AGENDA

UPPER SPENCER GULF REGIONAL ASSESSMENT PANEL

Tuesday 10 October 2023, Council Chamber, Whyalla City Council, Darling Terrace, Whyalla, commencing at 5pm.

AGENDA

UPPER SPENCER GULF REGIONAL ASSESSMENT PANEL

Notice is hereby given that a meeting of the Upper Spencer Gulf Regional Assessment Panel will be held on Tuesday 10 October 2023, Whyalla Council Chamber, Whyalla City Council, Darling Terrace, Whyalla, commencing at 5pm.

Jodie Perone
ASSESSMENT MANAGER
5 October 2023

1. Welcome – Stewart Payne, Presiding Member

2. Present

3. Apologies

4. Confirmation of Minutes

That the minutes of meeting held on 5 September 2023 be received and adopted.

5. Business Arising from the Previous Minutes

6. Conflict of Interest Declarations

7. Hearing of Representations – Planning, Development and Infrastructure Act applications

Refer 8.2 – Representor wishes to be heard.

8. Officer Reports

8.1.1 Representor does not wish to be heard.

8.2 Development Application 22041021 Page 257

Variation to Development Application 850/101/20 for changes to originally approved structure.

8.2.1 Representator address the Panel.

8.2.2 Applicant response to the Panel.

9. Other business

9.1 USGRAP Annual Report – 2002-2023 Page 275

For information only.

10. Close

DEVELOPMENT NO.:	23012328
APPLICANT:	John Cerchi
ADDRESS:	56 Quorn Rd, Stirling North SA 5710
NATURE OF DEVELOPMENT:	Child care centre (89 places), landscaping, car park, fencing, outbuilding and new wastewater disposal system
ZONING INFORMATION:	**Zones:** • Neighbourhood **Overlays:** • Affordable Housing • Hazards (Flooding - Evidence Required) • Key Railway Crossings • Native Vegetation • Urban Transport Routes **Relevant Technical Numeric Variations (TNVs):** • Maximum building height is 8m and 2 levels
LODGEMENT DATE:	28 Jun 2023
RELEVANT AUTHORITY:	Regional Assessment Panel at Upper Spencer Gulf Regional Assessment Panel
PLANNING & DESIGN CODE VERSION:	Version 2023.8 – 15/06/2023
CATEGORY OF DEVELOPMENT:	Code Assessed - Performance Assessed
NOTIFICATION:	Yes – 1 in support with some concerns
RECOMMENDING OFFICER:	Joshua Skinner Planning Consultant (Port Augusta City Council)
REFERRALS STATUTORY:	• Commissioner of Highways (COH) • Environment Protection Authority (EPA)
REFERRALS NON-STATUTORY:	• Wastewater (Mr Isireli Koyamaibole) • Engineering (Ms Janine Hugo)

CONTENTS:

1.0 DETAILED DESCRIPTION OF PROPOSAL:

This application is for a child care facility ("facility"), landscaping, car park, fencing, outbuilding and an on-site wastewater disposal system.

The facility will be single storey (max 5m high) with a floor area of about 649m^2, comprising 6 main rooms for child care, separate bathrooms for staff and children, plus other 'ancillary' staff areas such as a reception, laundry, lunch room, kitchen, meeting room and an office.

It will be supported by a 563m^2 on-site wastewater disposal area which will be fenced off from the remainder of the site, 640m^2 of outdoor play areas and a 26-space car park positioned at the front of the site. The outdoor play areas will feature shade sails, play equipment (slides, swings, towers etc), sand pits, lawn, gardens and 'nature play' items such as logs and steps.

A small garden shed will be accessed via the play area, being 7m^2, 2m high, with a "Monument" finish. Timber paling boundary fencing at 2.4m high is proposed to side and rear property boundaries. Open aluminium blade fencing at 1.2m high is proposed for the front boundary.

The following operational characteristics are proposed for the facility:

- A maximum daily capacity of 89-places.
- It will provide care for children aged 0 to 5 years.
- The applicant confirmed there will be no outdoor music (I understand this refers to playing of pre-recorded music through speakers, as the outdoor play area will have "music pipe" play equipment).
- Rubbish will either be collected by Council from the kerbside, or by a private contractor entering the property. In relation to private collection, the applicant provided turning paths demonstrating 10m waste collection vehicles will be able to enter and exit the land in a continuous forward motion, and the acoustic consultant recommended that private waste collection is restricted to 9am-7pm on Sundays and public holidays, and 7am-7pm on any other day.
- Vehicles must not use car parking spaces 1 to 7 (inclusive) prior to 7:00am, to manage noise spill.

The application does not include advertisements or retaining walls exceeding 1m high.

Image 1 - Streetscape Appearance

2.0 SUBJECT LAND & LOCALITY:

2.1 Land Description:

The address of this site is 56 Quorn Road, Stirling North. It comprises 1 allotment in CT 5706/123. There are no easements or encumbrances registered to the title.

The site has an irregular shape, with a frontage of 39.2m to Quorn Road and an area of 2862m^2.

The land is vacant, although it may have been used as part of broad acre farming or grazing prior to the surrounding area being developed.

The land now primarily contains what appears to be low-lying weedy vegetation. The applicant has supplied a declaration confirming native vegetation clearance is not proposed. The land surface is generally pervious and falls slightly toward the rear boundary.

2.2 Locality

The locality primarily contains detached dwellings on large allotments, with the exception of a cabin park about 65m west, the Stirling North Supermart and fuel outlet diagonally opposite the site on Quorn Road.

Quorn Road is state maintained, with a daily two-way traffic volume of 3600 vehicles. In addition a rail corridor (including a stormwater swale) abuts the rear boundary of the site.

2.3 Zoning

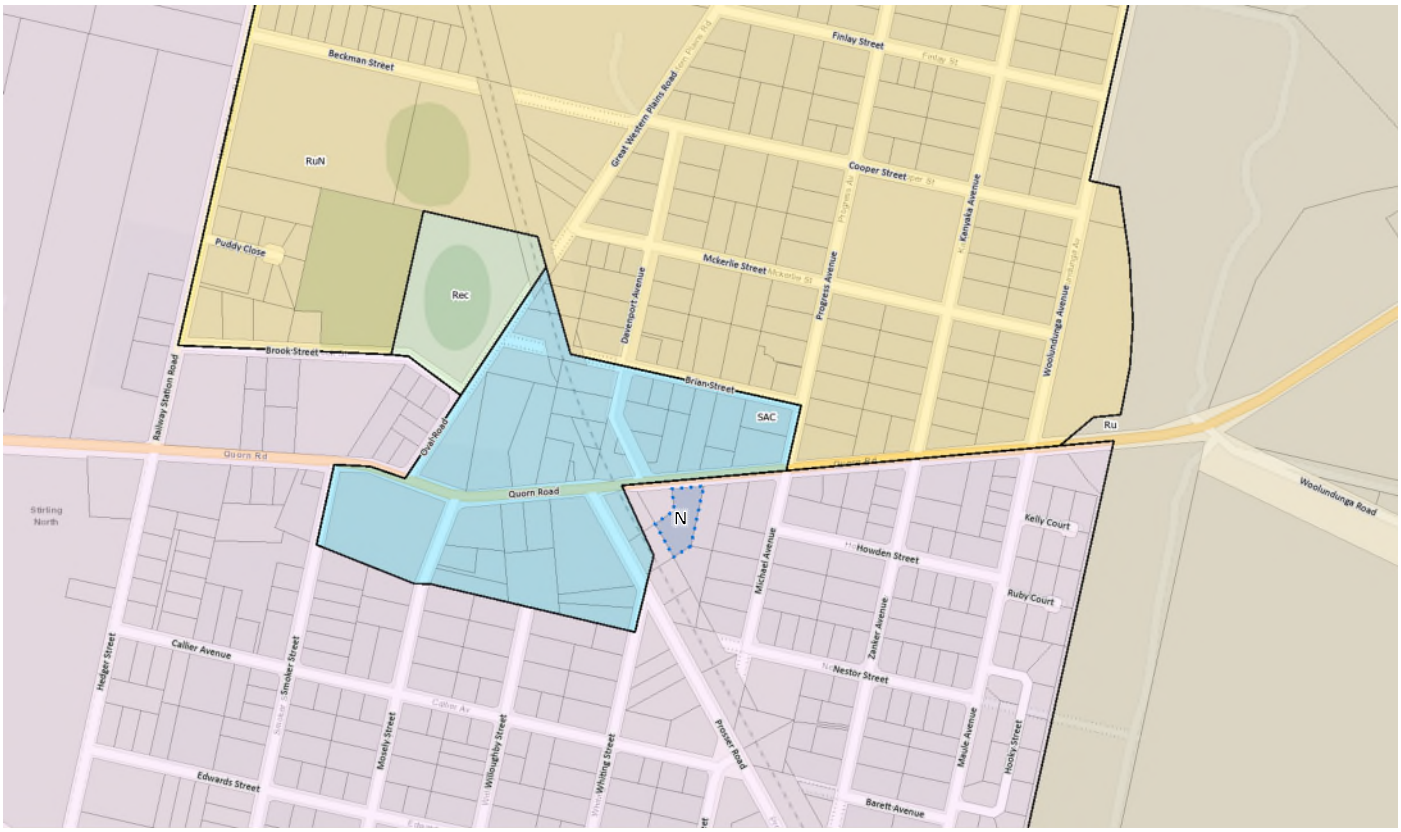
The site is located in the Neighbourhood Zone of the Planning and Design Code (the Code). The Suburban Activity Centre Zone is on the other side of Quorn Road and the railway corridor. These Zones are labelled “N” and “SAC” respectively in Images 3 and 4. For reference, the SAC Zone anticipates “neighbourhood-scale shopping, business, entertainment and recreation facilities to provide a focus for business and community life”.

Image 2 – View from Quorn Road

Image 3 – Aerial Imagery (with Zone Boundaries)

Zone boundaries & abbreviations / Allotment Boundaries / Subject Land / R1 Representor

Image 4 – Zoning Map



3.0 PROCEDURAL MATTERS:

3.1 Relevant Authority

The Upper Spencer Gulf Regional Assessment Panel is the relevant authority as this involves a Performance Assessed Development which was notified and received a representation.

3.2 Consent Required

Planning Consent.

3.3 Category of Development

Element	Category / Pathway	Reason
Outbuilding	Code Assessed - Performance Assessed	The application is “Performance Assessed” by default. The proposed elements are not classified as "Restricted Development", nor do they satisfy the "Accepted" or "Deemed to Satisfy" Criteria. Only shops exceeding 1000m^2 are classified as Restricted Development in this Zone
Fences	Code Assessed - Performance Assessed	
Child care facility	Code Assessed - Performance Assessed	

4.0 PUBLIC NOTIFICATION

4.1 Reason for Notification

Development identified within Column A of Zone Table 5 is exempt from public notification, subject to the conditions/exceptions listed in Column B.

This application required public notification because child care facilities / centres and preschools are not listed as an exemption under Column A.

4.2 Representation

One representation was received during the notification period which supported the development with some concerns, as summarised in the table below. The representor’s property is nearly directly opposite the site, as shown earlier in Figure 3.

No.	Name & Address	Comments	To be heard
1	Josie Polard 43 Quorn Road, Stirling North	• We do not have any objections to the centre but our concerns are with the parking. • Quorn Road is a busy road and at times it can be difficult getting out of our driveway especially if there is a car parked out the front as we cannot see cars coming from the railway line side. • our concerns are that if cars are parked out the front for long periods (perhaps Hours) not only do we have trouble exiting our driveway but also when our rubbish is collected and the street sweeper comes.	No

4.3 Applicant's Response

The architect's letter dated 14/8/23 responded to the concerns regarding on-street parking by stating the development "exceeds the minimum car parking requirements" and "the car park has also been designed using separate entry and exit with a continuous aisle to assist with any potential traffic congestion to the surrounding area".

I am satisfied that the development provides sufficient on-site parking and traffic conditions, which minimise any impact upon the representor's access and egress.

