Attachment to item number 5.1 -

ERA Planning Report;

Traffic Impact Assessment;

DDEG Acoustic Engineering; and

ERA Bushfire Hazard Report

era PLANNING & ENVIRONMENT

24 Clifton Drive
Tipalea Partners

Supporting planning report | 5 June 2024

ERA Planning and Environment acknowledge *palawa* as the Traditional Owners of *lutruwita* (Tasmania).

They are the original custodians of our land, sky and waters. We respect their unique ability to care for country and deep spiritual connection to it.

We honour and pay our respect to Elders past and present, whose knowledge and wisdom has and will ensure the continuation of culture and traditional practices.

We acknowledge that their sovereignty has never been ceded.

Always was, always will be.

ERA Planning Pty Ltd trading as ERA Planning and Environment

ABN 67 141 991 004

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Permit overview

Permit application details

Applicant	Tipalea Partners Pty Ltd
Owner	Ricky and Tina Polley
Address	24 Clifton Drive, Sorell
Lot description	Folio of the Register 179906, Lot 1
Description of proposal	Development and use of a childcare centre

Relevant Planning Provisions

Applicable planning scheme	Tasmanian Planning Scheme - Sorell
Zone(s)	General Residential
Codes	Parking and Sustainable Transport Road and Railway Assets Bushfire-Prone Areas Safeguarding of Airports
Discretions	Clause 8.3.1 Discretionary uses (P1, P2 and P4) Clause 8.5.1 Non-dwelling development (P3, P4) Clause C2.5.3 Motorcycle parking numbers (P1) Clause C2.6.5 Pedestrian access (P1) Clause C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction (P1) Clause C3.6.1 Habitable buildings for sensitive uses within a road or railway attenuation area (P1) Clause C1.6.1 Design and siting of signs (P1) Clause C16.5.1 Sensitive use within an airport noise exposure area (P1)

Contents

1 Introduction

1.1 Purpose of the report

ERA Planning and Environment has been engaged by Tipalea to seek planning approval for the use and development of a childcare centre located at 24 Clifton Drive, Sorell. This report provides the relevant background material, proposal details and an appraisal of the development against the relevant planning provisions.

1.2 Name of planning authority

The relevant planning authority is the Sorell Council.

1.3 Statutory controls

This planning permit application is to be assessed in accordance with the *Land Use Planning and Approvals Act 1993* (LUPAA) and is subject to the provisions of the *Tasmanian Planning Scheme – Sorell* (the planning scheme).

Specifically, the proposal requires assessment against the applicable zone purpose, use standards, development standards, and code requirements of the planning scheme.

1.4 Title documentation

This planning permit application relates to land at 24 Clifton Drive, Sorell (title reference CT179906/1), under the ownership of Ricky Polley and Tina Polley.

The landowner has been notified of the intention to lodge this planning permit application pursuant to clause 52 of LUPAA.

Title documents and the application form are available at Appendix A and Appendix B.

1.5 Enquiries

Enquiries relating to this planning report should be directed to

Georgina Young
Planner
ERA Planning and Environment
Email: enquiries@eraplanning.com.au
Phone: 03 6165 0443

2 Proposal

The proposal seeks approval for the use and development of a childcare centre at 24 Clifton Drive in Sorell. The subject site currently contains an existing Single Dwelling and associated outbuildings. The subject site has a total area of 1.652ha. The area where the childcare centre would be located is currently vacant and this portion of the site is proposed to be subdivided.

The proposed development includes:

- A 5.64 m high building with a total floor area of 832 m^2 providing six activity rooms, a kitchen, laundry, reception area, five bathrooms, three prep spaces and associated office, a meeting room and a staff planning area.
- An outdoor play area of 822.9 m^2.
- Parking for 21 vehicles and circulation areas, including one space for accessible parking.
- Five bicycle parking spaces.
- A Ground base sign and a Transom sign.

Architectural plans prepared by Brown Falconer are provided in Appendix C

Concept servicing plans have been prepared by Gandy and Roberts for the development and confirm that it can be adequately serviced by TasWater infrastructure, refer to Appendix D.

The centre will provide 21 staff to care for up to 114 children across six activity spaces including:

- 50 children of kindergarten age with five staff.
- 40 children toddler age with eight staff.
- 24 children of nursery age with six staff.

The centre is proposed to operate from 6.30 am to 6.30 pm Monday to Saturday.

A traffic impact assessment (TIA) has been prepared by Midson Traffic and is provided in Appendix E.

An acoustic report has been prepared by DDEG and is provided in Appendix F.

It is noted that landowner consent is required from the Department of State Growth due to the proposed upgrade of the existing driveway and crossover on to Clifton Drive, Sorell. This application for consent has been submitted to the Department of State Growth.

3 Site description

3.1 Site and surrounds

The subject site is located at 24 Clifton Drive, Sorell and contains one certificate of title, CT179906/1. The site is generally flat, with one existing vehicle crossing to Clifton Drive. The site is located on the corner of Clifton Drive and the Arthur Highway. The site has been cleared of native vegetation and contains an existing Single Dwelling and associated buildings, located in the southern most corner of the site. The site is 1.65ha in area and has a frontage to Clifton Drive of approximately 125 m and a frontage to Arthur Highway of approximately 227 m.

The site is located in the General Residential zone under the *Tasmania Planning Scheme – Sorell* and is surrounded by land zoned General Residential to the north and west and land zoned Agriculture to the east and south.

Whilst the site is serviced with reticulated water it currently is not serviced with sewer, this is being resolved through the subdivision process, refer to Appendix D for the Civil Plans prepared by Gandy and Roberts.

An aerial image of the subject site and surrounding context is shown in Figure 1Figure 1.

Figure 1 Aerial image of the site shown in blue outline (Source www.thelist.tas.gov.au)

4 Zoning assessment

4.1 Zoning

The site is zoned General Residential in the planning scheme. The proposal requires assessment against the applicable zone purpose, use standards, and development standards of the General Residential zone.

4.2 Use status

The proposed use is defined as Educational and Occasional Care under the planning scheme. Educational and Occasional Care is a discretionary use in the General Residential zone.

4.3 Zone purpose

The General Residential zone purpose in clause 8.1 is:

> *8.1.1 To provide for residential use or development that accommodates a range of dwelling types where full infrastructure services are available or can be provided.*
>
> *8.1.2 To provide for the efficient utilisation of available social, transport and other service infrastructure.*
>
> *8.1.3 To provide for non-residential use that:*
>
> *(a) primarily serves the local community; and*
>
> *(b) does not cause an unreasonable loss of amenity through scale, intensity, noise, activity outside of business hours, traffic generation and movement, or other off site impacts.*
>
> *8.1.4 To provide for Visitor Accommodation that is compatible with residential character.*

The proposal would provide important community infrastructure that services the local Sorell community and would not cause an unreasonable loss of amenity. This has been demonstrated in the body of the report and underpinned by the consultant's reports, located in the appendices. This primarily includes the Acoustic Report and the Traffic Impact Assessment. Accordingly, the proposal would be consistent with the zone purpose statements.

Notwithstanding the above, in accordance with the decision of the Tasmanian Civil and Administrative Tribunal in *Mount Wellington Cableway Company Pty Ltd v Hobart City Council and Others (2022)* TASCAT 128 (November 2022), it is noted that the zone purpose statements do not provide a basis for the refusal of a discretionary use, unless specifically called up in the performance criterion of a relevant use standard.

4.4 Use and development standards

Table 1 provides a summary of the applicable use and development standards for the proposal. An assessment against the applicable standards is provided in the sections following.

Table 1 Applicable standards in the General Residential Zone

Clause	Applicability
Use Standards	
Clause 8.3.1 Discretionary uses	Clause A1, A2, A3 & A4 - Applicable
Clause 8.3.2 Visitor Accommodation	Not Applicable. The proposal does not involve Visitor Accommodation.
Development standards for Dwellings	
Clause 8.4 Development standards for dwellings	Not Applicable. The proposal does not involve any dwellings.

Clause	Applicability
Development standards for Non-dwellings	
Clause 8.5.1 Non-dwelling development	Applicable.
Clause 8.5.2 Non-residential garages and carports	Not Applicable. The proposal does not involve any garages or carports.
Development standards for subdivision	
Not Applicable. The proposal does not involve subdivision.	

4.4.1 Discretionary uses

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause 8.3.1 Discretionary uses	
A1 Hours of operation of a use listed as Discretionary, excluding Emergency Services, must be within the hours of 8.00am to 6.00pm.	**P1** Hours of operation of a use listed as Discretionary, excluding Emergency Services, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the timing, duration or extent of vehicle movements; and (b) noise, lighting or other emissions.

Planner Response

The proposed hours of operation are from 6.30am to 6.30pm Monday to Saturday. This exceeds the hours of operation allowed under the acceptable solution. Therefore, the proposals must be assessed against the corresponding performance criteria.

It is anticipated that the majority of children will be dropped off between the hours of 7am to 8am. This is generally followed by a period of settling in with children normally inside the centre. The number of children in the outdoor area is expected to be minimal in the early hours of the morning and in the evening, particularly during the cooler months.

The TIA prepared by Midson Traffic determines the impact of the timing, duration, and extent of vehicle movements. This finds the opening hours of the childcare centre to be suitable for the location. Refer to Appendix E for further details.

External lighting will be in operation between 6.30am to 6.30pm to ensure people can safely use the site. External lighting will be designed in accordance with the Australian standards to ensure appropriate baffling, angling, and strength so there is no light spillage on adjoining sites.

The acoustic report maintains that with the implementation of the acoustic recommendations the proposal would satisfy the required standards. The proposed treatment measures predominately involve the installation of acoustic fencing around the play areas to reduce any noise impacts from children playing. The report also recommends the specific location of parent and staff car parking areas. Refer to Appendix F for further details.

Based on the above, the proposed use is not considered to have an unreasonable impact on the amenity of adjacent sensitive uses.

The performance criteria (P1) are satisfied.

A2 External lighting for a use listed as Discretionary: (a) must not operate within the hours of 7.00pm to 7.00am, excluding any security lighting; and (b) security lighting must be baffled to ensure direct light does not extend into the adjoining property.	**P2** External lighting for a use listed as Discretionary, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the number of proposed light sources and their intensity; (b) the location of the proposed light sources; (c) the topography of the site; and (d) any existing light sources.

Planner Response

External lighting will be operational between 6.30am to 6.30pm to ensure people can safely use the site. After these hours there will be security lighting in operation. All external lighting will be designed in accordance with Australian standards to ensure appropriate baffling, angling and strength to ensure there is minimal light spillage and to ensure direct light does not extend to the adjoining properties, refer to the submitted site plan in Appendix C for details.

The performance criteria (P2) are satisfied.

A3	**P3**
Commercial vehicle movements and the unloading and loading of commercial vehicles for a use listed as Discretionary, excluding Emergency Services, must be within the hours of: (a) 7:00am to 7:00pm Monday to Friday; (b) 9:00am to 12 noon Saturday; and (c) nil on Sunday and public holidays.	Commercial vehicle movements and the unloading and loading of commercial vehicles for a use listed as Discretionary, excluding Emergency Services, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the time and duration of commercial vehicle movements; (b) the number and frequency of commercial vehicle movements; (c) the size of commercial vehicles involved; (d) manoeuvring required by the commercial vehicles, including the amount of reversing and associated warning noise; (e) any existing or proposed noise mitigation measures between the vehicle movement areas and sensitive use; (f) potential conflicts with other traffic; and (g) existing levels of amenity.

Planner Response

Commercial vehicle movements will be limited to the hours detailed in the acceptable solution.

The acceptable solution (A3) is satisfied.

A4	**P4**
No Acceptable Solution.	A use listed as Discretionary must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the intensity and scale of the use; (b) the emissions generated by the use; (c) the type and intensity of traffic generated by the use; (d) the impact on the character of the area; and (e) the need for the use in that location.

Planner Response

The proposed use of a childcare centre would provide for 114 children and 21 staff. The centre would serve a core need for childcare in the local community. The proposed building would be located approximately 40m from any existing sensitive use.

The acoustic report demonstrates that noise generation from the site can be mitigated through treatment measures to ensure impacts on the adjacent sensitive uses are minimised, refer to Appendix F.

The TIA demonstrates that the proposal would not cause an unreasonable loss of amenity with regard to the type and intensity of traffic generated, particularly given the location on the corner of the Arthur Highway, refer to Appendix E.

It is considered that with the implementation of the consultant's recommendations a childcare centre in that location is appropriate.

The performance criteria (P4) are satisfied.

4.4.2 Development standards for non-dwellings

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	**Performance Criteria**

8.5.1 Non-dwelling development

A1	P1
A building that is not a dwelling, excluding for Food Services, local shop, garage or carport, and protrusions that extend not more than 0.9m into the frontage setback, must have a setback from a frontage that is: (a) if the frontage is a primary frontage, not less than 4.5m, or if the setback from the primary frontage is less than 4.5m, not less than the setback, from the primary frontage, of any existing dwelling on the site; (b) if the frontage is not a primary frontage, not less than 3.0m, or if the setback from the primary frontage is less than 3.0m, not less than the setback, from the primary frontage, of any existing dwelling on the site; or (c) if for a vacant site and there are existing dwellings on adjoining properties on the same street, not more than the greater, or less than the lesser, setback for the equivalent frontage of the dwellings on the adjoining properties on the same street	A building that is not a dwelling, excluding for Food Services and local shop, must have a setback from a frontage that is compatible with the streetscape, having regard to any topographical constraints.

Planner Response

The proposed building setback is 4.5m from the frontage. The proposal therefore meets the acceptable solution.

The acceptable solution (A1) is satisfied.

A2	P2
A building that is not a dwelling, excluding outbuildings with a building height of not more than 2.4m and protrusions that extend not more than 0.9m horizontally beyond the building envelope, must: (a) be contained within a building envelope (refer to Figures 8.1, 8.2 and 8.3) determined by: (i) a distance equal to the frontage setback or, for an internal lot, a distance of 4.5m from the rear boundary of a property with an adjoining frontage; and (ii) projecting a line at an angle of 45 degrees from the horizontal at a height of 3m above existing ground level at the side or rear boundaries to a building height of not more than 8.5m above existing ground level; and (a) only have a setback less than 1.5m from a side or rear boundary if the building: (i) does not extend beyond an existing building built on or within 0.2m of the boundary of the adjoining property; or (ii) does not exceed a total length of 9m or one-third of the length of the side or rear boundary (whichever is lesser).	The siting and scale of a building that is not a dwelling must: (a) not cause an unreasonable loss of amenity, having regard to: (i) reduction in sunlight to a habitable room, excluding a bedroom, of a dwelling on an adjoining property; (ii) overshadowing the private open space of a dwelling on an adjoining property; (iii) overshadowing of an adjoining vacant property; and (iv) visual impacts caused by the apparent scale, bulk or proportions of the building when viewed from an adjoining property; and (a) provide separation between buildings on adjoining properties that is consistent with that existing on established properties in the area.

Planner Response

The minimum setback for the proposed building would be 4.5 m. The proposed building would have a maximum height of 5.64 m. The side and rear boundary setbacks would be a minimum of 1.5 m.

The acceptable solution (A2) are satisfied.

A3	P3
A building that is not a dwelling, must have: (a) a site coverage of not more than 50% (excluding eaves up to 0.6m); and	A building that is not a dwelling, must have: (a) site coverage consistent with that existing on established properties in the area; and

(b) a site area of which not less than 35% is free from impervious surfaces.	(b) reasonable space for the planting of gardens and landscaping.

Planner Response

The entirety of the subject site has a total area of 1.625 ha. The proposed building has a total area of 829 m^2. The site coverage would therefore be 5%.

The site coverage would comply with acceptable solution A3 (a).

The entirety of the subject site has a total area of 1.625 ha. The proposed impervious areas would include the existing single dwelling and associated outbuildings and the proposed childcare centre, which would be approximately 3,100 m^2. This would mean approximately 80% of the site would be free from impervious surfaces

The acceptable solutions (A3) are satisfied.

A4	**P4**
No Acceptable Solution. (An exemption applies for fences in this zone – see Table 4.6.)	A fence (including a free-standing wall) for a building that is not a dwelling within 4.5m of a frontage must: (a) provide for security and privacy while allowing for passive surveillance of the road; and (b) be compatible with the height and transparency of fences in the street, having regard to: (i) the topography of the site; and (ii) traffic volumes on the adjoining road.

Planner Response

The following proposed fencing would not be exempt pursuant to Table 4.6 of the planning scheme.

- A large portion of the front boundary to Clifton Drive, which would have a 2 m high fence, as recommended by the acoustic report.
- On the southern boundary a 30 m length of fencing with a maximum height of 2.7 m. As recommended by the acoustic report.
- The 2 m high fence within 4.5 m of the southern boundary, as recommended by the acoustic report.
- A portion of the 2 m high fence surrounding the waste area and services area on the northern boundary that is located within 4.5 m of the front boundary.

These fences require assessment against the performance criteria.

The 2 m high front boundary fence adjoining Clifton Drive has been recommended in the acoustic report to mitigate the noise created by the traffic on the proposed sensitive use to an acceptable level. The fence therefore has limited transparency which is required for acoustic purposes.

Similarly, the southern side boundary fence would be between 2 m and 2.7 m in height. This has been recommended through the acoustic report, to mitigate the noise created by the children on the adjoining uses to an acceptable level. Again, the fence has limited transparency due to the acoustic requirements of the fence.

The fencing surrounding the waste area and service area would be 2 m high in order to minimise viewlines into the area from pedestrians and the street.

The acoustic fences would be constructed of 25 mm timber palings to meet acoustic requirements.

It is considered that the proposed fencing would provide for security and privacy for the children frequenting the childcare centre and would ensure that the noise generated by both the traffic and the children would be kept to an acceptable level, minimising the risk of land use conflict.

There is an existing colorbond fence running the length of the southeastern boundary with the Arthur Highway, which is approximately 2 m in height. The Arthur Highway is a Category 3 road and has large numbers of daily traffic. It is noted that the road reserve between the Arthur Highway and the subject site is more than 30 m and contains no foot path, therefore the extent of foot traffic would be negligible. The road reserve between Clifton Drive and the subject site is in excess of 10 m, contains a relatively deep and wide spoon drain and does not contain a footpath. The fence fronting Clifton Drive is a black aluminium fence with a maximum height of 1 m and allows for passive surveillance both to and from the car parking area and the main entrance to the building, which will see high numbers of pedestrian traffic.

It is considered that fencing for the corner site would comply with performance criteria P4.

The performance criteria (P4) are satisfied.

A5	**P5**
Outdoor storage areas, for a building that is not a dwelling, including waste storage, must not:	Outdoor storage areas, for a building that is not a dwelling, must be located or screened to minimise their

(a) be visible from any road or public open space adjoining the site; and (b) encroach upon parking areas, driveways or landscaped areas.	impact on views into the site from any roads or public open space adjoining the site, having regard to: (a) the nature of the use; (b) the type of goods, materials or waste to be stored; (c) the topography of the site; and (d) any screening proposed.

Planner Response

The outdoor storage area would be located on the northern side of the building. The outdoor storage area would be located under the roofed area of the building and would not be visible from any road or public space adjoining the site.

The outdoor storage area would not encroach upon parking areas, driveways, or landscaped areas.

The acceptable solution (A5) are satisfied.

A6	**P6**
Air extraction, pumping, refrigeration systems or compressors, for a building that is not a dwelling, must have a setback from the boundary of a property containing a sensitive use not less than 10m. (An exemption applies for heat pumps and air conditioners in this zone – see Table 4.6.)	Air conditioning, air extraction, pumping, heating or refrigeration systems or compressors, for a building that is not a dwelling, within 10m of the boundary of a property containing a sensitive use must be designed, located, baffled or insulated to not cause an unreasonable loss of amenity, having regard to: (a) the characteristics and frequency of any emissions generated; (b) the nature of the proposed use; (c) the topography of the site and location of the sensitive use; and (d) any mitigation measures proposed.

Planner Response

The service area would be located more than 10 m from any boundary containing a sensitive use.

The acceptable solution (A6) is satisfied.

5 Code assessment

The relevant planning scheme codes and specific area plans against which the proposal requires consideration are:

- Signs Code
- Parking and Sustainable Transport Code
- Road and Railway Asset Code
- Bushfire-Prone Areas Code

5.1 Signs Code

The Signs Code applies to all development for signs. The proposed development includes two signs, a Ground Base sign, and a Transom sign. Table 2 provides a summary of the applicable development standards for the proposal. An assessment against the applicable standards is provided in the sections following Table 2.

Table 2 – Applicable standards in the Signs Code

Clause	Applicability
Use Standards	
There are no use standards in this code	
Development standards for buildings and Works	
C1.6.1 Design and siting of signs	A1 – Applicable A2 – Applicable A3 – Not Applicable. No signs would be located on a frontage of the building.
C1.6.2 Illuminated signs	Not Applicable. The signage would not be illuminated
C1.6.3 Third party sign	Not Applicable. No third party signs are proposed.
C1.6.4 Signs on local heritage places and in local heritage precincts and local historic landscape precincts	Not Applicable. The sign would not be located on a heritage place, in a heritage precinct or in a local historic landscape precinct

5.1.1 Development standards

PLANNING SCHEME REQUIREMENT	
Acceptable Solutions	**Performance Criteria**
C1.6.1 Design and siting of signs	
A1 A sign must: (a) be located within the applicable zone for the relevant sign type set out in Table C1.6; and (b) meet the sign standards for the relevant sign type set out in Table C1.6, excluding for the following sign types, for which there is no Acceptable Solution: (i) roof sign; (ii) sky sign; and	**P1.1** A sign must: (a) be located within an applicable zone for the relevant sign type as set out in Table C1.6; and (b) be compatible with the streetscape or landscape, having regard to: (i) the size and dimensions of the sign; (ii) the size and scale of the building upon which the sign is proposed; (iii) the amenity of surrounding properties;

(iii) billboard.	(iv) the repetition of messages or information; (v) the number and density of signs on the site and on adjacent properties; and (vi) the impact on the safe and efficient movement of vehicles and pedestrians. P1.2 If a roof sign, sky sign or billboard, the sign must: (a) be located within the applicable zone for the relevant sign type set out in Table C1.6; (b) meet the sign standards for the relevant sign type in Table C1.6; and (c) not contribute to visual clutter or cause unreasonable loss of amenity to the surrounding area, having regard to: (i) the size and dimensions of the sign; (ii) the size and scale of the building upon which the sign is proposed; (iii) the amenity of surrounding properties; (iv) the repetition of messages or information; (v) the number and density of signs on the site and on adjacent properties; and (vi) the impact on the safe and efficient movement of vehicles and pedestrians.

Planner Response

The proposed signs are a Ground Base sign and a Transom sign.

The Ground Base sign would have a maximum height of 1 m and would read 'Sorell childcare'. The sign is in the applicable zone for the sign as per Table C1.6. There is only one ground base sign proposed for the development, which has a maximum height of 1 m above the ground. The supportive structure projects above the sign face, however it forms an integral part of the sign design. It is considered that the Ground Base sign complies with the Acceptable Solution A1.

The Transom sign would be located above the main entrance to the centre and would read 'Sorell childcare'. The sign is in the applicable zone for the sign as per Table C1.6. The sign would not extend more than 200 mm beyond the building alignment, nor would it extend beyond or below the level of the head of the doorway or window above which it is attached. The sign would have an approximate vertical dimension of 700 mm with a maximum height above ground level of 3.6 m. The Transom sign would not comply with the sign standards for the relevant sign type set out in Table C1.6 and therefore needs to be assessed against the corresponding performance criteria.

The proposed Transom sign would be located in the applicable zone for the sign as per table C1.6. The sign would be approximately 600 mm high and 3.7 m wide. The front façade of the building is 34 m wide with a maximum height of 5.48 m. The signage has been well designed and fits with the size and scale of the building. The sign faces the western side boundary and is setback approximately 17 m. There are only two signs proposed on site. The proposed sign would not impact on the safe and efficient movement of vehicles and pedestrians. It is considered that the sign would comply with performance criteria P1.

The performance criteria (P1) are satisfied.

A2	**P**
A sign must be not less than 2m from the boundary of any lot in the General Residential Zone, Inner Residential Zone, Low Density Residential Zone, Rural Living Zone or Landscape Conservation Zone.	A sign must not cause an unreasonable loss of amenity to adjoining residential properties, having regard to: (a) the topography of the site and the surrounding area; (b) the relative location of buildings, habitable rooms of dwellings and private open space; (c) any overshadowing; and (d) the nature and type of the sign.

Planner Response

The Ground Base sign would not be located within 2 m from the boundary of a lot in the General Residential zone.

The Transom sign would not be located within 2 m from the boundary of a lot in the General Residential zone.

The acceptable solutions (A1) are satisfied.

5.2 Parking and sustainable transport code

The Parking and Sustainable Transport Code applies to all proposed use and development. Table 3provides a summary of the applicable use and development standards for the proposal. An assessment against the applicable standards is provided in the sections following Table 3.

Table 3 Applicable standards in the Parking and Sustainable Transport Code

Clause	Applicability
Use Standards	
C2.5.1 Car parking numbers	Applicable
C2.5.2 Bicycle parking numbers	Applicable.
C2.5.3 Motorcycle parking numbers	Applicable.
C2.5.4 Loading Bays	Not Applicable. The GFA is less than 1000m^2.
C2.5.5 Number of car parking spaces within the General Residential Zone and Inner Residential Zone	Not Applicable. The proposal does not include an existing non-residential building.
Development standards for Buildings and Works	
C2.6.1 Construction of parking areas	Applicable.
C2.6.2 Design and layout of parking areas	Applicable.
C2.6.3 Number of accesses for vehicles	Applicable.
C2.6.4 Lighting of parking areas within the General Business Zone and Central Business Zone	Not Applicable. The subject site is not located in the General Business Zone or the Central Business Zone.
C2.6.5 Pedestrian access	Applicable.
C2.6.6 Loading Bays	Not Applicable. The proposal does not involve loading bays.
C2.6.7 Bicycle parking and storage facilities within the General Business Zone and Central Business Zone	Not Applicable. The subject site is not located in the General Business Zone or the Central Business Zone.
C2.6.8 Siting of parking and turning areas	Not Applicable. The subject site is not located in the applicable zones.
Parking Precinct Plan	
	Not Applicable. The subject site is not located within an area defined by a parking precinct plan.

5.2.1 Use standards

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C2.5.1 Car parking numbers	
A1 The number of on-site car parking spaces must be no less than the number specified in Table C2.1, less the number	**P1**

of car parking spaces that cannot be provided due to the site including container refund scheme space, excluding if: (a) the site is subject to a parking plan for the area adopted by council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan; (b) the site is contained within a parking precinct plan and subject to Clause C2.7; (c) the site is subject to Clause C2.5.5; or (d) it relates to an intensification of an existing use or development or a change of use where: (i) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is greater than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case no additional on-site car parking is required; or (ii) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is less than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case on-site car parking must be calculated as follows: N = A + (C- B) N = Number of on-site car parking spaces required A = Number of existing on site car parking spaces B = Number of on-site car parking spaces required for the existing use or development specified in Table C2.1 C= Number of on-site car parking spaces required for the proposed use or development specified in Table C2.1.	The number of on-site car parking spaces for uses, excluding dwellings, must meet the reasonable needs of the use, having regard to: (a) the availability of off-street public car parking spaces within reasonable walking distance of the site; (b) the ability of multiple users to share spaces because of: (i) variations in car parking demand over time; or (ii) efficiencies gained by consolidation of car parking spaces; (c) the availability and frequency of public transport within reasonable walking distance of the site; (d) the availability and frequency of other transport alternatives; (e) any site constraints such as existing buildings, slope, drainage, vegetation and landscaping; (f) the availability, accessibility and safety of on-street parking, having regard to the nature of the roads, traffic management and other uses in the vicinity; (g) the effect on streetscape; and (h) any assessment by a suitably qualified person of the actual car parking demand determined having regard to the scale and nature of the use and development. **P1.2** The number of car parking spaces for dwellings must meet the reasonable needs of the use, having regard to: (a) the nature and intensity of the use and car parking required; (b) the size of the dwelling and the number of bedrooms; and (c) the pattern of parking in the surrounding area

Planner Response

An Educational and Occasional Care use requires 1 space per employee, in accordance with Table C2.1 of the planning scheme. The proposal includes 21 staff members and therefore requires 21 car parking spaces. The proposal provides for 21 car parking spaces.

The acceptable solution (A1) is satisfied.

5.2.2 Bicycle parking numbers

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C2.5.2 Bicycle parking numbers	
A1 Bicycle parking spaces must: (a) be provided on the site or within 50m of the site; and (b) be no less than the number specified in Table C2.1.	**P1** Bicycle parking spaces must be provided to meet the reasonable needs of the use, having regard to: (a) the likely number of users of the site and their opportunities and likely need to travel by bicycle; and (b) the availability and accessibility of existing and any planned parking facilities for bicycles in the surrounding area

Planner Response

An Educational and Occasional Care use requires one space per five employees, in accordance with Table C2.1 of the planning scheme. The proposal provides for five bicycle parking spaces, therefore the acceptable solution is met.

The acceptable solution (A1) is satisfied.

