

11 March 2021

Frasers Property Australia
Level 2, 1C Homebush Bay Drive
Rhodes NSW 2138

info@asongroup.com.au
+61 2 9083 6601
Suite 5.02, Level 5, 1 Castlereagh Street
Sydney NSW 2000
www.asongroup.com.au

Attention: Robert Cauchi

Transport Statement for a Section 4.55 Application (SSD8903)

Dear Robert,

Ason Group has been commissioned by Frasers Property Australia to prepare a Transport Statement (TS) in support of Section 4.55 Application (S4.55) for Stage 1 of the Ivanhoe Estate development, specifically, amendments to the apartment mix associated with Building C1 (the Proposal) at Macquarie Park (the Site). This TS provides an assessment of the access, traffic and parking implications of the Proposal, which provides for:

- Residential (Market)
 - 41 x 1-bedroom apartments
 - 51 x 2-bedroom apartments
 - 11 x 3-bedroom apartments
 - 4 x 3-bedroom apartments
- Residential (Social Housing)
 - 42 x studio apartments
 - 118 x 1-bedroom apartments
 - 99 x 2-bedroom apartments
 - 0 x 3-bedroom apartments
- Residential (Affordable Housing)
 - 54 x studio apartments
 - 39 x 1-bedroom apartments
 - 36 x 2-bedroom apartments
 - 1 x 3-bedroom apartments
- 375 car parking spaces;
- Loading facility; and

- Community facility, gym / pool for residents, and car share facility.

The Site lies within the Ryde City Council (Council) Local Government Area (LGA), and as such key reference documents for the assessment include:

- Ryde Development Control Plan 2014 (DCP 2014);
- Ryde Local Environmental Plan 2014 (LEP 2014);
- Ason Group Traffic Impact Assessment – Ivanhoe Estate, Macquarie Park – Stage 1 (P0555r01v07); and
- Ason Group Traffic Impact Assessment – Ivanhoe Estate, Macquarie Park – Masterplan (0421r02v07).

This TS also references general access, traffic and parking guidelines, including:

- Australian Standard 2890.1:2004 Parking Facilities – Off-Street Car Parking (AS2890.1);
- Australian Standard 2890.2:2018 Parking Facilities – Off-Street Commercial Vehicle Facilities (AS2890.2);
- Australian Standard 2890.3:2015 Parking Facilities – Bicycle Parking (AS2890.3); and
- Australian Standard 2890.6:2009 Parking Facilities – Off-Street Parking for People with Disabilities (AS2890.6).

Background and The Proposal

The concept proposal (SSD-8707) and Stage 1 (SSD-8903) approval for Ivanhoe Estate, lodged by NSW Land and Housing Commission were approved by the Minister for Planning and Public Spaces on 30 April 2020.

The approved concept proposal (SSD-8707) includes:

- 3,300 new homes, including 950 for social housing, 128 affordable housing, and 273 seniors living homes
- 2.8 hectares of open space including new parks, a skatepark and playground
- A new primary school and two childcare centres
- A town plaza, new shops cafes and restaurants
- A new road connecting Herring Road with Lyonpark Road, including a new bridge over Shrimptons Creek
- 50 car share parking spaces within the overran Ivanhoe Estate Development.

The approved Stage 1 works (SSD-8903) consists of:

- Site preparation works, including tree removal and earthworks across the entire Ivanhoe Estate

- The provision and augmentation of utilities and services infrastructure across the entire Ivanhoe Estate
- The construction of the internal road network
- The consolidation of the existing lots and subdivision of the Ivanhoe Estate to reflect the revised road layout, open space, and provide superblocks corresponding to the master plan
- The construction and use of Buildings A1 and C1 in the norther western corner of the Ivanhoe Estate, comprising:
 - Building A1 with 269 apartments, 233 car parking spaces and a childcare centre
 - Building C1 with 471 apartments and 346 car parking spaces
 - Of the 740 apartments, 259 apartments were social dwellings.

Specifically, the following SSD-8903 conditions are relevant to this S4.55 assessment:

Number of Car Parking Spaces

B77. A maximum of 208 residential car parking spaces and 13 visitor car parking spaces and a minimum of 12 childcare centre car parking spaces are to be provided for Building A1. Details demonstrating compliance must be submitted to the Certifier prior to the issue of the relevant Crown Building Works Certificate.

B78. A maximum of 328 residential car parking spaces, 15 visitor car parking spaces and three staff car parking spaces are to be provided for Building C1. Details demonstrating compliance must be submitted to the Certifier prior to the issue of the relevant Crown Building Works Certificate.

