

Traffic Impact Assessment

Montefiore Aged Care Facility 30-36 Dangar Street, Randwick Project Approval Modification – Building D

Reference: 15.216r03v04 - November 2016





Document Verification

Job Number	15.061			
Project	Montefiore Aged Care Facility - 30-36 Dangar Street, Randwick			
Client	Sir Moses Mor	Sir Moses Montefiore Jewish Home		
Revision	Date	Prepared by	Approved by	Signature
15.216r03v01 - Montefiore Building D DA - DRAFT	04/10/2016	НВ	GH	W M
15.216r03v02 - Montefiore Building D DA	26/10/2016	НВ	GH	MM
15.216r03v03 - Montefiore (Building D) DA	08/11/2016	НВ	GH	W Kg
15.216r03v04 - Montefiore (Building D) DA	09/11/2016	НВ	GH	Wy





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1. Introduction

TRAFFIX has been instructed by Jackson Teece on behalf of Sir Moses Montefiore Jewish Home to undertake a traffic impact assessment in support of a Project Approval Modification (PAM) to Project Application MP10_0044 to enable an addition to an existing aged care facility at 30-36 Dangar Street, Randwick.

The PAM relates to Building D of the proposed development, part of the overall Concept Plan Modification approved by the Department of Planning and Environment on 15 June 2016 (MP09_0188). This approved scheme incorporated the following development on the subject site:

- an addition of 104 independent living units;
- an addition of 117 aged care beds to the site (a total of 393); and
- an auxiliary retail component of 350m².

The development is located within Randwick Council LGA and has been assessed under that council's controls and the prevailing State Environmental Planning Policy (SEPP). This report documents the findings of our investigations and should be read in the context of the statement of environmental effects prepared separately and the TRAFFIX Traffic Impact Assessment report accompanying the Masterplan proposal (ref 15.216r01v03 – October 2015).

The report is structured as follows:

- Section 2: Describes the site and its location
- Section 3: Documents existing traffic conditions
- Section 4: Describes the proposed development
- Section 5: Assesses the parking requirements
- Section 6: Assesses traffic impacts
- Section 7: Discusses access and internal design aspects
- Section 8: Outlines the requirements of the Construction Traffic Management Plan
- Section 9: Presents the overall study conclusions.



2. Location and Site

The site is situated on the corner of Dangar Street and King Street and lies within the sector bounded by Darley Road to the north and west and King Street and Dangar Street to the south and east respectively. The site is located 300m to the south of Centennial Park and approximately 5 kilometres south east of the Sydney CBD.

The site has a total area of approximately 30,000m² with an eastern frontage of approximately 160 metres to Dangar Street, a northern boundary of 180 metres to Govett Lane, a western boundary of 160m to an adjacent residential property and a southern boundary of 180m to King Street.

There are five access driveways serving the facility. These are located as follows:

- A 4.25 metre wide driveway providing entry only from Dangar Street;
- A pair of access driveways 6 metres wide providing access to a porte-cochere for pick up and set down to the Aged Care Centre on King Street;
- An 4 metre wide entry and a 4 metre wide exit driveway to King Street separated by a 1 metre median; and
- A 6 metre wide combined entry exit driveway to the childcare facility located on site.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**. Reference should also be made to the Photographic Record presented in **Appendix A**, which provides an appreciation of the general character of roads and other key attributes in proximity to the site.



