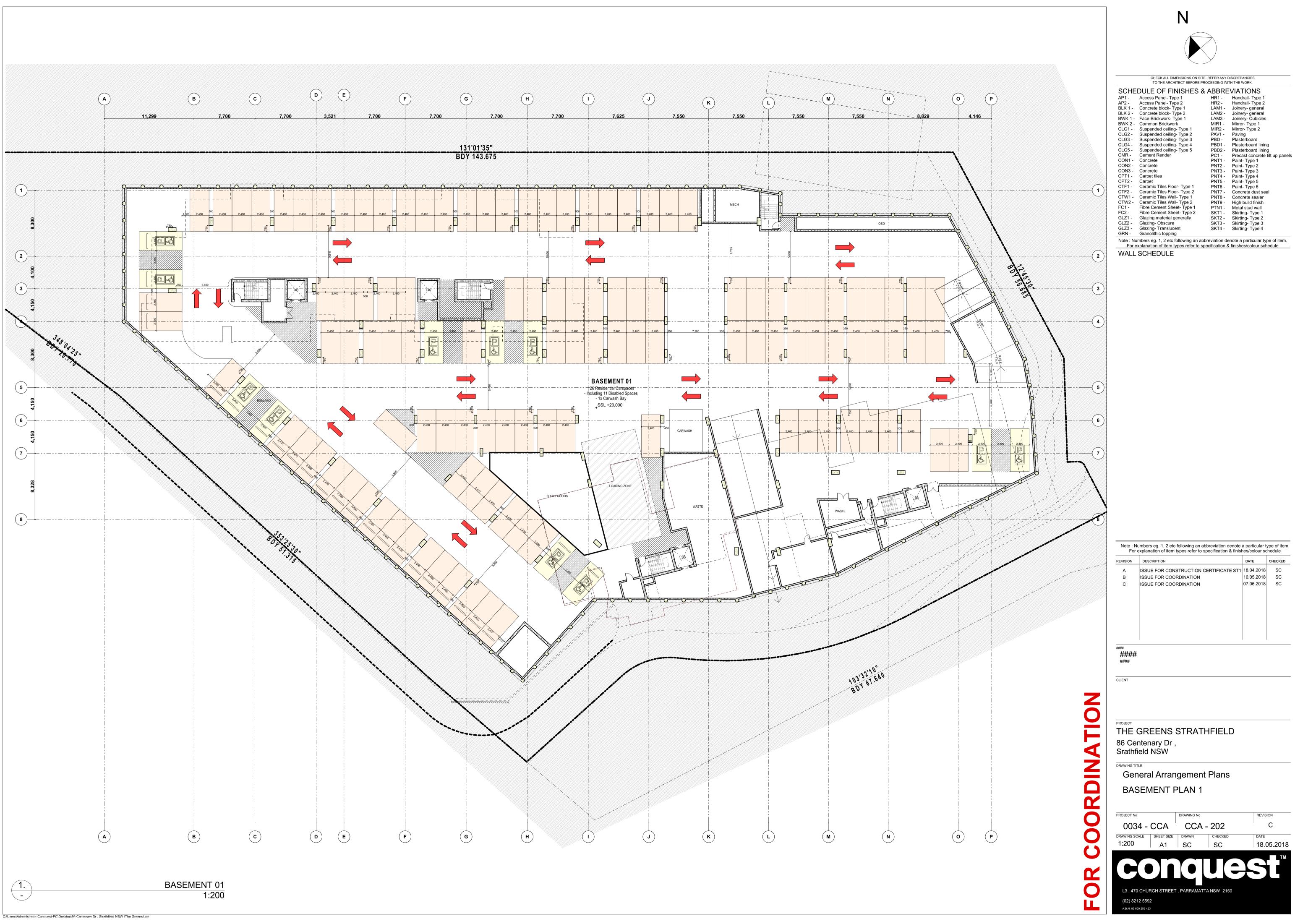
- The traffic generation will in reality not be any greater than that which was assessed and approved under previous applications and as a consequence there will not be any adverse traffic implications as a result of the proposed development
- The vehicle access, internal circulation, parking and servicing provisions will be satisfactory.

