PART C - CITY OF SWAN

- 1. Declarations of Due Consideration
- 2. Disclosure of Interests
- 3. Form 1 DAP Applications
 - 3.1 Lots 24 & 25 (88 & 90) Great Northern Highway and Lots 22, 23 & 104 (52, 54 & 44) John Street, Midland Proposed extension to Nursing Home (Use Not Listed) DAP/25/02938
- 4. Form 2 DAP Applications

Nil

5. Section 31 SAT Reconsiderations

Nil

PART C – Item 3.1 – Various Lots Midland – Proposed extension to Nursing Home (Use Not Listed)

Form 1 – Responsible Authority Report

(Regulation 12)

DAP Name:	Metro Outer Development Assessment
DAI Nume.	Panel
Local Government Area:	City of Swan
Applicant:	Planning Solutions
Owner:	Labouchere Investments Pty Ltd & B10
	Capital Pty Ltd
Value of Development:	\$25 million
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Responsible Authority:	Local Government
Authorising Officer:	Celina da Costa
LG Reference:	DA-503/2025
DAP File No:	DAP/25/02938
Application Received Date:	17 June 2025
Report Due Date:	30 September 2025
Application Statutory Process	90 Days
Timeframe:	
Attachment(s):	
	1. Location Plan
	Accompanying Plans:
	a) Cover page – Job no. 624028,
	DA-0000, Rev C
	b) Site Survey – Jon no.624028,
	DA-1000, Rev B
	c) Demolition Plan – Job
	no.624028, DA-1001, Rev B
	d) Proposed Site Plan – Job no.
	624028, DA-1100, Rev E
	e) Overshadowing Diagrams – Job no.624028, DA-1101, Rev A
	f) Ground Floor Plan – Job no.
	624028, DA-2100, Rev F
	g) First Floor Plan – Job no.
	624028, DA-2101, Rev E
	h) Roof Plan – Job no.624028, DA-
	2102, Rev C
	i) Overall Street Elevations (John
	Street) – Job no. 624028, DA-
	3100, Rev C
	j) GA Elevations Sheet 1 – Job
	no.624028, DA-3101, Rev D
	k) GA Elevations Sheet 2 – Job
	no.624028, DA-3102, Rev D

- I) GA Courtyard Elevations Sheet 1– Job no.624028, DA-3103, RevA
- m) GA Courtyard Elevations Sheet 2– Job no. 624028, DA-3104, RevA
- n) Plant building elevations Job no. 624028, DA-3105, Rev C
- o) Fence Elevations Job no. 624028, DA-3106, Rev A
- p) GA Sections Job no.624028, DA-4100, Rev C
- 3. Materials Schedule 4 April 2025

Supplementary Information:

- 4. Design Review comments 4 March 2025
- Design Review Panel Presentation for 4 March 2025 Meeting – 25 February 2025
- Chair Design Review comments –
 22 August 2025
- 7. Development Application Report 13 June 2025
- 8. Environmental Noise Assessment 16 May 2025
- 9. Waste Management Plan 16 May 2025
- Transport Impact Statement 22
 May 2025
- Architectural Design Statement 16
 May 2025
- 12. Landscaping Report 19 September 2025
- 13. Sustainability Strategy 15 May 2025
- Stormwater Management Plan 16
 May 2025

Responsible Authority Recommendation

That the Metro Outer Development Assessment Panel resolves to:

 Accept that the DAP Application reference DAP/25/02938 is appropriate for consideration as a "Use Not Listed - Nursing Home" land use and compatible with the objectives of the zoning table in accordance with Clause 4.4.2 of the City of Swan Local Planning Scheme No. 17; 2. **Approve** DAP Application reference DAP/25/02938 and accompanying plans in accordance with Clause 68 of Schedule 2 (Deemed Provisions) of the *Planning and Development (Local Planning Schemes) Regulations 2015*, and the provisions of Clause 10.3 of the City of Swan Local Planning Scheme No. 17, subject to the following conditions:

Conditions

- 1. The approved development must comply in all respects with the attached approved plans, as dated, marked and stamped, together with any requirements and annotations detailed thereon by the City of Swan. The plans approved as part of this application form part of the development approval issued.
- 2. This approval is for a "Nursing Home" as defined in the City of Swan's Local Planning Scheme No.17 and the subject land may not be used for any other use without the prior approval of the City of Swan.
- 3. **Prior to occupation or use of the development**, arrangements must be made to the satisfaction of the City of Swan for the amalgamation of Lot 104 (No.44) John Street, Lot 22 (No.52) John Street, Lot 23 (No.54) John Street, Lot 24 (No.88) Great Northern Highway, and Lot 25 (No.90) Great Northern Highway, Midland into one (1) lot.
- 4. **Prior to occupation or use of the development**, 71 vehicle parking bays must be provided on the lot in accordance with the approved plans. The design of vehicle parking and access must comply with AS/NZ 2890.1 (as amended). Accessible parking bays must comply with AS/NZ 2890.6 (as amended).
- 5. Bicycle spaces provided on the site in accordance with the approved plans must comply with AS 2890.3:2015 (as amended) to the satisfaction of the City of Swan.
- 6. Provision must be made for access and facilities for use of people with disabilities in accordance with provisions of the Building Code of Australia and AS 1428.1 to the satisfaction of the City of Swan.
- 7. Vehicle parking, access and circulation areas must be sealed, kerbed, drained and maintained to the satisfaction of the City of Swan, in accordance with the approved plans.
- 8. **Prior to a building approval being issued**, detailed stormwater disposal plans, details and calculations showing detention on site prior to connection to council street drainage must be submitted for approval by the City of Swan and thereafter implemented, constructed and maintained on-site to the satisfaction of the City of Swan.
- 9. Suitable arrangements being made for the connection of the land to the comprehensive district drainage system at the landowner/developer's cost. The contribution amount is based on the additional site allotment area of 3923m² to the satisfaction of the City of Swan in accordance with the City of Swan Local Planning Policy POL-C-040 'Midland District Drainage Development Reserve Fund'. This fee is to contribute towards the upgrade and supply of an adequate drainage service within the area. Payment must be made prior to the issuance of a building permit.

- 10. Prior to the submission of a building permit application, an amended Environmental Acoustic Assessment shall be submitted to the City of Swan for review and approval. The amended Environmental Acoustic Assessment shall address the following matters:
 - a) The location and type of mechanical plant servicing.
- 11. Mechanical services shall be installed in accordance with the amended Environmental Noise Assessment and maintained thereafter to the satisfaction of the City of Swan.
- 12. **Prior to occupation or use of the development** for the proposed "Nursing Home" the subject of this application, a Notification pursuant to Section 70A of the *Transfer of Land Act 1893* must be placed on the certificate of title of the land subject of the development to notify current and prospective landowners of the implications of aircraft noise in the area.
- 13. The proposed "Nursing Home" must incorporate noise insulation measures in accordance with the requirements of *State Planning Policy 5.1 Land use planning in the vicinity of Perth Airport and Australian Standard 2021 Building Site Acceptability* based on ANEF Zones.
- 14. All procedures, actions and design considerations detailed in the Waste Management Plan prepared by Talis Consultants (Version 2, dated 16 May 2025) shall be implemented on the site to the satisfaction of the City of Swan for the duration of the operation of the development.
- 15. The owner shall pay all costs associated with the removal of the street tree as indicated on the approved plan. Prior to the tree being removed, the owner is to liaise with the City on a suitable 'like' replacement and the replacement tree planted at their costs to the satisfaction of the City of Swan.
- 16. **Prior to an occupancy permit being issued**, detailed engineering drawings must be submitted to and approved by the City of Swan for the construction of twelve (12) vehicle parking bays in the northern verge of John Street as generally depicted on the approved plans, together with landscaping. The parking bays must comply with AS 2890.1 (as amended) and demonstrate compliance with AS 4970-2009 with respect to the protection of the existing street trees within the verge.
- 17. **Prior to an occupancy permit being issued**, the landowner must enter into a Deed of Construction, Maintenance and Indemnity with the City to construct and maintain twelve (12) vehicle parking bays in the northern verge of John Street in accordance with the approved engineering drawings, together with landscaping, to the satisfaction of the City of Swan. The Deed must be prepared by the City's solicitors to the satisfaction of the City and enable the City to lodge an absolute caveat over the lots. The landowner shall be responsible to pay all costs associated with the City's solicitors' costs of and incidental to the preparation (including all drafts) and stamping of the Deed and the lodgement of the absolute caveat.
- 18. **Prior to a building approval being issued**, a detailed landscaping and reticulation plan for the subject site and/or road verge(s) must be submitted to,

and approved to, the satisfaction of the City of Swan, and must include the following:

- a) The location, number and type of proposed trees and shrubs including planter and /or tree pit sizes and planting density;
- b) Any lawns to be established;
- c) Any existing vegetation and/or landscaped areas to be retained;
- d) Any verge treatments; and
- e) Evidence that the proposed landscaping will not, at maturity negatively impact the development and adjoining properties.
- 19. The approved landscaping and reticulation plan must be implemented within the first available planting season after the initial occupation of the development, and maintained thereafter, to the satisfaction of the City of Swan. Any species that fails to establish within the first two planting seasons following implementation must be replaced in consultation with, and to the satisfaction of the City of Swan.
- 20. The proposed gate(s) shall open wholly within the subject lot.
- 21. **Prior to occupation or use of the development**, the redundant crossover(s) to Lots subject of this development, as shown on the approved plans, must be removed and the verge, kerb and footpath (where relevant) reinstated to the specification and satisfaction of the City of Swan.
- 22. All crossovers must be built and maintained in accordance with the City of Swan's specifications.
- 23. A Construction Management Plan shall be submitted for approval to the City of Swan **prior to commencement of works**. The Construction Management Plan shall address dust, noise, waste management, storage of materials, traffic management and site safety/security. The Construction Management Plan is to be complied with for the duration of the construction of the development.
- 24. External lighting shall comply with the requirements of AS4282 Control of Obtrusive Effects of Outdoor Lighting.
- 25. External illumination shall not flash or pulsate to the satisfaction of the City of Swan.
- 26. No bunting is to be erected on the site (including streamers, streamer strips, banner strips or decorations of similar kind).
- 27. The colours, materials and finishes of the development shall be in accordance with the details and annotations as indicated on the approved plans/ approved schedule of materials and colours which form part of this approval unless otherwise approved by City of Swan.
- 28. **Prior to an occupancy permit being issued**, the Landowner must contribute a sum of 1% of the total development construction value towards Public Art in accordance with the City of Swan's Local Planning Policy for the Provision of Public Art (POL-LP-1.10), by either:
 - a) Payment to the City of Swan of a cash-in-lieu amount equal to the sum of the contribution amount of \$212,500 (being 1% of the total development

construction less the applicable 15% discount). This must be paid to the City of Swan prior to the date specified in an invoice issued by the City of Swan, or prior to the issuance of a building permit for the approved development, whichever occurs first; or

- b) Provision of Public Art on-site to a minimum value of the 1% contribution amount (\$250,000). The following is required for the provision of Public Art on-site:
 - i. The Landowner or Applicant on behalf of the Landowner must seek approval from the City of Swan for a specific Public Artwork including the artist proposed to undertake the work to the satisfaction of the City of Swan in accordance with POL-LP-1.10 and the *Developers' Handbook for Public Art* (as amended). The City of Swan may apply further conditions in regard to the proposed Public Art;
 - ii. No part of the approved development may be occupied or used until the Public Art has been installed in accordance with the approval granted by the City of Swan; and,
 - iii. The approved Public Art must be maintained in compliance with the approval granted by the City of Swan and any conditions thereof, to the satisfaction of the City of Swan.
- 29. All building works to be carried out under this development approval are required to be contained within the boundaries of the subject lot.

Details: outline of development application

Region Scheme	Metropolitan Region Scheme
Region Scheme -	Urban
Zone/Reserve	
Local Planning Scheme	City of Swan Local Planning Scheme No.17
Local Planning Scheme -	Residential
Zone/Reserve	
Structure Plan/Precinct Plan	N/A
Structure Plan/Precinct Plan	N/A
- Land Use Designation	
Use Class and	"Use not listed" – Nursing Home
permissibility:	
Lot Size:	Lot 104 – 10,187m ²
	Lot 22 – 737m ²
	Lot 23 – 737m ²
	Lot 24 – 1,286m ²
	Lot 25 – 1,163m ²
	Total combined lot size – 14,110m ²
Existing Land Use:	Nursing Home
State Heritage Register	No
Local Heritage	⊠ N/A
	☐ Heritage List
	□ Heritage Area

Design Review		N/A
	\boxtimes	Local Design Review Panel
		State Design Review Panel
		Other
Bushfire Prone Area	No	
Swan River Trust Area	No	

Proposal:

The Applicant Planning Solutions on behalf of the Landowners of St. Jude's Health Care Services in Midland lodged an application proposing an expansion to the existing "Nursing Home" located at Lot 104 (No.44) John Street, Midland. The development subject of this application is proposed across five (5) lots which encompass the total development site area. These include:

- Lot 104 (No.44) John Street, Midland;
- Lot 22 (No.52) John Street, Midland;
- Lot 23 (No.54) John Street, Midland;
- Lot 24 (No.88) Great Northern Highway, Midland; and
- Lot 25 (No.90) Great Northern Highway, Midland.

The proposed development will comprise the following:

- Demolition of existing single storey residential dwelling, access and ancillary structures at Lot 23 (No.54) John Street;
- Demolition of minor ancillary structures, including fencing and a shed across Lot 22 (No.52) John Street and Lot 24 (No.88) and Lot 25 (No.90) Great Northern Highway;
- Demolition of at least 63 existing car parks and associated drop off area to existing Residential Aged Care Facility;
- Proposed 1-2 storey "Nursing Home" accommodating 72 new single bedrooms and associated amenities;
- 8 additional staff accommodated onsite;
- 83 car parking bays proposed including 62 onsite, 9 short-stay bays and 12 onstreet bays;
- Vehicle access and egress is via 2 single width crossovers to John Street;
- 3 existing crossovers will become redundant as a result of the new access configuration;
- Removal of 2 existing trees, 1 on site and 1 within John Street to facilitate new vehicle access:

- 10 new trees planted within John Street; and
- New bin and services store and designated loading/ waste collection area.

Background:

The subject sites are located within a residential area of Midland addressing the corner of Great Northern Highway and John Street.

The proposed development is an expansion to the existing St Jude's Midland Village Residential Aged Care Facility or "Nursing Home" established on the property since the 1970's with extensions approved and constructed in the late 1990's to early 2000's. The existing facility was approved as a "Nursing Home" and is to be retained currently accommodating 110 beds and 44 staff.

The land surrounding the subject lots is zoned 'Residential' with a dual density coding of R20/40 for the lots to the north and east. To the south of John Street, the lots are dual coded at a higher density R40/60, while the properties to the west, adjacent to Great Northern Highway, are zoned R60.

Surrounding land uses include single residential, grouped dwelling sites, a care facility (Honeybrook Lodge) and a commercially used property located opposite to the south.

Legislation and Policy:

Legislation

Planning and Development Act 2005
Planning and Development (Development Assessment Panels) Regulations 2011
Planning and Development (Local Planning Scheme) Regulations 2015
Metropolitan Region Scheme
City of Swan Local Planning Scheme No. 17

State Government Policies

State Planning Policy 5.1 - Land Use Planning in the vicinity of Perth Airport State Planning Policy 7.0 - Design of the Built Environment State Planning Policy 7.3 - Residential Design Codes Volume 1

Local Policies

POL-LP-1.10 Provision of Public Art
POL-LP-1.13 Design Review
POL-TP-129 Vehicle Parking Standards
POL-C-040 Midland District Drainage Development Reserve Fund
POL-C-070 – Advertising Signs within Commercial and Industrial Zones

Consultation:

Public Consultation

In accordance with Clause 64 of the *Planning and Development (Local Planning Schemes) Regulations 2015*, the application is considered a 'Complex Application' which means -

a) An application for approval of development that is a use of land if the use is not specifically referred to in the zoning table for this Scheme in respect of the zone in which development is located.

Public consultation was undertaken as follows in accordance with Clause 64.

- Consultation period of twenty-eight days between 21 August to 18 September 2025;
- Letters to owners and occupiers of properties within 200m of the proposed development;
- Publication on the City's website; and
- Sign on site.

At the conclusion of advertising, four (4) submissions were received with one (1) objection, one (1) conditional support and two (2) no objections received.

The objection raised concern with the proliferation of development in the area and potential adverse impact of increased traffic on road and pedestrian safety, particularly on John Street.

The conditional support raised concern with the potential loss of privacy to the northern property and is concerned with the perceived noise and health/hygiene issues resulting from an increase in residential density. The submission is supportive of the development subject to the northern boundary fence being replaced with either a steel, limestone or brick fence to a minimum height of 2 metres and to be undertaken at the final completion stage and for ongoing construction activities to be managed to mitigate impacts to neighbours.

These concerns are addressed in the Planning Assessment section of this report and by way of conditions imposed. The fencing request is to be resolved separately under the *Dividing Fences Act 1961* between the property owners.

Referrals/consultation with Government/Service Agencies

No referrals were required.

The Water Corporation submitted comments on the application noting that reticulated water and sewerage is currently available to the subject area and that the proposal will require approval with Building Services prior to the commencement of works.

Design Review Panel Advice

In accordance with State Planning Policy 7.0 – Design of the Built Environment, the proposal was presented to the City of Swan's Design Review Panel, to undertake a design review of the proposed development. This is discussed in the Planning Assessment section of this report.

Other Advice

The application was referred to the following City of Swan internal business units for comment:

- Asset Management; and
- Environmental Health

Planning Assessment:

The proposal has been assessed against all the relevant legislative requirements of the Scheme, State and Local Planning Policies outlined in the Legislation and Policy section of this report. The following matters have been identified as key considerations for the determination of this application:

Zoning and Proposed Land Use and Permissibility

The subject property is zoned 'Urban' under the Metropolitan Region Scheme and 'Residential' under the City of Swan Local Planning Scheme No.17 (LPS17) with a dual-density residential code of R20/40.

A "Nursing Home" is not a use class specifically mentioned within the City's LPS17.

There are use classes in the Scheme of "Aged and Dependent Persons Dwellings", "Residential Building" and "Hospital" which are defined in the Scheme as follows.

"Aged and Dependent Persons Dwelling" and "Residential Building" 'has the same meaning as in the Residential Design Codes.'

The Residential Design Codes individually defines "Aged Person", "Dependent Person" and "Dwelling". Whilst an "Aged Person" is a person who is aged 55 years or older and a "Dependent Person" is someone that might require special care, the definition of a "Dwelling" is limited in composition to providing habitation to no more than six persons who do not comprise a single family.

- "Residential Building" means 'A building or portion of a building, together with rooms and outbuildings separate from such building but incidental thereto; such building being used or intended, adapted or designed to be used for the purpose of human habitation:
- temporarily by two or more persons; or
- permanently by seven or more persons, who do not comprise a single family, but does not include a hospital, sanatorium, a prison, a hotel, a motel or a residential school.'

The proposed development is not considered to be a "Residential Building", as the "Nursing Home" will provide a level of care and assistance to residents that falls outside the scope of the residential building definition. Uses involving similar levels of care or supervision – particularly where such care is provided by individuals who do not reside in the building – are explicitly excluded from that definition.

"Hospital" 'means premises in which persons are admitted and lodged for medical treatment or care and includes a maternity hospital.'

The proposed development is not considered to be a "Hospital" as defined within the planning scheme, as the purpose of the "Hospital" use class is to provide medical treatment or care for individuals admitted with a specific injury or illness, typically for a defined or short-term period, after which they are discharged to return to their primary place of residence.

In contrast, the proposed aged care facility is designed to accommodate elderly persons on a permanent basis as their primary place of residence, providing both managed healthcare and full-time support during the final stage of life. A such, the proposal includes a permanent residential component not contemplated within the "Hospital" use class.

City staff are of the opinion the use proposed is not a use that can be encompassed by the "Aged and Dependent Person's Dwelling", "Residential Building" or "Hospital" land use definition. The City considers the proposal cannot reasonably be determined as falling within a type, class or genus of activity of any other use class within the City's LPS17 and is therefore to be processed as a "Use Not Listed" development application in accordance with Clause 4.4.2 of LPS17.

Clause 4.4.2 of LPS17, 'if a person proposes to carry out on land any use that is not specifically mentioned in the Zoning Table and cannot reasonably be determined as falling within the type, class or genus of activity of any other use class the local government may —

- (a) Determine that the use is consistent with the objectives of the particular zone and is therefore permitted;
- (b) Determine that the use may be consistent with the objectives of the particular zone and thereafter follow the advertising procedures of cl.9.4 in considering an application for planning approval; or
- (c) Determine that the use is not consistent with the objectives of the particular zone and is therefore not permitted.'

The Objectives of the 'Residential' zone are to –

- (a) Provide for a range of forms and densities of residential development to meet the needs of the wide variety of households which make up the community;
- (b) Promote a residential environment in each locality consistent with the form and density of residential development permissible in the locality, so as to enhance a sense of place and community identity;
- (c) Preserve and enhance those characteristics which contribute towards residential amenity, and to avoid those forms of development which have the potential to prejudice the development of a safe and attractive residential environment;
- (d) Provide for a limited range of ancillary development compatible with the form and density of residential development, and complementary to the needs of local communities, but which will not compromise residential amenity; and
- (e) Avoid development of land for any purpose or in any manner that would detract from the viability or integrity of development in either the Strategic Regional Centre or the Commercial zones.

Compliance of the proposal with the objectives of the 'Residential' zone is based largely on being able to provide a range of housing to suit the needs of the community and by not prejudicing the safety and amenity of the residential environment.

The facility will be designed to address the housing needs of the ageing population with the building's form and density evaluated against surrounding residential development. In assessing the impact on safety and residential amenity, careful consideration will also be given to the operational requirements and the development's effect on parking demand.

Traffic generation, safety and access

The application as submitted proposes:

- Removal of existing vehicle access points:
 - One (1) ingress/ egress point to Great Northern Highway; and
 - o Three (3) ingress/ egress points to John Street.
- Two (2) proposed vehicle access points:
 - Entry only and exit only points located against the boundary to John Street with 6m wide driveways and crossovers.

The applicant has submitted a Transport Impact Statement (TIS) prepared by Urbii traffic consultants to identify the potential impact of traffic generated by the development on the local road network and access arrangements to the site.

The Transport Impact Statement contends:

- The development is expected to have a trip generation of 74 vehicles during the development's peak hour being around 3pm. The applicant's TIS concludes that the traffic generation of the proposed development is minimal and as such would have an insignificant impact on the surrounding road network.
- Swept path analysis indicates that the development and access points can
 accommodate the largest intended service vehicles being a 6.4m Small Rigid
 Vehicle (SRV) and 8.8m Medium Rigid Vehicle (MRV). The car and truck
 swept paths show that no issues are anticipated in the ingresses and all
 internal parking spaces within the site.

City staff are satisfied that the projected vehicle movements associated with the proposed development can be accommodated by the existing road network and the vehicle access points allow for safe ingress/ egress movements. The development will not have an adverse impact to road safety as expressed in the objection.

Noise

An Acoustic Report, prepared by Gabriels Hearne Farrell, was submitted in support of the proposed development. The report outlines that waste collection will be managed by a private contractor and restricted to twice weekly collections occurring

between 7am to 7pm Monday to Saturday, 9am to 7pm on Sundays and Public Holidays, in accordance with the *Environmental Protection (Noise) Regulations* 1997.

The Applicant has advised that mechanical plant and ventilation equipment have not yet been selected or specified at this stage. As such, detailed noise modelling will be undertaken during later project phases to ensure compliance with the Noise Regulations. A revised acoustic assessment is to be prepared once the plant selections are finalised.

In addition, the proposed external café dining area will be limited to operating hours of 7am to 7pm Monday to Saturday, and 9am to 7pm on Sundays and Public Holidays, with no external music speakers proposed, thereby minimising potential noise emissions.

The fire pump enclosure is to be located away from adjacent residential properties, with acoustic mitigation measures proposed to minimise noise impacts.

Based on the submitted information and proposed operating parameters, the development is considered capable of complying with the *Environmental Protection* (*Noise*) Regulations 1997. Should the application be approved, it is recommended that a condition be imposed requiring the Acoustic Report to be updated to incorporate the locations and specifications of the final mechanical and ventilation equipment, to confirm compliance and safeguard residential amenity.

State Planning Policy 5.1 - Land Use Planning in the vicinity of Perth Airport

The proposed "Nursing Home" is a noise-sensitive premises as described in State Planning Policy 5.1 – Land Use Planning in the Vicinity of Perth Airport (SPP 5.1).

The objectives of SPP 5.1 are to:

- protect Perth Airport from unreasonable encroachment by incompatible (noise sensitive) development, to provide for its ongoing development and operation; and
- minimise the impact of airport operations on existing and future communities with reference to aircraft noise.

SPP 5.1 guides decisions about the suitability of different development types and densities in aircraft noise affected areas based on Australian Noise Exposure Forecast (ANEF) contours. The proposed development is forecast to be exposed to ANEF 20-25.

The policy allows noise-sensitive land uses such as "Nursing Home" identified as "Conditionally Acceptable" within the ANEF 20-25 contour subject to the implementation of appropriate noise control measures and notification on title. The acoustic report submitted has provided an aircraft noise intrusion assessment which recommends the minimum construction requirement to comply with AS2021:2015 Acoustics – Aircraft noise intrusion. Should the panel approve of the development, a condition is recommended accordingly.

State Planning Policy 7.0 – Design of the Built Environment

A design review is required pursuant to Clause 3.1 (e) of the City of Swan's Local Planning Policy POL-LP-1.13 Design Review against the 10 principles of good design outlines in State Planning Policy 7.0 which are:

- Context and Character
- Landscape Quality
- Built form and scale
- Functionality and build quality
- Sustainability
- Amenity
- Legibility
- Safety
- Community
- Aesthetics

The development was presented at the City of Swan's Design Review Panel meeting prior to lodgement on 29 October 2024 and on 4 December 2025. A further Chair Review was undertaken on 22 August 2025. The results of the final review concluded that all ten (10) principles were supported and it was noted that the development 'is an exemplary design that will contribute positively to Midland, particularly as it is located along a major entry route to the town centre, and it sets a high benchmark for similar projects in the future'.

There are a few recommendations by the Chair to guide the detailed design of the development which includes to review the treatment of the vertical batten screening at the detailed design stage and for the City to condition for public art. A comment was also included to provide swept paths for service vehicles to confirm they can be accommodated through the car park which has been addressed in the Transport Impact Statement.

State Planning Policy 7.3 Residential Design Codes Volume 1 (R-Codes)

The design of the facility must be sympathetic to the residential character of the area in both form and density, in line with Objective b) of the 'Residential' zoning. Although the subject site is zoned 'Residential' City staff note that the proposed "Nursing Home" is not a residential development subject to the standards of the R-Codes. However, the R-Codes are useful to provide guidance on building height, site works and fencing, setbacks, site cover, overshadowing and visual privacy in which to assess the consistency of the development against the context of the surrounding neighbourhood.

Building Height

Under the R-Codes for development with R40 to R60 zoning, the maximum building height is limited to between 2 to 3 storeys, with a roof or wall height ranging from 8m to 11m for skillion or concealed roofs. The proposed development will consist of up to 2 storeys, with a concealed roof height of approximately 8.7m, which would be consistent with the height requirements in the locality.

Site works and fencing

The site is relatively flat, with a fall towards the western boundary along Great Northern Highway of approximately 1.2 to 1.5 metres. As part of the development, retaining walls

up to 1.23 metres in height are proposed along Great Northern Highway and a portion of John Street, with a 1.8-metre-high fence situated above the retaining in these areas.

The proposed street fencing is articulated and predominantly visually permeable, incorporating vertical battens allowing for passive surveillance to the public realm. Where privacy is required for private and communal courtyard spaces, solid sections of fencing are incorporated in a manner that balances amenity and privacy.

The combination of retaining and fencing is considered to be consistent with the design principles of the R-Codes (Clause 3.5 – Site works and retaining walls) and achieves an appropriate interface with the public realm, without detracting from the character or safety of the surrounding streetscape.

Setbacks

For R40 development, a minimum setback of 3 metres is required to the primary street (John Street), and 1 metre to the secondary street (Great Northern Highway). The proposed development complies with these requirements, with the main building set back a minimum of 3.2 metres from Great Northern Highway and between 4 metres and 7.8m from John Street. There is a minor encroachment from the vertical batten screen of the terrace/winter garden, but overall, the setbacks remain within an acceptable range.

A nil setback is proposed to John Street for the services enclosure, which constitutes a departure from the standard. However, as the development is for a "Nursing Home" land use, positioning the enclosure at the front of the site ensures practical access to essential infrastructure, including the fire pump, substation and waste room.

At the closest lot boundaries, the R-Codes require a minimum setback of 1 metre for walls up to 3.5 metres in height, and 3 metres for walls between 7.1 and 10 metres in height. The main building achieves a 4-metre setback to the northern boundary, while the services enclosure is setback 1.8 metres from the eastern boundary.

Overall, the proposed setbacks are appropriate for the site's context and meet the requirements of the R-Codes.

Site cover

The site cover provisions applicable to a residential density coding of R40 is 65% of the site area as site covered. The proposed building will be constructed over Lot 22, Lot 23, Lot 24, Lot 25 and Lot 104. In total, these five (5) lots have a combined area of 14,110m². The new building has a building area of approximately 2,468m² and approximately 151m² for the services enclosure and, when added to the existing buildings (approximately 4,267m² to be retained over the lots), this accounts for approximately 48.80% of the site area – maintaining 51.20% site as open space in compliance with the R-Codes.

Overshadowing

The R-Codes provisions with respect to solar access are referenced to the assessment of overshadowing from the development onto an adjoining property on a mid-winter day (21 June). The development would not give rise to overshadowing onto adjoining properties with shadow being cast over John Street and Great Northern Highway to the south.

Visual Privacy

Potential overlooking from the proposed development is limited to the adjoining northern property at Lot 103 (No.94) Great Northern Highway. The landowner of this property expressed concern with a loss of privacy resulting from the development.

- Bedrooms: Major openings from proposed bedrooms on the northern elevation are setback 4 metres, marginally short of the 4.5 metre visual privacy requirement under Clause 3.10 of the R-Codes. However, the area affected comprises of a vehicle access driveway and an outbuilding/ carport on the adjoining lot, which are not classified as "active habitable spaces" and therefore do not contribute to a loss of residential amenity or privacy. To further mitigate potential overlooking, design measures such as window shading devices which include 0.6-metre-deep vertical fins and hood projections are proposed.
- Dining Room (Habitable Room Other than a Bedroom or Study): The dining room opening is setback 7.7 metres from the northern boundary, exceeding the 7.5 metre 'deemed-to-comply' requirement.
- Outdoor Covered Terrace (Active Habitable Space): The covered terrace is setback 4.5 metres from the northern boundary, which is below the 7.5 metre 'deemed-to-comply' requirement. However, any overlooking is minor and directed primarily inward to the subject site. Views into the adjoining northern lot are limited to a portion of the corner rear yard containing existing outbuilding/ carport and lean-to structures, and do not affect any identified primary outdoor living areas.

Given the context and limited extent of overlooking, the proposal would satisfy the design principles of Clause 3.10 of the R-Codes and does not result in any unreasonable loss of privacy or amenity to the adjoining property.

City of Swan staff are of the view that the proposed development is therefore sufficiently sympathetic in its form and density to the surrounding residential context and is consistent with the objectives of the 'Residential' zoning. This conclusion is also reinforced through the outcomes of the Design Review.

Signage

One (1) sign is proposed as part of the development, being a low-height wall sign fronting John Street. The sign will display the St Jude's Health Care Services logo and will be backlit for illumination.

While the subject site is within the Residential zone and no specific signage policy applies to such zones, the City's Local Planning Policy POL-C-070 – Advertising Signs within Commercial and Industrial Zones has been used as a guiding framework. The proposed signage is modest in scale, integrated into the building design, and maintains a low profile consistent with residential character.

The signage proposal is considered to comply with the intent and relevant provisions of the policy and is therefore considered acceptable in the context of this development. For any further signage proposed, this would form part of a separate application should the signage not meet the City's exemption requirements.

Local Planning Policy POL-TP-129 Vehicle Parking Standards

The requirements of the City's Local Planning Policy POL-TP-129 Vehicle Parking Standards are to be applied.

The policy does not stipulate a parking standard for a "Nursing Home" land use and where the policy does not specify a minimum number of parking bays for a particular use, then the minimum requirement is to be determined by Council having regard to other relevant uses.

The existing facility which currently caters for 110 beds with 44 staff operates with 63 car bays onsite. The proposal is modifying the existing car parking area providing 62 bays with an additional 9 pickup and set down bays and 12 verge bays within John Street. City staff note that parking bays within the verge cannot be reserved for the exclusive use of the development and cannot be relied upon to address the parking demands of the site.

As discussed in the 'Zoning and Proposed Land Use and Permissibility' section of this report, given the similarities between the two (2) uses it is considered appropriate to apply the parking requirements of the "Hospital" use as a guide for the proposed "Nursing Home"; being one (1) bay per employee plus one (1) bay per every four (4) patient beds as calculated below:

- 182 beds requiring one (1) bay per four (4) beds equates to 45.5~ 46 bays;
 and
- 52 employees requiring one (1) bay per employee equates to 52 bays.

The total required onsite bays is 98 with the total bays provided onsite being 71, the proposed development will result in a shortfall of 27 bays when applying the "Hospital" parking requirements.

The Applicant has submitted a Transport Impact Statement in support of the proposal, which includes a parking survey undertaken on Tuesday, 3 December 2024 (7am to 7pm) and Saturday, 7 December 2024 (10am to 4pm).

The survey identified a peak occupancy rate of 76%, with 48 bays occupied at the busiest time. Based on the projected operational characteristics of the proposed development, the estimated peak parking demand is 64 vehicle bays.

When applying the Applicant's assumptions regarding staff shift patterns and visitor parking behaviour, the analysis demonstrates that the onsite parking provision is sufficient to accommodate peak demand and therefore does not result in a shortfall.

The City of Swan has reviewed the Applicant's parking analysis and considers that parking demand should be based primarily on the operational needs of the facility. In this regard, it is noted that the development will accommodate 52 permanent staff onsite at any one time and therefore should provide a minimum of 52 dedicated staff parking bays.

The remaining 20 bays are considered by City staff to be adequate to accommodate visitor parking demand, based on the expected visitation patterns associated with the use.

Accordingly, the proposed provision of 71 onsite parking bays is considered sufficient to meet the parking requirements for the development and is supported by the City.

Landscaping

Under the relevant provisions, parking facilities are required to include a 3-metrewide permanent landscape strip adjoining street boundaries, and to provide a minimum of 1m² of landscaping for every 10m² of parking stall area.

The proposal seeks a variation to the 3-metre landscaping strip requirement along John Street, with an approximately 0.7 metre wide landscape area proposed between the parking bays and the street boundary. To offset this variation, the Applicant has proposed extensive verge landscaping within the John Street Road reserve, including the planting of ten (10) new street trees. This approach achieves the equivalent 3-metre-wide landscaped buffer, albeit partly within the verge, and is supported by the City of Swan staff as it will contribute positively to the streetscape and assist in screening the parking area.

In terms of area, the total parking staff area is approximately 996.75m², which triggers a requirement for 99.67m² of landscaping. The proposal provides approximately 152m² of landscaping within and around the parking areas, exceeding the minimum requirement and ensuring compliance.

For non-residential development, the City's local planning policies require that a minimum of 10% of the site area be dedicated to landscaping. Based on a site area of 14,110m², a total of 1,411m² of landscaping is required. 1,184m² (8.39%) of new landscaping is proposed, and when combined with existing landscaping, the site provides a minimum of 10%.

The landscaping provision is considered sufficient, well-integrated, and of high quality, with positive feedback received from the City's Design Review Panel regarding the overall design and contribution. The formulation of a detailed Landscaping Plan to the satisfaction of the City of Swan is recommended as a condition should the application be approved.

<u>Local Planning Policy POL-C-040 Midland District Drainage Development Reserve</u> Fund

City staff are satisfied for a detailed Stormwater Drainage Management Plan to be submitted and approved by the City prior to the submission of a building permit.

The subject site is located within the Midland District Drainage Contribution Area and is subject to the City's Local Planning Policy - Midland District Drainage Development Reserve Fund (POL-C-040). Should the panel approve the application, it is recommended that the landowner contributes to the Fund based on the total additional site allotment area of 3923m² (Lots 22-25).

Local Planning Policy POL-LP-1.10 Provision of Public Art

In accordance with the City of Swan's Local Planning Policy POL-LP-1.10 Provision of Public Art, the owner is liable to make a contribution to public art, either monetarily or through development on-site, should the development be approved. The policy aims to ensure that certain developments in excess of \$2.52 million construction cost will contribute towards public artworks that promote and recognise the identity of the local community. The intent of the Policy is to encourage owners to develop public art on their property. As this is not always feasible however, the owner is granted discretion to make a monetary contribution toward public art instead.

The approximate cost of the proposed development as stated on the application form is \$25 million. The construction cost requires either a cash-in-lieu contribution of \$212,500 (being 1% of the construction cost less the applicable 15% discount) or the provision of public art onsite (as approved by the City of Swan) to the value of \$250,000. Should Public Art be constructed onsite, a Notification under Section 70A of the *Transfer of Land Act 1893* is required to be lodged on the Certificate of Title of the subject lot to advise future landowners of the need to maintain the Public Art.

Conclusion:

For the reasons outlined above, City staff consider the proposed expansion of the existing "Nursing Home" use to be suitably compliant with the applicable provisions of the City's Local Planning Scheme No.17 (LPS17), as well as relevant State and Local Planning Policies. Where variations to specific standards are proposed, these have been appropriately justified and are considered to meet the corresponding design principles or performance criteria.

The proposal is considered to be sympathetic in both form and function to the existing residential character and amenity of the surrounding area. Furthermore, the development responds to the housing and care needs of an ageing population, aligning with and supporting the objectives of the 'Residential' zone under LPS17.

Accordingly, City staff support the exercise of discretion and recommend that the Panel grant conditional development approval.





DISCLAIMER: Information shown here on is a composite of information from various different data sources. Users are warned that the information is provided by the City of Swan in this format as a general resource on the understanding that it is not suitable as a basis for decision making without verification with the original source.

Attachment 1

1:2000





MIDLAND VILLAGE	AGED CARE

ST JUDE'S HEALTHCARE SERVICES

COVER PAGE

DRAWING NUMBER	DRAWING NAME
DA-0000	COVER PAGE
DA-1000	SITE SURVEY
DA-1001	DEMOLITION PLAN
DA-1100	PROPOSED SITE PLAN
DA-1101	OVERSHADOWING DIAGRAMS
DA-2100	GROUND FLOOR PLAN
DA-2101	FIRST FLOOR PLAN
DA-2102	ROOF PLAN
DA-3100	OVERALL STREET ELEVATIONS
DA-3101	GA ELEVATIONS SHEET 1
DA-3102	GA ELEVATIONS SHEET 2
DA-3103	GA COURTYARD ELEVATIONS SHEET 1
DA-3104	GA COURTYARD ELEVATIONS SHEET 2
DA-3105	PLANT BUILDING ELEVATIONS
DA-3106	FENCE ELEVATIONS
DA-4100	GA SECTIONS

SCALE: NTS
DATE: 04/08/2025
DRAWN: MZ
DESIGNED: MZ
JOB NO: 624028
DRAWING: DA-0000 rev C

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MIDLAND VILLAGE AGED CARE

6.25 M. O

ST JUDE'S HEALTHCARE SERVICES

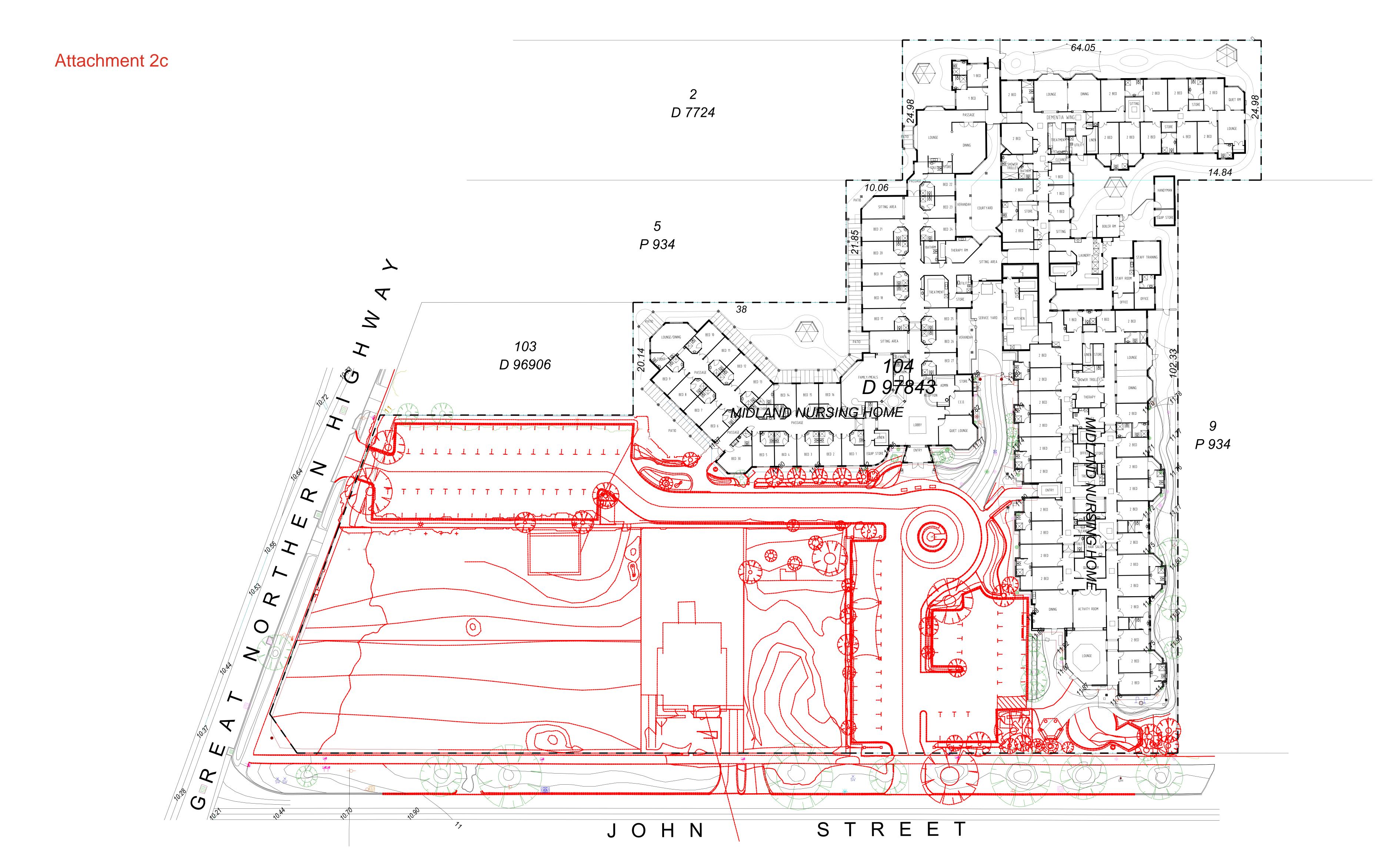
SITE SURVEY

N

SCALE: 1:250 @ B1
DATE: 04/04/2025
DRAWN: MZ
DESIGNED: MZ
JOB NO: 624028

DRAWING: DA-1000 rev B

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ST JUDE'S HEALTHCARE SERVICES

DEMOLITION PLAN

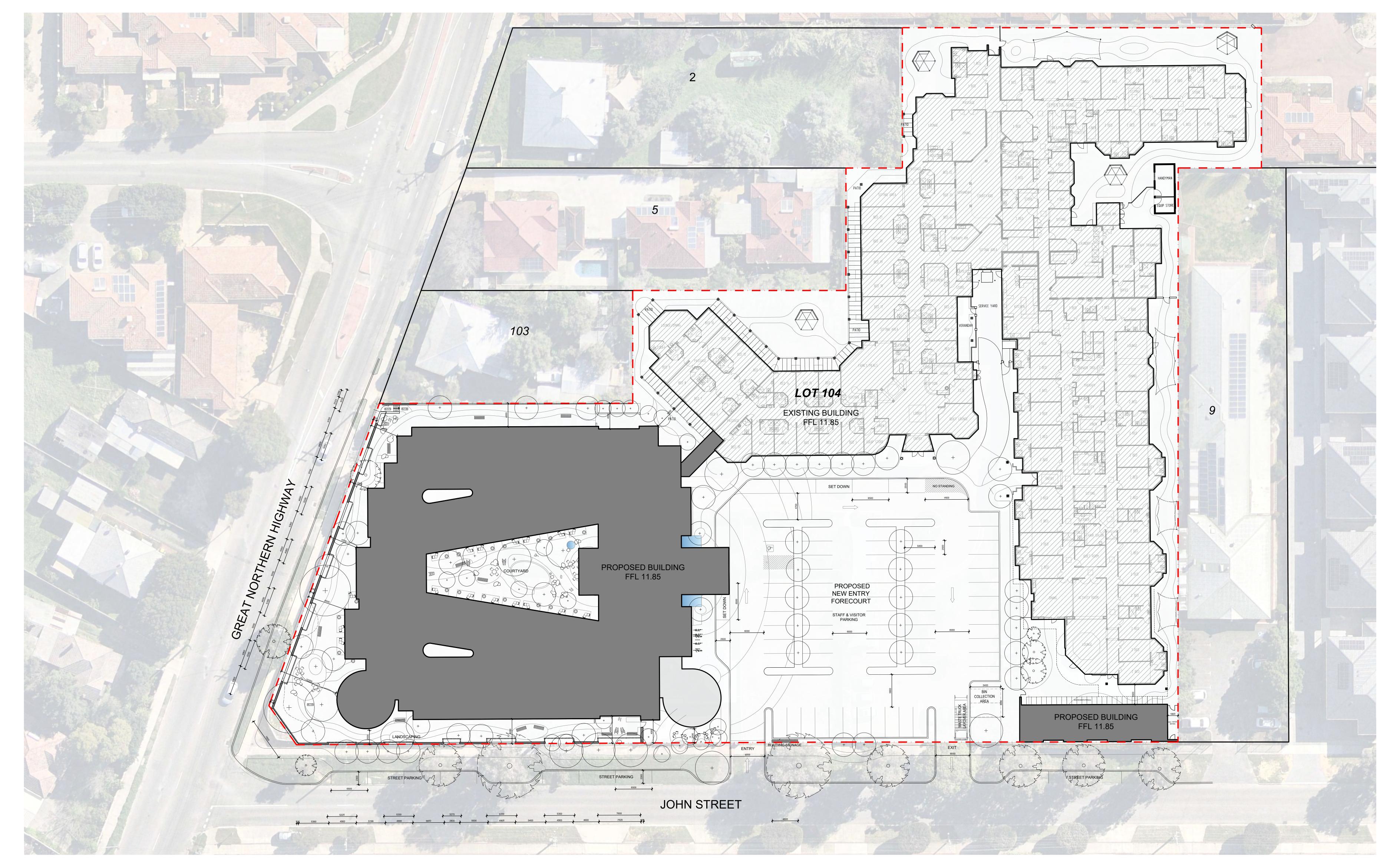
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JOB NO: 624028