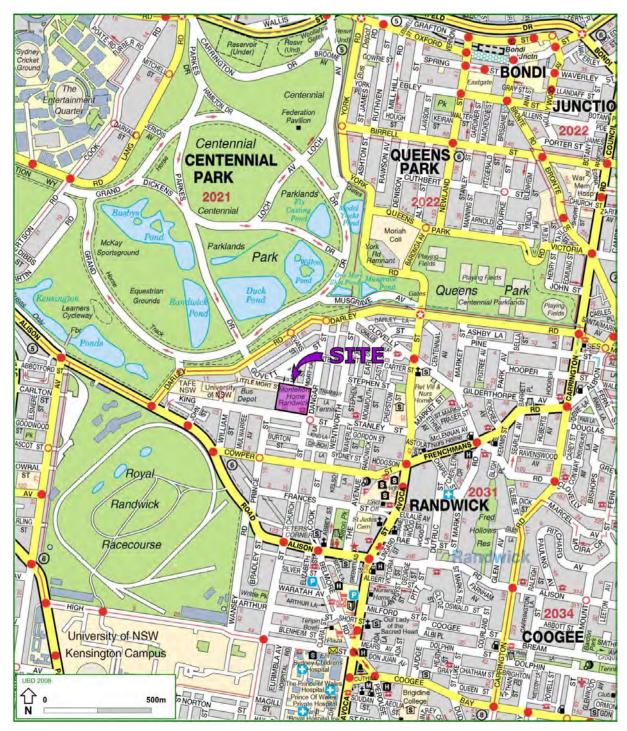


Figure 1: Location Plan

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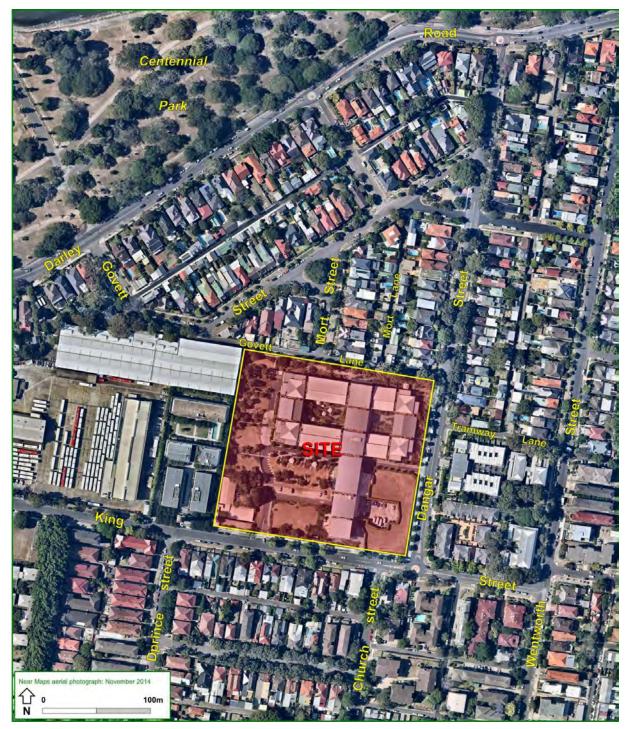


Figure 2: Site Plan



3. Existing Traffic Conditions

3.1 Road Network

The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- Alison Road: a sub arterial road (MR327) that lies to the south west of the site and traverses a north-south direction, commencing at Avoca Street to the south and terminating at Anzac Parade to the north. It has six lanes accommodating two way flow over a 19 metre carriageway separated by a median with parking restrictions during peak hours and a 60km/h speed restriction.
- King Street: a local road running in an east west direction commencing at Alison Road to the west and terminating at Wentworth Street to the east. It carries two way flow on a carriageway of 12.5 metres, with one lane in either direction, a 50km/h speed restriction and parking permitted on street.
- Dangar Street: a local road that runs in a north south direction connecting from Darley Road in the north and terminating at King Street in the south. It carries two way flow on a carriageway of 12.5 metres, with one lane in either direction, a 50km/h speed restriction and parking permitted on street.
- Darley Road: a local collector road that runs in an east west direction commencing at Alison Road in the west and terminating at Carrington Road in the east. It carries two way flow on a carriageway of 12.5 metres, with one lane in either direction, a 60km/h speed restriction and parking permitted on street.

It can be seen from **Figure 3** that the site is conveniently located with respect to the arterial and local road systems serving the region. It is therefore able to effectively distribute traffic onto the wider road network via a number of possible routes, minimising traffic impacts on any single intersection.



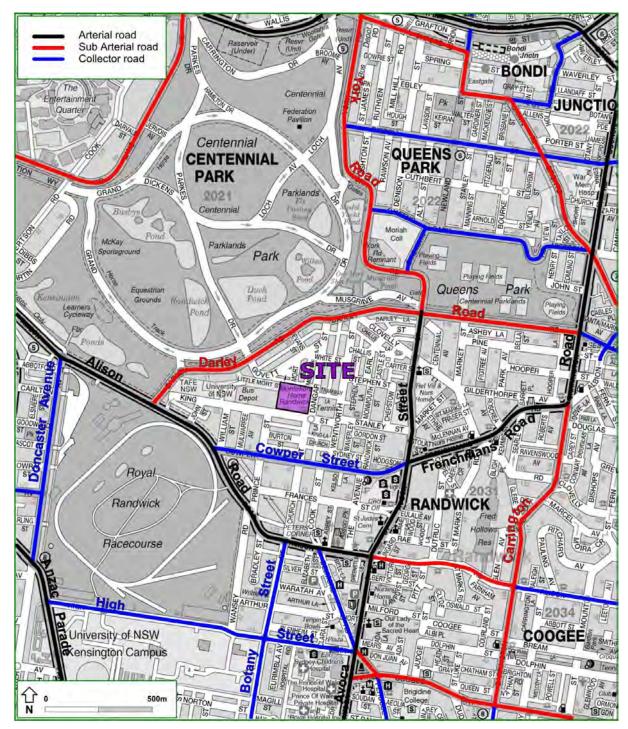


Figure 3: Road Hierarchy



3.2 Public Transport

The existing bus services that operate in the locality are shown in **Figure 5**. It is evident that the site has excellent connectivity to public transport being served by numerous bus services providing connections to the City, Bondi Junction, Randwick and Eastgardens.

Routes servicing the area include:

- 339 Clovelly to City;
- 372 & 373 Coogee to City via Randwick;
- 374 Coogee to City via Bream Street;
- 2 376 & 377 Maroubra Beach to City vis Randwick; and
- 400 & 410 Burwood to Bondi Junction

In addition, the proposed Randwick branch of the Sydney to South East light rail network can be seen in **Figure 6**. A station is planned for the new line, 750 metres to the west of site at the corner of Alison Road and Darley Road, known as 'Royal Randwick Racecourse'.