5.0 AGENCY REFERRALS

5.1 Agency Referrals

The attached agency referrals are summarised below. Both agencies have the power of "Direction".

Agency	Reason for Referral	Comments (abbreviated)
Commissioner of Highways (COH)	The proposal involves the creation of new access points onto a State Maintained Road (per Urban Transport Routes Overlay)	• No objection, with comments • Quorn Road is a Freight and Tourist Route, carrying 3600 vehicles per day with 13.5% being commercial. • The Department is supportive of the proposal, with access points sufficiently separated from the rail crossing and retail fuel outlet to minimise potential conflict. • It is noted that low lying power lines across the frontage of this development may create issues for waste collection trucks accessing the site. • Heavy vehicles parking on the eastern side of the Quorn Road opposite the service station may create sightline issues for motorists exiting the site. Council should consider installing parking restrictions to address this issue.
Environment Protection Authority (EPA)	The proposal involves a change to a more sensitive land use on a site which may be contaminated as a result of a Class 1 Activity - in particular, as a result of the adjacent service station (per Part 9.1 of the Code and Schedule 9 of the PDI Regulations).	• No objection, with comments (and conditions) • The EPA considered the PSI submitted with the application (prepared by Greencap, dated June 2023). • The EPA notes the site has been vacant or open space since the 1950s. No potentially contaminating activities were identified on the site. A service station and railway line are adjacent. The PSI indicated there was no need for intrusive investigations at this point in time. • The EPA is satisfied that the site could be made suitable for the proposed use subject to the following condition. • Condition 1 provides "A certificate of occupancy must not be granted in relation to a building on the relevant site until a statement of site suitability is issued by a site contamination consultant certifying the land is suitable for the proposed use."

In relation to the COH's comments:

- The applicant has agreed to provide a pedestrian connection (including a pedestrian ramp) between the site and the footpath on the other side of Quorn Road. Advice prepared by the applicant's traffic consultant (CIRQA) suggests that a "higher order" treatment such as a pedestrian refuge or wombat crossing in not warranted given the low volume of pedestrians and vehicles in this location.

- I recommend attaching an advisory note to any Planning Consent. This note suggest the applicant contacts SAPN or the Technical Regulator to discuss the potential issue with waste collection vehicles passing under the power lines. I suspect this is a non-issue however as waste collection trucks typically have a travel clearance height of about 4m or less whereas the powerlines appear to be 5m-6m above the ground (for reference, the lines are well above the adjacent, recently constructed dwelling as shown below).

Image 5 – Note the height of the powerlines relative to the dwelling on adjoining land

5.2 Internal Referrals

The application was referred to Council's Engineer and Environmental Health Officer.
Council's Engineer (Janine Hugo) generally supports the development in respect to traffic and stormwater matters, including the provision of a pedestrian crossing place in front of the site, and controlled drainage of stormwater to the swale over the rear boundary.

The Engineer has recommended that the car park be fitted with a lighting in accordance with the Pedestrian Area Lighting Standard AS 1158.3.1-2020 (as conditioned).

The Engineer also suggested an additional accessible car parking space (2 total), to satisfy AS 2890.6. This has been referenced within the suggested conditions, although this is typically dealt with as part of the Building Consent assessment. If necessary, Space 22 can accommodate an additional accessible space without affecting the total supply of car parking.

Council's Environmental Health Officer requested lodgement of a wastewater disposal application. The application was subsequently lodged to, and approved by, SA Health – as it is responsible for assessing systems with an organic capacity exceeding 40EP (effective persons).

6.0 PLANNING ASSESSMENT

The application has been assessed against the relevant provisions of the Planning & Design Code (Code).

6.1 Overlays

Overlay	Key Policies	Assessment
Affordable Housing	DO 1: Affordable housing is integrated with residential and mixed use development. PO 1.1: Development comprising 20 or more dwellings / allotments incorporates affordable housing.	Not applicable – the application does not involve any new dwellings
Hazards (Flooding – Evidence Required)	DPF 1.1: Habitable buildings, commercial and industrial buildings, and buildings used for animal keeping incorporate a finished floor level at least 300mm above (a) the highest point of top of kerb of the primary street or (b) the highest point of natural ground level at the primary street boundary where there is no kerb.	This Overlay is satisfied. The road verge in front of the site has a high point of 32.57 where the FFL of the facility is 300mm higher, at 32.870.
Key Railway Crossings	DPF 1.1 Development does not involve a new or modified access or cause an increase in traffic through an existing access that is located within the following distance from a railway crossing:… (f) 60 km/h road – 70m.	This Overlay is satisfied. The nearest proposed crossover (exit point) is 74.7m to the railway crossing (per CIRQA Sheet #01_SH03), which satisfies DPF 1.1(f) based on the posted speed limit of 60km/h.
Native Vegetation	DO 1: Areas of native vegetation are protected, retained and restored in order to sustain biodiversity, threatened species and vegetation communities, fauna habitat, ecosystem services, carbon storage and amenity values.	This Overlay is satisfied as the applicant declared that the development does not involve native vegetation clearance (consistent with my observations of the site).
Urban Transport Route	DO 1: Safe and efficient operation of Urban Transport Routes for all road users. PO 1.1: Access is designed to allow safe entry and exit to and from a site to meet the needs of development and minimise traffic flow interference associated with access movements along adjacent State maintained roads.	This Overlay is satisfied based on the supporting comments provided by COH. While the development will have 2 crossovers, they are well separated from each other and other potential conflict sources. Their separation also allow traffic to flow through the site, minimising congestion. All vehicles will enter and exit the land in a forward direction. The impact upon Quorn Road is considered to be low/acceptable in my view.

6.2 Land Use

While the Zone seeks “predominantly” residential development, childcare facilities are expressly envisaged by Zone DPF 1.1(b).

The other relevant Zone provisions seek:

PO 1.1 *Predominantly residential development with complementary non-residential uses that support an active, convenient, and walkable neighbourhood.*

PO 1.2 *Commercial activities improve community access to services are of a scale and type to maintain residential amenity.*

PO 1.1 is inherently satisfied as the corresponding DPF is met. In any event, the proposed land use is "complementary" in that it has low external impacts and its hours of operation suit a residential locality (as the facility will not operate in evenings or on weekends). The proposal also "support an active, convenient, and walkable neighbourhood" in that it provides increased activity within the locality during the daytime, and improves the access and availability of child care services in the local area.

The scale and impact of the land use preserves the amenity of surrounding residents in my view. An 89-place facility is relatively typical, and in fact my experience is that larger facilities can successfully co-exist near dwellings. Interface impacts are discussed in more detail below.

Finally, the site is considered to be well suited to the proposed land use given its frontage to an arterial road, its irregular shape which does not lend itself to conventional residential development, and its close proximity to the 'centre' of Stirling North.

6.3 Interface Between Land Uses

Interface Between Land Uses (IBLU) DO 1 seeks for development to be located and designed to mitigate adverse impacts to and from surrounding land uses in terms of overshadowing, noise, vibrations, air quality, operating hours and light spill.

My assessment of these matters follows:

- The development will result in negligible overshadowing of other land, as the proposed building will be single storey and set back 5m or more from property boundaries. IBLU PO/DPF 3.1-3.3 are satisfied.

- The applicant has supplied an Environmental Noise Assessment prepared by Sonus which confirms that noise emissions will comply with the Environment Protection (Noise) Policy, per DPF 4.1. Sonus recommends that private contractor waste collection avoids sensitive time periods; airtight 2.4m high timber/pine paling fences is established along the boundaries where shown within the architectural drawings; and car parking spaces 1 to 7 are not used prior to 7:00am. The methodology and findings of the Sonus report appear reasonable in my view.

- I anticipate only a small number of children will generally arrive and be kept inside the building between 6:30am and 7:00am. Noise impacts during this time will be mitigated by restricting the use of car parking spaces 1 to 7. The proposed operating hours are reasonable overall in my view.

- A child care facility is unlikely to cause vibration or air quality impacts in my view. Only a small kitchen of domestic size/function is proposed. The largest vehicle to enter the site will be a 10m waste collection truck.

- PO 4.2 seeks for the functional requirements of development to be designed and sited to not "unreasonably impact the amenity of adjacent sensitive receivers". I consider this policy to be satisfied. Noise spill from the plant, equipment and the sump pump is mitigated as these items are sited at ground level, set back from boundaries, and behind 2.4m high airtight timber paling fencing. These items are also screened from public view. The driveway has also been designed to allow delivery and waste collection vehicles to travel continuously forward through the site, minimising the noises and alarms associated with reversing vehicles.

- The facility will not overlook other land as it is single storey, on flat ground and generally fenced along side and rear boundaries.

- My view is that child care facilities are compatible with residential environments in principle, which is supported by the fact that such facilities are expressly anticipated in this Zone. Further to this, the proposal has been "designed to minimise adverse impacts" as it has a moderate capacity at 89-places, a single storey building scale, generous boundary setbacks, and a driveway that enables waste collection vehicles to travel in a continuous motion through the site (per PO 1.2).

6.4 Setbacks, Design, Appearance & Landscaping

The main building will have an eastern side setbacks of 5m, a western side setback of 8.7m, a rear setback of 12.5m and a front setback of about 30m.The proposed setbacks comfortably comply with:

- Zone DPF 5.1, which suggests front setback should be inline with adjoining properties at a minimum.

- Zone DPF 8.1, which suggests a minimum side setback of 1.9m.

- Zone DPF 9.1, which suggests a minimum rear setback of 4m.

- Zone DPF 7.1 which allows buildings to be built on one side boundary, whereas the proposed main building is comfortably set back from all boundaries.

The proposed site coverage of about 23% complies with DPF 3.1, which provides a maximum of 60%. The proposed building height of 1 storey / 5m maximum complies with Zone DPF 4.1, which provides maximums of 2 levels / 8m.

The facility will have a simple but contemporary external appearance featuring a 5-degree skillion roof to a peak height of 4.97m, vertical "James Hardie Axon" wall cladding in white, with a rendered band of walling situated below that cladding. The form, scale and materials of the proposed building are sympathetic to residential/domestic buildings in the locality. This satisfies Zone PO 1.4 which seeks

> *PO 1.4: Non-residential development sited and designed to complement the residential character and amenity of the neighbourhood.*

Notwithstanding the above, its architecture conveys its civic/community purpose so the development is unlikely to be confused as a dwelling. The entrance directly faces the street and is highlighted by the front verandah and an access path that connects to the front boundary. This aspect of the proposal satisfies Design PO 1.3 which states:

> *PO 1.3 Building elevations facing the primary street (other than ancillary buildings) are designed and detailed to convey purpose, identify main access points and complement the streetscape.*

Any retaining required as part of this development will not exceed 1m in height and therefore does not constitute "development" in its own right.

The proposed 2.4m high timber paling boundary fencing maintains visual and acoustic privacy without unreasonably affecting the visual outlook and sunlight access of neighbouring properties. This satisfies Design PO 9.1 which states:

> *PO 9.1 Fences, walls and retaining walls are of sufficient height to maintain privacy and security without unreasonably impacting the visual amenity and adjoining land's access to sunlight or the amenity of public places.*

The bin storage and plant/equipment areas will be screened from public view. Additional landscaping and tree planting was provided at the front of the site to soften the appearance of the development (particularly the car park). A significant amount of landscaping is proposed behind the building line.

PO 1.5 *The negative visual impact of outdoor storage, waste management, loading and service areas is minimised by integrating them into the building design and screening them from public view (such as fencing, landscaping and built form), taking into account the form of development contemplated in the relevant zone.*

PO 3.1 *Soft landscaping and tree planting are incorporated to:*
(a) *minimise heat absorption and reflection*
(b) *maximise shade and shelter*
(c) *maximise stormwater infiltration*
(d) *enhance the appearance of land and streetscapes*

6.5 Traffic, Access and Parking

Council's Engineer and the COH have endorsed the proposed access and car parking arrangements as detailed earlier in this report.