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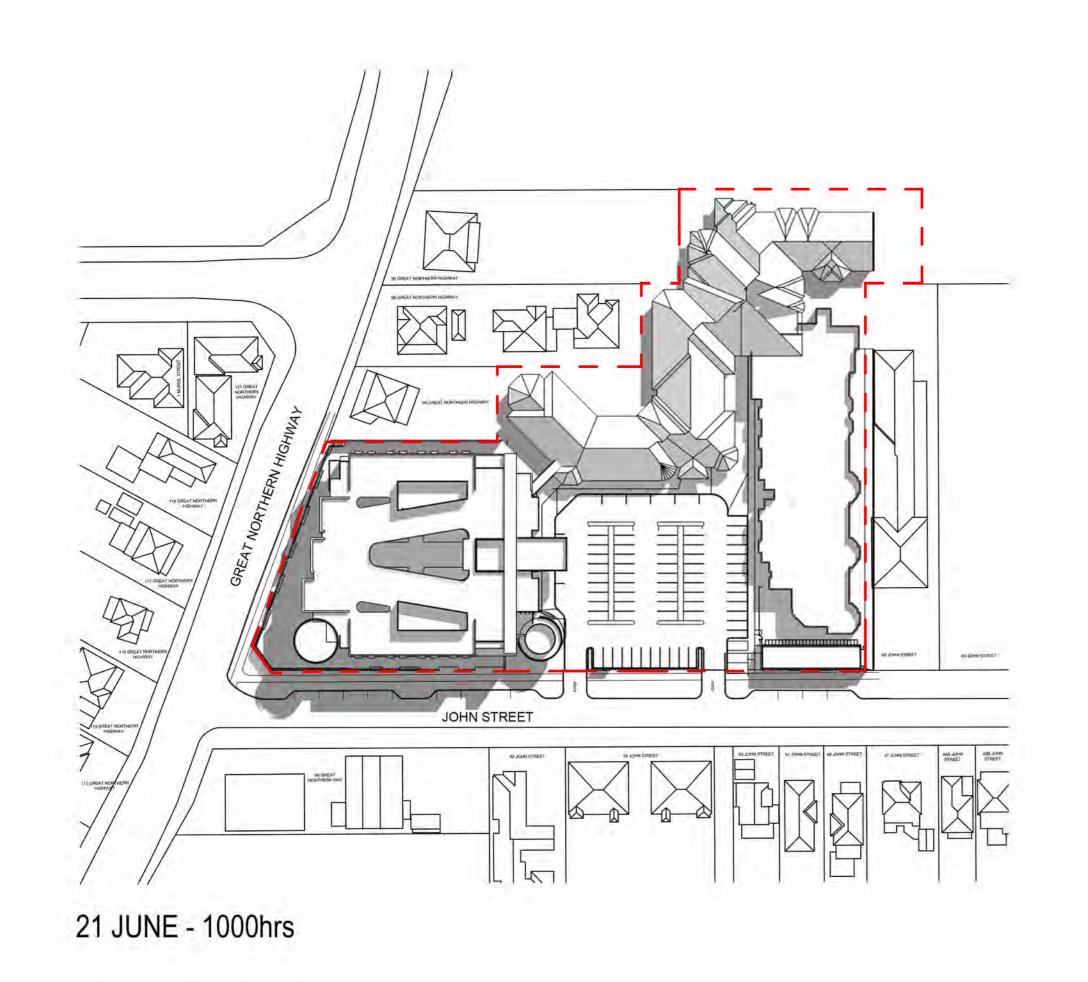
Attachment 2d ST JUDE'S HEALTHCARE SERVICES

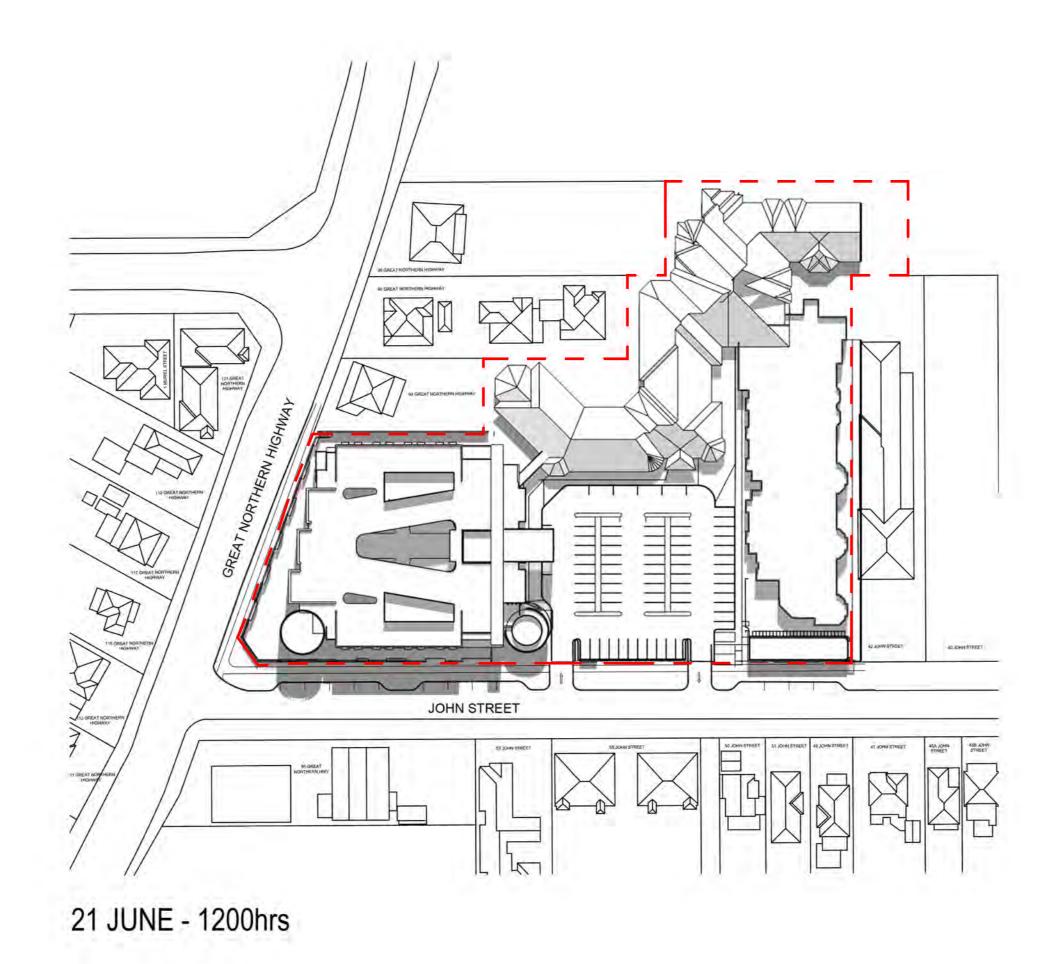
PROPOSED SITE PLAN

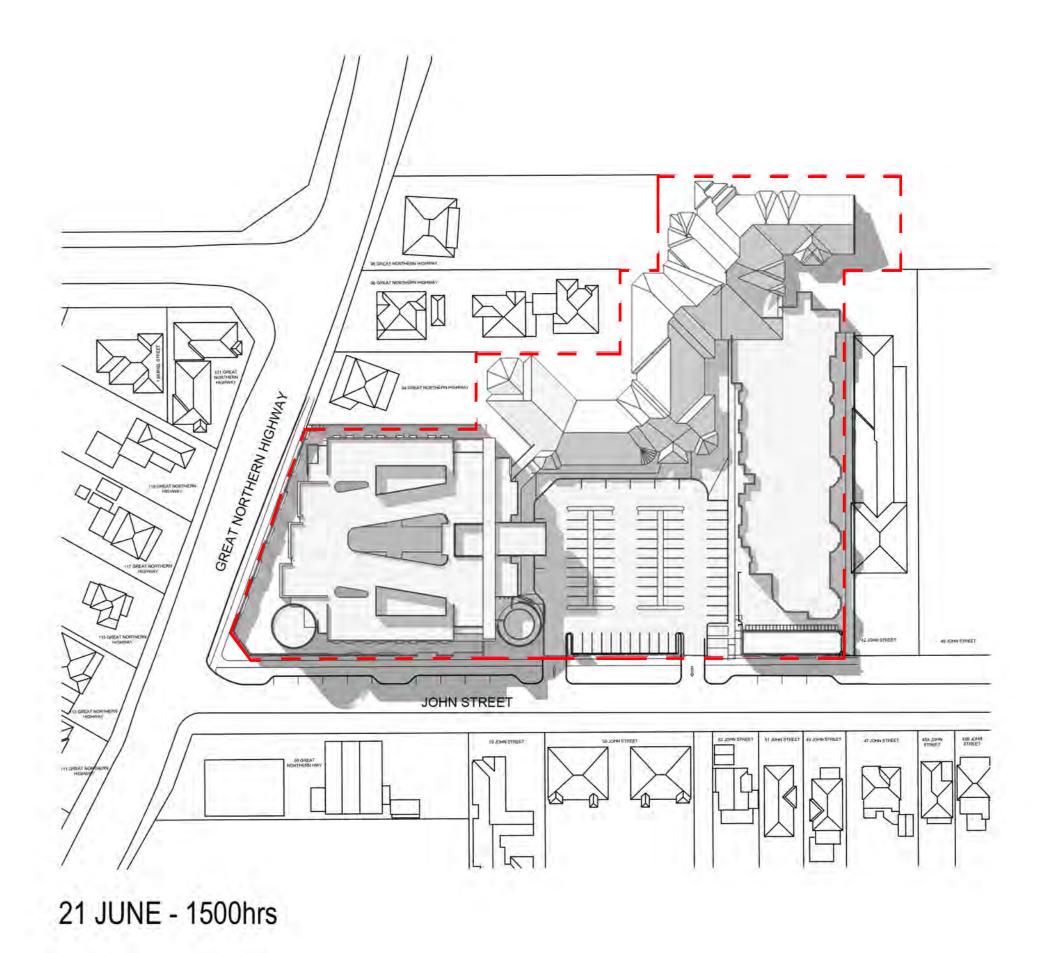
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ST JUDE'S HEALTHCARE SERVICES

Attachment 2e

OVERSHADOWING DIAGRAMS

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DATE: 04/04/2025

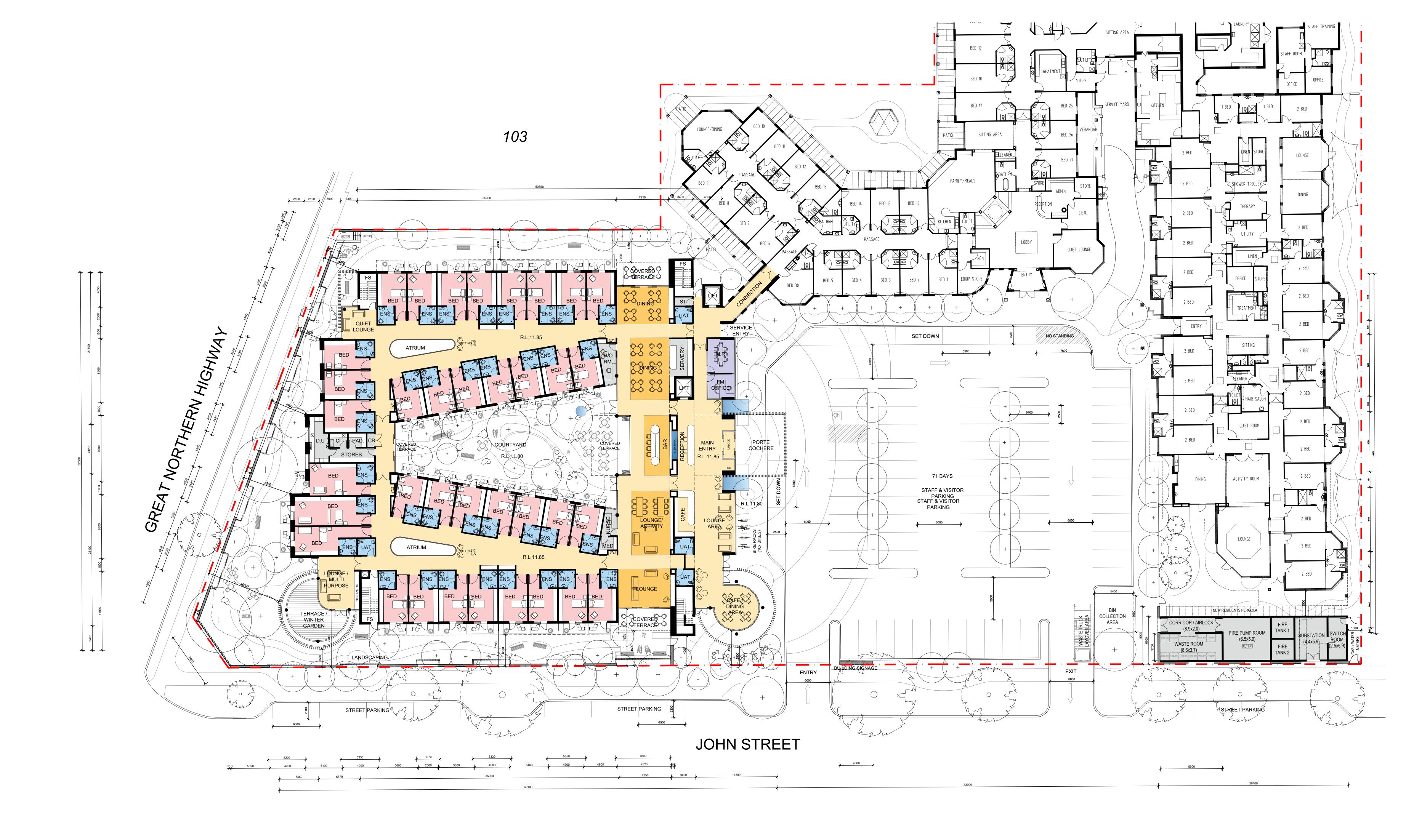
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ST JUDE'S HEALTHCARE SERVICES

Attachment 2f

GROUND FLOOR PLAN

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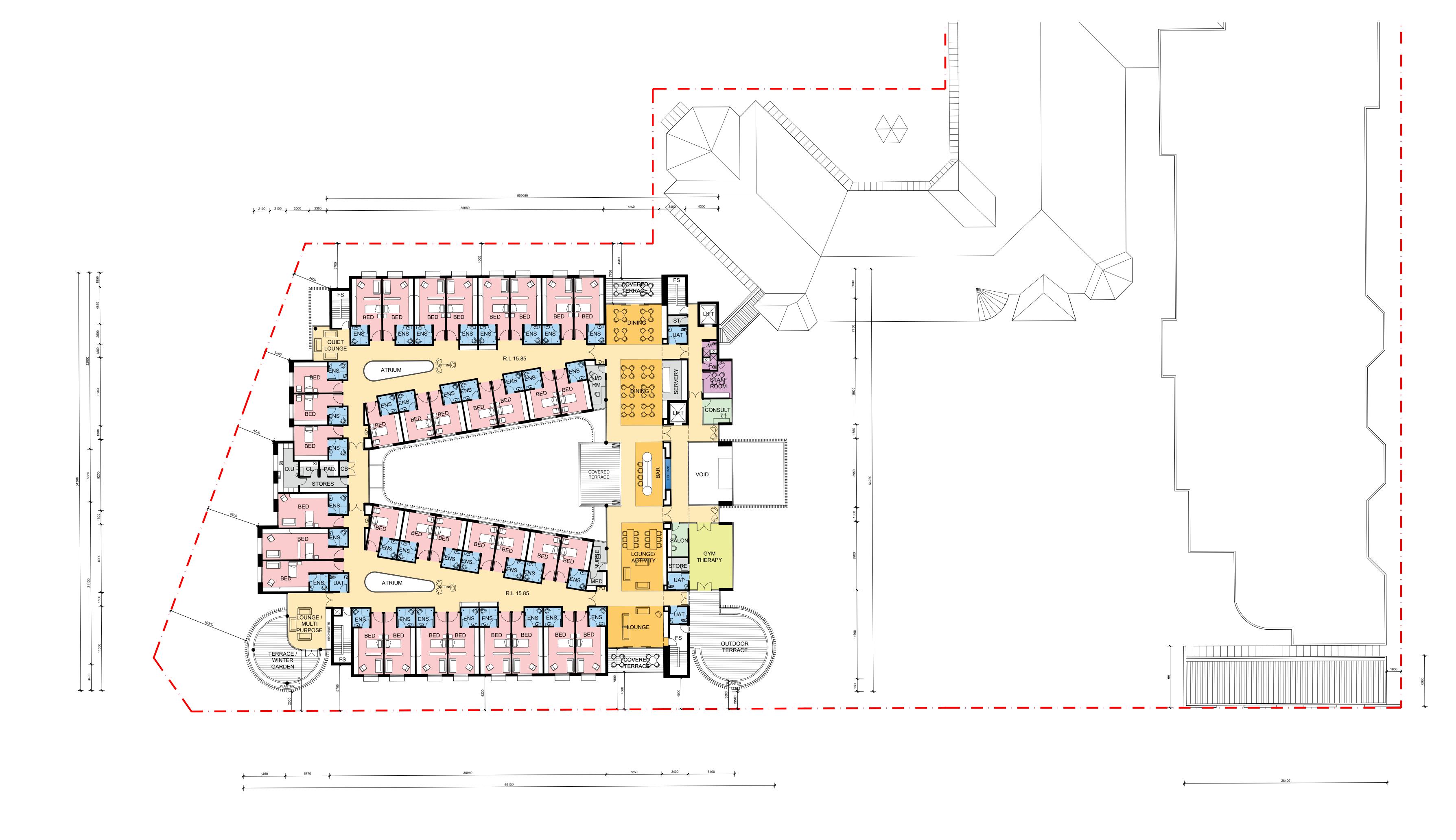
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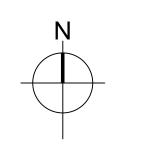
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ST JUDE'S HEALTHCARE SERVICES

Attachment 2g

FIRST FLOOR PLAN

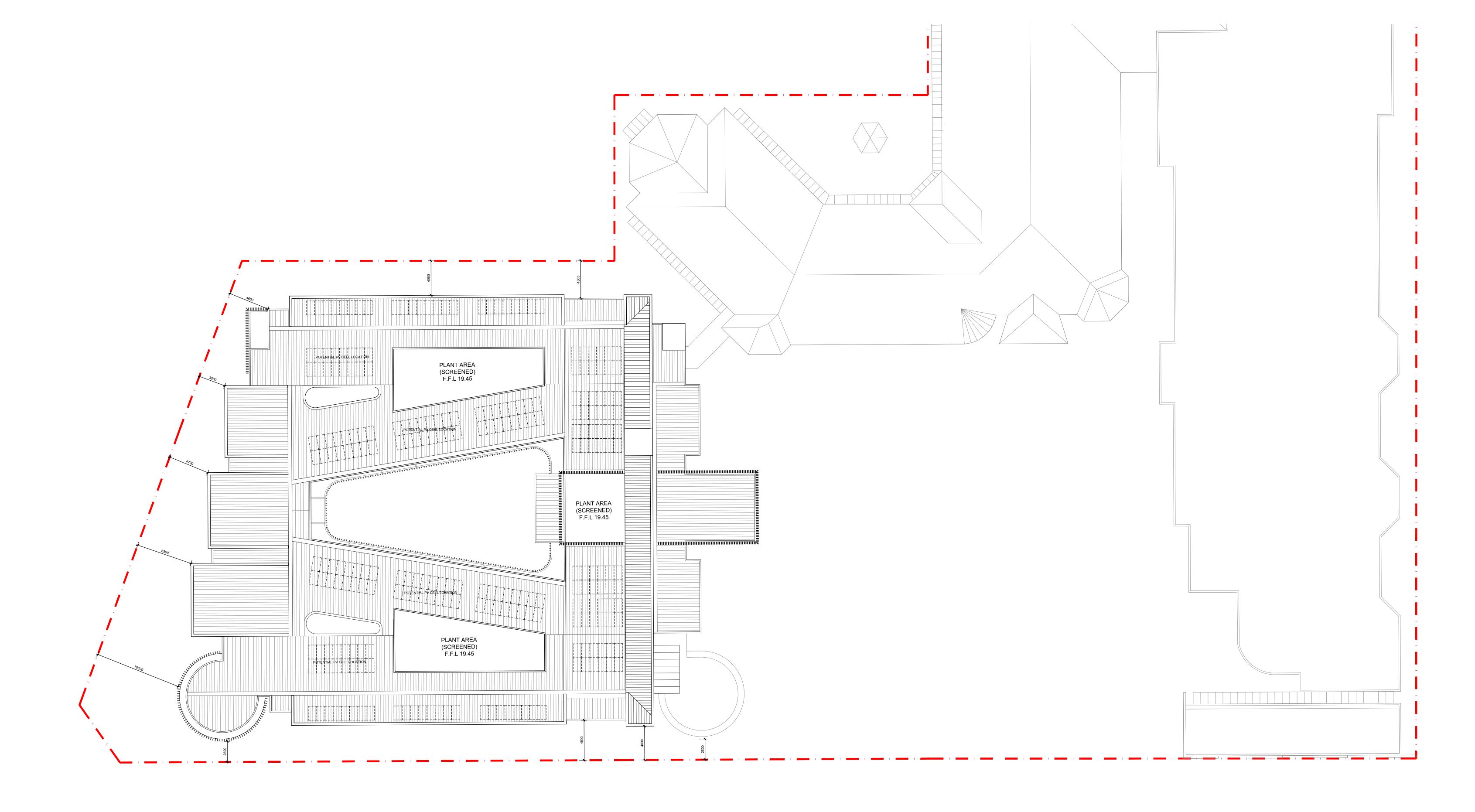


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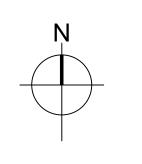
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ST JUDE'S HEALTHCARE SERVICES

Attachment 2h

ROOF PLAN



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JOHN STREET ELEVATION (WITH TREES) 1:250



JOHN STREET ELEVATION (WITHOUT TREES) 1:250

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2i

OVERALL STREET ELEVATIONS (JOHN STREET)

SCALE: 1:250 @ B1 DATE: 20/05/2025 DRAWN: MZ

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NORTH ELEVATION

1:100



EAST ELEVATION

1:100

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2j

GA ELEVATIONS SHEET 1

SCALE: 1:100 @ B1 DATE: 04/08/2025 DRAWN: MZ DESIGNED: MZ

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SOUTH ELEVATION

1:100



WEST ELEVATION

1:100

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2k

GA ELEVATIONS SHEET 2

SCALE: 1:100 @ B1 DATE: 04/08/2025

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INTERNAL COURTYARD ELEVATION SOUTH

1:100



INTERNAL COURTYARD ELEVATION NORTH

1:100

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2I

GA COURTYARD ELEVATIONS SHEET 1

SCALE: 1:100 @ B1 DATE: 04/08/2025 DRAWN: MZ DESIGNED: MZ JOB NO: 624028

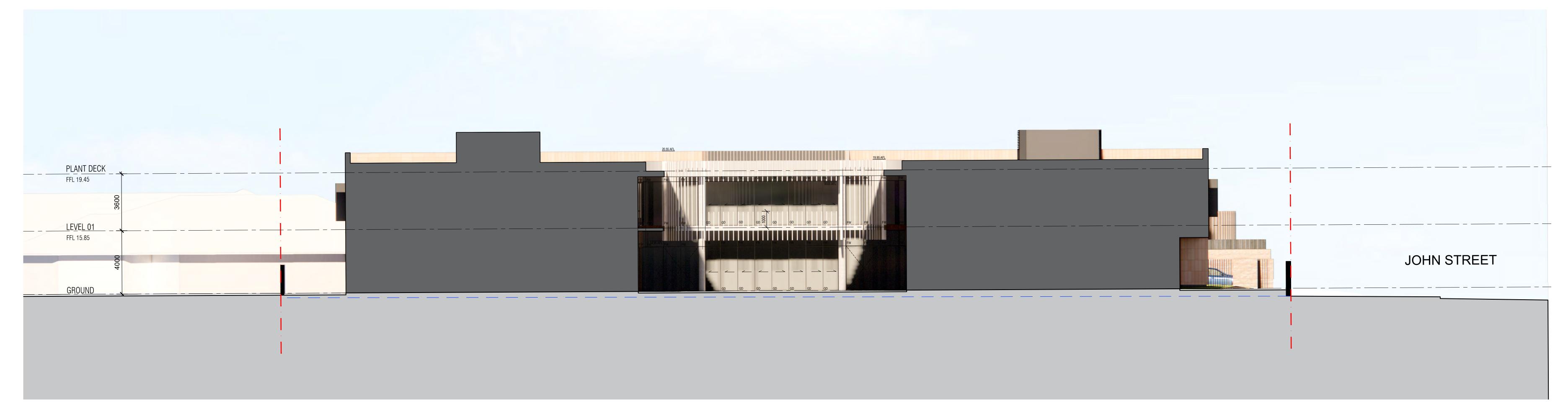
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INTERNAL COURTYARD ELEVATION WEST

1:100



INTERNAL COURTYARD ELEVATION EAST

1:100

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2m

GA COURTYARD ELEVATIONS SHEET 2

SCALE: 1:100 @ B1 DATE: 04/08/2025 DRAWN: MZ DESIGNED: MZ JOB NO: 624028

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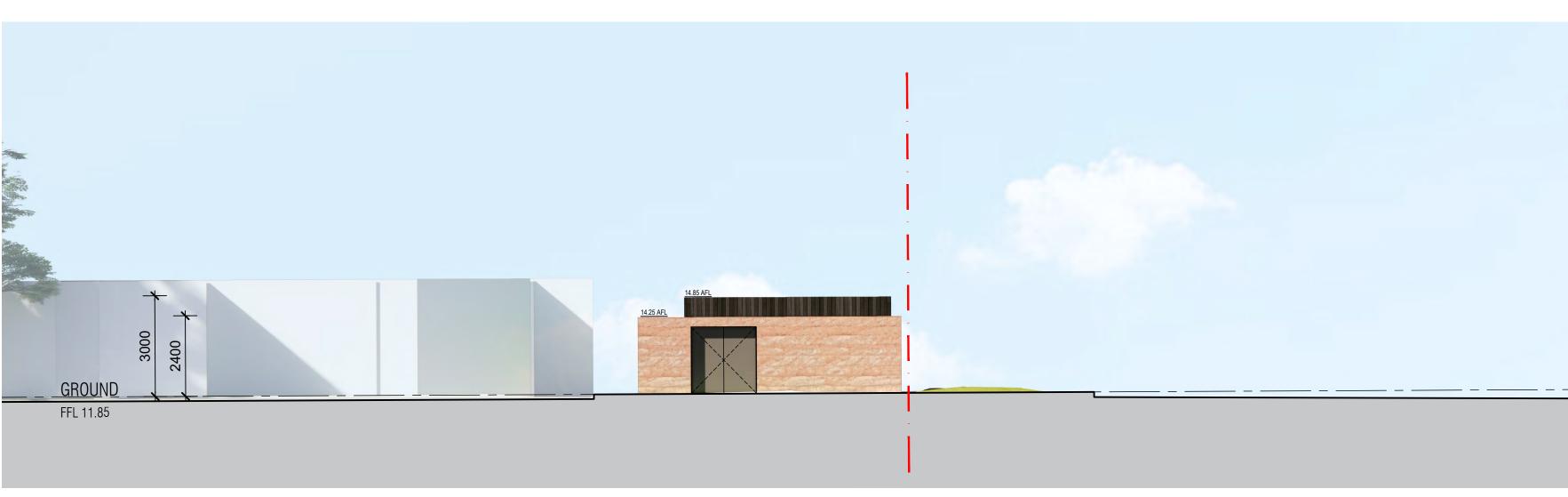
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SOUTH ELEVATION 1:100 WEST ELEVATION 1:100

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2n

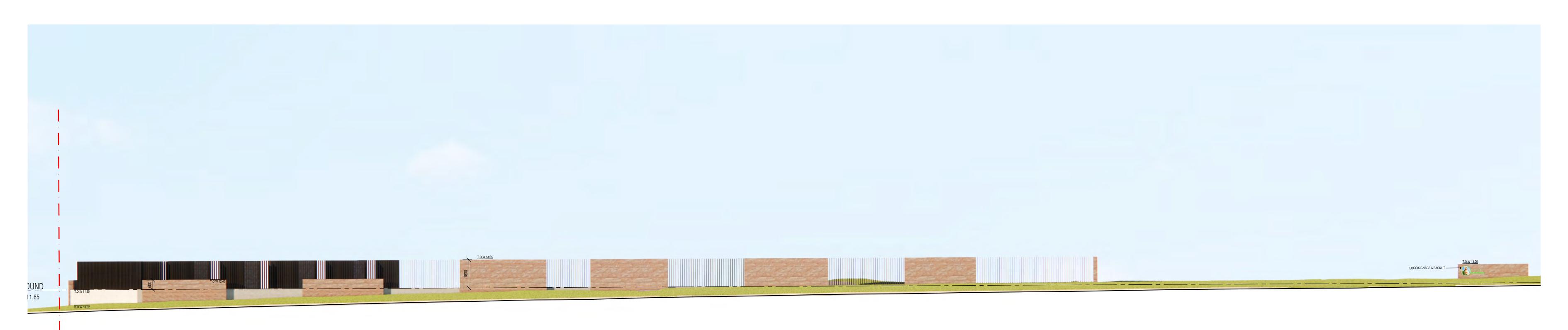
PLANT BUILDING ELEVATIONS

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DESIGNED: MZ

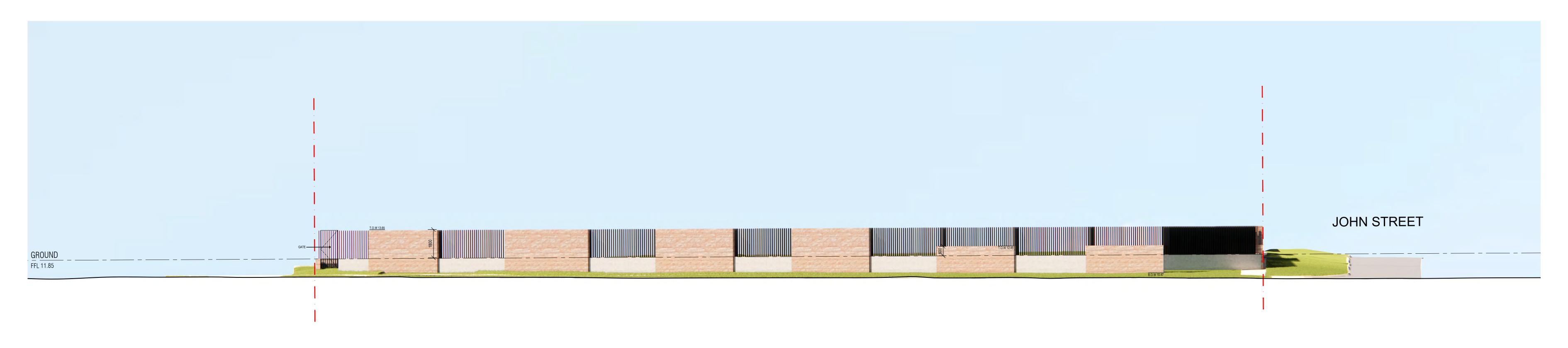
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SOUTH FENCE ELEVATION 1:100



WEST FENCE ELEVATION 1:100

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2o

FENCE ELEVATIONS

SCALE: 1:100 @ B1 DATE: 04/08/2025 DRAWN: MZ DESIGNED: MZ

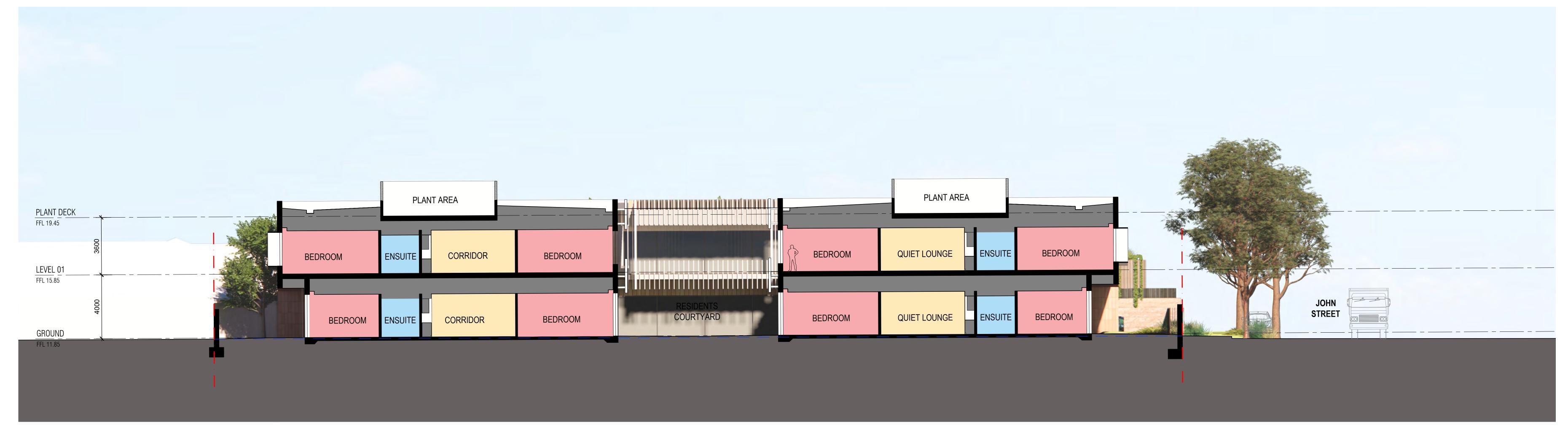
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SECTION AA (WEST - EAST) 1:100



SECTION BB (NORTH - SOUTH)

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

Attachment 2p

GA SECTIONS

SCALE: 1:100 @ B1 DATE: 21/05/2025 DRAWN: MZ DESIGNED: MZ JOB NO: 624028

DRAWING: DA-4100 rev C

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Attachment 3

No.		MIDLAND VILLAGE A.C.F	Project Number	6.24.028
CHITE CHITE	SCHEDULE	MIDLAND VILLAGE A.C.F	Date of Issue	4/04/2025
Tez A		44 JOHN STREET,	Ву	MZ
	SC.01	MIDLAND 6056		
			Revision	Α

ISSUE	DATE	CHECKED	APPROVED
ISSUE FOR DA	4/04/2025	MZ	PL

GENERAL NOTES:

THE FOLLOWING FINISHES and MATERIALS SCHEDULE IS TO BE READ IN CONJUNCTION WITH ALL PARTS OF THE CONTRACT DOCUMENTATION.

CONTROL SAMPLES OF ALL FINISHES ARE TO BE SUBMITTED FOR DESIGNER'S APPROVAL.

THE CONTRACTOR SHALL KEEP CONTROL SAMPLES ON SITE. THE TO PROVIDE ADDITIONAL SAMPLES WHERE REQUIRED FOR TESTING AND APPROVAL

ITEMS SHOWN HIGHLIGHTED IN FAINT ORANGE ARE NOT PART OF THE BUILDERS SCOPE OF WORK AND FORM PART OF THE LOOSE FURNITURE PROCUREMENT PACKAGE.

SC.01_Exterior Finishes Schedule_RevA

CODE	NAME	DESCRIPTION	MANUFACTURER	LOCATION	IMAGE	REV
SLA	Slab Protrusions	Colour: offwhite texture coat		Northern Façade - covered terrace Southern Façade - covered terrace Courtyard Façade - covered terrace		A
EC	Wall Cladding	Express jointed exterior wall cladding Colour: textured masonary effect in clay / ocre colour		Northern Façade Eastern Facade Southern Façade Western Facade		A
VF01	Vertical Fins	Colour: timber effect battens		Porte Cochere Northern/Western Façade - quiet lounge South Western Façade - lounge/winter garden South Eastern Façade - café dining area/ terrace		A
VF02	Vertical Fins 2	Colour: white aluminium battens		Courtyard Facade first floor, balustrades		A
TC01	Timber Effect Cladding	Vertical timber effect cladding with expressed joints Colour: light brown		Northern Façade - ground floor bedrooms, lift, connection walkway, fire stairs Western Façade - fire stair Southern Façade - ground floor bedrooms, fire stair Eastern Façade - connection walkway, staff toilets, lift Courtyard Façade - ground floor to bedrooms		A
TC02	TimberEffect Cladding - Dark	Vertical timber effect cladding with expressed joints Colour: dark brown / grey		Plant services enclsosure northern, southern, eastern & western facades		A
CW	Concrete effect wall	Concrete effect retaining walls to boundary Colour: light and medium grey texture finish		Southern Façade - ground Western Façade - ground		A
RW	Rammed Earth Wall	Colour: Natural		Northern Facade - boundary line ground Southern Facade - boundary line ground Western Elevation - boundary line ground Plant Services Enclosure		A
PF	Metal Palisade Fence	Colour: dark grey		Northern Facade - boundary line ground Southern Façade - boundary line ground Western Elevation - boundary line ground Plant Services Enclosure - gates		A

Document Set ID: 8685529

Document Set ID: 8685529 Version: 1, Version Date: 10/07/2025 2

AF01	Aluminium Glazing System	Aluminium framing in dark grey powdercoat / anodised colour Frame colour: dark grey	Northern Façade - utility, bedrooms, dining, connection walkway, quiet lounge Western Facade - bedrooms, utility spaces, lounge/winter garden, Southern Facade - lounge/winter garden, bedrooms,, Lounge, cafe/dining Eastern Facade - cafe/dining	A
	Aluminium Glazing System 2	Aluminium framing in natural anodised colour	Inner courtyard façade - bedrooms, quiet lounges Eastern Facade - reception, FM office, meeting room, lounge area, staff area, consult room, gym therapy	A
		Frame colour: light grey		
GLZ	Glass	Performance glazing Colour: clear / neutral tint	All external glazing	A
WSD	Window Shading Device	Aluminium Powdercoated Brise Soleil Colour: dark grey	Northern Façade - bedrooms first floor Southern Façade - bedrooms first floor	A
BAL	Balustrade	Frameless glass balustrade Colour: clear glass	Northern Façade - covered terraces Southern Façade - covered terraces	A
LVR	Metal Louvre	Metal louvre screens to enclose plant space behind in a powder coat finish Colour: dark grey	Rooftop to enclose plant area	A
RF	Metal Roof	Metal roof sheeting Colour: Similar to Colorbond Shale Grey	All metal roofs	A

Version: 1, Version Date: 10/07/2025

Document Set ID: 8685529



Design Review Report

Location/Venue: City of Swan Council Chambers - Midland Town Hall -

312 Great Eastern Highway Midland

Meeting Date: Tuesday 4th March 2025

Meeting Time: 1pm

Item 1 –Residential Aged Care Facility expansion – Lot 24&25 (No.88 & 90) Great Eastern Highway & Lot22 & 23 (No.52 & 54) John Street MIDLAND – DRP-26/2024 – 2nd Meeting Pre-DA

Design Review	Report
Subject	Item 1 - Residential Aged Care Facility expansion – Lot 24&25 (No.88 & 90) Great Eastern Highway & Lot22 & 23 (No.52 & 54) John Street MIDLAND
Design Reviewers	Malcolm Mackay - Chairperson (Mackay Urban Design)
	Brett Wood-Gush – Deputy Chairperson (Insight Urbanism)
	Wayne Dufty – Panel Member (DNA Architects)
	Peter Damen - Panel Member (Level 5 Design)
Proponent & Project Team	Matthew Cain – Planning Solutions Ben Doyle – Planning Solutions Peter Leighton – T&Z Architects Mark Zuvela – T&Z Architects Jono Marshall – See Design Studio
Declarations	None.

Design quality evaluation	on
Principle 1 Context and character	Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.
Comments and Recommendation	Strengths a) The work done to understand the context and provide inspiration for the development is welcome. b) The intent to blend the complex into its environment is supported. c) The DRP support the design intent as a response to place. d) The use of materials alludes to the material, colours and forms of the locality. e) The articulation of the street elevations contributes to a more animated streetscape with a finer grain. Areas for improvement
	f) None.



	Recommendations 1. None.
Principle 2 Landscape quality	Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.
Comments and Recommendations	Strengths a) The overall landscape package is very well considered, appropriately comprehensive, and multi-layered in its intent. b) the inclusion of a qualified landscape architect early in the process is commendable. c) The design strategies and drivers are thoughtful, considerate of the residents, well-expressed, and integrated with the built form. d) A reasonable balance has been achieved between public, communal and private spaces. e) The extension of the landscape to the John Street verge is good. f) The landscape package includes references to hardscapes and landscape infrastructure. g) The use of rammed earth for the street boundary walls is commendable. h) The provision of a landscaped outlook from each resident room is good. i) The provision of private outdoor courts to the ground-level rooms is supported. j) There is a strong correlation between the landscape on the plans and renders. k) The use of pedestrian-style materials and light colours in the parking plaza is supported. Areas for improvement l) Ensure the existing trees on site and on the verges are protected during construction. m) Consider in section whether the street boundary interface could be terraced to reduce the visual impact of the walls. n) Given the size of the parking plaza, there is capacity for larger trees to provide more shade. Recommendations 1. Investigate the capacity for larger trees in the car park and a terraced street interface where the change in level is greatest.
Principle 3 Built form and scale	Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.
Comments and Recommendation	Strengths a) The built form and scale is appropriate to the use and the locality. b) The site planning, wayfinding and access arrangements have been significantly improved.



	 c) There is a strong correlation between the built form and the internal planning. d) The articulation of the street elevations helps to disguise the large footprint of the new building. e) The inclusion of the central courtyard is positive. f) The internal lightwells help to articulate the internal circulation spaces. g) The two circular elements successfully turn the main corners of the building, even though the winter garden is not ideally orientated for optimal amenity. h) The arrangement of all stages of the development around the central car park provides a clarity to the form of the overall development. i) The double-height structure over the entrance and porte cochere is a generous gesture. j) The inclusion of the two atriums helps to alleviate the sameness of the corridors. k) The provision of multiple views out from the corridor is good. Areas for improvement l) Some cross sections would be beneficial to better understand the boundary conditions, the spatial quality of the main entrance, and the scale of the central courtyard. Recommendations 1. Include a roof plan and cross-sections in the DA pack.
Principle 4 Functionality and build quality	Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle.
Comments and Recommendation	Strengths a) The design appears to be functional and fit for purpose. b) The organisation of the social spaces to the eastern side of the building has a clarity of purpose and mediates between the public and private areas. c) The café is now well located from a functional perspective. Areas for improvement d) More explanation of back-of house functions – kitchens, laundry, waste management, etc, and service access – in the context of the adjacent buildings would be useful. e) Parking needs analysis to justify the parking provision. f) Whilst the design is of a high quality, it is also at risk of value management to reduce costs further down the track. Start to think about which positive aspects are most worth preserving in that situation. g) Consider the internal planning of the café in more detail to check the useability of the space. Recommendations 1. Provide more detail on the back-of-house arrangements and the relationship with the existing buildings. 2. Ensure the TIS provides a justification for the parking numbers based on need.



	3. Confirm the café space is practical and efficient.
Principle 5 Sustainability	Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.
Comments and Recommendation	Strengths a) The presentation includes the start of a sustainability strategy, but it needs further consolidation. b) The engagement of a sustainability consultant is positive. c) The reuse of existing buildings could be a good part of the sustainability narrative Areas for improvement d) Develop a more comprehensive sustainability strategy, based on the three pillars of sustainability and with quantified commitments. e) Include a sectional diagram that is relevant to the project. f) Obvious elements are missing – PV, low carbon materials, recyclability, etc.
	Recommendations 1. Continue to develop a strong sustainability narrative through a well-considered sustainability strategy.
Principle 6 Amenity	Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy.
Comments and Recommendation	 Strengths a) A high-quality development on this corner could be a good precedent for future development in the area. b) The inclusion of a range of facilities is good. c) The design provides for a variety of internal and outdoor spaces, both passive and active. d) All the residents have an outlook to landscape, a street, or the courtyard. e) The resident rooms all have good access to natural light. f) The Health Loop would benefit some residents (and staff). g) The consideration of dementia patients' needs is good. h) The low sill levels providing bed-bound residents are good. Areas for improvement i) There was some discussion on the relative placement of doors and beds, noting that different operators have different views. The explanation provide in the presentation is acknowledged but should be documented with a diagram as supporting information. j) There is some capacity to introduce north light to some of
	the west facing rooms through the addition of a side light. Recommendations 1. None.



D · · · I · 7	
Principle 7 Legibility	Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.
Comments and Recommendation	Strengths a) The central car park provides a strong shared space from which to enter all parts of the development. b) The main entry is strongly distinguished by the double-height entrance. c) The two circular elements contribute to wayfinding and balance each other in the overall streetscape. d) The looped internal circulation pattern, punctuated by lightwells and social spaces is very clear. e) The consideration of legibility for dementia patients is positive. f) The linear organisation of the communal areas is very clear and mediates between the public and private areas. g) The form of the development is readable as a health facility. h) The termination of the corridor vistas to the east and west is good (assuming glass doors). Areas for improvement i) None. Recommendations 1. None.
Principle 8 Safety	Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use.
Comments and Recommendation	 Strengths a) The consideration of the more vulnerable residents is positive. b) As an active uses, the café has the potential of providing eyes-on-the-street and to the main entry route for pedestrians. c) The location of the pedestrian route around the perimeter of the car park, rather than through it, is good. d) The one-way entry and exit regime is supported, noting that there may be capacity to reduce the width of the crossovers. e) The parallel parking at the edge of the parking plaza is commendable in creating a buffer between the vehicle and pedestrian environments. Areas for improvement f) Confirm pedestrian routes to public transport/bus stops in the street (for staff and visitors). g) Show swept paths for service vehicles in the TIS. Recommendations h) Include swept paths for service vehicles in the TIS at the DA stage.