When completed in 2020 this rail line will provide frequent and reliable connections to Sydney CBD, University of NSW and Prince of Wales Hospital, further reducing the need for private vehicle use in this precinct.



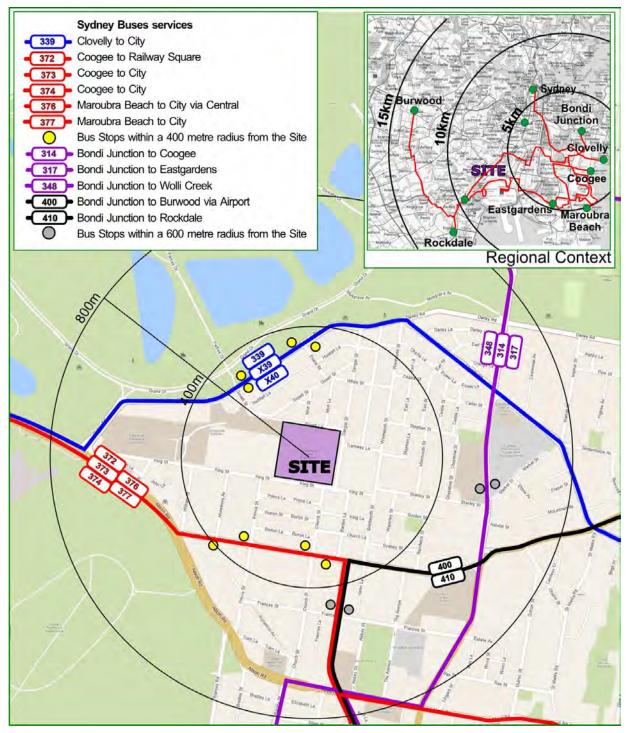


Figure 5: Existing Public Transport





Figure 6: Proposed Light Rail Network



4. Description of Proposed Development

The proposed development known as 'Building D' within the approved Concept Plan provides residential care beds, retail space and associated parking. A detailed description of the proposed development is provided in the PAM. In summary, **Table 1** shows the comparison between the approved concept and the modified 'Building D' proposal.

Туре	Approved Concept Design	Approved Concept Design in Building D	Proposed Modification in Building D
Residential Care	393 Beds	82 Beds	87 beds
Residential Care	(276 Beds Existing)	oz Deus	(additional +5 beds)
Independent Living Units	104 Units	N/A	N/A
Child Care	40 children	N/A	N/A
Auxiliary Retail	350m ²	350m ²	350m ²
Auxiliary Retail		(i.e. No Change)	(i.e. No Change)

Table 1: Approved Concept Plan and Proposed Scheme

The additional 5 beds shown in **Table 1** comprise an additional nine rooms to the existing Building C and a reduction of four rooms to the concept design for Building D, accounting for the net increase of 5 beds in this proposed modification over the approved concept design.

In addition the following parking provision is proposed under this Proposed Modification Approval:

- 28 car parking spaces in Block D
- 6 car parking spaces in Block C
- The retention of at grade parking for 26 spaces to the west of Building C

The traffic and parking impacts arising from the proposed development are discussed in **Sections 5** and **6**. Reference should be made to the conceptual plans which are presented at reduced scale in **Appendix B**.



5. Parking Requirements

5.1 Council Controls

Randwick Council DCP 2013 (specifically Section B7 - Table 1), specifies the parking rates required for a residential care facility. The DCP requires parking at a rate of 1 space per 2 staff, including 1 space suitable for an ambulance in addition to 1 space for each 10 beds or 1 space per 15 beds if the facility includes care for persons with dementia.

The care facility at Montefiore cares for patients with dementia and as such the latter rate may apply, however in order to ensure enough capacity for all components of the facility the rate of 1 space per 10 beds has been applied.

For a retail component the DCP requires 1 space per 40m². These parking requirements have been summarised in **Table 2**.

Туре	Number	Minimum Parking Rates	Spaces Required
Residential Care	87 Beds 40 peak staff	1 space per 2 staff and 1 space per 10 beds	29
Retail	350m ²	1 space per 40m ²	9
		Totals	34

Table 2: DCP/SEPP Parking Rates

It can be seen from **Table 2** that the application of the Council DCP rates to the subject development gives a requirement of an additional 34 car spaces on site.

In response, Building D development proposes an additional 34 car spaces on site, 28 spaces in the under croft parking under Building D, with a further six spaces on site under Building C to the west.

20 of the proposed spaces have been assigned to staff parking with 18 spaces reserved for retail and residential care visitors. This provision meets the requirements of the DCP for this stage.

In addition, it is noteworthy that the existing site contains 111 spaces within the basement parking of the existing Buildings A & B in addition to a loading zone with a further 26 informal parking spaces located on site to the west of Building C.



As such, the proposed addition of 34 spaces shall cater for the requirements of the building D development and is considered acceptable.