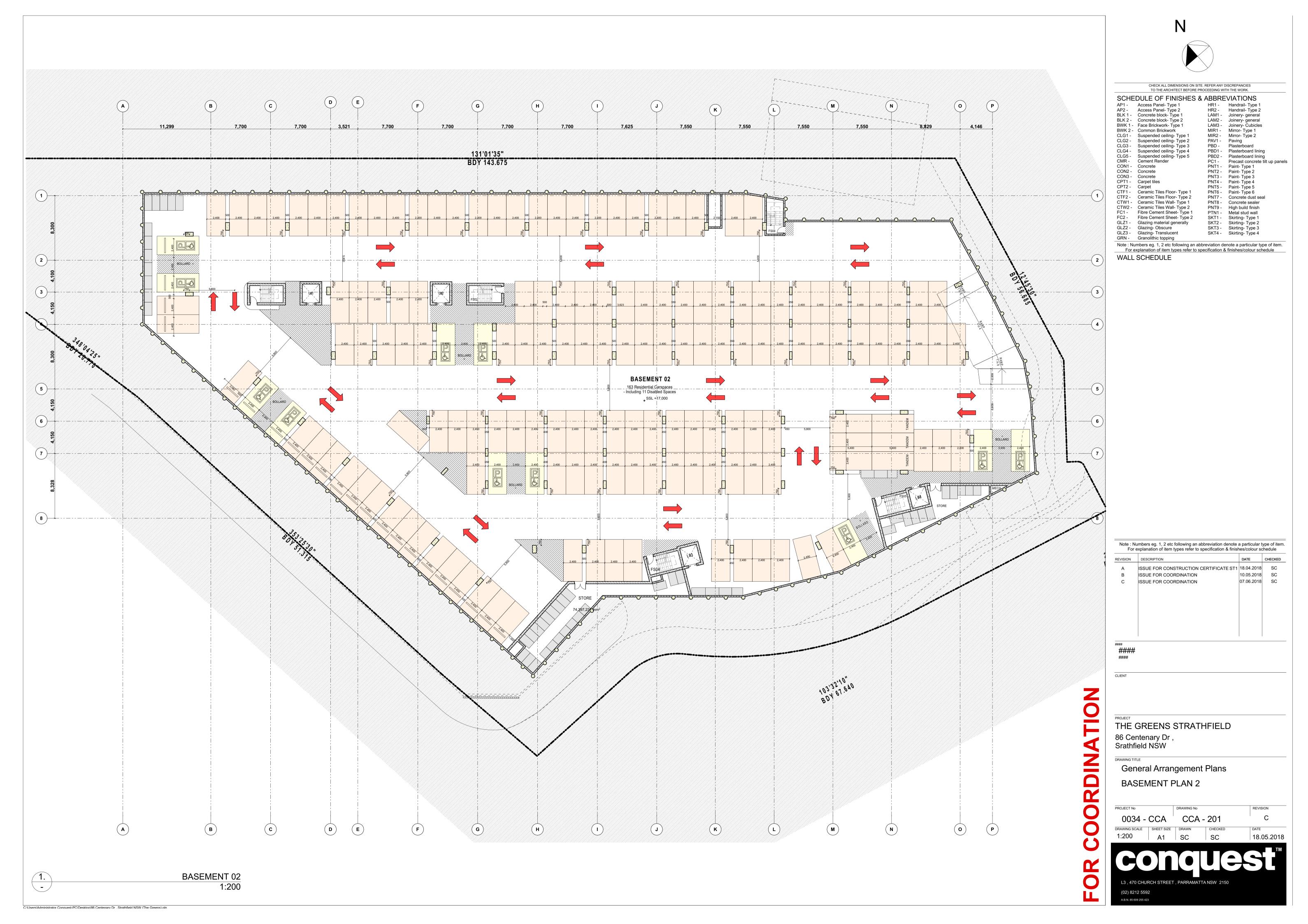
Another important conclusion is that of the inevitable outcome if insufficient parking is provided on-site for residents with these cars have no alternative other than to be parked on Hodges Avenue and other nearby streets.