In addition, I confirm that:

- The development is provided with sufficient car parking. Transport Access and Parking Table 1 suggests a car parking rate of 1 space per 4 children which equates to a theoretical parking demand of 23 spaces for this development, while 26 spaces are proposed.

- The proposed car parking spaces are a minimum 2.6m wide and 5.4m long (including a small number of 4.8m long space with access to 600mm of overhang).

- The development is well integrated with the existing transport system per Transport Access Parking (TAP) PO 1.1, being on an arterial road and within a residential catchment area.

- The development does not promote industrial or commercial vehicle movements through "residential streets" per TAP PO 1.2.

- The layout of the car park facilitates forward facing access and egress. The loading, unloading and turning of all traffic therefore avoids interrupting the of traffic and pedestrians per TAP 1.4.

- Although the path of the waste collection vehicle is not separated from the passenger vehicle parking area per TAP PO 1.3, the turning paths demonstrate that the waste collection vehicle can still move through the site even if the car park is full. In reality, I suspect that it is in the operator's own interest to arrange for collection to occur outside of peak business hours (eg middle of the day or between 6pm-7pm).

- Traffic movements associated with this activity will peak from approximately 7am-9am for morning drop off, and 4pm-6pm for afternoon pick up. Such movements will coincide with peak traffic flows in the surrounding road network and will not dramatically alter the character or amenity of the locality.

6.6 Other Matters

The proposed outbuilding and fencing are considered to be relatively minor and acceptable forms of development, with low visual and external impacts.

The applicant has provided a PSI and site contamination declaration which has satisfied the EPA subject to a site suitability statement being provided before occupancy. This will ensure the land "is suitable for use when land use changes to a more sensitive use" (Site Contamination PO 1.1).

7.0 CONCLUSION

The proposal represents an envisaged land use, in an appropriate location, which is architecturally designed, contextually responsive, well landscaped, with sufficient car parking and of low impact to surrounding land which is primarily residential.

The EPA, COH and Councils Engineer have endorsed the proposal in relation to site contamination, traffic, access, car parking and stormwater matters.

One representation was received, however their concern was limited to the potential for parked vehicles to block their driveway. The proposed should not exacerbate this problem however as it provides more car parking than suggested by the Code.

8.0 RECOMMENDATION

It is recommended that the Upper Spencer Gulf Assessment Panel resolves that:

1. Pursuant to Section 107(2)(c) of the Planning, Development and Infrastructure Act 2016, and having undertaken an assessment of the application against the Planning and Design Code, the application is NOT seriously at variance with the provisions of the Planning and Design Code; and

2. Development Application Number 23012328, by John Cerchi is granted Planning Consent subject to the following reasons/conditions/reserved matters:

CONDITIONS

Planning Consent

Conditions imposed by Regional Assessment Panel

Condition 1
The development granted Planning Consent shall be undertaken and completed in accordance with the stamped plans and documentation, except where varied by conditions below (if any).

Condition 2
Except in relation to waste collection, the approved operating hours are as follows:
- Monday to Friday: 6:30am to 6:00pm on the same day.

Condition 3
Waste (refuse) collection by a private contractor must be limited to the following hours, in accordance with the Environmental Noise Assessment prepared by Sonus:
- Sundays and Public Holidays: 9:00am to 7:00pm on the same day.
- Any other day: 7:00am to 7:00pm on the same day.

Condition 4
Vehicles must not park within car parking spaces 1 to 7 (inclusive) prior to 7:00am, in accordance with the Environmental Noise Assessment prepared by Sonus. As shown on the site plan, the developer must provide signage to car parking spaces 1 to 7 that states “No Parking Before 7am” (or similar).

Condition 5
Waste (refuse) collection by a private contractor must be contained entirely within the boundaries of the subject site. Private contactors must not collect waste from bins presented outside the subject site or at the side of the road.

Condition 6
In accordance with the applicant’s undertaking (as confirmed in the letter prepared on their behalf by CIRQA dated 14/09/2023), the applicant must provide a footpath from the site into the southern verge of

Quorn Road, and a corresponding pedestrian ramp and footpath connection on the northern side of Quorn Road.

Condition 7
The pedestrian ramp, footpath alterations and vehicle crossing places must be suitably documented by the applicant or developer, and submitted to Council for separate approval under the Local Government Act. This work must be completed at no cost to Council, prior to the commencement of the land use.

Condition 8
All car parking, driveways and vehicle manoeuvring areas shall be set out and delineated in accordance with Australian Standards (including any requirement for additional accessible car parking under AS 2890.6).

Condition 9
The development shall incorporate landscaping comprising native trees and shrubs, located within the boundaries of the allotment, and maintained in good condition at all times, to the reasonable satisfaction of Council.

Condition 10
Stormwater from at least 60% of the roof area must be directed to a combined retention and detention tank with a total capacity of 6000L, with 1000L plumbed into the building. Any stormwater overflow from the site must be directed to the surrounding stormwater network, not exceeding the rate of pre-development stormwater flows. Stormwater from the subject site shall not be discharged over any footpath. The stormwater system associated with this development must be maintained in good condition at all times, including any outlets, the headwall and scour protection.

Condition 11
The development must be serviced by an on-site waste water treatment system which:
- Is wholly located and contained within the allotment of development it will service;
- Will comply with the requirements of the South Australian Public Health Act 2011 and the South Australian On-site Wastewater Systems Code; and
- Is approved by the relevant authority.

Condition 12
The car park must incorporate low-height bollard lighting or similar which conforms with Table 2.5 of AS 1158.3.1-2020 (Pedestrian Area Lighting Standard). Such lighting must be baffled and directed in a manner so that it does not unreasonably spill into adjacent land.

Conditions imposed by Commissioner of Highways under Section 122 of the Act

Condition 13
All access to/from the development shall be gained in accordance with the site plan produced by SMFA, Job No. 22115, Drawing No. SK101, dated 25.7.2023

Condition 14
The access point/s shall be constructed in concrete extending from the property boundary to the edge of the road seal in order to maximise traction for vehicles exiting the site and minimise debris being dragged onto the carriageway. The access points shall incorporate generous flaring.

Condition 15
Clear sightlines, as shown in Figure 3.3 ‘Minimum Sight Lines for Pedestrian Safety’ in *AS/NZS 2890.1:2004*, shall be provided at the property line to ensure adequate visibility between vehicles leaving the site and pedestrians on the adjacent footpath.

Condition 16
All vehicles shall enter and exit the site in a forward direction. The largest vehicle permitted on-site shall be restricted to a 10m refuse vehicle.

Condition 17
The entry and exit points shall be suitably signed and line-marked to reinforce the desired traffic flow.

Condition 18
Stormwater run-off shall be collected on-site and discharged without impacting the safety or integrity of the adjacent road. In addition, longitudinal drainage of the adjacent road shall be maintained (including any required trafficable headwalls) adjacent and across the access to minimise the impact on the integrity and safety of the adjacent road network. Any alterations to the road drainage infrastructure required to facilitate this shall be at the applicant's expense.

Conditions imposed by Environment Protection Authority under Section 122 of the Act

Condition 19
A certificate of occupancy must not be granted in relation to a building on the relevant site until a statement of site suitability is issued by a site contamination consultant certifying the land is suitable for the proposed use.

ADVISORY NOTES

Planning Consent

Advisory Notes imposed by Regional Assessment Panel

Advisory Note 1
Within its referral advice, the Commission of Highways states "low lying power lines across the frontage of this development may create an issue for waste collection trucks accessing the site. This may need to be reviewed." It is recommended that you discuss this potential issue with SA Power Networks and/or the Office of the Technical Regulator.

Advisory Note 2
It is the responsibility of the applicant / developer to obtain all other necessary consents and easements (at no cost to Council), including (but not limited to) the consent of the Australian Rail Track Corporation Ltd to construct the stormwater outlet within the railway corridor.

Advisory Note 3
No work can commence on this development unless a Development Approval has been obtained. If one or more consents have been granted on this Decision Notification Form, you must not start any site works or building work or change of use of the land until you have received notification that Development Approval has been granted.

The applicant has a right of appeal against in relation to any decision or conditions imposed in relation to this Planning Consent. Such an appeal must be lodged at the Environment, Resources and Development Court within two months from the day of receiving this notice or such longer time as the Court may allow. The applicant is asked to contact the Court if wishing to appeal. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide 5000 (telephone number 8204 0289).

This consent or approval will lapse at the expiration of 2 years from its operative date, subject to the below or subject to an extension having been granted by the relevant authority.

Where an approved development has been substantially commenced within 2 years from the operative date of approval, the approval will then lapse 3 years from the operative date of the approval (unless the development has been substantially or fully completed within those 3 years, in which case the approval will not lapse).

The proposed development shall be undertaken in accordance with the plans and information submitted unless otherwise specified as a condition of consent.

Advisory Notes imposed by Environment Protection Authority under Section 122 of the Act

The applicant/owner/operator are reminded of its general environmental duty, as required by section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that activities on the site and associated with the site (including during construction) do not pollute the environment in a way which causes or may cause environmental harm.

OFFICER MAKING RECOMMENDATION
Name: Joshua Skinner
Title: Planning Consultant / Assistant Community Planner
Date: 3 October 2023