5.2 Accessible Parking

The development proposes two (2) spaces that meet the requirements of an accessible space under Australian Standards AS2890.6. This provision represents approximately 6% of the total provision, meeting the requirements of the DCP and the Building Code of Australia.

5.3 Servicing

As referenced in **Section 5.1** the development is served by an existing loading dock located in Building A. The approved concept plan utilised the existing loading dock to service the expanded development to cater for deliveries up to and including an 8.8m Medium Rigid Vehicle as the design vehicle. This arrangement is to continue under the subject proposal, with the existing loading dock servicing needs of the expanded aged care facility for this design vehicle.

In addition, a smaller Building D loading bay has also been included within the proposed Building D carpark to allow for deliveries internal to the site for vans or utility vehicles up to a B99 design vehicle size.

Garbage collection for the centre is to continue to be undertaken by private contractor, with garbage collection occurring in the existing loading dock within Building A.



6. Traffic Impacts

6.1 Trip Generation

During the assessment for the concept masterplan the impact on the local network of the trip generation relating to the full master plan was assessed.

This assessment incorporated the following proposed components:

Туре	Approved Number
Residential Care	117 Beds
Auxiliary Retail	350m ²
Independent Living Units	104 units

Table 3: Concept Masterplan

As the proposed PAM that is the subject of this report incorporates only 87 beds and 350m² of associated retail it is considered that the Building D proposal will generate fewer traffic movements than that which was assessed during the development of the full concept masterplan.

As such the traffic impacts of the subject proposal can be considered acceptable, as was concluded during the masterplan assessment process.



7. Access & Internal Design Aspects

7.1 Access

The Building D proposal maintains the existing access arrangements as set out in **Section 2**. The proposed parking associated with the expanded Building D is accessed by a combination of a 'Category 2' driveway on King Street (provided here as a 4m entry lane and a 4m exit lane separated by a 1m median) and a 'Category 1' driveway on Danger Street (provided as a 4.25m entry lane). This provision meets the requirements of AS2890.1 for up to 400 parking spaces and shall service the parking arrangements satisfactorily.

It is noted that the existing King Street access is to be modified during subsequent development stages to incorporate the proposed independent living units and additional set down and pick up spaces.

7.2 Internal Design

The internal car park for the proposal is to comply with the requirements of AS 2890.1 (2004) and the following characteristics are noteworthy:

7.2.1 Parking Modules

- The proposed design shows all staff parking spaces have been designed in accordance with a AS2890.1 for a Class 1A user. They are provided with a minimum space length of 5.4m a minimum width of 2.4m and a minimum aisle width of 5.8m.
- All visitor spaces have been designed in accordance with a Class 3 user, being provided with a minimum space length of 5.4m a minimum width of 2.6m and a minimum aisle width of 5.8m.
- Accessible spaces have been provided with a minimum dimension of 5.4m x 2.4m and located to an adjacent shared space of 5.4m x 2.4m in accordance with the requirements of AS2890.6.
- All spaces located adjacent to obstructions of greater than 150mm in height are provided with an additional width of 300mm.
- Ø Blind aisles are to extend a minimum of 1.0m beyond the last parking space.



7.2.2 Other Considerations

- All columns are required to be located outside of the parking space design envelope shown in Figure 5.2 of AS 2890.1 (2004).
- Appropriate visual splays are to be provided in accordance with the requirements of Figure 3.3 of AS2890.1 at all accesses.

In summary the internal configuration of the proposed car park has been designed in accordance with the requirements of AS2890.1 and AS2890.6. It is however envisaged that a condition of consent would be imposed requiring compliance with these standards and as such any minor amendments considered necessary (if any) can be dealt with prior to the release of a Construction Certificate.



8. Construction Traffic Management

It is envisaged that the current aged care facility will be fully operational during the demolition and construction phases of the proposal. A detailed Construction Traffic Management Plan (CTMP) will be prepared (and submitted to The Department of Planning and Environment separate to this Development Application) for the demolition and construction phases of the proposal in response to a suitable condition of consent.

The below commentary addresses the overall management principles for the site during these phases. It is noted that the preparation of a detailed CTMP report would require significant input from the appointed builder and would heavily rely upon the construction methodology which at this point cannot be confirmed. The proposed development would however adhere to the general CTMP principles that are provided below for information purposes:

O Truck Routes

The truck routes to and from the subject development area would arrive and depart from Allison Road via King Street, in order to utilise the arterial road network as much as possible. A copy of these routes would be provided to all drivers prior to attending the site. No trucks are to queue on street with trucks called to site once space is available in the proposed loading area (loading area location to be confirmed with the appointed contractor).

Truck Size And Volumes

Truck size and volumes will be determined by the methodology supplied by the appointed building contractor, as would the crane requirements. All vehicles entering site will enter and exit the King Street access in a forward direction to minimise disruption to local traffic and pedestrians.

Contractor parking

Contractors will be encouraged to either use public transport or ride share to / from the site.

Traffic Control Plans (If necessary)



Traffic Control Plans (TCP) will be designed in accordance with the RMS Traffic Control at Worksites Manual and AS 1742.3. The TCP's would primarily relate pedestrian control to ensure appropriate safety measures are implemented. All entry and exit movements will be monitored by certified traffic controllers.