Principle 9 Community	Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.
Comments and Recommendation	 Strengths a) The use is an asset for the community. b) The generosity and range of social spaces on each floor is good, as is the diversity of outdoor spaces for social interaction. c) The café could provide a useful facility for the community if it were open to the public (even if only a coffee window), and provide an opportunity for people to engage in a more public setting. d) Check whether there is a requirement for a public art component and, if so, what the strategy is. Areas for improvement e) None Recommendations 1. Check whether there is a requirement for a public art component and, if so, what the strategy is.
Principle 10 Aesthetics	Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.
Comments and Recommendation	Strengths a) The warm colour palette is suggestive of the sense of place. b) The articulation of the built form into smaller blocks, including the round elements and the main entry, is good. c) The contrast between the solid, transparent and screening elements provides visual interest. d) The general integration of the architecture, landscape and fencing is good. e) The vertical proportioning of the openings is supported. Areas for improvement f) Provide more detail on the intended materials. g) The materials on the render appear as wallpaper and lack detail – consider how subtle changes in the panels could help to further articulate the solid blocks. h) Consider variations in the batten thickness, spacing, or colours to add richness and, perhaps, allude to the forest to the east. Likewise, the fencing.
	 Notes: Subtlety is a forgotten art of architecture. Whilst Aldo Rossi may provide inspiration for built form, consider the work of Carlo Scarpa as inspiration for detail.
	Recommendations 1. Provide more detail on materials.



|--|

Design Review progress						
	Supported					
	Pending further attention					
	Not yet supported					
	Yet to be ad	ldressed				
		DRP Meeting 1 29/10/24 Concept	DRP Meeting 2 04/02/25 Concept	DRP Meeting 3	DRP Meeting 4	
Principle 1 - Context and character						
Principle 2 - Landscape quality						
Principle 3 - Built form and scale						
Principle 4 - Functionality and build quality						
Principle 5 - Sustainability						
Principle 6 - Amenity						
Principle 7 - Legibility						
Principle 8 - Safety						
Principle 9 - Community						
Principle 10 - Aesthetics						

Concluding Remarks

The Panel thanks the Applicant for considering the previous comments and returning to the DRP. The decision to completely revisit the plan must have been a difficult one to make but it has paid off insofar as it has resulted in a massive improvement and a design that verges on excellence.

There is a strong level of support for the design in the context of the 10 SPP7 principles, with only a few areas left for some improvement. The main area for improvement is ensuring that the sustainability narrative plays catch-up with the design and bakes in quantifiable initiatives.

The other areas of improvement are matters of detail that can be readily addressed and matters where more information could be included in the DA reporting.

The design has reached a point where it does not need to return for a full DRP review, and a Chair review will suffice.



Is the proposal required to go Please tick one of the following: ☐ Yes – future full panel desi √ No – future chair review on ☐ No – supported – no furthe	gn review Iy
Is the proposal supported? Please tick one of the following: ☐ Yes - Supported √ Yes - Supported – pending ☐ No - Not supported	further attention and/or conditions to be imposed
Design Review Report endorsement & DRP Recommendation	Malcolm Mackay DRP Chair



PROJECT VISION

The project will consist of:

68 RESIDENTIAL SHARED DINING, CAFE +GYM + SYMPATHETIC

AGED CARE + LOUNGES AND + WELL BEING = COHESIVE

ROOMS COMMUNAL CENTRE BUILT FORM

THE DRP PROCESS 10 PRINCIPLES OF DESIGN

1.	2.	3.	4.	5.
Context and Character	Landscape Quality	Built Form and Scale	Functionality and Build Quality	Sustainability
6.	7.	8.	9.	10.
Amenity	Legibility	Safety	Community	Aesthetics

1 CONTEXT AND CHARACTER

LOCATION AND PROXIMITIES



1 CONTEXT AND CHARACTER

THE SITE DETAILS



SITE DETAILS

LAND AREA: 3,939.75sqmDIMENSIONS: 100m x 40m



1 CONTEXT AND CHARACTER

SITE PHOTOS



CORNER OF JOHN STREET & GREAT NORTHERN HWY - LOOKING NORTH EAST



GREAT NORTHERN HWY - LOOKING EAST

1 CONTEXT AND CHARACTER SITE PHOTOS



JOHN STREET - LOOKING NORTH



GREAT NORTHERN HWY - LOOKING SOUTH EAST

3 BUILT FORM AND SCALE

ECLECTIC MIX OF FORM + SCALE

JOHN STREET



NEW 2 STOREY RESIDENTIAL



SINGLE STOREY RESIDENTIAL



CAR DEALERSHIP

GREAT NORTHERN HIGHWAY



3 STOREY MASONIC CARE



NEW 2 STOREY RESIDENTIAL



OLD 1750'S HOMES + SHOPS



NATURAL VEGETATION



OPEN SPACE + NATURAL VEGETATION



1900's HISTORIC HOMES

THESITE



Site Context

Legend

Midland Village Site

пппппп

Train Line

Public Open Space

Midland Train Station

Parks and Ovals



Existing Condition







Existing planting on northern boundary



South/West Corner



Tree Lined Street



Trees adjacent to site

Tree Retention Plan



Existing tree to be retained



Existing tree to be removed

ID NUMBER	SPECIES
01	Lophostemon confertus
02	Melaleuca sp.
03	Melia azedarach



1:500 @ A3





LANDCAPE CONC

Landscape Concept



Nostalgia / Familiarity

We're creating spaces that feel like home, drawing from the memories and experiences of the retirement generation.





Connection to Nature

Expect classic garden styles, executed in a sophiticated manner, soft tones and natural textures like timber and stone that bring a sense of nostalgia to life. The landscape balances structured familiar forms with flowing paths that invite exploration.

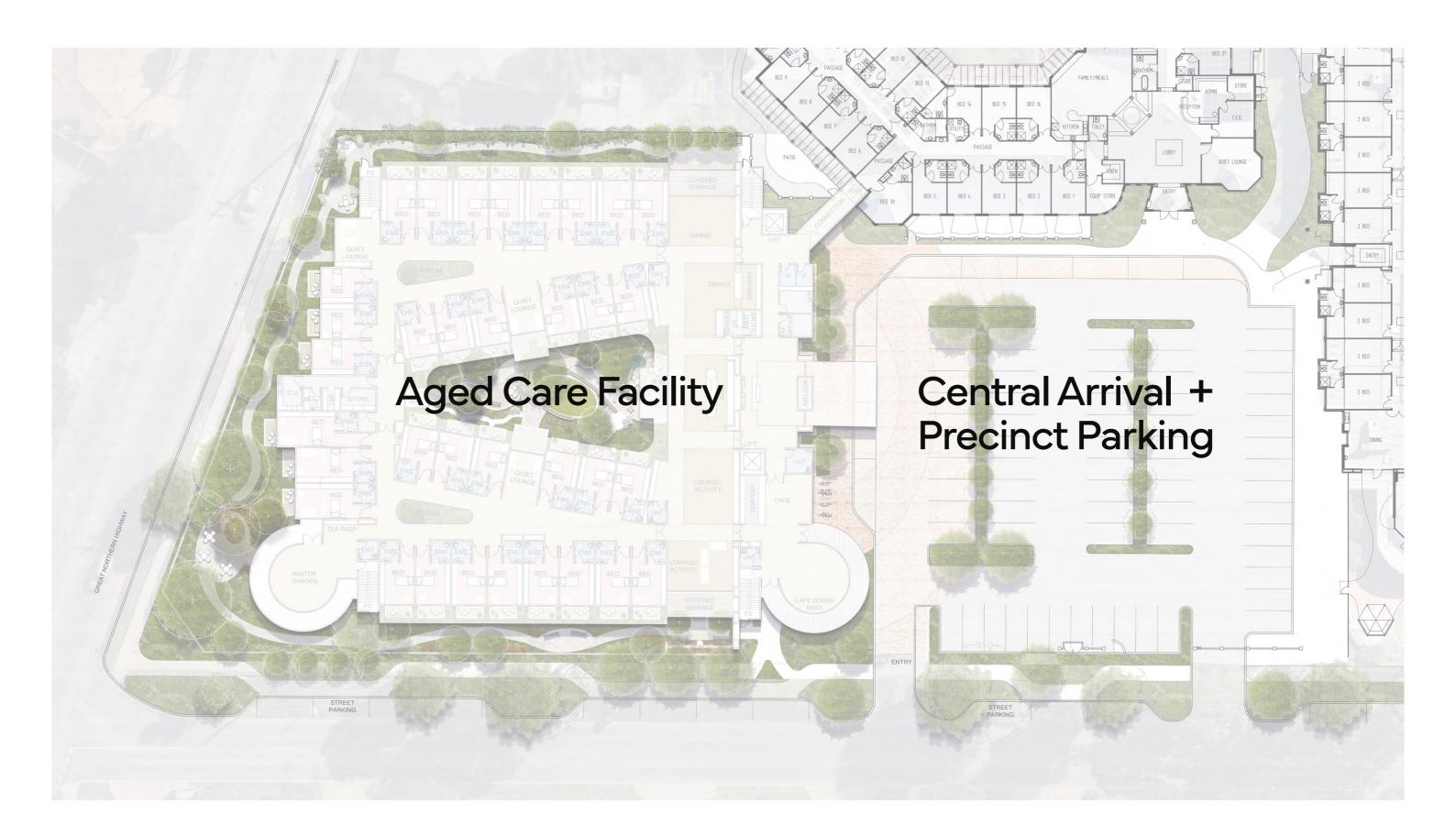




Cultural Connection

We're layering in cultural connection through local native plants and subtle indigenous story telling. Its about creating a space that feels grounded and personal. A place where residents can feel connected to their past, but also rooted in the community around them.

Key Spacial Elements



Key Spacial Elements



- 1. Wellness Loop: Continuous path connecting sensory and active spaces.
- **2. Café Terrace:** Semi-public, community-facing space for residents and visitors.
- **3. Sensory Gardens:** Tactile, aromatic planting areas with seasonal interest.
- **4. Buffer Planting:** Strategic use of planting to soften boundaries and reduce noise.
- **5. Atrium Garden:** An internal, light filled space which connects residents to nature.
- 6. Native Verge Planting: A verge garden that celebrates local endemic plants, with a focus on seasonal colour.
- 7. Green visual screen: Vertical screening elements that facilitate climbing plants to create a visual screen.
- 8. Secondary Wellness loop: A continuous path connecting internal and external spaces that reinforces an active landscape design.

Key Spacial Elements



- 1. Wellness Loop: Continuous path connecting sensory and active spaces.
- **2.** Café Terrace: Semi-public, community-facing space for residents and visitors.
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Key Design Moves



Orientating Hub

Enhanced connectivity between the orientating hub, dining area and garden spaces.



Sensory Experience

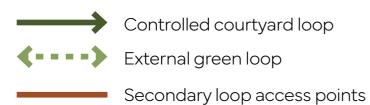
- Calm near rooms and dining
- Calm and reflective, transitioning to sensory planting and tactile engagement

Key Design Moves



Wellness Loops

Looping pathways with regular rest opportunities that reduce anxiety and encourage exploration without the risk of wandering too far.





Physical Activity

A continuous walking path for low-impact physical activity, enriched with sensory planting and regular resting points.

Higher risk activities, closer to surveillance

Informal Fitness Nodes

Garden Design Imagery

exploration trail







nostalgic planting

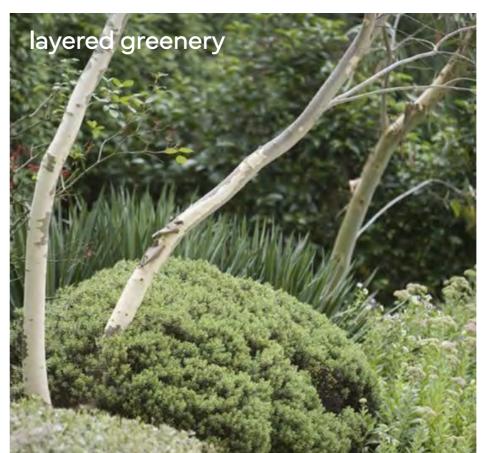
24/64



connection



comfort and moment of rest



native plants

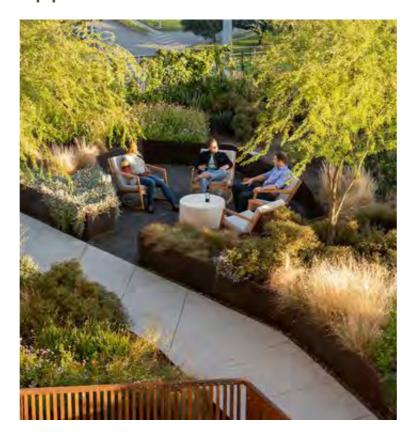
Accessible Active Landscape Imagery



active circulation



opportunities to connect



active social games







Cafe Terrace Imagery



peaceful moments











Natural materials

Native Verge Garden













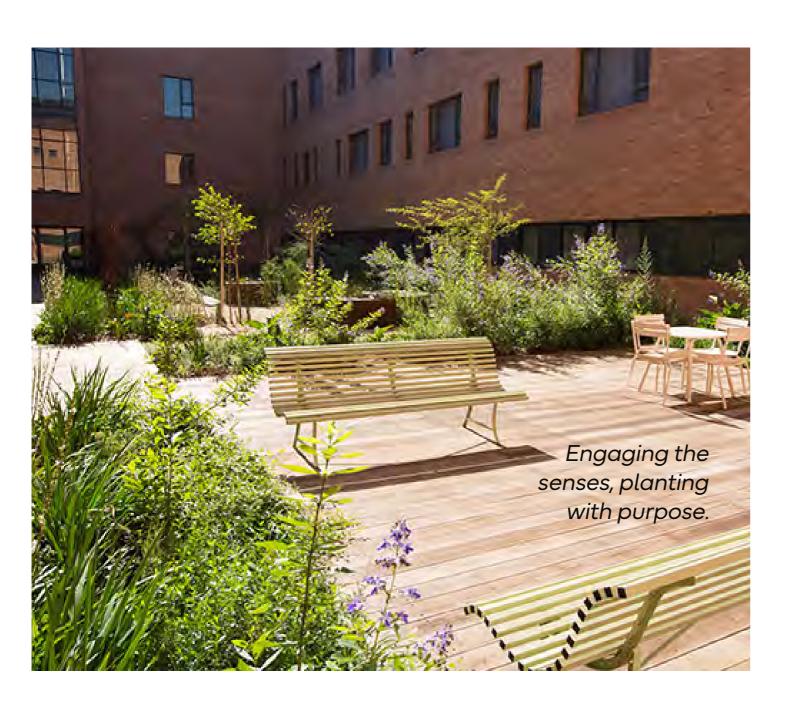


a sense of place

habitat creation

PLANTING PALETTE





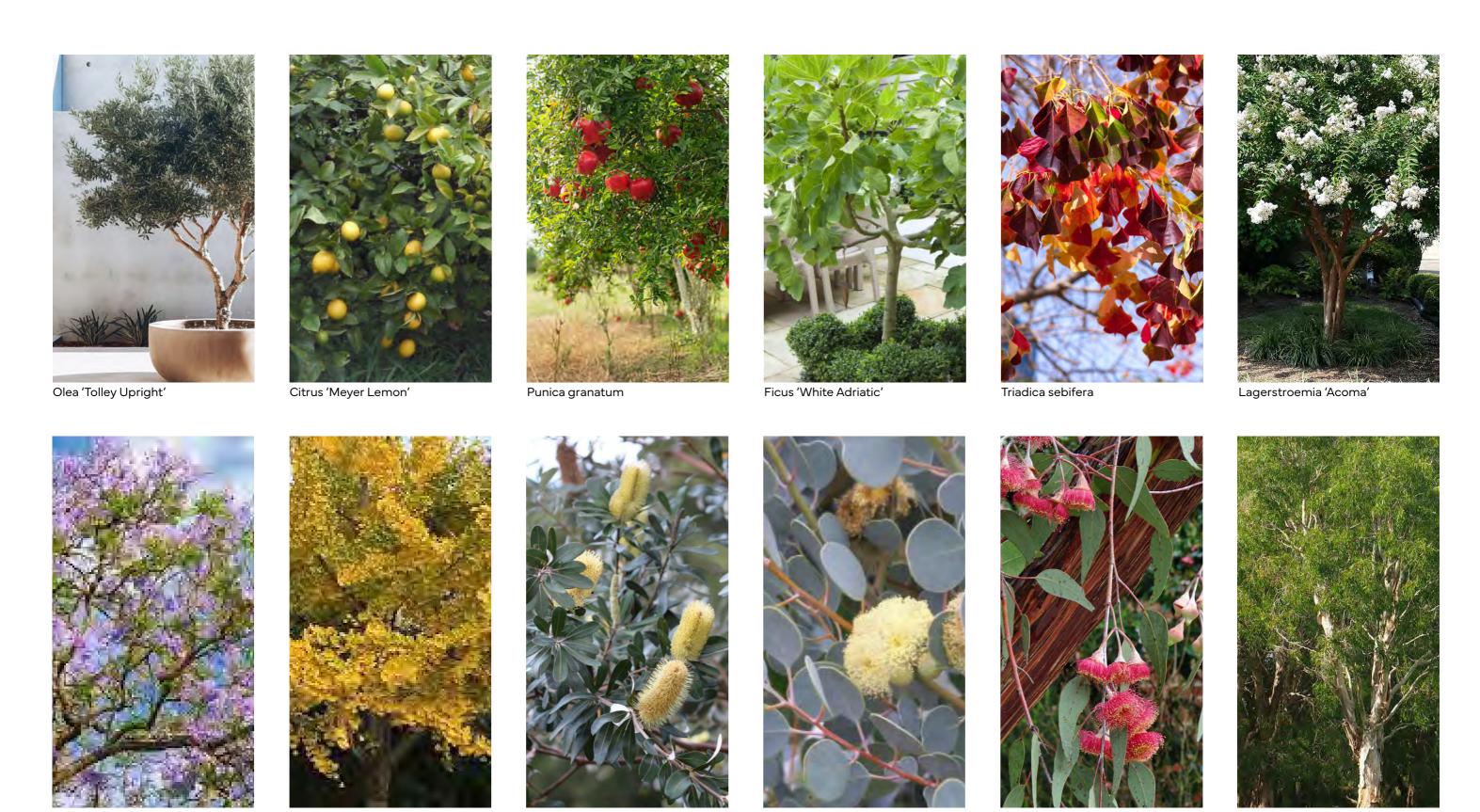
Planting Approach

Thoughtful plant choices are crucial to the creation of beautiful, functional and nourishing spaces. In creating gardens for people living with dementia, their families and care givers we want to use plants as a tool to engage and delight, help spark memory and create calm and to reinforce therapeutic interventions that increase wellbeing and quality of life.

- Plant with **seasonal change** for connection to natural cycles.
- 2 Local plants to provide **a sense of place** and attract birds.
- 3 Indoor plants to allow continual **connection to nature**.
- 4 Plants to provide **familiarity** and reinforce a sense of 'home'
- 5 Fragrant and textural plants to **engage the senses** and spark memories.
- 6 Safe planting selection and positioning of plants to reduce risk or injury.

See Design Studio Midland Village 29 / 64

Tree Species



Eucalyptus orbifolia

Eucalyptus caesia

Melaeuca leucadendra

Banskia integrifolia

Jacaranda mimosifolia

Ginko biloba

Familiar



Stachys 'Big Ears'





Rosa 'Queen of Sweden'



Erigeron karvinskiansis



Rosa 'Windermere'



Lavender 'Miss Dorrington'



Cosmos bipinnatus



Gaura 'Butterfly Bush'



Lonicera 'Honey Suckle'



Rosemary 'Tuscan Blue'



Wisteria



Virburnum tinus



Tulbhagia violacea

Sensory



Thymus 'Creeping'



Michelia figo



Oregano



Pennisetum 'Naphray'



Helichrysum 'Silver Mist



Lomandra 'Seascape'



Santolina 'Lavender Cotton'



Craspedia globosa



Philotheca myoporoides



Trachelospermum jasminoides

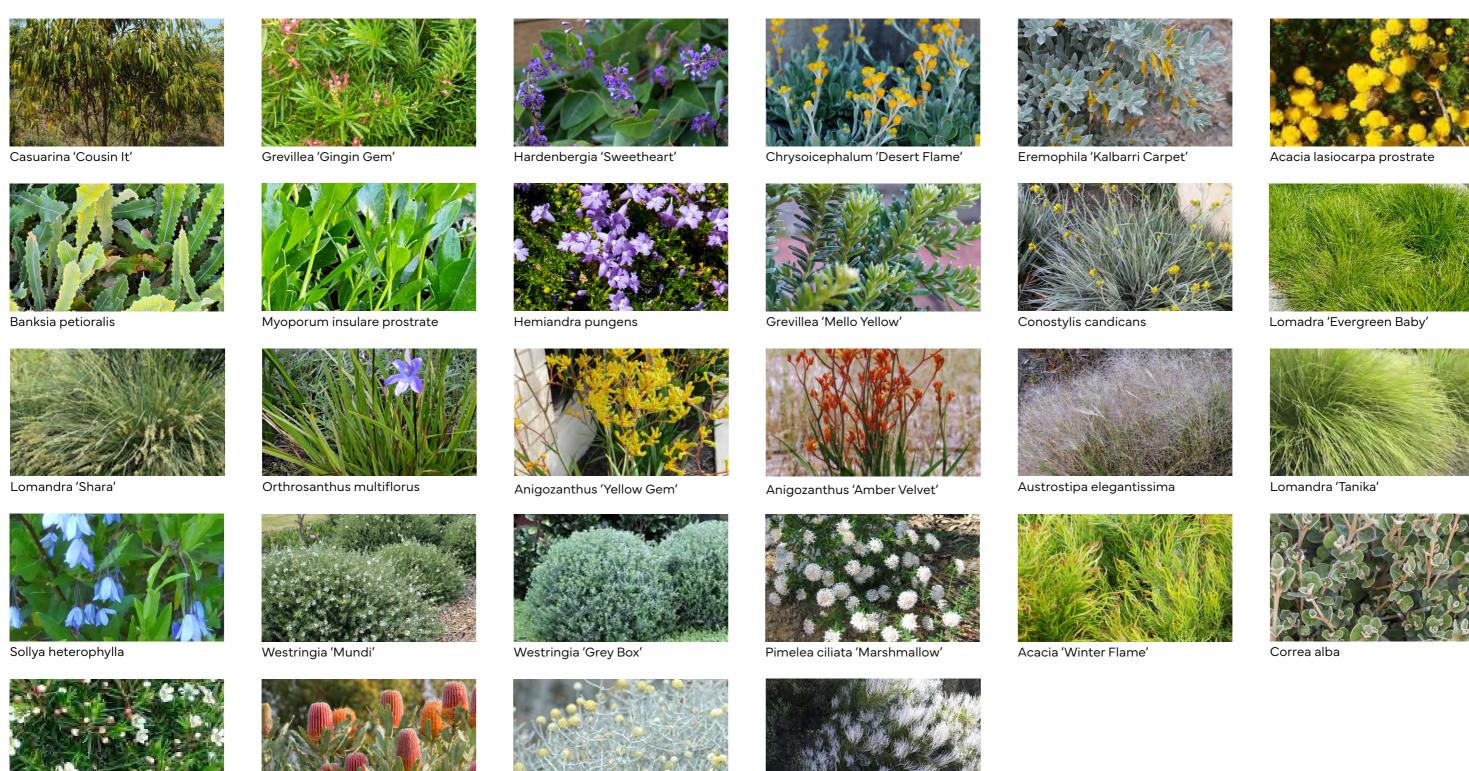


Plectranthus argentus



Rosemary prostrate

Native



Conospermum triplinervium

Leucophyta brownii

Chamelaucium 'White Dawn'

Banksia menzeisii dwarf

Boundary softening



Ficus pumila



Grevillea olivacea



Hardenbergia 'White Out'



Acmena 'Sublime'



Parthenocissus quinquefolia



Banksia integrifolia 'Sentinel'



Rosa banksiae



Casuarina 'Green Wave



Laurus 'Mile's Choice'



Acacia 'Lime Magik'

Shadey spaces



Viola hederacea



Ligularia reniformis



Cyathea cooperi



Dichondra repens



Philodendron 'Little Phil'



Aspidistra eliator



Hibbertia grossulariifolia



Philodendron 'Xanadu'



Fatsia japonica



Cissus 'Ellen Danica'



Acanthus mollis



Alpinia cerulae



Clivea miniata



Liriope 'Evergreen Giant'



Pittosporum 'Miss Muffet'



Liriope 'Isabella'



Blechnum 'Silver Lady'

Atrium garden



Philodendron cordatum



Peperomia obtusifolia





Epipremnum 'Green Dragon'



Calathea 'Burl Marx'



Hoya carnosa



Spathiphyllum 'Sensation'



Rhipsalis baccifera



Monstera deliciosa



Philodendron 'Little Phil'



Philodendron 'New Yorker'



Peperomia obtusifolia



Howea forsteriana

Ficus elastica - burgundy



Blueberry



Parsely



Strawberry



Cape Gooseberry



Thyme



Passionfruit





Nasturtiums



Perennial basi



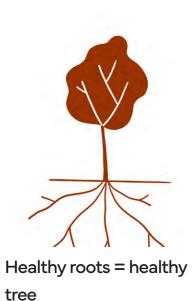
Globe Artichoke





Lemon verbena

Deep Soil Zone Benefits



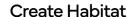


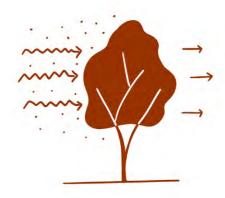


Enhance water filtration

Comfortable Micro-Climate + Reduction of Urban Heat Island Effect







Improve Air Quality



Community Health through increased canopy coverage



There is a generous allowance for deep soil areas throughout the project, exceeding the 10% requirement. This approach will be refined further for subsequent design review and DA lodgement.

Trees and gardens make a significant contribution to the ecology, character and amenity of neighborhoods. They provide habitat for fauna, shade, storm water management and micro-climate benefits, as well as improve apartment outlook and privacy.

The provision of deep soil areas to support and sustain the development of tree canopy. A deep soil area is an area of soil that is free of built structure and has sufficient area and depth to support tree growth and infiltrate rainwater.



MATERIALS

See Design Studio Midland Village 36/64

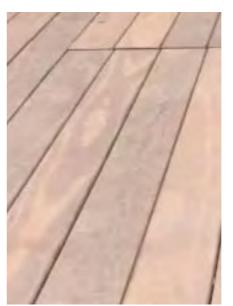
Material Palette



Porcelain paver - Travertine Mocha Supplier: Remastone



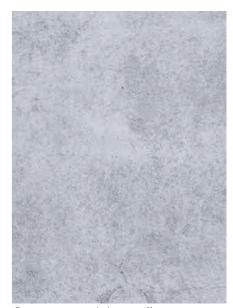
Porcelain paver - Terrazzo Pear Supplier: Remastone



Timber decking



Cotto Manetti Terracotta Supplier: Artedomus



Concrete retaining walls



Tensile wires



Wood chip mulch



Stabilised Gravel



Timber seat



Copper Bird Bath



Landscape Architects

Please feel free to contact us with any inquires.

Jono Marshall 0418 377 703 jono@seedesignstudio.com.au

Joel Barker 0466 266 305 Joel@seedesignstudio.com.au

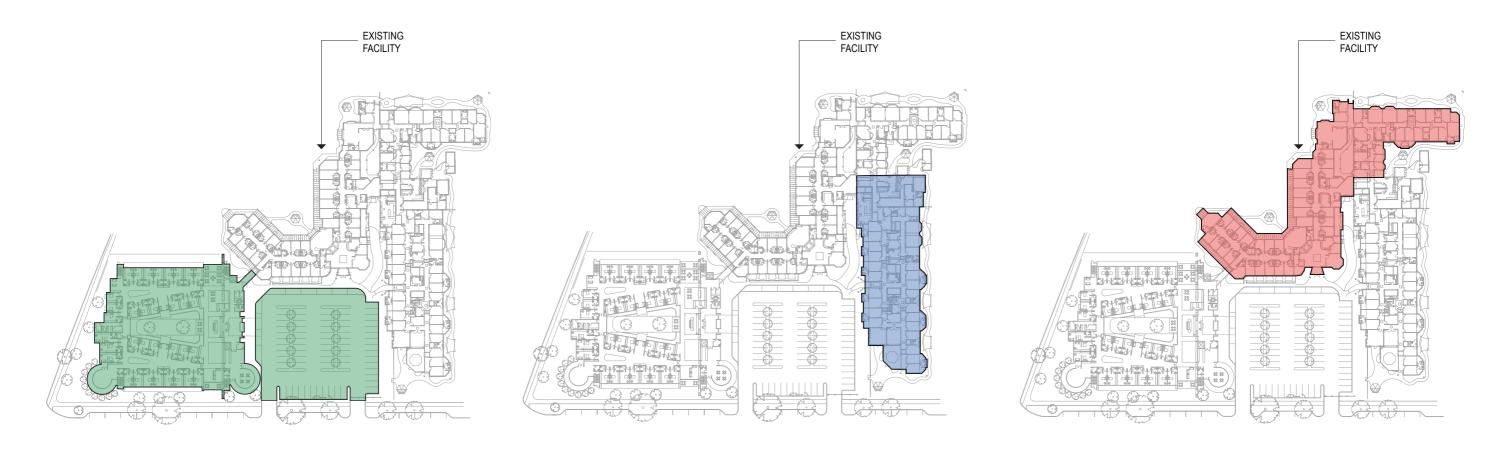


See Design Studio Midland Village

3 BUILT FORM AND SCALE MAINTAINING 2 STOREY FORM



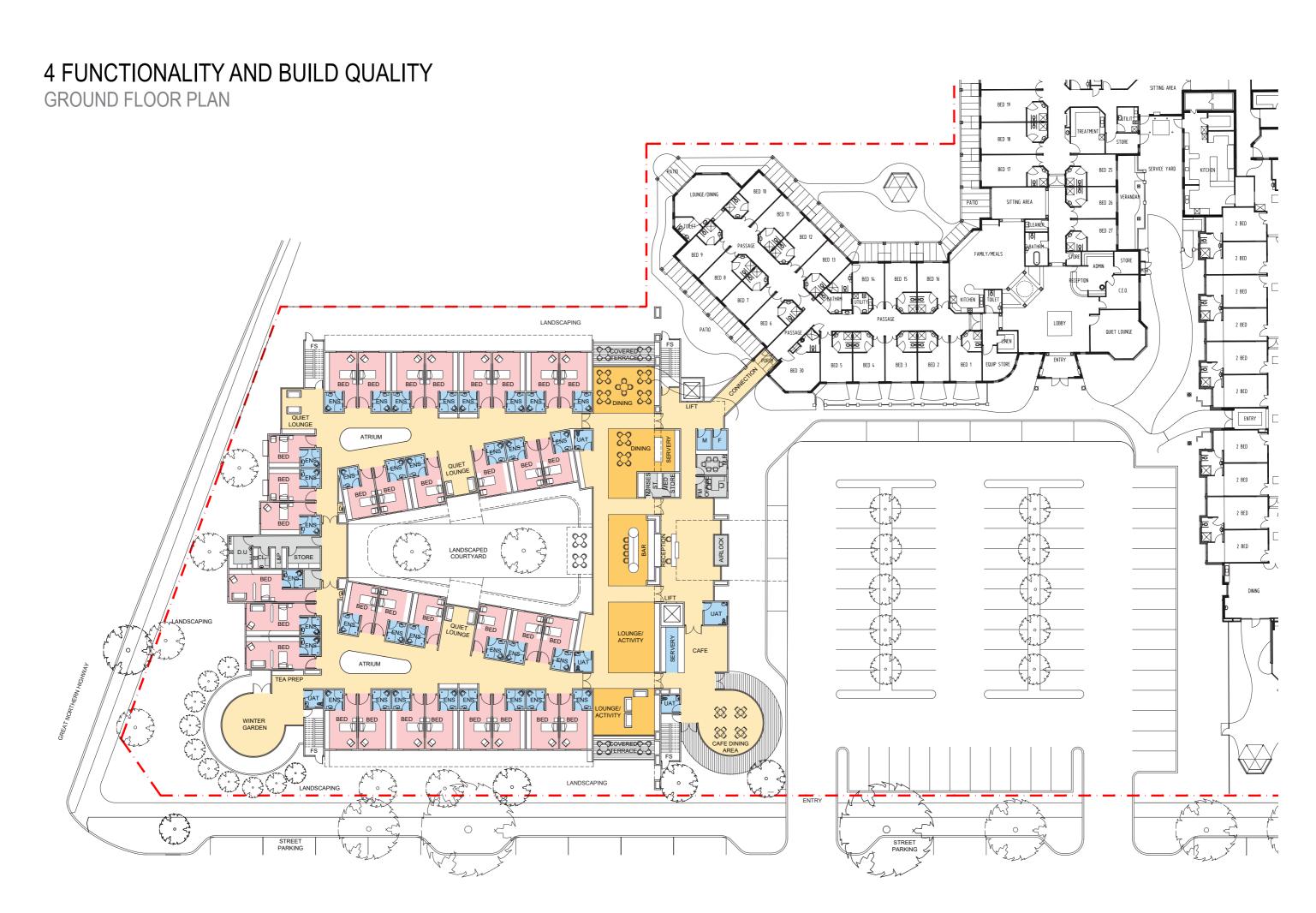
STAGING PLAN



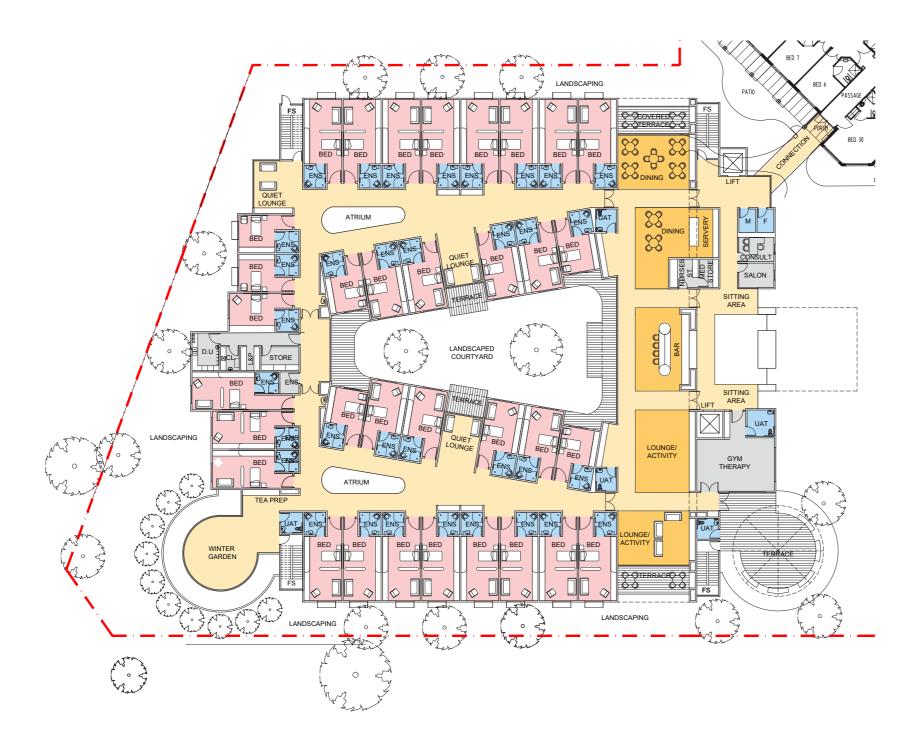
Stage 1 Stage 2 Stage 3

SITE PLAN





FIRST FLOOR PLAN



DESIGN PRECEDENTS













CORNER OF JOHN ST + GREAT NORTHERN HWY



MAIN ENTRY OFF JOHN STREET



INTERNAL PIAZZA ENTRY



VIEW FROM EXISTING RAC ENTRY



GREAT NORTHERN HWY FRONTAGE



VIEW FROM GREAT NORTERN HWY



CORNER OF GREAT NORTHERN HWY + JOHN STREET

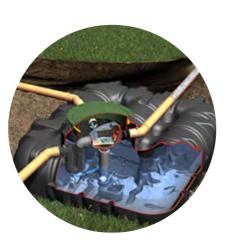


5 SUSTAINABILITY

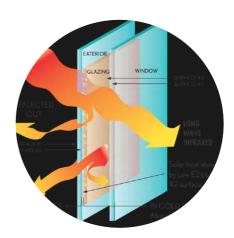
INTEGRATING SYSTEMS



CENTRAL BUILDING MANAGEMENT SYSTEMS



RAINWATER HARVESTING



PERFORMANCE GLAZING



EFFICIENT STRUCTURAL DESIGN



ROOF TOP SOLAR



ENVIRONMENT SENSORS



WATER WISE LANDSCAPING



BATTERY STORAGE

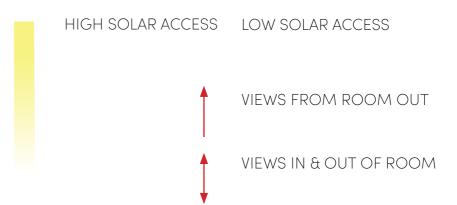


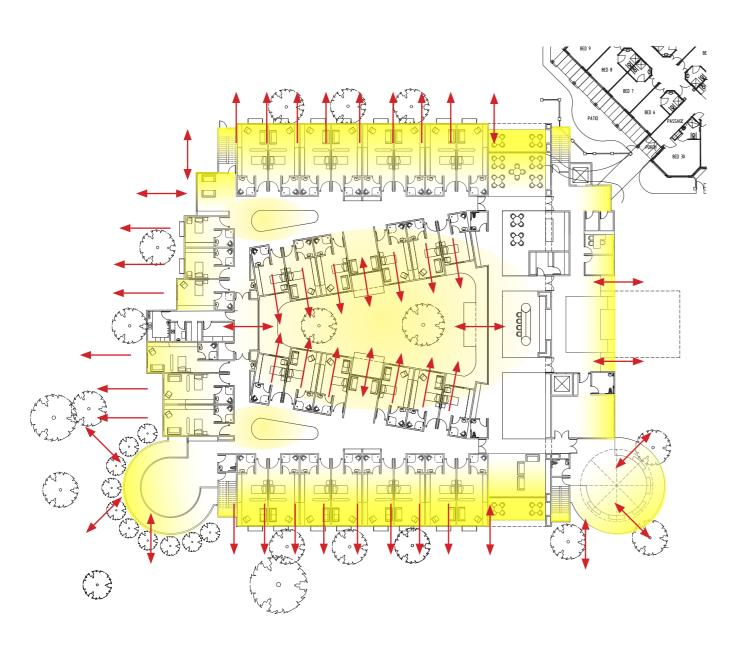
EV CHARGING

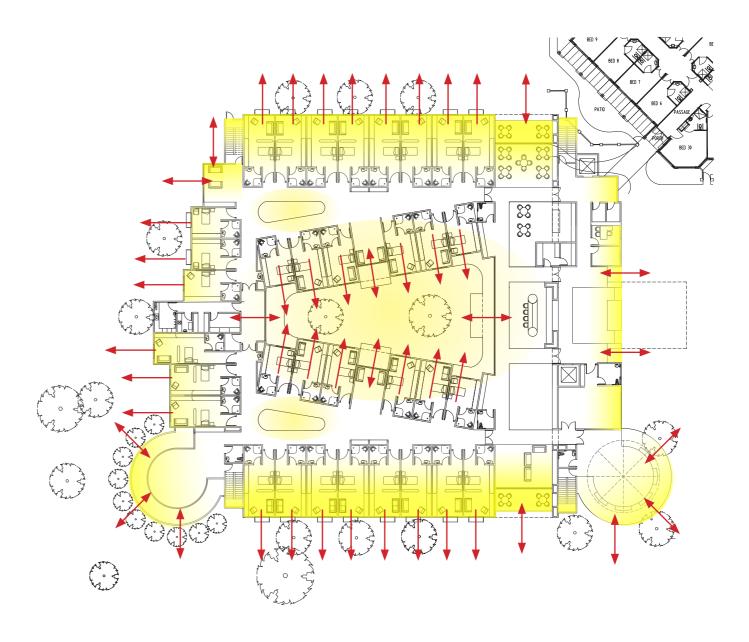


MOTION SENSORS

5 SUSTAINABILITY NATURAL LIGHT + ASPECT







Ground Floor Plan First Floor Plan

6 AMENITY

ACTIVATION + CONNECTIVITY



PUBLIC SPACES



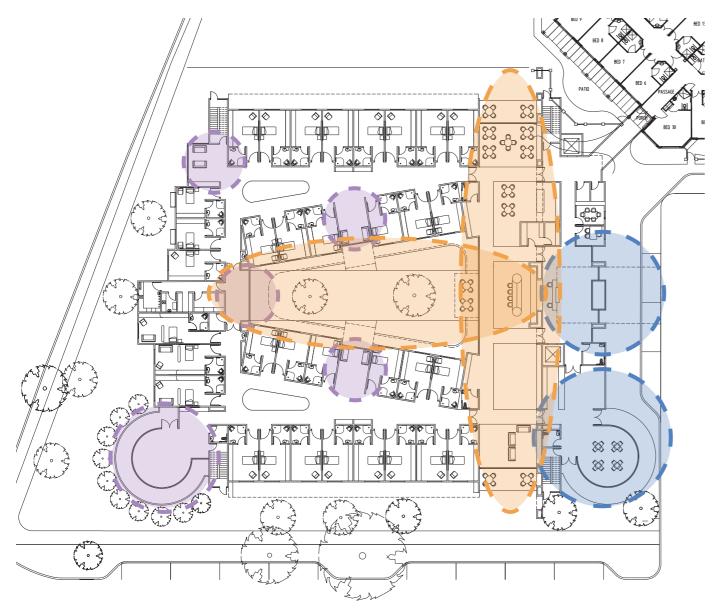
COMMUNAL RESIDENT SPACES



CONTROLLED RESIDENT ACTIVITY SPACES



QUIET COMMUNAL RESIDENTIAL SPACES



Ground Floor Plan

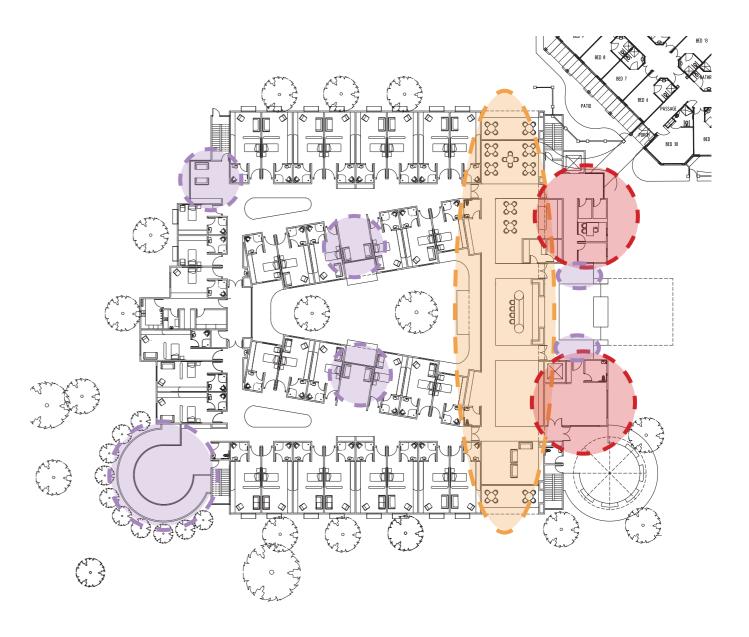
The design offers multiple communal areas where occupants and visitors can utilise for social interactions.

Some communal social spaces include:

- Terrace space & Winter gardens Gym
- Quiet Lounges Hair salon
- Dining areas

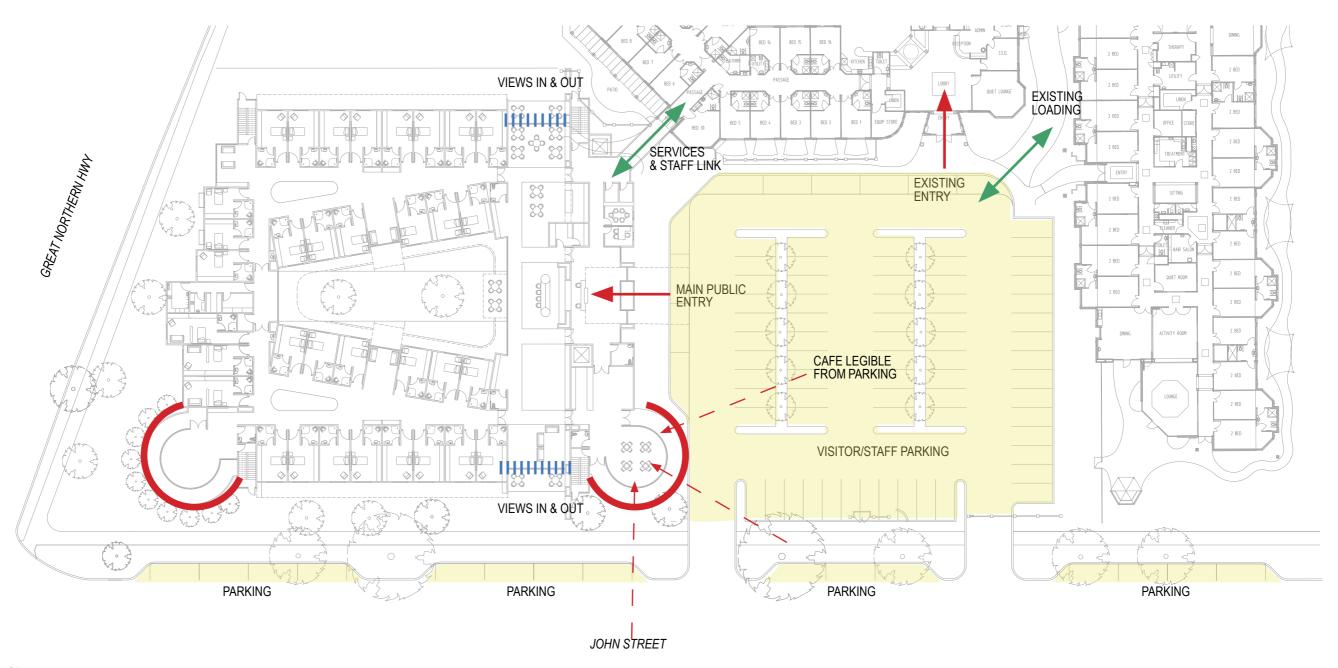
• Cafe

Activity zones



First Floor Plan

7 LEGIBILITY EASY ACCESS FOR ALL



Corner Site:

- Visibility: Easier for pedestrians & drivers to identify the property
- Landmark Potential: The form lot can serve as a natural landmark, helping it stand out in the neighborhood.
- Signage Opportunities: Owners can take advantage of visibility by placing signage that can be seen from different approaches, enhancing brand recognition or identification.
- Site Design Flexibility: The arched layout of the corner lots maximises exposure and creates for an inviting outdoor space/cafe, further enhancing legibility.