B79. A minimum of 12 car share spaces must be provided within the site in association with Stage 1.

Number of Bicycle Parking Spaces

B81. The minimum number of bicycle parking spaces to be provided for the development shall comply with the table below. Details confirming the bicycle parking numbers must be submitted to the Certifier prior to the issue of the relevant Crown Building Works Certificate.

Approval is now sought to modify the existing consent with the key changes that are relevant to this assessment:

- Change of the Stage 1 approved land use mix / apartment type and yield from within the Concept Approval due to the acceleration of delivering the affordable housing requirement of the development into the C1 building;
- Increase in total number of dwellings from 740 to a total of 765 dwellings, comprising 376 market apartments, 259 social housing, and 130 affordable apartments;
- Parking for 2,000 square metres of Retail / Community Use
- A total of 375 car parking spaces, comprising:

- 325 parking spaces for residential parking (including 17 visitor spaces) and remaining parking for community uses, and car share.
- Bicycle parking provision of 1 per dwelling (market, social, affordable) and visitor bicycle parking at a rate of 5% of dwelling yield.

Figure 1 and **Figure 2** provide Site plans of the Ground Floor and First Floor respectively, including the general layout of the tenancies and associated traffic circulation, loading and parking areas.

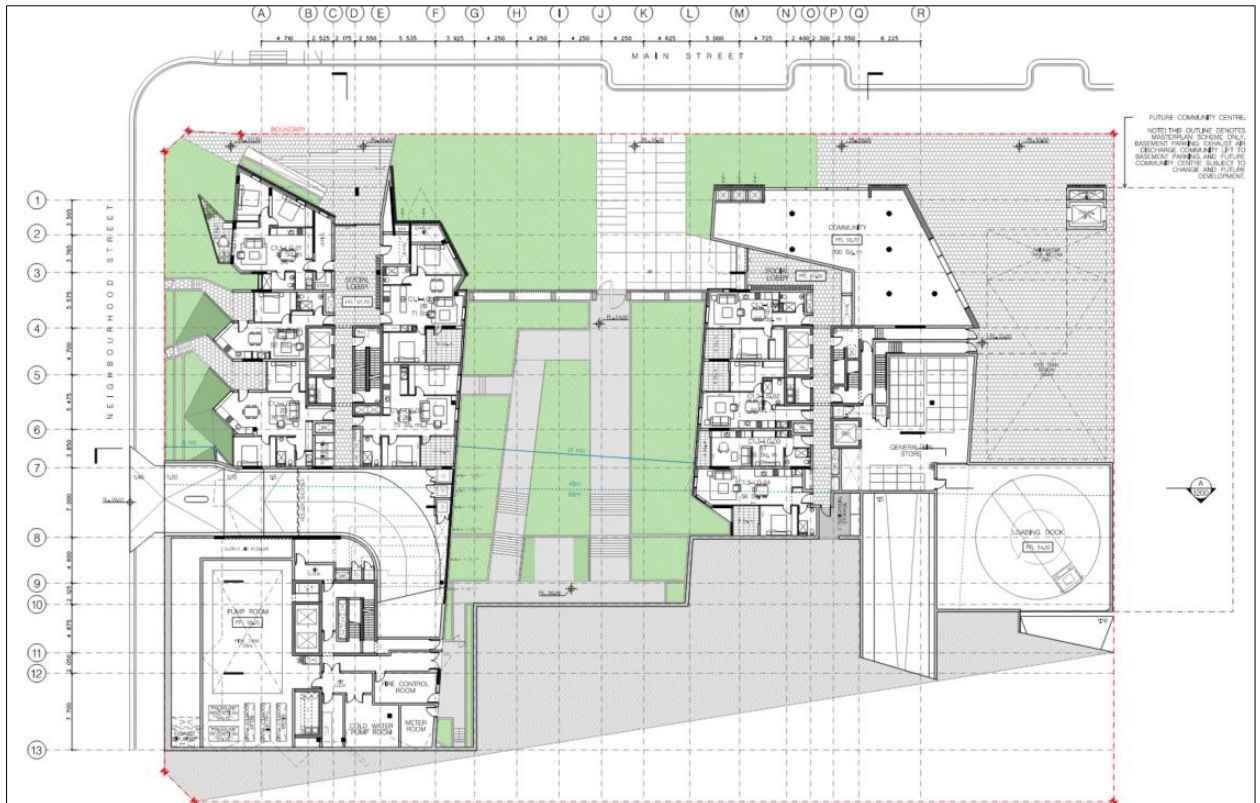


Figure 1: Proposal Site Plan – Lower Ground Floor



Figure 2: Proposal Site Plan – Upper Ground Floor

Table 1 (Building A1) and Table 2 (Building C1) provides a comparison between the approved development yield and the Proposal with respect to apartment yield and land use mix. For completeness of the assessment, we have included Building A1 in the mix.