With the above principles adhered to, it anticipated that minimal disruption will be experienced during the construction of the proposed Building D, with all truck movements to take place on the south east of site away from permanent operation buildings. A Construction Traffic Management Plan can be prepared in due course and submitted to the Department of Planning and Environment, which will also detail arrangements to separate pedestrian movements from construction activity.



9. Operational Management Plan

A revised Operational Management Plan (OMP) for the operation of the expanded site is to be prepared (and submitted to Department of Planning and Environment as a part of future Development Application) for the full operation of the completed development.

The Operational Management Plan shall build on the current Operational Plan for the existing site with the following aims notable:

- The management of the proposed pickup and drop off locations on site to encourage turnover and reduce wait times within the site;
- The management of the visitor parking provision to ensure ease of access for visitors whilst maintaining a suitable provision; and
- Addressing the operational plan for staff parking, in particular for the operation of shift changeovers, to ensure all parking demands are accommodated on site.

In this regard the operational plan shall ensure the increased parking and drop off provisions on site are fully utilised, ensuring a minimal impact on the on street parking demand in the locality.

Building D Operation

The operation of the proposed Building D expansion is to be as follows:

- The existing one way traffic entry from Danger Street is to be retained. This entry is to be used for entry to the Building D carpark for all staff, residents and visitors;
- Traffic exiting the Danger Street carpark is to exit to the west through Building C to exit via the King Street access; and
- No external deliveries are to be directed to Building D. All external deliveries are to be directed to the existing loading dock within Building A using the King Street site access.

In this regard the operation of the Building D traffic flow shall be a one way system, with traffic entering from the Danger Street entry and flowing through to the King Street exit, minimising the chance of conflicting movements on the site between vehicles or pedestrians.



10. Conclusions

In summary:

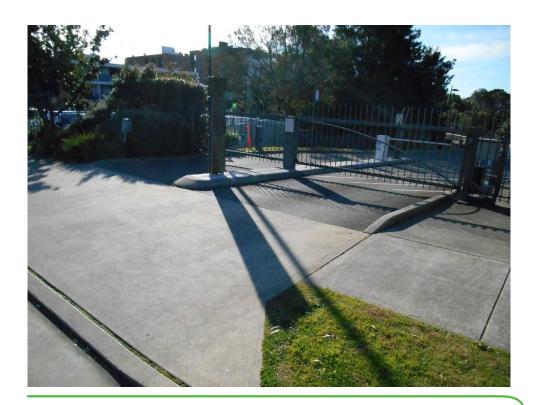
- The Project Approval Modification seeks to develop the proposed Building D in line with the approved concept plan, in order to provide residential care beds, retail space and associated parking.
- The traffic generation for the full concept masterplan was assessed as acceptable during the development of the masterplan. As such, the traffic generation of the interim arrangement proposed under this PAM can also be considered acceptable.
- The parking requirement for the PAM under Council's DCP is for an additional 34 car spaces for the site. In response a 34 spaces has been proposed on site with an appropriate mixture of staff and visitor parking.
- The PAM plans demonstrate that the access and internal design aspects will comply with AS 2890 and are considered acceptable;

It is therefore concluded that the proposed development is supportable on traffic planning grounds and will not cause a significant impact on the local traffic network.



Appendix A

Photographic Record





Montefiore existing King Street access





Montefiore existing Dangar Street access



'The Burger Centre' porte-cochere.





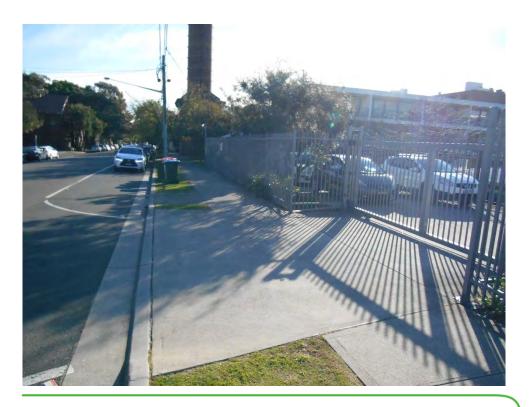


Intersection of King Street and Dangar Street



Dangar Street looking south.