5.2.3 Motorcycle parking numbers

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C2.5.3 Motorcycle parking numbers	
A1 The number of on-site motorcycle parking spaces for all uses must: (a) be no less than the number specified in Table C2.4; and (b) if an existing use or development is extended or intensified, the number of on-site motorcycle parking spaces must be based on the proposed extension or intensification, provided the existing number of motorcycle parking spaces is maintained.	**P1** Motorcycle parking spaces for all uses must be provided to meet the reasonable needs of the use, having regard to: (a) the nature of the proposed use and development; (b) the topography of the site; (c) the location of existing buildings on the site; (d) any constraints imposed by existing development; and (e) the availability and accessibility of motorcycle parking spaces on the street or in the surrounding area

Planner Response

Pursuant to table C2.4 off the planning scheme a use that contains 21-40 car parking spaces requires one motorcycle space. The proposal does not provide for motorcycles, therefore the corresponding performance criteria must be assessed. Given that the proposed use is for a childcare centre it is considered that transportation of children to and from the centre on a motorcycle is uncommon. The proposal will provide for 21 car parking spaces which is considered adequate for the proposed use, and can be relied upon for motorcycle parking.

The performance criteria (P1) are satisfied.

5.2.4 Construction of parking areas

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C2.6.1 Construction of parking areas	
A1 All parking, access ways, manoeuvring and circulation spaces must: (a) be constructed with a durable all weather pavement; (b) be drained to the public stormwater system, or contain stormwater on the site; and (c) excluding all uses in the Rural Zone, Agriculture Zone, Landscape Conservation Zone, Environmental Management Zone, Recreation Zone and Open Space Zone, be surfaced by a spray seal, asphalt, concrete, pavers or equivalent material to restrict abrasion from traffic and minimise entry of water to the pavement.	**P1** All parking, access ways, manoeuvring and circulation spaces must be readily identifiable and constructed so that they are useable in all weather conditions, having regard to: (a) the nature of the use; (b) the topography of the land; (c) the drainage system available; (d) the likelihood of transporting sediment or debris from the site onto a road or public place; (e) the likelihood of generating dust; and (f) the nature of the proposed surfacing

Planner Response

All parking areas would be constructed of a durable all-weather pavement and drained to the public stormwater system.

The acceptable solution (A1) are satisfied.

5.2.5 Design and layout of parking areas

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C2.6.2 Design and layout of parking areas	
A1 Parking, access ways, manoeuvring and circulation spaces must either: (a) comply with the following: (i) have a gradient in accordance with Australian Standard AS 2890 – Parking facilities, Parts 1-6; (ii) provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces; (iii) have an access width not less than the requirements in Table C2.2; (iv) have car parking space dimensions which satisfy the requirements in Table C2.3; (v) have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are 3 or more car parking spaces; (vi) have a vertical clearance of not less than 2.1m above the parking surface level; and (vii) excluding a single dwelling, be delineated by line marking or other clear physical means; or (b) comply with Australian Standard AS 2890- Parking facilities, Parts 1-6. **A1.2** Parking spaces provided for use by persons with a disability must satisfy the following: (a) be located as close as practicable to the main entry point to the building; (b) be incorporated into the overall car park design; and (c) be designed and constructed in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009 Parking facilities, Off-street parking for people with disabilities.1	**P1** All parking, access ways, manoeuvring and circulation spaces must be designed and readily identifiable to provide convenient, safe and efficient parking, having regard to: (a) the characteristics of the site; (b) the proposed slope, dimensions and layout; (c) useability in all weather conditions; (d) vehicle and pedestrian traffic safety; (e) the nature and use of the development; (f) the expected number and type of vehicles; (g) the likely use of the parking areas by persons with a disability; (h) the nature of traffic in the surrounding area; (i) the proposed means of parking delineation; and (j) the provisions of Australian Standard AS 2890.1:2004 - Parking facilities, Part 1: Off-street car parking and AS 2890.2 -2002 Parking facilities, Part 2: Off-street commercial vehicle facilities.

Planner Response

The proposed parking and access have been assessed in the TIA. It concludes that the car parking design complies with the acceptable solution, refer to Appendix E.

The acceptable solution (A1.1) is satisfied.

There is a requirement to provide one accessible parking space associated with the proposed car park given the number of parking spaces proposed. This space is provided on site near the main entrance to the childcare centre. The accessible space is to be designed and constructed in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009 Parking facilities, Off-street parking for people with disabilities.

The acceptable solution (A1.2) is satisfied.

5.2.6 Number of accesses for vehicles

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clauses C2.6.3 Number of access for vehicles	
A1 The number of accesses provided for each frontage must:	**P1** The number of accesses provided for each frontage must:

(a) be no more than 1; or (b) no more than the existing number of accesses, whichever is the greater.	(a) be no more than 1; or (b) no more than the existing number of accesses, whichever is the greater.

Planner Response

The site would utilise the existing site access via a right of carriage way.

The acceptable solution (A1) is satisfied.

5.2.7 Pedestrian access

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C2.6.5 Pedestrian access	
A1 Uses that require 10 or more car parking spaces must: (a) have a 1m wide footpath that is separated from the access ways or parking aisles, excluding where crossing access ways or parking aisles, by: (i) a horizontal distance of 2.5m between the edge of the footpath and the access way or parking aisle; or (ii) protective devices such as bollards, guard rails or planters between the footpath and the access way or parking aisle; and (b) be signed and line marked at points where pedestrians cross access ways or parking aisles **A1.2** In parking areas containing accessible car parking spaces for use by persons with a disability, a footpath having a width not less than 1.5m and a gradient not steeper than 1 in 14 is required from those spaces to the main entry point to the building.	**P1** Safe and convenient pedestrian access must be provided within parking areas, having regard to: (a) the characteristics of the site; (b) the nature of the use; (c) the number of parking spaces; (d) the frequency of vehicle movements; (e) the needs of persons with a disability; (f) the location and number of footpath crossings; (g) vehicle and pedestrian traffic safety; (h) the location of any access ways or parking aisles; and (i) any protective devices proposed for pedestrian safety.

Planner Response

21 car parking spaces are proposed. The proposal does not comply with A1 and therefore needs to be assessed against the corresponding performance criteria. The TIA determines that the proposed development is acceptable in terms of safe and convenient pedestrian access, refer to Appendix E.

The performance (P1) is satisfied.

5.3 Road and railway assets code

The road and Railway Assets Code applies to the proposal because the proposal will increase the amount of vehicular traffic using an existing vehicle crossing Table 4provides a summary of the applicable use and development standards for the proposal. An assessment against the applicable standards is provided in the sections following Table 4..

Table 4 Applicable standards in the Road and Railway Assets Code

Clause	Applicability
Use Standards	
Clause 3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction	Applicable

Clause	Applicability
Development standards for buildings or works	
Clause C3.6.1 Habitable buildings for sensitive uses with a road or railway attenuation area.	Applicable.
Development standards for subdivision	
Subdivision clauses	Not Applicable. No subdivision is proposed.

5.3.1 Traffic generation

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C3.5.1 Traffic generation at a vehicle crossing, level crossing or new junction	
A1 For a category 1 road or a limited access road, vehicular traffic to and from the site will not require: (a) a new junction; (b) a new vehicle crossing; or (c) a new level crossing. **A1.2** For a road, excluding a category 1 road or a limited access road, written consent for a new junction, vehicle crossing, or level crossing to serve the use and development has been issued by the road authority. **A1.3** For the rail network, written consent for a new private level crossing to serve the use and development has been issued by the rail authority. **A1.4** Vehicular traffic to and from the site, using an existing vehicle crossing or private level crossing, will not increase by more than: (a) the amounts in Table C3.1; or (b) allowed by a licence issued under Part IVA of the Roads and Jetties Act 1935 in respect to a limited access road. **A1.5** Vehicular traffic must be able to enter and leave a major road in a forward direction	**P1** Vehicular traffic to and from the site must minimise any adverse effects on the safety of a junction ,vehicle crossing or level crossing or safety or efficiency of the road or rail network, having regard to: (a) any increase in traffic caused by the use; (b) the nature of the traffic generated by the use; (c) the nature of the road; (d) the speed limit and traffic flow of the road; (e) any alternative access to a road; (f) the need for the use; (g) any traffic impact assessment; and (h) any advice received from the rail or road authority

Planner Response

Clifton Drive is not a category 1 road, therefore A1.1 is not applicable.

No new junction, vehicle crossing, or level crossing is proposed, therefore A1.2 is not applicable.

No new private rail crossing/s are proposed, therefore A1.3 is not applicable.

The acceptable increase in vehicles movements per day for an existing vehicle crossing on a non-major road is 20% or 40 vehicle movements per day for vehicles up to 5.5 m long. It is anticipated that the majority of vehicles accessing the site will be under 5.5 m long. The increase in vehicle movements per day resulting from the proposal will exceed the acceptable solution based on the number of children (114). Therefore, the corresponding performance criteria must be addressed.

The TIA undertaken by Midson Traffic refers to the previous TIA undertaken by Hubble Traffic for the proposed residential development on the site. The reports demonstrate that the proposal satisfies the requirements (refer to Appendix E).

Vehicular traffic will be able to enter and exit the site in a forward direction, compliant with A1.5.

The performance criteria (P1) are satisfied.

C3.6.1 Habitable buildings for sensitive uses within a road or railway attenuation area

A1	P1
Unless within a building area on a sealed plan approved under this planning scheme, habitable buildings for a sensitive use within a road or railway attenuation area, must be: (a) within a row of existing habitable buildings for sensitive uses and no closer to the existing or future major road or rail network than the adjoining habitable building; (b) an extension which extends no closer to the existing or future major road or rail network than: (i) the existing habitable building; or (ii) an adjoining habitable building for a sensitive use; or (c) located or designed so that external noise levels are not more than the level in Table C3.2 measured in accordance with Part D of the Noise Measurement Procedures Manual, 2nd edition, July 2008.	Habitable buildings for sensitive uses within a road or railway attenuation area, must be sited, designed or screened to minimise adverse effects of noise, vibration, light and air emissions from the existing or future major road or rail network, having regard to: (a) the topography of the site; (b) the proposed setback; (c) any buffers created by natural or other features; (d) the location of existing or proposed buildings on the site; (e) the frequency of use of the rail network; (f) the speed limit and traffic volume of the road; (g) any noise, vibration, light and air emissions from the rail network or road; (h) the nature of the road; (i) the nature of the development; (j) the need for the development; (k) any traffic impact assessment; (l) any mitigating measures proposed; (m) any recommendations from a suitably qualified person for mitigation of noise; and (n) any advice received from the rail or road authority

Planner Response

The proposed building is not within a building area on a sealed plan, is not an extension, and is not in an existing row of buildings. The proposed use is a sensitive use. The acoustic report has detailed that without any acoustic measures noise levels at the outdoor play areas are expected to reach more than the external noise levels set out in Table C3.2, pursuant to Clause C3.6.1(c). The proposal cannot meet the acceptable solution and must be assessed against the performance criteria.

A traffic impact assessment and an acoustic report have been prepared to ensure the proposed childcare centre is suitably located on the subject site. Both assessments have provided recommendations to ensure that the building and outdoor play areas are designed and screened to minimise adverse effects of emissions from the Arthur Highway, and these have been incorporated into the design, refer to Appendix E and Appendix F.

The performance criteria (P1) are satisfied.

5.4 Bushfire-prone areas code

The subject site is located within a bushfire prone area and is a Vulnerable use. The proposed development is therefore subject to the bushfire prone areas code. Table 5 provides a summary of the applicable use and

development standards for the proposal. An assessment against the applicable standards is provided in the sections following Table 5.

Table 5 Applicable standards in the Bushfire Prone Areas Code

Clause	Applicability
Use Standards	
Clauses 13.5.1 Vulnerable uses	Not Applicable (proposed exempt)
Clause 13.5.2 Hazardous uses	Not Applicable. The proposed use is not for a hazardous use.
Development standards for subdivision	
Subdivision clauses	Not Applicable. No subdivision is proposed.

5.4.1 Exemptions

The proposed development of a childcare centre (education and occasional care) is a defined vulnerable use within a bushfire-prone area.

The closest bushfire threat to the proposed building area for the childcare centre development is the grassland area located approximately 95 m to the south-east of the building area (a minimum of 50 m separation is required between the proposed building area and classified grassland vegetation), resulting in a BAL rating of BAL-LOW. As the minimum separation areas are met, there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures and accordingly, the development can exempt from the code under clause C13.4.1(a).

See Appendix G.

5.5 Safeguarding of Airports Code

The site is in an airport noise exposure area and an airport obstacle limitation area (152 m) and is therefore subject to the Safeguarding of Airports Code. Table 6provides a summary of the applicable use and development standards for the proposal. An assessment against the applicable standards is provided in the sections following Table 6..

Table 6 Applicable standards in the Safeguarding of Airports Code

Clause	Applicability
Use Standards	
Clauses 16.5.1 Sensitive use within an airport noise exposure area	Applicable
Development standards for buildings and use	
Clauses C16.6.1 Buildings and works within an airport obstacle limitation area.	Not applicable. The buildings and works would not exceed the specified height limit shown on the airport obstacle limitation area overlay.
Development standards for subdivision	
Subdivision clauses	Not Applicable. No subdivision is proposed.

5.5.1 Sensitive use

PLANNING SCHEME REQUIREMENT

Acceptable Solutions	Performance Criteria
Clause C16.5.1 Sensitive use within an airport noise exposure area	
A1 A sensitive use must not be located within an airport noise exposure area.	**P1** A sensitive use within an airport noise exposure area must be located and designed to minimise exposure to excessive aircraft noise, having regard to: (a) the location, orientation and elevation of the site relative to aircraft flight paths; (b) the current and future type and frequency of aircraft operating from the airport; (c) the type of use and the operational requirements for the use; (d) the layout and construction of buildings associated with the use; (e) the need to not compromise the future operation of the airport; (f) the noise attenuation measures required by Section 3 of the Australian Standard AS 2021 – 2015, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction; (g) the requirements of any relevant airport master plan; and (h) any advice from the airport operator or Airservices Australia.

Planner Response

An Educational and Occasional care use is a sensitive use, therefore the proposal must be assessed against the corresponding performance criteria. An acoustic report has been prepared by DDEG and maintains that the proposed development is expected to comply with performance criteria P1, for more detail refer to Appendix F.

The performance criteria (P1) are satisfied.

6 Conclusion

The proposal seeks planning approval for the use and development of a childcare centre at 24 Clifton Drive, Sorell. This report identifies that the proposal is subject to the provision of the *Tasmanian Planning Scheme – Sorell*. In particular, the zone purpose, use and development standards in the General Residential zone. The proposal also requires assessment against the relevant Codes.

An assessment against all relevant standards has been outlined in this report, including its appendices and is summarised in Table 7 below. The assessment has demonstrated that even where the acceptable solution is not met, the performance criterion is achieved; accordingly, the proposal is recommended for approval.

Table 7 Summary of relevant standards and whether the proposal meets the acceptable solution or performance criterion

Clause	Standard	Acceptable Solution or Performance Criterion
General Residential Zone		
Clause 8.3.1	Discretionary uses	Clause A1 – Relies on PC Clause A2 – Relies on PC Clause A3 – Complies with AC Clause A4 – Relies on PC
Clause 8.5.1	Non-dwelling development	Clause A1 – Complies with AS Clause A2 – Complies with AS Clause A3 – Relies on PC Clause A4 – Relies on PC Clause A5 – Complies with AS Clause A6 – Complies with AS
Signs Code		
Clause C1.6.1	Design and siting of signs	Clause P1 – Relies on PC Clause A2 – Complies with AS
Parking and Sustainable Transport Code		
Clause C2.5.1	Car parking numbers	Complies with AS
Clause C2.5.2	Bicycle parking numbers	Complies with AS
Clause C2.5.3	Motorcycle parking numbers	Relies on PC
Clause C2.6.1	Construction of parking areas	Complies with AS
Clause C2.6.2	Design and layout of parking areas	Complies with AS
Clause C2.6.3	Number of accesses for vehicles	Complies with AS
Clause C2.6.5	Pedestrian access	Relies on PC
Road and Railway Assets Code		
Clause C3.5.1	Traffic generation at a vehicle crossing, level crossing or new junction	Relies on PC
Clause C3.6.1	Habitable buildings for sensitive uses within a road or railway attenuation area	Relies on PC
Bushfire Prone Areas Code		

Clause	Standard	Acceptable Solution or Performance Criterion
Clause C13.4.1	Exemption	N/A
Safeguarding of Airports Code		
Clause C16.5.1	Sensitive use within an airport noise exposure area	Relies on PC

MIDSON
traffic
pty ltd

Tipalea Partners Pty Ltd

24 Clifton Drive, Sorell
Traffic Impact Assessment

May 2024

CELEBRATING 15 YEARS
2008 - 2023

Contents

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1. Introduction

1.1 Background

Midson Traffic were engaged by Tipalea Partners to prepare a traffic impact assessment for a proposed childcare centre development at 24 Clifton Drive, Sorell.

1.2 Traffic Impact Assessment (TIA)

A traffic impact assessment (TIA) is a process of compiling and analysing information on the impacts that a specific development proposal is likely to have on the operation of roads and transport networks. A TIA should not only include general impacts relating to traffic management, but should also consider specific impacts on all road users, including on-road public transport, pedestrians, cyclists and heavy vehicles.

This TIA has been prepared in accordance with the Department of State Growth (DSG) publication, *Traffic Impact Assessment Guidelines*, August 2020. This TIA has also been prepared with reference to the Austroads publication, *Guide to Traffic Management,* Part 12: *Integrated Transport Assessments for Developments*, 2020.

Land use developments generate traffic movements as people move to, from and within a development. Without a clear understanding of the type of traffic movements (including cars, pedestrians, trucks, etc), the scale of their movements, timing, duration and location, there is a risk that this traffic movement may contribute to safety issues, unforeseen congestion or other problems where the development connects to the road system or elsewhere on the road network. A TIA attempts to forecast these movements and their impact on the surrounding transport network.

A TIA is not a promotional exercise undertaken on behalf of a developer; a TIA must provide an impartial and objective description of the impacts and traffic effects of a proposed development. A full and detailed assessment of how vehicle and person movements to and from a development site might affect existing road and pedestrian networks is required. An objective consideration of the traffic impact of a proposal is vital to enable planning decisions to be based upon the principles of sustainable development.

This TIA also addresses the relevant clauses of C2.0, *Parking and Sustainable Parking Code*, and C3.0, *Road and Railway Assets Code*, of the Tasmanian Planning Scheme – Sorell, 2021.

1.3 Statement of Qualification and Experience

This TIA has been prepared by an experienced and qualified traffic engineer in accordance with the requirements of Council's Planning Scheme and The Department of State Growth's, *Traffic Impact Assessment Guidelines*, August 2020, as well as Council's requirements.

The TIA was prepared by Keith Midson. Keith's experience and qualifications are briefly outlined as follows:

- 28 years professional experience in traffic engineering and transport planning.
- Master of Transport, Monash University, 2006
- Master of Traffic, Monash University, 2004

- Bachelor of Civil Engineering, University of Tasmania, 1995
- Engineers Australia: Fellow (FIEAust); Chartered Professional Engineer (CPEng); Engineering Executive (EngExec); National Engineers Register (NER)

1.4 Project Scope

The project scope of this TIA is outlined as follows:

- Review of the existing road environment in the vicinity of the site and the traffic conditions on the road network.
- Provision of information on the proposed development with regards to traffic movements and activity.
- Identification of the traffic generation potential of the proposal with respect to the surrounding road network in terms of road network capacity.
- Review of the parking requirements of the proposed development. Assessment of this parking supply with Planning Scheme requirements.
- Traffic implications of the proposal with respect to the external road network in terms of traffic efficiency and road safety.

1.5 Subject Site

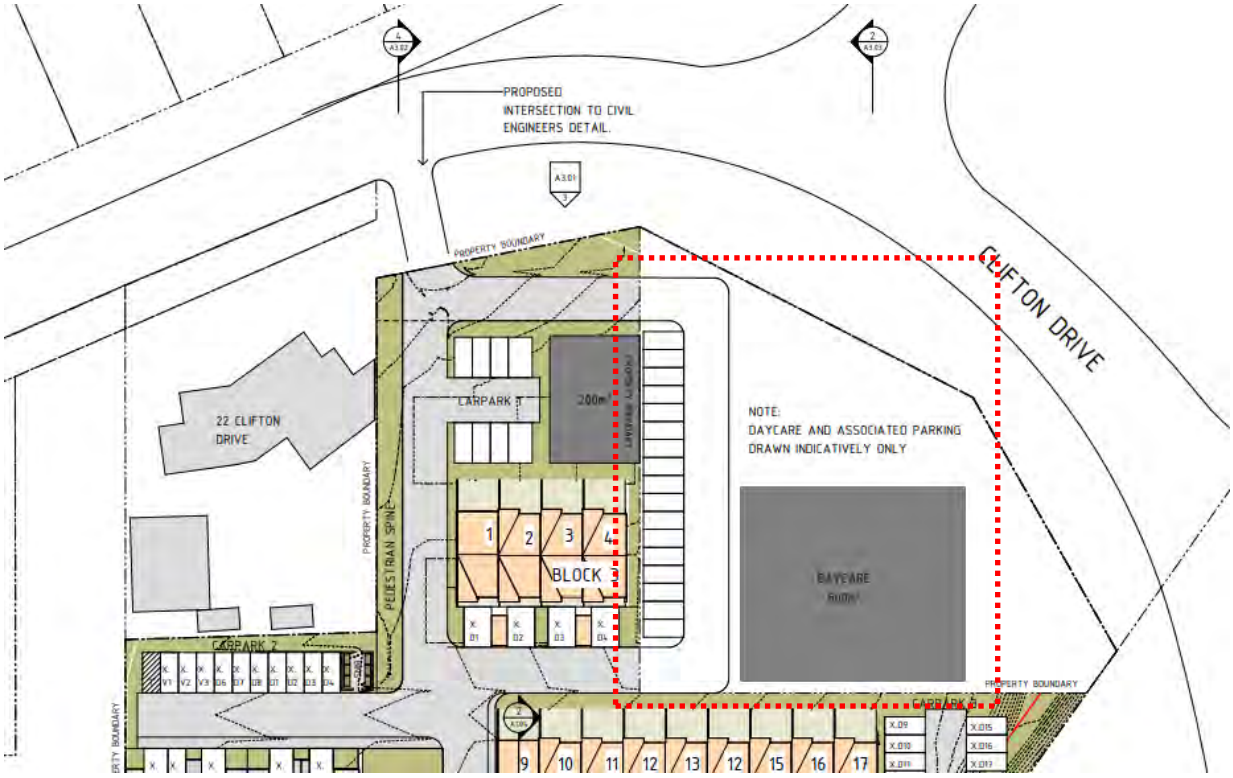
The subject site is located at 24 Clifton Drive, Sorell. The site is within an approved residential unit development that has not yet been constructed.

The subject site and surrounding road network is shown in Figure 1. The subject site within the approved development site is shown in Figure 2.

Figure 1 Subject Site & Surrounding Road Network

Image Source: LIST Map, DPIPWE

Figure 2 Subject Site Within Overall Development



1.6 Reference Resources

The following references were used in the preparation of this TIA:

- Tasmanian Planning Scheme – Sorell, 2021 (Planning Scheme)
- Austroads, *Guide to Traffic Management,* Part 12: *Integrated Transport Assessments for Developments*, 2020
- Austroads, Guide to Road Design, Part 4A: Unsignalised and Signalised Intersections, 2021
- Department of State Growth, *Traffic Impact Assessment Guidelines*, 2020
- Roads and Maritime Services NSW, *Guide to Traffic Generating Developments*, 2002 (RMS Guide)
- Roads and Maritime Services NSW, *Updated Traffic Surveys,* 2013 (Updated RMS Guide)
- Australian Standards, AS2890.1, *Off-Street Parking*, 2004 (AS2890.1)

2. Existing Conditions

2.1 Transport Network

For the purposes of this report, the transport network consists of Clifton Drive and Arthur Highway.

Clifton Drive formed a component of the Arthur Highway corridor prior to the construction of the Sorell Southern Bypass in 2022. It connects between Cole Street at its western end, and Arthur Highway at its eastern end.

It carries approximately 5,000 vehicles per day. The posted speed limit of Clifton Drive is 60-km/h.

Clifton Drive adjacent to the subject site is shown in Figure 3.

Figure 3 Clifton Drive

Clifton Drive connects to the Arthur Highway at a roundabout, which is located on the northeastern corner of the subject site.

Arthur Highway is classified as a 'Category 3' road according to DIER's Road Hierarchy. Category 3 roads are of strategic importance to regional and local communities, linking Category 1 and Category 2 roads. Arthur Highway provides access to the Tasman Peninsula and the various townships located to the east and south east of Sorell. Arthur Highway carries approximately 13,400 vehicles per day[1] east of the roundabout.

[1] Department of State Growth Traffic data, 2022.

2.2 Road Safety Performance

Crash data can provide valuable information on the road safety performance of a road network. Existing road safety deficiencies can be highlighted through the examination of crash data, which can assist in determining whether traffic generation from the proposed development may exacerbate any identified issues.

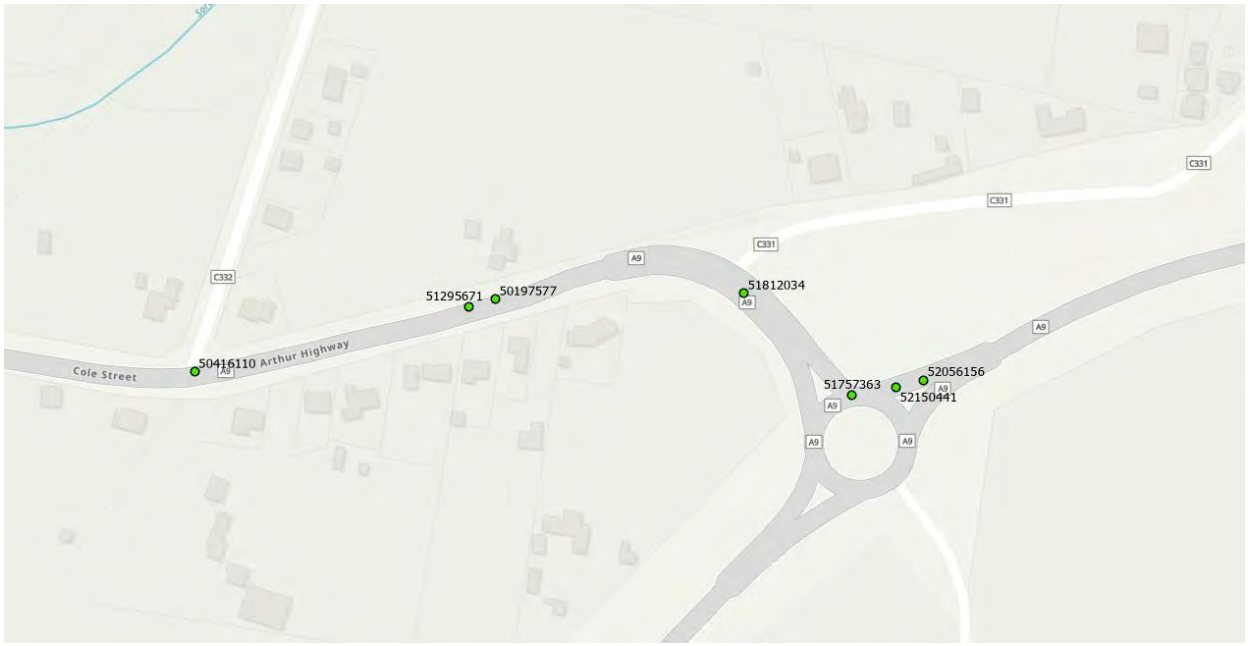
Crash data was obtained from the Department of State Growth for a 5+ year period between 1st January

The findings of the crash data is summarised as follows:

- A total of 7 crashes were reported during this time.
- Severity. 3 crashes involved minor injury; 4 crashes involved property damage only.
- Time of day. 5 crashes were reported between 11:00am and 6:00pm. 1 crash was reported prior to 8:00am and 1 crash was reported after 9:00pm.
- Day of week. No crash trends were noted by day of week. 2 crashes were reported on Mondays; 2 crashes were reported on Saturdays; 1 crash was reported on a Wednesday, Friday and Sunday.
- Crash types. 2 crashes involved 'rear-end' collisions; 1 crash involved a 'cross-traffic' collision; 1 crash involved a 'right-near' collision; 1 crash involved a 'pulling-out' manoeuvre; 1 crash involved a single vehicle losing control on the carriageway.
- Crash locations. 3 crashes were reported at the roundabout; 1 crash was reported at the Pawleena Road junction; 3 crashes were reported at midblock locations. The crash locations are shown in Figure 4.
- Vulnerable road users. 1 crash involved a motorcycle. This crash occurred at the roundabout at 9:30pm, 29th September 2023, resulting in minor injury.

The crash data is considered to be typical of a collector road servicing predominantly residential property. No specific road safety deficiencies were identified through the crash data analysis.