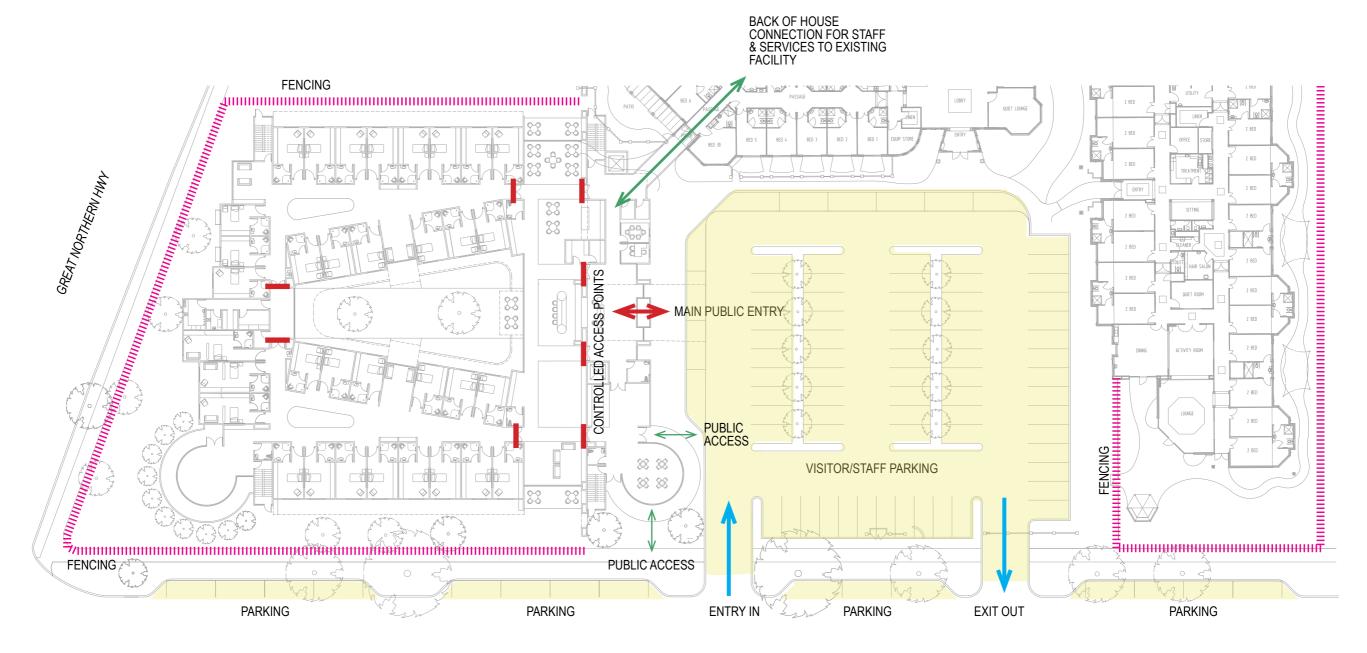
7 LEGIBILITY

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JOHN STREET





Design Review Report Chair Review Report

Chair Review Date: Friday, 22 August 2025

Item 1 - Residential Aged Care Facility expansion – Lot 24&25 (No.88 & 90) Great Eastern Highway & Lot22 & 23 (No.52 & 54) John Street MIDLAND – DRP-26/2024 – DA-503/2025

Design Review Report			
	Item 1 - Residential Aged Care Facility expansion – Lot 24&25 (No.88 & 90) Great Eastern Highway & Lot22 & 23 (No.52 & 54) John Street MIDLAND		
Chairperson undertaking the Review	Malcolm Mackay - Chairperson (Mackay Urban Design)		

Design quality evaluation			
Principle 1 Context and character	Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place.		
Comments and Recommendation	 Strengths a) The work done to understand the context and provide inspiration for the development is welcome. b) The intent to blend the complex into its environment is supported. c) The DRP support the design intent as a response to place. d) The use of materials alludes to the material, colours and forms of the locality. e) The articulation of the street elevations contributes to a more animated streetscape with a finer grain. Areas for improvement f) None. Recommendations 1. None. 		
Principle 2 Landscape quality	Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context.		
Comments and Recommendations	Strengths a) The overall landscape package is very well considered, appropriately comprehensive, and multi-layered in its intent. b) the inclusion of a qualified landscape architect early in the process is commendable.		



	c) The design strategies and drivers are thoughtful, considerate of the residents, well-expressed, and integrated with the built form. d) A reasonable balance has been achieved between public, communal and private spaces. e) The extension of the landscape to the John Street verge is good. f) The landscape package includes references to hardscapes and landscape infrastructure. g) The use of rammed earth for the street boundary walls is commendable. h) The provision of a landscaped outlook from each resident room is good. i) The provision of private outdoor courts to the ground-level rooms is supported. j) There is a strong correlation between the landscape on the plans and renders. k) The use of pedestrian-style materials and light colours in the parking plaza is supported. Areas for improvement l) Ensure the existing trees on site and on the verges are protected during construction – the City may wish to include a condition of approval or advice note in relation to this. Recommendations 1. None.
Principle 3 Built form and scale	Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area.
Comments and Recommendation	Strengths a) The built form and scale is appropriate to the use and the locality. b) The site planning, wayfinding and access arrangements have been significantly improved. c) There is a strong correlation between the built form and the internal planning. d) The articulation of the street elevations helps to disguise the large footprint of the new building. e) The inclusion of the central courtyard is positive. f) The internal lightwells help to articulate the internal circulation spaces. g) The two circular elements successfully turn the main corners of the building, even though the winter garden is not ideally orientated for optimal amenity. h) The arrangement of all stages of the development around the central car park provides a clarity to the form of the overall development. i) The double-height structure over the entrance and portecochere is a generous gesture. j) The inclusion of the two atriums helps to alleviate the sameness of the corridors.



Principle 4 Functionality and build quality Comments and Recommendation	k) The provision of multiple views out from the corridor is good. Areas for improvement I) None. Recommendations 1. None. Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle. Strengths a) The design appears to be functional and fit for purpose. b) The organisation of the social spaces to the eastern side of the building has a clarity of purpose and mediates between the public and private areas. c) The café is well located from a functional perspective. d) The use of existing back-of-house areas in the retained building is efficient. e) The parking provision is based on a tailored needs analysis rather a simple formula, which results in a more efficient use of the site. Areas for improvement f) None. Recommendations 1. None.
Principle 5 Sustainability	Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes.
Comments and Recommendation	Strengths a) The inclusion of a sustainability strategy Is commendable. b) The engagement of a sustainability consultant is positive. c) The reuse of existing buildings contributes to a compelling sustainability narrative. d) The sustainability strategy includes a wide range of initiatives and includes an identification of verification points in the approval process. e) The identified sustainability benefits include matters beyond just energy efficiency. Areas for improvement f) None. Recommendations 1. None.
Principle 6 Amenity	Good design optimises internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and



hoalthy			
Comments and Recommendation		 b) A high-quality development on this corner could be a good precedent for future development in the area. b) The inclusion of a range of facilities is good. c) The design provides for a variety of internal and outdoor spaces, both passive and active. d) All the residents have an outlook to landscape, a street, or the courtyard. e) The resident rooms all have good access to natural light. f) The Health Loop would benefit some residents (and staff). g) The consideration of dementia patients' needs is good. h) The low sill levels providing bed-bound residents are good. Areas for improvement i) There was some discussion on the relative placement of doors and beds, noting that different operators have different views. The explanation provide in the presentation is acknowledged but should be documented with a diagram as supporting information. j) There is some capacity to introduce north light to some of the west facing rooms through the addition of a side light. 	
Principle 7 Legibility		Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around.	
Comments and Recommendation		Strengths a) The central car park provides a strong shared space from which to enter all parts of the development. b) The main entry is strongly distinguished by the double-height entrance. c) The two circular elements contribute to wayfinding and balance each other in the overall streetscape. d) The looped internal circulation pattern, punctuated by lightwells and social spaces is very clear. e) The consideration of legibility for dementia patients is positive. f) The linear organisation of the communal areas is very clear and mediates between the public and private areas. g) The form of the development is readable as a health facility. h) The termination of the corridor vistas to the east and west is good (assuming glass doors). Areas for improvement i) None. Recommendations 1. None.	
Principle 8 Safety		Good design optimises safety and security, minimising the risk of personal harm and supporting	



safe behaviour and use.			
Comments and Recommendation	 Strengths a) The consideration of the more vulnerable residents is positive. b) As an active uses, the café has the potential of providing eyes-on-the-street and to the main entry route for pedestrians. c) The location of the pedestrian route around the perimeter of the car park, rather than through it, is good. d) The one-way entry and exit regime is supported, noting that there may be capacity to reduce the width of the crossovers. e) The parallel parking at the edge of the parking plaza is commendable in creating a buffer between the vehicle and pedestrian environments. Areas for improvement f) Show swept paths for service vehicles in the TIS or WMP to confirm that they can be accommodated through the car park. Recommendations Provide swept paths for service vehicles. The City may wish to include a condition of approval that ensures that this is provided to the City's satisfaction prior to Building Permit. 		
Principle 9 Community	Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction.		
Comments and Recommendation	 Strengths a) The use is an asset for the community. b) The generosity and range of social spaces on each floor is good, as is the diversity of outdoor spaces for social interaction. c) The café could provide a useful facility for the community if it were open to the public (even if only a coffee window) and provide an opportunity for people to engage in a more public setting. Areas for improvement d) It is noted that details regarding public art will be provided in due course. The Applicant is encouraged to provide the art on site rather than as cash-in-lieu to further enhance the appeal of the development. Recommendations The City should include one of its standard conditions of approval in relation to public art. 		
Principle 10 Aesthetics	Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses.		



Comments and Recommendation	 Strengths a) The warm colour palette is suggestive of the sense of place. b) The articulation of the built form into smaller blocks, including the round elements and the main entry, is good. c) The contrast between the solid, transparent and screening elements provides visual interest. d) The general integration of the architecture, landscape and fencing is good. e) The vertical proportioning of the openings is supported. Areas for improvement f) Consider, at the detailed design stage, incorporating variations in the batten thickness, spacing, or colours to add richness to allude to the forest to the east. Likewise,
	the fencing. Recommendations 1. Review the treatment of the vertical batten screening and fencing at the detailed design stage with a view to introducing more sophistication.

Design Review progress							
Supported	Supported						
Pending furt	Pending further attention						
Not yet supp	Not yet supported						
Yet to be ad	Yet to be addressed						
	DRP Meeting 1 29/10/24 Concept	DRP Meeting 2 04/03/25 Concept	Chair Review 1 22/08/25 Post DA				
Principle 1 - Context and character							
Principle 2 - Landscape quality							
Principle 3 - Built form and scale							
Principle 4 - Functionality and build quality							
Principle 5 - Sustainability							
Principle 6 - Amenity							
Principle 7 - Legibility							
Principle 8 - Safety							
Principle 9 - Community							
Principle 10 - Aesthetics							



Concluding Remarks

The Panel thanks the Applicant for considering the previous comments and further refining the design.

The Panel is now satisfied that the design meets all 10 SPP7 principles. There are a few minor areas where the design could be further improved or details confirmed, but these can be readily addressed at the detailed design stage and through conditions of approval if needs be.

The Panel commends the Applicant team for their diligence in the design process and returning to the drawing board when the original design concept was identified with various shortcomings. The result of the pre-lodgement design process is an exemplary design that will contribute positively to Midland, particularly as it is located along a major entry route to the town centre, and it sets a high benchmark for similar projects in the future.

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Is the proposal required to go Please tick one of the following: ☐ Yes – future full panel desi ☐ No – future chair review or √ No – supported – no furthe	gn review Ily
Is the proposal supported? Please tick one of the following: √ Yes - Supported □ Yes - Supported - pending □ No - Not supported	further attention and/or conditions to be imposed
Design Review Report endorsement & DRP Recommendation	Malcolm Mackay DRP Chair

Development Application Report

Midland Aged Care Facility Expansion

Lots 24 & 25 (88 & 90) Great Northern Highway and Lots 22, 23, 104 (52, 54 & 44) John Street, Midland

NNING SOLUTIONS

URBAN & REGIONAL PLANNING



Prepared for

Labouchere Investments Pty Ltd

June 2025

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Prepared by	Planning Solutions		
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Version	Purpose	Date	Author	Reviewer
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1 PRELIMINARY

1.1 Introduction

Planning Solutions acts on behalf of Labouchere Investments Pty Ltd, the registered proprietor of Lots 24 & 25 (88 & 90) Great Northern Highway and Lots 22 & 23 (52 & 54) John Street, Midland (**subject site**). Planning Solutions has prepared the following report in support of an application for development approval.

This report will discuss various matters pertinent to the proposal, including:

- Site details.
- Proposed development.
- Statutory planning framework.

This application seeks development approval for the expansion of the existing Residential Aged Care Facility (RACF) at the subject site, as well as associated vehicle parking, access and landscaping.

The proposal will facilitate extension of the existing RACF with provision for 72 new bedrooms, along with high-quality facilities and amenities for future occupants. The RACF will continue to be operated and oversee by St. Jude's Health Care Services (**St Jude's**).

The proposed development has been designed in a site responsive and contextual manner, with the layout and built form responding to the existing context of the locality, as well as advice received during preliminary engagement with the City's Design Review Panel (**DRP**).

The proposed expansion of the existing RACF reflects an increasing demand for specialised aged care housing options that provide high-quality aged care facilities. The RACF will provide an essential service to the community and will positively contribute to the amenity of the surrounding area. Technical considerations such as environmental noise, traffic, waste and sustainability matters are appropriately addressed by the development application.

Accordingly, Planning Solutions respectfully requests the Metro Outer Development Assessment Panel (**DAP**) grant approval for the application.

1.2 Background

1.2.1 City of Swan

On 25 July 2024, representatives of the project team (T&Z Architects and Planning Solutions) met with the City of Swan (**City**) to discuss the potential redevelopment of the subject site. During this meeting, the City provided initial commentary relating to potential design considerations, bushfire impacts, parking provision, land use, aircraft noise and development application submission requirements.

Following the City's preliminary advice and initial engagement with the City's Design Review Panel (**DRP**), the project team met with the City again on 6 February 2025. The project team provided an update on project status and actions taken to address preliminary officer and DRP feedback.

The outcomes of this engagement resulted in confirmation that the development would progress to a subsequent DRP meeting for further review and advice.

During this meeting, it was confirmed that due to updates to Bushfire Prone Area mapping the site was no longer identified as bushfire prone and therefore no longer required bushfire reporting or assessment at the development application phase.



1.2.2 Design Review Panel

The development design has been presented to the City's DRP twice prior to lodgement.

Design Review 1

The initial design was presented to the DRP on 29 October 2024. Early engagement with the DRP was acknowledged.

The DRP provided comments with respect to the Design Principles of *State Planning Policy 7.0 – Design of the Built Environment* (**SPP7.0**), with the following recommendation:

While the DRP sees the importance of the centre from a community point of view, there are significant concerns that a possible parking shortfall could result in a negative outcome for the local community, and on safety, accessibility and functionality.

The design review panel appreciates the early engagement with the designers.

Much of the presentation package is informative on need but lacks the necessary detail on how the site will work in terms of circulation and servicing.

There are some concerns where there is significant detail defining function but very little detail on the actual built form and landscape design outcome. The DRP is concerned that development will be unable to hide its bulky institutional form.

Design Review 2

A refined design proposal was presented to the DRP on 4 March December 2025. The panel acknowledged the improvement made to the design scheme since Design Review 1, noting the revised scheme resulted in significant improvement.

DRP remarks relating to the revised development design noted:

The Panel thanks the Applicant for considering the previous comments and returning to the DRP. The decision to completely revisit the plan must have been a difficult one to make but it has paid off insofar as it has resulted in a massive improvement and a design that verges on excellence.

There is a strong level of support for the design in the context of the 10 SPP7 principles, with only a few areas left for some improvement. The main area for improvement is ensuring that the sustainability narrative plays catch-up with the design and bakes in quantifiable initiatives.

The other areas of improvement are matters of detail that can be readily addressed and matters where more information could be included in the DA reporting.

The design has reached a point where it does not need to return for a full DRP review, and a Chair review will suffice.

Refer Appendix 1 - DRP 2 meeting minutes.

DRP Recommendations

Following two DRP reviews, the proposed development has now achieved a recommendation of support for the proposed development, as noted above.

Table 1 below illustrates the DRPs design quality evaluation of the proposed development between Design Review 1 and Design Review 2.



Table 1 - DRP design quality evaluation - Design Review 1 and 2

Principle	DRP 1 (29/10/24)	DRP 2 (4/2/2025)
Principle 1 - Context and character		
Principle 2 - Landscape quality		
Principle 3 - Built form and scale		
Principle 4 - Functionality and build quality		
Principle 5 - Sustainability		
Principle 6 - Amenity		
Principle 7 - Legibility		
Principle 8 - Safety		
Principle 9 - Community		
Principle 10 - Aesthetics		

As demonstrated above, following Design Review 2 the proposed development now achieves a supportive recommendation from the City's DRP. Design Principles 4, 5 and 10 remain 'pending further attention', however, these matters are addressed through further information provided within the development application submission.



2 SITE DETAILS

2.1 Land description

Refer to Table 1 below for lot details and a description of the subject site.

Table 2 - Lot details

Lot	Deposited Plan	Volume	Folio	Area (m²)
22	27685	1261	464	736
23	27685	1261	465	737
24	27686	1261	467	1,287
25	27687	1837	181	1,163
104	97843	2162	195	10,180

There are no encumbrances listed on the Certificates of Title relevant to the subject site.

Refer Error! Reference source not found. - Certificates of Title.

2.2 Location

2.2.1 Context

The subject site is in the municipality of the City of Swan (**City**), within the locality of Midland. Located at the corner of Great Northern Highway and John Street, the site is within the established Midland area.

Refer Figure 1 - Aerial Photograph.



Figure 1 - Aerial photograph



The site is approximately 15km northeast of the Perth city centre and approximately 2.1km north of the Midland District Centre. The development area is bounded by existing residential dwellings to the north, Great Northern Highway to the west, John Street to the south, and a mental health care facility to the east.

Broadly, the development area is surrounded by primarily residential land use, including a mix of single and grouped dwellings. It is expected that there will continue to be residential densification in the locality, in line with the objectives of the City of Swans Local Planning Strategy.

The subject site is in an area accessible by public transport, with bus stops along Great Northern Highway in proximity to the proposed development. The Midland Train Station is also located approximately 1.5km south of the subject site. Pedestrian paths are provided along both sides of John Street and Great Northern Highway, linking the development area to the surrounding locality.

2.2.2 Existing Site Conditions

The subject site is presently developed with multiple existing building and land uses, comprising:

- St. Jude's Aged Care Facility, associated landscaping and parking across Lot 104 (44) John Street
- Single storey residential dwelling, access and ancillary structures across Lot 23 (54) John Street
- Minor ancillary structures including fencing and a shed across Lot 22 (52) John Street and Lot 24 (88) and Lot 25 (90) Great Northern Highway

Aside from the existing St. Jude's Aged Care Facility building, all other elements over the site will be demolished to facilitate the expansion of the RACF.

The site has a generally flat topography, with a slight increase in natural levels from the south-eastern corner of to the central portion of the site adjoining the existing facility.



B PROPOSED DEVELOPMENT

This application seeks development approval for an expansion of the existing aged care facility and associated parking, access and landscaping. The proposed facility expansion will provide 72 new rooms to the existing and new residents of the facility. Renders of the proposed development are provided in **Figures 2-6** below.



Figure 2 - Development perspective, as viewed looking northeast from Great Northern Highway



Figure 3 - Development perspective, as viewed looking southwest from internal car park



Figure 4 - Development perspective, as viewed looking west from John Street



3.1 Development Summary

A summary of the proposed development is provided in **Table 3** and **4** below.

Table 3 - Development summary

Particular	Proposed	
Building height:	1-2 storey	
Car Bays:	 84 car parking bays, including: 63 parking bays (on-site) 9 short-stay bays 12 on-street bays 	
Bicycle spaces:	10 spaces	
Land Use:	Use Not Listed (Nursing Home)	
Rooms:	72 single bed rooms	

Table 4 - Proposed Development Details

Development Aspect	Details
Ground Floor Layout	 Reception and entrance foyer Office and meeting rooms Nurse and medication storage Bar, lounge, activity and quiet areas 36 single-bed rooms Servery and dining areas Café Internal landscaped courtyard Winter garden and external terraces Connection to existing aged care facility building
First Floor Layout	 Resident amenity areas (bar, gym/therapy room, salon, lounge and activity areas) 36 single-bed rooms Staff areas Two nurse rooms with associated medication storage Servery and dining areas Winter garden Three lounges and outdoor terraces

Refer Appendix 3 - Development Plans.

3.2 Built Form

The proposed RACF expansion proposes a 1-2 storey building scale that ensures it remains consistent with the existing building scale present within the surrounding locality. The surrounding area features a mix of architectural styles and materials, which are reflected in the proposed development. The architectural design has been achieved through resolution of a design that contains references to the residential and natural elements present within the locality.

The design is further outlined through the Architectural Design Statement prepared by T&Z Architects in response to the design principles of SPP7.0. Refer **Appendix 4** –Architectural Design Report.

A separate schedule of materials and finishes is also provided. Refer **Appendix 5** - Material Schedule.



3.3 Access and Parking

Access

Vehicle access and egress to the subject site is available via two single width crossovers to John Street. Three existing crossovers to the subject site will become redundant as a result of the proposed new access configuration and be removed as part of the development works.

The subject site has primary pedestrian access via the existing footpath along John Street, with an additional connection point to Great Northern Highway. This provides pedestrian connectivity to the wider locality.

Vehicle Parking

A total of 83 vehicle parking bays will be provided as part of the proposed development. Vehicle parking bays will comprise the following:

- 71 on-site car parking bays (including 1 ACROD bays).
- 12 on-street car parking bays

A Transport Impact Statement (refer **Appendix 6**) has been prepared in support of the proposed development. In preparing the TIS, Urbii have assessed transport, access, parking and trip generation aspects of the proposed development. Urbii have also undertaken a parking demand and supply analysis of the existing residential aged care facility to support proposed parking provision.

End of Trip Facilities

The development provides 10 bicycle parking spaces facilitating parking directly adjacent the main entry of the development. End of trip facilities, including a separate male and female shower are provided for staff.

3.4 Landscaping

The proposed design is centred around a highly landscape-oriented site layout and design approach, with considerable consideration having been given to the integration and importance of landscape for residential aged care developments. Having access to nature, trees and landscaping is particularly important for the elderly in providing sense of place, promoting physical activity and providing mental health benefits.

The development proposes significant soft landscaping treatments on site, with all planting areas being deep soil zones to support planting treatments. The proposed landscaping areas will create a significant greenscape response for the development, significantly enhancing the interface to the public realm.

The development proposed removal of two existing trees, one on the site and one within John Street to facilitate a new vehicle egress point. As part of the proposed landscaping upgrades, approximately 69 trees are proposed to be planted on-site, with an additional 10 trees proposed within the verge as part of external street upgrades. This provides significant future tree canopy to the development and the street.

Hard landscaping elements will be included throughout the external building area and the internal courtyard to enhance resident amenity. This will include walking trails, wellness areas, informal fitness nodes, and bird, insect and reptile habitat integration opportunities.

Refer **Appendix 7** - Landscape Plan prepared by See Design Studios.

3.5 Waste

A Waste Management Plan (**WMP**) has been prepared by Talis Consultants in support of the proposed development. The WMP considers estimation of general waste volumes and recommendations for appropriate collection, storage, handling and management of waste and recycling for the development with consideration to the guidelines set out in the City of Melbourne's *Guidelines for Waste Management Plans* (2021).



The development proposes one dedicated bin store located at the southeast corner of the site, providing for both the expansion element of the development as well as the existing facility. The proposed bin store is deemed to provide sufficient general and recycling waste storage capacity based on the operations of the facility and twice weekly collection by private contractor.

The WMP concludes that proposed bin storage areas and bin collection arrangements are adequate to service the proposed development.

Refer **Appendix 8** – Waste Management Plan.

3.6 Sustainability

Full Circle Design Services has been engaged as the project sustainability consultant, with the lead consultant a Green Star Accredited Professional. The proponent is committed to achieving a sustainable design outcome and is proposing a range of sustainability initiatives within the development, including:

- Solar photovoltaic array
- Upfront carbon emissions reduction
- Electric vehicle infrastructure
- Envelope performance improvement
- Biodiversity improvement and native planting
- Low Global Warming Potential (GWP) refrigerants
- Fossil fuel free site

Refer Appendix 9 - Sustainability Strategy.

3.7 Acoustic

An Environmental Noise Assessment (**Acoustic Report**) has been prepared to consider the proposed development in accordance with the *Environmental Protection (Noise) Regulations 1997* (**Noise Regulations**). The Acoustic Report identifies the proposed development is only at the development application stage and the detailed design process is yet to occur.

As set out within the Acoustic Report, compliance with the requirements of the Noise Regulations is considered achievable. During the detailed design process (post-development approval), full assessment of noise emissions associated with the development will be undertaken to ensure compliance with the relevant requirements.

As per the Acoustic Report, the subject site is within proximity to Perth Airport and is subject to consideration with *State Planning Policy 5.1– Land Use Planning in the Vicinity of Perth Airport* (**SPP5.1**). This matter has been addressed in the acoustic report prepared in support of the proposed development.

Refer **Appendix 10** – Environmental Noise Assessment.

3.8 Stormwater

A Stormwater Management Plan (**SMP**) has been prepared by Colliers for the proposed development. The purpose of the SMP is to demonstrate the development can appropriately manage stormwater drainage in accordance with the City's stormwater storage requirements.

Stormwater from the building and car park is proposed to be managed via a range of measures including soakwells and GRAF cells which will provide a total storage volume exceeding required volume.

Refer **Appendix 11** - Stormwater Management Plan.



4 STATUTORY PLANNING FRAMEWORK

4.1 Metropolitan Region Scheme

Under the provisions of the Metropolitan Region Scheme (MRS) the subject site is zoned 'Urban'. The proposed development is consistent with the intent of the Urban zone under the MRS and is capable of approval accordingly.

The subject site is not affected by land reserved by the MRS, nor is it subject to any resolution or declaration made under the MRS.

4.2 Local planning scheme

4.2.1 Zoning

The local planning scheme applicable to the subject site is the *City of Swan Local Planning Scheme No.17* (**LPS17**). Pursuant to LPS17, the subject site is zoned 'Residential', with a dual-density code of R20/40.

Refer Figure 5 - LPS17 Zoning Map (extract).

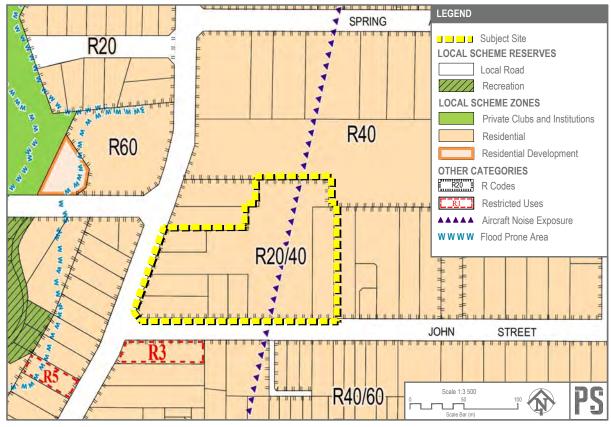


Figure 5 - LPS17 Zoning Map (extract)



In accordance with LPS17, the objectives of the Residential zone are:

- a) Provide for a range of forms and densities of residential development to meet the needs of the wide variety of households which make up the community.
- b) Promote a residential environment in each locality consistent with the form and density of residential development permissible in the locality, so as to enhance a sense of place and community identity.
- c) Preserve and enhance those characteristics which contribute towards residential amenity, and to avoid those forms of development which have the potential to prejudice the development of a safe and attractive residential environment.
- d) Provide for a limited range of ancillary development compatible with the form and density of residential development, and complementary to the needs of local communities, but which will not compromise residential amenity.
- e) Avoid development of land for any purpose or in any manner that would detract from the viability or integrity of development in either the Strategic Regional Centre or the Commercial zones.

The proposed aged care facility is considered to align with the objectives of the PCP zone, as follows:

- The development delivers an extension of existing specialised aged care services on private land.
- The proposal exhibits a specialised form of residential development which assists in meeting diverse needs within the community for people who are unable to live independently.
- The facility's design prioritises harmony with its surrounding environment through high-quality architectural and landscape design that integrates appropriately within the surrounding residential locality.
- The development is not located within the Strategic Regional Centre or a Commercial Zone.

4.2.2 Special Control Area – Aircraft Noise Exposure Areas

The subject site falls within the Special Control Area - Aircraft Noise Exposure Area (**SCA**) as identified on the LPS17 Scheme Map.

The SCA generally aligns with the intent and objectives of *State Planning Policy 5.1* Land use planning in the vicinity of Perth Airport (**SPP5.1**) and the Aircraft Noise Exposure Forecasts (**ANEF**). It is understood that the purpose of the SCA is to manage development around the Perth Airport buffer zone and avoid encroachment of incompatible (noise sensitive) land uses from impact by aircraft noise.

In accordance with the Acoustic Report, the subject site within the 20 ANEF noise contour. In accordance with Schedule 12 – Building Site Acceptability Based on Aircraft Noise Zones, a 'Nursing Home' building type is 'Conditionally Acceptable' within a 20 ANEF noise contour.

The proposed development requires planning approval in accordance with Clause 6.2.2 of LPS17. The decision maker determine that a development requires minimum construction or noise attenuation measures to be incorporated into the design of the development. As per the Acoustic Report, recommended construction outcomes are proposed to ensure compliance with acoustic requirements.

It is considered that the proposal has limited potential for adverse impact from the airport and aligns with the intent and objectives of SPP5.1 and the purpose of the SCA. The development warrants approval accordingly.

4.2.3 Land use permissibility

The proposal involves the expansion of an existing Residential Aged Care Facility on the subject site. Pursuant to LPS17, the proposed operation is not listed within Table 1 - Zoning Table or within Schedule 1 of LPS17.

The Residential Aged Care Facility is therefore classified as a 'Use Not Listed'.



Pursuant to Clause 4.4.2, where a use is not listed within Table 1 - Zoning Table of LPS17 and the use cannot be reasonably determined to fall within a type or class of use that is listed, the local government may:

- a) determine that the use is consistent with the objectives of the particular zone and is therefore permitted;
- b) determine that the use may be consistent with the objectives of the particular zone and thereafter follow the advertising procedures of clause 9.4 in considering an application for planning approval; or
- c) determine that the use is not consistent with the objectives of the particular zone and is therefore not permitted.

The proposed land use is considered consistent with the objectives of the Residential zone as set out in **Section 4.2.1** above. Beyond this, the proposed land use is also an extension of the existing aged care facility which operates from the subject site. The land use is therefore considered a permitted use capable of approval.

Notwithstanding the above, Clause 9.4.3 of LPS17 sets out further requirements for applications for development approval which state:

Where an application is made for planning approval to commence a use or commence or carry out development which involves a use which is –

- a) an 'A' use as referred to in clause 4.3.2; or
- b) a use not listed in the Zoning Table,

the local government is not to grant approval to that application unless notice is given in accordance with clause 9.4.3.

Therefore, even if the land use were deemed to be consistent with the objectives of the Residential zone and considered to be permitted in accordance with Clause 4.4.2(a), any development application for a 'use not listed' is required to be advertised for public comment in accordance with Clause 9.4.3 of LPS17.

Following completion of advertising of the development application, it is appropriate that the proposed development and associated use not listed be supported.

4.2.4 Development standards and requirements

Clause 5.1 of LPS17 requires development to have regard to any applicable adopted local planning policy. Assessment against the relevant planning policies is completed within this report. Refer **Section 6.3**.

There are no other development standards within LPS17 specifically relevant to the proposed development.

4.3 Local Planning Policies

4.3.1 POL-LP-1-10 - Provision of Public Art

The City's Local Planning Policy 1.10 Provision of Public Art (LPP1.10) guides the requirement for the provision of public art within any development. LPP1.10 states that the policy shall apply where:

- The prescribed development will cause at least 20 people to become part of, or to interact with, the locality in which the prescribed development will be located, and who will therefore benefit from the public art.
 or
- b) The prescribed development will, in the opinion of the City, be highly visible from the public realm.

Public art contributions are required for development to the value of one percent of the total development cost. These contributions will be imposed as a condition of approval.

The specific of intended public artwork location and design is not resolved. This matter is appropriately addressed via condition of approval.



4.3.2 POL-LP-1-13 - Design Review

The City's Local Planning Policy 1.13 Design Review (LPP1.13) sets out the requirements and criteria of developments which are to be presented to the Design Review Panel. Pursuant to LPP1.13, the proposed development is required to be presented to the Design Review Panel on the basis that it is a DAP application.

As discussed within **Section 2.2**, the development has been presented to the City of Swan DRP on two occasions and is supported by the panel, with no further formal DRP meeting required.

It is understood that the City will refer the development application to the DRP Chair for final comment during the application assessment process.

4.3.3 POL-TP-129 - Vehicle Parking Standards

The City's Local Planning Policy 129 Vehicle Parking Standards (LPP129) guides the requirement for the provision of appropriate parking provision for vehicle parking within any development. LPP129 applies to all development except for development where the Residential Design Codes (R-Codes) apply or development involving a rural use.

Whilst the subject site is zoned Residential and has an applicable density coding, the R-Codes do not apply to the development of a residential aged care facility such as the proposed facility. Therefore, the requirements of LPP129 apply and shall be used in the consideration of vehicle parking requirements.

Where a land use is not listed within Table 1 – Land Use Parking Requirements of LPP129, the parking requirement is "to be negotiated with the Council".

Parking provision has previously been discussed with the City's officers through preliminary engagement process. In support of the proposed development and parking provision, the City recommended the TIS appropriately address parking supply and demand to confirm that adequate parking provision was provided for the development.

As per part 3.2 of the TIS, a parking survey was undertaken by Urbii at the existing aged care facility to assess existing parking demand and occupancy. This determined that at peak occupancy (staff and visitors), 76% (48 bays) of vehicle parking bays were occupied. Assessing the proposed expansion and overall residential aged care beds (182) against the 83 proposed on and off-site parking bays, the development would result in 77% parking occupancy rate.

Taking away the off-site parking provision, 64 vehicle parking bays would be required at peak occupancy. The development proposes 71 dedicated on-site parking bays. Considering the outcomes of the TIS assessment of parking demand with the proposed development parking provision, the facility will contain sufficient parking to support development operations.

In addition to the 71 proposed on-site parking bays, the development proposes the provision of 12 additional on-street parking bays within John Street. Given these bays are within the road reserve, they are subject to review by the City's Asset Management department as part of the development application process.

4.3.4 POL-C-040 - Midland District Drainage Development Reserve Fund

The City's *Policy C-040 – Midland District Drainage Development Reserve Fund* (**Drainage Policy**) sets out contribution requirements for development within the Midland District Drainage area.

It is understood the contribution requirements of the City's Drainage Policy will be addressed via a condition of approval.



4.4 State Planning Policies

4.4.1 State Planning Policy 5.1 - Land use planning in the vicinity of Perth Airport

State Planning Policy 5.1 - Land use planning in the Vicinity of Perth Airport protects Perth Airport from unreasonable encroachment by incompatible (noise-sensitive) development, to support ongoing development and minimise impact of airport operations (particularly noise) on existing and future communities.

SPP5.1 applies to the proposed development as the subject site is located within the '20-25 ANEF' contour. Refer **Table 5** below for an assessment against the provisions of SPP5.1.

Table 5 - Assessment against SPP5.1 provisions

Requirement	Comment	Complies
Development may be approved provided it is consistent with the zoning and density coding of the land under the local planning scheme, local development plan or local structure plan	The proposed development is consistent with the zoning of the land under LPS17	✓
In the case of development that is subject to discretionary control under a local planning scheme (as provided for under clause 5.3.1), the impact of aircraft noise on the users or occupiers of the development should be taken into consideration in the determination of applications, and where relevant, in the imposition of conditions of approval.	Noted	✓
Where no density coding is prescribed for 'Residential' zoned land, the maximum density should generally be limited to R20, except as provided for in relation to the application of residential density controls under clause 5.3.2	N/A	N/A

As outlined in Table 5, the proposed development is consistent with provisions of SPP5.1.

Additional to the above, Gabriels Hearne Farrell have prepared an Acoustic Report (refer **Appendix 10**) in support of the development which is inclusive of assessment of aircraft noise.

Further noise considerations associated with construction (such as materials / glazing specifications) will be considered through the detailed design phase of the development.

4.4.2 State Planning Policy 7.0 - Design of the built environment

State Planning Policy 7.0 Design of the Built Environment (SPP7) provides a framework which works to define the desired design quality outcomes for development across the State.

The proposed development has been assessed against these design principles of SPP7.0 through the DRP review process. Through two design review sessions, the development has evolved and is now generally supported by the City's DRP.

Additionally, an Architectural Design Statement has been prepared by the project architect, T&Z Architects, demonstrating how the development has been considered with, and responds to, the design principles to create a high-quality development outcome.

Refer Appendix 4 - Architectural Statement.



4.4.3 Matters to be considered

Table 4 - Matters to be considered

Ma	tter to be considered	Provided
(a)	the aims and provisions of this Scheme and any other local planning scheme operating within the Scheme area;	An assessment against the relevant provisions of LPS17 has been completed within this report. It is considered that the proposed development responds appropriately to the key aims, objectives and provisions of LPS17.
(c)	any approved State planning policy	As assessment against relevant State Planning Policies has been completed in Section 4.4 of this report.
(g)	any local planning policy for the Scheme area;	An assessment against the applicable Local Planning Policies has been completed within Section 4.3 of this report.
(1)	the effect of the proposal on the cultural heritage significance of the area in which the development is located;	The development has been designed to respond to its contextual surrounds and is not considered to adversely affect the surrounding area or adjoining buildings.
(m)	the compatibility of the development with its setting, including — (i) the compatibility of the development with the desired future character of its setting; and (ii) the relationship of the development to development on adjoining land or on other land in the locality including, but not limited to, the likely effect of the height, bulk, scale, orientation and appearance of the development;	The design of the development has considered the context and character of the locality, particularly the built form of adjoining properties and the surrounding area. In designing the proposed development, consideration has been given to planning controls and requirements, existing development within the locality, and the importance of the development being incorporated into the current and future development context. Building height and setbacks have been considered to ensure the development maintains consistency with the existing and future character intention for the area.
(n)	the amenity of the locality including the following (i) environmental impacts of the development; (ii) the character of the locality; (iii) social impacts of the development;	The expansion of the existing residential aged care will introduce new vitality, sociability and landscaped areas to the area. The design integrates significant amounts of high quality landscaping and provides a specialised type of residential development which allows the elderly a high quality of life and provides an opportunity for them to remain in place as they age.
(s)	the adequacy of — (i) the proposed means of access to and egress from the site; and (ii) arrangements for the loading, unloading, manoeuvring and parking of vehicles;	Proposed access and egress arrangements have been assessed through the TIS (refer Appendix 6).
(t)	the amount of traffic likely to be generated by the development, particularly in relation to the capacity of the road system in the locality and the probable effect on traffic flow and safety;	The predicted traffic levels and impact on the surrounding network has been assessed as acceptable in the TIS (refer Appendix 6).
(u)	the availability and adequacy for the development of the following –	The subject site is in proximity to bus routes along Great Northern Highway. Midland Train Station is approximately 1.4km from the site.
	(i) public transport services;(ii) public utility services;	A WMP has been prepared for the proposed development to support waste management practices (Appendix 8).
	(iii) storage, management and collection of waste; (iv) access for pedestrians and cyclists (including	10 bicycle spaces have been provided to support the development, as well as staff end of trip facilities.
	end of trip storage, toilet and shower facilities);(v) access by older people and people with disability;	Considering the type of use, the design incorporates many accessibility design measures to ensure all residents are accommodated for.
(x)	the impact of the development on the community as a whole notwithstanding the impact of the development on particular individuals;	The proposed development introduces opportunities for social interaction between residents and the wider community. The increase in residents will in turn increase activity within the locality, increases passive surveillance and provide economic activity.
(zc)	Any advice of the Design Review Panel;	The proposed development has been considered by the City's DRP on two occasions, with the panel resolving general support for the proposed development.



5 CONCLUSION

As detailed above, the proposed development of the Midland Aged Care Facility Expansion on the subject site achieves the purpose and intent of the applicable local planning framework and complies with the provisions of the applicable region planning scheme. Specifically:

- The proposed development is consistent with the provisions of the Metropolitan Region Scheme and the Urban zone.
- The proposed development achieves the aim, objectives and development considerations of the City of Swan Local Planning Scheme No.17.
- The proposed development is consistent with the objectives and provisions of the City's Local Planning Policies.
- The proposed development will not have any undue adverse impact on the amenity of adjoining properties or the wider locality.

The application seeks approval for the removal of the existing buildings on four lots and the subsequent development of a two-storey residential aged care facility expansion, comprising 72 new beds with associated landscaping, parking and amenities.

The development is designed in a contextual and site-responsive manner, taking architectural inspiration from the prevailing character of the locality. Overall, the proposed development is demonstrated to achieve an exceptional design outcome, with a high-quality architectural design supported by strong landscaping, sustainability and amenity attributes for future residents and visitors.

Additionally, the development has been demonstrated to meet relevant environmental noise, traffic, acoustic and waste management requirements.

It is respectfully requested that the Development Assessment Panel consider the application on its merits and approves the proposed development.

Appendix 1: Design Review Panel Minutes

Appendix 2: Certificates of Title

Appendix 3: Development Plans

Appendix 4: Architectural Design Report

Appendix 5: Materials Schedule

Appendix 6: Transport Impact Statement

Appendix 7: Landscape Plan

Appendix 8: Waste Management Plan

Appendix 9: Sustainability Report

Appendix 10: Environmental Noise Assessment

Appendix 11: Stormwater Management Plan



ACOUSTIC REPORT DEVELOPMENT APPROVAL STAGE

MIDLAND VILLAGE AGED CARE ST JUDE'S HEALTH CARE SERVICES

16th May 2025



For

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ATTACHMENTS

- APPENDIX A - Marked-up plans of Part F7 BCA requirements

Report Version	Author	Comment	Date
2	Benjamin Farrell	Updated following value management	16 th May 2025



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1. INTRODUCTION

This report addresses the mandatory acoustic requirements at the Development Approval stage for the proposed Midland Village aged care facility for St Jude's Health Care Services. The project involves a new two-storey facility located at the corner of Great Northern Highway and John St.

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This report addresses the mandatory acoustic requirements for this project including:

- Part F7 'Sound Transmission and Insulation' of the Building Code of Australia;
- Aircraft noise intrusion (compliance with State Planning Policy 5.1); and,
- Environmental noise emissions (compliance with the Environmental Protection (Noise) Regulations 1997).

2. PART F7 OF NCC 2022 VOLUME 1

Given that the proposed development is a Class 9c building, each Bed Room suite is considered to be a sole-occupancy unit. As such, Part F7 'Sound Transmission and Insulation' of the Building Code of Australia (BCA) applies to all of the Bed Rooms and associated ensuites within the proposed residential care facility.

Part F7 of the BCA does not apply to the other parts of the building.

A summary of the Part F7 acoustic requirements are provided in Table 1.

Situation	BCA Clause	Acoustic requirement
Walls between sole-occupancy units	Part F7D6(3)(a)	R _w 45
Walls between <i>sole-occupancy units</i> and kitchens, bathrooms, sanitary compartments, laundries, plantrooms, and utility rooms	Part F7D6(3)(b)	R _w 45
Walls separating a <i>sole-occupancy unit</i> from a kitchen, laundry, or the like	Part F7D6(4)	R _w 45 discontinuous construction
Separation between duct/riser and a habitable room of a sole-occupancy unit	Part F7D7(1)(a)	R _w + C _{tr} 40
Separation between duct/riser and a non-habitable room of a sole-occupancy unit	Part F7D7(1)(b)	R _w + C _{tr} 25
Floors separating sole-occupancy units	Part F7D5(2) F7P3(b)	R _w 45 L _{nT,w} ≤ 62

Table 1 - Summary of Part F5 acoustic requirements applicable to this project

The marked-up plans appended to this report (Appendix A) identify the locations where the Part F7 requirements apply. Options for compliance with the Part F7 BCA requirements are provided below.

2.1 Wall construction between the sole-occupancy units

As per Part F7D6(3) the walls between the sole-occupancy units must achieve a sound reduction of R_w 45. Options include:

- 110 mm masonry, rendered both sides.
- Concrete panel wall, minimum 100 mm thickness.
- 2 layers of 13 mm standard plasterboard + 76 mm stud frame with 75 mm glasswool partition batts + 1 layer of 13 mm standard plasterboard.
- 1 layer of 13 mm Impactchek plasterboard + 92 mm stud frame with 75 mm glasswool partition batts + 1 layer of 13 mm Impactchek plasterboard. Note - Impactchek can be substituted by Aquachek.

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2.1.1 Control of room-to-room flanking noise transmission via the ceiling space

The room-to-room flanking noise transmission via the ceiling space must be controlled by one of the following options:

- Option 1 Extend the walls around sole-occupancy units to the underside of the concrete slab or roof sheeting above; or,
- Option 2 Provide 13 mm flush plasterboard ceilings throughout the bed room and ensuite, with a minimum of 75 mm glasswool ceiling insulation over. Implementing this option will also assist in addressing the services requirements outlined in Section 2.5.

Please note that if Option 2 is implemented, care is required in order to ensure that the mechanical and electrical services do not downgrade the sound reduction properties of the plasterboard ceiling. Traditional 'open' style heat lamps must not be used (there are enclosed radiant heaters available that will not compromise the ceiling).

2.1.2 General detailing

Specification 28 of the BCA establishes the following detailing requirements:

- Masonry walls Units must be laid with all joints filled solid.
- Sheeting of studs If one layer of plasterboard is required on each side of the studs, then it must be fastened to the studs with joints staggered on opposite sides. Where two layers of plasterboard are required on one side of a stud then the second layer must be fastened over the first layers so the joints do not coincide with those of the first layer. Joints between sheets and between sheets and adjoining construction must be taped and sealed.
- Perimeter of wall framing Perimeter framing members must be securely fixed to the adjoining structure and bedded in resilient compound or the joints must be caulked so that there are no gaps between the framing members and the adjoining structure.
- Electrical outlets Within masonry walls electrical outlets must be offset by less than 100 mm. in stud framed walls electrical outlets must be offset by at least 300 mm, or a vertical stud must be positioned between the electrical outlets of adjacent rooms.
- Services must not be chased into concrete or masonry elements.

2.2 Discontinuous wall construction between a sole-occupancy unit and a kitchen, laundry, or the like

Part F7D6(4) states that a wall separating a *sole-occupancy unit* from a kitchen, laundry, or the like, must be a discontinuous construction. The intention is to control structure-borne noise transmission into the sole-occupancy unit. The BCA defines discontinuity as a 20 mm gap within the wall construction.