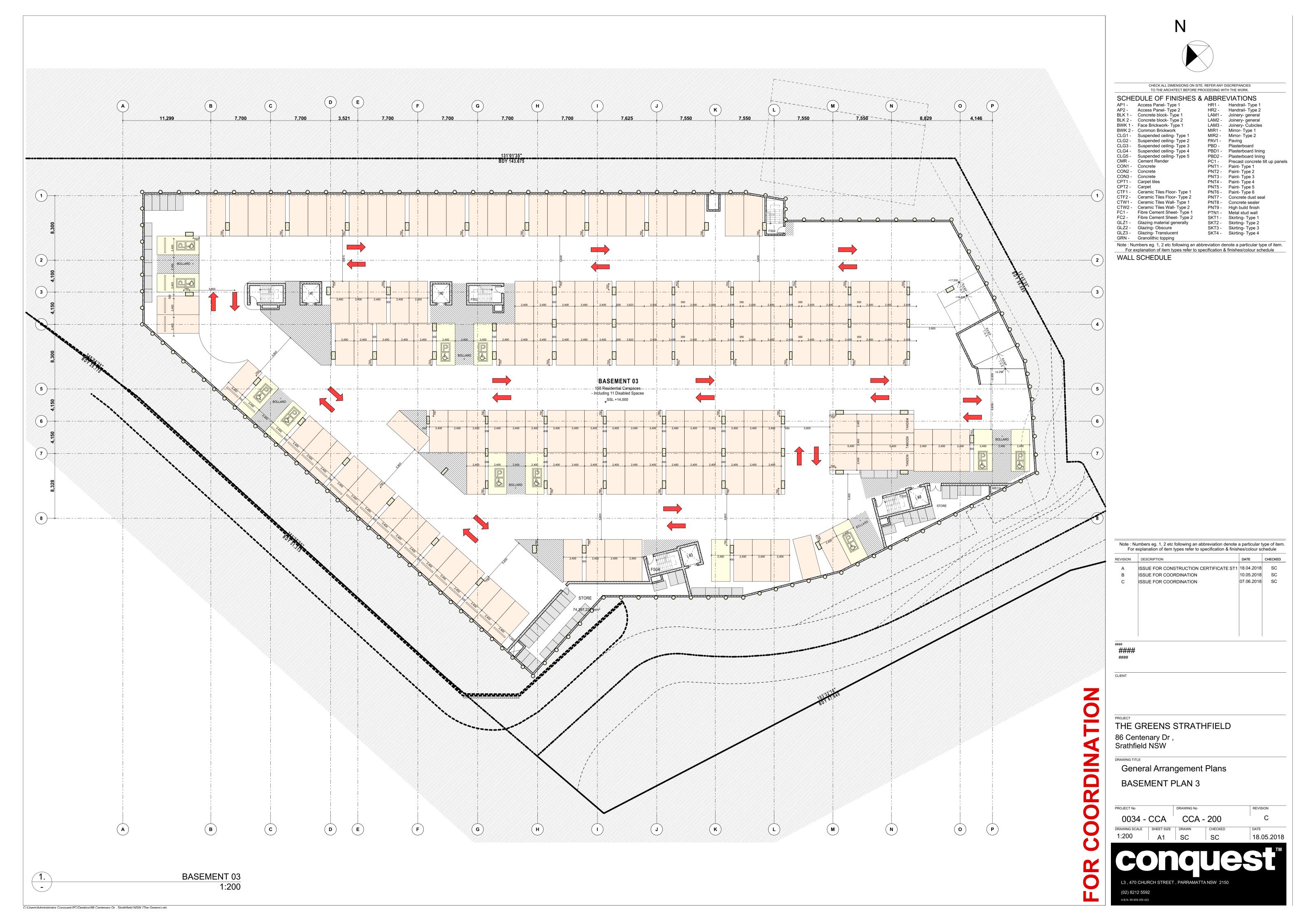
APPENDIX A

APPROVED PLANS