SMFA

STIRLING NORTH CHILDCARE
22115

56 Quorn Road Stirling North SA 5710

14/09/2023

1 LOCATION PLAN
Scale 1:200

SUBJECT SITE

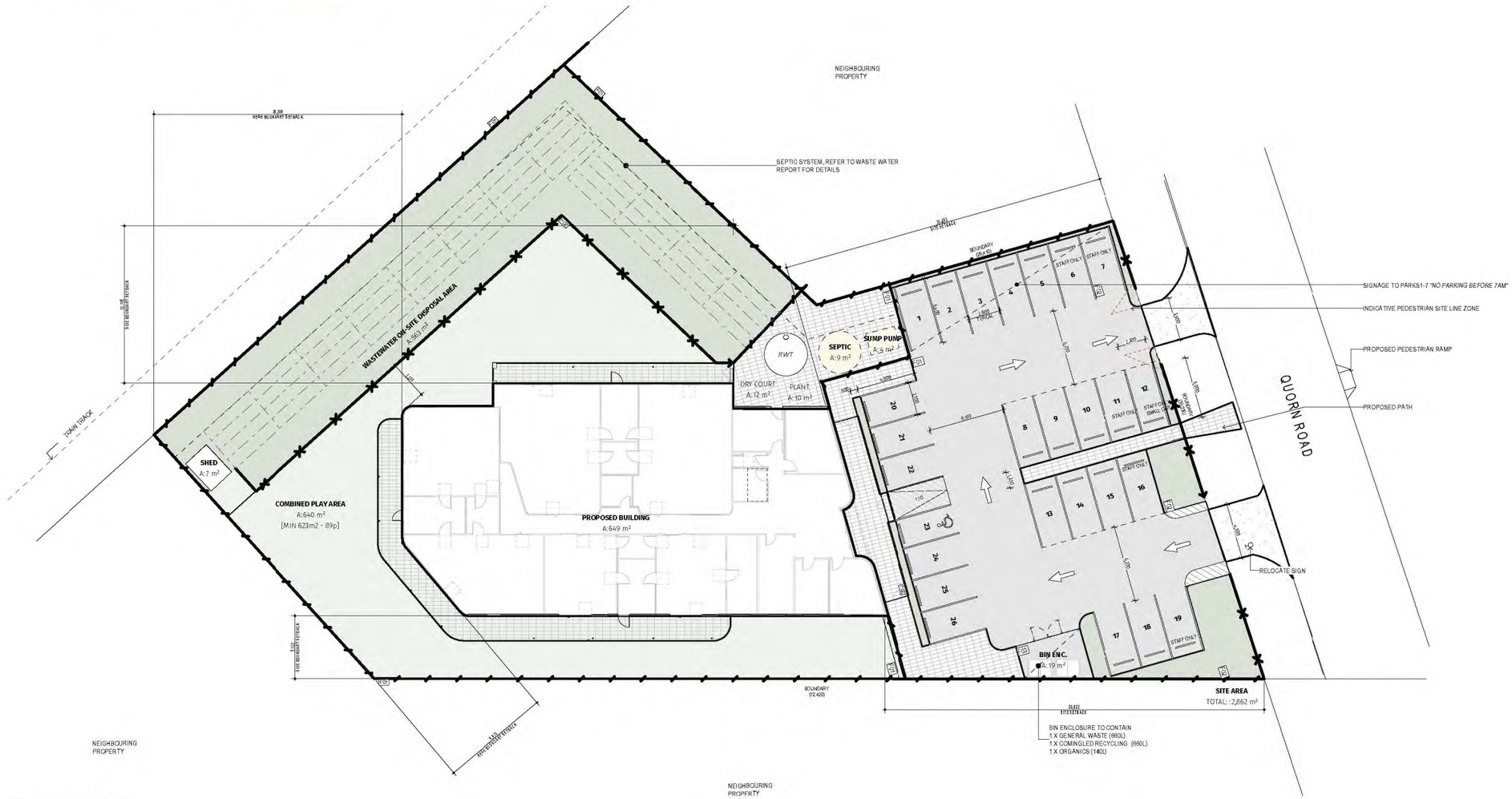
BUILDING AREA SCHEDULE

	AREA m2
BUILDING	649
PLAY	640
SHED/OTHER [EXTERNAL]	48
WASTEWATER [SOAKAGE]	563
WASTEWATER [UNITS]	13
	1,913 m²

SITE PLAN LEGEND

- EXISTING BOUNDARY LINE
- LANDSCAPING - REFER TO LANDSCAPING PLAN
- EXISTING TREES
- NEW TREES - REFER TO LANDSCAPING PLAN
- EXISTING CORRUGATED FENCE
- EXISTING FENCE
- F01 TIMBER / PINE PALING FENCING HEIGHT | 2400M
- F02 OPEN ALUMINIUM BLADE FENCING COLOUR | BLACK HEIGHT | 1200M
- F03 HORIZONTAL ALUMINIUM SLAT FENCING COLOUR | BLACK HEIGHT | 2400M
- LP LIGHT POLE

ABESCO SHEDS 3000m x 2260m x 2000m MONUMENT PREMIER DOUBLE DOOR GARDEN SHED



5 SITE AND DEMOLITION PLAN
1:200

Job:	STIRLING NORTH CHILDCARE 56 Quorn Road Stirling North SA 5710
	S M F A
Title:	SITE PLAN
Date:	1:200 @ A1
Drawn:	CB
Date:	14/09/2023
Approved:	SXD
Job No.:	22115
Dwg No.:	SK101
Dwg Issue:	04 - WIP

1 LOCATION PLAN
Scale 1:200

SUBJECT SITE

BUILDING AREA SCHEDULE

	AREA m2
BUILDING	649
PLAY	640
SHED/OTHER[EXTERNAL]	48
WASTEWATER[SOAKAGE]	563
WASTEWATER[UNITS]	13
	1,913 m²

SITE PLAN LEGEND

- EXISTING BOUNDARY LINE
- LANDSCAPING - REFER TO LANDSCAPING PLAN EXISTING TREES
- NEW TREES - REFER TO LANDSCAPING PLAN
- EXISTING CORRICATED FENCE
- EXISTING FENCE
- F01 TIMBER / PINE PALING FENCING HEIGHT | 2400M
- F02 OPEN ALUMINIUM BLADE FENCING COLOUR | BLACK HEIGHT | 1200M
- F03 HORIZONTAL ALUMINIUM SLAT FENCING COLOUR | BLACK HEIGHT | 2400M
- LP LIGHT POLE

ABESCO SHEDS 3.000m x 2.260m x 2.000m MONUMENT PREMIER DOUBLE DOOR GARDEN SHED

5 SITE AND DEMOLITION PLAN
1:200

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

S M F A

SITE PLAN
1:200 @ A1 | CB
14/09/2023 | SKD
22115 | SK101 | 04

TOTAL AREA

	AREA m2
ADMIN	84
AMENITIES	89
CARE	339
OTHER [INTERNAL]	72
PLAY	640
SHED/OTHER [EXTERNAL]	48
	1,272 m²

2 GROUND FLOOR
1:100

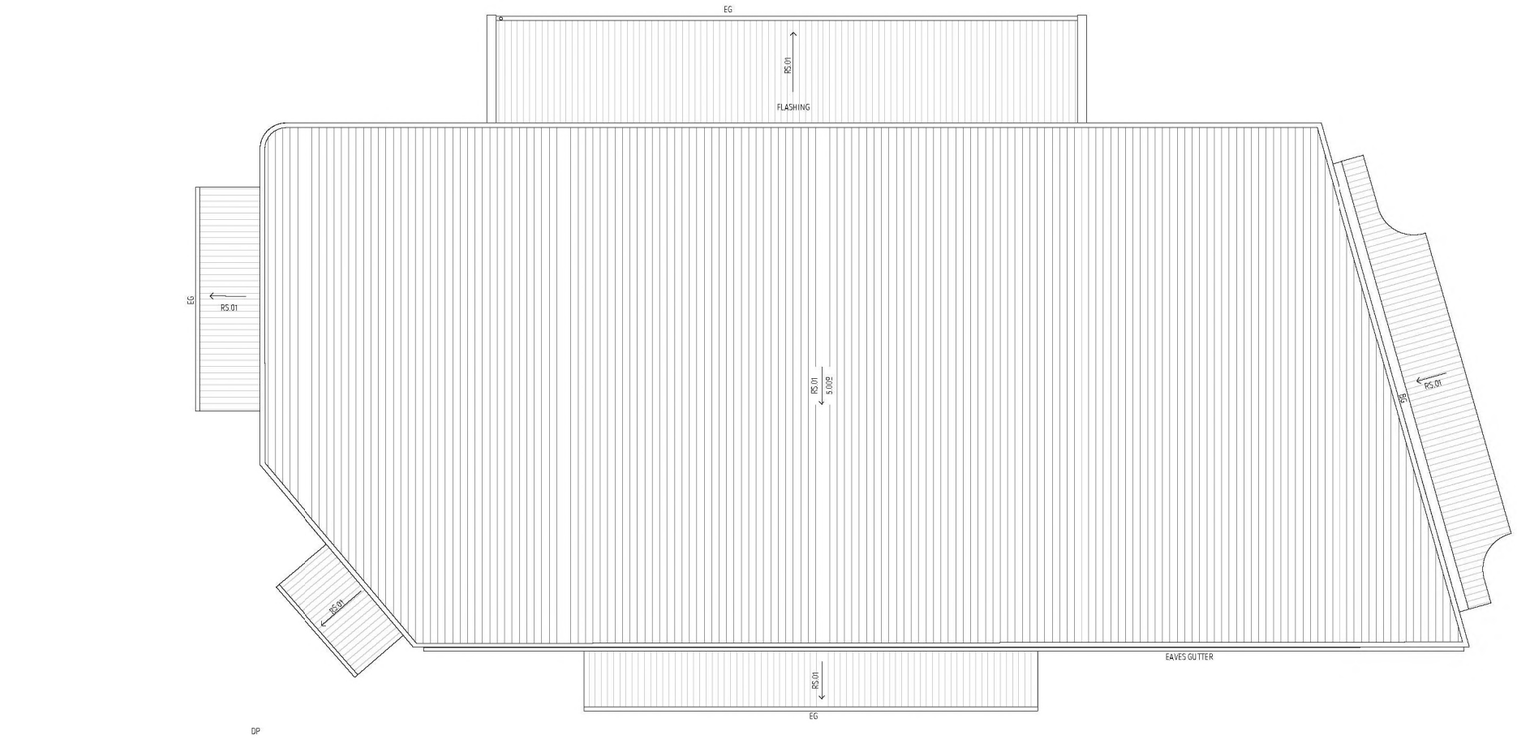
STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

S M F A

GROUND FLOOR

Scale	Drawn
1:1, 1:100 @ A1	AR
Date	Appd.
14/09/2023	SKD

Job No.	Dwg No.	Dwg Issue
22115	SK102	03 - WIP



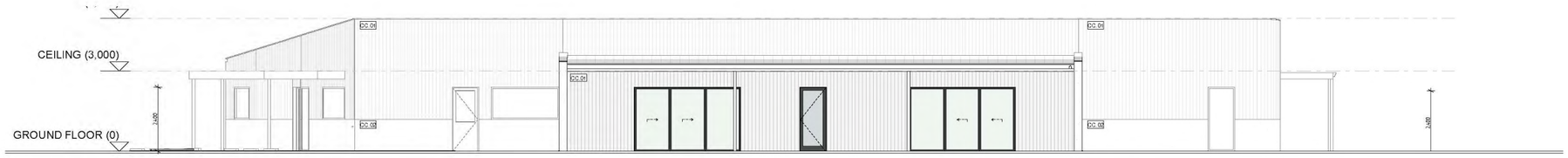
1 ROOF
1:100

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

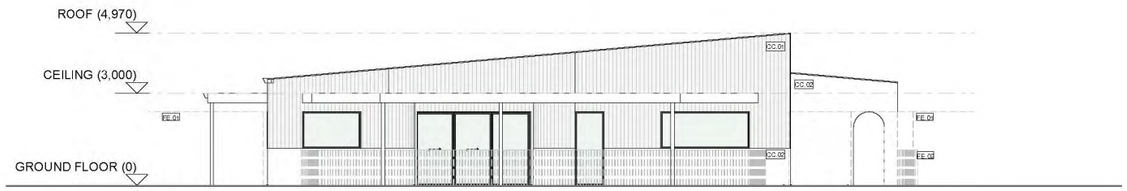
S M F A

ROOF PLAN

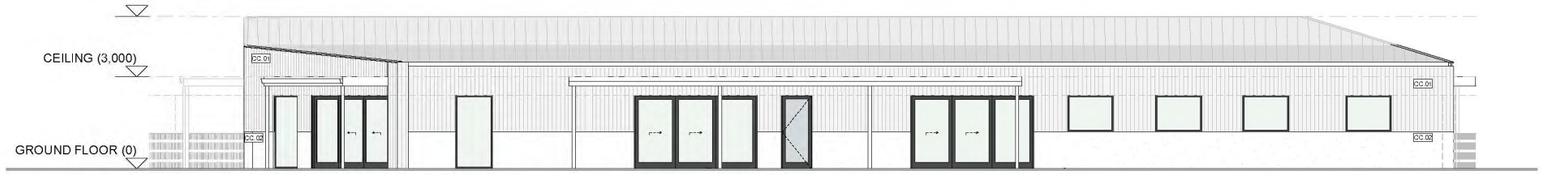
Scale:	1:100 @ A1	Drawn:	AR
Date:	14/09/2023	Aband:	SKD
Job No:	22115	Dwg No:	SK103
Dwg Issue:	03 - WIP