Options for discontinuous walls include:

- Cavity masonry construction, no wall ties.
- Dual stud wall consisting of 2 layers of 13 mm plasterboard + 64 mm studs with 75 mm glasswool insulation + 20 mm gap + 64 mm studs + 1 layer of 13 mm plasterboard (the 2 layers of plasterboard shall be installed on the Bed Room side of the wall).
- 110 mm masonry + 20 mm gap + 64 mm studs with 75 mm glasswool insulation + 1 layer of 13 mm plasterboard.

In all cases, any water supply pipes must not cross over/bridge the cavity/20 mm gap.

2.2.1 Discontinuous construction between ensuites where the wall contains water supply pipes

The walls between ensuites that incorporate water supply pipes must also be *discontinuous*, due to the following BCA clauses:

- Part F7D7(1)(b) R_w + C_{tr} 25 separation is required between a water supply pipe and an adjacent sole-occupancy unit; and,
- Specification 28(2)(g) A water supply pipe must only be installed in the cavity of a discontinuous construction.

Where the walls between ensuites incorporate water supply pipes, the options include:

A cavity masonry wall without wall ties, and the water supply pipes must not cross over the cavity;
 or,

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> A dual stud wall consisting of 1 layer of 13 mm plasterboard + 64 mm studs with 75 mm glasswool insulation + 20 mm gap + 64 mm studs + 1 layer of 13 mm plasterboard. The water supply pipes must not cross over the 20 mm gap between the two rows of studs.

2.3 Duct walls onto ensuites (R_w + C_{tr} 25)

As per Part F7D7(1)(b) the walls between the duct/shafts and the ensuites must achieve a minimum sound reduction of $R_w + C_{tr} 25$. Options include:

- Pipes wrapped with Pyrotek Soundlag 4525 + stud frame with any plasterboard lining (no partition batts);
- Pipes without lagging + 76 mm stud frame with 75 mm glasswool partition batts + 1 layer of 13 mm plasterboard; or,
- Pipes without lagging + 90 mm masonry leaf.

Note - Acoustic pipework such as Rehau Raupiano Plus can be used in liue of wrapped PVC pipe.

As per Specification 28(2)(g) a water supply pipe must -

- Only be installed within a cavity of a discontinuous construction; and,
- In the case of a pipe that serves only one sole-occupancy unit, not be fixed to the wall leaf on the side adjoining any other sole-occupancy unit and have a clearance not less than 10 mm to the other wall leaf.

Note - the above requirements also apply to any enclosed stormwater pipes that are located adjacent ensuites.

2.4 Duct walls onto habitable rooms ($R_w + C_{tr} 40$)

With the current configuration of the facility, there are no plumbing duct/risers directly abutting the habitable rooms of the sole-occupancy units (bed rooms).

However, if stormwater downpipes are to be located within the external walls, then $R_w + C_{tr}$ 40 separation is required between the downpipe and the bed rooms. If this occurs, the options for consideration include:

- Downpipe without lagging + 110 mm masonry leaf;
- Downpipe wrapped with Pyrotek Soundlag 4525 + 90 mm masonry leaf; or,
- Pipes wrapped with Pyrotek Soundlag 4525 + 76 mm stud frame with 75 mm partition batts + 1 layer of 13 mm plasterboard.

2.5 Services located above the ceilings of the Sole-Occupancy Units

Where a soil/waste pipe, storm water pipe, or water supply pipe that serves an adjacent sole-occupancy unit runs above the ceiling, the following acoustic separation is required.

2.5.1 Services located above habitable rooms ($R_w + C_{tr}$ 40)

- Wrap the pipe with Pyrotek Soundlag 4525 + install 75 mm glasswool insulation above the ceiling within a minimum 1200 mm zone each side of the pipe; or,
- Acoustic pipework (eg Rehau Raupiano Plus) + install 75 mm glasswool insulation above the ceiling within a minimum 1200 mm zone each side of the pope.

Please note that where soil/waste pipes are located above bed room ceilings, the 13 mm plasterboard ceiling is important for achieving the $R_w + C_{tr}$ 40 requirement. Therefore it is <u>not</u> acceptable to have open grilles in the ceiling layer for return air (ie the ceiling space is used as a return air plenum) if there are soil and waste pipes located in the ceiling space of the bed room.

2.5.2 Services located above ensuites ($R_w + C_{tr} 25$)

- Wrap the pipe with Pyrotek Soundlag 4525; or use acoustic pipework (eg Rehau Raupiano Plus); or.
- PVC pipes without lagging + 13 mm plasterboard ceiling with 75 mm glasswool insulation over.

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2.6 Access panels

Access panels must not open onto habitable rooms (ie bed rooms), they must only open onto the ensuite itself or the corridor. The access panels must be configured as follows:

- The access panel must be constructed of timber with minimum thickness of 33 mm, or 9 mm compressed fibre cement sheeting, or a sheet material with a surface density of not less than 24.4 kg/m².
- The access panel must overlap the frame or rebate by not less than 10 mm and be fitted with a sealing gasket fitted along all edges.

NOTE – Access panels are permitted in Bed Rooms where the panel is use for accessing the fan coil unit or exhaust fan that serves that Bed Room only. The access panel shall be detailed as recommended above.

2.7 Floors between sole-occupancy units

Part F7D5(2) states that the floors separating the *sole-occupancy units* within Class 9c buildings must achieve a minimum sound reduction of R_w 45. This can be achieved by a concrete slab with minimum thickness of 100 mm.

In addition to this, Part F7P3 states that the floors separating *sole-occupancy units* in Class 9c buildings must provide impact isolation of L_{nTw} 62 dB or less.

The $L_{nT,w}$ 62 requirement can be achieved in the bed rooms by using carpet floor finishes. In the ensuites where hard floor finishes are required, compliant options include:

- Vinyl installed on top of the concrete slab; or,
- Tiled flooring on a 5 mm acoustic underlay such as Regupol Sonus Multi 4.5 or Embelton Impactamat.

2.8 Ensuite exhaust

From an acoustics point of view, the best approach is to have individual in-line fans for ensuites ducted to an external louvre/grille.

Where a large bathroom exhaust fan will serve several separate *sole-occupancy units*, it is critical that the shared ductwork does not compromise the sound reduction requirement of R_w 45 between ensuites. Where there is shared ductwork between two ensuites of separate *sole-occupancy units*, a minimum of 4 metres length of internally insulated ductwork (50 mm perforated foil faced glasswool insulation) is required between the exhaust grille in one ensuite and the exhaust grill in the other ensuite.

2.10 Acoustic isolation between Bed Rooms and the corridor and the other BCA classifications

The BCA does not establish any requirements for the doors and walls between the *sole-occupancy units* and the corridors and spaces of other BCA classifications. However, in our experience of aged care facilities it is important to provide a reasonable degree of acoustic separation where a bed room abuts a lounge room, dining area, activity area, nurse base, and the like. It is therefore $\underline{\text{recommended}}$ that R_w 50 walls are provided where these situations occur.

Options for R_w 50 walls are provided below:

- 150 mm special performance brick, rendered both sides.
- Two leafs of 90 mm masonry, side-by-side (or with cavity in between if desired).
- 90 mm masonry + 50 mm studs with 50 mm glasswool insulation + 1 layer of 13 mm plasterboard.
- 2 layers of 13 mm plasterboard + 76 mm studs with 75 mm glasswool insulation + 2 layers of 13 mm plasterboard.
- 2 layers of 13 mm Impactchek + 92 mm studs with 75 mm glasswool insulation + 1 layer of 13 mm Impactchek.

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3. AIRCRAFT NOISE INTRUSION (STATE PLANNING POLICY 5.1)

As illustrated in Figure 1 below, the proposed site is located just within the ANEF 20 noise contour of Perth Airport – specifically the future second runway (21L/03R). In accordance with State Planning Policy 5.1 'Land use planning in the vicinity of Perth Airport', an air-craft noise intrusion assessment is required. This State Planning Policy references Australian Standard 2021:2015 'Acoustics – Aircraft noise intrusion'. This standard provides a methodology for determining the required sound reduction (R_w) of the building envelope for the purpose of controlling noise intrusion associated with departures and arrivals of commercial air-craft.



Figure 1- ANEF Contours for Perth Airport

3.1 Aircraft noise levels (departures and arrivals)

The procedure for estimating the aircraft noise level at a given site in the proximity of an airport is outlined within Section 3 of Australian Standard 2021:2015. The relevant runway is 21L/03R which is the proposed second runway at Perth Airport. This new runway is expected to be operational around 2028.

Based on the following factors, the external aircraft noise level for the basis of the noise intrusion calculations is L_{max} 76 dB(A):

- DS = 474 metres (this is the distance from the building site to the extended runway centre-line).
- DL = 7,580 metres (this is the distance from the closer end of the runway to the intersection of the extended run-way centre-line and the DS line.
- DT = 10,670 metres (this is the distance from the further end of the runway to the intersection of the extended run-way centre-line and the DS line.
- Aircraft = Airbus A380. The assessment is based on the loudest noise event which would be a
 A380 taking off to the north. The next loudest air-craft is the Airbus 330 departing to the north
 (Lmax 74 dB(A)).

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NOTING. 2 1007

3.2 Internal noise level criteria

Table 3.3 of AS 2021:2015 establishes the indoor sound level criteria for various habitable spaces. The criteria for commercial buildings is provided in Table 2 below:

Type of space	Indoor design sound level, L _{max}
Sleeping Areas (aged care bed rooms)	L _{max} 50 dB(A)
Consulting Rooms and the like	L _{max} 50 dB(A)
Other habitable spaces	L _{max} 55 dB(A)
Ensuites, bathrooms	L _{max} 60 dB(A)

Table 2 - Indoor noise level criteria as per AS 2021:2015

3.3 Minimum required building envelope construction

Utilising the aircraft noise level of L_{max} 76 dB(A), and taking into account the required indoor design sound levels of AS 2021:2015, the required air-craft noise reduction (ANR) has been determined for the various building envelope elements. The noise intrusion assessment has been undertaken in accordance with Appendix G of AS 2021:2015. The calculations have been conducted for each space, taking into account the size of the external windows, the orientation of the façade to the flight path, ceiling heights, the expected Reverberation Time within the spaces, and other factors.

Following the assessment, the minimum required sound reduction (R_w) for the roof/ceiling, external glazing, and external walls has been determined. These minimum requirements are provided in the table below.

Building Element	Minimum Sound	Example(s) of compliant construction systems	
	Reduction (R _w)		
Bed Rooms - North and south facing glazing & Quiet Lounge - North facing glazing	R _w 31	Single 6.38 mm laminated glass (awning windows recommended, glazed louvres to be avoided)	
Bed Rooms - West facing glazing & Quiet Lounge - West facing glazing & Lounge / Multipurpose - West facing glazing	R _w 36	Single 10.5 mm VLAM Hush Glass; or, Thermal double glazing incorporating one pane of 8.38 mm laminated glass and one pane of 6 mm glass. (awning windows recommended).	
Bar area – West glazing facing onto Courtyard	R _w 34	Single 10.38 mm laminated glass; or, Thermal double glazing incorporating one pane of 6.38 mm laminated glass and one pane of 6 mm glass. (awning windows recommended).	
All other glazing	R _w 28	Single standard 6 mm glass (awning or sliding windows permitted).	
Bed Room - Roof/ceiling system	R _w 40	Sheet metal roofing with minimum Anticon 60 insulation; in addition to 13 mm plasterboard ceiling with 75 mm glasswool insulation over.	
Roof/ceiling system in Quiet Lounge, Dining, Lounge/Activity and other habitable spaces	R _w 35	 Sheet metal roofing with minimum Anticon 60 insulation; in addition to: Acoustic Mineral Fibre Tile ceiling (CAC/D_{nCw} 35 and NRC >0.7); or, 10 mm plasterboard ceiling with sound absorptive treatment suspended or installed to the underside. 	
External walls	R _w >37	External cladding (eg aluminium) + top-hats + 92 mm studs with R2.5 glasswool + 13 mm plasterboard).	

Table 3 - Minimum required building envelope construction

NOTE 1 – The stated R_w values for the external glazing relate to the whole of suite performance inclusive of glass, frame, seals, etc.

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NOTE 2 - The plasterboard ceilings on the first floor must not be compromised by the mechanical and electrical services. Open style heat lamps must be avoided - there are enclosed heat lamps / radiant heaters available that will not compromise the ceiling layer.

4. **ENVIRONMENTAL NOISE EMISSIONS**

The noise transmission from the proposed development to the surrounding noise sensitive premises must comply with the Environmental Protection (Noise) Regulations 1997. The nearest noise sensitive premises include:

- The residences on the west side of Great Northern Highway; and,
- The residences on the south side of John Street.

The noise transmission to these noise sensitive premises must not exceed the 'Assigned Levels' outlined in Section 4.1.

4.1 **Assigned Levels**

The following 'Assigned Levels' are applicable at the adjacent residences. This is based on an Influencing Factor of 2 dB:

Secondary Road within the 100 m circle (Great Northern Highway with 14,800 VPD) = 2 dB.

Part of premises receiving noise	Time of day	Time of day Assigned Leve		(dB)	
		L _{A10}	L _{A1}	L _{A max}	
Noise Sensitive Premises: highly sensitive area	7 am to 7 pm Monday to Saturday	47	57	67	
(eg within 15 metres of a house)					
	9 am to 7 pm	42	52	67	
	Sunday and public holidays				
	7 pm to 10 pm all days	42	52	57	
	10 pm to 7 am Monday to Saturday and 10 pm to 9 am on Sundays and public holidays	37	47	57	

Table 4– Assigned Levels for nearest residences

4.2 Mechanical services

At this early stage of the project the mechanical equipment has not been selected or specified. Therefore it is not possible to undertake detailed noise modelling of the mechanical plant at this time.

We confirm that the mechanical plant will be designed and specified to achieve compliance with the Environmental Protection (Noise) Regulations 1997. This may require the following noise control strategies:

4.2.1 Condensing units

- Selection of condensing units lowest Sound Power Level available.
- The condensing units to incorporate a 'night mode' or similar to achieve lower noise emissions between 10 pm and 7 am.

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Document Set ID: 8685570 Version: 1, Version Date: 10/07/2025 • Acoustic barriers around the perimeter of the mechanical roof compound(s) (eg fibre cement sheeting and/or 300 mm acoustic louvres). These acoustic barriers will need to be taller than the top of the condensing units in order to achieve sufficient barrier attenuation.

4.2.2 Toilet exhaust fans and other fans

All exhaust fans shall be selected on the basis of quiet operation. In some cases it may be necessary to oversize the fans and run them at lower speeds (via a VSD) in order to achieve lower noise emissions.

Detailed noise modelling of the mechanical plant will be undertaken at later stages of the project, once preliminary selections have been made in order to confirm compliance with the Environmental Protection (Noise) Regulations 1997.

4.3 Fire pumps

The fire-pumps will be tested monthly in accordance with AS 1851. The testing will be undertaken between the hours of 7 am and 7 pm, Monday to Saturday, and the duration of the test will be less than 20 minutes per test. The relevant Assigned Level is L_1 57 dB(A), given that the test duration is less than 10% of the representative assessment period of 4 hours.

The site plan indicates that the fire-pump room will be positioned 20 metres from the boundary of the John St residences.

The preliminary noise emissions indicates that the following noise control will be required in order to comply with the Assigned Level of L_1 57 dB(A) at the residences across John St:

- A packaged/attenuated fire pump shall be specified, that achieves a radiated noise level of 88 dB(A) at 1 metre from the engine (eg Allied Pumps Enviropac System with Class 1 attenuation).
- Mufflers/silencers to be installed on the exhaust, achieving a noise level of 78 dB(A) at 1 metre.
- The roof of the fire-pump room is to consist of sheet metal roofing with minimum Anticon 60 insulation.
- The perimeter walls of the fire-pump room shall achieve a minimum sound reduction of R_w 45 (eg 110 mm masonry or 140 mm concrete blockwork).
- Ventilation louvres shall be avoided on the southern façade of the fire-pump. If louvres are necessary in the south façade, and the free area must exceed 0.7 m², then 300 mm acoustic louvres will be necessary (eg Fantech SBL1).
- Ventilation louvres on the north façade of the fire-pump room shall not exceed 2.0 m², otherwise acoustic louvres will be necessary.
- If relief air is required via the roof, it shall consist of 1 metre length of internally insulated ductwork (eg 50 mm perforated foil faced glasswool) beneath the roof cowl.

4.4 External seating of the Café Dining Area

We understand that the café located on the ground floor of the proposed building will not be a commercial venture, but rather a meeting place for the aged care residents and their visitors. The café will not have a kitchen, but rather a small servery with cakes, sandwiches, and other snacks.

The café dining area will include an external verandah with limited seating. In order to maintain amenity for residential neighbours across John St, it is recommended that use of the verandah area be limited to the following hours:

- 7 am to 7 pm, Monday to Saturday.
- 9 am to 7 pm, Sunday and Public Holidays.

The external bi-fold doors of the Café Dining Area shall also be kept closed during the above hours.

External speakers for the purpose of playing background music <u>will not</u> be permitted in the external verandah area.

4.5 Waste Collection

Regulation 14A of the Environmental Protection (Noise) Regulations 1997 addresses the noise emissions associated with waste collection. Fundamentally, waste collection activities are exempt from complying

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with the 'Assigned Levels', provided the collection only occurs between the hours of 7 am and 7 pm Monday to Saturday, and between 9 am and 7 pm on Sundays and Public Holidays. This is on the basis that:

- The works are carried out in the quietest reasonable and practicable manner; and,
- The equipment used to carry out the works is the quietest reasonably available.

We understand that the proposed waste collection for this project is intended to be carried out within the hours stated above. In the event that a future waste collection provider wishes to carry out their services outside of the hours stated above, they will need to prepare their own noise management plan in accordance with Regulation 14A.

If you have any queries regarding this information please call the undersigned on 9474 5966.

Regards,

Benjamin Farrell Director M.A.A.S.

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ATTACHMENTS

- APPENDIX A - Marked-up plans of Part F7 BCA requirements

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Attachment 9

Waste Management Plan

Midland Village Aged Care Facility

Prepared for St Jude's Health Care Services

16 May 2025

Project Number: WMP25021



DOCUMENT CONTROL

Version	Description	Date	Author	Reviewer	Approver
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2.0	Second Approved Release	16/05/2025	RH	JL	RH

Approval for Release

Name	Position	File Reference
Rachel Hayton	Project Manager – Senior Waste Strategy Consultant	WMP25021-01_Waste Management Plan_2.0
Signature	Rachel Hayton	

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Executive Summary

St Jude's Health Care Services is seeking development approval for the proposed additions to the Midland Village Aged Care Facility located at 44 John Street, Midland (the Proposal).

To satisfy the conditions of the development application the City of Swan (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

A summary of the bin size, numbers, collection frequency and collection method is provided in the below table.

Proposed Waste Collection Summary

Waste Type	Generation (L/week)	Bin Size (L)	Number of Bins	Collection Frequency	Collection
Refuse	10,920	1,100	Five	Twice each week	Private Contractor
Recycling	10,920	1,100	Five	Twice each week	Private Contractor

A private contractor will service the Proposal onsite, directly from the Bin Storage Area. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via John Street.

Management will oversee the relevant aspects of waste management at the Proposal.



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Figure 1: Locality Plan



1 Introduction

St Jude's Health Care Services is seeking development approval for the proposed additions to the Midland Village Aged Care Facility located at 44 John Street, Midland (the Proposal).

To satisfy the conditions of the development application the City of Swan (the City) requires the submission of a Waste Management Plan (WMP) that will identify how waste is to be stored and collected from the Proposal. Talis Consultants has been engaged to prepare this WMP to satisfy the City's requirements.

The Proposal is bordered by residential developments to the north, east, John Street to the south and Great Northern Highway to the west, as shown in Figure 1.

1.1 Objectives and Scope

The objective of this WMP is to outline the equipment and procedures that will be adopted to manage waste (refuse and recyclables) at the Proposal. Specifically, the WMP demonstrates that the Proposal is designed to:

- Adequately cater for the anticipated volume of waste to be generated;
- Provide an adequately sized Bin Storage Area, including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

To achieve the objective, the scope of the WMP comprises:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Waste Management; and
- Section 6: Conclusion.



2 Waste Generation

The following section shows the waste generation rates used and the estimated waste volumes to be generated at the Proposal.

2.1 Proposed Tenancies

The anticipated volume of refuse and recyclables is based on the total number of residential aged care beds at the existing and proposed buildings – **182 beds**.

2.2 Waste Generation Rates

In order to achieve an accurate projection of waste volumes for the Proposal, consideration was given to the City of Melbourne's *Guidelines for Waste Management Plans* (2021).

Table 2-1 shows the waste generation rates which have been applied to the Proposal.

Table 2-1: Waste Generation Rates

Tenancy Use Type	City of Melbourne	Refuse	Recycling
	Guideline Reference	Generation Rate	Generation Rate
Residential Aged Care Beds	Retirement Village	60L/apartment/week	60L/apartment/week

As medical waste is highly dependent on the nature and scale of medical practices undertaken, there are currently no medical/clinical waste generation rates available within published waste management guidelines. The Proposal will manage medical waste (i.e. sharps, infectious waste, pathological waste, pharmaceuticals, chemical waste and non-regulated medical waste) in-situ.

2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-2. It is estimated that the Proposal will generate 10,680L of refuse and 10,680L of recyclables each week.

Table 2-2: Estimated Waste Generation

Residential Aged Care Beds	Number of Beds	Waste Generation Rate	Waste Generation (L/week)
Refuse	182	60L/apartment/week	10,920
Recyclables	182	60L/apartment/week	10,920
		Total	21,840



3 Waste Storage

Waste materials generated within the Proposal will be collected in the bins located in the Bin Storage Area, as shown in Diagram 1, and discussed in the following sub-sections.

3.1 Internal Transfer of Waste

To promote positive recycling behaviour and maximise diversion from landfill, internal bins will be available throughout the rooms and amenity areas of the Proposal for the source separation of refuse and recycling.

These internal bins will be collected by the staff/cleaners and transferred to the Bin Storage Area for consolidation into the appropriate bins, as required. This internal servicing method may be conducted outside of main operational hours to mitigate disturbances to residents/visitors.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist staff and cleaners to dispose of their separate waste materials in the correct bins.

3.2 Bin Sizes

Table 3-1 gives the typical dimensions of standard bins sizes that may be utilised at the Proposal. It should be noted that these bin dimensions are approximate and can vary slightly between suppliers.

Table 3-1: Typical Bin Dimensions

Dimensions (m)	Bin Sizes			
Difficusions (III)	240L	660L	1,100L	
Depth	0.730	0.780	1.070	
Width	0.585	1.260	1.240	
Height	1.060	1.200	1.330	

Reference: SULO Bin Specification Data Sheets

3.3 Bin Storage Area Size

To ensure sufficient area is available for storage of the bins, the amount of bins required for the Bin Storage Area was modelled utilising the estimated waste generation in Table 2-2, bin sizes in Table 3-1 and based on collection of refuse and recyclables twice each week.

Based on the results shown in Table 3-2 the Bin Storage Area has been sized to accommodate:

- Five 1,100L refuse bins; and
- Five 1,100L recycling bins.

Table 3-2: Bin Requirements for Bin Storage Area

Waste Stream	Waste Generation	Number of Bins Required			
waste stream	(L/week)	240L	660L	1,100L	
Refuse	10,920	23	9	5	
Recycling	10,920	23	9	5	



The configuration of these bins within the Bin Storage Area is shown in Diagram 1. It is worth noting that the number of bins and corresponding placement of bins shown in Diagram 1 represents the maximum requirements assuming two collections each week of refuse and recyclables.

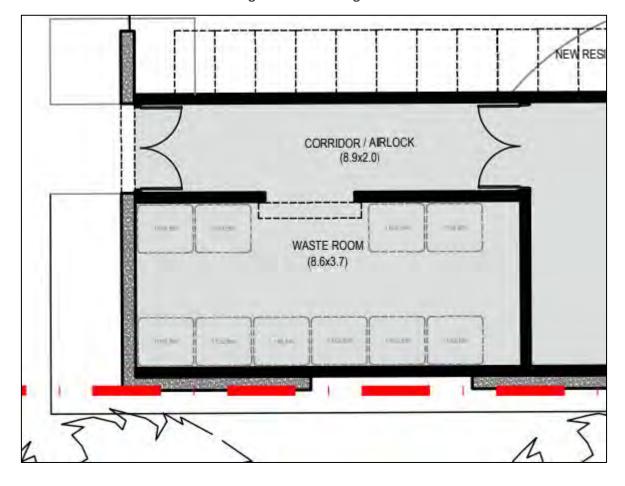


Diagram 1: Bin Storage Area

3.4 Bin Storage Area Design

The design of the Bin Storage Area will take into consideration:

- Smooth impervious floor sloped to a drain connected to the sewer system;
- Taps for washing of bins and Bin Storage Area;
- Adequate aisle width for easy manoeuvring of bins;
- No double stacking of bins;
- Doors to the Bin Storage Area self-closing and vermin proof;
- Doors to the Bin Storage Area wide enough to fit bins through;
- Ventilated to a suitable standard;
- Appropriate signage;
- Undercover where possible and be designed to not permit stormwater to enter the drain;
- Located behind the building setback line;
- Bins not to be visible from the property boundary or areas trafficable by the public; and
- Bins are reasonably secured from theft and vandalism.

Waste Management Plan Midland Village Aged Care Facility St Jude's Health Care Services



Bin numbers and storage space within the Bin Storage Area will be monitored by management during the operation of the Proposal to ensure that the number of bins and collection frequency is sufficient.



4 Waste Collection

A private waste collection contractor will service the Proposal and provide five 1,100L bins for refuse and five 1,100L bins for recyclables.

The private contractor will collect refuse and recyclables twice each week utilising a rear loader waste collection vehicle.

The private contractor's rear loader waste collection vehicle will service the bins onsite, directly from the Bin Storage Area via the Waste Truck Layover Area/Bin Collection Area. The private contractor's rear loader waste collection vehicle will travel with left hand lane traffic flow on John Street, turn into the Proposal in forward gear, and pull up directly opposite the Bin Collection Area for servicing, as shown in Diagram 2.

It is proposed that servicing will be conducted outside of normal operating hours to allow the waste collection vehicle to utilise the empty carpark for manoeuvring and mitigate impacts on local traffic movements during peak traffic hours.

Private contractor's staff will ferry bins to and from the rear loader waste collection vehicle and the Bin Storage Area during servicing, utilising the Bin Collection Area. The private contractor will be provided with key/PIN code access to the Bin Storage Areas and security access gates to facilitate servicing, if required.

Once servicing is complete the private contractor's rear loader waste collection vehicle will exit in a forward motion, turning onto John Street moving with traffic flow.

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the Environmental Protection (Noise) Regulations and such vehicles should not service the site before 7.00am or after 7.00pm Monday to Saturday, or before 9.00am or after 7.00pm on Sundays and Public Holidays.

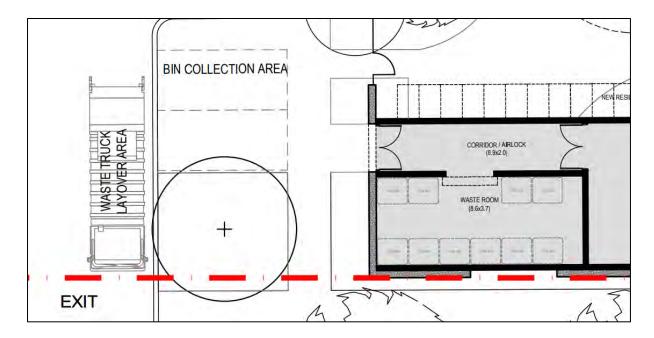


Diagram 2: Waste Collection Point



4.1 **Bulk and Speciality Waste**

Adequate space may be allocated throughout the Proposal for placement of cabinets/containers for collection and storage of bulk and specialty wastes that are unable to be disposed of within the bins in the Bin Storage Area. These may include items such as:

- Refurbishment wastes from fit outs;
- Mattresses;
- Clothing;
- Batteries and E-wastes:

- White goods/appliances;
- Used Cooking Oil;
- Cleaning chemicals; and
- Commercial Light globes.

These materials will be removed from the Proposal once sufficient volumes have been accumulated to warrant disposal. A temporary skip bin could be utilised for collections, if required. Bulk and specialty waste collection will be monitored by management who will organise their transport to the appropriate waste facility, as required.

4.2 **Controlled Medical Wastes**

The volume of medical waste generated at the Facility will be dependent on the nature and scale of the medical practises undertaken. Smaller appropriate containers may be placed in all internal locations where particular categories of medical waste may be generated.

Instructions on identification and separation of medical wastes will be posted at each waste collection point to remind staff of procedures. Suitably qualified medical waste service providers will be engaged to determine storage and collection requirements.

The following points are indicative of minimum requirements for environmental best practice relating to controlled medical wastes and will be considered within the Proposal:

- Ensuring all clinical and related waste is properly contained;
- Ensuring all relevant measures are taken to reduce risk to staff, the community and the environment; and
- All waste containers to meet the Australian Standards and are to be of the appropriate colour and have suitable symbols/wording for the waste types to be deposited into that container.

WMP25021-01_Waste Management Plan_2.0



5 Waste Management

Management will be engaged to complete the following tasks:

- Monitoring and maintenance of bins and the Bin Storage Area;
- Cleaning of bins and Bin Storage Area, when required;
- Ensure all staff/cleaners at the Proposal are made aware of this WMP and their responsibilities thereunder;
- Monitor staff/cleaner behaviour and identify requirements for further education and/or signage;
- Monitor bulk and speciality waste accumulation and assist with its removal, as required;
- Regularly engage with staff/cleaners to develop opportunities to reduce waste volumes and increase resource recovery; and
- Regularly engage with the private contractors to ensure efficient and effective waste service is maintained.



6 Conclusion

As demonstrated within this WMP, the Proposal provides a sufficiently sized Bin Storage Area for storage of refuse and recyclables, based on the estimated waste generation volumes and suitable configuration of bins. This indicates that an adequately designed Bin Storage Area has been provided, and collection of refuse and recyclables can be completed from the Proposal.

The above is achieved using:

- Five 1,100L refuse bins, collected twice each week; and
- Five 1,100L recycling bins, collected twice each week.

A private contractor will service the Proposal onsite, directly from the Bin Storage Area. The private contractor's waste collection vehicle will enter and exit the Proposal in forward gear via John Street.

Management will oversee the relevant aspects of waste management at the Proposal.



Figures

Figure 1: Locality Plan



Assets | Engineering | Environment | Noise | Spatial | Waste

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St Jude's Midland Village Proposed Residential Aged Care Facility

TRANSPORT IMPACT STATEMENT









Prepared for:

Labouchere Investment Pty Ltd

May 2025

Document Set ID: 8685542 Version: 1, Version Date: 10/07/2025

St Jude's Midland Village

Prepared for: Labouchere Investment Pty Ltd

Prepared by: Paul Ghantous

Date: 22 May 2025

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1 Introduction

This Transport Impact Statement has been prepared by Urbii on behalf of Labouchere Investment Pty Ltd with regards to the proposed residential aged care facility (RACF) expansion, located at Lots 24-25 Great Northern Hwy and Lots 22-23 John St, Midland.

The subject site is located at the corner of Great Northern Highway and John Street, as shown in Figure 1. The site presently accommodates the 'St Jude's Midland Nursing Home'. The existing RACF accommodates 110 beds and 44 staff.

The site is surrounded by mostly residential land uses.

It is proposed to expand the existing site through construction of a new residential aged care building accommodating an additional 72 beds and 8 staff, with supporting amenities. The existing building will be retained and therefore the expanded RACF will accommodate a total of 182 beds and 52 staff in the post development situation.

The key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns, car parking and access to the site for alternative modes of transport.





Figure 1: Subject site

2 Proposed development

The proposal for the subject site is for construction of a Residential Aged Care Facility (RACF) comprising:

- Retention of the existing RACF building;
- Construction of a new RACF building on the south-west portion of the site. The new building
 will include 72 additional beds, staff and resident amenities including foyer, administration,
 cafe, servery, courtyards, reception, and other ancillary areas;
- Modified onsite car park with a total of 62 car parking bays including 1 x ACROD bays;
- Pick-up/set-down facilities with the capacity to accommodate up to 9 vehicles;
- 12 on-street parking bays;
- 10 bicycle parking spaces;
- End of trip facilities including separate male and female shower, lockers and change rooms;
 and,
- A bin store and designated loading/waste collection area.

Vehicle access for the new facility is via two crossovers on John Street.

Waste collection, delivery and other service vehicle activity for the site will be accommodated within the site car park.

Pedestrians and cyclists will access the development from the external path network abutting the site.

The proposed development plans are included for reference in Appendix A.





3 Vehicle access and parking

3.1 Vehicle access

The proposed vehicular access arrangements have been reviewed for efficient and safe traffic circulation.

As indicated in Figure 3, there are currently four crossovers provided along the John Street frontage of the site. This includes one crossover providing access into the existing RACF car park.

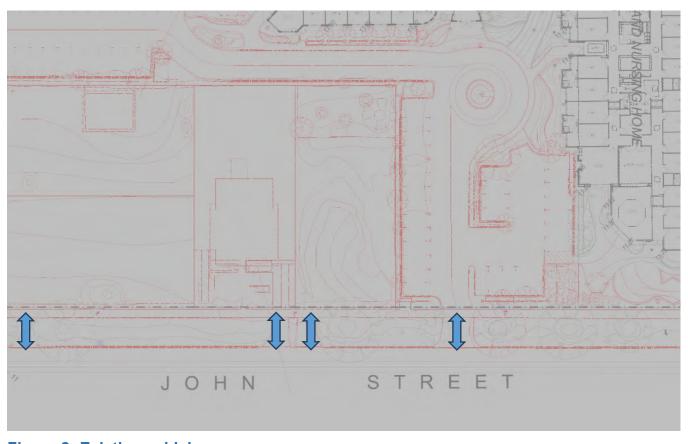


Figure 2: Existing vehicle access

Vehicle access to the new RACF car park is proposed via two crossovers on John Street (Figure 3). The western crossover will be entry only and the eastern crossover exit only.

The pick-up/set-down areas are configured for one-way clockwise traffic flow and will be used for general pick-up/drop-off, taxis, rideshare and minibus access.

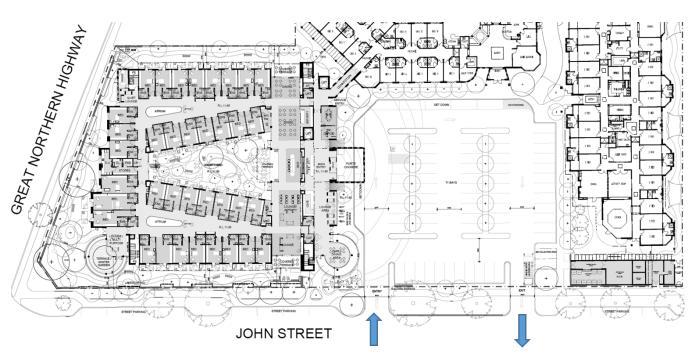


Figure 3: Proposed vehicle access



3.2 Parking supply and demand

A parking survey was undertaken at the existing aged care facility, to estimate the parking demand generated for staff and visitors.

The parking survey was undertaken on a weekday and at the weekend as follows:

- Tuesday 3 December 2024 7am to 7pm.
- Saturday 7 December 2024 10am to 4pm.

As detailed in Figures 4 and 5, the peak parking utilisation was recorded at 11am on Tuesday. At this time there was a total parking demand of 48 bays, which represented peak occupancy of 76%.

Staff and visitor parking demand was increased in proportion to the proposed increase in beds and number of staff. The parking analysis is presented in Table 1 and estimates a peak parking demand of 64 bays in the post-development situation.

Table 1: Parking demand and supply analysis

Parking Analysis	Existing	Proposed
Beds	110	182
Staff	44	52
Parking	63	83
Visitor peak demand	16	26
Staff peak parking demand	32	38
Total peak parking demand	48	64
Peak parking occupancy	76%	77%

It is proposed to provide a total parking capacity of 83 spaces in the post development situation. This includes:

- Modified onsite car park with a total of 62 car parking bays including 1 x ACROD bays;
- Pick-up/set-down facilities with the capacity to accommodate up to 9 vehicles; and,
- 12 on-street parking bays.

The proposed car parking supply is expected to be sufficient for the needs of the proposed development.

Occupancy

Day	Time	S	V	TOTAL
TUE	7:00	24	3	27
TUE	8:00	27	3	30
TUE	9:00	32	8	40
TUE	10:00	32	13	45
TUE	11:00	32	16	48
TUE	12:00	32	15	47
TUE	13:00	31	11	42
TUE	14:00	31	12	43
TUE	15:00	22	12	34
TUE	16:00	12	17	29
TUE	17:00	10	16	26
TUE	18:00	4	11	15
TUE	19:00	4	11	15

% Occupancy

Day	Time	S	V	TOTAL
TUE	7:00	60%	13%	43%
TUE	8:00	68%	13%	48%
TUE	9:00	80%	35%	63%
TUE	10:00	80%	57%	71%
TUE	11:00	80%	70%	76%
TUE	12:00	80%	65%	75%
TUE	13:00	78%	48%	67%
TUE	14:00	78%	52%	68%
TUE	15:00	55%	52%	54%
TUE	16:00	30%	74%	46%
TUE	17:00	25%	70%	41%
TUE	18:00	10%	48%	24%
TUE	19:00	10%	48%	24%

Supply

Day	Time	S	V	TOTAL
TUE	7:00	40	23	63
TUE	8:00	40	23	63
TUE	9:00	40	23	63
TUE	10:00	40	23	63
TUE	11:00	40	23	63
TUE	12:00	40	23	63
TUE	13:00	40	23	63
TUE	14:00	40	23	63
TUE	15:00	40	23	63
TUE	16:00	40	23	63
TUE	17:00	40	23	63
TUE	18:00	40	23	63
TUE	19:00	40	23	63

Vacant Spaces

Day	Time	S	V	TOTAL
TUE	7:00	16	20	36
TUE	8:00	13	20	33
TUE	9:00	8	15	23
TUE	10:00	8	10	18
TUE	11:00	8	7	15
TUE	12:00	8	8	16
TUE	13:00	9	12	21
TUE	14:00	9	11	20
TUE	15:00	18	11	29
TUE	16:00	28	6	34
TUE	17:00	30	7	37
TUE	18:00	36	12	48
TUE	19:00	36	12	48

Figure 4: Parking survey results – Tuesday 3 December 2024





Occupancy

Day	Time	S	V	TOTAL
SAT	10:00	16	9	25
SAT	11:00	15	11	26
SAT	12:00	15	10	25
SAT	13:00	17	6	23
SAT	14:00	16	5	21
SAT	15:00	12	7	19
SAT	16:00	11	7	18

% Occupancy

Day	Time	S	V	TOTAL
SAT	10:00	40%	39%	40%
SAT	11:00	38%	48%	41%
SAT	12:00	38%	43%	40%
SAT	13:00	43%	26%	37%
SAT	14:00	40%	22%	33%
SAT	15:00	30%	30%	30%
SAT	16:00	28%	30%	29%

Supply

Day	Time	S	V	TOTAL
SAT	10:00	40	23	63
SAT	11:00	40	23	63
SAT	12:00	40	23	63
SAT	13:00	40	23	63
SAT	14:00	40	23	63
SAT	15:00	40	23	63
SAT	16:00	40	23	63

Vacant Spaces

Day	Time	S	V	TOTAL
SAT	10:00	24	14	38
SAT	11:00	25	12	37
SAT	12:00	25	13	38
SAT	13:00	23	17	40
SAT	14:00	24	18	42
SAT	15:00	28	16	44
SAT	16:00	29	16	45

Figure 5: Parking survey results – Saturday 7 December 2024

4 Provision for service vehicles

The proposed development site plan has been reviewed for service vehicle access, egress and circulation.

There is an existing service yard where delivery, laundry and other service vehicles access the existing building (Figure 6). This service yard will be retained and will provide consolidated service access for the existing and proposed aged care buildings.

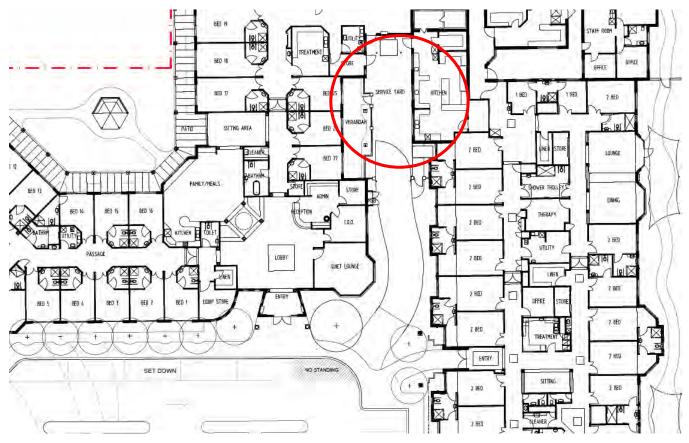


Figure 6: Existing service yard location

Waste collection for the facility will be undertaken by a private contractor. A new bin store is proposed on the south-east corner of the site, which will provide centralised waste storage for the entire facility (Figure 7).

A bin collection area is provided near the eastern crossover. A rear loader waste truck is proposed to park within the car park, and bins will be wheeled to the rear of the truck for emptying.



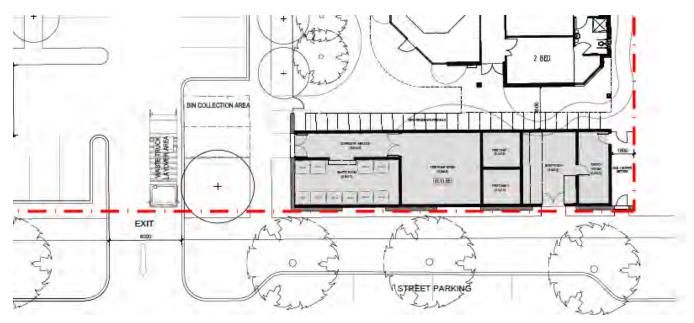


Figure 7: New bin store and bin collection area

It is understood that waste collection will be scheduled outside the peak traffic hours (and staff roster change over periods) of the facility, to avoid impact on the car park.

However, if required, cars are still able to exit from the eastern driveway while a waste truck is stopped on site.

Swept path analysis has been undertaken to confirm satisfactory service vehicle movements and is presented in Appendix B.

5 Hours of operation

For most aged care facilities, the peak afternoon staff changeover typically occurs at around 3:00pm, with the morning care staff leaving the site and afternoon care staff arriving.

The morning staff changeover typically occurs early in the day (7am start), outside the road network peak hour. The evening changeover occurs late in the evening when road network traffic is also comparatively low.

Visitor traffic to the proposed development is anticipated to be highest during weekday early evenings and on weekends. During this time, there will be lower staffing levels. Therefore, the peak traffic and parking demand times for staff and visitors will not overlap.



6 Daily traffic volumes and vehicle types

6.1 Traffic generation

The traffic volume that will be generated by the proposed development has been estimated using trip generation rates derived with reference to the following sources:

- Roads and Traffic Authority of New South Wales Guide to Traffic Generating Developments (2002); and
- RTA TDT 2013/ 04a.

The trip generation rates adopted are detailed in Table 2.

Table 2: Adopted trip rates for traffic generation

Land use	Trip rate source	Daily rate	PM Rate	in	out
Aged care bed	TDT 2013/04a - Housing for seniors	2.1	0.4	50%	50%

The estimated existing and post-development traffic generation of the site is detailed in Table 3. The site is estimated to generate a total of 382 vehicles per day (vpd) and 74 vehicles per hour (vph) during the PM peak hour. The net increase in site traffic is estimated to be **+151vpd** and **+30vph** when traffic generation of the existing and proposed building facilities is compared.

These trips include both inbound and outbound vehicle movements. It is anticipated that most of the vehicle types would be passenger cars and SUVs.

Table 3: Traffic generation – Comparison of existing and proposed building facilities

Land use	Quantity	Daily PM Peak Daily	PM	PM Peak Trips			
	Quantity	Rate	Rate	Trips	Trips	IN	OUT
Existing beds	110	2.1	0.4	231	44	22	22
Proposed beds	182	2.1	0.4	382	74	37	37
Net change				+151	+30	+15	+15

6.2 Impact on surrounding roads

The WAPC Transport Impact Assessment Guidelines for Developments (2016) provides the following guidance on the assessment of traffic impacts:

"As a general guide, an increase in traffic of less than 10 percent of capacity would not normally be likely to have a material impact on any particular section of road but increases over 10 percent may. All sections of road with an increase greater than 10 percent of capacity should therefore be included in the analysis. For ease of assessment, an increase of 100 vehicles per hour for any lane can be considered as equating to around 10 percent of capacity. Therefore, any section of road where development traffic would increase flows by more than 100 vehicles per hour for any lane should be included in the analysis."

The proposed development will not increase traffic flows on any roads adjacent to the site by the quoted WAPC threshold of +100vph to warrant further analysis. Therefore, the impact on the surrounding road network is moderate (Figure 8).

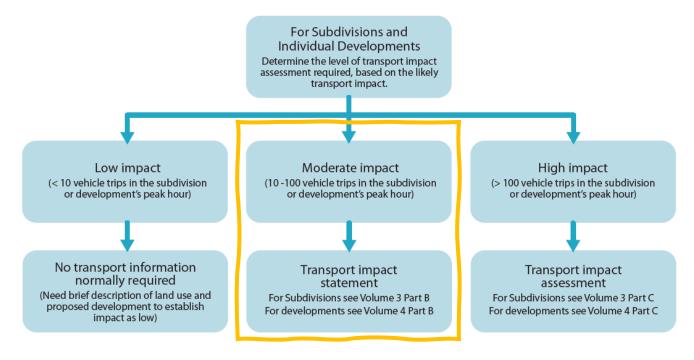


Figure 8: Level of traffic impact for subdivisions and individual developments

Source: WAPC Transport Impact Assessment Guidelines Volume 4: Individual Developments, August 2016



7 Traffic management on the frontage roads

Information from online mapping services, Main Roads WA, Local Government, and/or site visits was collected to assess the existing traffic management on frontage roads.

7.1.1 John Street

John Street near the subject site is an approximately 7m wide, two-lane undivided road. A path for walking and cycling is provided on both sides of the road. Walk crossings are provided at nearby intersections, which include kerb ramps.

John Street is classified as an *Access* road in the Main Roads WA road hierarchy (Figure 9) and operates under a speed limit of 50km/h (Figure 10). Access roads are the responsibility of Local Government and are for the provision of vehicle access to abutting properties (Figure 11).

No traffic data was available for John Street at the time of preparation of this report.