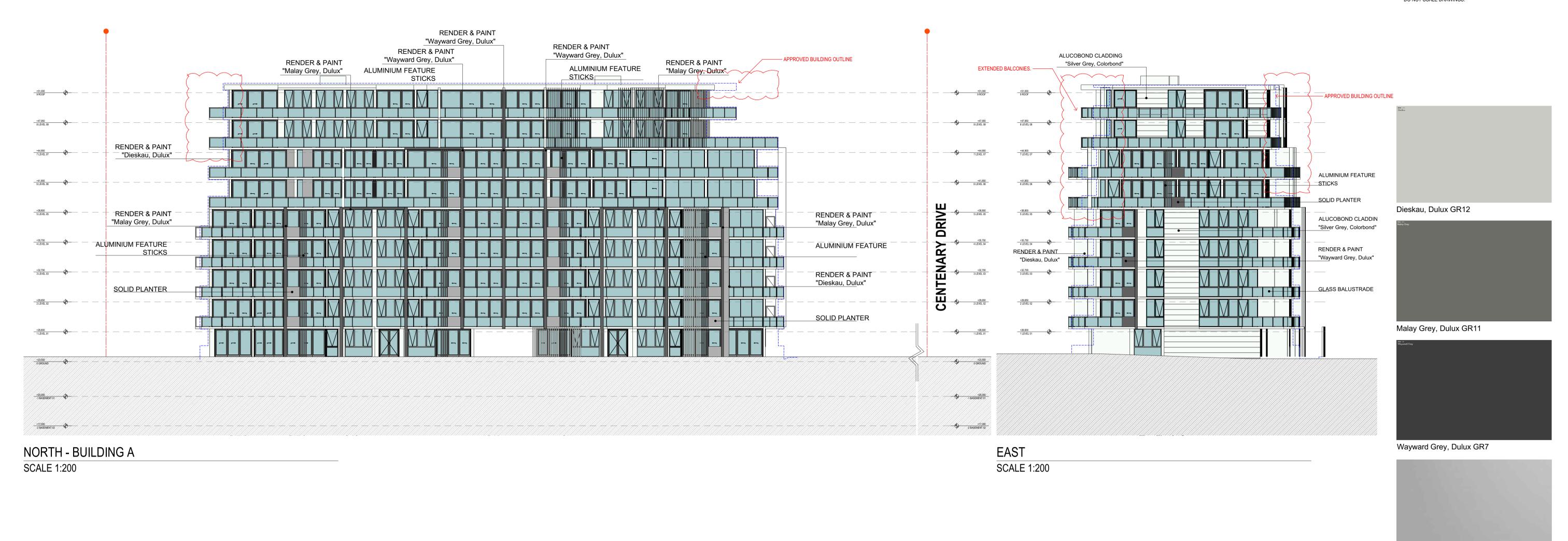


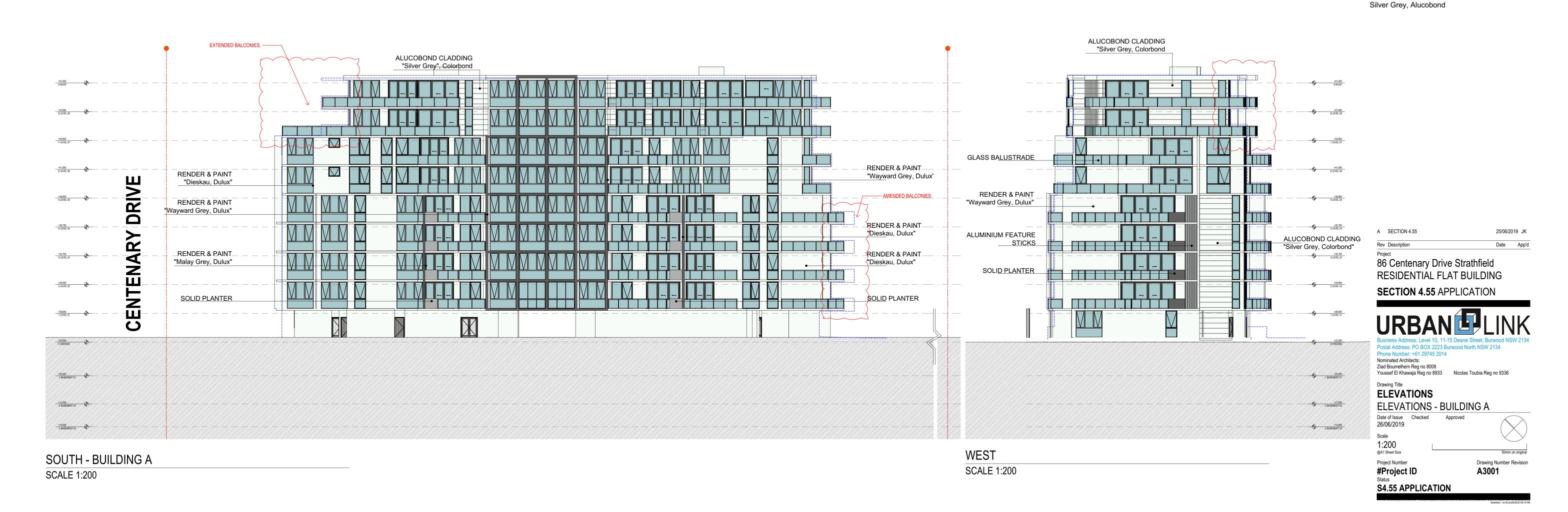
APPENDIX B