1 ELEVATION
1:100



2 ELEVATION
1:100



3 ELEVATION
1:100

4 ELEVATION
1:100

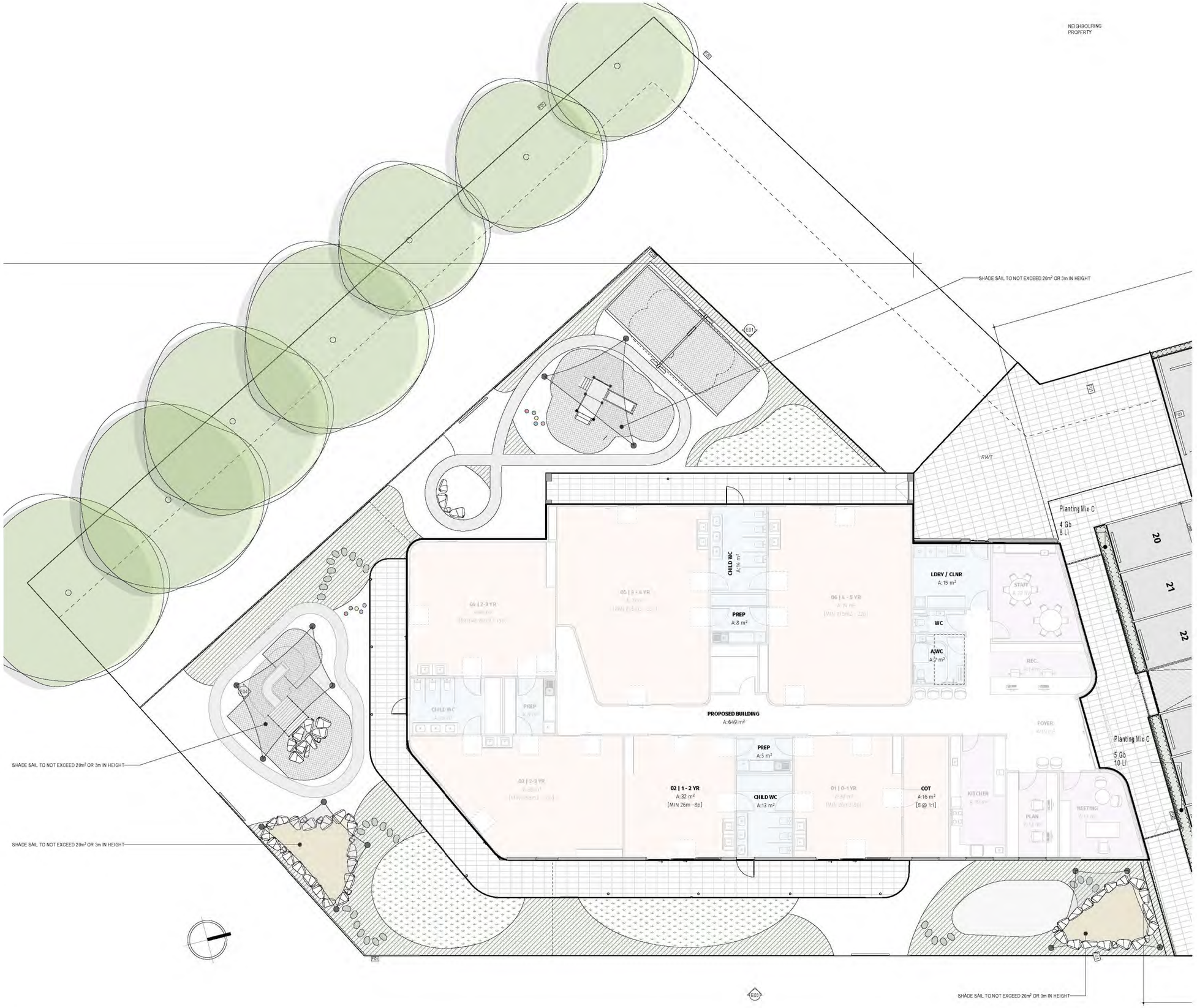
MATERIALS LEGEND

CC.01 | JAMES HARDIE AXON COLOUR | WHITE OR SIMILAR	RS.01 | METAL ROOF SHEET COLOUR | COLORBOND SURFMIST OR SIMILAR	CC.02 | RENDER	ALL GUTTERS, DOWNPIPES FASCIAS, STRUCTURAL BEAMS / COLUMNS COLOUR | SURFMIST OR SIMILAR	ALUMINIUM DOORS AND WINDOWS COLOUR | MONUMENT OR SIMILAR	SOFFIT COMPOSITE TIMBER SOFFIT

Job: STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

SMFA

Title: ELEVATIONS
Scale: 1:100, 1:1 @ A1 | Drawn: AR
Date: 14/09/2023 | Approved: SXD
Job No.: 22115 | Dwg No.: SK104 | Dwg Issue: 03 - WIP



1 LANDSCAPE CONCEPT
1:100

Job	STIRLING NORTH CHILDCARE 56 Quorn Road Stirling North SA 5710
	S M F A

Title	LANDSCAPE CONCEPT
Scale	1:100 @ A1
Drawn	
Date	14/09/2023
Approved	
Job No.	22115
Dwg No.	SK105
Revision	02 - WIP

LANDSCAPE CONCEPT
1:100

Planting Mix A

		
Anigozanthos flavidus Kangaroo Paw Code: Af	*Chrysocephalum apiculatum* Common Everlasting Code: Ca	*Lomandra densiflora* Pointed Mat-Rush Code: Ld

Planting Mix B

			
Anigozanthos flavidus Kangaroo Paw Code: Af	*Atriplex paludosa* Marsh Saltbush Code: Ap	*Chrysocephalum apiculatum* Common Everlasting Code: Ca	*Lomandra densiflora* Pointed Mat-Rush Code: Ld

Planting Mix C

	
Glischrocaryon behrii Golden Pendants Code: Gb	*Lomandra longifolia* Tanika Code: Ll

Planting Mix D

			
Chrysocephalum apiculatum Common Everlasting Code: Ca	*Eremophila glabra* Tar Bush Code: Eg	*Glischrocaryon behrii* Golden Pendants Code: Gb	*Poa labillardieri 'Eskdale'* Blue Tussock Grass Code: Ld

Shrubs + Hedges

	
Acacia brachybotrya Grey Mulga Code: Ab	Photinia x fraseri Red Robin Code: Pf

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

SMFA

LANDSCAPE CONCEPT
Scale: 1:100, 21 @ A1
Date: 14/09/2023
Job No: 22115
Dwg No: SK106
Dwg Issue: 02 - WIP

22115 Cerchi Stirling North Childcare
LANDSCAPE CONCEPT

SMFA

contents

SITE LOCATION

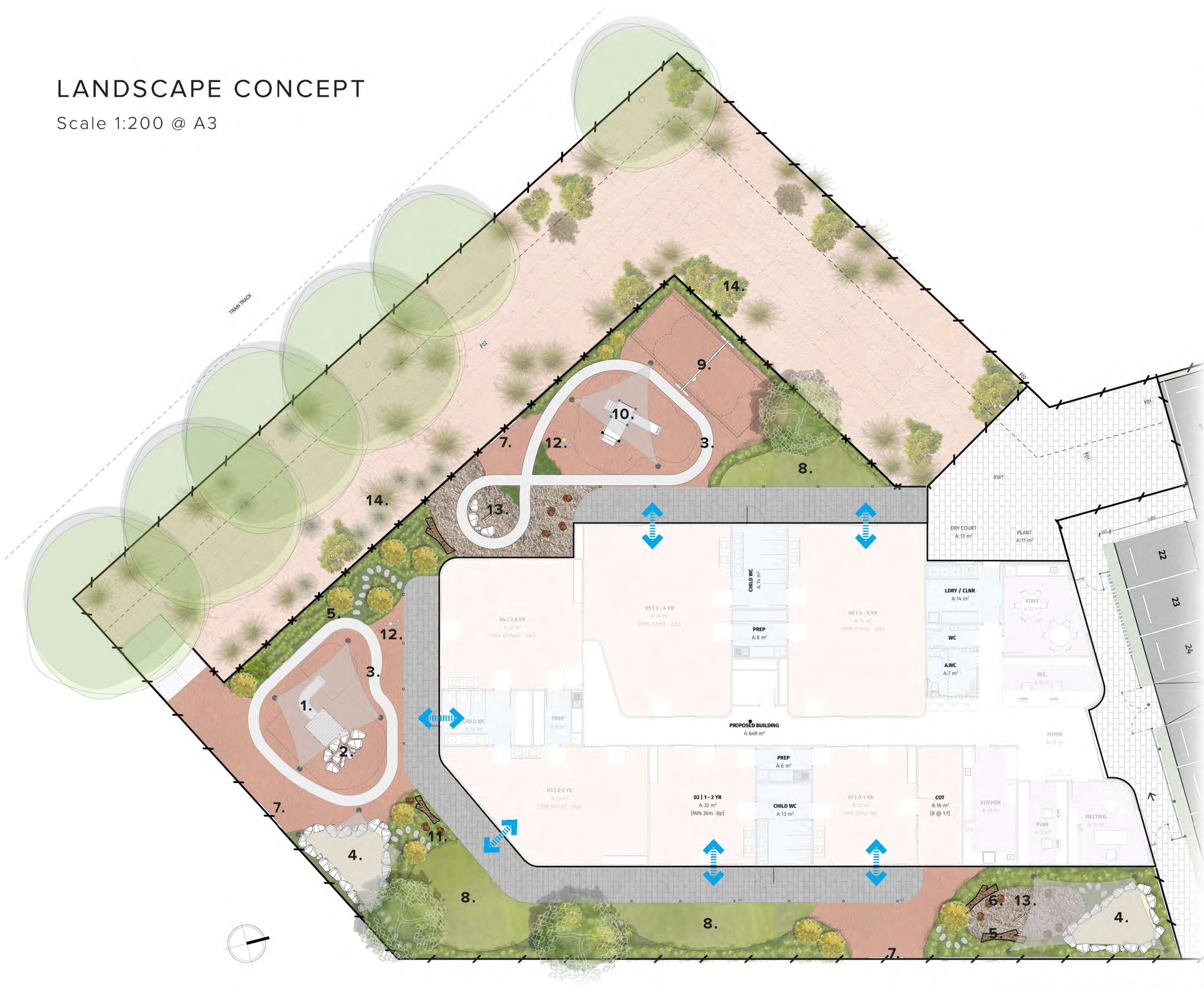
STIRLING NORTH

56 Quorn Road

LAND SIZE: 2700 M^2

LANDSCAPE CONCEPT

Scale 1:200 @ A3



Legend

1. Slide
2. Rock Scramble
3. Bike Track
4. Sand Pit
5. Log
6. Log Steppers
7. Sensory Wall
8. Lawn
9. Swing
10. Play Tower
11. Totems
12. Music Pipes
13. Tee Pee
14. Native Planting

Legend

- Garden bed
- Lawn
- Soft Fall Paving
- Unit Paving
- Sandstone Rock Edging
- Shade Sail
- Native Planting

LANDSCAPE CONCEPT // SMFA

MATERIALS PALETTE

Fallen Logs

Totem Poles

Sand pit with Rock edge and Shade Sail

Rock Scramble

Sensory Wall

Rubber Softfall

Pine Softfall

Rubber Softfall Mound

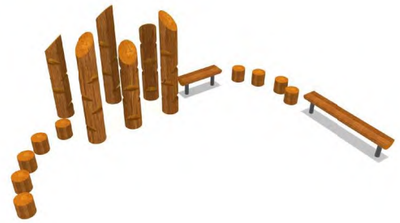
Bike Track

Yarning Circle

EQUIPMENT SCHEDULE

Product: Curved Playground Slide
Supplier: Q Play
Code: MPC15+E
Age Group: 3-5

Product: Walworth Play Unit
Supplier: Adventure+
Code: S2030W
Age Group: 5+



Product: Steppers/Balance beams
Supplier: Imagine Play
Code:4614133
Age Group: 5-12

Product: Orchestral Panel
Supplier: Proludic
Code:J3425
Age Group: 1+

Product: Symmetry+ Swing Frame - Double
Supplier: Adventure+
Code: S0404V
Colour: Timber

Product: Giant Chimes
Supplier: WILLPLAY
Code: SE-010
Colour: Multi

Product: 4 note Drum set
Supplier: WILLPLAY
Code:SE-0002
Age Group: 2+

Product: Nature Play - Ip Tee Pee
Supplier: Imagine Play
Code:4613760
Age Group: All Age Groups

LANDSCAPE CONCEPT // SMFA

INDICATIVE PLANT LIST

GROUNDCOVERS

Tar Bush
Eremophila glabra
H:1m X S:1.2m

Muntires
Kunzea pomifera
H:0.2m X S:2-4m

Blue Tussock Grass
Poa labillardieri ‘Eskdale’
H:0.3m X S:0.3m

Black Anther Flax-lily
Dianella ‘Little Rev’
H:1m X S:2m

Kangaroo paw
Anigozanthos ‘Gold Velvet’
H:0.5m X S:0.4m

Fairy Fan Flower
Scaevola aemula
H:0.5m X S:1m

SMALL SHRUBS

Button everlasting
Helichrysum scorpioides
H:0.2m X S:0.5m

Cushion Bush
Leucophyta Brownii
H:0.1m X S:1-5m

Marsh Saltbush
Atriplex paludosa
0.2M W X 0.4M H

Common everlasting
Chrysocephalum Apiculatum
H:0.5m X S:0.2-0.5m

Sweet apple berry
Billardiera cymosa
H:0.2m X S:1-4m

Rock Correa
Correa glabra
H:1-1.5m X S:1-1.5m

LARGE SHRUBS

Sticky Hop Bush
Dodonaea viscosa *ssp. spaculata*
H:1.5-4m X S:1.5-3m

Silver cassia
Senna artemisioides
H:2.5m X S:2.5m

Grey mulga
Acacia brachybotrya
H:1-2m X S:1-2m

Silver princess gum
Eucalyptus caesia subsp. magna
H:5-6m X S:3-7m

Crepe myrtle
lagerstroemia indica natchez
H:2-6m X S:2-6m

Tuckeroo Tree
Cupaniopsis anacardioides
H:2-5m X S:5-9m

stallard meek flightpath architects

65 Charles Street Norwood 5067
mail@sm-f.com.au | **sm-f.com.au**

RFI Response

Date: 21/6/23

To: Joshua Skinner
City of Port Augusta

Dear Joshua Skinner,

Please find below further information as requested for application 23012328 (Stirling North Childcare).