Table 1: Site Land Use GFA Breakdown – Building A1 – No Change

Land Use	Approved Yield	Proposed Yield	Difference in Yield
Residential (Market) – Building A1			
Studio	7	7	-
1 Bed	111	111	-
2 Bed	141	141	-
3 Bed	10	10	-
4 Bed	-	-	-
Child Care Centre	75 Children	75 Children	-

Table 2: Site Land Use GFA Breakdown – Building C1 – Yield Modified

Land Use	Approved Yield	Proposed Yield	Difference in Yield
Residential (Market) – Building C1			
Studio	14	0	-14
1 Bed	61	41	-20
2 Bed	119	51	-68
3 Bed	14	11	-3
4 Bed	4	4	-
Residential (Social) – Building C1			
Studio	42	42	-
1 Bed	118	118	-
2 Bed	99	99	-
3 Bed	0	0	-
Residential (Affordable)			
Studio	0	54	+54
1 Bed	0	39	+39
2 Bed	0	36	+36
3 Bed	0	1	+1
Retail / Community	244m ²	200m ²	-44m ²
Total Yield Difference			Decrease of 105 Market Apartments Increase of 130 Affordable Apartments Net increase of 20 Apartments (Affordable) Reduction of 44m² GFA in community use

Car Parking Assessment

Parking Requirements

Parking for the Proposal has been provided in accordance with the parking rate established in the and is summarised in **Table 3**.

Table 3: Proposal Car Parking Requirements – C1 only

Land Use	Yield	Parking Rate – as per approved rate of parking provision SSD-8903	Maximum Parking Requirement	Parking Provided
Residential (Market) – Building C1				
Studio	0	0 spaces per dwelling	0	0
1 Bed	41	0.6 spaces per dwelling	25	25
2 Bed	51	0.9 spaces per dwelling	46	46
3 Bed	11	1.4 spaces per dwelling	15	15
4 Bed	4	1.4 spaces per dwelling	6	6
Visitor	107	1 space per 20 units	5	6
Residential (Social) – Building C1				
Studio	42	0	0	0
1 Bed	118	0.6 spaces per dwelling	71	71
2 Bed	99	0.9 spaces per dwelling	89	89
3 Bed	0	1.4 spaces per dwelling	0	0
Visitor	259	1 space per 65 units	4	4
Residential (Affordable)				
Studio	54	0	0	0
1 Bed	39	0.6 spaces per dwelling	23	23
2 Bed	36	0.9 spaces per dwelling	32	32

3 Bed	1	1.4 spaces per dwelling	1	1
Visitor	130	1 space per 20 units	6	7
Community Use	2000m ² ¹	1 space / 100m ²	20	20
Car Share		1 space per 100 parking spaces and minimum of 50 spaces for overall Development ²	Minimum 4 Maximum 50	30
Total			394	375

It is noted that the Affordable Housing and Housing for Seniors or People with a Disability SEPPs permit parking for the social housing at a minimum rate of 0.5 spaces per dwelling. On this basis, the parking proposed for the social dwellings is consistent with the requirements of the SEPP.

With reference to **Table 3**, the proposed car parking provision maintains the same rate of provision as approved in SSD-8903 for the dwelling component of the Stage 1 development. In addition, the proposal seeks the provision of car share in advance of future stages of the overall Ivanhoe Estate Development which formed part of the Concept Plan Approval (SSD-8707), and as such the Proposal is supportable in regard to parking provision.

Additional Parking Considerations

Motorcycle Parking

There is no requirement for the provision of motorcycle parking spaces established in either SSD-8707 or SSD-8903.

The Proposal will provide a total of 8 motorcycle parking spaces and considered supportable.

Bicycle Parking

Condition B81 of the SSD-8903 requires that bicycle parking be provided at a rate of 1 bicycle space per dwelling, with visitor bicycle parking spaces provided at a rate of 5% of the number of dwellings. Application of this rate to the 496 dwellings results in a requirement for 496 resident bicycle spaces plus 25 visitor bicycle parking spaces.