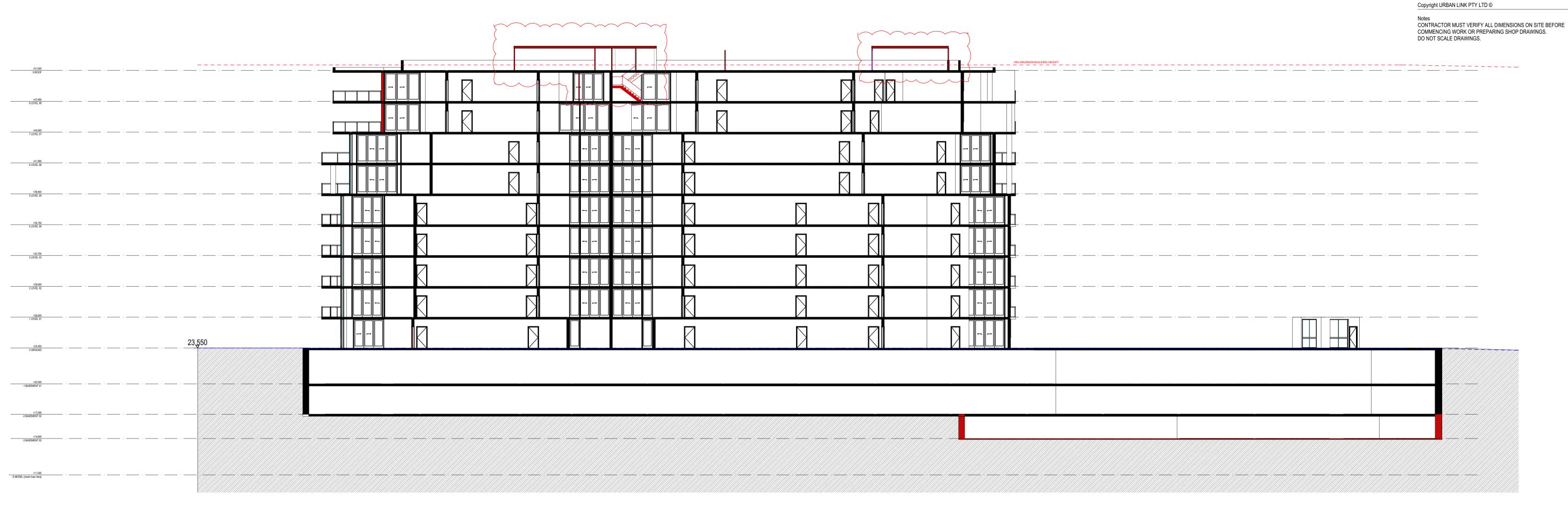
S 4.55 PLANS

CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