Figure 9: Main Roads WA road hierarchy plan

Source: Main Roads WA Road Information Mapping System (RIM)



Figure 10: Main Roads WA road speed zoning plan

Source: Main Roads WA Road Information Mapping System (RIM)

ROAD HIERARCHY FOR WESTERN AUSTRALIA ROAD TYPES AND CRITERIA (see Note 1)

	DDULADY DISTRIBUTOR		TYPES AND CRITERIA (see		LOCAL DISTRIBUTOR	100F00 DO1D
CRITERIA	PRIMARY DISTRIBUTOR (PD) (see Note 2)	DISTRICT DISTRIBUTOR A (DA)	DISTRICT DISTRIBUTOR B (DB)	REGIONAL DISTRIBUTOR (RD)	LOCAL DISTRIBUTOR (LD)	ACCESS ROAD (A)
Primary Criteria						
Location (see Note 3)	All of WA incl. BUA	Only Built Up Area.	Only Built Up Area.	Only Non Built Up Area. (see Note 4)	All of WA incl. BUA	All of WA incl. BUA
2. Responsibility	Main Roads Western Australia.	Local Government.	Local Government.	Local Government.	Local Government.	Local Government.
3. Degree of Connectivity	High. Connects to other Primary and Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	High. Connects to Primary and/or other Distributor roads.	Medium. Minor Network Role Connects to Distributors and Access Roads.	Low. Provides mainly for property access.
Predominant Purpose	Movement of inter regional and/or cross town/city traffic, e.g. freeways, highways and main roads.	High capacity traffic movements between industrial, commercial and residential areas.	Reduced capacity but high traffic volumes travelling between industrial, commercial and residential areas.	Roads linking significant destinations and designed for efficient movement of people and goods between and within regions.	Movement of traffic within local areas and connect access roads to higher order Distributors.	Provision of vehicle access to abutting properties
Secondary Criteria						
Indicative Traffic Volume (AADT)	In accordance with Classification Assessment Guidelines.	Above 8 000 vpd	Above 6 000 vpd.	Greater than 100 vpd	Built Up Area - Maximum desirable volume 6 000 vpd. Non Built Up Area - up to 100 vpd.	Built Up Area - Maximum desirable volume 3 000 vpd. Non Built Up Area - up to 75 vpd.
Recommended Operating Speed	60 – 110 km/h (depending on design characteristics).	60 – 80 km/h.	60 – 70 km/h.	50 – 110 km/h (depending on design characteristics).	Built Up Area 50 - 60 km/h (desired speed) Non Built Up Area 60 – 110 km/h (depending on design characteristics).	Built Up Area 50 km/h (desired speed). Non Built Up Area 50 – 110 km/h (depending on design characteristics).
7. Heavy Vehicles permitted	Yes.	Yes.	Yes.	Yes.	Yes, but preferably only to service properties.	Only to service properties.
Intersection treatments	Controlled with appropriate measures e.g. high speed traffic management, signing, line marking, grade separation.	Controlled with appropriate measures e.g. traffic signals.	Controlled with appropriate Local Area Traffic Management.	Controlled with measures such as signing and line marking of intersections.	Controlled with minor Local Area Traffic Management or measures such as signing.	Self controlling with minor measures.
9. Frontage Access	None on Controlled Access Roads. On other routes, preferably none, but limited access is acceptable to service individual properties.	Prefer not to have residential access. Limited commercial access, generally via service roads.	Residential and commercial access due to its historic status Prefer to limit when and where possible.	Prefer not to have property access. Limited commercial access, generally via lesser roads.	Yes, for property and commercial access due to its historic status. Prefer to limit whenever possible. Side entry is preferred.	Yes.
10. Pedestrians	Preferably none. Crossing should be controlled where possible.	With positive measures for control and safety e.g. pedestrian signals.	With appropriate measures for control and safety e.g. median/islands refuges.	Measures for control and safety such as careful siteing of school bus stops and rest areas.	Yes, with minor safety measures where necessary.	Yes.
11. Buses	Yes.	Yes.	Yes.	Yes.	Yes.	If necessary (see Note 5)
12. On-Road Parking	No (emergency parking on shoulders only).	Generally no. Clearways where necessary.	Not preferred. Clearways where necessary.	No – emergency parking on shoulders – encourage parking in off road rest areas where possible.	Built Up Area – yes, where sufficient width and sight distance allow safe passing. Non Built Up Area – no. Emergency parking on shoulders.	Yes, where sufficient width and sight distance allow safe passing.
13. Signs & Linemarking	Centrelines, speed signs, guide and service signs to highway standard.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs, guide and service signs.	Centrelines, speed signs and guide signs.	Speed and guide signs.	Urban areas – generally not applicable. Rural areas - Guide signs.
14. Rest Areas/Parking Bays	In accordance with Main Roads' Roadside Stopping Places Policy.	Not Applicable.	Not Applicable.	Parking Bays/Rest Areas. Desired at 60km spacing.	Not Applicable.	Not Applicable.

Figure 11: Road types and criteria for Western Australia

Source: Main Roads Western Australia D10#10992

8 Public transport access

Information was collected from Transperth and the Public Transport Authority to assess the existing public transport access to and from the site.

The subject site has access to the following bus services within walking distance:

- Bus route 308: Midland Stn (Circular Route) via Viveash.
- Bus route 310: Midland Stn Ellenbrook Stn via Great Northern Hwy & Millhouse Rd.
- Bus route 312: Midland Stn (Circular Route) via Baskerville and Millendon.

Bus services provide excellent coverage and connectivity to the rail network. The closest bus stops are located on Great Northern Highway, approximately 250m walk to the north-west of the site (Figure 12).

Public transport services provide a viable alternative mode of transport for staff and visitors of the proposed development. The public transport network plan is shown in Figure 13.



Figure 12: Closest bus stops serving the proposed development



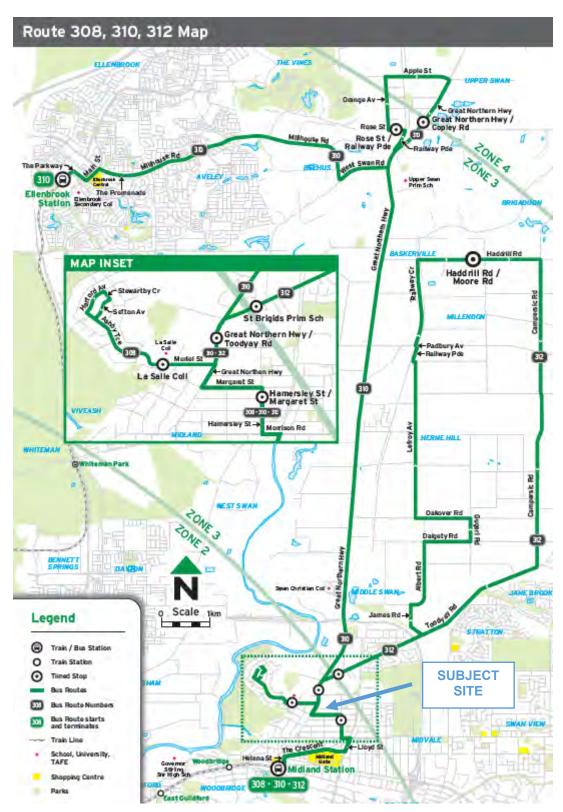


Figure 13: Transperth public transport plan

Source: Transperth

9 Pedestrian access

Information from online mapping services, Main Roads WA, Local Government, and site visits was collected to assess the pedestrian access for the proposed development.

9.1.1 Pedestrian facilities and level of service

Footpaths are provided on John Street and Great Northern Highway near the subject site. An internal footpath network is also proposed to connect different buildings on site.

The WAPC Transport Impact Assessment Guidelines for Developments (2016) provide warrants for installing pedestrian priority crossing facilities. This is based on the volume of traffic as the key factor determining if pedestrians can safely cross a road. The guidelines recommend pedestrian priority crossing facilities be considered once the peak hour traffic exceeds the volumes detailed in Table 4.

The traffic volumes in this table are based on a maximum delay of 45 seconds for pedestrians, equivalent to Level of Service E. Traffic volumes on John Street adjacent to the site are expected to be below the threshold for safe pedestrian crossing. Therefore, pedestrian crossing level of service is satisfactory on the adjacent road network.

Table 4: Traffic volume thresholds for pedestrian crossings

Road cross-section	Maximum traffic volumes providing safe pedestrian gap
2-lane undivided	1,100 vehicles per hour
2-lane divided (with refuge)	2,800 vehicles per hour
4-lane undivided*	700 vehicles per hour
4-lane divided (with refuge)*	1,600 vehicles per hour



10 Bicycle access

Information from online mapping services, Department of Transport, Local Government, and/or site visits was collected to assess bicycle access for the proposed development.

10.1 Bicycle network

The Perth and Peel Long Term Cycle Network (LTCN) designates routes by their function, rather than built form. Function considers the type of activities that take place along a route, and the level of demand (existing and potential). The built form of a route is based on the characteristics of the environment, including space availability, topography, traffic conditions (speed, volumes), and primary users. The cycling network hierarchy is described in Figure 14.

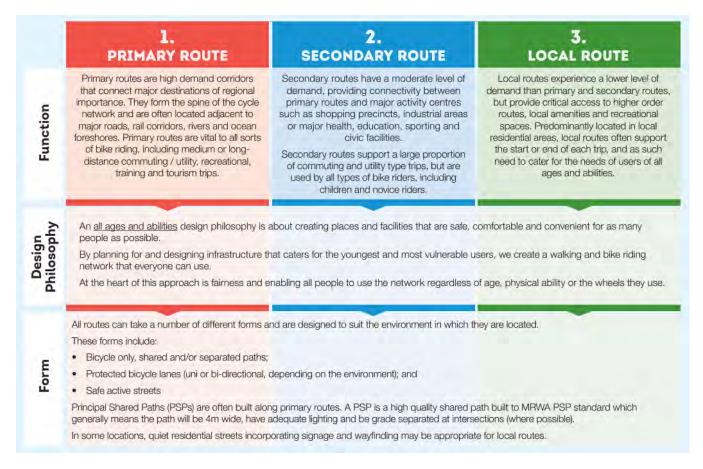


Figure 14: Western Australian Cycling Network Hierarchy

The Long-Term Cycle Network plan is detailed in Figure 15. John Street and Great Northern Highway are designated as a 'local route'. The John Street infrastructure needs significant improvement and Great Northern Highway needs some improvement.

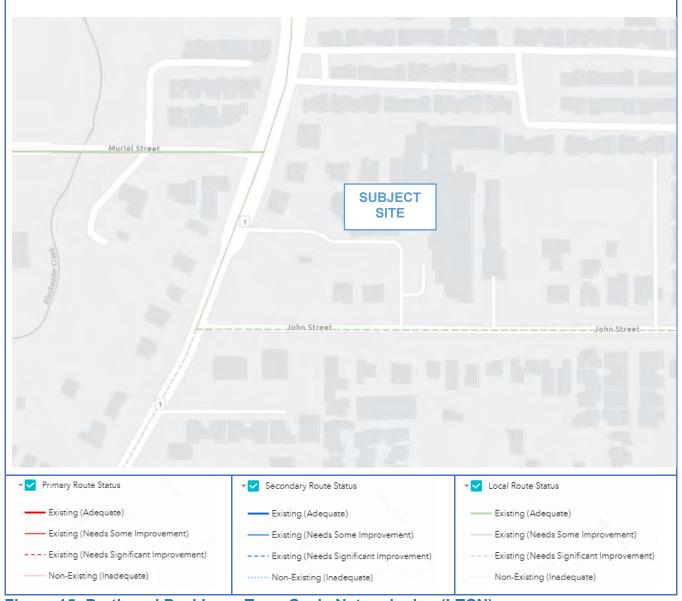


Figure 15: Perth and Peel Long Term Cycle Network plan (LTCN)



The Strava cycling heatmap tool shows that Great Northern Highway is a relatively popular cycling route in the area (Figure 16).

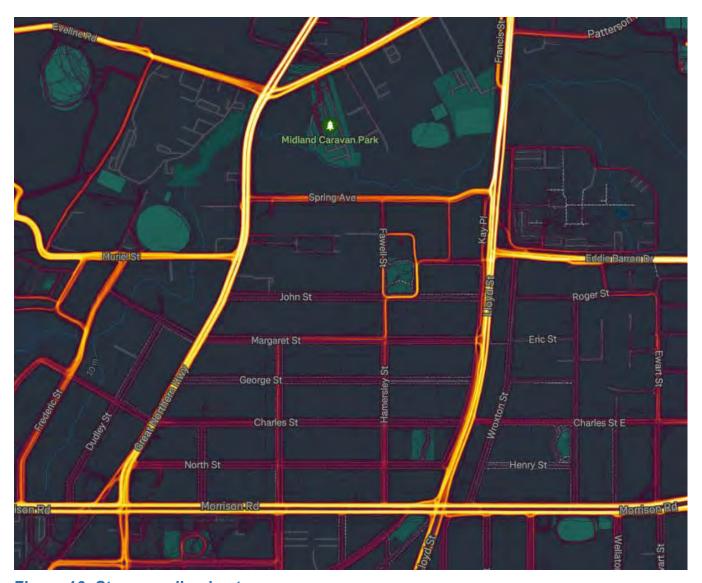


Figure 16: Strava cycling heatmap

10.2 Bicycle parking and end of trip facilities

5 x double-sided bicycle racks are provided within the site near the main entry, providing parking for up to ten bicycles. End of trip facilities including separate male and female showers, change rooms and lockers are provided to encourage active transport for staff.

10.3 Sustainable transport catchment

As detailed in Figure 17, the subject site is well placed for staff and visitors to travel by sustainable modes of transport. A large catchment of people exists within a comfortable 8km or 20-25min cycling or micromobility journey to the site.

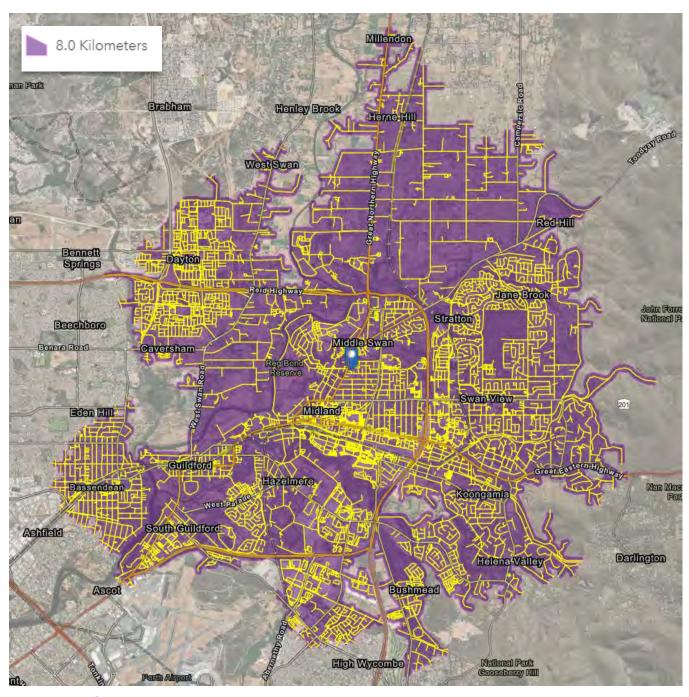


Figure 17: Cycling and micro-mobility catchment





11 Site specific issues

No additional site-specific issues were identified within the scope of this assessment.

12 Safety issues

The five-year crash history in the vicinity of the site was obtained from Main Roads WA. As detailed in Figure 18, no crashes were recorded on John Street near the site in the last five years.

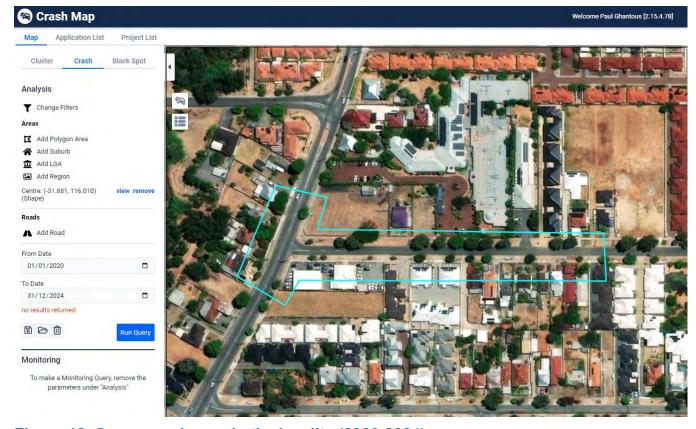


Figure 18: 5-year crash map in the locality (2020-2024)

Source: MRWA crash mapping tool



13 Conclusion

This Transport Impact Statement has been prepared by Urbii on behalf of Labouchere Investment Pty Ltd with regards to the proposed residential aged care facility (RACF) expansion, located at Lots 24-25 Great Northern Hwy and Lots 22-23 John St, Midland.

The subject site is located at the corner of Great Northern Highway and John Street and accommodates the 'St Jude's Midland Nursing Home'. The existing RACF accommodates 110 beds and 44 staff.

The site is surrounded by mostly residential land uses.

It is proposed to expand the existing site through construction of a new residential aged care building accommodating an additional 72 beds and 8 staff, with supporting amenities. The existing building will be retained and therefore the expanded RACF will accommodate a total of 182 beds and 52 staff in the post development situation.

The site features good connectivity with the existing road, walking and cycling network. There is good public transport coverage through nearby bus services that can provide connectivity to the rail network.

The car parking supply is satisfactory and can accommodate the car parking demand of the proposed development.

The traffic analysis undertaken in this report shows that the traffic generation of the proposed development is minimal (less than 100vph on any lane) and as such would have an insignificant impact on the surrounding road network.

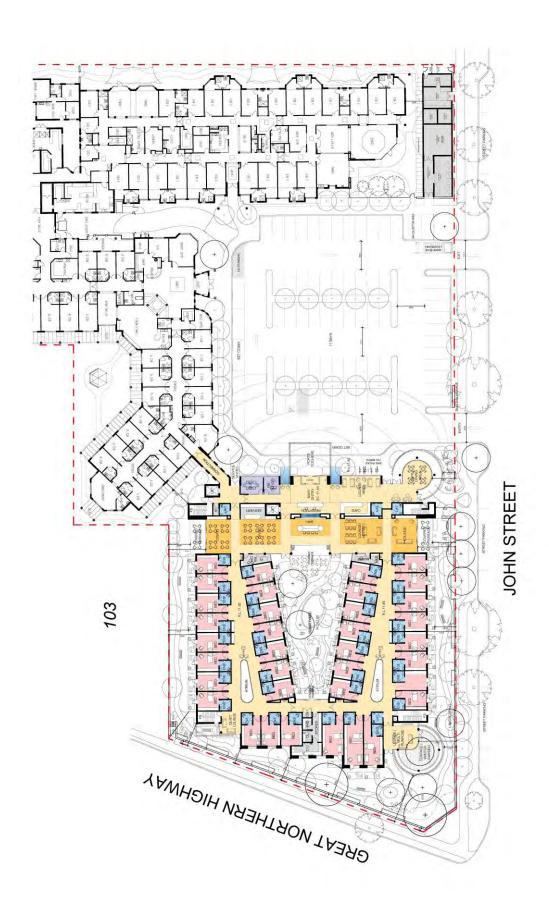
It is concluded that the findings of this Transport Impact Statement are supportive of the proposed development.

Appendices

Appendix A: Proposed development site plans







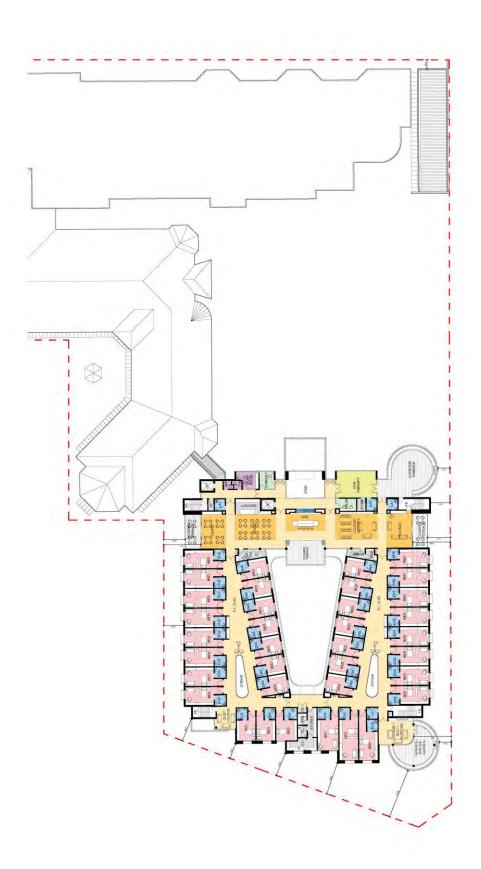
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MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

ST JUDE'S HEALTHCARE SER

GROUND FLOOR PLAN



6

ST JUDE'S HEALTHCARE SERVICES

FIRST FLOOR PLAN

z 🕀

MIDLAND VILLAGE AGED CARE

Appendix B: Swept path diagrams

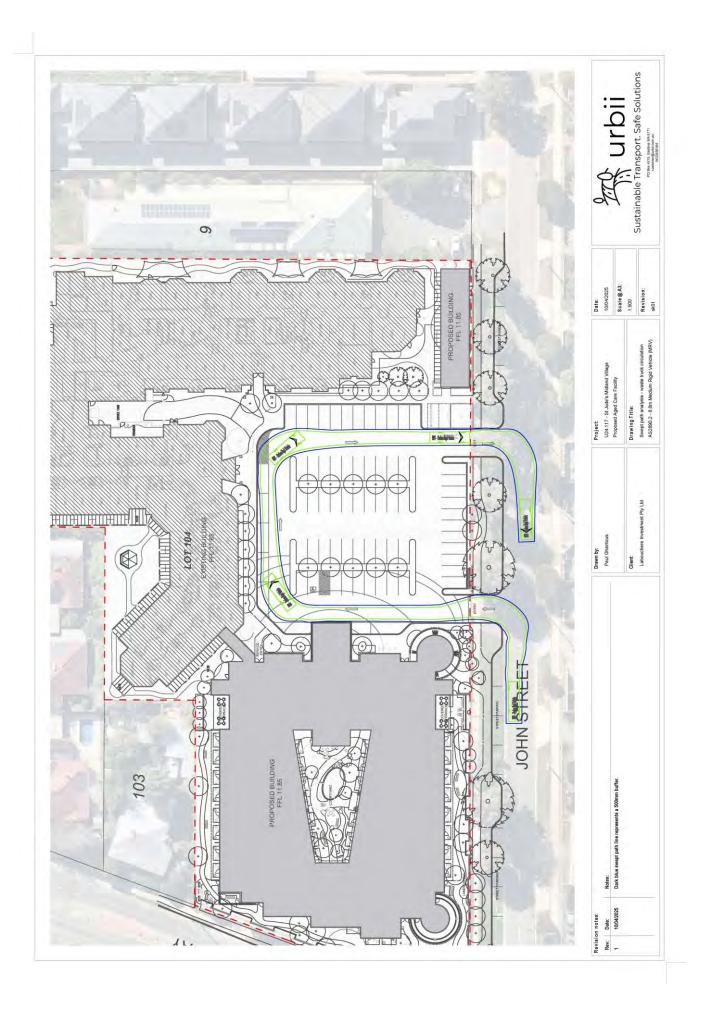
Swept path diagrams are included in this section of the report. Different coloured lines are employed to represent the various envelopes of the vehicle swept path, as described below:

Cyan represents the wheel path of the vehicle

Green represents the vehicle body envelope

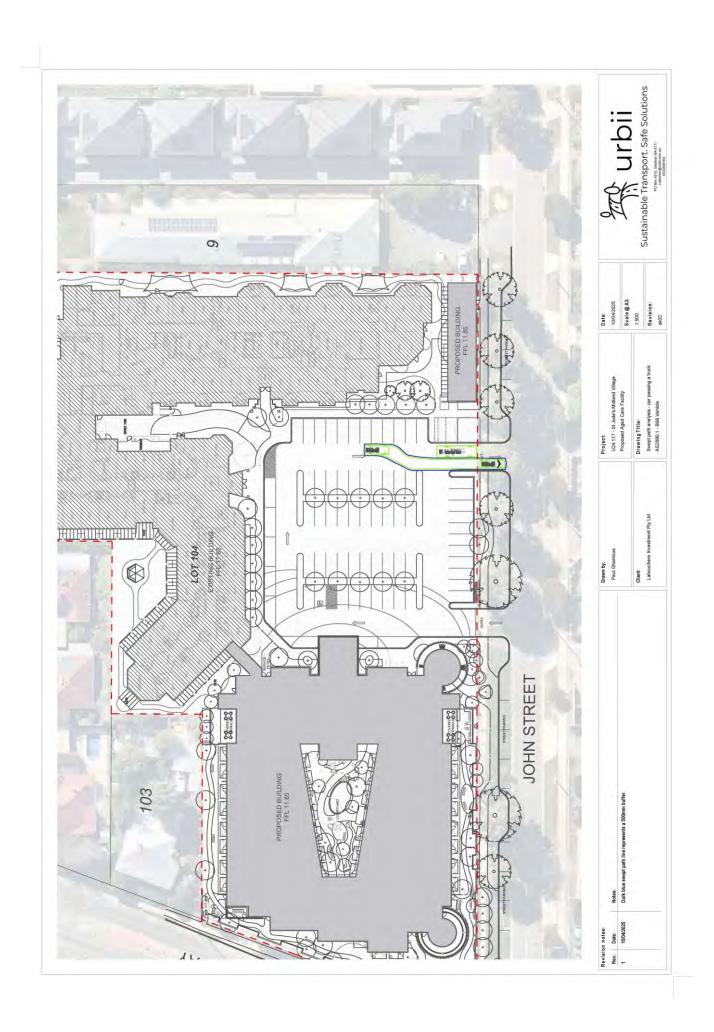
Blue represents a 500mm safety buffer line, offset from the vehicle swept path

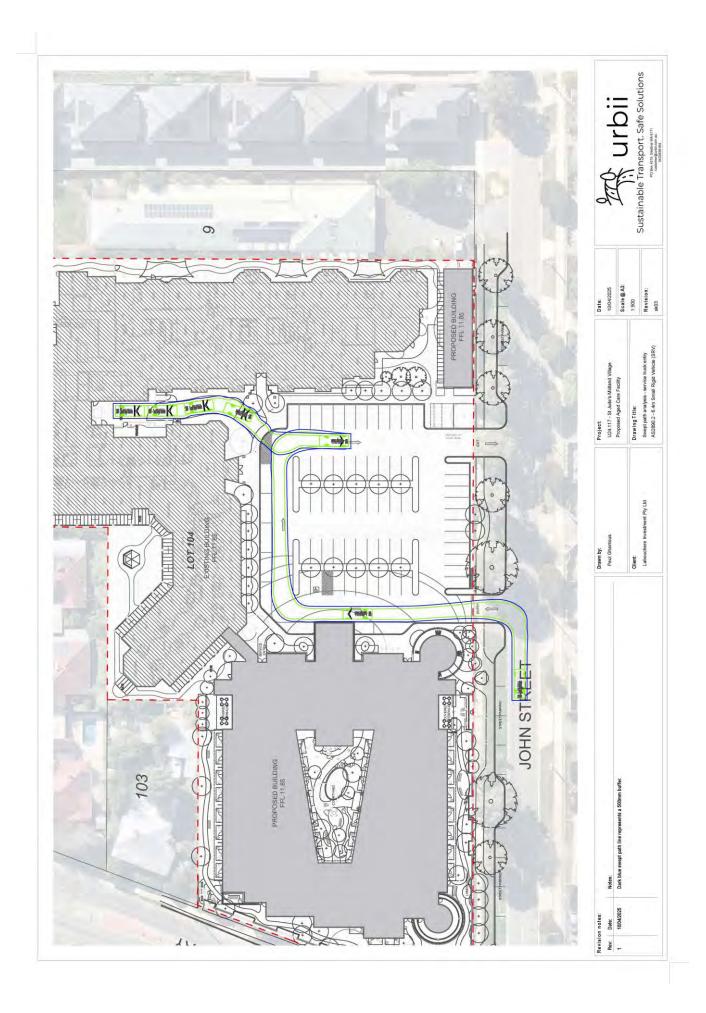
The swept path diagrams are also provided separately in high-quality, A3 PDF format.





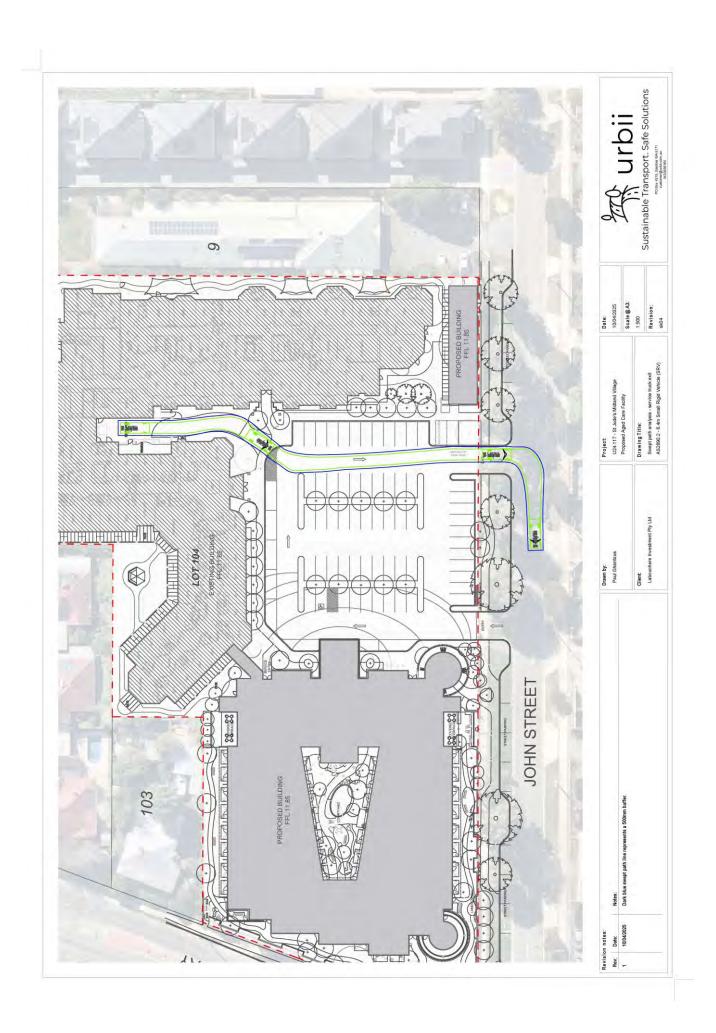
















PROPOSED MIDLAND VILLAGE AGED CARE FACILITY 44 JOHN STREET, MIDLAND

ARCHITECTURAL DESIGN STATEMENT

May, 2025

PURPOSE

To seek development approval from the City of Swan

REV.	ISSUED FOR	DATE	PREPARED	REVIEWED	APPROVED
А	Draft DA Issue	07.04.2025	MZ	JB	MZ
В	Issued for DA	16.05.2025	MZ	JB	MZ

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1. EXECUTIVE SUMMARY

St Jude's Healthcare Services is proposing a new 72-bed Residential Aged Care Facility for their Midland Nursing Home site. The project intends to act as the first stage of a greater redevelopment masterplan that will allow for the site to evolve and adapt well into the future.

The proposed new facility has the core objective of creating a comfortable, safe, and supportive environment for elderly residents, fostering a sense of community, independence, and dignity. The design prioritises accessibility, functionality, and well-being, while embracing a modern aesthetic that reflects a harmonious blend of care, comfort, and contemporary design principles whilst also addressing a major demand for high quality and contemporary aged care for the greater Midland / Swan area.

The architectural concept for the facility is rooted in the principles of inclusivity, adaptability, and sustainability. The facility aims to be a home-like environment that not only meets regulatory requirements but also enriches the lives of residents through thoughtfully designed spaces that promote interaction, engagement, and a sense of belonging.

A key design driver for the facility is to break down traditional stereotypes associated with aged care and designing a space not only for its residents but also the staff and visitors.

The following report will outline the site context, architectural vison and the design brief which has informed the proposal.

We thank the City of Swan for their time in considering this proposal and we look forward to continue to develop this project towards construction in late 2025 with an estimate completion early 2027.

Should you have any questions on the following, report or drawing package, please feel free to contact the undersigned.

Sincerely,

Mark Zuvela Associate

T&Z Architects



2. BACKGROUND

2.1. PROJECT OVERVIEW

The project intends to meet the ever-growing demand for aged care, especially in the greater Midland and Swan areas. There is currently a short supply of quality aged care offerings that promote hotel like amenities in a home like setting whilst destigmatising traditional and outdated aged care developments.

2.2. SITE CONTEXT

The site is located within the existing Midland Nursing Home facility that was purchased by St Jude's a few years prior.

The site was previously a senior's specific hospital which over the years was adapted and evolved into the facility that exists today. The last major development to occur on the site was over 25 years ago and as a result a new modern facility occupying the corner lots of John Street and Great Northern Hwy will be the first stage of a gradual redevelopment. As a result, the proposed design not only needs to allow for the existing facility to still remain fully operational, but also connect into it and improve the entry, arrival and servicing aspects as well.

Whilst aged care design is an ever evolving, the new facility will allow for ease of adaptability and not restrict any future development that may occur in the coming years as the existing buildings on the site reach the end of their service life.



FIG 1 – Site Location and Local Context



2.3. SITE CHARACTERISTICS

Topography

The area has not seen any major development in over 80 years and as result the site conditions are still roughly the same as they were post World War 2. The area was predominantly residential and market gardens so the quality of the soil and the existing trees are high. Whilst land closer to the Swan River are affected by flooding, this site is not considered on a flood plain.

The topography is mostly flat sitting at a contour of around 11.8m AHD with a fall to the western boundary of the site along Great Northern Hwy by approx. 1.2-1.5m. The proposed development will take a simple approach to the site by maintaining the RL11.8on levels and using the western boundary to Great Northern Hwy as a retaining wall allowing for better separation of the residents within to the traffic of the road.

Refer to the Feature Survey within the architectural package for more detail.



FIG 2 – Landgate Aerial Photo from March 1963

Bushfire

The Department of Fire and Emergency Services Bushfire Prone Map has indicated that the site is <u>not</u> a bushfire prone area. Refer to Bushfire Report and the extract below.



FIG 3 – DFES Bushfire Prone Map Area accessed on the 4th April 2025



Heritage

The site currently has no heritage buildings on it that will affect this application.

2.4. PUBLIC ART

The project will fully comply with the City of Swan's Public Art policy for new developments. The detail of the artwork is not covered as part of this DA, but it will follow the accepted artist procurement process and seek input from the City of Swan prior to the final designs being approved before the Building Permit is granted.

It should be noted that the proposed development does not rely on the use of public art to improve the overall aesthetics of the project. Rather, the intent is to give the chosen artist a freer reign to consider multiple options and ideas and thus foster greater collaboration between the design team and the public artist to improve the public realm and the residents within by creating an original and appropriate public art response.



3. SPP 7.0 – DESIGN PRINCIPLES

3.1. CONTEXT AND CHARACTER

"Good design responds to and enhances the distinctive characteristics of a local area, contributing to a sense of place"

The proposed development is surrounded by an eclectic mix of building typologies and architectural styles. The general theme along Great Northern Hwy varies from new multi residential development to character houses that were built over 100 years ago, along with car dealerships and post war European influence homes and businesses.

It could be said that the area is consistently inconsistent however the one common theme that can be taken is the connection to nature via the pockets of natural bushland and mature native trees both along Great Eastern Hwy and John Street.

The intent of this development is to create an original yet appropriate development that is not a literal response to the standard Midland aesthetic of brick and pitched / saw tooth roofs. Rather a landscape centric approach that uses well-proportioned forms and subtle connections to post war and Italianate architecture that also sits harmoniously with the residential typologies of John Street.

The proposed building also considers being viewed not just from the neighbouring properties but also from fast moving traffic along the busy Great Northern Highway.



FIG 4 – snapshot of the surrounding building styles and typologies



3.2. LANDSCAPE QUALITY

"Good design recognises that together landscape and buildings operate as an integrated and sustainable system, within a broader ecological context"

Residential aged care facilities are extremely landscape centric buildings. The external spaces are arguably just as important as the internal spaces. As a result, considerable amounts of time and collaboration has been invested into the landscape design of this proposal.

The integration goes far beyond just the external areas as resident wellness and dementia design principles are heavily considered whilst combined with along with the local vernacular to ensure an appropriate yet familiar environment is created.

Please refer to the landscape design report for more detail.



Nostalgia /Familiarity

We're creating spaces that feel like home, drawing from the memories and experiences of the retirement generation.



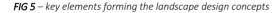
Connection to Nature

Expect classic garden styles, executed in a sophiticated manner, soft tones and natural textures like timber and stone that bring a sense of nostalgia to life. The landscape balances structured familiar forms with flowing paths that invite exploration.



Cultural Connection

We're layering in cultural connection through local native plants and subtle indigenous story telling. Its about creating a space that feels grounded and personal. A place where residents can feel connected to their past, but also rooted in the community around them.





 $\textbf{\textit{FIG 6}} - \text{exterior perspective of the main entry off John Street showing the integration of existing trees and new landscape}$



3.3. BUILT FORM AND SCALE

"Good design ensures that the massing and height of development is appropriate to its setting and successfully negotiates between existing built form and the intended future character of the local area"

The proposed facility remains in keeping the predominantly 1-2 level built scale of the surrounding areas. The building uses a restrained materiality pallet and breaks down the forms into more residential like elements to further reduce the impact of its bulk and scale. Whilst aged care facilities typically have higher floor to floor levels over standard residential, great care has been taken to ensure the buildings mass and portions remain appropriate and balanced to fit in with the surround areas.

The street setbacks to Great Northern Hwy varies to the shape of the lot, the building follows the western boundary but does not mimic it.

To John Street, the ground floor is set back to allow for the most amount of landscaped space and cover for the bedroom's private external courtyards.

The nature of the boundary fencing has also been considered to also follow the same rhythm of the building beyond and allow for transparency yet a sense of security to the elderly residents within.



FIG 7 – exterior perspective from Great Northern Hwy looking south east



FIG 8 – exterior elevational perspective from Great Northern Hwy looking directly east



3.4. FUNCTIONALITY AND BUILD QUALITY

"Good design meets the needs of users efficiently and effectively, balancing functional requirements to perform well and deliver optimum benefit over the full life-cycle."

The Midland Village Residential Aged Care facility, caters to the needs of residents, staff, and visitors. The facility prioritises both efficiency and comfort, ensuring that it provides a space that feels like home while maintaining a high standard of aged care.

- 1. **Resident-Centred Spaces**: The layout of the facility is designed to ensure residents have easy access to necessary care while promoting their independence. Bedrooms and common areas are thoughtfully designed to enhance comfort and functionality.
- 2. **Dementia-Friendly Design**: One of the most crucial aspects of the facility is its focus on dementia-friendly principles. The building uses colour schemes, clear wayfinding, and simple, intuitive layouts that help residents with dementia navigate the spaces more easily. Familiar textures, lighting, and environmental cues are also integrated to reduce confusion and anxiety.
- 3. **Open and Spacious Layout**: The building is designed with open hallways and areas to promote freedom of movement. Wide, uncluttered spaces allow residents to navigate comfortably without feeling restricted. This is particularly important for residents with dementia, as they may experience confusion or disorientation. The use of natural light and clear sightlines makes the space feel less intimidating and more welcoming whilst maintaining a connection to the outside realm at all times.
- 4. **Safe and Accessible Spaces**: The facility incorporates safety features like non-slip floors, handrails, and wide doorways, making it safer for residents with mobility challenges. Entry and exit points are clearly marked, and there are designated areas for respite and therapeutic activities. Accessibility is a top priority, and the layout allows for easy access for both residents and visitors.
- 5. Therapeutic and Recreational Spaces: Dedicated spaces for therapy, recreation, and socialization are an important part of the facility. Gardens, sensory rooms, and activity rooms provide residents with opportunities to engage in meaningful activities that promote physical and mental well-being. These spaces are designed to be safe yet stimulating, providing a variety of environments that cater to different needs and preferences.

Meeting the Needs of Residents, Staff, and Visitors

For Residents:

- o The design fosters a sense of belonging and dignity for residents. The integration of personalized spaces, communal areas, and outdoor access ensures that residents feel connected to the community and their environment.
- o Special attention is given to the sensory needs of residents with dementia. Sensory cues, like the use of different textures and colours in the décor, contribute to enhancing the resident's experience and memory recall.

For Staff:

- o The design allows staff to efficiently care for residents while minimizing travel distances. Nurses' stations are strategically placed to ensure that staff can provide immediate attention when needed, without unnecessary movement.
- o Work areas are equipped with the latest technology to ensure that staff can access medical records and other essential tools quickly and easily.



Staff amenities, such as break rooms and training areas, are also integrated into the design, promoting staff well-being and efficiency.

For Visitors:

- o The facility is designed to be welcoming to visitors, offering comfortable, inviting spaces where family and friends can spend time with residents.
- There are dedicated visitor areas that are designed to be homely and inviting, as well as outdoor spaces that encourage family gatherings.
- o Easy-to-navigate layouts and clear signage ensure visitors can find their way around the facility without confusion

The facility uses durable, high-quality materials that are easy to clean and maintain while also ensuring the comfort and safety of residents. Non-toxic paints, low-maintenance flooring, and durable fixtures contribute to the longevity of the building and reduce the need for frequent repairs.



Porcelain paver - Travertine M Supplier: Remastone











FIG 9 - exterior materiality













Please refer to the exterior finishes schedules in both the landscape and architectural packages for more detail.



3.5. SUSTAINABILITY

"Good design optimises the sustainability of the built environment, delivering positive environmental, social and economic outcomes"

The building incorporates energy-efficient systems, such as climate control and insulation, which help reduce energy consumption and costs. Sustainable materials are used throughout the facility, ensuring durability and low environmental impact. The design also prioritizes natural lighting and ventilation, creating a comfortable indoor environment while minimizing reliance on artificial lighting and air conditioning. Additionally, the facility's water management systems, including low-flow fixtures, contribute to water conservation. Overall, the facility is built with long-term sustainability in mind, reducing its carbon footprint while providing a healthy, efficient space for residents, staff, and visitors. The Midland Village Residential Aged Care facility incorporates passive design principles to enhance energy efficiency and comfort while reducing environmental impact. Key features include:

- Cross Ventilation: The building is strategically designed to allow for natural airflow through open windows and vents, facilitating cross ventilation. This reduces the need for mechanical cooling systems, helping to maintain a comfortable indoor climate while minimizing energy consumption.
- Solar Orientation: The facility is carefully oriented to take advantage of the sun's natural path, maximizing passive solar heating in winter and minimizing overheating in summer. Large windows on the north-facing side allow for solar gain, while shading elements like overhangs and screens help prevent excessive heat build-up. This solar orientation helps reduce the need for artificial heating and cooling, promoting a more sustainable indoor environment year-round.



FIG 10 – ESD principles to potentially incorporate into the facility

Please refer to the ESD report for more detail.



3.6. AMENITY

"Good design provides successful places that offer a variety of uses and activities while optimising internal and external amenity for occupants, visitors and neighbours, providing environments that are comfortable, productive and healthy."

The design adheres to principles of universal design, ensuring that all spaces are easily accessible for residents, including those with mobility issues, disabilities or suffering from advanced stages of dementia.

The design includes a variety of different outdoor spaces, such as sensory gardens and courtyards, where residents can enjoy fresh air and nature, contributing to mental and emotional health along with consulting rooms for allied health professionals to offer services from within the facility, resident gym / wellness room for exercise classes and rehabilitation along with a hair salon.

The facility also features a café that can be open to the public whilst still serving staff, residents and visitors whilst being in the safety of the facility.

The proposed design also offers a variety of common areas such as lounges, dining areas, and activity spaces, quiet rooms, and a central bar like area designed to encourage residents to socialise, participate in activities, and build relationships. These areas are also family-friendly spaces, ensuring that visitors can interact comfortably with residents. These areas offer a welcoming environment for families, which is important for maintaining strong connections and supporting residents' emotional needs. Roof terraces over the café and winter gardens to the south west corners also create unique spaces that can be used during different times of the day and seasons.

The resident bedrooms are designed to offer a peaceful and private retreat. The rooms are oversized in area allowing for personalisation to foster a sense of ownership and identity. The design includes privacy buffers to shared spaces, to allow residents to enjoy time with others while also having the option to withdraw into more private areas when needed.



 ${\it FIG~11}-{\it main~entry~with~the~caf\'{e}}$ to the corner and the covered Porte cochere that connects to the new internal piazza



3.7. LEGIBILITY

"Good design results in buildings and places that are legible, with clear connections and easily identifiable elements to help people find their way around"

The proposed design features a clear, legible layout that enhances the arrival experience for residents, staff, and visitors. One of the main features contributing to this clarity is the creation of a new shared drop-off, arrival, and parking space that acts like an internal piazza. This central, open area plays a pivotal role in defining the arrival sequence and improving the functionality of the entire site.

The piazza is designed to be a welcoming, open space, with defined pathways that lead to the main entry points of the facility. This helps visitors easily navigate their way into the building, enhancing the first impression and reducing any confusion upon arrival.

One of the key design drivers was to maintain the integrity of the existing facilities' front-door arrival, allowing them to continue serving their purpose while also benefiting from the new layout. The new shared arrival area doesn't overshadow or replace the existing entryways; instead, it enhances them by offering clear connections and improving the circulation across the site. This integration ensures that the existing front doors remain easily accessible for long-standing residents and their families, preserving the character of the original design while introducing modern functionality.

The open nature of the piazza and its integration with landscaping and seating areas foster a sense of community and warmth. It encourages spontaneous social interaction and acts as a central gathering space, offering both a practical function and a communal, welcoming feel. Whether visitors are arriving or departing, the piazza provides a comfortable space for people to meet, rest, and orient themselves, further enhancing the experience of entering the facility.



FIG 12 – view of the internal piazza space looking to the new facility from the current existing arrival / entry area



3.8. SAFETY

"Good design optimises safety and security, minimising the risk of personal harm and supporting safe behaviour and use."

The design of the Midland Village Residential Aged Care facility integrates CPTED principles throughout, creating a safe, secure, and welcoming environment for all users. The controlled open piazza space, buildings acting as natural barriers, multiple access points, and strategic placement of social spaces and bedrooms ensure that the site is both safe and accessible. These design elements work together to enhance visibility, encourage passive surveillance, and maintain a clear distinction between public and private areas, ultimately providing residents, staff, and visitors with a secure and supportive environment.