Figure 4 Crash Locations



Source: Department of State Growth

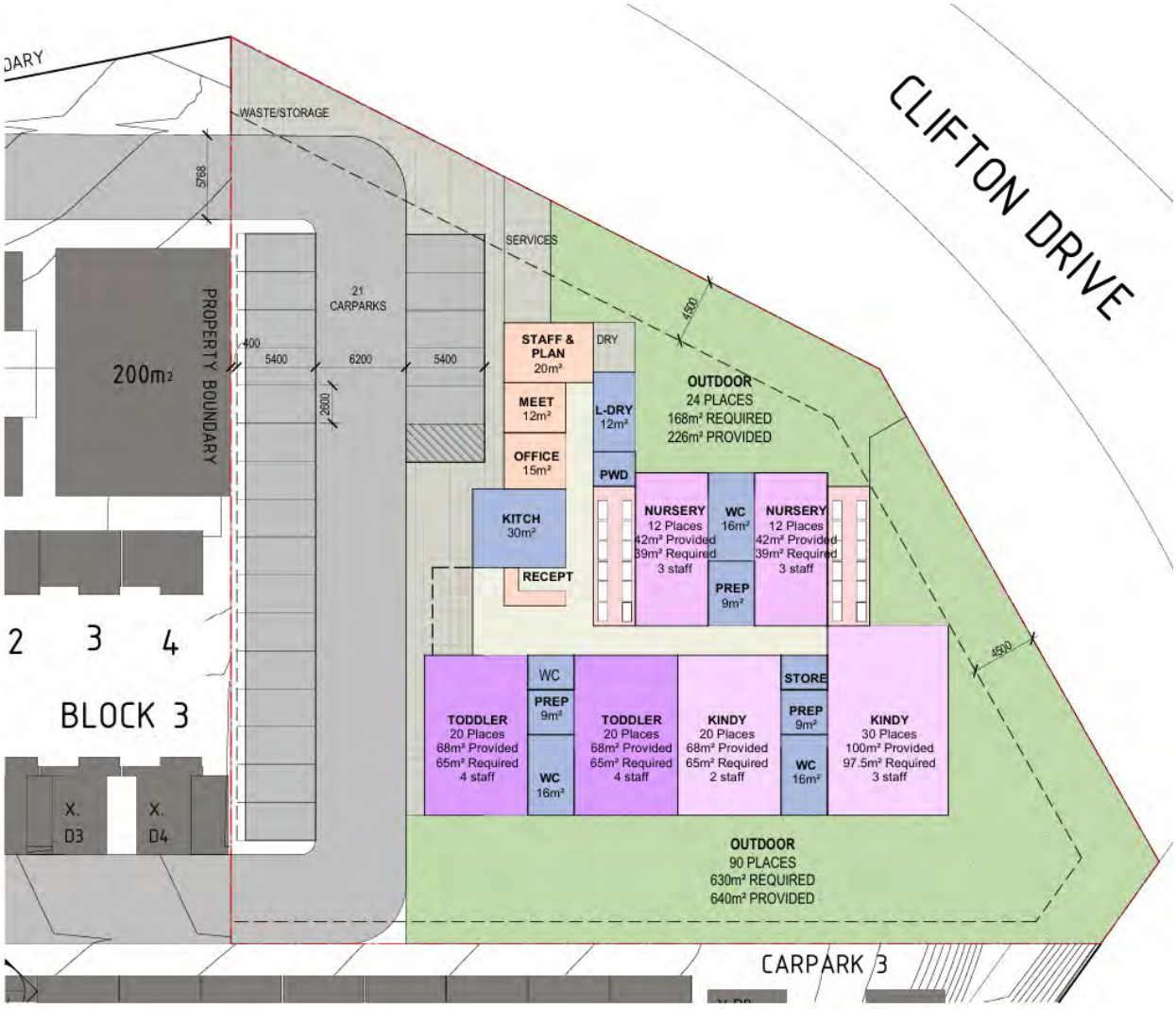
3. Proposed Development

3.1 Development Proposal

The proposed development involves the construction of a childcare centre. The childcare centre will cater for 114 children and provides a total of 21 parking spaces.

The proposed development is shown in Figure 5.

Figure 5 Proposed Development Plans



4. Traffic Impacts

4.1 Previous Development TIA

A previous TIA was prepared for the overall site by Hubble Traffic in January 2024.

The TIA was prepared on the basis of a full residential unit development, consisting of 50 units. The TIA calculated the overall traffic generation of the residential development to be 276 vehicles per day, with a peak of 28 vehicles per hour.

The proposed development will reduce the number of units by 5 units. This will reduce the residential component of the development to 244 vehicles per day, with a reduced peak of 25 vehicles per hour.

4.2 Trip Generation

Trip generation rates were sourced from the RMS Guide. The RMS Guide traffic generation rates are summarised in Table 1.

Table 1 RMS Traffic Generation

Component	Quantity	Maximum Morning Peak Hour Traffic Generation	Maximum Afternoon Peak Hour Traffic Generation
Proposed childcare	114 children	1.4 trips per child 160 vehicles per hour	0.8 trips per child 91 vehicles per hour

The traffic generation will therefore be 160 and 91 vehicles per hour during the morning and afternoon peaks respectively. The daily traffic generation is likely to be in the order of 500 vehicles per day (assuming two trips per child places per drop-off and pick-up, plus staff vehicle trips).

The total traffic generation of the site, including the previously approved residential component (less the 5 units to accommodate the proposed development) will be:

- 744 vehicles per day
- AM peak 185 vehicles per hour
- PM peak 116 vehicles per hour

4.3 Trip Assignment

All traffic will access the development via the proposed new access junction at Clifton Drive. It is likely that there will be a relatively even distribution of traffic entering/ exiting the site from/ to Sorell CBD/ Arthur Highway.

4.4 Access Impacts

The assessment of the junction access associated with the residential development with Clifton Drive in terms of safety, efficiency and sight distance was prepared in a separate TIA by Hubble Traffic. The traffic generation associated with the proposed childcare centre was incorporated into the overall traffic generation of the development.

The increased traffic generation that will arise from the proposed development on the access at Clifton Drive will not alter the findings of the Hubble TIA. The increased turning movements result in the requirement of a Short Channelised Right Turn Lane (CHR(S)). The right turn movements during the AM peak will be approximately 46 vehicles per hour (increased from 28 vehicles per hour). This increase in turning movements results in an unchanged CHR(S) requirement at the junction (refer to Diagram 6.2 in Hubble Traffic TIA, page 8).

The Hubble TIA noted that the access will operate at LOS A during peak periods. The increased traffic generation will not significantly alter the LOS of the junction (noting that a LOS B or C may result at the access during peak periods, based on the relatively low total peak access volume of 185 vehicles per hour, two-way flow).

An assessment of the traffic impacts of the proposed childcare centre was undertaken for the internal road network of the site. This is detailed in Section 4.6.

4.5 Pedestrian Impacts

The proposed development is likely to attract a relatively small amount of pedestrian movements in the surrounding network. The internal road network associated with the residential unit development provides footpaths that connect to the external road network.

4.6 Internal Road Assessment

Access for the childcare centre consists of a loop road that connects to the main access road to the residential development, that connects to Clifton Drive. The loop road will effectively result in predominantly one-way flow in a clockwise direction through the site. An assessment of the internal road network was undertaken to ensure that traffic congestion associated with the childcare centre would not adversely affect the internal road network.

The traffic generation be 160 and 91 vehicles per hour during the morning and afternoon peaks respectively. The peak generation will be two-way trips, with an average parking duration of stay of approximately 7 minutes.

Traffic delays within the internal road network will only occur during parking and unparking manoeuvres. The effective queue storage that would be acceptable before any blockage with the main access would occur is 30 metres. With a peak arrival rate of 80 vehicles per hour (half of the two-way peak generation during the AM peak period, assuming that all traffic would access via the northern internal roadway to the site), the average delay that would cause queueing to extend to 30 metres is a continuous service rate of 130 vehicles per hour at the northern end of the car park. This equates to an average parking delay of 28 seconds per vehicle applicable to the northernmost car parking spaces.

Given that the average duration of stay for each space will be 7 minutes, then the above delays are not considered possible (ie. a delay of 28 seconds or more would only occur every 7 minutes, which would not have an outcome of causing delays of more than 5 vehicles along the northern access road to the car park). Parking and unparking manoeuvres would be relatively evenly distributed across all parking spaces. It is also noted that parking manoeuvres would also facilitate the movement of cars past parking spaces (ie. an unparking manoeuvre would give way to through traffic within the aisle, therefore no queuing would result unless a vehicle were waiting for the parking space associated with the manoeuvre).

The layout of the parking area also enables two-way flow with two access locations. If queues extend to the main junction location, cars can continue down the main access road to access the car park at its southern access location.

Even under circumstances where the car park may be fully occupied, there is sufficient storage within the internal road network to prevent queueing beyond the main access road junctions.

4.7 Road Safety Impacts

There are no significant detrimental road safety impacts foreseen for the proposed development. This is based on the following:

- The existing road safety performance of Clifton Drive does not indicate that there are any current road safety deficiencies that might be exacerbated by the proposed development.
- The site is located within a newly designed residential unit development, with a single access connecting to Clifton Drive. The access is located west of an existing roundabout. The roundabout provides traffic calming and a positive road safety environment for movements into and out of the access.
- Adequate sight distance is available at the site access on Clifton Drive in relation to the prevailing vehicle speeds in accordance with Austroads requirements.
- The additional traffic generated by the proposed development (noting an estimated peak of up to 160 vehicles per hour, can be readily absorbed by the surrounding road network).

5. Parking Assessment

5.1 Parking Provision

The proposed development provides a total of 21 parking spaces. This includes 1 disabled parking space.

The car parking layout is shown in Figure 5.

5.2 Planning Scheme Requirements

The Acceptable Solution A1 of Clause C2.5.1 of the Planning Scheme states:

> *"The number of on-site car parking spaces must be no less than the number specified in Table C2.1, excluding if:*
>
> *(a) the site is subject to a parking plan for the area adopted by council, in which case parking provision (spaces or cash-in-lieu) must be in accordance with that plan;*
>
> *(b) the site is contained within a parking precinct plan and subject to Clause C2.7;*
>
> *(c) the site is subject to Clause C2.5.5; or*
>
> *(d) it relates to an intensification of an existing use or development or a change of use where:*
>
> *(i) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is greater than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case no additional on-site car parking is required; or*
>
> *(ii) the number of on-site car parking spaces for the existing use or development specified in Table C2.1 is less than the number of car parking spaces specified in Table C2.1 for the proposed use or development, in which case on-site car parking must be calculated as follows:*
>
> *N = A + (C- B)*
>
> *N = Number of on-site car parking spaces required*
>
> *A = Number of existing on site car parking spaces*
>
> *B = Number of on-site car parking spaces required for the existing use or development specified in Table C2.1*
>
> *C= Number of on-site car parking spaces required for the proposed use or development specified in Table C2.1".*

In this case, sub-points (a), (b), (c), and (d) are not applicable. The car parking requirements in Table C2.1 for 'Educational and Occasional Care' is 1 space per employee and 1 space per 6 tertiary students.

The childcare centre ('occasional care') does not cater for tertiary students and therefore the requirements relate to staff parking only.

The proposed childcare centre will cater for up to 21 staff: the parking requirement is therefore 21 spaces. The parking provision of 21 spaces satisfies the requirements of Acceptable Solution A1 of Clause C2.5.1 of the Planning Scheme.

5.3 Car Parking Layout

The Acceptable Solution A1.1 of Clause C2.6.2 of the Planning Scheme states:

> *"Parking, access ways, manoeuvring and circulation spaces must either:*
>
> *(a) comply with the following:*
>
> *(i) have a gradient in accordance with Australian Standard AS 2890 - Parking facilities, Parts 1-6;*
>
> *(ii) provide for vehicles to enter and exit the site in a forward direction where providing for more than 4 parking spaces;*
>
> *(iii) have an access width not less than the requirements in Table C2.2;*
>
> *(iv) have car parking space dimensions which satisfy the requirements in Table C2.3;*
>
> *(v) have a combined access and manoeuvring width adjacent to parking spaces not less than the requirements in Table C2.3 where there are 3 or more car parking spaces;*
>
> *(vi) have a vertical clearance of not less than 2.1m above the parking surface level; and*
>
> *(vii) excluding a single dwelling, be delineated by line marking or other clear physical means; or*
>
> *(b) comply with Australian Standard AS 2890- Parking facilities, Parts 1-6".*

The car parking layout is assessed against the requirements of A1.1(b) in the following sections:

5.3.1 Driveway Grade

Section 2.5.3(b) of AS2890.1 states the following regarding the maximum grade of straight ramps:

i. Longer than 20 metres – 1 in 5 (20%) maximum.

ii. Up to 20 metres long – 1 in 4 (25%) maximum. The allowable 20 m maximum length shall include any parts of the grade change transitions at each end that exceed 1 in 5 (20%).

The maximum grade of the access is well below the maximum AS2890.1 requirements.

5.3.2 Parking Grade

Section 2.4.6 of AS2890.1 states that the maximum grades within a car park shall be:

- Measured parallel to the angle of parking 1 in 20 (5%)
- Measured in any other direction 1 in 16 (6.25%)

The grades of the parking spaces are effectively level, thus complying with the AS2890.1 grade requirements.

5.3.3 On-Site Turning

The car park facilities forward entry and forward exit, with adequate on-site turning within the central aisle, as well as the provision of a loop road within the internal road network.

5.3.4 Parking Dimensions

AS2890.1 defines the parking as User Class 3, '*Short-term city and town centre parking, parking stations, hospital and medical centres'.* User Class 3 requires the following dimensions for 90-degree parking:

- Space width 2.6 metres
- Space length 5.4 metres
- Aisle width 5.8 metres

The parking dimensions within the car park have the following dimensions:

- Space width 2.6 metres
- Space length 5.4 metres
- Aisle width 6.2 metres

The parking therefore exceeds the minimum AS2890.1 requirements (aisle width is greater than minimum requirement).

5.3.5 Vertical Clearance

The site is not constrained by vertical obstructions.

5.3.6 Assessment Summary

The proposed car parking design complies with the requirements of AS2890.1 and therefore complies with the Acceptable Solution A1.1(b) of Clause C2.6.2 of the Planning Scheme.

5.4 Accessible Parking

The Acceptable Solution A1.2 of Clause C2.6.2 of the Planning Scheme states:

> *"Parking spaces provided for use by persons with a disability must satisfy the following:*
>
> *(a) be located as close as practicable to the main entry point to the building;*
>
> *(b) be incorporated into the overall car park design; and*
>
> *(c) be designed and constructed in accordance with Australian/New Zealand Standard AS/NZS 2890.6:2009 Parking facilities, Off-street parking for people with disabilities".*

The following is relevant with respect to the development proposal:

a. Location. The disabled parking space is located immediately adjacent to the main entrance to the building.

b. Car park design. The disabled parking space has been incorporated into the design of the car park.

c. Disabled space design. The disabled parking space complies with the dimensional requirements in AS2890.6, including the adjacent shared area.

The National Construction Code provides the requirements for the number of disabled spaces. The Code classifies the building as a 'Class 9b' building. This requires 1 disabled parking space for every 100 car parking spaces. This is a requirement for 1 disabled space, which is provided as close as practicably to the building entrance.

Based on the above assessment, the disabled parking provision complies with the requirements of Acceptable Solution A1.2 of Clause C2.6.2 of the Planning Scheme.

6. Conclusions

This traffic impact assessment (TIA) investigated the traffic and parking impacts of a proposed childcare development at 24 Clifton Drive, Sorell.

The key findings of the TIA are summarised as follows:

- The childcare centre will cater for up to 114 children and will have up to 21 staff. The childcare centre is located in a recently approved residential unit development site.
- The traffic generation of the childcare centre will be 160 vehicles per hour during the AM peak and 91 vehicles per hour during the PM peak. The daily generation is likely to be 500 vehicles per day.
- The traffic generation will increase the traffic at the access junction on Clifton Drive. The traffic increase will not alter the level of service of the access. The increased traffic will not alter the requirements for a CHR(S) treatment at the access with Clifton Drive.
- The parking provision of 21 spaces satisfies the requirements of Acceptable Solution A1 of Clause C2.5.1 of the Planning Scheme.
- The car parking layout satisfies the requirements of Acceptable Solution A1.1(b) of Clause C2.6.2 the Planning Scheme.

Based on the findings of this report the proposed development is supported on traffic grounds.

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Document Status

Revision	Author	Review	Date
0	Keith Midson	Zara Kacic-Midson	8 May 2024

Appendix F Acoustic Report

Acoustic Engineering

Town Planning Acoustic Report

24 Clifton Drive, Sorell, TAS

Project No: 207671-A
Date: 23/05/2024
Revision: 2

Document Control

Document Title: Acoustic Engineering Town Planning Acoustic Report

Project: 24 Clifton Drive, Sorell, TAS

Project No: 207671-A

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Revision History

Doc.	Rev.	Date	Purpose	Author	Reviewer
TPR	0	22/04/2024	Not for endorsement	C. Johnstone	A. Mitchell
TPR	1	23/05/2024	Updated to include assessment of aircraft noise	C. Johnstone	A. Mitchell
TPR	2	23/05/2024	Updated per Client comment	C. Johnstone	A. Mitchell

Executive Summary

DDEG has been appointed to provide acoustic engineering consulting services associated with the proposed child care centre at 24 Clifton Drive, Sorell, TAS.

Advice in relation to the following acoustic engineering elements has been requested, and is presented in this document:

Table 1 Acoustic Engineering Elements and Reference Criteria

Acoustic Engineering Element	Reference Criteria
External noise (i.e. traffic noise) impact on children	▪ Clause C3.6 of the Tasmanian Planning Scheme – State Planning Provisions ▪ AAAC – Guideline for Child Care Centre Acoustic Assessment
Aircraft noise intrusion via building envelope	▪ Clause C16.5 of the Tasmanian Planning Scheme – State Planning Provisions ▪ AS 2021:2015 ▪ AAAC – Guideline for Child Care Centre Acoustic Assessment
Environmental noise emissions due to children and other activities within indoor and outdoor areas of the site	▪ Clause 8.3 of the Tasmanian Planning Scheme – State Planning Provisions ▪ AAAC – Guideline for Child Care Centre Acoustic Assessment
Environmental noise emissions due to mechanical plant	▪ Clause 8.3 of the Tasmanian Planning Scheme – State Planning Provisions ▪ Environmental Management and Pollution Control (Noise) Regulations 2016 ▪ Environment Protection Policy (Noise)
Environmental noise emissions due to on-site vehicle movements and other car park activity	▪ Clause 8.3 of the Tasmanian Planning Scheme – State Planning Provisions ▪ Environment Protection Policy (Noise)

A review of the above elements has been undertaken and it is considered that the development will satisfy the reference criteria with inclusion of the following acoustic engineering measures:

Table 2 Recommended Acoustic Engineering Measures

System	Acoustic Engineering Measure
External Noise Intrusion	▪ Traffic noise levels within outdoor play areas are calculated to exceed the adopted noise criteria without acoustic treatment. ▪ To attenuate traffic noise levels within outdoor play areas, acoustic treatment measures are recommended. These measures are presented in Section 6.3, and comprise installing a minimum 2 m high solid acoustic fence along sections of the northern, eastern and southern boundaries of the child care centre highlighted in Figure 5. ▪ Indicative constructions for external walls, external glazing and the roof / ceiling assembly have been presented in Section 6.4. ▪ Refer to Section 6 for full details.
Aircraft Noise Intrusion	▪ It is considered that the proposed building does not need to be specifically designed to protect against aircraft noise intrusion. Standard building construction will satisfy the acoustic requirements of AS 2021:2015, provided that all penetrations in the building envelope are sealed airtight. ▪ Aircraft noise levels within outdoor play areas are expected to be acoustically acceptable without the need for acoustic treatment measures. ▪ Refer to Section 7 for full details.
Outdoor Play Areas	▪ It is calculated that noise levels due to outdoor play areas could exceed the recommended guideline noise levels at the nearest receivers without acoustic treatment. ▪ Recommended acoustic treatment measures are presented in Section 8.3, which involve installing sections of 2.7 m high and 2.0 m high acoustic fencing to the locations highlighted in Figure 9. ▪ Refer to Section 8 for full details.
Indoor Play Areas	▪ Noise levels due to indoor play areas are calculated to comply with the noise criteria at the nearest receivers without acoustic treatment. ▪ Refer to Section 8.5 for full details.
Mechanical Plant	▪ Noise from mechanical plant is expected to satisfy the requirements of the *Environmental Management and Pollution Control (Noise) Regulations 2016* at the potentially most-affected receivers, based on the adopted input parameters outlined in Section 9.2.1. ▪ Further acoustic review should be undertaken at detailed design stage if any of the outcomes outlined in Section 9.3 eventuate. ▪ Refer to Section 9 for full details.

System	Acoustic Engineering Measure
Car Park Noise	▪ To minimise noise emissions from the child care centre car park, it is recommended that the car park layout include designated staff parking bays and parent parking bays as presented in Figure 10. ▪ Refer to Section 10 for further details.
Summary of Acoustic Fencing / Screening	▪ Refer to Section 11 for a summary of all recommended acoustic fence / screen locations and heights. ▪ Appendix E shows a typical detail of an acoustic timber paling fence.

Contents

1 Introduction

1.1 Purpose

DDEG has been appointed to provide acoustic engineering consulting services in relation to the proposed child care centre at 24 Clifton Drive, Sorell, TAS.

This document has been prepared for the purpose of informing a Development Application to Council.

The scope of this document comprises:

- Assessment of potential noise impacts on children due to nearby roads and aircraft noise associated with Hobart Airport.
- Assessment of potential noise impacts due to use of proposed indoor and outdoor play areas.
- Assessment of noise due to proposed mechanical plant in relation to the statutory requirements.
- Review of potential noise impacts associated with use of the car park at pick-up and drop-off times.

A glossary of the acoustic nomenclature used in this document is presented in Appendix A.

1.2 Reference Documentation

This document is based on information contained in the following documents and drawings:

Table 3 Reference Documentation

Document	Prepared by	Issue
Preliminary Issue Architectural Drawings; Drawing No. SK06	Brown Falconer	March 2024
Preliminary DA Revision Site Plan; Drawing No. DA.A1.02	1+2 Architecture	22/02/2024
Email To: Campbell Johnstone CC: martin@morganmoore.com.au; Andrew Mitchell; Adrianna Kazzi Subject: RE: Tipalea Partners - Sorell Acoustic Report	Jack Hunter, Tipalea Partners Pty Ltd	Thu 28/03/2024 3:48 PM

1.3 Document Limitations

The following limitations are applicable with respect to the acoustic advice presented in this document:

- DDEG has prepared this document for the sole use of the relevant stakeholders and approval authorities and for the specific purpose expressly stated in the document. No other party should rely on this document without the prior written consent of DDEG. DDEG undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document.
- The information contained in this document provides advice in relation to acoustics and vibration only. No claims are made and no liability is accepted in respect of design and construction issues falling outside of the specialist field of acoustics and vibration engineering including and not limited to structural integrity, fire rating, architectural buildability and fitness-for-purpose, waterproofing and the like. Supplementary professional advice should be sought in respect of these issues.
- Documents marked 'Not for Construction' or 'Draft' may be subject to change and are not released as final documents. DDEG accepts no liability pending release of the final version of the document.
- In preparing this document DDEG may have relied upon information provided by the Client and other third parties, some of which may not have been verified. DDEG accepts no responsibility or liability for any errors or omissions which may be incorporated into this document as a result.
- The recommendations, data and methodology presented in this document are based on the listed reference documentation. The recommendations apply specifically to the project under consideration and must not be utilised for any other purpose. Any modifications or changes to the project from that described in the listed reference documentation may invalidate the advice provided in this document, necessitating a revision.
- Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.

2 Project Characteristics

2.1 Site Location

The project site is located at 24 Clifton Drive, Sorell, TAS, as shown in Figure 1. The topography in the area of the site slopes gently downward from east to west. The site is located with a road and railway attenuation area under the Tasmanian State Planning Provisions due to its proximity to Arthur Highway, which is a designated Category 3 major road.

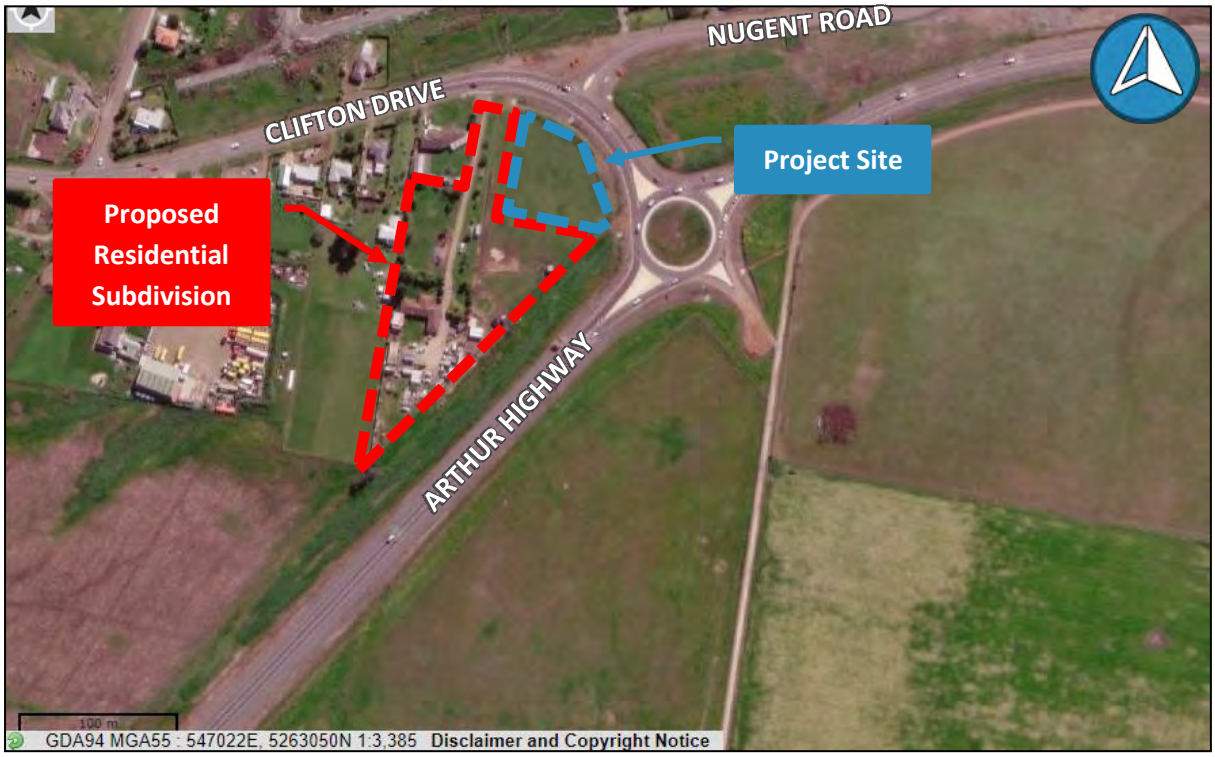

Figure 1 Aerial Image of Site
(Aerial Photo Source: https://maps.thelist.tas.gov.au/listmap/app/list/map)

2.2 Proposed Project

The project comprises a proposed single-storey child care centre with capacity for up to 114 children.

Figure 2 shows the proposed site plan.

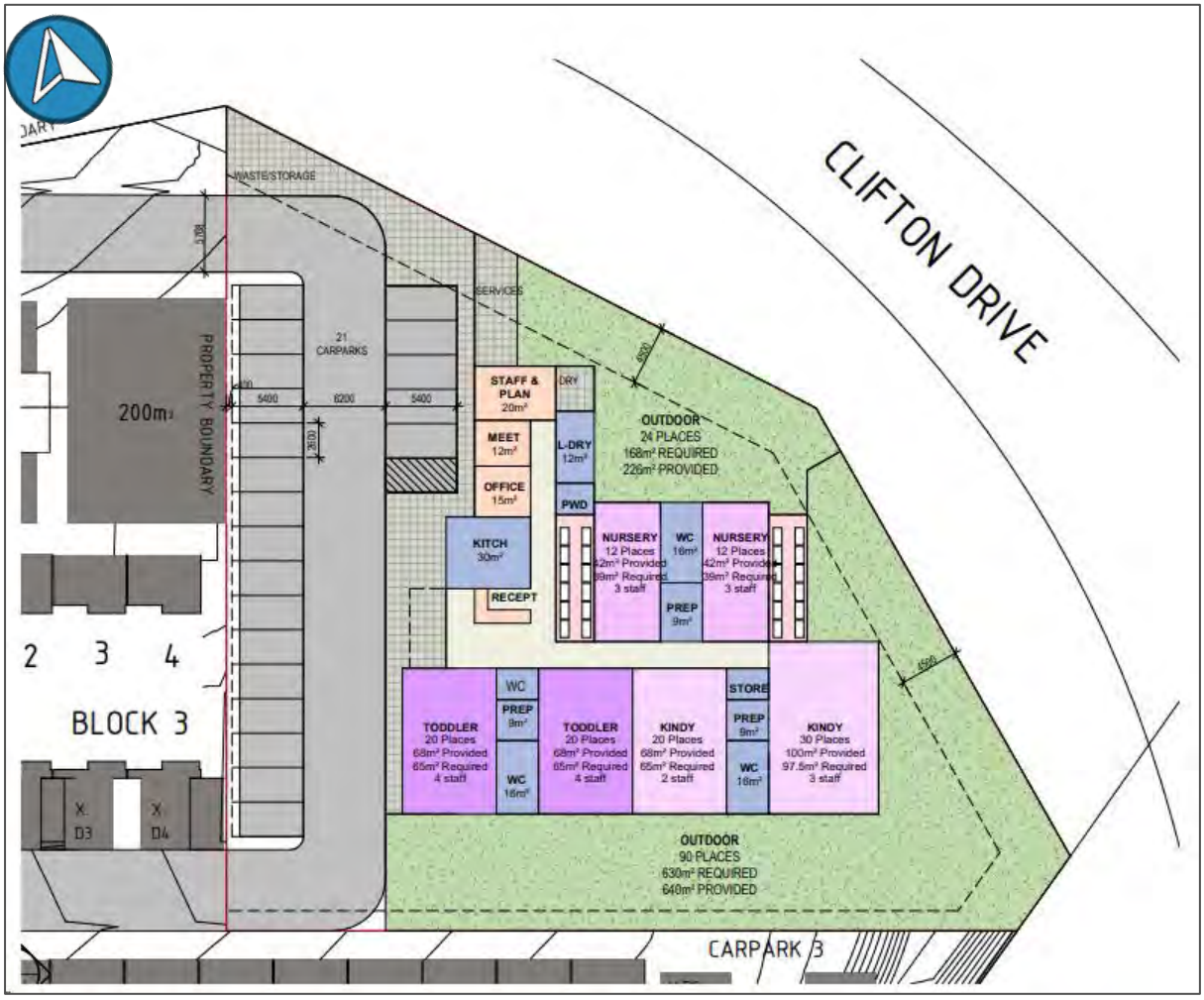

Figure 2 Proposed Site Plan (Image Source: Brown Falconer)

2.3 Adjacent Future Residential Development

It is understood that a residential subdivision is proposed on the land adjacent to the project site, as shown in Figure 1. The residential subdivision is proposed to incorporate approximately 42 one and two storey townhouse style dwellings.