.

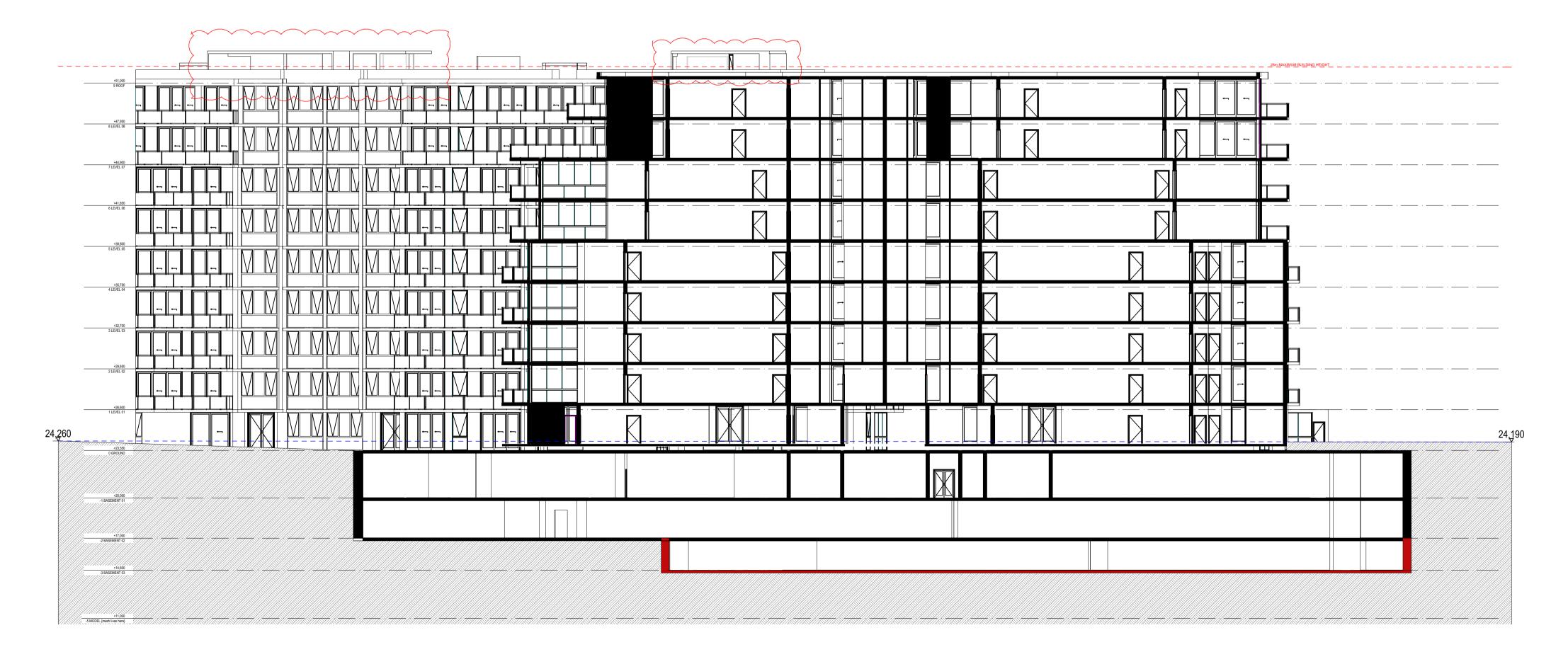
DO NOT SCALE DRAWINGS.