1. **Preliminary Site Investigation (contamination) report and completed site contamination declaration (as the proposal involves a more sensitive use of the land)**

   - Refer attached Soil Contamination Report prepared by GreenCap.

2. **Dimensioned side and rear boundary setbacks on site plan.**

   - Refer updated site plan.

3. **Dimensioned crossover widths.**

   - Refer updated site plan.

4. **Updated site plan providing more detail on the outdoor bin storage facility (number, size and waste stream types).**

   - Refer updated site plan.

5. **I assume that no retaining walls exceeding 1m high are proposed. If retaining walls over 1m high are proposed, please make this clear on the plans.**

   - No retaining walls exceeding 1m high are proposed.

6. ***Landscaping concept for the front of the site and the car park (as this area has been omitted from the supplied plans).**

   - Refer updated landscape concept plan.

7. **Brief written statement outlining pertinent operational matters. Including but not limited to staffed hours, childcare hours, waste refuse management, timing, and frequency of waste collection:**

   - **Operations:** Monday – Friday / 06:30 AM to 6:00PM
   - **Employee Numbers:** *15*
   - **Outdoor music:** *No outdoor music*
   - **Children age group:** *Birth to 5 years old*
   - **Waste Refuse Management:** *Bin removal will either be kerb side council pick up, or privately collected from within the property – yet to be confirmed. Bin enclosure location as shown on architectural site plan.*

8. ***Updated acoustic report that addresses the collection of rubbish (if undertaken by a private contractor)**

   - Refer Noise Impact Assessment prepared by Sonus.

9. **Any stormwater calculations and/or modelling prepared.**

   - Refer Stormwater Management Plan prepared by JAC

10. **As the land is accessed via an Urban Transport Routes Overlay (state maintained road), you must provide the following prior to lodgement:**

a) The expected number of vehicle movements per day.
b) The expected maximum vehicle length for vehicles expected to access the site.
c) vehicle turning paths for the largest vehicle (entry, exit, on-site circulation and angle of vehicles crossing the property boundary).
d) *Distance of unobstructed sightline to and from the crossing places.*
e) *Distance between crossing places.*
f) *Distance from each cross place to public road junctions, private driveways, roadside infrastructure, and trees.*

- Refer attached Traffic Report prepared by CIRQA.

Yours Sincerely,

Stallard Meek Flightpath Architects

Simon Xotta-Dickson

Director

8211 6355
0411598757
simon@sm-f.com.au

Response to Representation
Application ID: 23012328

Address: 56 Quorn Rd, Stirling North, SA 5710

14 August 2023

To: Joshua Skinner

Port Pire Regional Council

Thank you for forwarding the representations received during the public notification period.

Representations were received from:

- Josie Pollard, 43 Quorn Road, Stirling North, SA 5710.

The representors' concerns relate to:

- On street carparking adjacent to proposed development.

Response:

Thank you for your concern regarding the proposed childcare. In relation to the potential increase of on street carparking on Quorn Rd, we would highlight that the development has been designed in accordance with planning provision for a development of this nature in this location, and currently exceeds the minimum carparking requirements.

The car park has also been designed using a separate entry and exit with a continuous aisle to assist with any potential traffic congestion to the surrounding area.

Thank you for the opportunity to provide a response to the representation.

Yours Sincerely,

Charlie Bell

Graduate of Architecture at SMFA

0430 305 539

charlie@sm-f.com.au

stallard meek flightpath architects

65 Charles Street Norwood 5067
mail@sm-f.com.au | **sm-f.com.au**

RFI Response

Date: 14/9/23

To: Joshua Skinner
City of Port Augusta

Dear Joshua Skinner,

Please find below further information as requested for application 23012328 (Stirling North Childcare).

1. *Incorrect Acoustic Report uploaded to portal*
- *Refer correct report uploaded to portal.*

2. *Update the site plan, to show signage which restricts parking within spaces 1-7 (i.e. "No parking before 7:00am" as recommended by your acoustic consultant).*
- *Refer updated site plan.*

3. *Updated civil plans and landscaping plan, to be consistent with the latest version of the architectural package (in particular, to capture the recent reduction in car parking spaces).*
- *Refer updated civil drawings.*

4. *I recommend that more trees are shown planted at the front of the site, particularly where the car parking spaces were deleted.*
- *Refer updated site and ladscape plan.*

5. *I understand you have submitted a wastewater disposal application to Council, which will be assessed by the Environmental Health Officer under separate legislation. Can you please upload a copy of the wastewater approval to the Portal, once that is granted.*
- *Refer copy of wastewater approval uploaded to portal.*

6. *Shade Sails Development Approval.*
- *Refer updated site plan with shade sails reduced to less than 20m2 and noted as less than 3m in height.*

7. *Potential Crossover*
- *Refer updated site plan*
- *Refer letter provided by CIRQA.*

8. *Update the civil plan to show the location and detail of the outflow into the swale, including details on the headwall and scour protection.*
- *Refer updated civil drawings.*

9. *Have your civil engineer confirm the "discharge flow QD" and in relation to the outflow into the swale.*
- *JAC Response: overflow from rainwater tank is 8L/s and 39.5L/s from underground tank. It is shown in the calculation in stormwater management plan.*

10. *Ensure that all parking spaces have a minimum length of 5.4m (4.8m is proposed for spaces 20-26). Alternatively, I am willing to consider any justification provided by your civil engineer.*
- *Refer updated site plan – note dimension shows overhang portion of carpark as planting. Total carpark length is 5.4m*

11. *An additional car parking space for people with a disability (While I acknowledge that accessible parking is a Building Consent matter, it affects the total supply of parking which is a Planning Consent matter).*
- *Refer updated site plan noting carpark 23 as accessible park.*

Yours Sincerely,
Stallard Meek Flightpath Architects

Simon Xotta-Dickson

Director

82116355
0411598757
simon@sm-f.com.au

Ref: 23200|BNW

16 June 2023

Mr Simon Xotta-Dickson
SMFA
65 Charles Street
NORWOOD SA 5067

Dear Simon,

PROPOSED CHILD CARE CENTRE
56 QUORN ROAD, STIRLING NORTH

I refer to your request for a fee proposal for the proposed child care centre at 56 Quorn Road, Stirling North (Application ID: 23012328). Specifically, this letter provides a response to traffic engineering related queries identified in Council's Request for Documentation (RFD) dated 12 May 2023.

The traffic related matters raised by Council (notably in reference to requirements of the Urban Transport Overlay) are provided in italics below, followed by my response.

10a. – "the expected number of vehicle movements per day."

Typical traffic generation guidelines adopted for assessment of traffic generation for child care centres only identify peak period generation rates. Based on the rates identified in the most recent RMS "*Guide to Traffic Generating Developments*" update, the proposal would be forecast to generate 85 am and 75 pm peak hour trips. Noting that volumes outside of the set-down/pick-up periods are generally low at such uses, it is anticipated that total daily volumes would be in the order of 200 to 250 trips.

10b. – "the expected maximum vehicle length for vehicles expected to access the site."

The largest vehicle anticipated to be required to access the site would be a refuse collection vehicle. Such vehicles would be anticipated to be in the order of 8.8 m to 10.0 m long.

10c. – "vehicle turning paths for the largest vehicle (entry, exit, on-site circulation and angle of vehicles crossing the property boundary)."

The attached Drawing C23200_01-SH01 illustrates the ingress, circulation and egress path for a 10 m long refuse collection vehicle as well as the angles of the vehicle when crossing the property boundary.

10d. – "distance of unobstructed sightline to and from the crossing places."

The sight line provisions the crossovers are illustrated on Drawing C23200_01-SH02.

10e. – "distance between the crossing places."

The distances between for the crossovers are illustrated on Drawing C23200_01-SH03.

10f. – "distance from each cross[ing] *place to public road junctions, private driveways, roadside infrastructure and trees."*

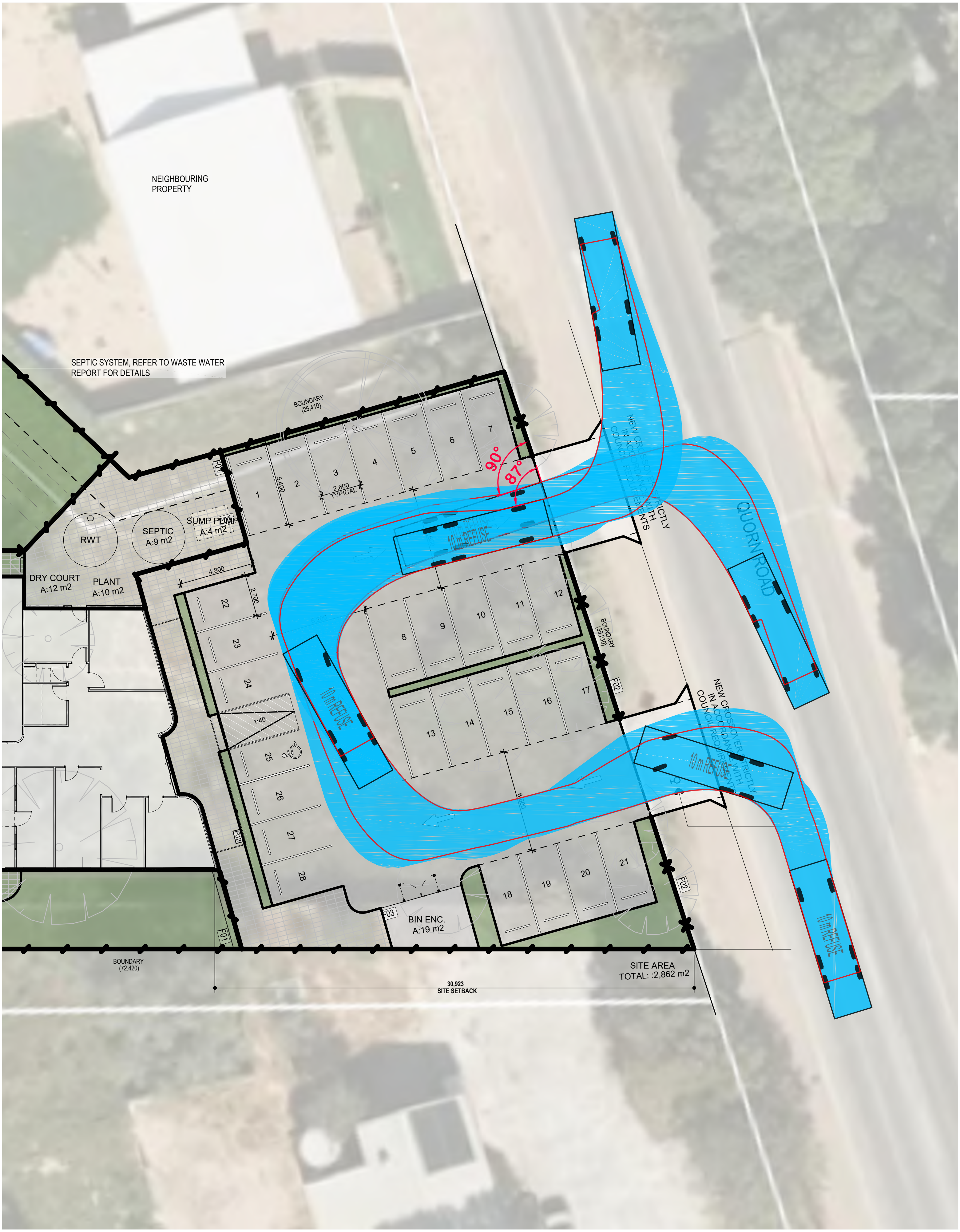
The distances between the crossovers and the items noted above are illustrated on Drawing C23200_01-SH03.