The Proposal will provide a total of 521 bicycle parking spaces and therefore compliance with the level of bicycle parking provision consistent with the rate of provision established in Condition B81 of SSD-8903.

Accessible Parking

¹ Subject to future DA for additional 1800m² of community use.

² As per Condition A18(k) of SSD-8707

Condition B73 requires that a minimum of 5% of dwellings be designed as Adaptable Dwellings.

The Proposal will provide a total of 14 accessible parking spaces.

Service Vehicles

No change is proposed to the loading arrangement proposed when compared to the approved development SSD-8903.

Traffic Generation

The forecast traffic generation of the Proposal references RMS Guide Update trip rates; **Table 3** provides a comparison of the approved traffic generation and proposed traffic generation of the Site further to the Proposal.

Table 4: Approved vs Proposed Traffic Generation

	Land Use	Yield	AM Peak		PM Peak	
			Trip Rate	Trips/hr	Trip Rate	Trips/hr
Approved	Market Dwellings	481	0.14 per unit	68	0.12 per unit	57
Approved	Social Dwellings	259	0.03 per unit	8	0.05 per unit	13
Approved	Child Care	75 Children	0.1 per child + 6 Staff	14	0.1 per child + 6 Staff	14
Approved	Ancillary Retail	525m ²	1 per 100m ²	5	1 per 100m ²	5
Approved	Total Trip Generation			95		89
Proposed	Market Dwellings	376	0.14 per unit	53	0.12 per unit	45
Proposed	Social Dwellings	259	0.03 per unit	8	0.05 per unit	13
Proposed	Affordable Units	130	0.12 per unit	16	0.10 per unit	13
Proposed	Community Use / Ancillary Retail	2,000m ²	1 per 100m ²	20	1 per 100m ²	20
Proposed	Child Care	75 Children	0.1 per child + 6 Staff	14	0.1 per child + 6 Staff	14
Proposed	Total Trip Generation			111		105
	Difference in Trip Generation			+16		+16

As shown in **Table 4**, the assessment forecasts that the Proposal would generate 16 trips more than the approved scheme in the respective AM and PM peak hours when compared to the approved development, which is a minor increase to the Stage 1 development and as such is supportable on traffic generation grounds.

Design Commentary

A comprehensive technical assessment of the revised Site plans indicates that the internal car parking layout, aisle roadways and loading are designed in accordance with the following relevant Australian Standards:

- AS2890.1:2004 for car parking areas;
- AS2890.2:2018 for loading areas; and
- AS2890.6:2009 for accessible (disabled) parking.

Based on the technical analysis, the following features of the proposed car parking areas are considered noteworthy:

- All resident parking spaces are provided in accordance with AS2890.1 for a Class 1A user, which requires a minimum space length of 5.4m, a minimum width of 2.4m and a minimum aisle width of 5.8m;
- The access ramp has been checked and are designed in accordance with AS2890.1;
- The loading space has been designed in accordance with AS2890.2 for a Medium Rigid Vehicle. The turntable has been afforded 500mm clearance in accordance with AS2890.2;
- All accessible parking spaces are provided in accordance with AS2890.6, which requires a space with a minimum space length of 5.4m, a clear width of 2.4m and located adjacent to a shared area of 5.4m long by 2.4m wide, with a bollard and hatch marking as required by AS2890.6; and
- All spaces located adjacent to obstructions greater than 150mm in height (including landscaping items) are provided with an additional width of 300mm.

The results of this analysis, which are presented on plans attached as **Attachment 1**, indicate that all necessary vehicular manoeuvres can be accommodated under the Proposal.

It is expected that any detailed construction drawings in relation to any modified areas of the car park or Site access would comply with these Standards. Furthermore, compliance with the above Standards already form the requirements of Conditions B77 and B78 of SSD-8903.

Conclusions

Further to a detailed assessment of the Proposal, Ason Group has concluded that:

- The car, motorcycle and accessible parking provided on-site are consistent with the Conditions of SSD-8903.
- The Proposal would generate an additional 16 vehicle trips for each of the AM and PM peak in comparison to the approved traffic generation.

- The proposed changes to the internal Site design will provide compliance with all relevant Australian Standards.

As such, Ason Group has determined that the Proposal is supportable on access, traffic and parking grounds.

We trust the above is of assistance. If you have any questions or should you wish to discuss further, please feel free to contact the undersigned.

Yours sincerely,



Principal Lead – Traffic Management & Operations – Ason Group

Email: dora.choi@asongroup.com.au

Attachment(s): 1) Swept Path Analysis

Attachment 1