Figure 3 shows the proposed residential subdivision plan. It should be noted that this plan has not been finalised at the time of writing, and may be subject to change.

Figure 3 Proposed Residential Subdivision Plan (Image Source: 1+2 Architecture)

2.4 Operating Hours

The proposed operating hours of the premises are 6:30 am to 6:30 pm Monday to Friday.

2.5 Occupancy Characteristics

The proposed premises will have a maximum capacity of 114 children.

In addition to the above, up to 21 staff members will typically be on-site during operating hours.

3 Legislation, Policy and Guidelines

3.1 Summary of Relevant Documents

Table 4 presents a summary of the relevant legislation, policy and guidelines applicable to the proposed project. The information contained in these documents forms the basis of the design criteria and advice presented in this document.

Table 4 Summary of Relevant Statutory Requirements and Guidelines

Document	Status	Relevance to this Project
Environmental Management and Pollution Control (Noise) Regulations 2016 (State of Tasmania, 2016)	Legislation	Prescribes the limits at nearby residences for noise emissions from premises within Tasmania, and the times that are applicable for assessment. Mechanical plant noise emissions due to the development will be subject to the requirements of the Environmental Management and Pollution Control (Noise) Regulations.
AS 2021:2015 Acoustics - Aircraft Noise Intrusion - Building Siting and Construction (Standards Australia, 2015)	Standard	This Standard is relevant to the project with regards to aircraft noise intrusion. This Standard provides guidelines for determining the extent of aircraft noise reduction required and the type of building construction necessary to provide acceptable noise levels indoors based on the type of activity being undertaken.
Environment Protection Policy (Noise) (Noise EPP) (Department of Environment, Parks, Heritage and Arts, 2009)	Policy	Prescribes Acoustic Environment Indicator Levels for protection of the community from excessive noise. The Acoustic Environment Indicator Levels provide a reference for considering the condition of the existing acoustic environment and for identifying where noise management measures may be required to protect the environmental values of an area.
Tasmanian Planning Scheme – State Planning Provisions (Tasmanian Government, 2022)	Policy	Prescribes the policy and noise criteria applicable for protection of proposed habitable buildings for sensitive uses from noise impacts.
Association of Australasian Acoustical Consultants (AAAC) – Guideline for Child Care Centre Acoustic Assessment (AAAC, 2020)	Guideline	Provides guidelines in relation to noise due to sources such as playground noise, and noise emissions due to activities inside the building as well as external noise intrusion criteria to protect building occupants.

3.2 Tasmanian Planning Scheme – State Planning Provisions: Clause C3.6

Clause C3.6.1 "Habitable buildings for sensitive uses within a road or railway attenuation area" of the *Tasmanian Planning Scheme – State Planning Provisions* (Tasmanian Government, 2022) prescribes the policy and noise criteria applicable for protection of proposed noise sensitive developments from noise impacts due to existing and future major roads.

Since the project site is located within a road attenuation area, the project is required to either meet the conditions of the Acceptable Solution – A1 or to be shown to comply with Performance Criterion – P1.

Table 5 presents the relevant acoustic Acceptable Solution and Performance Criterion.

Table 5 Relevant Acoustic Requirements from Clause C3.6

Item No.	Text from Acceptable Solution	Text from Performance Criterion
1	**A1** Unless within a building area on a sealed plan approved under this planning scheme, habitable buildings for a sensitive use within a road or railway attenuation area, must be: (a) within a row of existing habitable buildings for sensitive uses and no closer to the existing or future major road or rail network than the adjoining habitable building; (b) an extension which extends no closer to the existing or future major road or rail network than: (i) the existing habitable building; or (ii) an adjoining habitable building for a sensitive use; or (c) located or designed so that external noise levels are not more than the level in Table C3.2 measured in accordance with Part D of the *Noise Measurement Procedures Manual, 2nd edition, July 2008*.	**P1** Habitable buildings for sensitive uses within a road or railway attenuation area, must be sited, designed or screened to minimise adverse effects of noise, vibration, light and air emissions from the existing or future major road or rail network, having regard to: (a) the topography of the site; (b) the proposed setback; (c) any buffers created by natural or other features; (d) the location of existing or proposed buildings on the site; (e) the frequency of use of the rail network; (f) the speed limit and traffic volume of the road; (g) any noise, vibration, light and air emissions from the rail network or road; (h) the nature of the road; (i) the nature of the development; (j) the need for the development; (k) any traffic impact assessment; (l) any mitigating measures proposed; (m) any recommendations from a suitably qualified person for mitigation of noise; and (n) any advice received from the rail or road authority.

Table C3.2 outlines that for habitable buildings for a sensitive use within a road attenuation area, the applicable design noise level is 63 dB(A) $L_{A10,18hr}$ or less, at the most exposed facade of the habitable building.

3.3 Tasmanian Planning Scheme – State Planning Provisions: Clause 8.3

Clause 8.3.1 "Discretionary uses" from the *Tasmanian Planning Scheme – State Planning Provisions* (Tasmanian Government, 2022) prescribes the standards applicable for discretionary uses to ensure they do not cause an unreasonable loss of amenity to adjacent sensitive uses.

The use class of a child care centre is defined as Educational and Occasional Care, which falls under the discretionary use category for General Residential Zones, as outlined in Use Table 8.2. The project site is located adjacent to a sensitive use (the future residential development).

As such, the project is required to either meet the conditions of the Acceptable Solutions (A1 and A4) or to be shown to comply with Performance Criterion (P1 and P4).

Table 6 presents the relevant acoustic Acceptable Solutions and Performance Criterion.

Table 6 Relevant Acoustic Requirements from Clause 8.3

Item No.	Text from Acceptable Solution	Text from Performance Criterion
1	**A1** Hours of operation of a use listed as Discretionary, excluding Emergency Services, must be within the hours of 8.00am to 6.00pm.	**P1** Hours of operation of a use listed as Discretionary, excluding Emergency Services, must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the timing, duration or extent of vehicle movements; and (b) noise, lighting or other emissions.
4	**A4** No Acceptable Solution.	**P4** A use listed as Discretionary must not cause an unreasonable loss of amenity to adjacent sensitive uses, having regard to: (a) the intensity and scale of the use; (b) the emissions generated by the use; (c) the type and intensity of traffic generated by the use; (d) the impact on the character of the area; and (e) the need for the use in that location.

It should be noted that the relevant Performance Criterion P1 and P4 do not prescribe noise limits to be considered. As such, acoustic criteria for each relevant noise source will be adopted from other legislation, policy and guidelines as may be appropriate.

3.4 Tasmanian Planning Scheme – State Planning Provisions: Clause C16.5

Clause C16.5.1 "Sensitive use within an airport noise exposure area" from the *Tasmanian Planning Scheme – State Planning Provisions* (Tasmanian Government, 2022) prescribes the policy and noise criteria to ensure that:

(a) sensitive uses are appropriately located or designed to minimise exposure to excessive aircraft noise; and

(b) the operation of airports is not compromised by the amenity expectations of sensitive uses.

Since the project site is a sensitive use and is located within an airport noise exposure area, the project is required to be shown to comply with Performance Criterion – P1 as outlined below.

3.4.1 Performance Criterion – P1

A sensitive use within an airport noise exposure area must be located and designed to minimise exposure to excessive aircraft noise, having regard to:

(a) the location, orientation and elevation of the site relative to aircraft flight paths;

(b) the current and future type and frequency of aircraft operating from the airport;

(c) the type of use and the operational requirements for the use;

(d) the layout and construction of buildings associated with the use;

(e) the need to not compromise the future operation of the airport;

(f) the noise attenuation measures required by Section 3 of the Australian Standard *AS 2021 – 2015, Acoustics – Aircraft Noise Intrusion – Building Siting and Construction*;

(g) the requirements of any relevant airport master plan; and;

(h) any advice from the airport operator or Airservices Australia.

4 Noise Sensitive Receivers

Table 7 and Figure 4 identify the nearest and potentially most-affected Noise Sensitive Receivers (NSRs) in the vicinity of the project site.

Assessment of environmental noise emissions due to the project will be undertaken at these locations. It is expected that compliance with the environmental noise criteria at these locations will also result in compliance at all other nearby NSRs.

Table 7 Details of Potentially Most-Affected Noise Sensitive Receivers (NSRs)

NSR Ref.	Address	No. Storeys	NSR Type	Notes
1	24 Clifton Drive, Sorell, TAS	TBA	Residential	Future Development, Adjacent Project Site

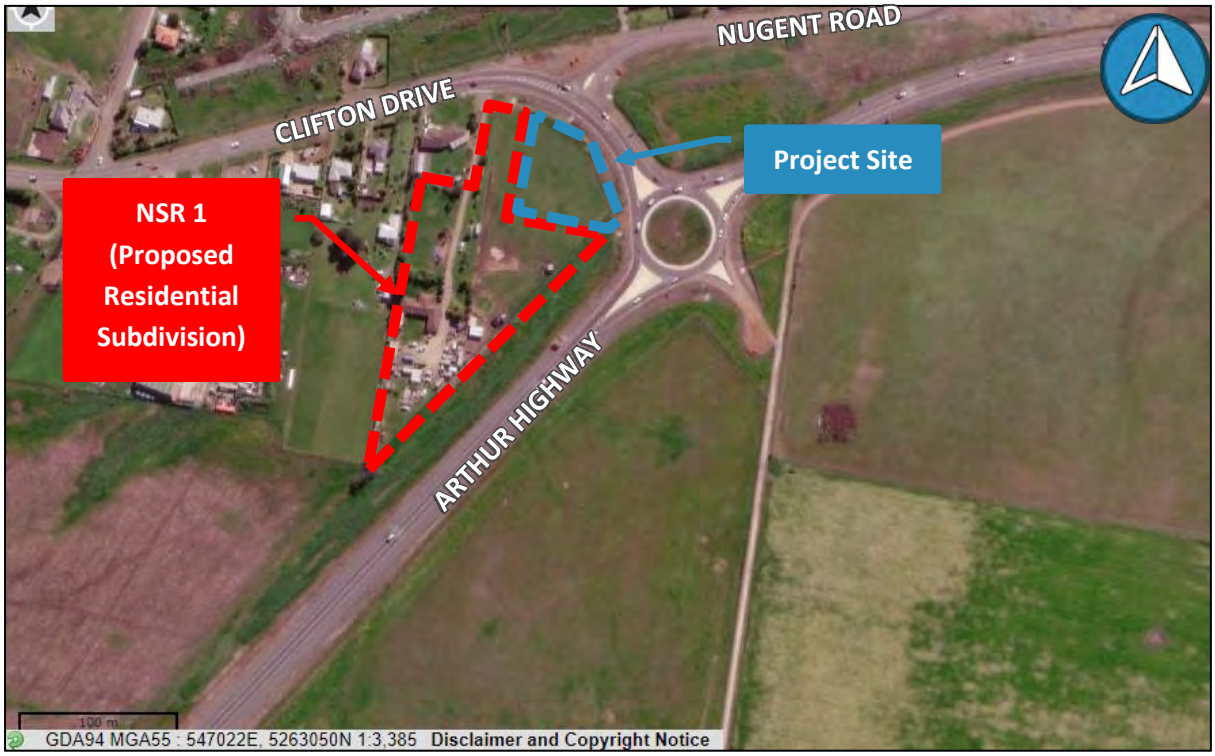

Figure 4 Locations of Potentially Most-Affected Noise Sensitive Receivers (NSRs) (Aerial Photo Source: https://maps.thelist.tas.gov.au/listmap/app/list/map)

5 Existing Acoustic Conditions

5.1 Exterior Soundscape

During DDEG's site visits on 1 and 11 September 2023, the soundscape consisted of road traffic noise from Arthur Highway to the east of the site as well as from Clifton Drive to the north.

5.2 Environmental and Background Noise Levels

Attended noise measurements were performed at several locations near the boundary of the development on 1 September 2023. Full details of the measurement locations and measurement methodology are presented in Appendix B.

Table 8 presents the measured environmental and background noise levels.

Table 8 Measured Environmental and Background Sound Pressure Levels

Measurement Details		Overall L_{A90}, dB(A)	Overall L_{Aeq}, dB(A)
Location	Time		
Location 1B	2:18 PM to 3:18 PM	52	62
Location 1B	3:18 PM to 4:18 PM	53	63
Location 1B	4:18 PM to 5:18 PM	55	63
Location 2	11:20 AM to 11:35 AM	53	61
Location 3	11:40 AM to 11:55 AM	51	62
Location 4	12:03 PM to 12:18 PM	43	57

The background noise levels at Location 4 are likely to be lower than the background noise levels at the potentially most-affected receptors due to the receptors being closer to the main sources of road traffic noise in the area. The background noise levels measured at Location 4 are therefore conservative for the purpose of determining noise limits.

In addition to the attended noise measurements, environmental noise logging was performed at the site to establish the road traffic noise levels. The measurements were performed at north-eastern boundary of the site between 1 and 7 September 2023. Details of the measurement location and measurement methodology are presented in Appendix B.

Table 9 presents a summary of the measured Sound Pressure Levels. Graphs showing the variation of the Sound Pressure Levels over the full measurement period are presented in Appendix C.

Table 9 Summary of Measured Environmental Noise Levels

Date	Highest Measured $L_{Aeq,1hr}$ Sound Pressure Level, dB(A) (6:30 am to 6:30 pm)
Friday, 1 September 2023	64
Monday, 4 September 2023	66[1]
Tuesday, 5 September 2023	65
Wednesday, 6 September 2023	65[1]
Thursday, 7 September 2023	67
Adopted Design Sound Level	**67**

1 Extraneous noise events were excluded during these periods due to adverse weather conditions.

6 External Traffic Noise Impact on Child Care Centre

6.1 Design Criteria

6.1.1 Tasmanian Planning Scheme – State Planning Provisions: Clause C3.6

The applicable design noise level for habitable buildings for a sensitive use within a road attenuation area is 63 dB(A) $L_{A10,18hr}$ or less at the most exposed facade of the habitable building, as required by Clause C3.6 of the *Tasmanian Planning Scheme – State Planning Provisions* (Tasmanian Government, 2022)

6.1.2 AAAC Guideline for Child Care Centre Acoustic Assessment

The *Association of Australasian Acoustical Consultants Guideline for Child Care Centre Acoustic Assessment* (AAAC Guideline) (AAAC, 2020) recommends that a noise intrusion assessment be conducted for proposed child care centres which will be located within 60 m of an arterial road, railway line, or industrial area.

Designing the centre to achieve the AAAC Guideline noise levels is considered appropriate for the purpose of protecting children from excessive external noise.

Table 10 presents the AAAC Guideline recommends limits for the noise level from road traffic, rail or industry during the hours when the centre is operating.

Table 10 AAAC Guideline Noise Limits for Road Traffic, Rail or Industry Noise

Location	Applicable Period	AAAC Guideline Criteria, dB(A)
Outdoor play or activity area	During operating hours	$L_{Aeq,1hr} \leq 55$
Indoor activity area	During operating hours	$L_{Aeq,1hr} \leq 40$
Indoor sleeping area	During operating hours	$L_{Aeq,1hr} \leq 35$

The AAAC Guideline noise limits are more stringent than the design noise level under Clause C3.6, and will therefore be the controlling noise criteria applicable to the development.

6.2 External Traffic Noise Levels

Based on the measured environmental noise levels, traffic noise levels at the outdoor play areas are expected to be up to L_{Aeq} 67 dB(A). Therefore, acoustic treatment measures are recommended to the outdoor play areas to comply with the AAAC Guideline criterion.

Traffic noise levels at the project building facade are calculated to be up to L_{Aeq} 60 dB(A).

Recommended specifications for acoustic treatment of the outdoor play areas and the building facade are presented in the following subsections.

6.3 Outdoor Play Areas

The following measures are recommended to comply with the AAAC Guideline noise criterion:

- Install a minimum 2 m high solid acoustic fence along the sections of northern, eastern and southern boundaries of the child care centre to the extent highlighted in Figure 5.
- The fence at each location should be constructed from minimum 25 mm thick timber palings, 9 mm thick fibre cement sheet, 8 mm thick solid Perspex or polycarbonate, or other suitable sheeting material of at least 15 kg/m^2.
- There must be no gaps between the fence panels / palings, or between bottom of the fence and the ground.
- A typical detail for an acoustic timber fence is presented in Appendix E.

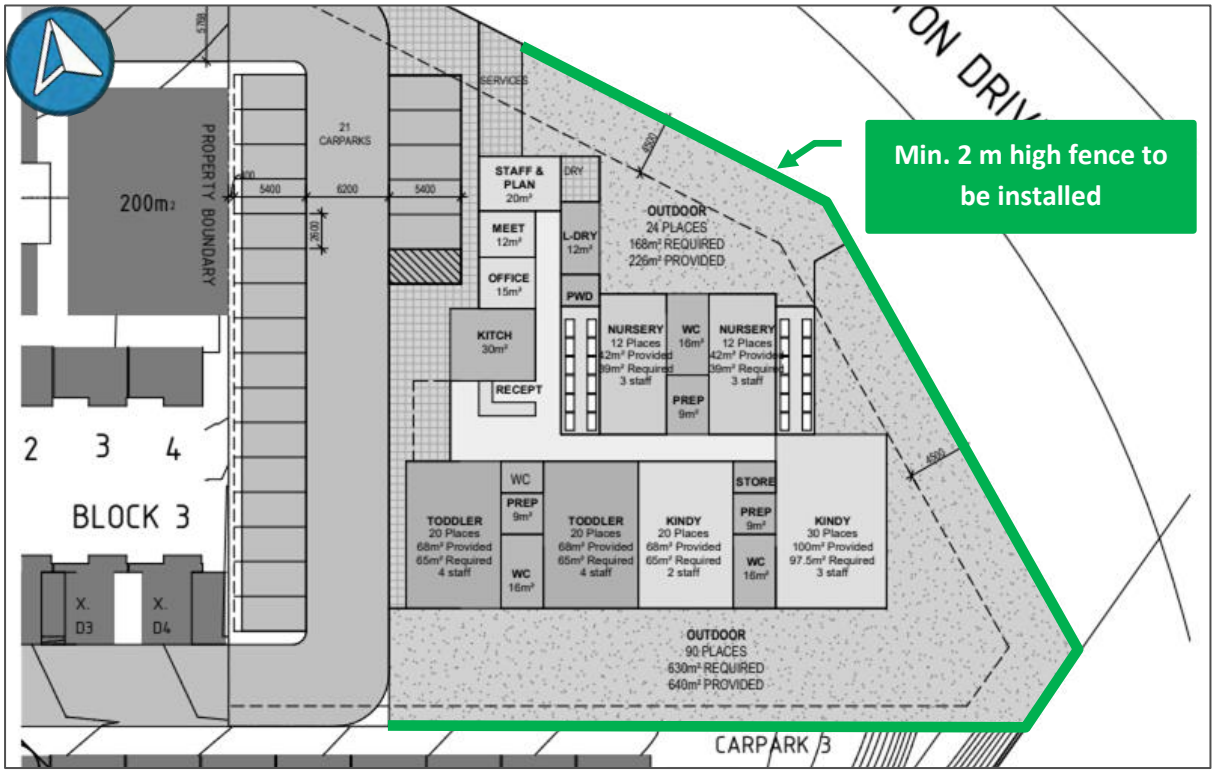

Figure 5 Recommended Acoustic Treatment for Outdoor Play Area (Image Source: Brown Falconer)

6.4 External Facade and Ceiling / Roof

Based on the measured environmental noise levels, it is considered that standard external facade and ceiling / roof construction will comply with the adopted acoustic criteria, provided that:

- Minimum 90 mm thick, 20 kg/m^3, fibreglass or mineral wool insulation (equivalent to R2.5 wall batt) is included in the wall cavity between the external cladding and internal wall lining, and all penetrations are sealed.

- The selected external glazing system(s) to children activity and sleeping areas achieve not less than R_w 32, such as 6 mm thick single glazing or double glazing units comprising 6 mm glass + 12 mm air gap + 6 mm glass. Openable windows include rubber or dense foam acoustic seals e.g. Schlegel Q-lon or equivalent.
- The ceiling lining is minimum 10 mm plasterboard and minimum 175 mm thick, 7 kg/m^3 fibreglass insulation (equivalent to R3.5 ceiling insulation batts) is included in the ceiling cavity, and all penetrations are sealed.

7 AS 2021 Aircraft Noise Assessment

7.1 ANEF Chart

The Australian Noise Exposure Forecast (ANEF) Chart used for the assessment is the Hobart Airport Long Term (2042) ANEF, as endorsed by Air Services Australia on 7 October 2022 (see Appendix F).

The following assessment is based on the proposed Year 2042 runway configuration, which is generally consistent with the existing 12 / 30 runway running north-west to south-east, as shown in Figure 6.

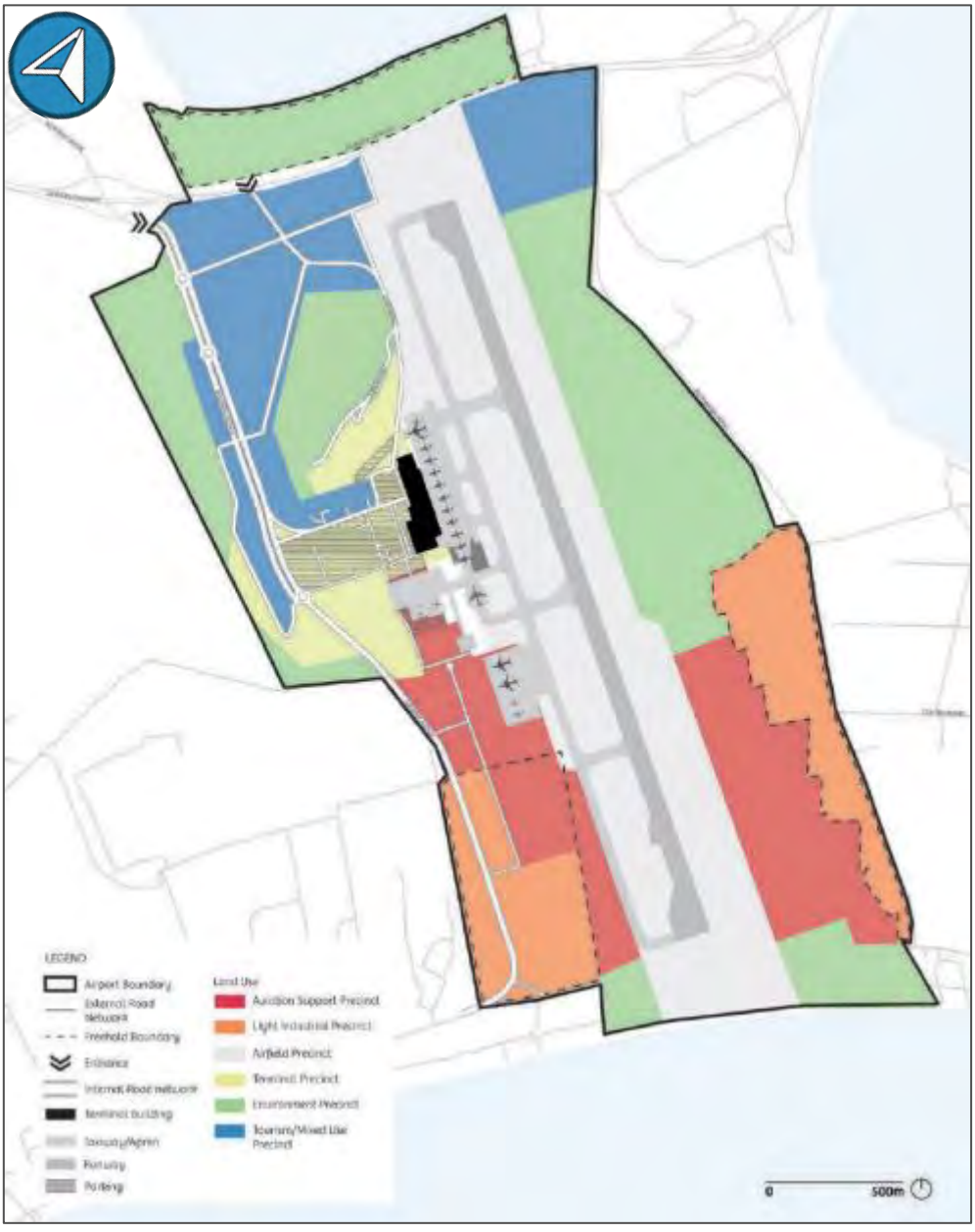

Figure 6 Proposed Year 2042 Hobart Airport Runway Configuration (Source: Hobart Airport Masterplan 2022)

7.2 Aircraft Types

Based on the ANEF Chart, the following aircraft types are understood to operate frequently at the airport and have therefore been considered in the assessment:

Table 11 Aircraft Types

Aircraft Type from ANEF Chart	AS 2021:2015 Representative Aircraft	Aircraft Type	AS 2021 Table
737800	Boeing 737-800	Domestic Jet	3.15
777300	Boeing 777-300	Domestic Jet	3.19
737MAX8	Boeing 737-800	Domestic Jet	3.12
7773ER	Boeing 777-300	Domestic Jet	3.19
7878R	Boeing 787-8	International	3.20
A320-271N	Airbus A320-232	Domestic Jet	3.5
A321-232	Airbus A321-232	Domestic Jet	3.6
A330-301	Airbus A330-301	Domestic Jet	3.7
B779	Boeing 777-300	Domestic Jet	3.19
B781	Boeing 787-8	International	3.20
B797	Boeing 787-8	International	3.20
GV	Gulfstream GV	Domestic Jet	3.34

7.3 Distance of Site from Runway

The AS 2021 distance coordinates of the site with respect to the runway are as shown in Table 12. Figure 7 shows how the distance coordinates are defined in AS 2021.

Table 12 AS 2021 Distance Coordinates of Site

Distance Coordinate	Runway 12 / 30
DS (Sideline Distance), m	7775
DL (Landing Distance), m	582
DT (Take-off Distance), m	2147

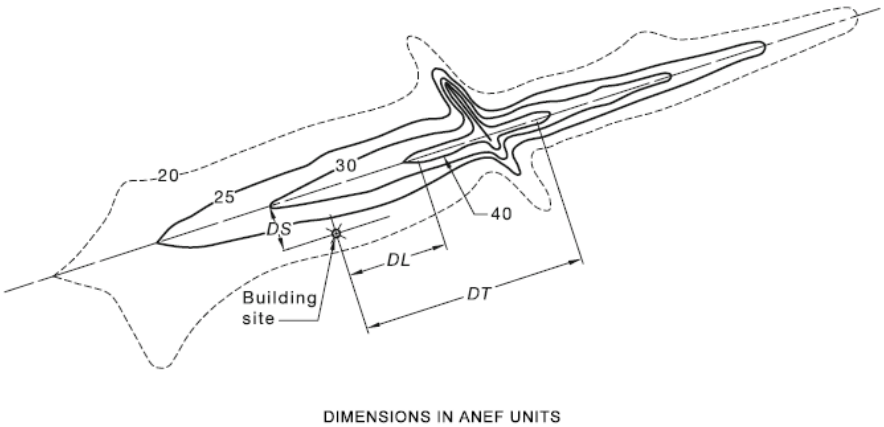

Figure 7 Definition of AS 2021 Distance Coordinates (Image Source: AS 2021:2015)

7.4 Elevation Corrections

To account for the elevation difference between the project site and the runway, the following elevation corrections are to be added to the distance coordinates in accordance with AS 2021:

Table 13 Elevation Corrections

Correction	Runway 12 / 30
Elevation Difference, m*	**-30**
Correction to DL, m	-570
Correction to DT - Domestic Jet, m	-180
Correction to DT - International, m	-230
Correction to DT - Domestic Non-Jet, m	-330

* Elevation difference is calculated based on the elevation of the closest end of the runway and the elevation at the centre of the project site. Positive elevation difference means the runway is at higher elevation than the project site. Negative elevation difference means the runway is at lower elevation than the project site. Elevations have been determined from 1-second SRTM digital elevation model data downloaded from https://elevation.fsdf.org.au/.