I trust the above sufficiently responds to Council's queries, however, please feel free to contact me on (08) 7078 1801 should you require any additional information.

Yours sincerely,

BEN WILSON
Managing Director | CIRQA Pty Ltd

Encl. - Drawings C23200_01 SH01, SH02 and SH03



CIRQA™	
ABN: 12 681 029 983 | PO Box 144, Glenside SA 5065 | E: info@cirqa.com.au	

DRAWING AMENDMENTS

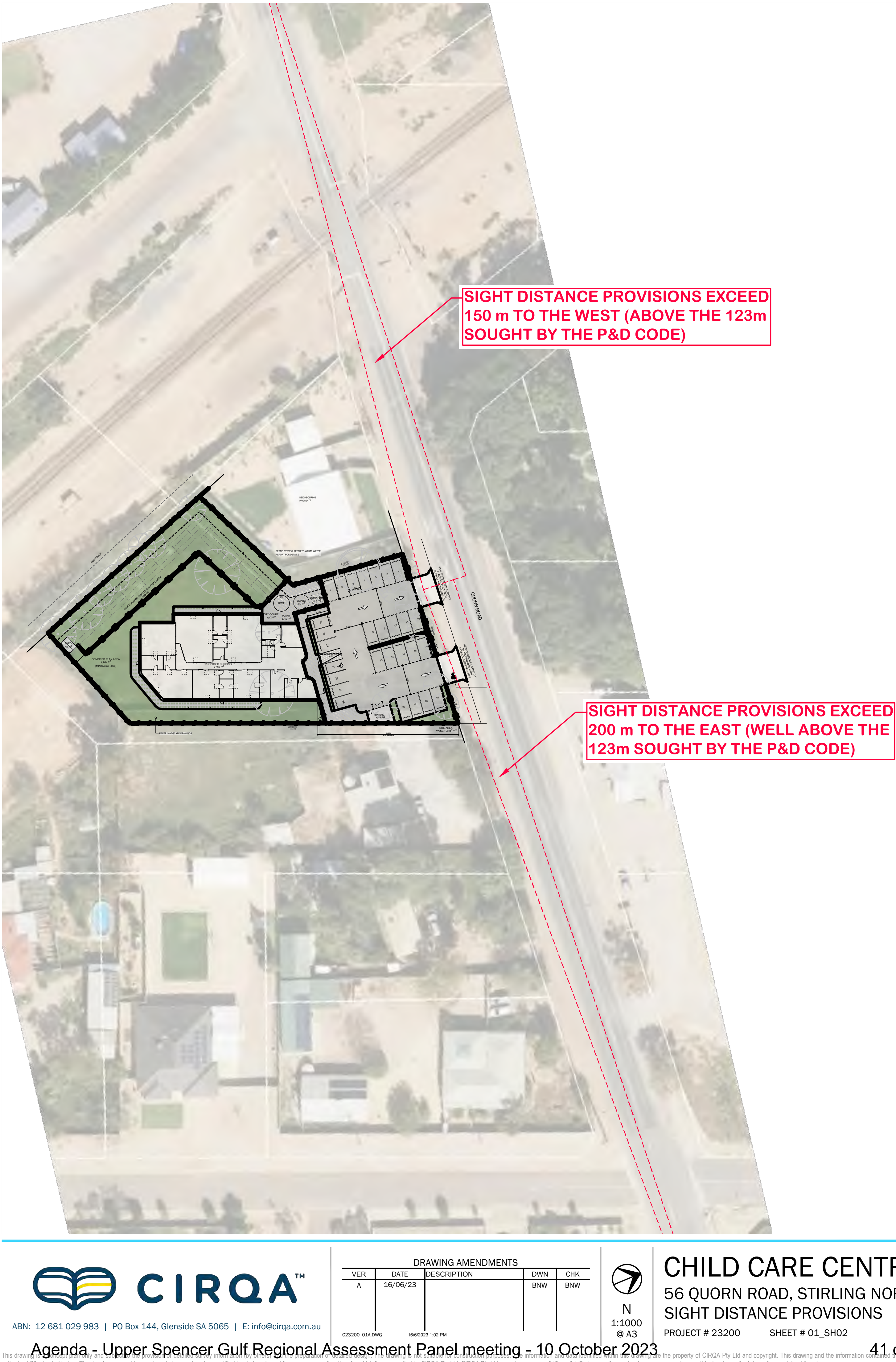
VER	DATE	DESCRIPTION	DWN	CHK
A	16/06/23		BNW	BNW

C23200_01A.DWG 16/6/2023 1:39 PM

N
1:300 @ A3

CHILD CARE CENTRE
56 QUORN ROAD, STIRLING NORTH
TURN PATH ASSESSMENT

PROJECT # 23200 SHEET # 01_SH01



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DRAWING AMENDMENTS

VER	DATE	DESCRIPTION	DWN	CHK
A	16/06/23		BNW	BNW

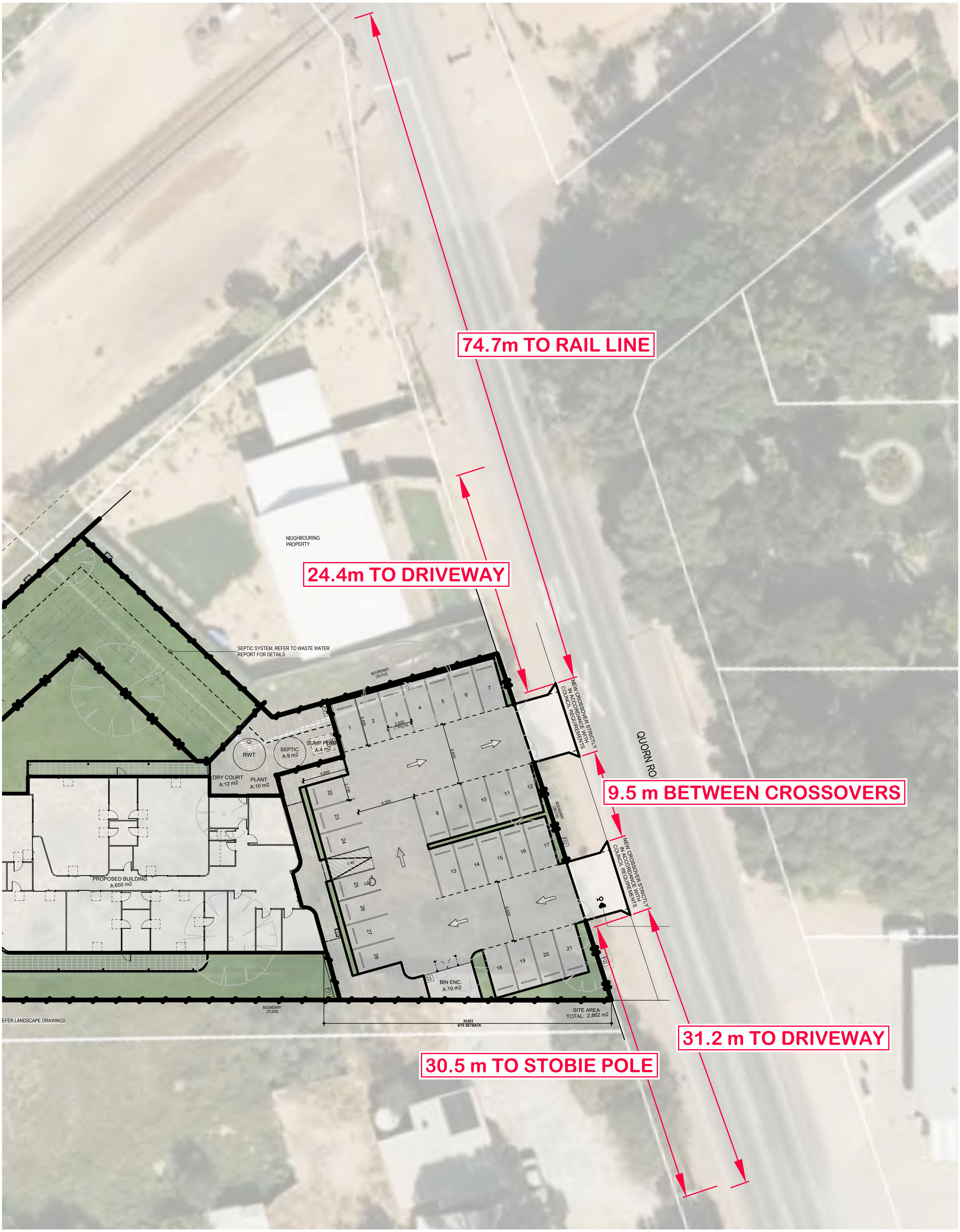
C23200_01A.DWG 16/6/2023 1:02 PM

N
1:1000 @ A3

CHILD CARE CENTRE

56 QUORN ROAD, STIRLING NORTH
SIGHT DISTANCE PROVISIONS

PROJECT # 23200 SHEET # 01_SH02



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DRAWING AMENDMENTS

VER	DATE	DESCRIPTION	DWN	CHK
A	16/06/23		BNW	BNW

C23200_01A.DWG 16/6/2023 1:37 PM

N
1:500
@ A3

CHILD CARE CENTRE

56 QUORN ROAD, STIRLING NORTH
SEPARATION DISTANCES

PROJECT # 23200 SHEET # 01_SH03

Ref: 23200|BNW

14 September 2023

Mr Simon Xotta-Dickson
SMFA
65 Charles Street
NORWOOD SA 5067

Dear Simon,

PROPOSED CHILD CARE CENTRE
56 QUORN ROAD, STIRLING NORTH

I refer to the proposed child care centre at 56 Quorn Road, Stirling North (Application ID: 23012328). As requested, I have reviewed the comments provided by Council/DIT in respect to pedestrian arrangements adjacent the site.

Specifically, I note that Council has stated the following in respect to the proposed pedestrian access provisions:

> *"Traffic engineers to provide an indicative layout/location for a pedestrian crossing adjacent the site, together with an assessment as to whether such a crossing is warranted, having regard to any relevant standards."*

External infrastructure works are typically the responsibility of the road authorities (Council in the case of works with the verge and DIT in respect to works within the carriageway). Nevertheless, noting the potential for parents (with children) to seek to access the proposed development, the applicant has advised it is willing to provide a footpath connection with the verge with a corresponding pedestrian ramp on the opposite side of Quorn Road to connect to the existing footpath. Such provisions are considered adequate given the relatively low traffic volumes on Quorn Road (3,600 vehicles per day) and low pedestrian numbers (most staff and parents would be expected to access the site via private vehicles), higher order treatments (pedestrian refuge, formal crossing such as a Wombat Crossing etc.) are not considered warranted. The proposed arrangements are shown on the updated site plan prepared by SMFA (22115-SK101-04, dated 14 September 2023).

In addition to the external treatments, the internal layout has been adjusted to provide a connection through the car park to the proposed building. To ensure that the slight

relocation of the proposed parking spaces does not restrict pedestrian sight lines at the egress point, parking space '12' has been proposed as a small car space (and also a staff only space as previously proposed).