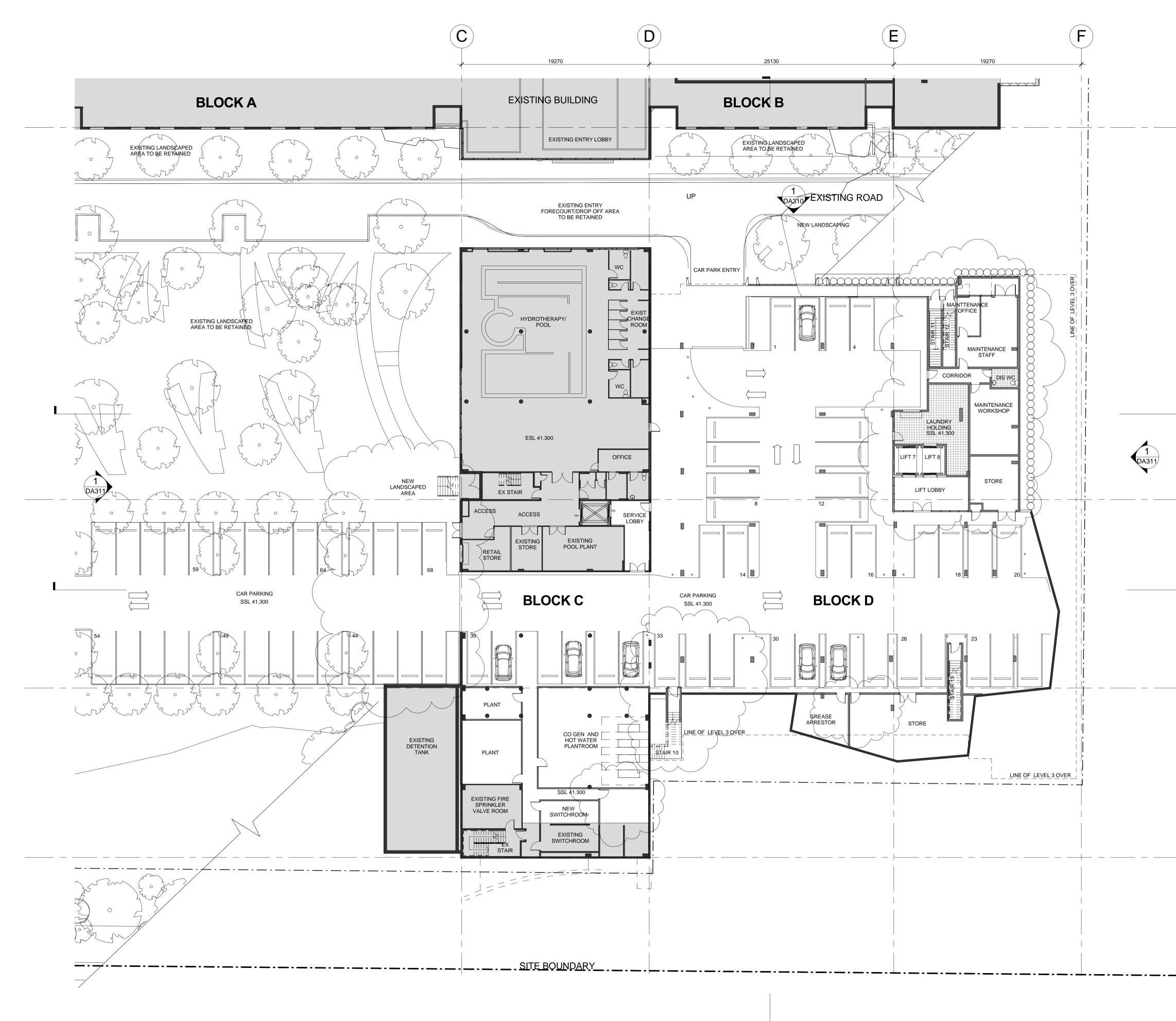


Childcare Centre existing staff parking and on street pick-up / set-down



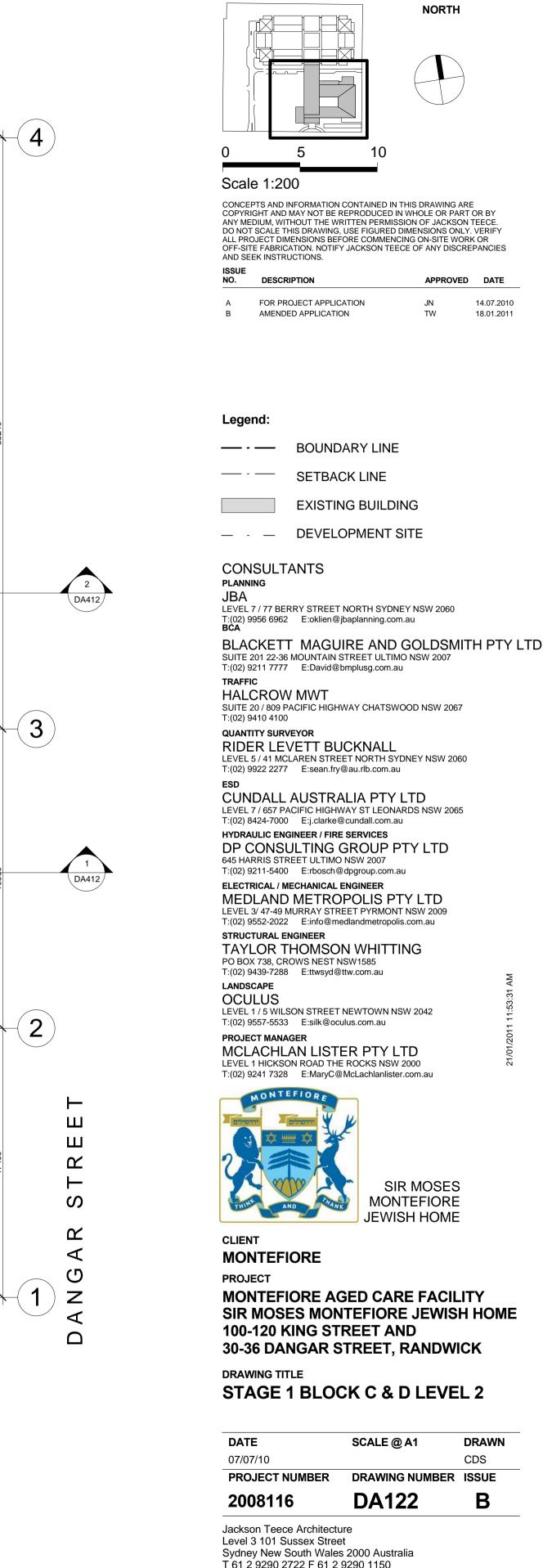
Appendix B

Reduced Plans



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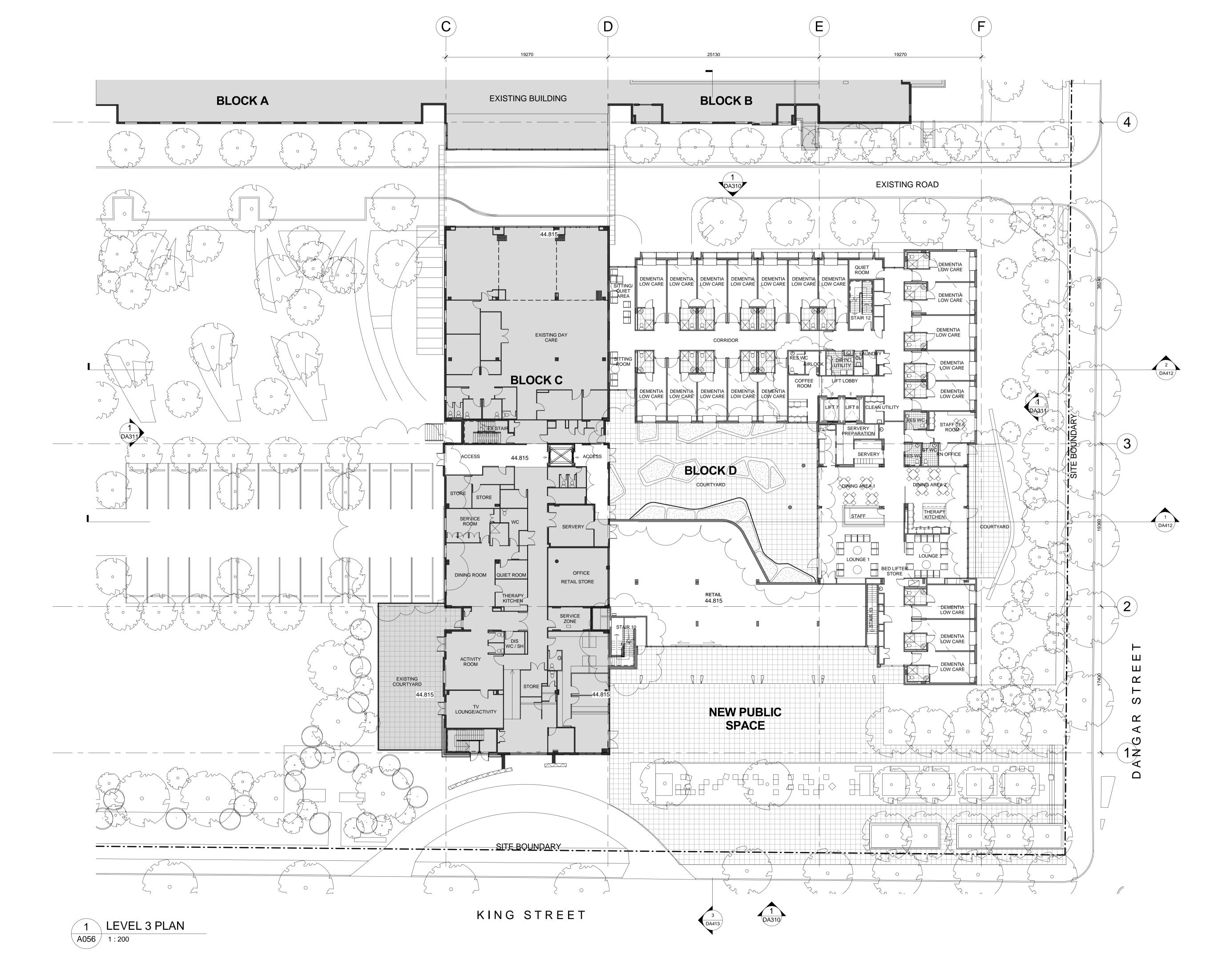
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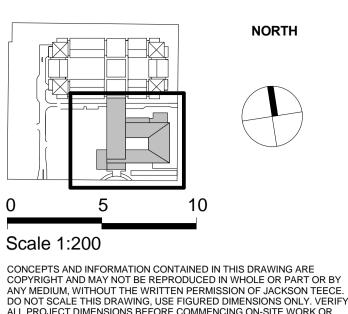
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DESCRIPTION	AFFROVED	DAIL
FOR PROJECT APPLICATION	JN	14.07.2010
AMENDED APPLICATION	TW	18.01.2011
	FOR PROJECT APPLICATION	FOR PROJECT APPLICATION JN