7.5 Aircraft Noise Level

The controlling aircraft noise level (ANL) for the assessment is determined to be as follows:

Table 14 Aircraft Noise Level

Runway	Aircraft Type	Flight Type	Departure / Arrival	AS2021 Table	Aircraft Noise Level, dB(A)
12 / 30	777200	All Flights	Departure	3.19B	58

7.6 Indoor Design Sound Levels

In accordance with Table 3.3 of AS 2021 the following indoor design sound levels have been adopted for the purposes of this assessment, noting that AS 2021 does not specify criteria for childcare centres:

Table 15 Indoor Design Sound Levels for Aircraft Noise

Building Type and Activity	Indoor Design Sound Level, dB(A)
Houses, home units, flats, caravan parks	
Sleeping areas, dedicated lounges	50
Other habitable spaces	55
Bathrooms, toilets, laundries	60

7.7 Aircraft Noise Reduction

The required aircraft noise reduction (ANR) is calculated according to:

$$ANR = ANL - Indoor\ Design\ Sound\ Level,\ [dB(A)]$$

The required ANRs for each type of space within the project are presented in Table 16.

Table 16 Required Aircraft Noise Reduction

Building Type and Activity	Aircraft Noise Reduction (ANR), dB(A)
Sleeping areas, dedicated lounges	8
Other habitable spaces	3
Bathrooms, toilets, laundries	0

7.8 Evaluation

In accordance with Clause 2.3 and Table 2.1 of AS 2021:2015, where a building lies outside the ANEF 20 contour, there is usually no need for the buildings' construction to provide protection specifically against aircraft noise.

Additionally, calculation of the required aircraft noise reduction (ANR), which is dependent on the following:

- distance of the project site from the runway,
- elevation difference between the project site and the runway,
- controlling aircraft noise level (ANL), and
- indoor design sound level,

has determined that the maximum required ANR for the project site is 8 dB(A). It is expected that standard building envelope construction will achieve in excess of this ANR, provided that all penetrations are sealed airtight.

Based on the outcome of the AS 2021 assessment, it is considered that the construction of the building need not be specifically designed to provide protection against aircraft noise intrusion.

7.9 Outdoor Play Areas

AS 2021 does not specify acceptable aircraft noise levels for outdoor areas. The controlling aircraft noise level (ANL) for the assessment is determined to be 58 dB(A) L_{Amax}. In comparison to the noise criterion for outdoor areas specified by the AAAC Guideline of $L_{Aeq,1hr} \leq 55$, it is expected that aircraft noise levels within outdoor play areas will be acoustically acceptable without the need for acoustic treatment measures, considering that:

- Based on the expected number of daily arrivals and departures outlined in the ANEF chart, aircraft noise is only expected to be audible at the project site for a short amount of time during any given 1-hour period; AND that

- Noise levels determined in accordance with AS 2021 are in terms of L_{Amax} Sound Pressure Levels, which is a measure of the short term maximum noise level experienced during a flyover, whereas the $L_{Aeq,1hr}$ recommended by the AAAC Guideline is a time average noise level. Given the number of flights expected there will be periods of quiet between aircraft noise events and it the $L_{Aeq,1hr}$ sound pressure level due to aircraft noise contributions would be below 55 dB(A).

7.10 Consideration of Clause C16.5.1 - Performance Criterion P1

Based on the results of Sections 7.8 and 7.9, the proposed development is expected to comply with the Performance Criterion P1 outlined in Clause C16.5.1 of the *Tasmanian Planning Scheme – State Planning Provisions* (Tasmanian Government, 2022).

8 Children Play Area Noise

8.1 Assessment Criteria

The noise impact assessment method for child care centres recommended by the *Association of Australasian Acoustical Consultants Guideline for Child Care Centre Acoustic Assessment* (AAAC Guideline) (AAAC, 2020) will be adopted to assess the noise emissions due to children's outdoor play at the centre.

The noise guidelines presented in Table 17 are recommended for noise emissions from outdoor play areas to nearby residential properties in accordance with the AAAC Guideline. The assessment locations are the most affected point on or within any residential receiver property boundary such as outside an external window, at an outdoor private open space, or on a balcony.

Table 17 AAAC Guideline Noise Criteria for Outdoor Play Activity

AAAC Guideline Criteria	AAAC Guideline Criteria for the Proposed Child Care Centre
Up to 4 hours total outdoor play per day: Greater of: $L_{Aeq,15min}$ ≤ Background* + 10 dB(A) or 45 dB(A)	$L_{Aeq,15min}$ ≤ 53 dB(A) (day)
Over 4 hours total outdoor play per day: Greater of: $L_{Aeq,15min}$ ≤ Background* + 5 dB(A) or 45 dB(A)	$L_{Aeq,15min}$ ≤ 48 dB(A) (day)

* Background noise level measured as $L_{A90,15min}$ Sound Pressure Level.

Whilst the above criteria have been considered for guidance in this assessment, it is noted that certain aspects of the AAAC Guideline do not align well with contemporary early learning practice and good urban design. In particular:

- The allowance of higher limits for less than 4 hours of play in outdoor areas has the potential to result in restrictions being placed on the duration of children's outdoor play as an acoustic treatment measure. Outdoor play is recognised to have significant health and learning benefits that would be negatively impacted by restrictions on outdoor play time.
- Strict compliance with the AAAC Guideline can lead to excessive noise barrier height requirements, giving rise to visual and shadowing impacts for adjacent properties and/or the child care centre.

Having regard to the above points, a background +10 dB(A) approach has been adopted as a more practicable target for avoiding unreasonable noise emissions to residential dwellings due to outdoor play. This aligns with the AAAC Guideline recommendations for less than 4 hours outdoor play.

Based on the above discussion, the noise criterion presented in Table 18 has been adopted for noise levels received at nearby residential properties due to outdoor play activity at the child care centre.

Table 18 Adopted Noise Criteria for Outdoor Play Activity

Receptor Type	Noise Source	Adopted Noise Criterion
Residential	Outdoor Play Area	$L_{Aeq,15min} \leq 53$ dB(A) (day)

8.2 Assessment Input Parameters

SoundPLAN environmental noise modelling software was used to model the future noise emissions from outdoor play areas at the proposed child care centre, based on the maximum number of children on-site and on the site plan as in the referenced documentation.

For the purpose of this acoustic assessment, the following input parameters have been used:

- The assessment has been based on the child care centre operating hours as specified in Section 2.4.
- Sound Power Levels of children playing have been based on the guidelines provided by the AAAC Guideline. These levels are presented in Table 19 below:

Table 19 Sound Power Levels for Groups of 10 Children Playing

Age Group, Years Old	Number of Children Playing	Sound Power Level of the Group, dB(A)
0 – 2	10	78
2 – 3	10	85
3 – 6	10	87

- The total number of children to be accommodated in the proposed child care centre is 114. Based on the reference documentation, the assessment has been based on the number of children allocated as per Table 20. Figure 8 presents the different outdoor play areas used in the assessment.

Table 20 Maximum Number of Children in Outdoor Play Areas

Outdoor Play Area	Age Group, Years Old	No. of Children in Play Area
Outdoor Play 1	0-2	24
	2-6	-
	3-6	-
Outdoor Play 2	0-2	20
	2-3	20
	3-6	50
Total		**114**

- It is unlikely that all 114 children will play outdoors at the same time, however, to simulate a potential worst-case scenario, acoustic calculations have been carried out considering all children playing outside at the same time.
- All baseline boundary fencing (i.e. without acoustic treatment) has been taken to have no acoustic screening effect.

Full details of the noise modelling input parameters, assumptions, and data sources are presented in Appendix D.

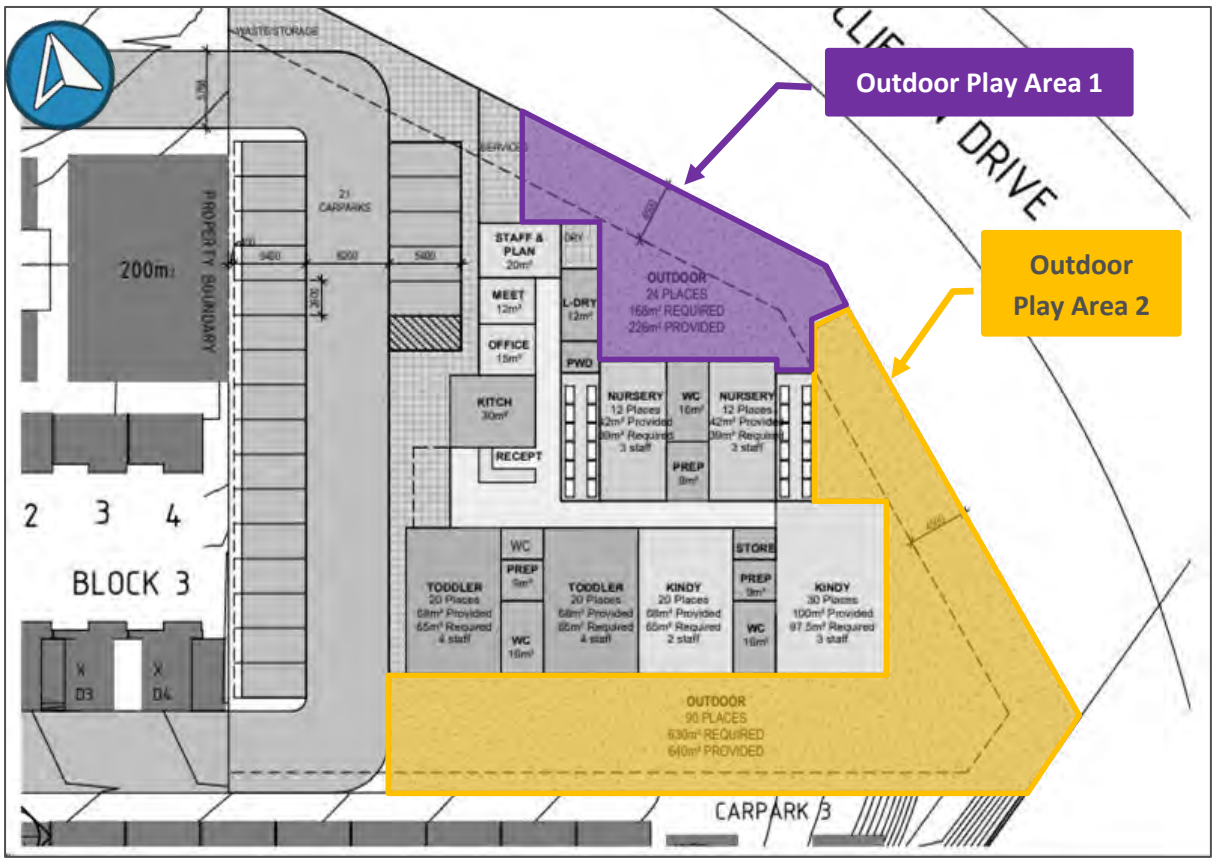

Figure 8 Outdoor Play Areas Locations (Image Source: Brown Falconer)

8.3 Acoustic Treatment for Control of Outdoor Play Area Noise

The following acoustic engineering measures are recommended to comply with the AAAC Guideline noise criterion:

- Install minimum 2.7 m high solid acoustic fencing along the southern boundary of the child care centre, to the extent highlighted in orange in Figure 9 (spanning a length of at least 30 metres eastwards from the western boundary of the play area).

- In addition to the above acoustic fence, sound-absorbing lining should be installed to the child-care centre side of the fence to the full height of the fencing highlighted in orange in Figure 9. The sound-absorbing lining to the fence must be a material suitable for use outdoors which has acoustic properties unaffected by moisture. The material should achieve the following minimum sound absorption coefficients:

Table 21 Minimum Sound Absorption Coefficients for Acoustic Fence Lining Material

Octave Band Centre Frequency, Hz	125	250	500	1k	2k	4k
Sound Absorption Coefficient	0.1	0.2	0.5	1	0.9	0.8

- Examples of acoustically suitable materials include 25 mm thick Stratocell Whisper UV closed-cell polyethylene foam, 25 mm thick Pyrotek Reapor acoustic panels or minimum 25 mm thick rockwool with a density in the range of 32 to 60 kg/m^3 (e.g. Bradford Fibretex 350). (Note: Rockwool should be protected from direct exposure to rain, and should be faced with perforated steel or fibre cement sheet with minimum 35% open area to prevent risk of physical damage to the insulation).
- Install minimum 2 m high solid acoustic fencing at the locations highlighted in green in Figure 9.
- The fence at each location should be constructed from minimum 25 mm thick timber palings, 9 mm thick fibre cement sheet, 8 mm thick solid Perspex or polycarbonate, or other suitable sheeting material of at least 15 kg/m^2. Note, the above materials and thicknesses are minimum specifications for acoustic purposes only. Other engineering requirements may dictate thicker materials or other specific requirements.
- There must be no gaps between the fence panels / palings, or between bottom of the fence and the ground.
- A typical detail for an acoustic timber fence is presented in Appendix E.

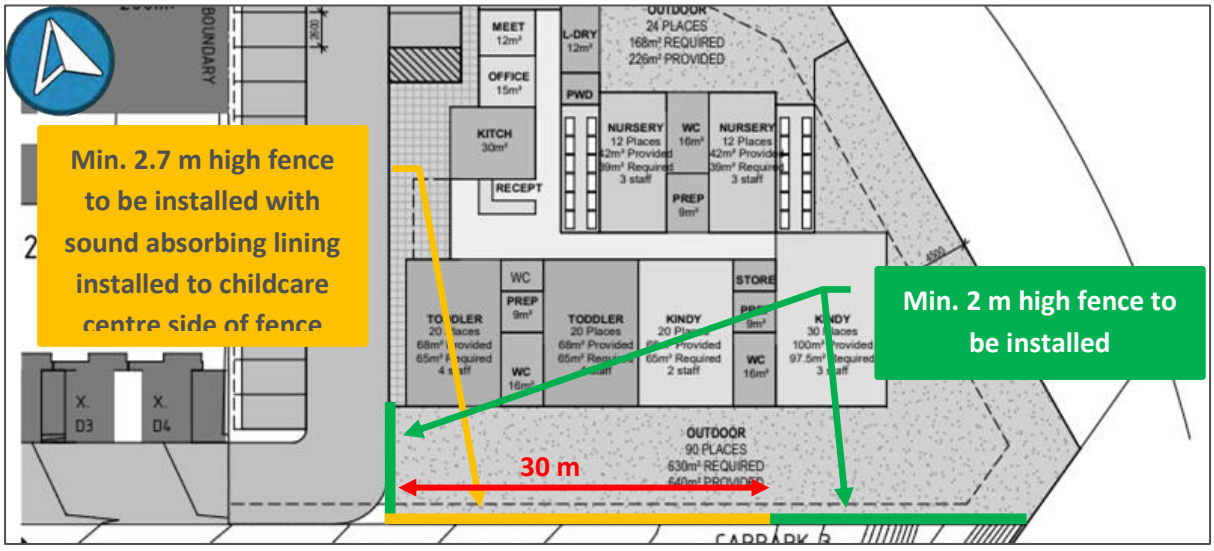

Figure 9 Recommended Acoustic Treatment for Outdoor Play Area Noise (Image Source: Brown Falconer)

8.4 Calculated Noise from Outdoor Play Areas – With Acoustic Treatment

Table 22 presents the calculated noise levels at the nearby residences, due to children playing in outdoor areas with acoustic treatment measures as specified in Section 8.3 implemented.

Table 22 Calculated Noise Levels from Outdoor Play Areas – With Acoustic Treatment

NSR Ref.	Calculated Noise Level, L_{Aeq}, dB(A)	Adopted Noise Criterion Compliance ($L_{Aeq,15min}$ ≤ 53 dB(A))
NSR 1	53	✓

The results above indicate that outdoor play activity noise levels at nearby receivers with acoustic treatment implemented are expected to comply with the adopted AAAC Guideline criterion.

8.5 Noise from Indoor Play Areas

Indoor areas of the child care centre will benefit from sound insulation provided by the building envelope construction. Even with windows open for ventilation, noise levels at the surrounding residences due to indoor play areas would be less than due to outdoor play areas. On this basis, acoustic treatment to the building is not required to control noise from indoor areas of the child care centre.

9 Building Services – Environmental Noise

9.1 Design Criteria

Noise emissions from mechanical plant serving the proposed child care centre are to be designed to comply with the requirements of the *Environmental Management and Pollution Control (Noise) Regulations 2016* (State of Tasmania, 2016) at the nearest and potentially most-affected Noise Sensitive Receivers (NSRs).

Table 23 presents the noise limits which have been determined to apply at the nearest and potentially most-affected Noise Sensitive Receivers (NSRs).

Table 23 Mechanical Plant Noise Limits

Environment	Time Period	Noise Limit, L_{Aeq} dB(A)
NSRs – Outside NSR building	7 am to 10 pm	45
NSRs – Outside NSR building	10 pm to 7 am	40

9.2 Assessment

At the time of writing, no mechanical services information is available. As such, the following sections present indicative advice based on the referenced architectural drawings.

9.2.1 Assessment Input Parameters

SoundPLAN environmental noise modelling software was used to model the future noise emissions from mechanical plant equipment based on the following input parameters:

- The mechanical plant noise calculations are based on heating and cooling for the building being provided by split system air conditioning units located within the services area to the north of the proposed building. As air conditioning equipment specifications for the proposed building are not yet available, approximate heating / cooling requirements have been calculated based on a general estimate of 150 W/m^2. Allowance for 7-off 16.0 kW air conditioning condenser units has been included in the modelling. The Sound Power Level of the units has been modelled based on Daikin model RXYMQ6AV4A, which has a rated Sound Power Level of 73 dB(A).
- 1-off rooftop-mounted kitchen exhaust fan located above the kitchen with an individual Sound Power Level of 72 dB(A). This Sound Power Level is considered typical of kitchen exhaust fans serving small commercial kitchens.
- 6-off rooftop-mounted exhaust fans serving toilets and store rooms located above each relevant room with an individual Sound Power Level of 65 dB(A). This Sound Power Level is considered typical of exhaust fans typically installed to serve toilets, laundries, cleaners rooms, and store rooms.

- For the purposes of this assessment, it has been assumed that all mechanical plant could potentially operate simultaneously, and at any time.

Further details of the noise modelling input parameters, assumptions, and data sources are presented in Appendix D.

9.2.2 Calculated Noise due to Mechanical Plant – With Baseline Modelling Parameters

Table 24 presents the calculated noise levels at the nearest NSRs based on the above input parameters.

Table 24 Calculated Effective Noise Levels due to Mechanical Plant – With Baseline Modelling Parameters

NSR Ref.	Calculated Noise Level, L_{Aeq}, dB(A)	NSR Day Period Compliance (L_{Aeq} ≤ 45 dB(A))	NSR Night Period Compliance (L_{Aeq} ≤ 40 dB(A))
NSR 1	40	✓	✓

The results above indicate that noise emissions from mechanical plant, based on the documented design, are expected to comply with the Environmental Management and Pollution Control (Noise) Regulations 2016 noise limits for all relevant periods.

9.3 Triggers for Further Acoustic Review

Further acoustic review to confirm compliance with Part I of the EPA Noise Protocol should be undertaken at detailed design stage if any of the following occurs:

- If more than 7-off air conditioning condenser units are proposed.
- If the air conditioning condenser units are to be installed at any location other than the services area to the north of the proposed building.
- If the selected air conditioning condenser units have individual Sound Power Level greater than 73 dB(A).
- If more than 1-off kitchen exhaust fan is proposed.
- If the selected kitchen exhaust fan has an individual Sound Power Level greater than 72 dB(A).
- If more than 6-off exhaust fans are proposed to serve toilets, laundries, cleaners rooms, or store rooms.
- If the selected exhaust fans have an individual Sound Power Level greater than 65 dB(A).

10 Car Park Noise

10.1 Design Criteria

Noise emissions from the proposed car park should be designed to comply with the Acoustic Environment Indicator Levels outlined by the *Environment Protection Policy (Noise)* (Noise EPP) (Department of Environment, Parks, Heritage and Arts, 2009) at nearby residential dwellings.

The Acoustic Environment Indicator Levels are levels that, if exceeded, would indicate a potential noise impact on the community, and would warrant a management response; for example, further investigation of mitigation measures.

Table 23 presents the Acoustic Environment Indicator Levels for outside residential dwellings, as presented in the Noise EPP.

Table 25 Acoustic Environment Indicator Levels

Environment	Time Period	Recommended External Noise Level, L_{Aeq} dB(A)
Outdoor living area (and outside sleeping areas)	6 am to 10 pm	≤ 50
Outside sleeping areas	10 pm to 6 am	≤ 45

10.2 Assessment Input Parameters

Noise due to vehicle movements within the on-site car parking area has been modelled in SoundPLAN environmental noise modelling software using methods prescribed in *Parking Area Noise* (BayLfU, 2007).

For the purpose of this acoustic assessment, the following input parameters have been used:

- Site and car park layout with 21 parking bays as per the referenced documentation.
- All baseline boundary fencing (i.e. without acoustic treatment) has been taken to have no acoustic screening effect.
- Noise from the car park has been modelled based on guidance from the *Guide to Traffic Generating Developments* (Roads and Traffic Authority NSW, 2002), and as described below:
    - 0.8 trips per child during the AM one-hour peak period (i.e. 91 total vehicle movements over each one-hour peak period).
    - 0.7 trips per child during the PM one-hour peak period (i.e. 80 total vehicle movements over each one-hour peak period).

Further details of the noise modelling input parameters, assumptions, and data sources are presented in Appendix D.

10.3 Acoustic Treatment for Control of Car Park Noise

Car parking movements within designated staff parking bays are expected to occur only at the start and end of the day, with less trips compared to designated parent parking bays. To minimise noise emissions from the child care centre car park on the nearest dwellings, it is recommended that the car park layout include designated staff parking bays and parent parking bays as presented in Figure 10.

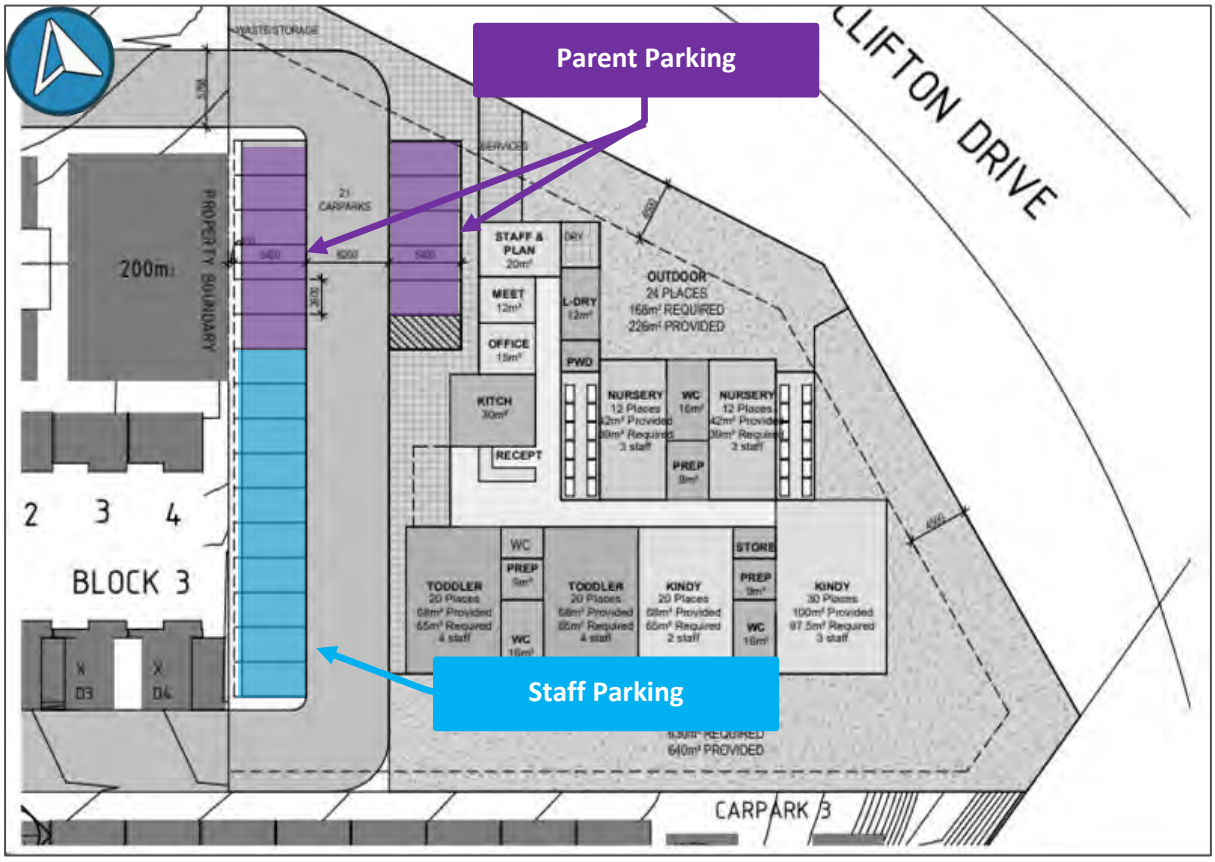

Figure 10 Proposed Car Park Layout (Image Source: Brown Falconer)

10.4 Calculated Noise from Car Park – With Acoustic Treatment

Table 26 presents the calculated noise levels at the nearby residences, due to vehicle movements in the on-site car park with acoustic treatment measures as specified in Section 8.3 implemented.

Table 26 Calculated Noise Levels from Car Park – With Acoustic Treatment

NSR Ref.	Calculated Noise Level and Acoustic Environment Indicator Levels Compliance Status, (L_{Aeq} ≤ 50 dB(A))
NSR 1	50 ✓

Car park noise levels at nearby residences with the proposed acoustic treatment implemented are calculated to comply with the adopted Acoustic Environment Indicator Levels.

11 Summary of Acoustic Fencing Recommendations

The following figure provides a summary of overall acoustic fencing recommendations for the project based on the assessments presented in the previous sections.

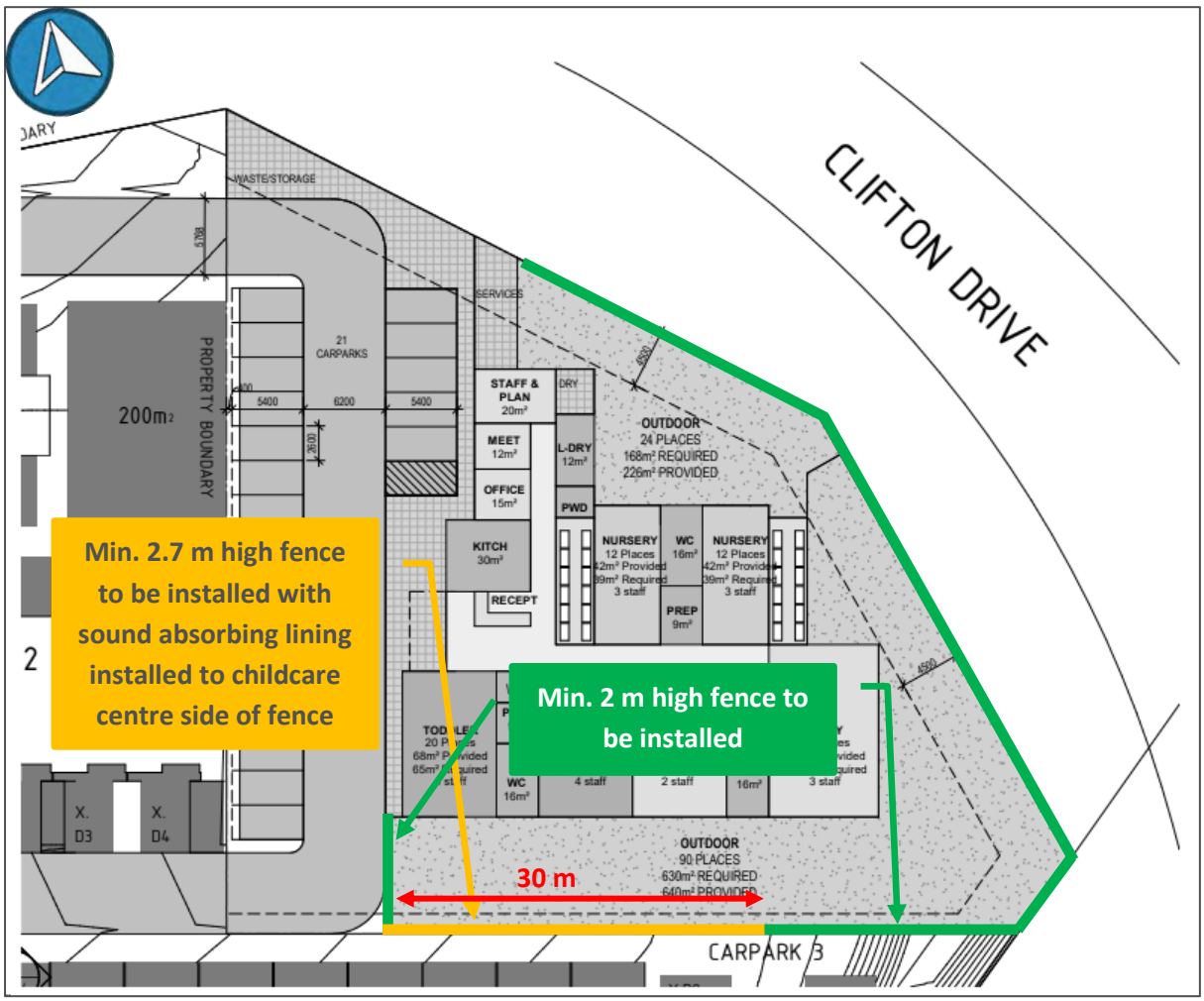

Figure 11 Summary of Recommended Acoustic Fencing (Image Source: Brown Falconer)

12 Conclusion

This document has presented a town planning acoustic assessment for the proposed child care centre at 24 Clifton Drive, Sorell, TAS.