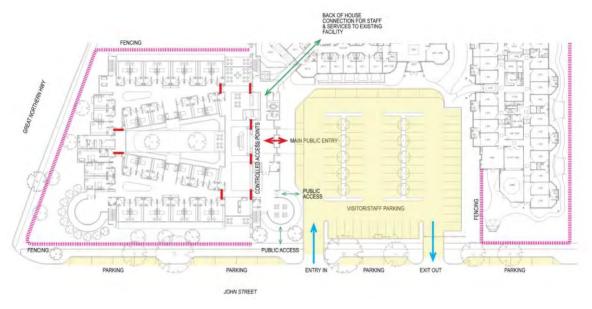


FIG 13 – site plan diagram showing the public vs private spaces and the controlled access points

3.9. COMMUNITY

"Good design responds to local community needs as well as the wider social context, providing environments that support a diverse range of people and facilitate social interaction."

The proposed facility brings significant benefits to the community, particularly in light of the current shortage of aged care beds in Western Australia. It not only addresses the urgent need for additional care options but also enhances the quality of life for residents through high-quality, compassionate care. The facility supports the local economy through job creation, strengthens community connections, making it an invaluable asset to the region. Additionally, it offers long-term solutions to the challenges faced by the growing elderly population, helping to ensure that the community is well-equipped to support its aging members.



3.10.AESTHETICS

"Good design is the product of a skilled, judicious design process that results in attractive and inviting buildings and places that engage the senses."

The overall aesthetic concept of the facility is a sophisticated and contemporary interpretation of Midland's historical past. While the facility does not directly mimic traditional forms, it uses familiar elements like earthy tones, natural textures, timber and stone to create a sense of place that resonates with the local context.

The design language is intended to be refined yet approachable, that blend seamlessly with the surrounding environment.

A combination of modern materials such as composite cladding and rammed earth with features like timber accents and expansive glazing creates a building that feels both grounded and progressive, looking to the future while respecting the past.

The use of timber fins to the porte cochere and winter gardens enhances the aesthetic appeal, providing both functional and visual harmony. The thoughtful integration of the surrounding mature trees and respect for the surrounding landscape further reinforces the building's connection to its environment.



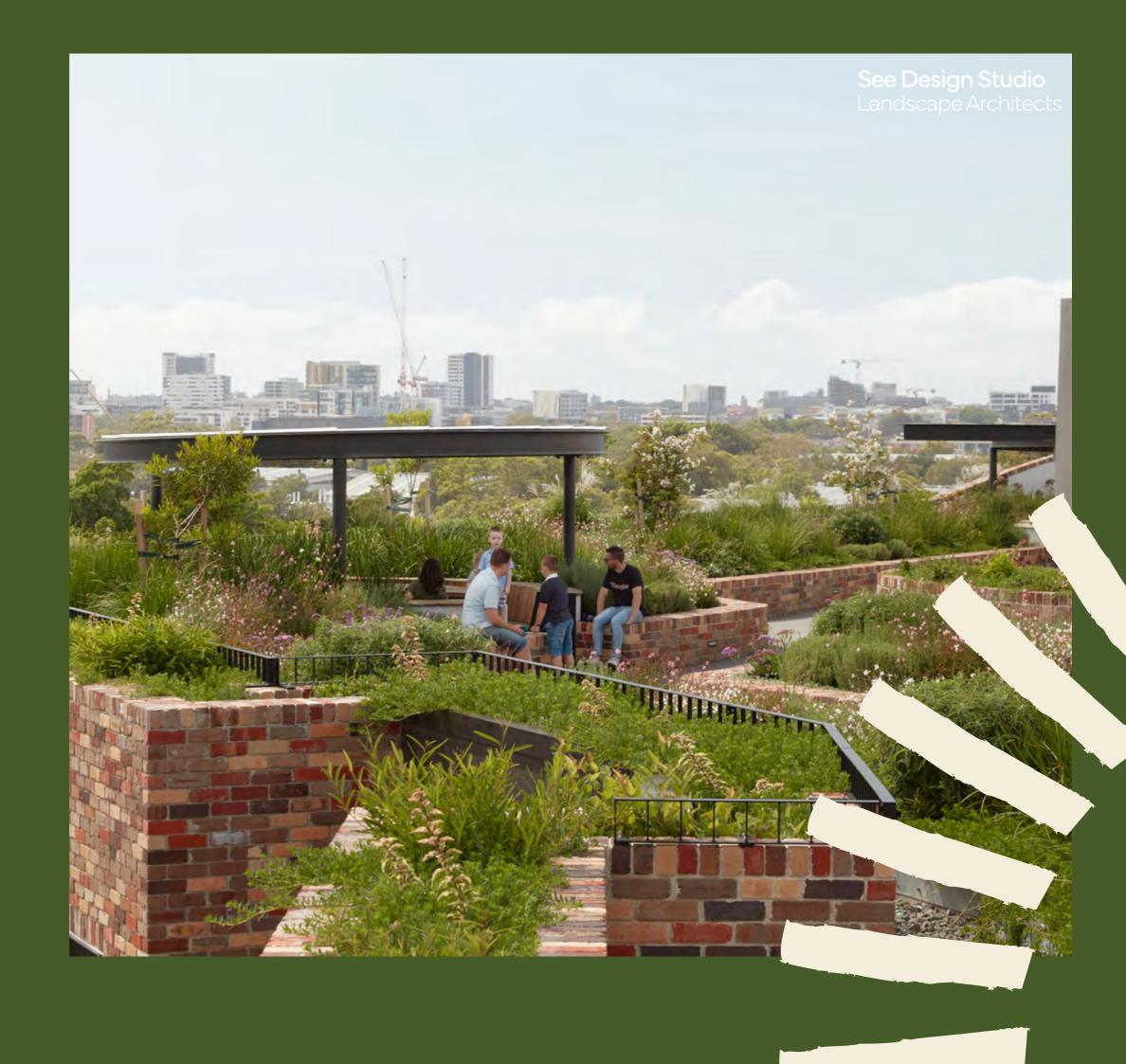
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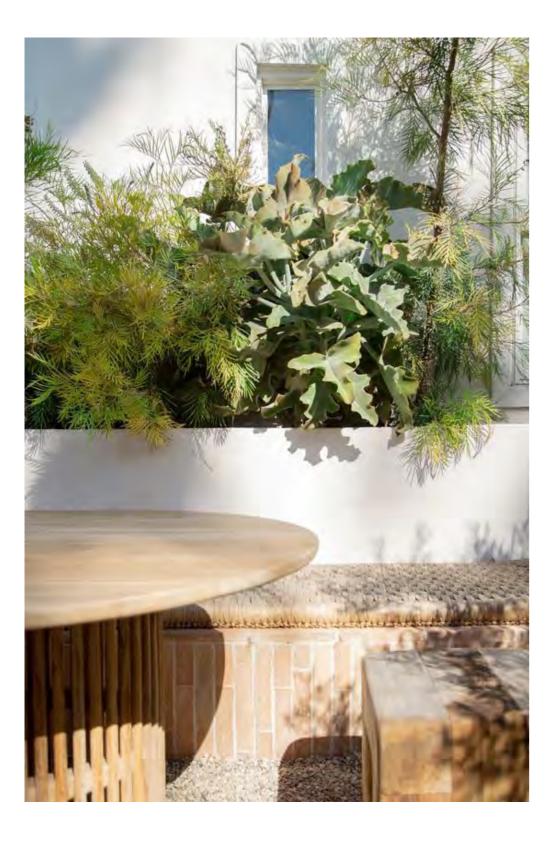
NAN MAN

Landscape Architecture

Concept Report

19.09.2025





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THE SITE



Site Context

Ray Marshall Park THE CRESCENT Midland Gate Legend GREAT EASTERN HWY VICTORIA ST Midland Village Site Train Line 111111111111 Coal Dam Park Midland Train Station Midland Railway Square and Worshops Public Open Space HELENA RIVER St John of God Midland Public Hospital Parks and Ovals

Sandalford Wines

Existing Condition







Existing planting on northern boundary



South/West Corner



Tree Lined Street



Trees adjacent to site

Tree Retention Plan



Existing tree to be retained



Existing tree to be removed

ID NUMBER	SPECIES
01	Lophostemon confertus
02	Melaleuca sp.
03	Lophostemon confertus
04	Jacaranda mimosifolia



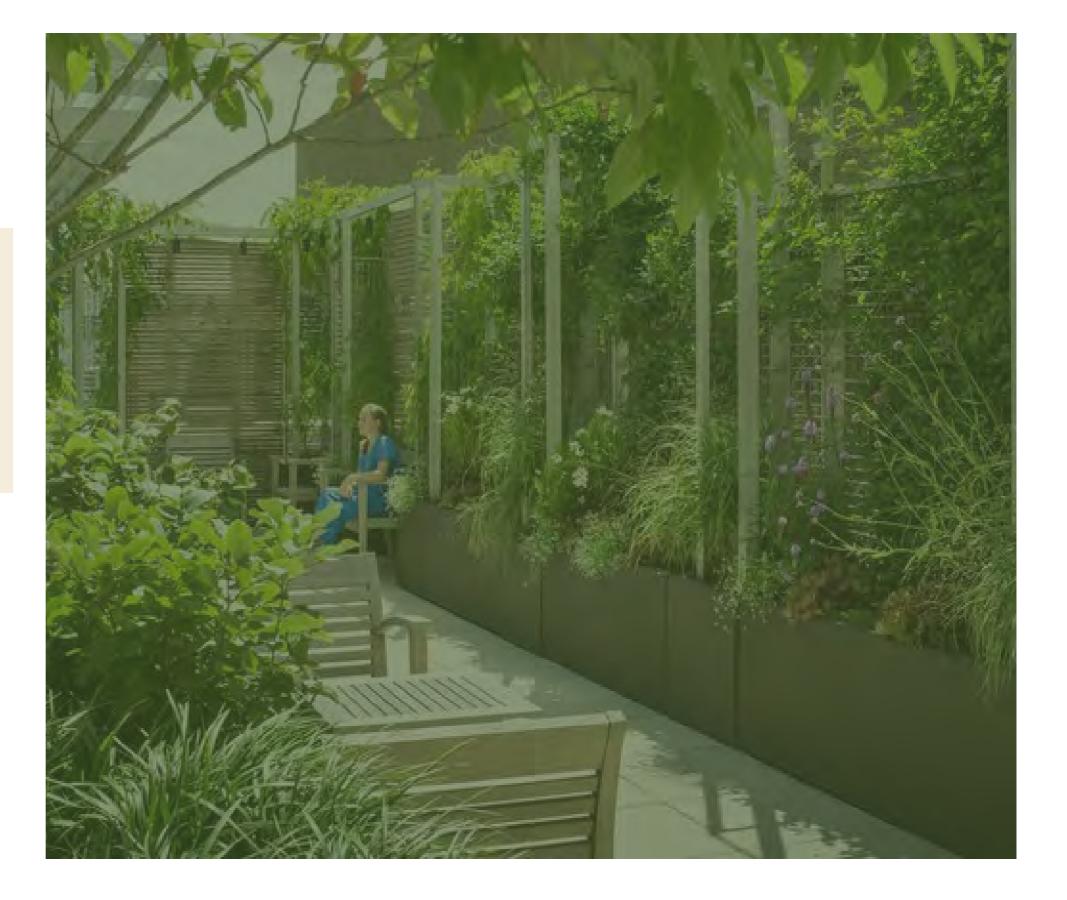
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Midland Village



Research Led Design Tailoring Spaces for Aged Care

Our approach is grounded in research, ensuring that every decision we make is informed by evidence. By understanding the unique needs of residents, staff, and visitors, we're able to create spaces that are not only functional but nurturing. This process is driven by research to ensure the best possible experience for all users.



Research Led Design

We've undertaken preliminary research into key studies and reports to guide our design for dementia care landscapes. Our approach draws on the latest findings in therapeutic landscapes, sensory gardens, and the role of nature and physical activity in improving the well-being of individuals living with dementia. Below are some key studies that have informed our strategy:

'Cognitive Benefits of Access to Nature In Dementia Care Facilities,'

Geriatrics and Gerontology International (2017)

Summary: Explores the impact of outdoor access on mood and cognitive clarity in older adults with dementia.

'Nature, Identity, and Dementia: The Psychological Benefits of Green Spaces,'

Psychological Medicine (2017)

Summary: Highlights how connection to green spaces helps improve a sense of identity and reduce disorientation for dementia patients.

'Sensory Gardens as a Therapeutic Tool for Dementia Patients,'

Aging and Mental Health (2020)

Summary: Examines how sensory gardens reduce anxiety and agitation in people with dementia.

'The Role of Green Roofs and Rooftop Gardens in Enhancing Social Interaction in Dementia Care Settings,'
Environmental Psychology Review (2018)

Summary: Looks at how rooftop gardens with sensory features enhance social interaction and mood for dementia care residents.

'Exercise and Dementia: A Meta-Analysis of Cognitive Benefits,'

The Lancet Neurology (2019)

Summary: Investigates the role of physical activity in reducing cognitive decline among elderly individuals, including those with dementia.



Research Led Design

Based on this research, we've synthesised the following key insights to guide the landscape design:

Access to Nature Improves Cognitive Clarity

According to Geriatrics and Gerontology International (2017), access to outdoor spaces has been shown to improve cognitive clarity and overall mental well-being for people living with dementia. Outdoor environments promote grounding, reduce confusion, and enhance clarity.

Sensory Gardens Reduce Anxiety and Agitation

Research published in Aging and Mental Health (2020) indicates that sensory gardens can reduce anxiety and agitation by **up to 40%**. These sensory-rich environments offer a calming effect through engagement with plants that stimulate sight, smell, and touch.

Physical Activity Slows Cognitive Decline

A meta-analysis in The Lancet Neurology (2019) suggests that regular physical activity can reduce the rate of cognitive decline by **around 25%**. Walking, gentle exercises, and active engagement with the environment support cognitive function and overall physical health.

Connection to Nature Enhances Identity

The study from Psychological Medicine (2017) emphasizes that green spaces help foster a sense of identity, reducing disorientation and improving emotional well-being for dementia patients. Familiar and natural environments create a sense of place and time for residents.

Rooftop Gardens Improve Social Interaction and Mood

According to Environmental Psychology Review (2018), rooftop gardens with sensory elements can improve mood and increase social interaction by **up to 50%**. These spaces provide a positive environment for both residents and their families, encouraging meaningful interactions in a natural setting.



DESIGNTHINKING

Landscape Vision



Landscape Principles for Caring Spaces

1. Engagement

Providing multi-sensory experiences of sound, texture, fragrance and form to stimulate and engage residents. Planting will provide colour, fragrance and seasonal change while the inclusion of moving water, textural materials like gravels which will crunch underfoot and sculptural elements that interact with wind will provide a soothing soundscape.

2. Flow

Creating **closed loop pathways** that are easy to navigate, accommodate various mobility levels with wayfinding, seating spots and activity nodes along the way.

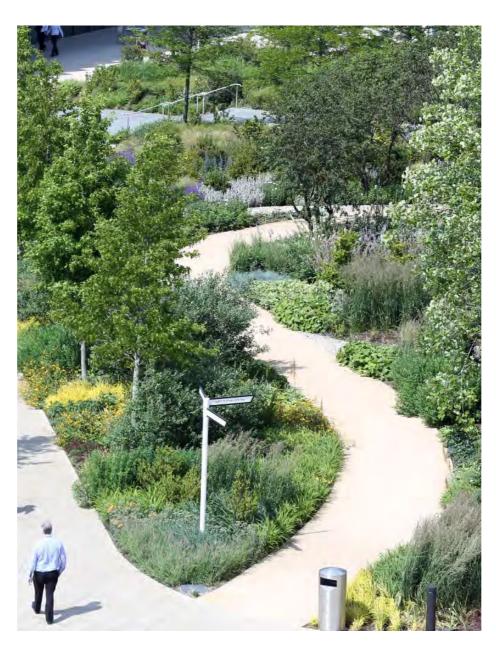
Walking is an important tool for the reduction of anxiety and restlessness, provides relief for boredom and can help offset physical pain. Physical activity is proven to **reduce cognitive decline by up to 25%**

3. Inclusion

Facilitation of activities that **empower differently-abled residents** via multiple modalities.

This accessibility will provide pathways for residents to foster relationships, a sense of community, personal fulfillment and identity.

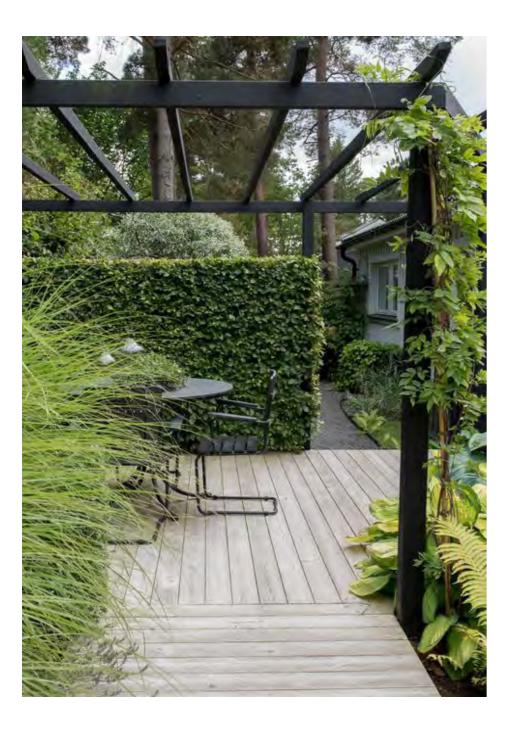






4. Interconnection

Connection to nature will be facilitated through strong visual links, connected circulation loops, safe, comfortable transition spaces and verandas, and access to multiple outdoor areas. The garden spaces should also promote and foster connection with staff and visitors, providing a beautiful space to engage with residents.



5. Familiarity

Creating a sense of **safety and joy** through the familiar with a planting palette that evokes memory through fragrance colour and seasonal changes.

Essential to the design is a creation of a **'home-like' environment** with materials, planting choices and scale creating a cozy personal vernacular



6. Balance

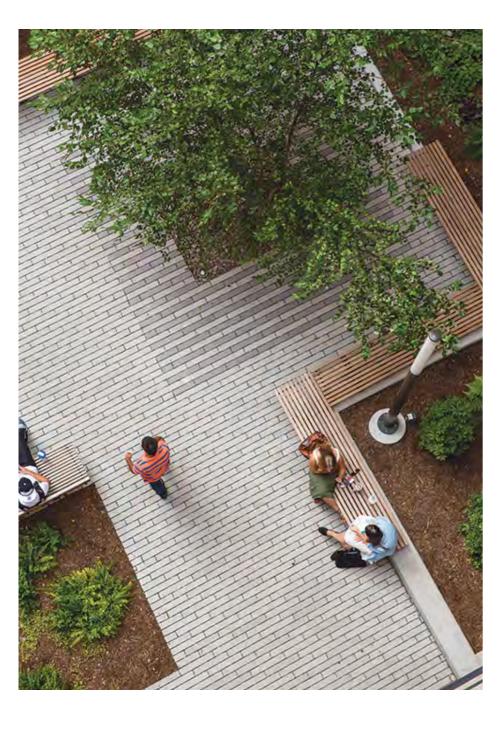
Spaces for **active engagement and stimulation** will be balanced with calming zones for **quiet reflection** and lower sensory input.

Residents will appreciate active community spaces and passive private spaces.



7. Flexibility

The **spaces should be multipurpose**, enabling different activities depending on the seasons or changing resident requirements or adaption to the program requirements of the centre.



8. Occupation

Facilites and spaces that enable **different therapeutic programs** to be run such as gardening, exercise classes, bird watchingmusic performance and art workshops. The design and structure of the spaces should support these activities with the inclusion of flexible seating for teaching groups, beautiful plantings, water for the birds and protection from the elements.



9. Comfort

Creating environments that **modulate the aggravating sensory input**. Shade and protection from glaring summer sun, muting traffic noises with water features and thick planting, blocking strong winds and using a pallete of materials and plants that provide softness and tactile comfort.





LANDSCAPECON

Landscape Concept



Nostalgia / Familiarity

We're creating spaces that feel like home, drawing from the memories and experiences of the retirement generation.





Connection to Nature

Expect classic garden styles, executed in a sophiticated manner, soft tones and natural textures like timber and stone that bring a sense of nostalgia to life. The landscape balances structured familiar forms with flowing paths that invite exploration.



Cultural Connection

We're layering in cultural connection through local native plants and subtle indigenous story telling. Its about creating a space that feels grounded and personal. A place where residents can feel connected to their past, but also rooted in the community around them.

Ground Floor Precinct Plan



1:500 N

Ground Floor - Aged Care Facility

Legend

- 01) Bike Racks
- 02) Cafe Entrance
- O3 Alfresco Informal seating amongst shade trees
- 04) Relaxation Terraces
- (05) Garden seating under shade trees
- (06) Private Terraces
- (07) Wellness Loop Pedestrian Path with low impact exercise elements adjacent to path
- O8) Sensory Garden Tactile, aromatic planting areas with seasonal interest.
- 09) Native Verge Planting
- (10) Retained Street Trees
- (11) Building Access

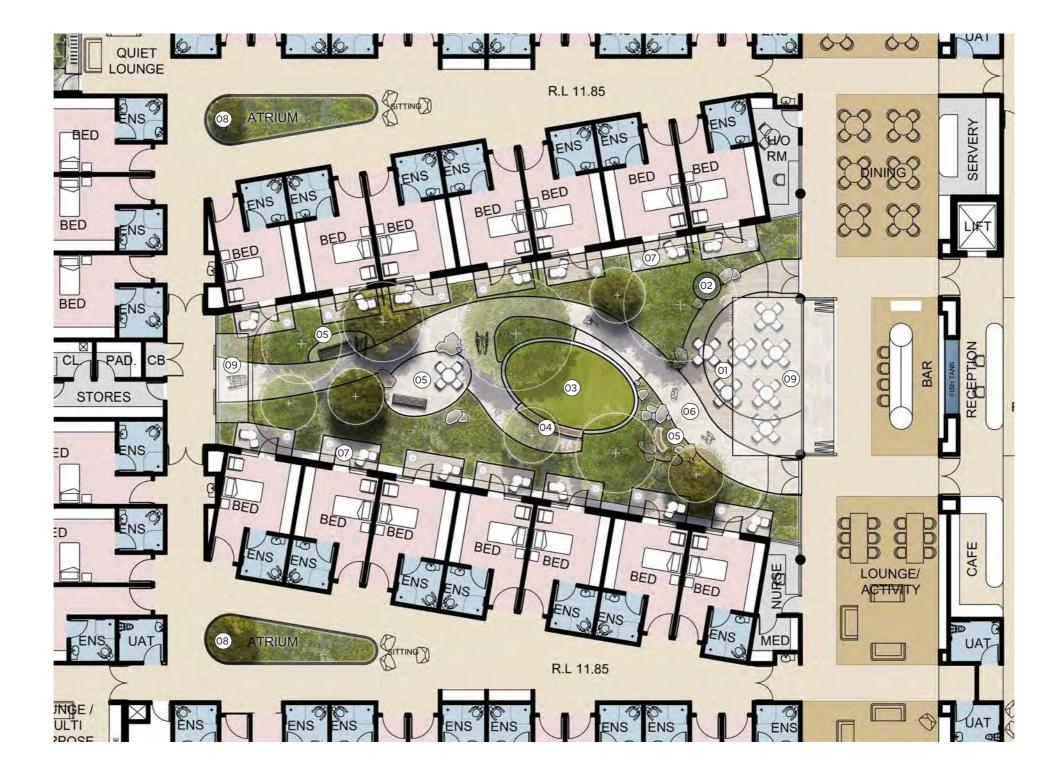




Ground Floor - Detail Landscape Plan

Legend

- (01) Alfresco dining
- (02) Water feature
- (03) Informal lawn area
- 04) Seating wall
- 05) Relaxation seating / node
- (06) Residents trails
- (07) Private terraces
- 08) Light void / Atrium garden
- (09) Shade structure above

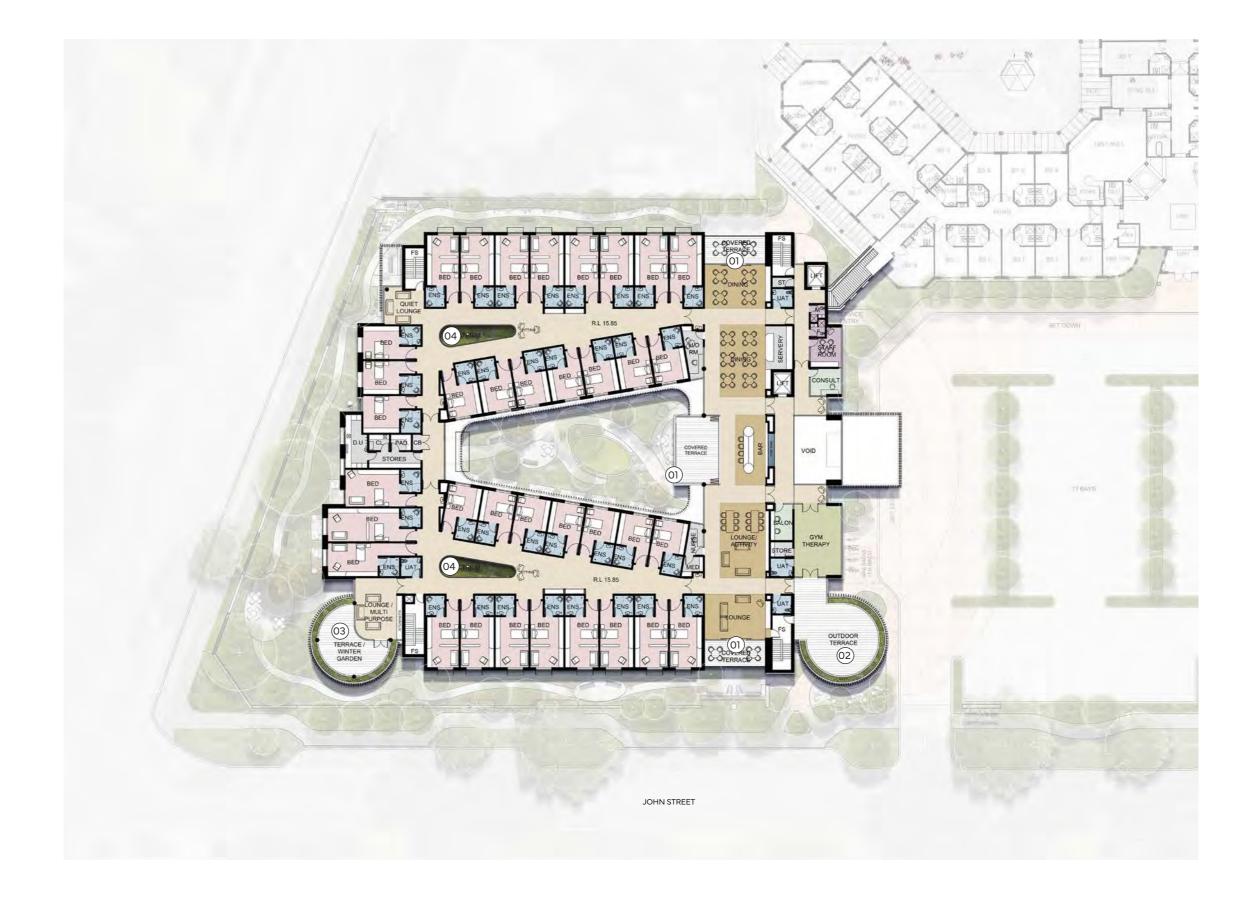




Level 1 - Aged Care Facility

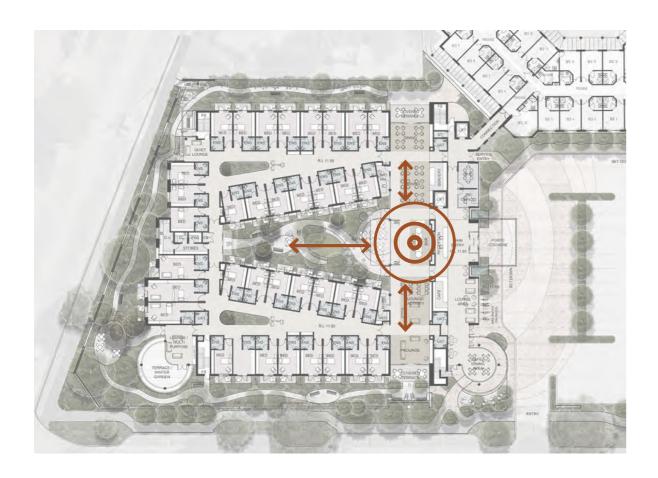
Legend

- 01) Elevated seating terraces
- 02) Open-air terrace garden
- ©3) Enclosed winter garden with raised planters surrounding
- 04) Atrium garden below





Key Design Moves



Orientating Hub

Enhanced connectivity between the orientating hub, dining area and garden spaces.



Sensory Experience

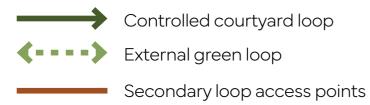
- Calm near rooms and dining
- Calm and reflective, transitioning to sensory planting and tactile engagement

Key Design Moves



Wellness Loops

Looping pathways with regular rest opportunities that reduce anxiety and encourage exploration without the risk of wandering too far.





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Physical Activity

A continuous walking path for low-impact physical activity, enriched with sensory planting and regular resting points.

Higher risk activities, closer to surveillance

Informal Fitness Nodes

Garden Design Imagery

exploration trail







nostalgic planting



connection



comfort and moment of rest



native plants

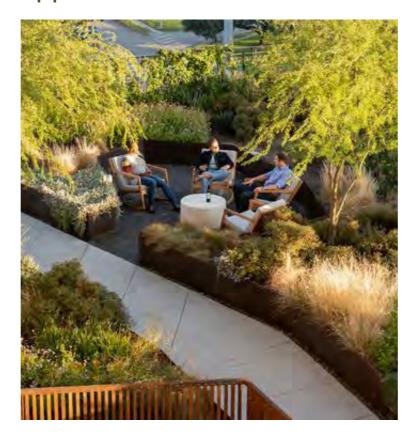
Accessible Active Landscape Imagery



active circulation



opportunities to connect



active social games





Cafe Terrace Imagery



peaceful moments











Natural materials

Native Verge Garden











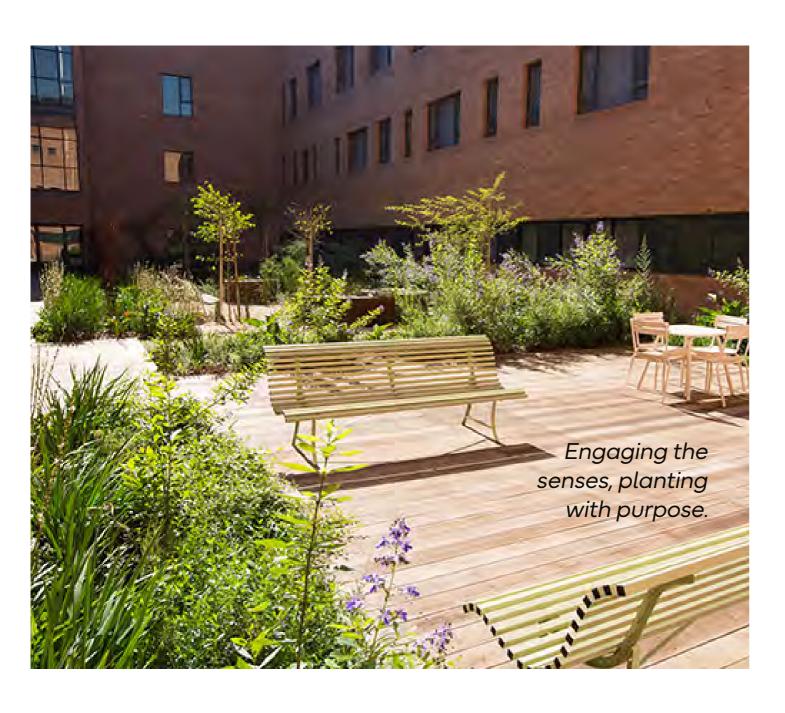




a sense of place

habitat creation

PLANTING PALETTE



Planting Approach

Thoughtful plant choices are crucial to the creation of beautiful, functional and nourishing spaces. In creating gardens for people living with dementia, their families and care givers we want to use plants as a tool to engage and delight, help spark memory and create calm and to reinforce therapeutic interventions that increase wellbeing and quality of life.

- Plant with **seasonal change** for connection to natural cycles.
- 2 Local plants to provide **a sense of place** and attract birds.
- 3 Indoor plants to allow continual **connection to nature**.
- 4 Plants to provide **familiarity** and reinforce a sense of 'home'
- Fragrant and textural plants to **engage the senses** and spark memories.
- 6 Safe planting selection and positioning of plants to reduce risk or injury.

Tree Species

Deciduous Trees



Triadica sebifera





Gleditsia 'sunburst'



Jacaranda mimosifolia



Cercis canadensis

Fruit Trees



Olea 'Tolley Upright'





Punica granatum



Ficus 'White Adriatic'

Caesalpinia ferrara

Ginko biloba

Native Trees



Banskia integrifolia



Eucalyptus orbifolia



Eucalyptus caesia



Melaeuca leucadendra



Eucalyptus victrix



Eucalyptus torquata



Hakea laurina



Eucalyptus forrestiana

Familiar



Stachys 'Big Ears'



Rosa 'Queen of Sweden'



Erigeron karvinskiansis



Rosa 'Windermere'



Lavender 'Miss Dorrington'



Cosmos bipinnatus



Gaura 'Butterfly Bush'



Lonicera 'Honey Suckle'



Rosemary 'Tuscan Blue'



Wisteria



Virburnum tinus



Tulbhagia violacea

Sensory



Thymus 'Creeping'



Michelia figo



Oregano



Pennisetum 'Naphray'



Helichrysum 'Silver Mist



Lomandra 'Seascape'



Santolina 'Lavender Cotton'



Craspedia globosa



Philotheca myoporoides



Trachelospermum jasminoides



Plectranthus argentus

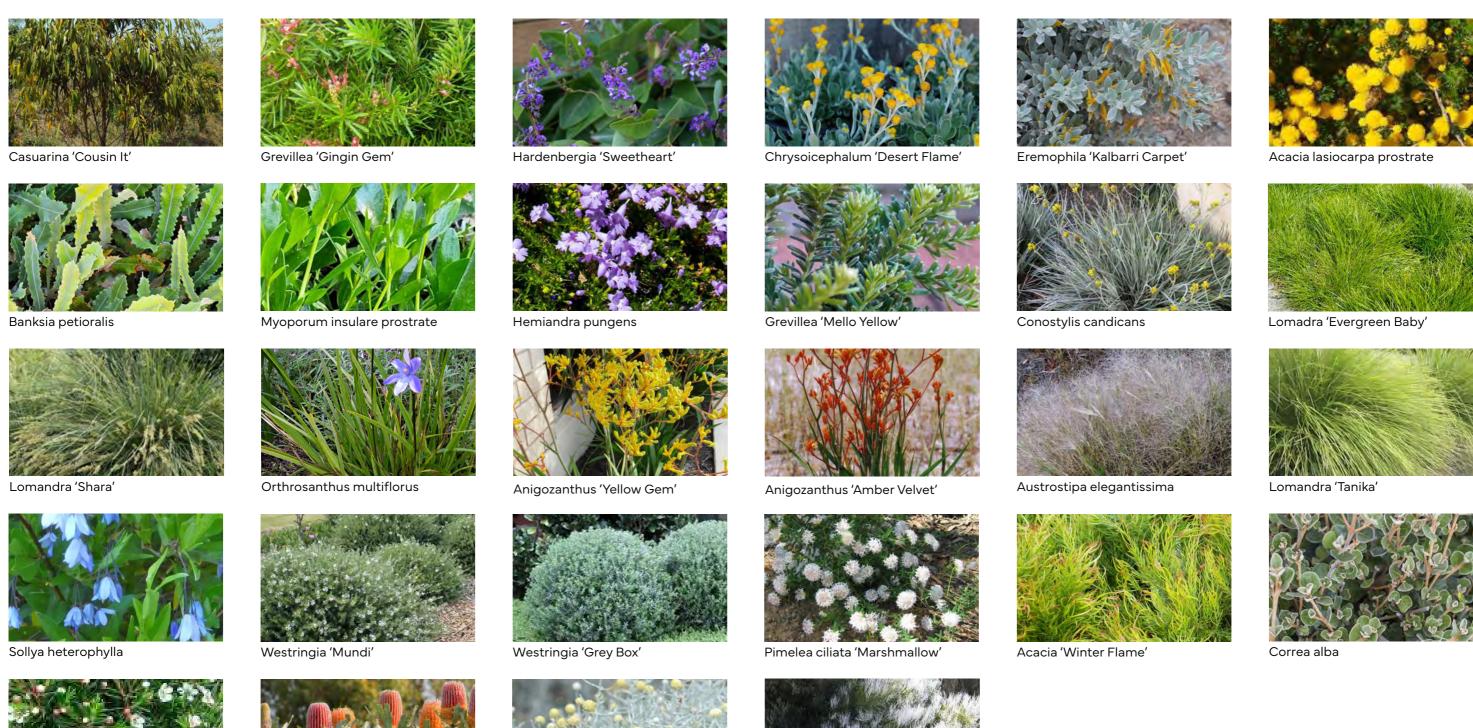


Rosemary prostrate

Native

Chamelaucium 'White Dawn'

Banksia menzeisii dwarf



Conospermum triplinervium

Leucophyta brownii

Boundary softening



Ficus pumila



Grevillea olivacea



Hardenbergia 'White Out'



Acmena 'Sublime'



Parthenocissus quinquefolia



Banksia integrifolia 'Sentinel'



Rosa banksiae



Casuarina 'Green Wave



Laurus 'Mile's Choice'



Acacia 'Lime Magik'

Shadey spaces



Viola hederacea



Ligularia reniformis



Cyathea cooperi



Dichondra repens



Philodendron 'Little Phil'



Aspidistra eliator



Hibbertia grossulariifolia



Philodendron 'Xanadu'



Fatsia japonica



Cissus 'Ellen Danica'



Acanthus mollis



Alpinia cerulae



Clivea miniata



Liriope 'Evergreen Giant'



Pittosporum 'Miss Muffet'



Liriope 'Isabella'



Blechnum 'Silver Lady'

Atrium garden



Philodendron cordatum



Peperomia obtusifolia



Epipremnum 'Green Dragon'



Calathea 'Burl Marx'



Hoya carnosa



Spathiphyllum 'Sensation'



Rhipsalis baccifera



Monstera deliciosa



Philodendron 'Little Phil'



Philodendron 'New Yorker'



Peperomia obtusifolia



Howea forsteriana



Ficus elastica - burgundy

Edible Garden



Blueberry



Parsely



Strawberry



Cape Gooseberry



Thyme



Passionfruit



ane



Nasturtiums



Perennial basi



Globe Artichoke

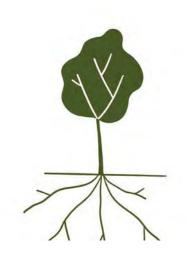


Borage



Lemon verbena

Deep Soil Zone Benefits



Healthy roots = healthy tree



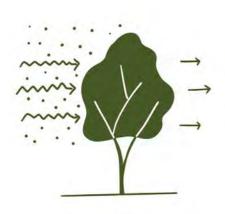
Enhance water filtration



Comfortable Micro-Climate +
Reduction of Urban Heat Island
Effect



Create Habitat



Improve Air Quality



Community Health
through increased canopy
coverage

Trees and gardens make a significant contribution to the ecology, character and amenity of neighbourhoods. They provide habitat for fauna, shade, storm water management and micro-climate benefits, as well as improve apartment outlook and privacy.

The provision of deep soil areas to support and sustain the development of tree canopy can also make a major contribution to the retention of existing trees. A deep soil area is an area of soil that is free of built structure and has sufficient area and depth to support tree growth and infiltrate rainwater. Site planning should seek to co-locate deep soil areas with existing trees on and adjacent to the site, and in locations best suited to the development of a viable tree canopy and landscaping.

See Design Studio Midland Village 36/42

Deep Soil Calculation



Summary

Legend

Rootable Deep Soil Zone

Deep Soil Calculation (min	Area
1,000m soil depth + 1,000mm width)	
Site Area	14128 sqm
Ground Floor DSA	1096 sqm
TOTAL	1096 sqm (7%
	Deep Soil Area)

Tree Plan



LEGEND

Existing Trees to be retained

DECIDUOUS

- Triadica sebifera 500 ltr
- Lagerstroemia 'Acoma' 500 ltr
- Jacaranda mimosifolia 1000 ltr
- Ginko biloba 1000 ltr
- Caesalpinia ferrara 1000 ltr
- Gleditsia 'sunburst' 1000 ltr
- Cercis canadensis 500 ltr

NATIVE TREES

- Banskia integrifolia 90 ltr
- Eucalyptus orbifolia 90 ltr
- Eucalyptus caesia 90 ltr
- Eucalyptus victrix 200 ltr
- Eucalyptus torquata 90 ltr
- Eucalyptus forrestiana 90 ltr
- Hakea laurina 90 ltr
- Melaeuca leucadendra 90 ltr

FRUIT TREES

- Olea 'Tolley Upright' 200 ltr
- Citrus 'Meyer Lemon' 90 ltr
- Punica granatum 90 ltr
- Ficus 'White Adriatic' 200 ltr

Habitat Integration



LEGEND

Bird box

Bird bath

Insect & reptile habitat



MATERIALS

Material Palette



Porcelain paver - Travertine Mocha Supplier: Remastone



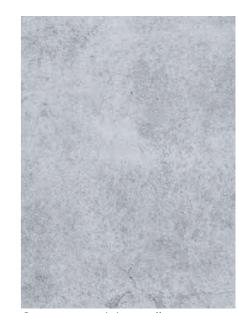
Porcelain paver - Terrazzo Pear Supplier: Remastone



Timber decking



Cotto Manetti Terracotta Supplier: Artedomus



Concrete retaining walls



Tensile wires



Wood chip mulch



Stabilised Gravel



Timber seat



Copper Bird Bath



Please feel free to contact us with any inquires.

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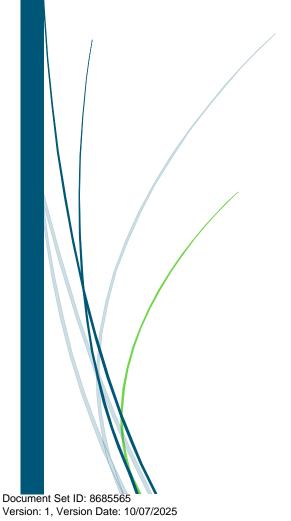




May 2025

St Jude's Midland Aged Care Facility

Sustainability Strategy



Graham Agar
FULL CIRCLE DESIGN SERVICES



Full Circle Design Services					
Telephone: 0412 475 819	Report Nº: 2024_096_ESD_REP_01				
Email: graham.agar@fcds.com.au	Original Date of Issue: 19th March 2025				
ACN: 163 742 890					
ABN: 84 163 742 890					

Title:	St Jude's Midland Aged Care Facility - Sustainability Strategy
Author:	Graham Agar
Client:	T&Z
Contact:	Peter Leighton
Description:	This report provides the ESD strategy for the proposed development at the St Jude's Midland Aged Care Facility.
	The project includes an extension to an existing aged care facility.
	The design includes best practice sustainable design features across a range of assessment categories including renewable generation, thermal performance, embodied energy and sustainable transport.

Revision	Date	Checked by		Transm	itted by
Α	21st March 2025	CR	CR		GEA
В	27 th March 2025				GEA
С	15 th May 2025				GEA

Distribution	Revision							
Receiver	Α	В	С					
T&Z	Χ	Х	Χ					

Executive Summary

FCDS have been commissioned to assist the St Jude's Aged Care project team with sustainable design services for the proposed extension to the existing facility on John St in Midland.

The development is an extension of an existing facility and is seeking to provide a strong health and well being response for occupants through connection with outside, internal commons and community spaces and high air quality.

Considering the nature of the project and its location, the project team have developed four key sustainable design themes which support the project's value proposition and add to the experience for owners and occupiers:

- Healthy living
- Minimised footprint and operational costs
- Community Benefits
- Sustainable transport

Supporting these themes are a range of sustainable design features and inclusions which will provide verifiable performance improvement over current business as usual design and construction practices. These features include:

- Photovoltaic array on site
- Development within an existing retirement village community
- Upfront carbon emissions reduction
- Electric vehicle infrastructure
- Envelope performance improvement
- Biodiversity improvement and native planting
- Fossil fuel free site
- Low GWP refrigerant

This report provides additional information on the proposed themes and the verification pathway for the project.

15/05/2025





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1. Introduction

FCDS have been commissioned to assist the St Jude's Aged Care project team with sustainable design services for the proposed extension to the existing facility on John St in Midland.

The development is an extension of an existing facility and is seeking to provide a strong health and well being response for occupants through connection with outside, internal commons and community spaces and high air quality.

This report presents the proposed ESD themes the project has elected to pursue and outlines key design features to deliver measurable performance against these themes.

1.1 Project Description

The development includes multiple new rooms for the facility across two levels, with common areas and external planted areas to improve occupant amenity.

The design has strong solar passive basis, with most glazing being well shaded and an expectation of using high performance glass to improve visible light transmission whilst minimising heat gain and loss.

1.2 Existing Site

The site is part of a well-developed residential community, developing the south west corner of the Midland ACF site, providing linkage with the existing facility and also supplementing existing parking for the site.



Above: Lot Location (Google Maps)





1.3 Strategic Project Aims

In progressing this development, the project team are keen to deliver best practice sustainable design outcomes for occupiers, owners and the surrounding community and, therefore, have selected the following key sustainable design themes for the project. Design features, aligning with national best practice, have also been proposed as a means to demonstrate the project has met its intended outcomes:

Healthy living

 The design should promote occupant health and wellbeing, both through internal design decisions and access to external spaces.



• Minimised footprint and operational costs

- o The design must ensure that operational utility use such as energy and water are minimised, with long life cycle products and low carbon technology where possible.
- o The development should minimise impacts to nature and local ecology.



• Community Benefits

 The development is intended to provide an excellent outcome for the local community, with additional beds allowing for care of local residents and retain connection to family and existing social connections.



• Climate resilience and future focus

o The development has a design life of in excess of 50 years. The final product must provide high performance in current climatic conditions, with flexibility and resilience to suit weather patterns in 2080 and beyond.



• Sustainable transport

o The location of the project can assist occupants in reducing their dependence on cars. Integration and facilitation of sustainable transport options is key for project success.



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2. Occupant Health and Wellbeing

The project is intended to support occupants keen to be a part of a community, providing accommodation for residents and connecting to existing amenities and facilities already on site.

The design includes indoor and outdoor spaces for community building and connection to nature, with potential for natural ventilation and operable facades for key spaces.

The design seeks to improve occupant health outcomes through the design features detailed in the following sections.