SECTION B - BUILDING B **SCALE 1:200**



SECTION A - BUILDING A

SCALE 1:200

A SECTION 4.55 Rev Description

25/06/2019 JK Date App'd

86 Centenary Drive Strathfield RESIDENTIAL FLAT BUILDING

SECTION 4.55 APPLICATION

Postal Address: PO BOX 2223 Burwood North NSW 2134
Phone Number: +61 29745 2014
Nominated Architects:
Ziad Boumelhem Reg no 8008
Youssef El Khawaja Reg no 8933
Nicolas Toubia Reg no 9336

Drawing Title
SECTIONS

SECTIONS Date of Issue Checked Approved

26/06/2019 Scale 1:200 @A1 Sheet Size

Drawing Number Revision

Project Number #Project ID

S4.55 APPLICATION



CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK OR PREPARING SHOP DRAWINGS.

DO NOT SCALE DRAWINGS.

Drawing Number Revision

A2003

Project Number

#Project ID

S4.55 APPLICATION

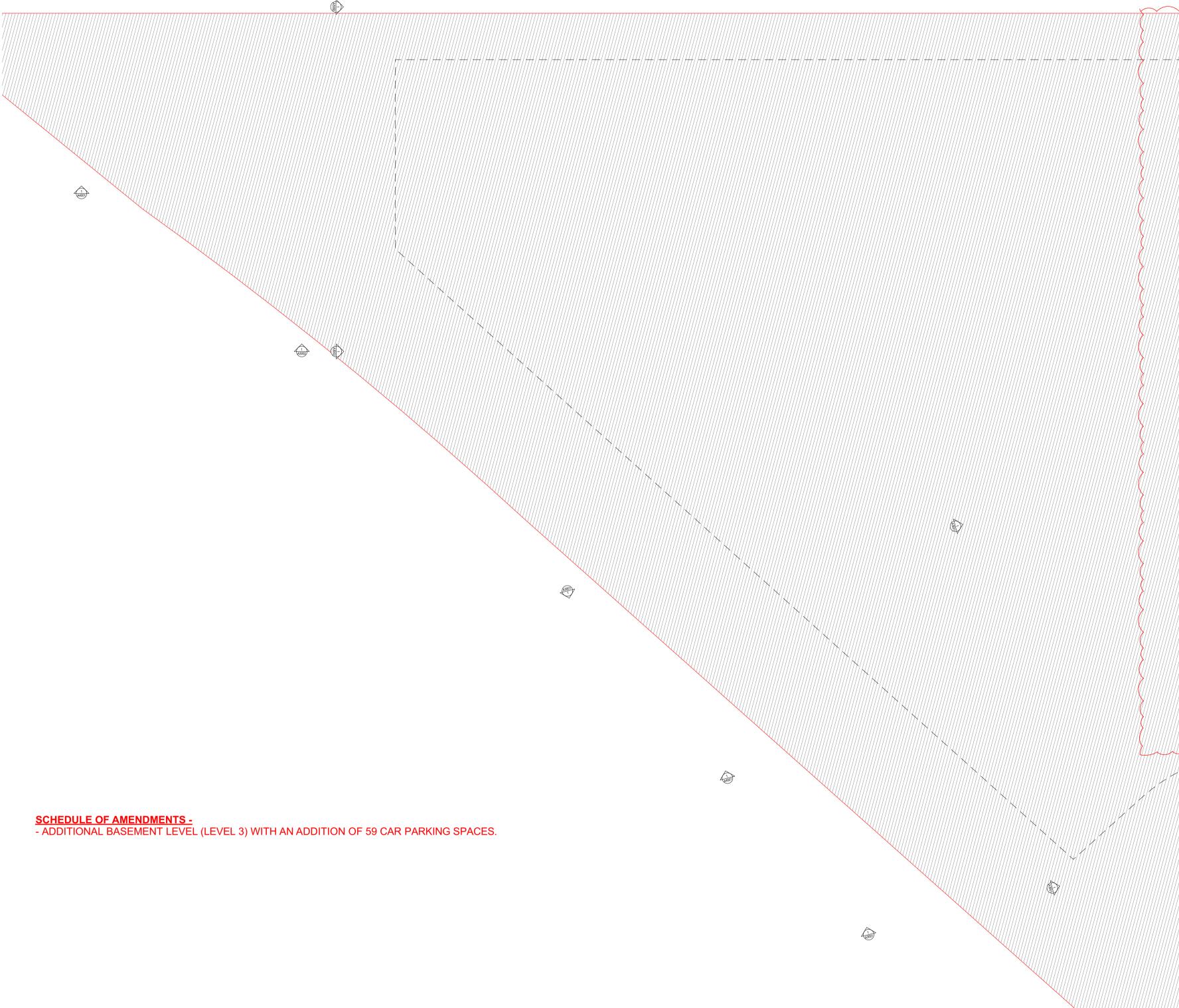
A3002 //4m/// STAGE 2 OSD TANK AREA 108 parking places RL. 20.00 TOTAL **PARKING SPACES**: 334 TOTAL **STORAGE UNITS** = 203 \langle LINE OF BUILDING ABOVE B1 PARKING PER LVL = 116CPS (EXCLUDING CAR WASH BAY x1) (36 VISITOR SPACES) RL. 20.00 RL. 20.00 116 parking places STORAGE UNITS = 92 \langle A4001 A *ADD ISSUE DESCRIPTION HERE <u>SCHEDULE OF AMENDMENTS -</u>