The assessment has been undertaken with regard to the acoustic requirements prescribed by the *Tasmanian Planning Scheme – State Planning Provisions* (Clauses C3.6.1, C8.3.1 and C16.5.1) and *AS 2021:2015 Acoustics - Aircraft Noise Intrusion - Building Siting and Construction*, the acoustic criteria prescribed by the *Environmental Management and Pollution Control (Noise) Regulations 2016, Environment Protection Policy (Noise)*, as well as the guidelines prescribed by *Association of Australasian Acoustical Consultants Guideline for Child Care Centre Acoustic Assessment*.

Acoustic engineering advice for the proposed project has been presented in Sections 6 to 11.

Subject to implementation of the advice presented in this document, it is considered that the proposed project will satisfy the applicable acoustic legislation and guidelines.

13 References

AAAC. (2020). *Guideline for Child Care Centre Acoustic Assessment, Version 3.0.* Association of Australasian Acoustical Consultants.

BayLfU. (2007). Parking Area Noise - Recommendations for the Calculation of Sound Emissions of Parking Areas, Motorcar Centers and Bus Stations as well as Multi-Storey Car Parks and Underground Car Parks. (6. R. Edition, Ed.) Augsburg, Germany: Bayerisches Landesamt für Umwelt (Bavarian State Office for the Environment).

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ISO. (1996). ISO 9613-2:1996 Acoustics - Attenuation of Sound During Propagation Outdoors - Part 2: General Method of Calculation. International Standards Organisation.

Roads and Traffic Authority NSW. (2002, October). Guide to Traffic Generating Developments, Issue No. 2.2.

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Appendix A Glossary of Acoustic Terms

dB / dB(A) Decibels or 'A'-weighted Decibels, the units of Sound Pressure Level and Sound Power Level. 'A'-weighting adjusts the levels of frequencies within the sound spectrum to better reflect the sensitivity of the human ear to different frequencies at Sound Pressure Levels typical of everyday sounds. [Unit: dB / dB(A)]

The following are examples of the decibel readings of everyday sounds;

- 0 dB The faintest sound we can hear
- 30 dB A quiet library or in a quiet location in the country
- 45 dB Typical office space. Ambience in the city at night
- 60 dB The sound of a vacuum cleaner in a typical lounge room
- 70 dB The sound of a car passing on the street
- 80 dB Loud music played at home
- 90 dB The sound of a truck passing on the street
- 100 dB The sound of a rock band
- 120 dB Deafening

Effective Noise Level "Effective noise level" means the level of noise emitted from the commercial, industrial or trade premises, or from plant serving common areas of residential premises and adjusted if appropriate for character and duration.

$L_{A10,T}$ The value of A-weighted Sound Pressure Level which is exceeded for 10 percent of the time during given measurement period T. This is commonly used to provide an indication of the upper limit of fluctuating noise, such as characteristic of music or moderately busy traffic. [Unit: dB / dB(A)]

$L_{A90,T}$ The value of A-weighted Sound Pressure Level which is exceeded for 90 percent of the time during given measurement period T. This is commonly used to represent the background noise level. [Unit: dB / dB(A)]

$L_{Aeq,T}$ The Equivalent Continuous A-weighted Sound Pressure Level measured over the period T (also known as Time-Average Sound Pressure Level). The Equivalent Continuous A-weighted Sound Pressure Level is the constant value of A-weighted Sound Pressure Level for a given period that would be equivalent in sound energy to the time-varying A-Weighted Sound Pressure Level measured over the same period. In simple terms, this can be thought of as the average Sound Pressure Level. [Unit: dB / dB(A)]

$L_{AFmax,T}$ The maximum value of A-weighted, F time-weighted Sound Pressure Level which occurs during a given measurement period T. [Unit: dB / dB(A)]

R_w	Weighted Sound Reduction Index. A single number rating of the airborne sound insulation performance of a specific building element in the absence of flanking transmission. R_w is a laboratory test rating for a single building element (e.g. a door, a window or a wall) determined under ideal conditions with minimal flanking transmission, and is largely independent of partition size and room effects. R_w ratings cannot be accurately tested outside of a controlled laboratory environment. A higher R_w value indicates better airborne sound insulation. [Unit: dB]
Sound Power Level	A measure of the total sound energy radiated by a source, per unit time. Mathematically, it is ten times the logarithm to the base ten of the ratio of the sound power (W) of the source to the reference sound power; where the reference sound power is $1x10^{-12}$ W. [Unit: dB]
Sound Pressure Level	A measure of the magnitude of a sound wave. Mathematically, it is twenty times the logarithm to the base ten of the ratio of the root mean square sound pressure at a point in a sound field, to the reference sound pressure; where sound pressure is defined as the alternating component of the pressure (Pa) at the point, and the reference sound pressure is $2x10^{-5}$ Pa. [Unit: dB]

Appendix B Noise Measurement Methodology

B.1 Measurement Location

Table B.1 presents details of the noise measurement locations. Figure B.1 to Figure B.5 present a map and photographs of the noise measurement locations.

Table B.1 Noise Measurement Location Details

Location Reference	Measurement Description	Microphone Height Above Ground Level
1A	Unattended environmental noise logging	1.8 m
1B, 2, 4	Attended traffic noise measurement	2 m
3	Attended traffic noise measurement	1.6 m

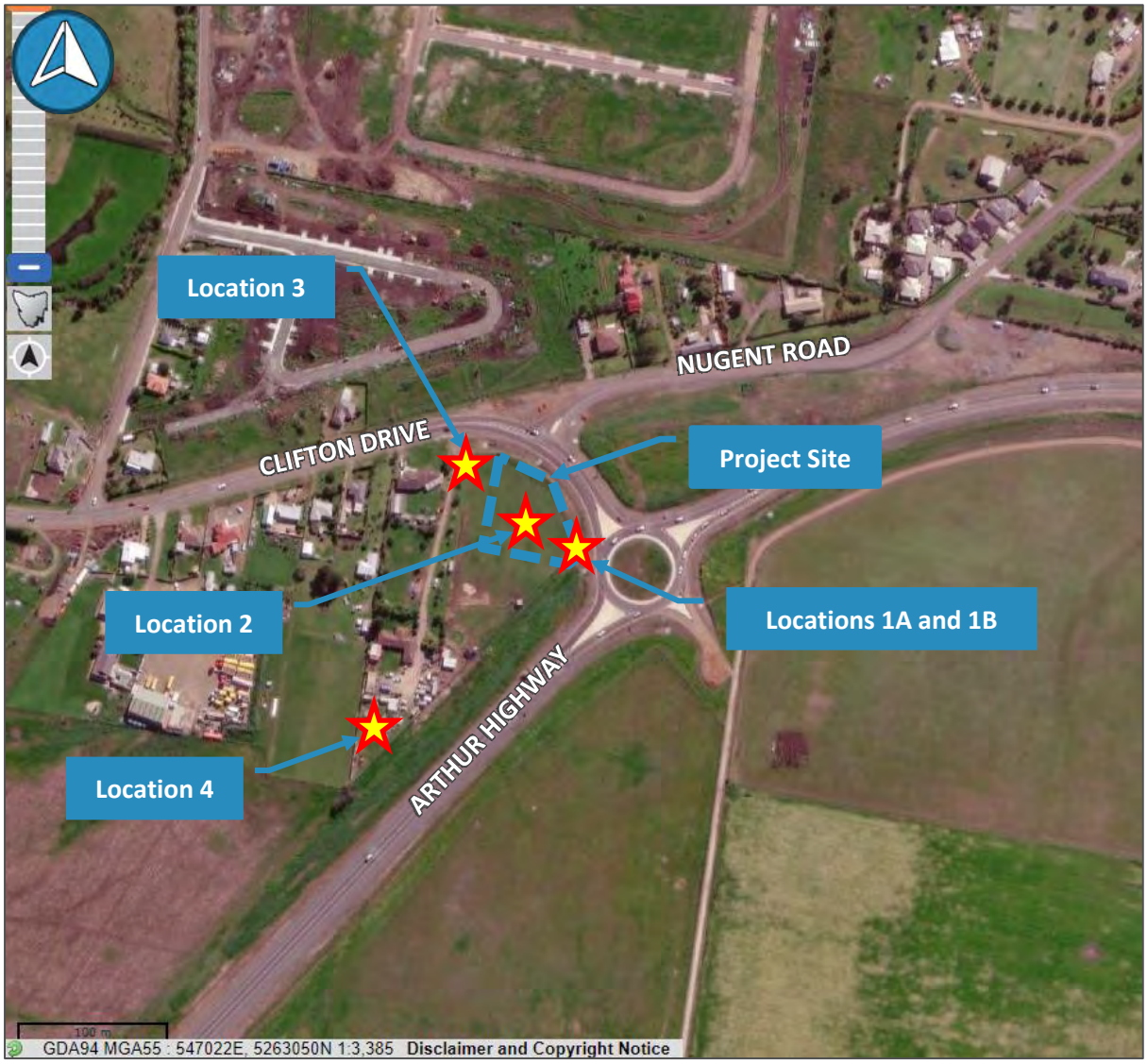


Figure B.1 Noise Measurement Locations (Aerial Photo Source: Google Maps)

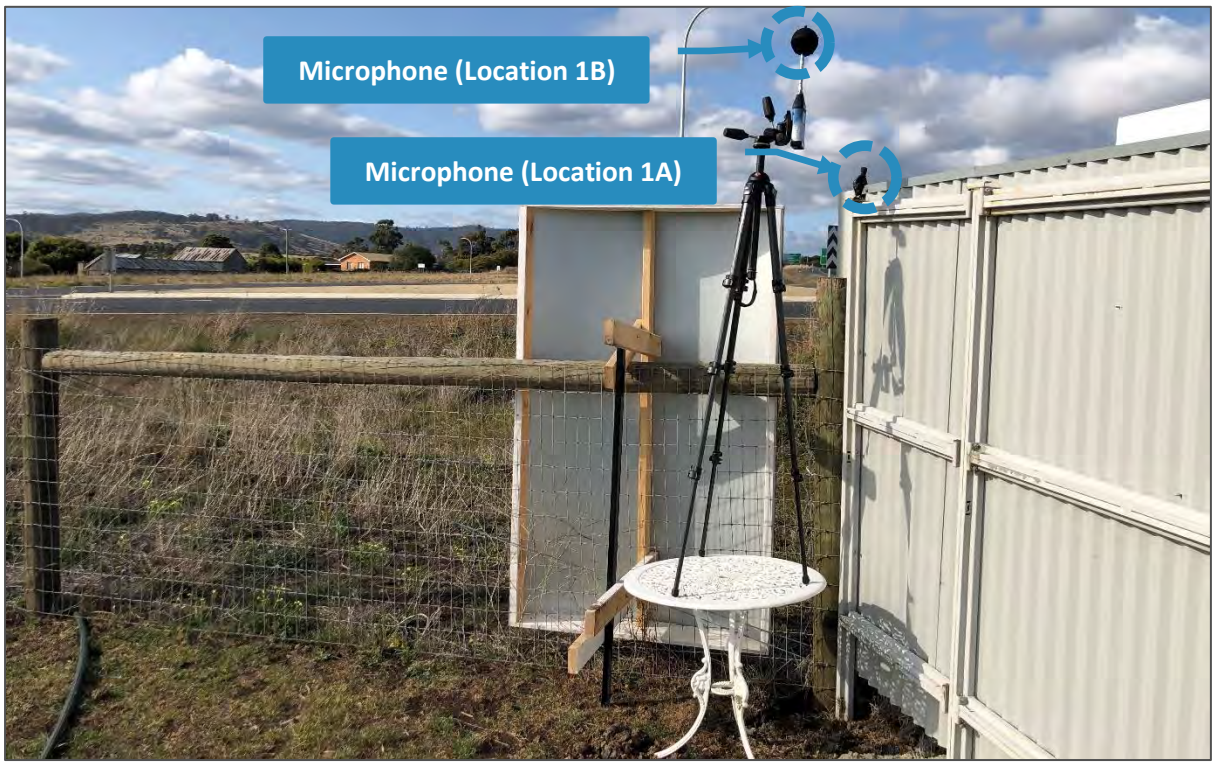


Figure B.2 Noise Measurement Locations 1A and 1B – Photo Facing East

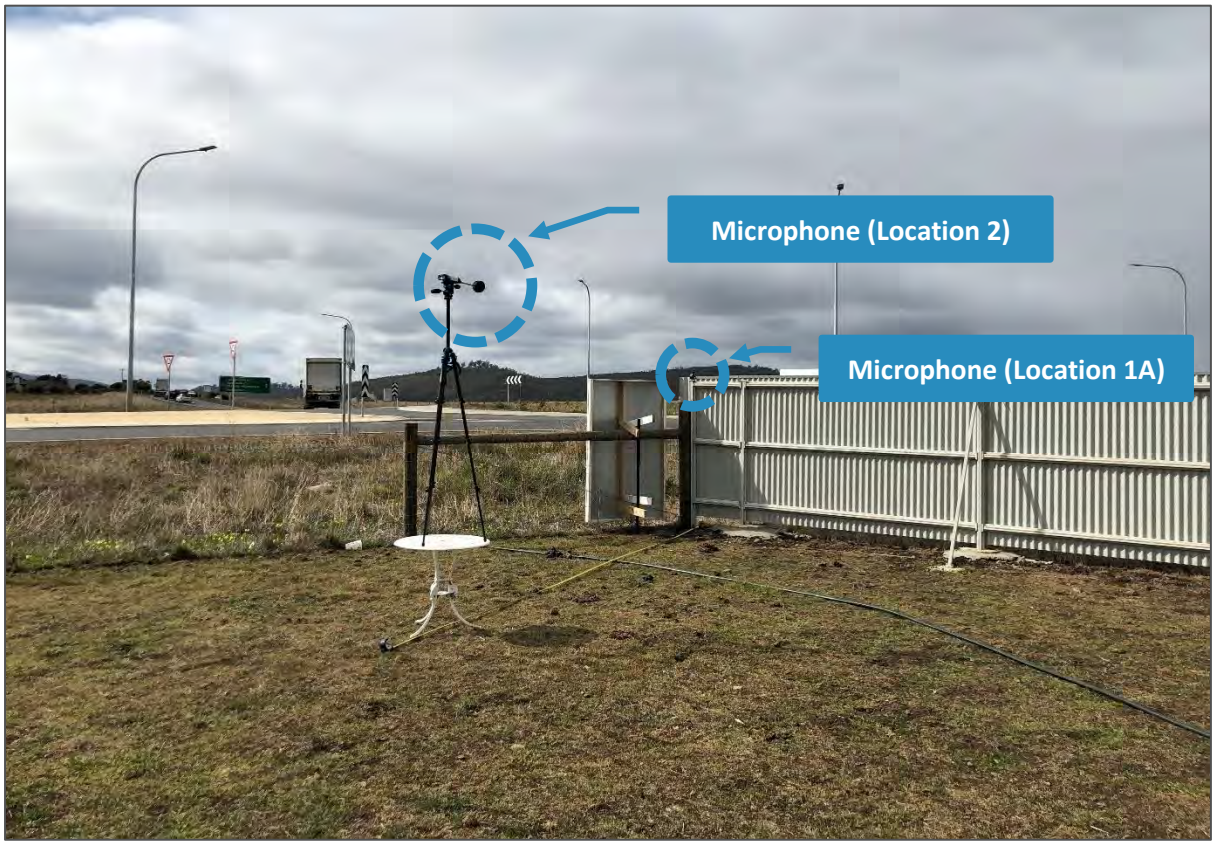


Figure B.3 Noise Measurement Location 2– Photo Facing North-East

Figure B.4 Noise Measurement Location 3 – Photo Facing North

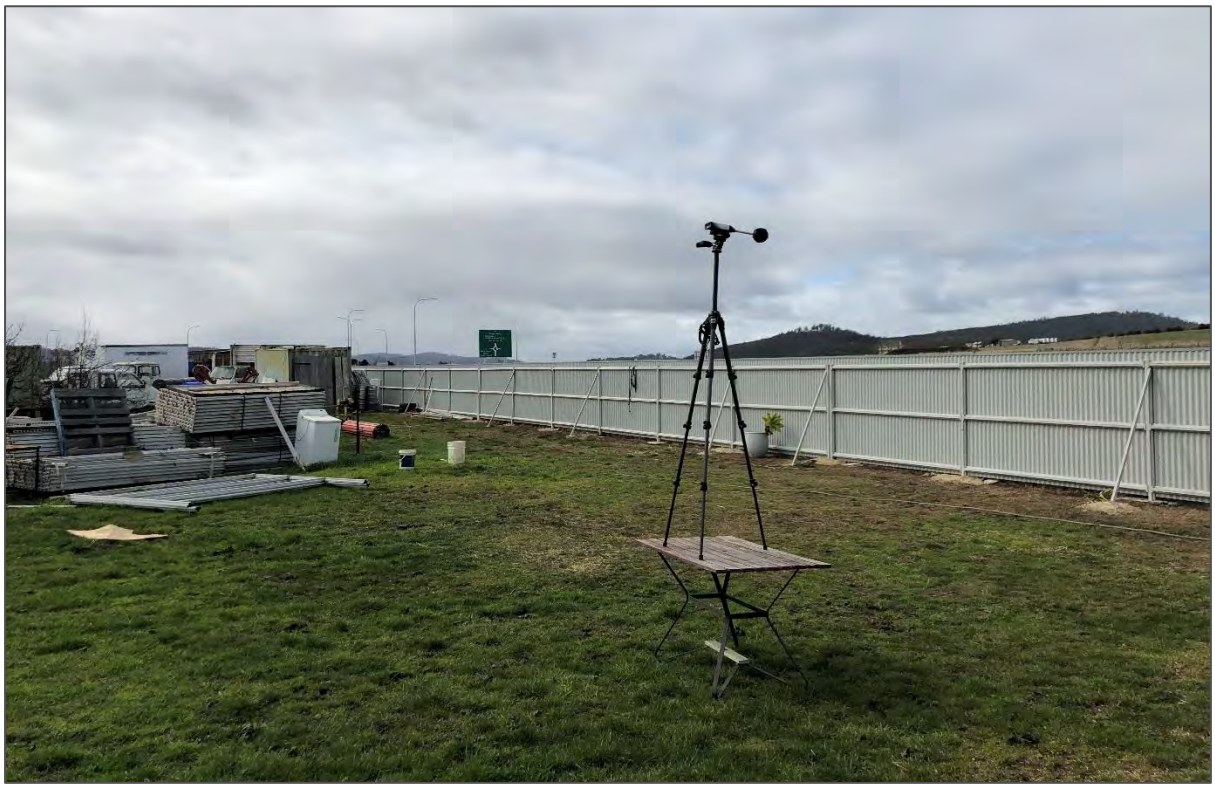


Figure B.5 Noise Measurement Location 4 – Photo Facing North-East

B.2 Measurement Procedure

Noise measurements were performed at the site to establish the environmental noise levels. Table 27 presents details of each measurement:

Table 27 Details of Measurement Period

Location Ref.	Measurement Type		Start Time	Start Date	End Time	End Date
	Attended	Unattended				
1A	☐	☒	11:00 AM	Friday 1/09/2023	11:45 PM	Thursday 7/09/2023
2	☒	☐	11:20 AM	Friday 1/09/2023	11:35 AM	Friday 1/09/2023
3	☒	☐	11:40 AM	Friday 1/09/2023	11:55 AM	Friday 1/09/2023
4	☒	☐	12:03 PM	Friday 1/09/2023	12:18 PM	Friday 1/09/2023
1B	☒	☐	2:18 PM	Friday 1/09/2023	5:18 PM	Friday 1/09/2023

The equipment was configured to provide the measurement results as a continuous series of 1 second A- and Z-weighted Sound Pressure Levels. Metrics used for the assessment were then post-processed from this data.

A foam windscreen was installed on each microphone to minimise the effect of wind-induced pressure fluctuations on the measurements.

B.3 Instrumentation

All acoustic instrumentation used for the measurements held a current certificate of calibration from a National Association of Testing Authorities (NATA) accredited laboratory or from the manufacturer at the time of the measurements.

A field check to confirm correct calibration of the instrumentation was performed at the beginning and end of the measurement period using a laboratory calibrated portable Sound Level Calibrator. At the time of each check the instrumentation was found to be reading correctly and the deviation between consecutive checks was found to be less than 1 dB.

Details of the acoustic instrumentation used for measurements are presented in Table 28.

Table 28 Acoustic Instrumentation Details

Location Reference	Instrument Description	Serial No.	Date of Last Laboratory Calibration
1A	Convergence Instruments NSRT_mk2 Type 1 Sound Level Meter	Atp+jdUYcf2VgLHiyyr5ND	14/06/2018
1B, 2, 3, 4	Svantek 977 Class 1 Sound Level Meter	45763	22/03/2023
-	Svantek SV33B Portable Sound Level Calibrator	112498	16/01/2023*

* In accordance with AS 1055.1-1997 and National Association of Testing Authorities Guidelines, Sound Level Calibrators require calibration annually.

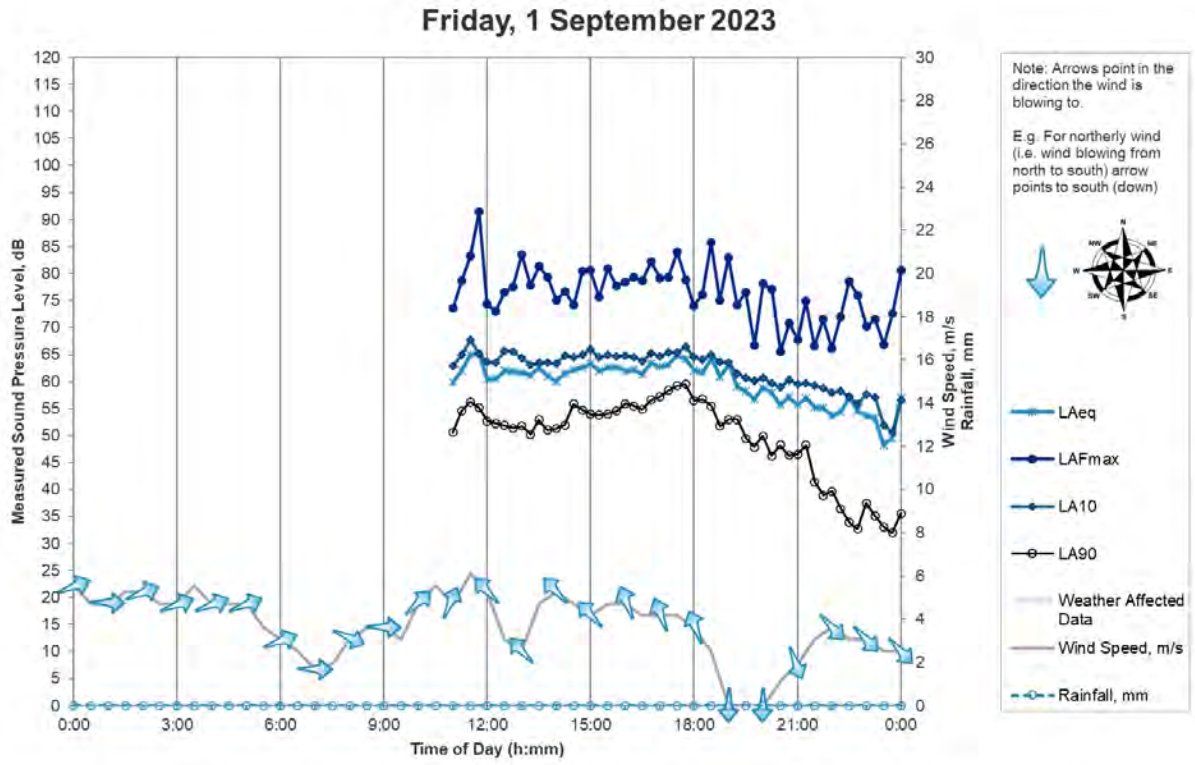
B.4 Meteorological Data

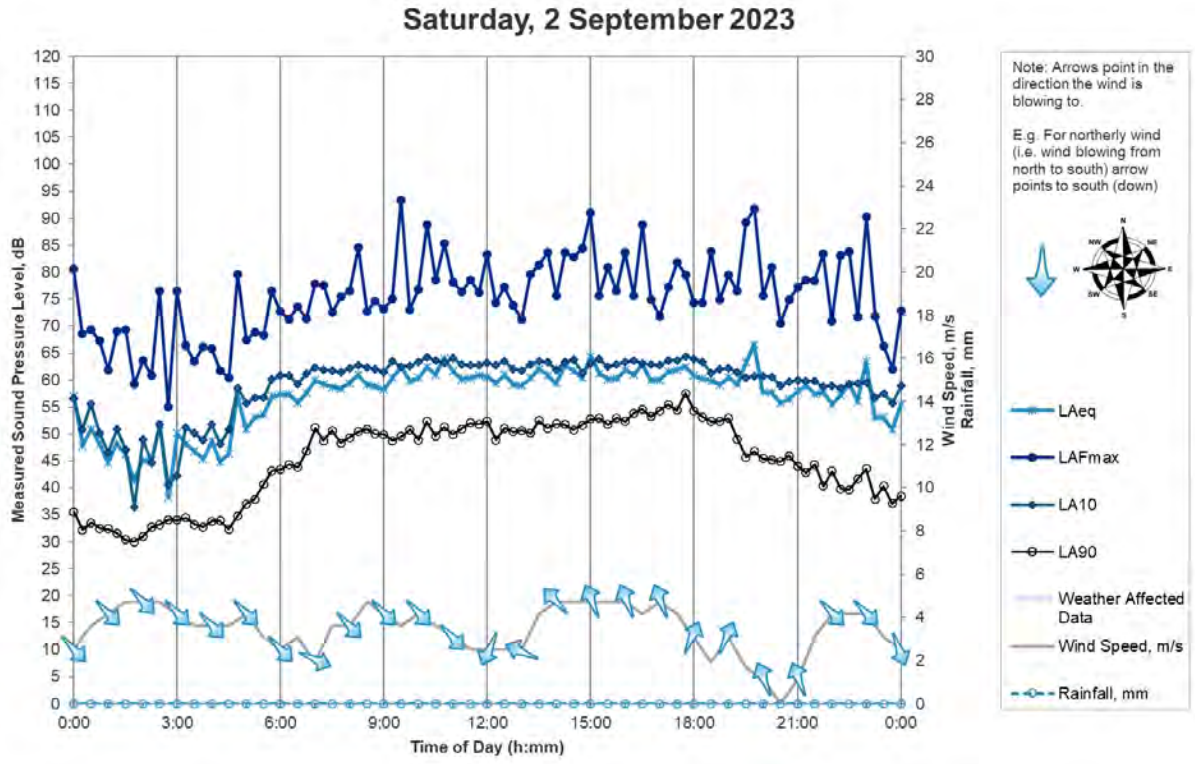
Weather observations during the monitoring period were taken from the Bureau of Meteorology Weather Station at Hobart Airport, approximately 7 km away. Appendix C shows the meteorological observations plotted against the measured L_{Aeq}, L_{A10}, L_{A90} and L_{AFmax} Sound Pressure Levels for the duration of the measurement period.