Legend:

<u> </u>	BOUNDARY LINE
	BOUNDARY LINE

— - — SETBACK LINE

EXISTING BUILDING

— - — DEVELOPMENT SITE

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SIR MOSES MONTEFIORE JEWISH HOME

CLIENT MONTEFIORE PROJECT MONTEFIORE AGED CARE FACILITY

SIR MOSES MONTEFIORE JEWISH HOME 100-120 KING STREET AND 30-36 DANGAR STREET, RANDWICK

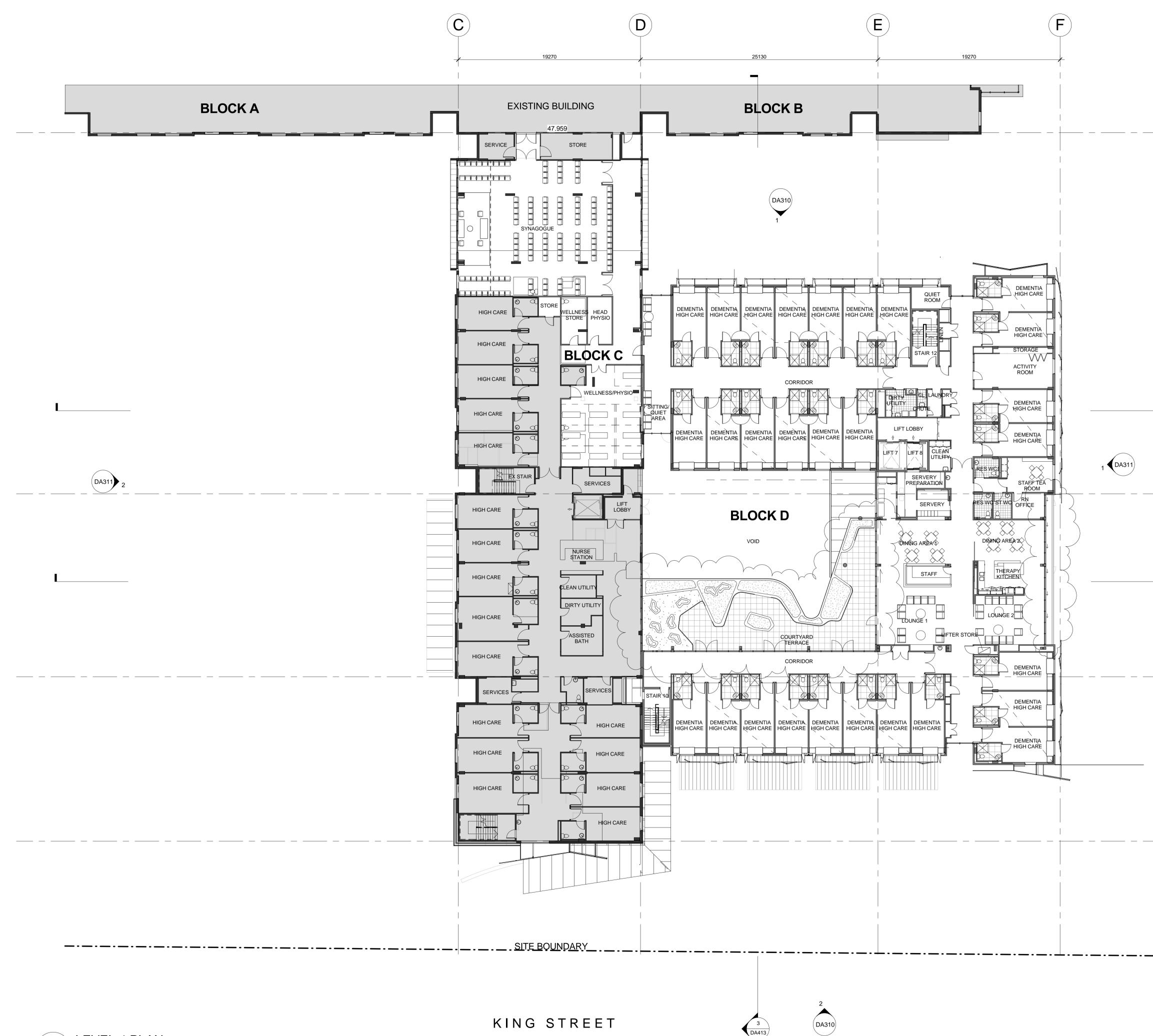
DRAWING TITLE

STAGE 1 BLOCK C & D LEVEL 3

SCALE @ A1	DRAWN
	CDS
DRAWING NUMBER	ISSUE
DA123	В
	DRAWING NUMBER

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