- STORAGE UNITS SHOWN ON PLANS (B1 + B2) A SECTION 4.55 25/06/2019 JK Rev Description Date App'd 86 Centenary Drive Strathfield A3001 RESIDENTIAL FLAT BUILDING **SECTION 4.55** APPLICATION Postal Address: PO BOX 2223 Burwood North NSW 2134
Phone Number: +61 29745 2014
Nominated Architects:
Ziad Boumelhem Reg no 8008
Youssef El Khawaja Reg no 8933
Nicolas Toubia Reg no 9336 Drawing Title
FLOOR PLANS BASEMENT 01 Date of Issue Checked 26/06/2019 XX Scale
1:200
@A1 Sheet Size

NOTES
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE
COMMENCING WORK OR PREPARING SHOP DRAWINGS.
DO NOT SCALE DRAWINGS.

A3002



SECTION 4.55 86 Centenary Drive, Strathfield



SCHEDULE OF CHANGES:

Copyright URBAN LINK PTY LTD ©

Notes
CONTRACTOR MUST VERIFY ALL DIMENSIONS ON SITE BEFORE
COMMENCING WORK OR PREPARING SHOP DRAWINGS.
DO NOT SCALE DRAWINGS.

S4.55 APPLICATION

THE ARCHITECTURAL DRAWINGS SHOW THE PROPOSED MODIFICATION TO THE LATEST APPROVED PLANS FOR 86 CENTENARY DRIVE, HOMEBUSH. THE CHANGES INCLUDE THE FOLLOWING:

- ADDITIONAL BASEMENT LEVEL
- ADDITIONAL 3 PRIVATE OPEN SPACES TO THE ROOF OF BUILDING B.
- CHANGES TO BALCONY SIZES