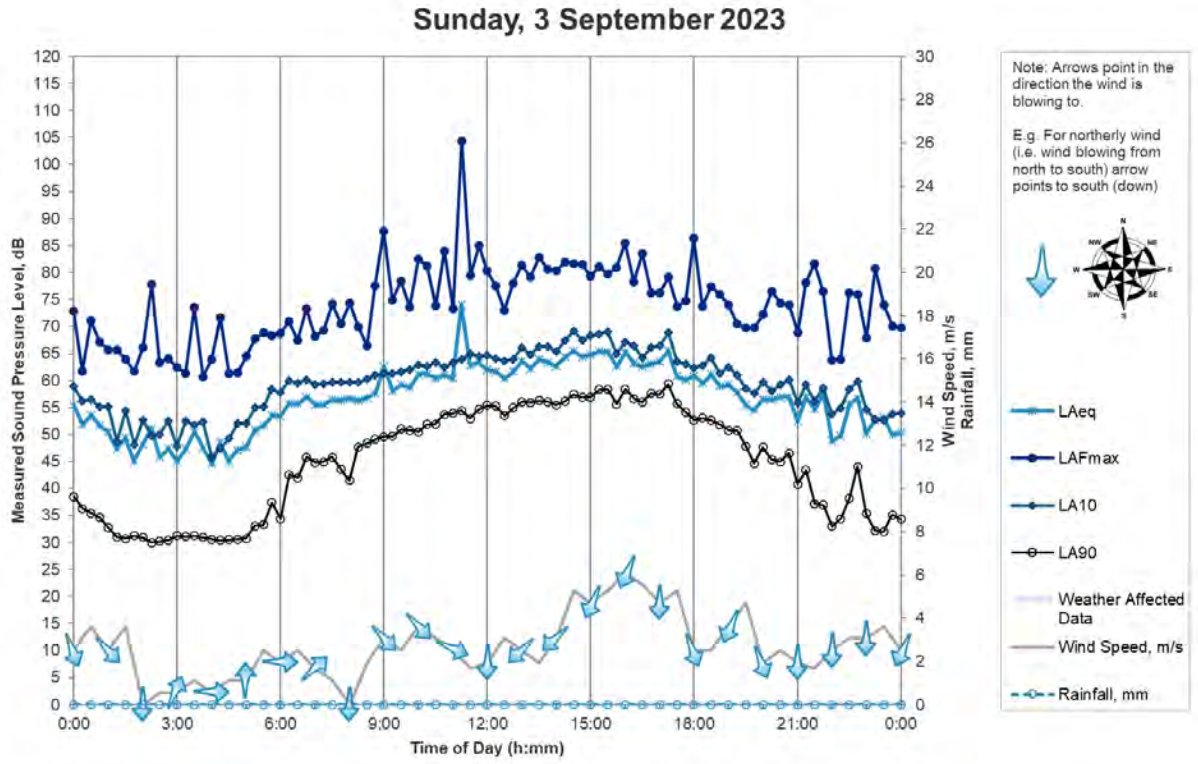
B.5 Weather Conditions

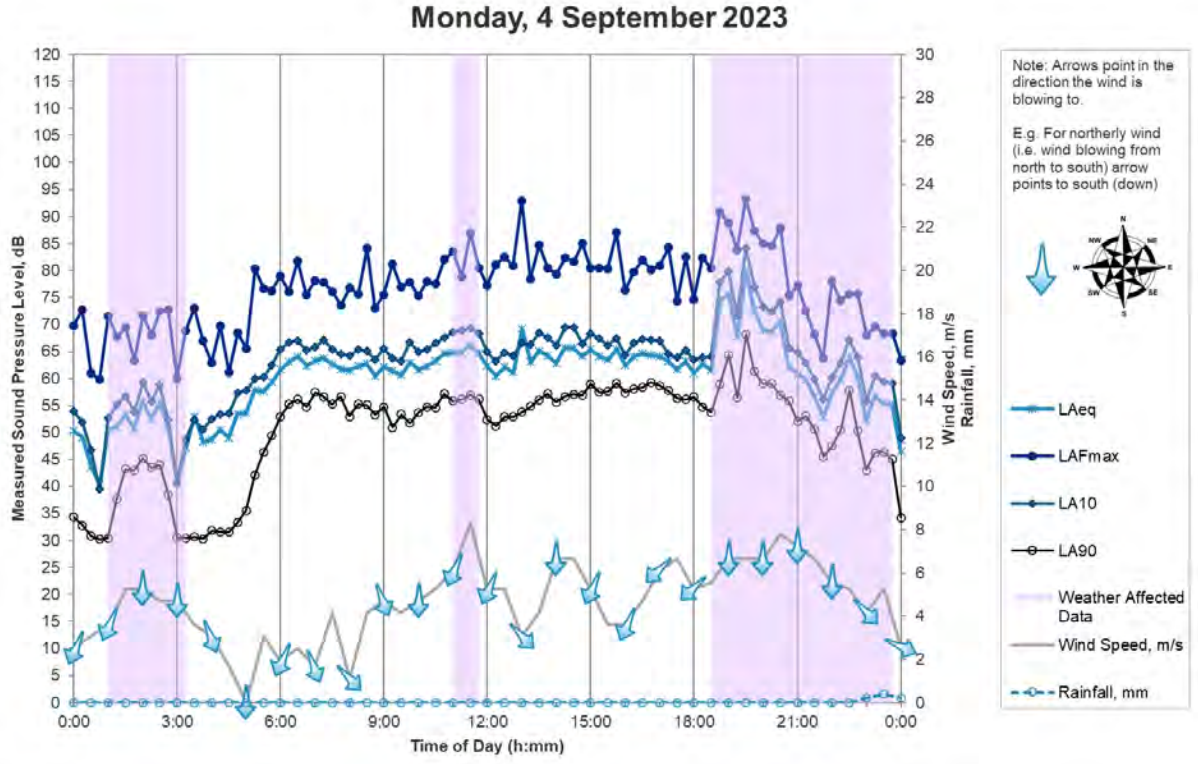
The weather during the attended measurements was fine with light winds. Nearby road surfaces were dry.

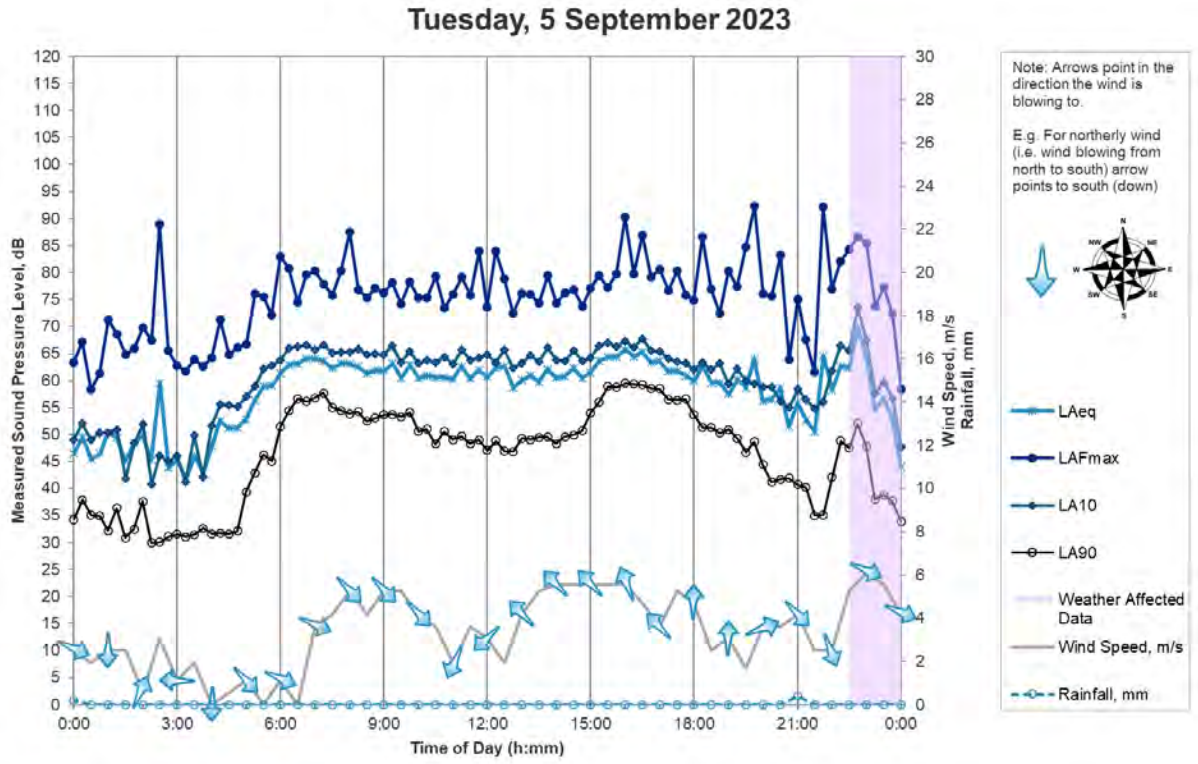
Appendix C Graphed Noise Measurement Results

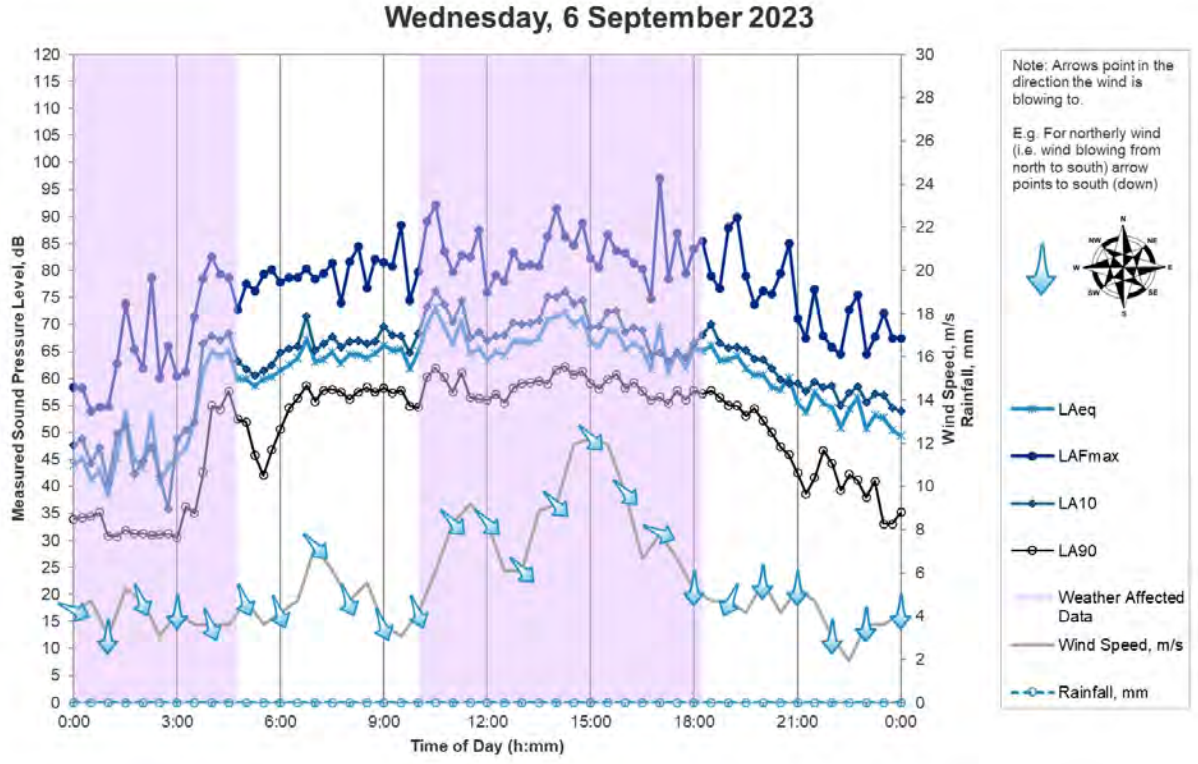


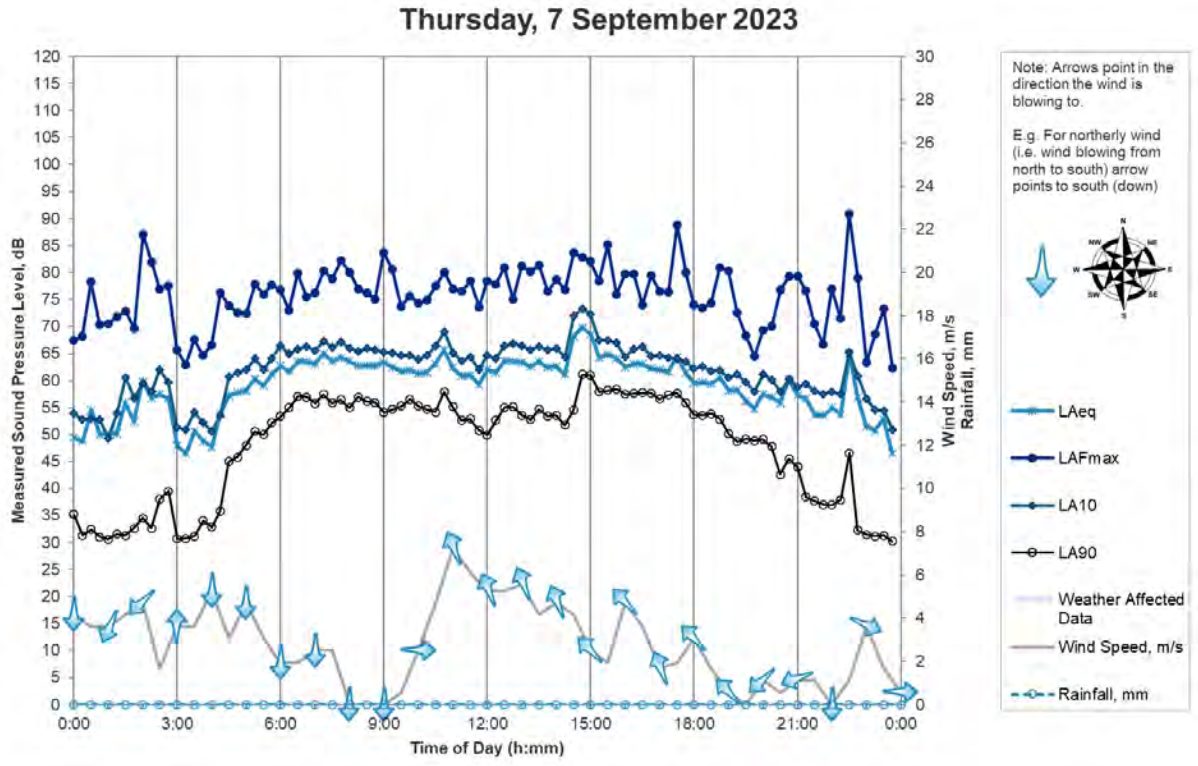



Sunday, 3 September 2023
Measured Sound Pressure Level, dB
Wind Speed, m/s
Rainfall, mm
Time of Day (h:mm)
0:00
3:00
6:00
9:00
12:00
15:00
18:00
21:00
0:00
Note: Arrows point in the direction the wind is blowing to.
E.g. For northerly wind (i.e. wind blowing from north to south) arrow points to south (down)
LAeq
LAFmax
LA10
LA90
Weather Affected Data
Wind Speed, m/s
Rainfall, mm


Monday, 4 September 2023
Measured Sound Pressure Level, dB
Wind Speed, m/s
Rainfall, mm
Time of Day (h:mm)
0:00
3:00
6:00
9:00
12:00
15:00
18:00
21:00
0:00
Note: Arrows point in the direction the wind is blowing to.
E.g. For northerly wind (i.e. wind blowing from north to south) arrow points to south (down)
LAeq
LAFmax
LA10
LA90
Weather Affected Data
Wind Speed, m/s
Rainfall, mm


Tuesday, 5 September 2023
Measured Sound Pressure Level, dB
Wind Speed, m/s
Rainfall, mm
Time of Day (h:mm)
0:00
3:00
6:00
9:00
12:00
15:00
18:00
21:00
0:00
Note: Arrows point in the direction the wind is blowing to.
E.g. For northerly wind (i.e. wind blowing from north to south) arrow points to south (down)
LAeq
LAFmax
LA10
LA90
Weather Affected Data
Wind Speed, m/s
Rainfall, mm


Wednesday, 6 September 2023
Measured Sound Pressure Level, dB
Wind Speed, m/s
Rainfall, mm
Time of Day (h:mm)
0:00
3:00
6:00
9:00
12:00
15:00
18:00
21:00
0:00
Note: Arrows point in the direction the wind is blowing to.
E.g. For northerly wind (i.e. wind blowing from north to south) arrow points to south (down)
LAeq
LAFmax
LA10
LA90
Weather Affected Data
Wind Speed, m/s
Rainfall, mm


Thursday, 7 September 2023
Measured Sound Pressure Level, dB
Wind Speed, m/s
Rainfall, mm
Time of Day (h:mm)
0:00
3:00
6:00
9:00
12:00
15:00
18:00
21:00
0:00
Note: Arrows point in the direction the wind is blowing to.
E.g. For northerly wind (i.e. wind blowing from north to south) arrow points to south (down)
LAeq
LAFmax
LA10
LA90
Weather Affected Data
Wind Speed, m/s
Rainfall, mm

Appendix D Modelling Parameters

D.1 General Parameters

Parameter	Description
Software	SoundPLAN Version 7.4
Calculation Method	ISO 9613-2:1996 (ISO, 1996) Car Park Noise: BayLfU (BayLfU, 2007)

D.2 Geometrical Parameters

Parameter	Description
Site Layout	▪ As per reference documentation.
Terrain	▪ Ground modelled according to elevation data from ELVIS (Elevation Information System).
Ground absorption	▪ For modelling of noise impact on children due to traffic, all areas have been modelled as a combination of hard and soft ground using a ground factor of 0.75. ▪ For modelling of environmental noise emissions associated with the proposed child care centre, all areas modelled as a combination of hard and soft ground using a ground factor of 0.4.
Buildings	▪ On-site buildings and buildings within adjacent residential subdivision modelled as per referenced architectural drawings. ▪ Buildings in the vicinity of the project site modelled according to the latest Google Earth satellite imagery.
Receptors	▪ Receiver noise levels calculated at positions 1 m in front of the building facade and 1.5 m above floor level for each floor.

D.3 Environmental Parameters

Parameter	Description
Air Absorption Calculation	ISO 9613-2:1996
Air Temperature	10 degrees Celsius
Air Pressure	1013.3 mbar
Humidity	70%
Propagation Conditions	▪ The propagation conditions used in the modelling are the standard ISO 9613-2 conditions. These represent downwind propagation with: o Wind direction ± 45 degrees of the direction connecting the centres of the dominant sound source and the specified receiver region, with the wind blowing from source to receiver; and o Wind speed between approximately 1 m/s and 5 m/s, measured at a height of 3 m to 11 m above ground.

Parameter	Description
	▪ The modelled conditions would similarly represent average propagation under a well-developed moderate ground-based temperature inversion, such as commonly occurs on clear, calm nights. ▪ Such conditions result in enhanced noise propagation and can be considered to represent a worst-case scenario for noise propagation.

D.4 Noise Source Parameters

Air Conditioning Condenser Unit

The air conditioning condenser units have been modelled as:

- Point sources 0.7 m above roof level.
- The modelled octave band spectrum Sound Power Levels for each condenser unit have been based on a Daikin RXYMQ6AV4A, as follows:

Frequency, Hz	63	125	250	500	1K	2K	4K	Total dB(A)
Sound Level, dB(Z)	78	75	76	68	66	63	64	73

Exhaust Fan Noise

The exhaust fan units have been modelled as:

- Point sources 0.7 m above floor level.
- The octave band spectrum Sound Power Level for each kitchen exhaust fan has been modelled as follows:

Frequency, Hz	63	125	250	500	1K	2K	4K	Total dB(A)
Sound Level, dB(Z)	69	66	75	69	66	64	58	72

- The octave band spectrum Sound Power Level for all other exhaust fans has been modelled as follows:

Frequency, Hz	63	125	250	500	1K	2K	4K	Total dB(A)
Sound Level, dB(Z)	62	59	68	62	59	57	51	65

Children

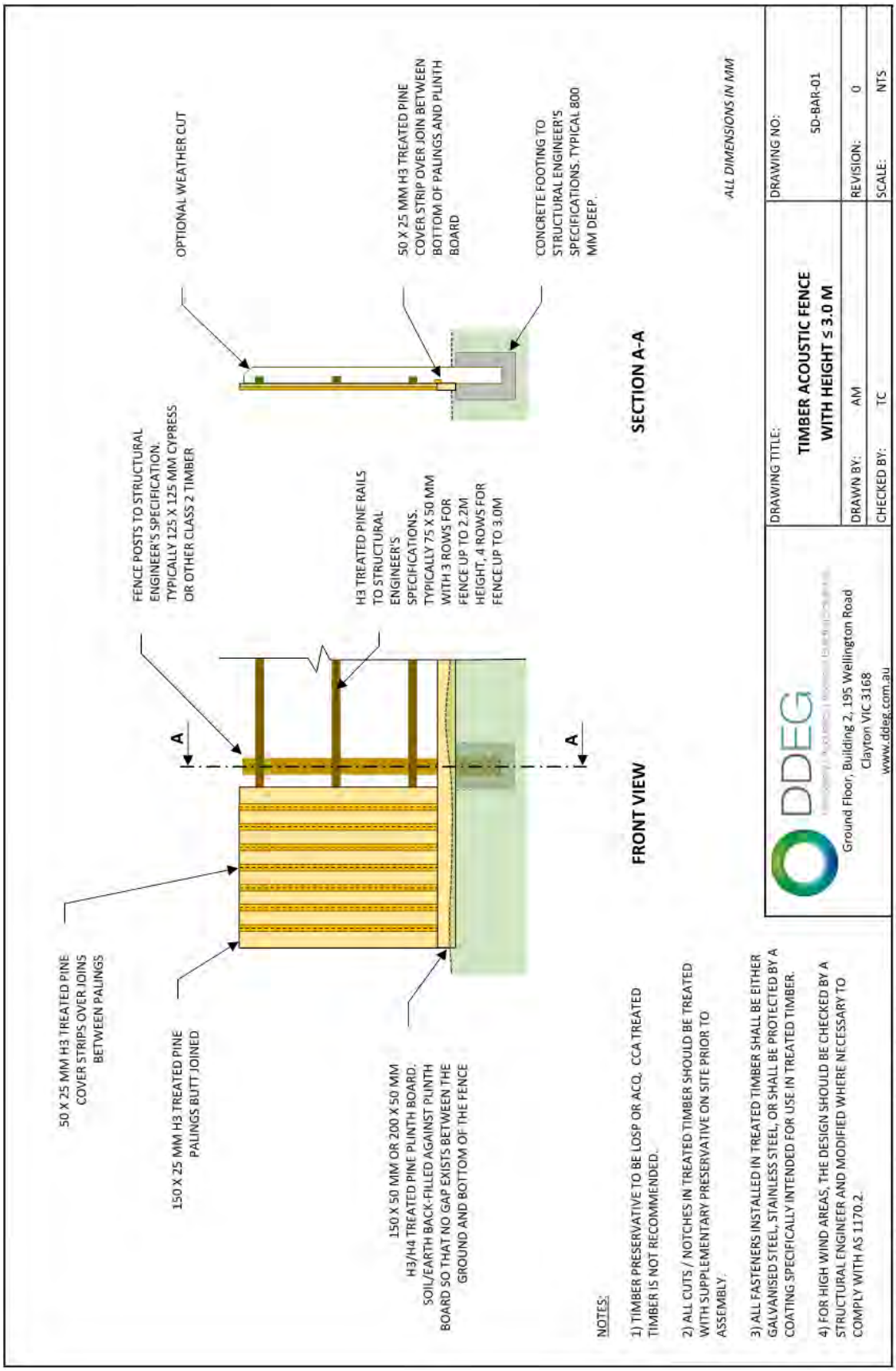
Children playing in the outdoor play area have been modelled as:

- An area source the same size as the outside play areas at 1.0 m above ground level.
- The modelled octave band spectrum Sound Power Levels for Outdoor Play 1 are as follows:

Frequency, Hz	63	125	250	500	1K	2K	4K	Total dB(A)
Sound Level, dB(Z)	58	64	70	76	78	75	71	81

<table>
<tr><th>Parameter</th><th>Description</th></tr>
<tr><td></td><td>▪ The modelled octave band spectrum Sound Power Levels for Outdoor Play 2 are as follows:
<table>
<tr><th>Frequency, Hz</th><th>63</th><th>125</th><th>250</th><th>500</th><th>1K</th><th>2K</th><th>4K</th><th>Total dB(A)</th></tr>
<tr><td>Sound Level, dB(Z)</td><td>72</td><td>78</td><td>83</td><td>89</td><td>91</td><td>88</td><td>84</td><td>95</td></tr>
</table></td></tr>
<tr><td>Parking</td><td>Noise associated with cars in the on-site parking bays has been modelled using the BayLfU parking noise prediction methodology (BayLfU, 2007). Each parking space has been modelled as having approximately 4.3 car movements per hour.</td></tr>
</table>

Appendix E Timber Paling Acoustic Fence



Appendix F ANEF Chart

Building type	ANEF zone of site		
	Acceptable	Conditionally acceptable	Unacceptable
House, home unit, flat, caravan park	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hotel, motel, hostel	Less than 25 ANEF	25 to 30 ANEF	Greater than 30 ANEF
School, university	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Hospital, nursing home	Less than 20 ANEF	20 to 25 ANEF	Greater than 25 ANEF
Public building	Less than 20 ANEF	20 to 30 ANEF	Greater than 30 ANEF
Commercial building	Less than 25 ANEF	25 to 35 ANEF	Greater than 35 ANEF
Light industrial	Less than 30 ANEF	30 to 40 ANEF	Greater than 40 ANEF
Other industrial	Acceptable in all ANEF zones		

Notes

1. The actual location of the 20 ANEF contour is difficult to define accurately, mainly because of variations in aircraft flight paths. Because of this, the procedure of Clause 2.3.2 may be followed for building sites outside but near to the 20 ANEF contour.
2. Within 20 ANEF to 25 ANEF, some people may find that the land is not compatible with residential or educational uses. Land use authorities may consider that the incorporation of noise control features in the construction of residences or schools is appropriate.
3. There will be cases where a building of a particular type will contain spaces used for activities which would generally be found in a different type of building (e.g. an office in an industrial building). In these cases Table 2.1 should be used to determine site acceptability, but internal design noise levels within the specific spaces should be determined by Table 3.3.
4. This Standard does not recommend development in unacceptable areas. However, where the relevant planning authority determines that any development may be necessary within existing built-up areas designated as unacceptable, it is recommended that such development should achieve the required ANR determined according to Clause 3.2. For residences, schools, etc., the effect of aircraft noise on outdoor areas associated with the buildings should be considered.
5. In no case should new development take place in greenfield sites deemed unacceptable because such development may impact airport operations.

Runway	Aircraft	Arrival			Departure			Grand Total
		Day	Night	Total	Day	Night	Total	
12	Airbus A320-200 Series	4.97	1.39	6.37	4.97	1.39	6.37	**12.73**
	Airbus A321-200 Series	4.82	1.35	6.17	4.82	1.35	6.17	**12.35**
	Airbus A330-300 Series	0.09	0.03	0.11	0.09	0.03	0.12	**0.23**
	Boeing 737-800 Series	10.37	2.90	13.27	10.37	2.90	13.27	**26.55**
	Boeing 777-300 Series	0.09	0.03	0.11	0.09	0.03	0.11	**0.23**
	Boeing 787-8 Dreamliner	0.56	0.16	0.72	0.56	0.16	0.72	**1.44**
	Boeing C-17A	0.16	0.05	0.21	0.16	0.05	0.21	**0.41**
	Gulfstream G550	0.16	0.05	0.21	0.16	0.05	0.21	**0.42**
	Raytheon Beech 1900-D	0.67	0.19	0.86	0.67	0.19	0.86	**1.71**
12 Total		21.91	6.13	28.04	21.91	6.13	28.04	**56.07**
30	Airbus A320-200 Series	5.66	1.58	7.24	5.66	1.58	7.24	**14.48**
	Airbus A321-200 Series	5.49	1.53	7.02	5.49	1.53	7.02	**14.04**
	Airbus A330-300 Series	0.10	0.03	0.13	0.10	0.03	0.13	**0.26**
	Boeing 737-800 Series	11.80	3.30	15.10	11.80	3.30	15.10	**30.19**
	Boeing 777-300 Series	0.10	0.03	0.13	0.10	0.03	0.13	**0.26**
	Boeing 787-8 Dreamliner	0.64	0.18	0.82	0.64	0.18	0.82	**1.64**
	Boeing C-17A	0.18	0.05	0.23	0.18	0.05	0.23	**0.47**
	Gulfstream G550	0.19	0.05	0.24	0.19	0.05	0.24	**0.47**
	Raytheon Beech 1900-D	0.76	0.21	0.98	0.76	0.21	0.98	**1.95**
30 Total		24.91	6.97	31.88	24.91	6.97	31.88	**63.76**
Helipad	Bell 206B-3	3.45	0.96	4.41	3.45	0.96	4.41	**8.83**
	Bell 430	3.65	1.02	4.67	3.65	1.02	4.67	**9.34**
	Eurocopter EC-130	3.92	1.10	5.02	3.92	1.10	5.02	**10.04**
Helipad Total		11.02	3.08	14.10	11.02	3.08	14.10	**28.20**
Grand Total		**57.84**	**16.18**	**74.02**	**57.84**	**16.18**	**74.02**	**148.04**

Runway	Latitude	Longitude
12	-42.8282	147.5090
30	-42.8367	147.5317
Helipad	-42.8392	147.5006

Notes

1. Terrain has been included in the calculation of the ANEF contours
2. ANEF contours modelled with AEDT 3e
3. Co-ordinate system: WGS84
4. Where figures have been rounded, there may be discrepancies between the total presented and the sum of the items in that column

Issue date: 20 SEP 2022
Drawn by: To70 Aviation

ENDORSEMENT FOR TECHNICAL ACCURACY

STANDARD ANEF

airservices

MALE_C Digitally signed by MALE_C6
Date: 2022.10.07 15:52:46 +10'00'

Network Planning & Optimisation

The aircraft noise contours on this chart have been calculated using an appropriate modelling process. Airservices Australia has, in accordance with the approved manner of endorsement, considered the physical ultimate capacity of the existing or proposed runways in its endorsement process.
The data input and assumptions made in that process are derived in part from external sources. Airservices Australia makes no warranty in respect of that information and excludes all liability for any loss arising from reliance on that information.

Appendix G Bushfire Hazard Report

era
PLANNING
& ENVIRONMENT

24 Clifton Drive, Sorell
Bushfire Hazard Report

For planning approval | 30 May 2024

ERA Planning and Environment acknowledge *palawa* as the Traditional Owners of *lutruwita* (Tasmania).

They are the original custodians of our land, sky and waters. We respect their unique ability to care for country and deep spiritual connection to it.

We honour and pay our respect to Elders past and present, whose knowledge and wisdom has and will ensure the continuation of culture and traditional practices.

We acknowledge that their sovereignty has never been ceded.

Always was, always will be.

ERA Planning Pty Ltd trading as ERA Planning and Environment

ABN 67 141 991 004

Job Number: 2324-051

Document Status

Document Version	Date	Author	Reviewer
Draft V1	16 May 2024	Sarah Silva	Clare Hester
Final	30 May 2024	Sarah Silva	

era
PLANNING
& ENVIRONMENT

Contents

1 Introduction

1.1 Purpose of report

ERA Planning and Environment (ERA) have been engaged by Tipalea Partners Pty Ltd to prepare a Bushfire Assessment Report, including a Bushfire Hazard Management Plan (BHMP) if required, for the construction of a new childcare centre development; a defined vulnerable use in the Bushfire Prone Areas Code. This report assesses the proposed development against the requirements of the Bushfire Prone Areas Code in the planning scheme.