2.1 Low Toxicity Materials

Internal finishes and joinery will prioritize low toxicity through minimisation of VOCs and formaldehyde:

- Walls and ceiling paints will target Ultra Low VOC compliance (<5g/l)
- Adhesives, sealants, trim paints, primers and sealers will comply with Green Star best practice benchmarks.
- All internal joinery will be certified as low (E0 or E1) formaldehyde

At building license stage the design team will provide a performance specification for all relevant products and, where selected, will ensure materials meet the performance requirements above.

2.2 High Performance Envelope

The building design will prioritize the protection of glazing through the use of local shading and reasonably sized glazing to avoid excessive heat gain / loss, but still providing a strong connection to outside.

Overall, the intent is to exceed minimum compliance requirements for building envelope by at least 10%.

2.3 Natural Ventilation

The design will target compliance with AS 1668.4 for natural ventilation to bedrooms, whilst managing air quality and pressure regimes for infection control.

At building license stage the mechanical designer will certify appropriate ventilation provisions for all habitable spaces.

2.4 Acoustic Performance

The design is targeting best practice sustainability outcomes for the site through management of noise levels and exceeding BCA requirements for noise separation in walls and floors.

Compliance will be demonstrated through acoustic reporting at Building License, with verification of some performance elements on site at practical completion.

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3. Minimised Footprint and Operational Costs

The Greenhouse Effect and global warming has been identified as the most significant environmental challenge of our times. Increasingly corporations and governments are embracing the need to act through setting performance goals and penalising carbon inefficiency with increasing utility costs.

The project team are aware of the need for projects to act responsibly with their ecological footprint both initially and in operation through life cycle assessment and building design. Best practise design can successfully reduce energy and water consumption, divert waste from landfill and minimise refrigerant carbon footprint. Site selection can minimise impact on existing fauna and offer the potential for developments to act as a restorative force.

Many of the features in other categories contribute to improved building carbon efficiency, including natural ventilation, an efficient envelope and water efficiency measures. Sustainable transport options also reduce the carbon footprint of building occupants and visitors.

The following additional design features are intended to delivery embodied and operational carbon footprint improvements:

3.1 Considered Development

The building will connect to an existing Aged Care facility, with existing infrastructure and residents. The ground plane will provide native planting and pathways, improving the current biodiversity outcomes of the bare site and providing opportunities for occupants to interact and engage with nature:







3.2 Fossil Fuel Free Site

The design will eliminate fossil fuel use on site as far as practical. Whilst emergency systems – such as pumps – may require diesel back up, all cooking, domestic hot water and heating will be delivered by electrical systems.

The transition away from fossil fuels reduces the carbon footprint for buildings, an effect which will increase as Perth electrical network continues to transition to renewable energy. The use of gas fired equipment in any new project locks in the requirement for direct greenhouse gas emissions for the duration of the plant life time – potentially up to 30 years for large boiler systems.

At building license stage the design documentation will show electrical infrastructure for all residences to operate fossil fuel free.

3.1 Embodied Energy

The proposed design will be targeting a reduction in upfront carbon through material selections, and design rationalisation. The image right shows some of the relative carbon footprints of various construction materials:

Assessment of similar style developments shows that concrete and steel make up the majority of the building's upfront carbon emissions. The design team will be reviewing the potential for the use of a post-tensioned slab, replacement of Portland cement and selection of sustainably sourced steel to assist in minimising this footprint. In addition, window frames will consider the use of LocAl Capral frames – achieving a reduction of around 50% in embodied carbon emissions

In addition to aluminium, concrete and steel, refrigerants can also play a major role in building embodied and upfront carbon. The mechanical design will seek to utilise R32 refrigerant in lieu of the more common blends, with systems aiming to be kept small

Material	PERembodied energy MJ/ kg
Air dried sawn hardwood	0.5
Stabilised earth	0.7
Concrete blocks	1.5
In situ concrete	1.9
Precast tilt-up concrete	1.9
Kln dried sawn hardwood	2
Precast steam-cured concrete	2
Clay bricks	2.5
Gypsum plaster	2.9
Kln dried sawn softwood	3.4
Autoclaved aerated concrete	3.6
(AAC)	
Plasterboard	4.4
Fibre cement	4.8
Cement	5.6
Local dimensioned granite	5.9
Particleboard	8
Plywood	10.4
Gue-laminated timber	11
Laminated veneer lumber	11
MDF (medium density fibreboard)	11.3
Gass	12.7
Imported Dimensioned Granite	13.9
Hardboard	24.2
Galvanised steel	38
Acrylic paint	61.5
PVC (polyvinyl chloride)	80
Plastics — general	90
Copper	100
Synthetic rubber	110
Aluminium	170

and local to limit capacity and refrigerant in pipework – a reduction of around 60% in refrigerant carbon footprint.

Finally, the use of timber within joinery and some internal finishes will provide a carbon sink in upfront construction and ongoing emissions.

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3.2 Waste Management

The existing facility already segregates waste streams, with central collection points for mixed recyclables and general waste. The new design will continue this approach, with potential to segregate FOGO (Food Organics / Garden Organics) and medical waste in future.

3.3 Renewable Energy

The design intent is to include potential for roof mounted solar panels for the building, supplementing the existing panels on site.

Final array size will depend on network capacity, but the design will target around 25% of the roof area as allocated for solar. A 60kW array would be expected to offset more than 100MWHrs of electrical consumption each year and cater for around 75% of annual energy of the new build.

3.4 Overall Performance

Overall, the project team are seeking to demonstrate at least a 30% performance improvement in operational energy and 10% water reduction against typical performance. Design features below will contribute to this target:

Improved building envelope:
 Efficient Services
 Low water use
 Controls
 10% Margin on Section J Compliance
 WELS rated fittings and appliances
 Automated lighting, natural ventilation

Performance Verification Benchmark to NABERS Aged Care



4. Community Benefits

The intent of the project is to continue to provide amenity to the local Midland Community.

The project will provide two different room sizes and a variety of common areas to promote occupant interaction and community building.

4.1 Landscape Connection

The current design includes a landscaped courtyard with pathways to promote connection to nature in a controlled and secure environment. The building is surrounded by landscaped space to improve views for occupants.



4.2 Local Facilities

There is a demand for aged care facilities in the Midland area. This project will help to fill that need and provide flexibility for local residents to transition to a higher level of support whilst staying close to family and their long-term home.



5. Climate Resilience

FCDS has undertaken a base review of the project and the potential likely impacts of climate change on the site, based on the following likely impacts of climate change in South West WA:

Variable	Current	Predicted	Expected Change	Possible Range
Annual Average Temperature (°C)	25.8°C	29.3 °C	+3.5°C	28.4 – 30°C
Number of days over 35°C	28	63	+35	50-72
Annual Average Rainfall (mm)	851.7mm	698mm	-18%	536 – 809mm
Summer	40.5mm	38.5mm	-5%	27.9 – 55.1mm
Autumn	144.1mm	135.4mm	-6%	98 – 162.8mm
Winter	398.2mm	282.7mm	-29%	223 – 338.5mm
Spring	147.5mm	94.4mm	-36%	60.5 – 126.8mm
Annual Average Potential Evaporation	1800mm	1836mm	+2%	1818-1872mm
Annual Relative Humidity	55%	54.4%	-0.6%	53.7 – 55%

5.1 Risk Review

The development site is not considered to be at significant risk of climate impacts, as confirmed through the GBCA climate change risk assessment checklist:

Checklist	Criteria Response	Future Climate Exposure Reviewed?	Risk to the project identified?	Risk treatment identified?	Design / Operational Measure
Has the project area been previously impacted by extreme climate events?	No	Yes	No	No	NA
Is the project located in a cyclone zone?	No	Yes	No	No	NA
Is the project located in or adjacent to a bushfire prone area?	No	Yes	No	No	NA
Is the project located in or adjacent to a flood prone area?	No	Yes	No	No	Local high topological point.
Is the project located at or adjacent to the coastline or tidally influenced waterway?	Yes	Yes	No	No	NA
Will the project accommodate occupants vulnerable to the impacts of climate extremes?	Yes	Yes	No	No	Improved envelope. Efficient Air Conditioning Onsite generation.



5.1.1 Flood Risk – Very High Inundation Scenario

Coastal risk maps indicate that the site is well above inundation even under a 5m high sea level rise.



Right: Coastal Risk Australia

5.1.2 Bushfire Prone Areas

Bushfire zone maps show that the site has bushfire zones to the north and west of the site, but the development itself is not within a prone zone.



Above: Bushfire Prone Areas



5.2 Design Response

Notwithstanding the low risk rating, the design team have included the following features to mitigate risks and provide an improved outcome for occupants and the local community:

Climate Change Impact	Risk	Proposed Response
Increased temperatures lead to increased bushfire risk and intensity.	Moderate due to current classification of site.	Multiple orientations for natural ventilation. Provide filters on air conditioning units to mitigate bushfire smoke infiltrating into apartments.
Rising sea levels and increased flood risk.	Very low	Ensure structure can adapt to changing ground water levels.
Reduced rainfall	Increasing requirement for irrigation, increased cost of scheme water.	Utilise smart irrigation, including moisture detection and prioritise drought tolerant planting. Utilise native planting where possible.
Increased temperatures lead to increased reliance on air conditioning.	Building is unable to provide comfortable environment for extended periods.	Provide high efficiency air conditioning systems with automatic controls. Upgrade building envelope in excess of BCA minimum requirements. Reduce urban heat island effect.
Increased temperatures lead to increased power demand.	Operating cost increases as electrical prices increase. Power security becomes questionable.	Good control systems and energy efficient design. Potential for solar photovoltaics for renewable generation.

5.2.1 Water Efficient Fittings

Where provided, fittings and appliances will target high water efficiency, generally within 1 Star of the best available WELS rating for each fitting type:

Fixture Type	Minimum WELS rating	Maximum Flow Allowable
Taps	5 stars	4.5-6 L/min
Urinals	5 stars	1.0 L / Flush + Smart demand flush device
Toilets	4 stars	<3.5 L average flush <4.7L full flush, <3.2 half flush
Showers	3 stars	6.0 - 7.5 L/min

Low flow fittings save water, operational costs, carbon emissions and energy use when they utilise hot water.



5.2.2 Native or Drought Tolerant Planting

The design team will be including water efficient planting and irrigations to target a 30% reduction in water use against Green Star benchmarks and to minimise operational costs and carbon emissions.

Building license documentation will include these elements.

5.2.3 Urban Heat Island Mitigation

The project team intend to meet Green Star best practice guidelines for urban heat island by maintaining more than half of the site as either vegetation, shaded areas or elements with a 3-year SRI of 64 or greater.

Building license plans and finish selections will demonstrate this performance outcome.

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6. Sustainable Transport

Increasingly, Perth drivers are transitioning away from tradition Internal Combustion Engine vehicles – with the current rate of 6.6% of new vehicles (2023) set to be ~10% by 2025 and more than 50% in 2030 (https://www.watoday.com.au/politics/western-australia/future-planning-is-this-the-year-petrol-will-disappear-from-wa-20231218-p5esbe.html).

The graph below shows the uptake in electric vehicles since the end of 2021 (Western Australian Electric Vehicle Analysis Summary 2023 Q4 – Department of Transport):

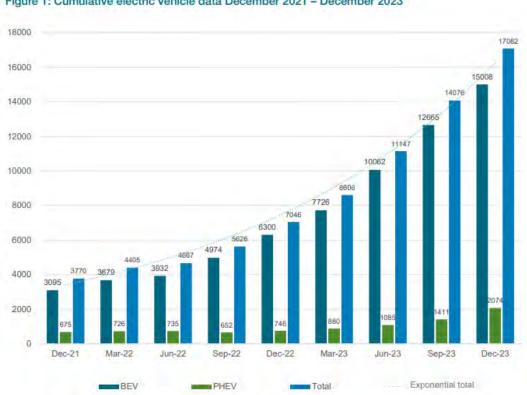


Figure 1: Cumulative electric vehicle data December 2021 - December 2023

Recognising this shift, the project team will be seeking to facilitate alternate transport options, as described in the following sections.

6.1 Electric Vehicle Facilitation

The design will include electrical capacity to provide EV charging to 20% of new bays within the new car parking area.



7. Feature Summary

Many of the features proposed above offer performance improvements across a range of themes. The following table outlines the proposed features and the demonstration pathway – aligning with national best practice benchmarks – selected for the project team.

Design Feature	Benchmark Performance	Verification Method	Healthy Living	Building Footprint	Climate Resilience	Community Benefits	Sustainable Transport
EV Facilitation	Dedicated EV DB, Capacity to service 5 bays.	Design documents		Х			Х
Brown Field Development	100% Site previously developed, improved ecology score	Design documents	Х	Χ	Χ	Х	Х
Efficient Envelope	Improvement over BCA 2022	Building License Report	Χ	Χ	X	X	
Acoustic Performance	Design report and performance verification at completion.	Report	Χ			Χ	
Native Planting	Demonstrate 30% reduction in water use against Green Star Standards	Report at Building License		Χ	Χ	Χ	
Fossil Fuel Free Site	No fossil fuels for domestic hot water, cooking or heating	Design documents		Χ	Χ		
Renewable Energy	Potential for Solar PV Panels and onsite storage	Performance Specification		Χ	Χ	Х	
Urban Heat Island	Achieve 50% of site with a 3-year SRI of 64 or greater	Design documents	Х	Х	Χ	Х	
Waste Plan	Integrate with facility waste management plan. Segregate streams and divert from landfill.	Design documents		X			
Embodied Energy	Target 20% reduction in life cycle footprint, as demonstrated with peer reviewed LCA report.	LCA Report at Building License		Χ	Χ		
Water Efficiency	WELS rated fittings – Within 1 Star of best available	Design documents		Χ	Χ		
Low Toxicity Materials	Utilise low VOC and formaldehyde internal finishes, adhesives and sealants.	Material review at Building License	X				
Low Carbon Materials	Utilise R32 Refrigerant and improved materials to improve upfront carbon by 10%	LCA Report at Building License		X	Х		
Natural Ventilation	Comply with AS 1668.4 for natural ventilation to all apartments	Report at Building License	Х	Χ	Χ		
Operational Footprint	20% reduction in operational energy through envelope and services.	Report at Building License		Χ	Χ	Χ	







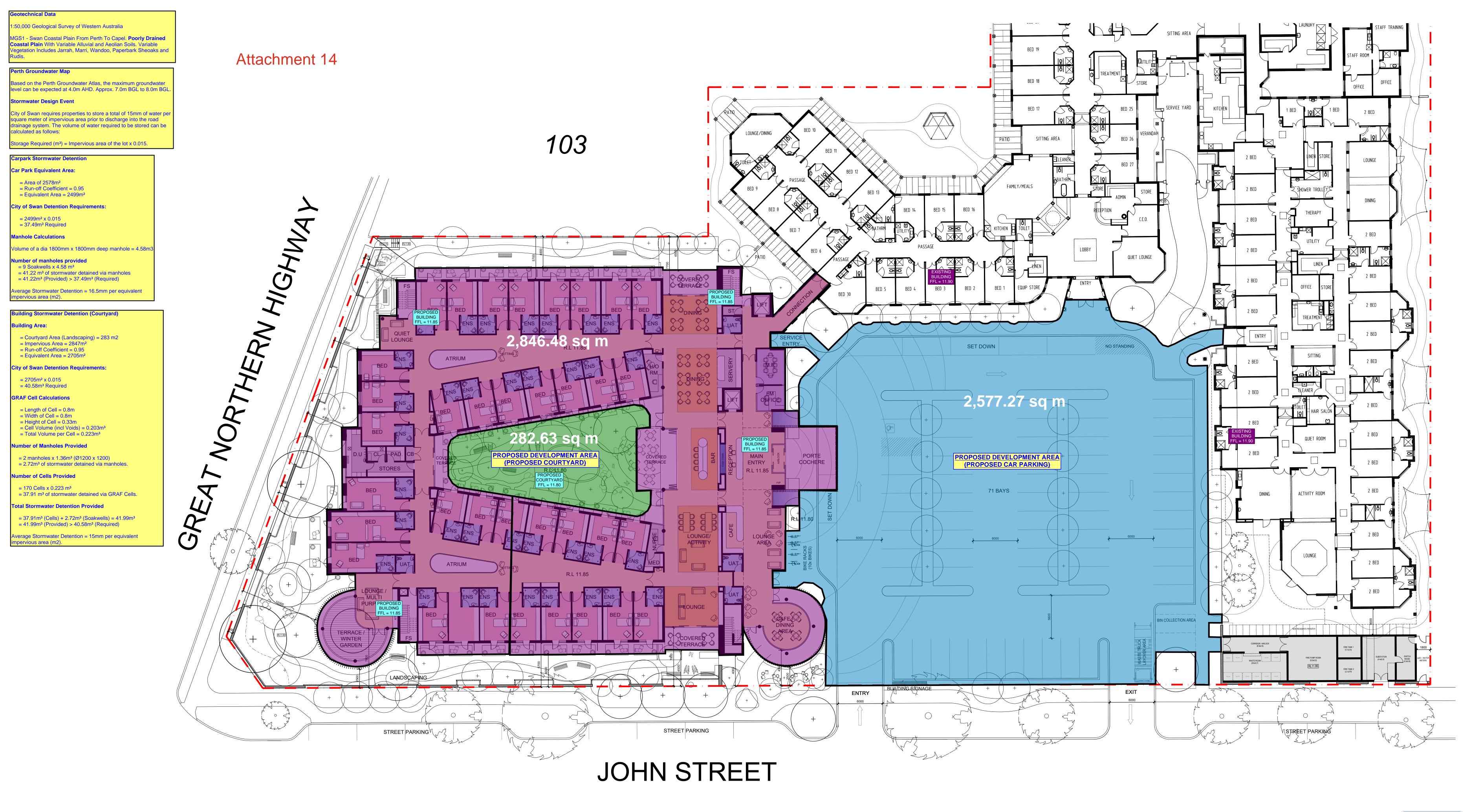
Planning | Design | Delivery | Performance

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Colliers

COLLIERS CIVIL DA CONCEPT SHALL BE VERIFIED AND CERTIFIED BY COLLIERS FOR BUILDING PERMIT APPLICATION.

Drawing Set:

TZ Architects Midland Village Aged Care 24358-C8-DG-01

16 May 2025

reception@tz.com.au 님 www.tz.com.au L3, 679 Murray St, West Perth, P.O. Box 830, West Perth 6872

MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

GROUND FLOOR PLAN

SCALE: 1:200 @ B1

DATE:

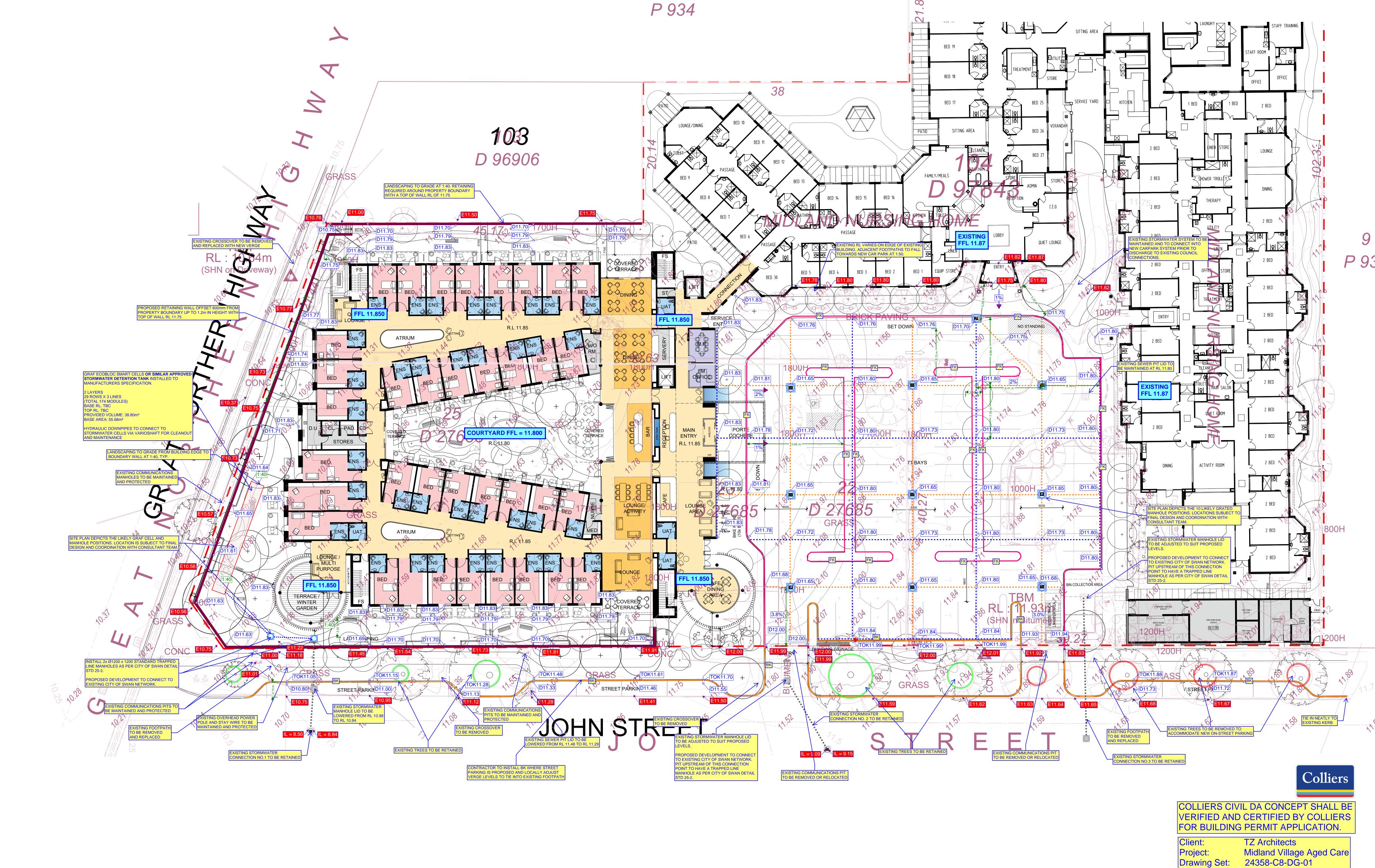
DRAWN: MZ

DESIGNED: MZ

JOB NO: 624028

DRAWING: DA-2100 rev D

12/05/2025



MIDLAND VILLAGE AGED CARE

ST JUDE'S HEALTHCARE SERVICES

GROUND FLOOR PLAN

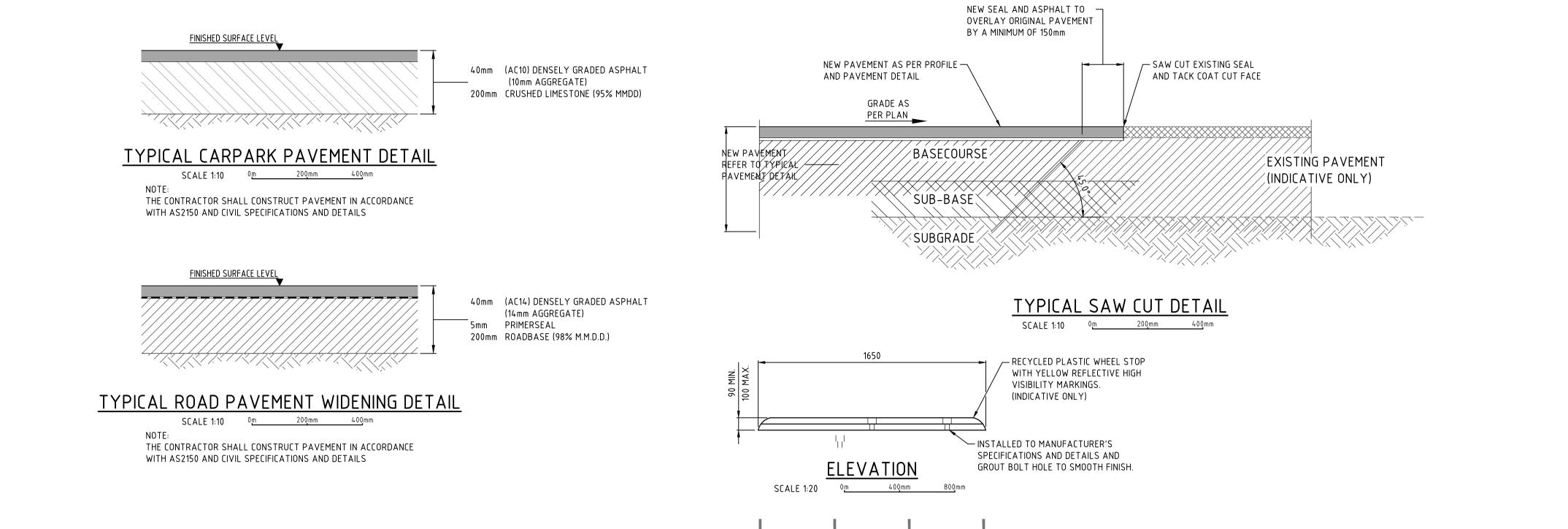
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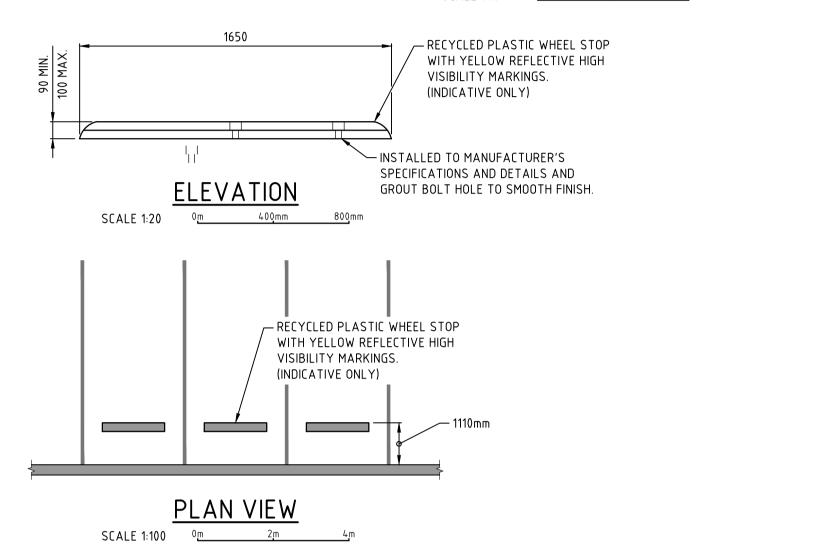
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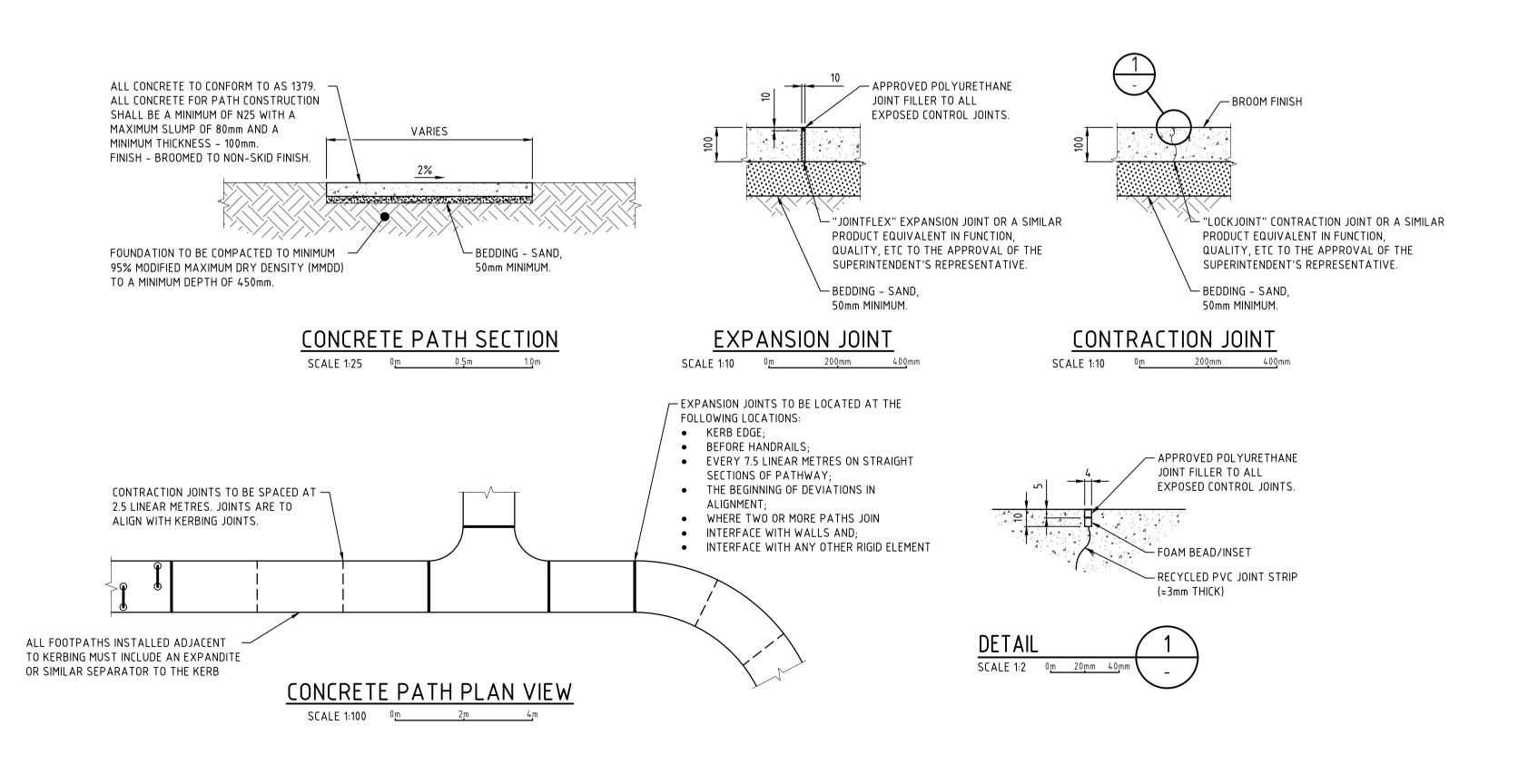
reception@tz.com.au www.tz.com.au **_**\degree +61 8 9423 0000 L3, 679 Murray St, West Perth, P.O. Box 830, West Perth 6872

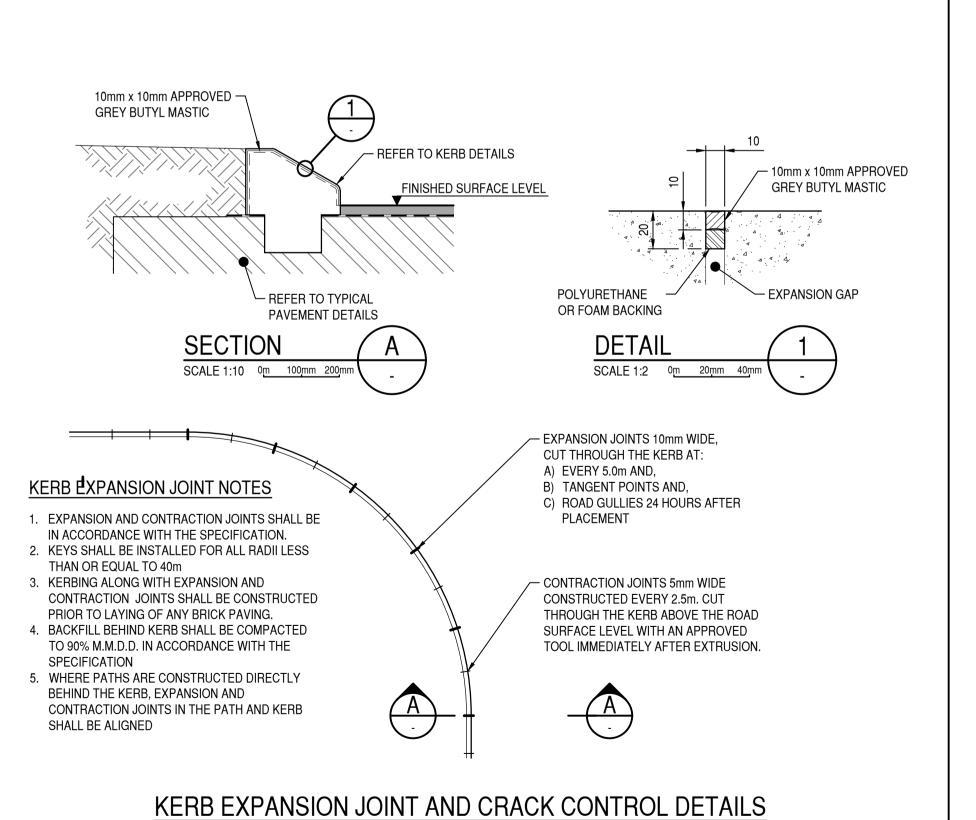
16 May 2025





TYPICAL WHEEL STOP DETAIL - RECYCLED PLASTIC





SCALE 1:200 0<u>m 4m 8</u>m

COMPACTED

3-R10 BARS AT 90mm CENTRES

LOCATED CENTRALLY IN BEAM

600

TYPICAL KERB DETAIL - BARRIER

SCALE 1:10 0m 200mm 400mm

TYPICAL KERB DETAIL - FLUSH BEAM

SCALE 1:10 0<u>m</u>

NOTE: ALL RADII ARE 10mm U.S.O.

BACKFILL

← KERB FACE SHALL BE SLIGHTLY

FINISHED SURFACE LEVEL

OFF VERTICAL (e.g. 5mm).

- 100 x 100 KEY WHEN ON RADIUS OF 40m OR LESS

— PRIMERSEAL

- REFER TO TYPICAL

FINISHED SURFACE LEVEL

COLLIERS CIVIL DA CONCEPT SHALL BE VERIFIED AND CERTIFIED BY COLLIERS FOR BUILDING PERMIT APPLICATION.



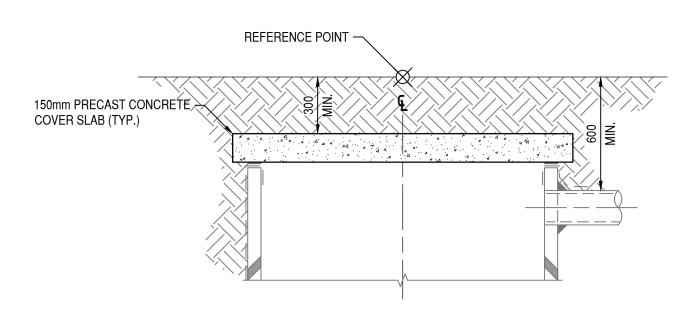
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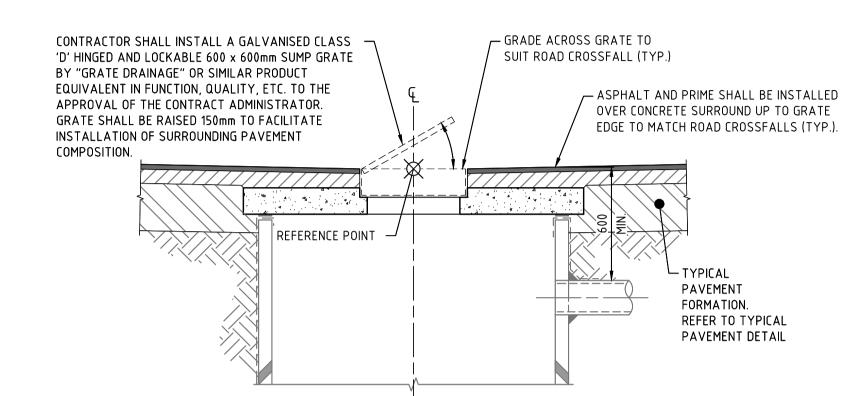
Client: TZ Architects
Project: Midland Village Aged Care
Drawing Set: 24358-C8-DG-01
Revision: C
Date: 16 May 2025

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The Essential First Step.

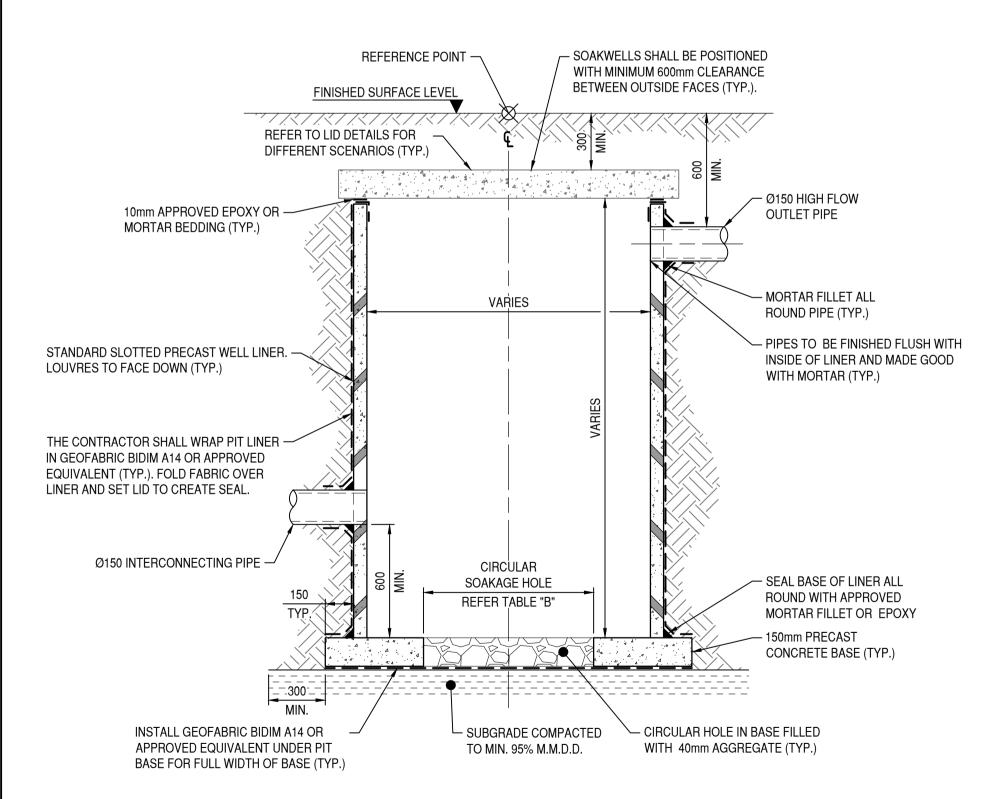


TYPICAL BURIED LID DETAIL (BSW)



TYPICAL INVERTED GULLY GRATE LID DETAIL (GSW) WITH ASPHALT PAVEMENT

SCALE 1:20 0m 400mm 800mm



TYPICAL INTERCONNECTED SOAKWELL DETAIL SCALE 1:20 0m 400mm 800mm



TRENCH DETAIL NOTES

- 1. ALL PIPE TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AS3725 DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES. SHOULD DISCREPANCIES EXIST, AS3725 TAKES PRECEDENCE.
- 2. DRY CONDITIONS SHALL BE SAND SOIL WHERE THE MAXIMUM PREDICTED GROUND WATER LEVEL (G.W.L.) IS A MINIMUM 300mm BELOW PIPE INVERT.
- THE MAXIMUM PREDICTED G.W.L. IS HIGHER THAN 300mm BELOW PIPE INVERT.

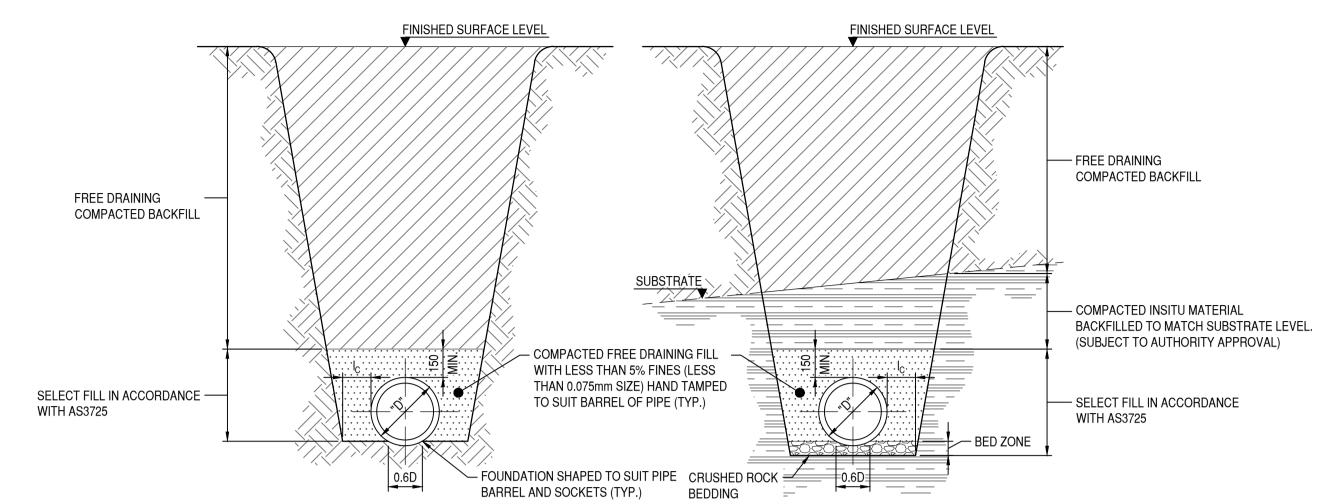
 4. BEDDING CONDITION SHALL BE CARRIED PAST ALL MANHOLES, GULLIES & OTHER

3. WET CONDITIONS SHALL BE CONSIDERED

AS BEING IN ROCK, CLAY OR SAND WHERE

5. WHERE PIPES HAVE PROTRUDING SOCKETS, SUITABLE RECESSES SHALL BE PROVIDED IN THE SUPPORTING MATERIALS TO ENSURE THAT THE PIPES DO NOT BEAR ON THE SOCKETS (TYP.)

DRAINAGE STRUCTURES DOWNSTREAM.



MINIMUM BED ZONE DEPTHS		
SUPPORT TYPE	DEPTH (mm)	
U	75	
H / HS ≤ Ø1500	100	
H / HS > Ø1500	150	

MINIMUM SIDE CLEARANCE " I_{C} " (D/6 or I_{C} , WHICHEVER IS GREATER)	
PIPE DIAMETER	L _C
≤600	150
>600 - ≤1200	200
>1200	D/6
NOTE: THE MINIMUM Lc VALUES SHALL ONLY BE USED WHERE NECESSARY COMPACTION VALUES CAN BE ASSURED.	

DRY CONDITIONS

WET CONDITIONS

TYPICAL CONCRETE PIPE TRENCH DETAILS (SUPPORT TYPE "U")

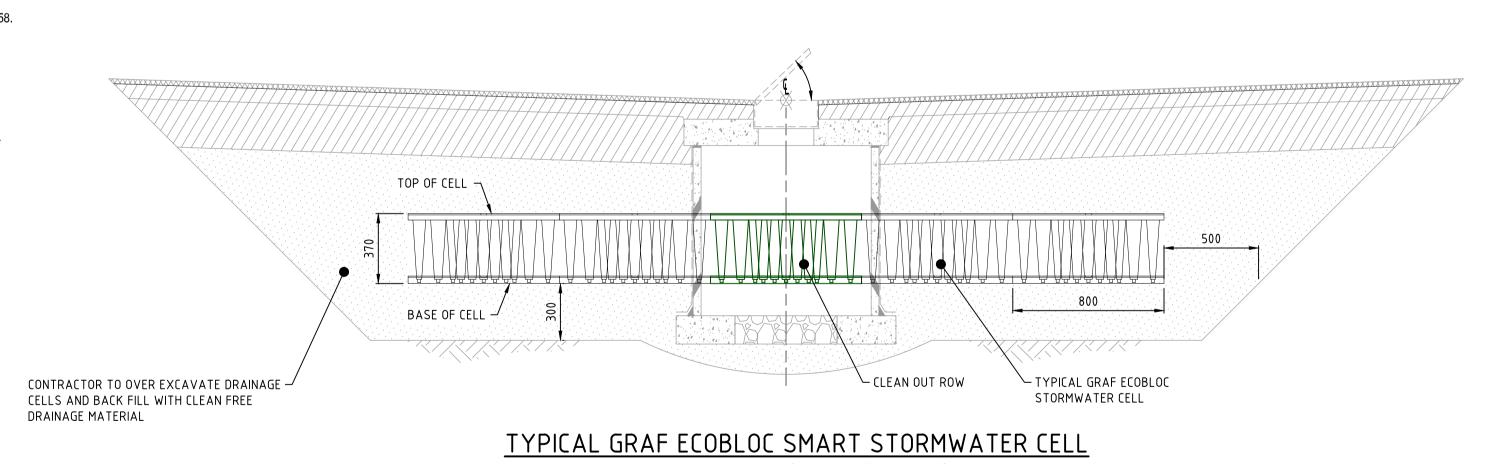
SCALE 1:20

STORMWATER PIT NOTES

- ALL INSITU CONCRETE SHALL BE CLASS N32 IN ACCORDANCE WITH A1379.
 ALL INSITU CONCRETE CORNERS SHALL HAVE A 20mm CHAMFER UNLESS OTHERWISE NOTED.
- CEMENT MORTAR SHALL CONSIST OF ONE PART CEMENT AND THREE PARTS SAND.
- 4. SL81 REINFORCEMENT SHALL CONFORM WITH HARD DRAWN FABRIC TO
- 5. MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 50mm.6. THE LINER SHALL BE REINFORCED CONCRETE MANUFACTURED TO AS4058.
- 7. THE MAXIMUM INLET/OUTLET PIPE OUTSIDE DIAMETER SHALL BE LESS THAN 60% OF THE LINER INTERNAL DIAMETER.
- 8. MINIMUM OF 40% OF LINER SHALL REMAIN IN ANY HORIZONTAL PLANE.
 9. MINIMUM INTERNAL LINER SPACE OF 200mm BETWEEN PUNCHED/CUT
- 10. HOLES TO BE CUT/PUNCHED ON ACCORDANCE WITH MANUFACTURER'S
- SPECIFICATION.

 11. THE LINER SHALL HAVE EQUIVALENT PROPERTIES AND REINFORCEMENT
- 11. THE LINER SHALL HAVE EQUIVALENT PROPERTIES AND REINFORCEMENT OF CLASS 2 R.C.P. EXCEPT THAT THE REINFORCEMENT SHALL BE CIRCULAR.
- 12. COVERS SHALL BE CLASS 'D' TO AS3996.

TABLE B		
DRAINAGE PIT BASE SOAKAGE HOLE SIZE		
SOAKHOLE DIAMETER		
(mm)		
600		
600		
900		
1200		



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PART D - OTHER BUSINESS

- 1. State Administrative Tribunal Applications and Supreme Court Appeals
- 2. Meeting Closure