Enquiries relating to this planning report should be directed to:

Clare Hester
Manager Planning
ERA Planning & Environment
Email: clare@eraplanning.com.au
Phone: 03 6165 0443

1.2 The proposal

The proposal seeks approval for the use and development of a childcare centre at 24 Clifton Drive, Sorell (CT 179906/1). The subject site has a total area of 1.652ha however it is understood that approval is currently being sought for a proposed subdivision of the site to create two lots, although no permit had been issued at the time of writing this report. This will be lodged as a separate application to Sorell Council (the Bushfire Assessment was undertaken by JR Bushfire Assessments, dated 21.03.2024) and subsequently this report does not include an assessment of the subdivision itself and is limited to an assessment of the bushfire risk associated with the siting of the future childcare centre only, which will be contained within future Lot 1. The future Lot 1 will be located at the far north-eastern end of the site, adjacent to the Arthur Highway, Clifton Road, and Nugent Road intersection, and will be approximately 2701 m^2 in size, as per the attached site plan at Appendix A. The proposed development layout is shown in Figure 1 below.

Figure 1 Proposed site plan and internal layout (source: Brown Falconer Architects)

The proposed childcare centre will have a total building area of 829 m^2 and will provide care for up to 114 children, with 21 employees. A breakdown of the proposed development is provided below:

- nursery – 24 placements
- kindy - 50 placements
- toddler – 40 placements
- two separate outdoor play areas
- administration rooms (office, meeting rooms)
- food preparation rooms
- laundry facilities
- ablutions
- a carpark for the parking of up to 21 vehicles; and
- access to the site will be via a right-of way easement from an existing crossover from Clifton Drive.

The proposed childcare centre is classified as Building Class 9b under the National Construction Code (NCC).

2 Site description

2.1 Title details

The site for the purposes of the proposed development is contained within the titles listed in Table 1 below and Figure 3.

Table 1: Certificate of Title details of subject site

Address	PID	Title reference	Land owner	Authority	Description of location
24 Clifton Drive, Sorell	9056868	CT 179906/1	R and T Polley	Private freehold	Primary subject site
Acquired road	n/a	CT 179852/2	The Crown	State Government	Road next to the primary subject site
Acquired road	n/a	CT 50/4424	The Crown	State Government	Road next to the primary subject site

2.2 Site area and surrounds

The subject land is located at 24 Clifton Road, Sorell, refer to Figure 2. The site is irregular in shape and is framed by residential properties to the north (on the opposite side of Clifton Road) and west, together with a substantial area of road reserve including that associated with Clifton Drive, Arthur Highway, and round-a-about intersection to the north and east. Agricultural land is located to the south-east on the opposite side of the Arthur Highway. The existing development on the site includes a single dwelling and ancillary outbuildings.

Figure 2:: Site highlighted in yellow (source: The LIST, 16.05.2024)

The layout for proposed Lot 1, that will contain the future childcare centre, is shown in Figure 3 below.

Figure 3: proposed layout of Lot 1 (source: Brown Falconer Architects)

2.3 Planning context

The relevant planning instrument for use and development of the site is the *Tasmanian Planning Scheme Sorell*. The site is zoned General Residential (red), refer to Figure 4. The site is located within the bushfire-prone area and airport noise exposure and obstacle limitation area overlays.

Figure 4: Zoning plan. Site is highlighted in blue and zoned General Residential (source: The LIST, 16.05.2024)

2.4 Natural values

The TASVEG 4.0 database maps the site as being entirely modified land in an urban area (FUR).

Figure 5: TasVeg4.0 mapping overlay showing the site as being entirely within FUR (Urban Areas)(source: The LIST, 17.05.2024)

2.5 Fire history of area

The site is not recorded as previously being affected by bushfires. The closest area recorded as being affected by the bushfires in 1966-1967 is located approximately 500 m, refer to Figure 6. The site was also within proximity to 2012-2013 bushfires, which occurred approximately 2.8 kms to the east. It is highlighted that the site may have been affected by other bushfires not shown in the figure below.

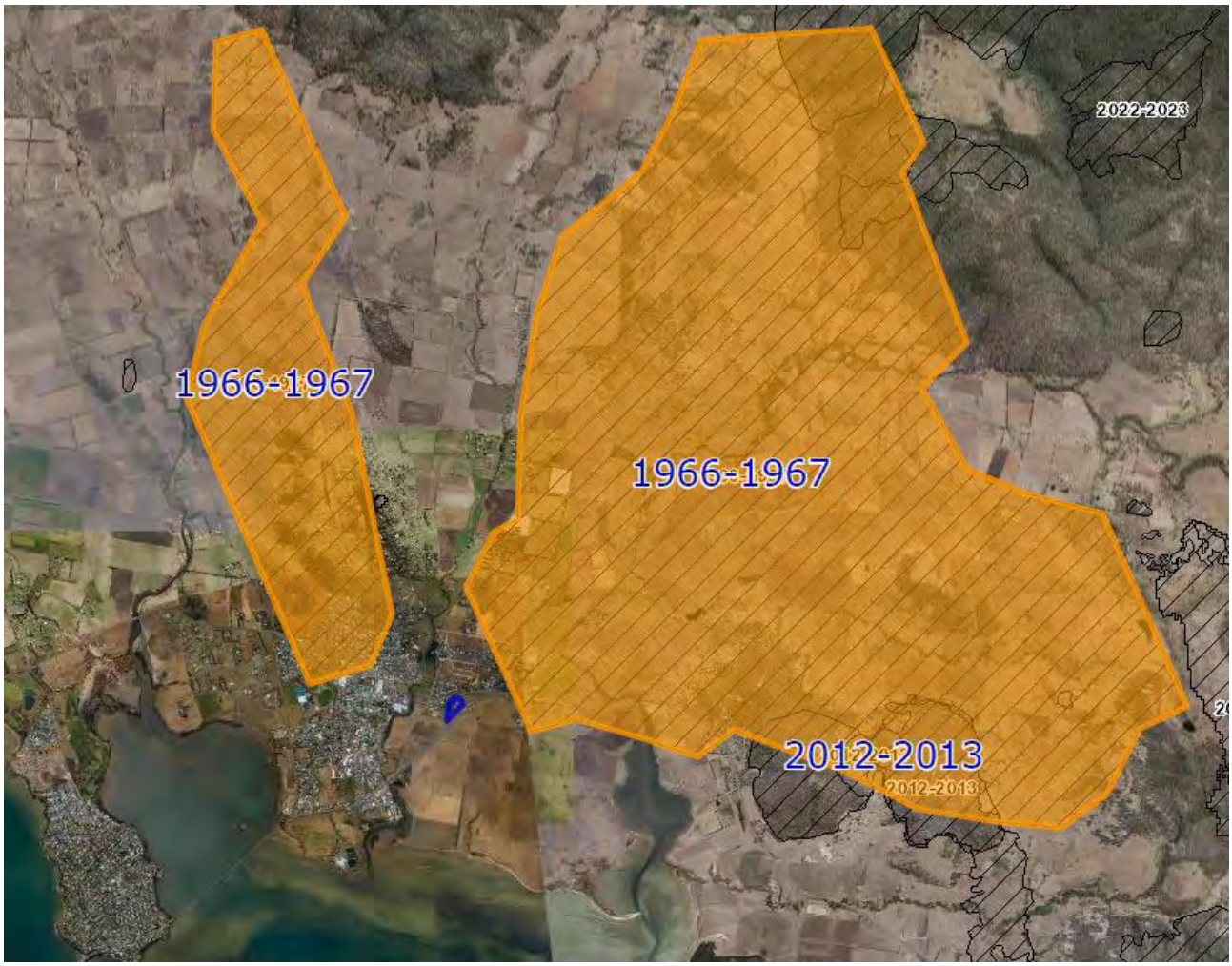


Figure 6: Subject site outlined in blue. Hatched area highlighted in orange identifies area affected by bushfire (source The LIST, 16.05.2024)

3 Bushfire Hazard Assessment

The subject site is located within the Bushfire-prone Areas overlay for the Sorell municipality. Therefore, the site is within a 'bushfire prone area' as defined under Clause C13.3.1 of the Bushfire-Prone Areas Code.

The key factors affecting bushfire behaviour are fuel, weather conditions, and topography. This section of the report considers these factors in the context of *AS 3959-2018 construction of buildings in bushfire-prone areas*, which is required to determine compliance with planning and building requirements for bushfire protection.

3.1 Vegetation & effective slope

AS 3959-2018 provides categories for classifying vegetation based on structural characteristics. The Bushfire Attack Level (BAL) determines the likely exposure to uncontrolled bushfire hazard. The method for determining BAL ratings is outlined in AS 3959-2018. This assessment has relied on Method 1, which considers vegetation type, distance from hazardous vegetation and effective slope.

'Effective slope' refers to the slope of land underneath bushfire-prone vegetation relative to the subject site. Effective slope affects a fire's rate of spread and flame length and is accordingly, a critical aspect affecting bushfire behavior. AS 3959-2018 refers to five categories of effective slope and these have been used for the purposes of this analysis.

Figure 7 shows land within 100 m of the proposed development site, slope, and the areas of vegetation classified as bushfire prone.

Figure 7: Site analysis. Subject site outlined in dark blue. All land within 100 m radius of the proposed childcare centre site (highlighted in red) is classified as either low threat or managed land (highlighted in yellow) and grassland (highlighted in blue). (source: The LIST, 17.05.2024).

3.2 Bushfire attack level (BAL)

The applicable Fire Danger Index (FDI) is 50 in accordance with AS 3959-2018 Clause 2.2.2. The vegetation within 100 m of the site has been assessed below.

Exclusions – Low threat vegetation and non-vegetated areas

As illustrated in Figure 7, the areas, within 100 m of the proposed building area, that are in a bushfire prone area and satisfy the exclusions pursuant to clause 2.2.3.2 of AS 3959:2018, include:

- Single areas of vegetation less than 1 ha in area and not within 100 m of other vegetation being classified vegetation 2.2.3.2(b). Much of the subject site is used for horse grazing and, while there are grassland characteristics, the grass appears to be regularly maintained through the grazing and mowing. However, if the maintenance were to stop, then this land has the potential to be regenerated and for this reason has been considered as 'grassland'. This area is highlighted in blue on Figure 7 and in the images below at Figure 17 and can meet 2.2.3.2(b), as it is less than 1 ha in area and not within 100 m of other vegetation being classified vegetation.

Figure 8: View of grassland at the rear of the subject site. Excluded pursuant to clause 2.2.3.2 (b)(source: ERA Planning & Environment, 20.05.2024)

- Hard surface areas associated with surrounding road network; excluded pursuant to clause 2.2.3.2 (e). Additionally, the associated road reservices which are managed by the Department of State Growth (DSG). Advice received from Rogerson & Birch Surveyors includes confirmation from the DSG that the subject road reserve areas are slashed twice per year and subsequently can be classed as low threat vegetation. This email is included at Appendix C. Site photos of the surrounding road network are provided at Figure 9 to Figure 13 below.

Figure 9: View looking north-east showing the Clifton Road / Arthur Highway intersection. Hard surface areas associated with surrounding road network; excluded pursuant to clause 2.2.3.2 (e)(source: ERA Planning & Environment, 20.05.2024)

Figure 10: View looking north-east showing the Clifton Road / Nugent Road intersection. Hard surface areas associated with surrounding road network; excluded pursuant to clause 2.2.3.2 (e)(source: ERA Planning & Environment, 20.05.2024)

Figure 11: View looking south-west down Clifton Road. Hard surface areas associated with surrounding road network; excluded pursuant to clause 2.2.3.2 (e)(source: ERA Planning & Environment, 20.05.2024)

Figure 12: View looking south-west down Arthur Highway. Hard surface areas associated with surrounding road network; excluded pursuant to clause 2.2.3.2 (e)(source: ERA Planning & Environment, 20.05.2024)

Figure 13: View looking south-east over Arthur Highway road reserve. Hard surface areas associated with surrounding road network; excluded pursuant to clause 2.2.3.2 (e)(source: ERA Planning & Environment, 20.05.2024)

- Maintained lawns and grassland managed in a minimal fuel condition; excluded pursuant to clause 2.2.3.2 (f). The subject site itself contains a single dwelling and associated outbuildings and is mostly in a managed state, see point above and the site analysis at Figure 7. This is the same situation for the adjoining larger (more than 1500 m^2) residential lots to the west (18 Clifton Road and 22 Clifton Road) in addition to 12 Clifton Drive, also to the west, in addition to 17 Clifton Drive to the north of the site, on the opposite side of Clifton Drive These subject properties appear to be regularly maintained. All other surrounding residential lots are less than 1,500 m^2 in area and can therefore be considered low threat vegetation for the purposes of the Director's Determination. Site photos of the surrounding maintained lawns and grassland managed in a minimal fuel condition are provided at Figure 14 to Figure 13 below.

Figure 14: View looking north-west showing recent residential subdivision with maintained lawns and grassland managed in a minimal fuel condition. Excluded pursuant to clause 2.2.3.2 (f)(source: ERA Planning & Environment, 20.05.2024)

Figure 15: View of nearby property (Lot 1 Cole Street, Sorell), looking west. Grassland)(source: ERA Planning & Environment, 20.05.2024)

Figure 16: View of adjoining property (18 Clifton Drive, looking north. Excluded pursuant to clause 2.2.3.2 (f)(source: ERA Planning & Environment, 20.05.2024)

Exclusions – Low threat vegetation and non-vegetated areas Note 1 states the following vegetation may be assumed to be low threat vegetation if it meets the following criteria:

- *Minimal fuel condition means there is insufficient fuel available to significantly increase the severity of the bushfire attack, recognisable as short-cropped grass for example, to a nominal height of 100 mm).*

In summary:

- The hardstand of Clifton Drive, Arthur Highway, Nugent Road and associated road reserve and round-about intersection meet the criteria for a 'non-vegetated area' and 'low threat vegetation'.
- The land directly to the north of the proposed building area, on the opposite side of Clifton Drive, forms part of a residential subdivision with General Residential zoned lots with areas of less than 1000 m^2. As this area has recently been developed, this land is managed in a low threat condition. In accordance with Bushfire Hazard Advisory Note No. 1, parcels of land zoned General Residential, that

are less than 1,500 m^2 in area, are considered low threat vegetation for the purposes of the Director's Determination.

- All surrounding residential lots greater than 1500 m^2, within 100 m of the proposed building area, including 17 (CT 185546/99), 18 and 22 Clifton Road appear to be regularly managed in a low threat condition and for this reason can meet the 2.2.3.2(f) exclusion.

Group G Grassland (G)

There is only one type of vegetation within 100 m of the proposed building area which presents as bushfire-prone vegetation. This includes the large agricultural property to the south-east of the proposed building area (Lot 2 Arthur Hwy, CT 181116/2), on the opposite side of the Arthur Highway. An image of this site is provided at Figure 17 below.

Figure 17: View of grassland on agricultural property to the south-east of the site, on the opposite side of the Arthur Highway (source: ERA Planning & Environment, 20.05.2024)

Refer to Table 2 which shows the existing separation distances between proposed building area and bushfire-prone vegetation. The separation is also show in the site analysis at Figure 7.

Table 2: Existing separation distances between proposed building area and bushfire-prone vegetation

Lot Number	**North**	**South-East**	**South-West**	**East**
G: Grassland vegetation **LTV: Low threat vegetation**				
Proposed building area	0 - 100 m (LTV)	0 - 95m (LTV) 95 – 100 m (G)	0 – 100 (LTV)	0 – 100 m (LTV)
Exclusions (where applicable)	**Paragraph from clause 2.2.3.2**			
	(e) and (f)	(e) and (f)	(e) and (f)	(e) and (f)
Minimum separation distances from bushfire-prone vegetation				
BAL-LOW	>100m	>50 m (G)	>100m	>100m
BAL-12.5	N/A	22-<50 m	N/A	N/A
Effective slope under classified vegetation (clause 2.2.5)				

Effective Slope under the classified vegetation	0-5 degrees downslope	0-5 degrees downslope	0-5 degrees downslope	0-5 degrees downslope
Determination of Bushfire Attack Level (BAL)				
BAL value for each side of the building area	North N/A	South-East N/A	South-West N/A	East N/A

Based on the existing separation distances from classified vegetation being grassland, the building area on proposed Lot 1 is BAL-LOW and subsequently, no specific bushfire protection measures are required.

4 Bushfire-Prone Areas Code

4.1 Purpose of Code

The purpose of the Bushfire-Prone Areas Code (the code) is identified under clause C13.1 as follows:

> *The purpose of this Code is to ensure that use and development is appropriately designed, located, serviced and constructed to reduce the risk to human life and property and the cost to the community, caused by bushfire.*

In accordance with clause C13.2.1 the code applies to the following:

a. *subdivision of land that is located within, or partially within, a bushfire-prone area; and*

b. *A use, on land that is located within, or partially within, a bushfire-prone area, that is a vulnerable use or hazardous use.*

A vulnerable use is defined under C13.3.1 as:

> *Means a use that is within one of the following Use Classes:*
>
> a. Custodial Facility;
>
> b. *Educational and Occasional Care*;
>
> c. *Hospital Services;*
>
> d. *Residential if for respite centre, residential aged care home, retirement home, and group home.*

The childcare centre falls under the 'Educational and Occasional Care' use class and is a defined vulnerable use.

The closest bushfire threat to the proposed building area for the childcare centre development is the grassland area that is approximately 95 m to the south-east of the building area, resulting in a BAL rating of BAL-LOW due to the bushfire prone vegetation type being grassland (see Table 2.6 of AS 3959:2018). For this reason, there is no requirements for a Hazard Management Area (HMA) and there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures. Accordingly, the development can exempt from this code under clause C13.4.1(a) and no further assessment against the code is required.

Clause C13.4.1 states the following:

> *The following use or development is exempt from this code:*
>
> *(a) any use or development that the TFS or an accredited person, having regard to the objective of all applicable standards in this code, certifies there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures; and*
>
> *(b) adjustment of a boundary in accordance with clause 7.3 of this planning scheme*

The relevant objective for vulnerable uses is found under clause C13.5.1:

> *That vulnerable uses can only be located on land within a bushfire-prone area where tolerable risks are achieved through mitigation measures that take into account the specific characteristics of both the vulnerable use and the bushfire hazard.*

As established under the section 3 of this report, the nearest bushfire prone vegetation is grassland, which is over 50 m from the proposed use. Pursuant to Table 2.6, grassland, over 50 m away, is BAL – LOW. Accordingly, the vulnerable use is being located on land that is classified as being a bushfire-prone area, but under a site-specific analysis found to be a BAL LOW and therefore a tolerable level of risk is achieved without any specific bushfire mitigation measures required.

As an accredited person, having regard to the relevant objective, it has been determined that there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures and the development, as proposed, can exempt.

5 Building compliance

As there is considered insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, the future use and development is not required to meet any specific bushfire protection measures for building compliance.

6 Conclusion

The proposed development of a childcare centre (education and occasional care) is a defined vulnerable use within a bushfire-prone area.

The closest bushfire threat to the proposed building area for the childcare centre development is the grassland area located approximately 95 m to the south-east of the building area (a minimum of 50 m separation is required between the proposed building area and classified grassland vegetation), resulting in a BAL rating of BAL-LOW. As the minimum separation areas are met, there is an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures and accordingly, the development can exempt from the code under clause C13.4.1(a).

Appendix B Title details

RESULT OF SEARCH

RECORDER OF TITLES

Issued Pursuant to the Land Titles Act 1980

Tasmanian Government

SEARCH OF TORRENS TITLE

VOLUME	FOLIO
179906	1
EDITION	DATE OF ISSUE
1	15-Mar-2022

SEARCH DATE : 30-May-2024
SEARCH TIME : 02.09 PM

DESCRIPTION OF LAND

Town of SORELL
Lot 1 on Plan 179906
Derivation : Part of 980 Acres Gtd to Thomas Villeneuve Jean and Cornelius Driscoll
Prior CT 37576/1

SCHEDULE 1

C894147 TRANSFER to RICKY JOHN POLLEY and TINA ROBYN POLLEY Registered 03-Mar-2009 at 12.01 PM

SCHEDULE 2

Reservations and conditions in the Crown Grant if any
B229612 PROCLAMATION under Section 9A and 52A of the Roads and Jetties Act 1935
C894148 MORTGAGE to Westpac Banking Corporation Registered 03-Mar-2009 at 12.02 PM

UNREGISTERED DEALINGS AND NOTATIONS

E329477 DISCHARGE OF MORTGAGE C894148 Lodged by MURDOCH CLARKE on 17-Apr-2024 BP: E329477
N181559 TRANSFER to CLIFTON ARTHUR PTY LTD Lodged by MURDOCH CLARKE on 17-Apr-2024 BP: E329477
N190553 MORTGAGE to Murdoch Clarke Mortgage Management Limited Lodged by MURDOCH CLARKE on 17-Apr-2024 BP: E329477

OWNER: RICKY JOHN POLLEY
TINA ROBYN POLLEY

FOLIO REFERENCE: 37576/1

GRANTEE: Part of 980 Acres Gtd to T V Jean and C Driscoll, Town of SORELL.

PLAN OF TITLE

LOCATION: ~~LAND DISTRICT OF PEMBROKE~~ TOWN ~~PARISH OF~~ SORELL

CONVERTED BY PLAN No. D37576

COMPILED BY: VERIS AUSTRALIA PTY LTD

NOT TO SCALE LENGTHS IN METRES

REGISTERED NUMBER
P179906

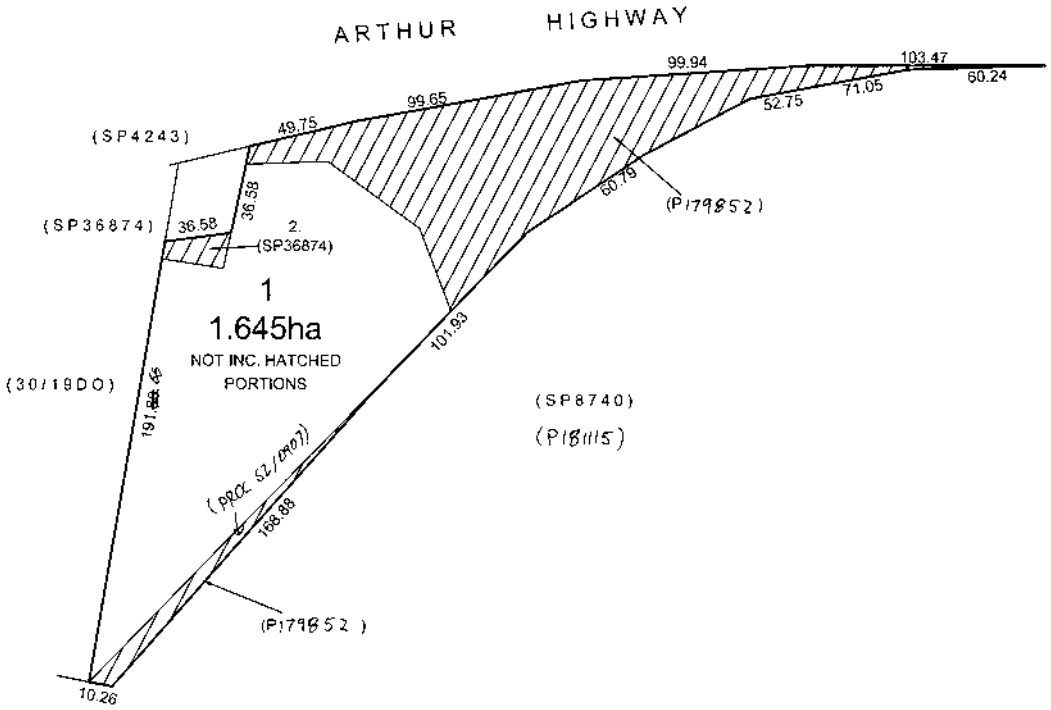
APPROVED 11 MAR 2022
Recorder of Titles

ALL EXISTING SURVEY NUMBERS TO BE CROSS REFERENCED ON THIS PLAN

SKETCH BY WAY OF ILLUSTRATION ONLY

'EXCEPTED LANDS'
LOT 2 SP36874 ~~(384m²)~~ (394m²)
P179852 (9471m²)
P179852 (793m²)

BALANCE PLAN



Appendix C Maintenance schedule confirmation – Department of State Growth

Sarah Silva

From: McQueen, Steve <Steve.McQueen@stategrowth.tas.gov.au>
Sent: Thursday, 12 October 2023 2:22 PM
To: jr.bushfireassessments@gmail.com; info stategrowth
Subject: RE: Maintenance schedule - Sorell Bypass

Hello James,
I can inform you that the regime for mowing these areas is a minimum of 2 cuts per year generally in November and February.
I hope this helps to inform you of your decision.

Kind regards,

Steve McQueen | Regional Team Leader – South
Maintenance Services, Asset Management | Department of State Growth
Level 2, 4 Salamanca Place, Hobart TAS 7000 | GPO Box 536, Hobart TAS 7001
Phone: 0499 973 604
www.stategrowth.tas.gov.au

From: jr.bushfireassessments@gmail.com <jr.bushfireassessments@gmail.com>
Sent: Monday, 9 October 2023 10:37 AM
To: info stategrowth <info@stategrowth.tas.gov.au>
Subject: Maintenance schedule - Sorell Bypass

Good morning,

I am just after some clarification as to how often (see below aerial images, highlighted red) these pieces of land are slashed/mowed near the Sorell Bypass?

I am undertaking a bushfire assessment of an adjacent property and if it is slashed regularly (as it appears so) I can lower the BAL rating, with written confirmation it is slashed a couple times per year.

I look forward to hearing back from you.

Kind regards

James Rogerson
Bushfire Practitioner – Accreditaed (scopes 1, 2 & 3B)
☎0488 372 283

Appendix D Planning certificate

BUSHFIRE-PRONE AREAS CODE

CERTIFICATE[1] UNDER S51(2)(d) *LAND USE PLANNING AND APPROVALS ACT 1993*

1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address:	24 Clifton Drive, Sorell
Certificate of Title / PID:	**CT 179906/1 with right-of-way access over CT 179852/2 and CT 50/4424.**

2. Proposed Use or Development

Description of proposed Use and Development:	Childcare Centre (Education and Occasional Care)
Applicable Planning Scheme:	Tasmanian Planning Scheme - Sorell

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Proposed Development Plans	Brown Falconer Architects	29.04.2024	V1
Bushfire Assessment Report	ERA Planning & Environment	30.05.2024	V1

[1] This document is the approved form of certification for this purpose and must not be altered from its original form.

4. Nature of Certificate

The following requirements are applicable to the proposed use and development:

☒	**E1.4 / C13.4 – Use or development exempt from this Code**	
	Compliance test	**Compliance Requirement**
☒	E1.4(a) / C13.4.1(a)	Insufficient increase in risk

☐	**E1.5.1 / C13.5.1 – Vulnerable Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.1 P1 / C13.5.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.1 A2 / C13.5.1 A2	Emergency management strategy
☐	E1.5.1 A3 / C13.5.1 A2	Bushfire hazard management plan

☐	**E1.5.2 / C13.5.2 – Hazardous Uses**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.5.2 P1 / C13.5.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.5.2 A2 / C13.5.2 A2	Emergency management strategy
☐	E1.5.2 A3 / C13.5.2 A3	Bushfire hazard management plan

☐	**E1.6.1 / C13.6.1 Subdivision: Provision of hazard management areas**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.1 P1 / C13.6.1 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.1 A1 (a) / C13.6.1 A1(a)	Insufficient increase in risk
☐	E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as 'balance')
☐	E1.6.1 A1(c) / C13.6.1 A1(c)	Consent for Part 5 Agreement

☐	**E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.2 P1 / C13.6.2 P1	***Planning authority discretion required. A proposal cannot be certified as compliant with P1.***
☐	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk
☐	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables

☐	**E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes**	
	Acceptable Solution	**Compliance Requirement**
☐	E1.6.3 A1 (a) / C13.6.3 A1 (a)	Insufficient increase in risk
☐	E1.6.3 A1 (b) / C13.6.3 A1 (b)	Reticulated water supply complies with relevant Table
☐	E1.6.3 A1 (c) / C13.6.3 A1 (c)	Water supply consistent with the objective
☐	E1.6.3 A2 (a) / C13.6.3 A2 (a)	Insufficient increase in risk
☐	E1.6.3 A2 (b) / C13.6.3 A2 (b)	Static water supply complies with relevant Table
☐	E1.6.3 A2 (c) / C13.6.3 A2 (c)	Static water supply consistent with the objective

5. Bushfire Hazard Practitioner

Name:	Clare Hester	**Phone No:**	0429 359 636
Postal Address:	125a Elizabeth Street, Hobart	**Email Address:**	clare@eraplanning.com.au
Accreditation No:	BFP – 149	**Scope:**	1, 2, 3A & 3B

6. Certification

I certify that in accordance with the authority given under Part 4A of the *Fire Service Act 1979* that the proposed use and development:

☐ Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or

☒ The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant **Acceptable Solutions** identified in Section 4 of this Certificate.

Signed:
certifier

Name: Clare Hester **Date:** 30/05/2024

Certificate Number: 2324-005 V1

(for Practitioner Use only)

era
PLANNING
& ENVIRONMENT

Contact us
ERA Planning & Environment
Level 1, 125A Elizabeth St *nipaluna* (Hobart) 7000
(03) 6165 0443
enquiries@eraplanning.com.au

eraplanning.com.au

Insert Appendix section or delete

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