I trust the above sufficiently responds to Council's queries, however, please feel free to contact me on (08) 7078 1801 should you require any additional information.

Yours sincerely,

BEN WILSON
Managing Director | CIRQA Pty Ltd

STIRLING NORTH CHILDCARE
56 QUORN ROAD, STIRLING NORTH,
S.A. 5710
CIVIL

PREPARED BY

JACK ADCOCK CONSULTING PTY. LTD.
STRUCTURAL & CIVIL ENGINEERING

GENERAL NOTES:

1. THESE DRAWINGS ARE NOT CADASTRAL PLANS AND MUST NOT BE USED IN DETERMINING PRECISE DETAILS WITH RESPECT TO BOUNDARIES.
2. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS SHALL BE VERIFIED ON SITE.
4. ALL LEVELS ARE EXPRESSED IN METRES.
5. ALL CO-ORDINATES ARE A.M.G. BASED, UNLESS NOTED OTHERWISE.
6. LEVEL DATUM IS A.H.D.
7. ALL SET OUT AND DIMENSIONS TO ARCHITECTS DRAWINGS. DO NOT SCALE CIVIL DRAWINGS.
8. WHERE A DISCREPANCY OCCURS, THE GREATER COST SHALL BE ALLOWED FOR IN ANY TENDERING OR QUOTING.
9. REFER TO DIMENSIONED ARCHITECTURAL BUILDING DETAILS FOR ALL SET OUT DIMENSIONS OF BUILDINGS, KERBING, PAVING, ETC.
10. JACK ADCOCK CONSULTING PTY LTD TAKES NO RESPONSIBILITY FOR ANY ERRORS IN DIMENSION, SETOUT OR SURVEY.
11. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE RELEVANT SPECIFICATIONS.
12. REFER TO STRUCTURAL DRAWINGS FOR DETAILS OF CONCRETE FLOOR AND BEAMS BEFORE SETTING OUT.
13. THIS DRAWING AND ANY SUBSEQUENT DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE FOOTING CONSTRUCTION REPORT, SPECIFICATION AND STANDARD DETAILS.
14. REFER TO HYDRAULICS DRAWINGS FOR ALL UNDERGROUND PIPEWORK AND DETAILS.
15. THESE DRAWINGS ARE A SCHEMATIC REPRESENTATION OF SERVICES INFORMATION CONTAINED IN DRAWINGS ISSUED BY THE RELEVANT AUTHORITIES. THE INFORMATION CONTAINED IN THESE DRAWINGS IS INDICATIVE ONLY, AND REFERENCE SHOULD BE MADE TO THE RELEVANT AUTHORITIES DOCUMENTATION TO CONFIRM ACCURACY AND COMPLETENESS. WHERE INFORMATION IS AVAILABLE, THE SUB-SURFACE SERVICES INSTALLED BY CONTRACTORS OTHER THAN THE AUTHORITIES HAVE BEEN SHOWN, BUT ADDITIONAL UNDOCUMENTED SERVICES MAY BE PRESENT. SHOULD THE CONTRACTOR BELIEVE THAT SUB-SURFACE SERVICES ARE AT RISK OF DAMAGE DURING CONSTRUCTION, THE CONTRACTOR SHOULD NOTIFY THE RELEVANT AUTHORITIES AND ESTABLISH THE EXACT LOCATION OF THE SERVICES.
16. THE FINISHED SURFACE SHALL BE EVENLY GRADED BETWEEN DESIGN SURFACE LEVELS.
17. ALL REDUNDANT EXISTING STORMWATER PIPES, PITS, PUMPS AND OTHER RELATED SERVICES SHALL BE DECOMMISSIONED AND REMOVED FROM SITE.
18. CONTRACTOR TO ADJUST LIDS OF EXISTING SERVICE PITS TO MATCH FINISHED SURFACE LEVEL. PROVIDE HEAVY DUTY COVER IF IN PAVED AREA TO THE REQUIREMENTS OF THE RELEVANT AUTHORITY, IF APPLICABLE. RELOCATE SERVICE AS REQUIRED.
19. WORKMANSHIP AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
20. ANY DISCREPANCIES SHALL BE REFERRED TO THIS OFFICE FOR CLARIFICATION.
21. ALL LINEMARKING SHALL BE DONE IN ACCORDANCE WITH THE ARCHITECT'S OR BUILDING DESIGNER'S SPECIFICATION.

EROSION CONTROL:

1. THE CONTRACTOR MUST PROTECT THE SITE, AND OTHER SITES DOWNSTREAM, FROM EROSION DURING CONSTRUCTION.
2. RETAIN AND LEAVE UNDISTURBED ALL VEGETATION WHERE POSSIBLE.
3. PROVIDE SEDIMENT CONTROL IN ACCORDANCE WITH SECTION 5 OF THE STORMWATER POLLUTION PREVENTION CODE OF PRACTICE.
4. SEDIMENT, SILT AND POLLUTION TRAPS SHALL BE CLEARED AND MAINTAINED FOR THE DURATION OF CONSTRUCTION.
5. THE SITE SHALL BE REHABILITATED TO ITS ORIGINAL CONDITION OR IN ACCORDANCE WITH THE CONTRACT DOCUMENTS (WHICHEVER IS APPLICABLE) AT THE COMPLETION OF CONSTRUCTION INCLUDING REMOVAL OF ALL TEMPORARY CONTROL WORKS.

STORMWATER NOTES:

1. INLET PIPES SET 20mm ABOVE PIT INVERT LEVEL (U.N.O.)
2. OUTLET PIPE INVERT LEVELS ARE SET AT PIT INVERT LEVEL (U.N.O.)
3. TOP R.L. FOR SIDE ENTRY PITS IS WATER TABLE LEVEL.
4. TRENCH GRATES TO BE STAINLESS STEEL HEELPROOF AND SLIP-PROOF TYPE BY ACO OR APPROVED EQUIVALENT.
5. ALL STORMWATER PIPES SHALL BE uPVC, PIPES SHALL BE SEWER CLASS (U.N.O.)
6. ALL STORMWATER PITS GREATER THAN 600x600 SHALL BE PROVIDED WITH A SPLIT LID TO ENSURE MAXIMUM LID "LIFT" IS 600x600.
7. ALL STORMWATER PITS ON PLAN DRAWINGS TO HAVE HEELPROOF GRATE OR PAVER INFILL LID WHERE LOCATED ON PAVEMENT OR FOOT TRAFFIC AREA.
8. ALL STORMWATER PITS TO HAVE ACCESS STEP IRONS INSTALLED IN ACCORDANCE WITH AS1657 AND AS4198 WHERE DEPTH IS GREATER THAN 1200mm.
9. AG DRAINS TO BE INSTALLED BEHIND ALL RETAINING WALLS AND LOCATIONS SHOWN ON DRAWINGS.
10. ALL AG DRAINS TO 100Ø, WRAPPED IN 200 MICRON GEOTEXTILE (BIDIM A24 OR SIMILAR) AND MINIMUM 300mm THICKNESS OF 20mm DRAINAGE SCREENINGS (U.N.O.)
11. ALL DOWNPIPE RISERS TO BE AS SHOWN ON ARCHITECTURAL DRAWINGS. CONNECT TO 150Ø UNDERGROUND CONNECTION (U.N.O.)

PAVEMENT NOTES:

1. EXISTING PAVERS THAT ARE INDICATED TO BE RE-LAID ARE TO BE NEATLY STOCKPILED ON SITE TO AVOID DAMAGE DURING CONSTRUCTION.
2. AREAS OF RE-LAID PAVERS SHALL HAVE BASE MATERIAL CUT TO NEW LEVEL WITHIN EXISTING BASE MATERIAL AND NEW 25mm SAND LAYER.
3. PAVER LOC OR SIMILAR PRODUCT SHALL BE USED ON ALL RE-LAID PAVERS.
4. PAVERS RE-LAID SHALL BE CLEANED PRIOR TO RE-INSTALLATION. DAMAGED PAVERS ARE TO BE REPLACED.
5. IN AREAS WHERE ASPHALT PAVEMENT EXISTS AND NEW PAVEMENT IS BEING LAID THE CONTRACTOR SHALL REMOVE THE EXISTING TOP COAT AND PAVEMENT DOWN 100mm FROM SURFACE LEVEL.
6. RE-ASPHALTED AREAS SHALL HAVE EXISTING BASE MATERIAL EXCAVATED (GENERALLY 100mm) REPLACED WITH A DTEI SPEC PM1/20QG AND COMPACTED (98% MODIFIED) TO NEW DESIGN LEVEL AND HOTMIX PLACED TO MATCH NEW LEVELS.
7. ALL PAVERS UPON COMPLETION OF INSTALLATION SHALL BE TREATED WITH A STAIN RESISTANT COATING/SEALANT TO ASSIST WITH CLEANING OF PAVERS. CONTRACTOR TO SUBMIT TREATMENT AND WORK METHOD TO SUPERINTENDENT FOR APPROVAL.

SITE PREPARATION:

1. STRIP FROM THE PROPOSED PAVING AND BUILDING AREAS ALL EXISTING TOPSOIL, ORGANIC MATERIAL, PAVED SURFACES, BASE AND SUB-BASE COURSES, LOOSE RUBBLE AND ANY NON-ENGINEERED FILL.
2. TOPSOIL TO BE STOCKPILED ON SITE FOR REUSE IN LANDSCAPING AND ANY REMAINDER TO BE DISPOSED OF TO A LICENSED DUMPING FACILITY.
3. OTHER EXCAVATED MATERIAL TO BE STOCKPILED FOR REUSE, RECYCLED OR DISPOSED OF TO A LICENSED DUMPING FACILITY AS REQUIRED OR APPROPRIATE.
4. PROOF ROLL AREAS OF NEW WORKS TO IDENTIFY ANY SOFT SPOTS OR OTHER UNSUITABLE AREAS.
5. ALL SOFT SPOTS TO BE REMOVED AND FILLED WITH APPROPRIATE EXISTING OR IMPORTED MATERIAL TO A MINIMUM COMPACTION OF 98% STANDARD.
6. IMPORTED FILL TO SUB-BASE LEVEL AND BELOW TO BE PM2/QG QUARRY RUBBLE COMPACTED TO 95% MODIFIED.
7. FILLING AND COMPACTION TO BE UNDERTAKEN IN LAYERS UP TO 250 mm LOOSE THICKNESS.
8. ALL FILLING TO BE CLEAN, FREE OF CONTAMINANTS, AND CAPABLE OF ACHIEVING THE REQUIRED COMPACTION LEVELS.
9. PRIOR TO PROOF ROLLING AND COMPACTION ACTIVITIES, THE SUBJECT MATERIAL SHALL BE MOISTURE CONDITIONED TO WITHIN 2% OF ITS OPTIMUM MOISTURE CONTENT.

SITE SPECIFIC NOTES:

1. EXISTING STRUCTURES HAVE ALREADY BEEN DEMOLISHED, INCLUDING CELLAR.
2. ALL DISTURBED SOILS, BUILDING RUBBLE AND FILLED CELLARS ARE TO BE CONSIDERED NON-ENGINEERED FILL.
3. UP TO 700 mm OF NON-ENGINEERED FILL HAS BEEN IDENTIFIED IN THE BORELOGS.
4. NON-ENGINEERED FILL IS TO BE TREATED IN ACCORDANCE WITH THE SITE PREPARATION NOTES.
5. ALL FOOTINGS WHERE THE BASE OF THE FOOTING IS IN OR ABOVE A 1:1 LINE OF INFLUENCE TO THE BASE OF THE CELLAR SHALL BE DEEPENED TO ACHIEVE A BASE LEVEL BELOW THE LINE OF INFLUENCE.
6. ONLY THE TOP 700 mm OF NON-ENGINEERED CELLAR FILLING NEED BE REMOVED AND RECOMPACTED.

REUSE OF SITE WON FILLING MATERIALS:

1. THE CONTRACTOR MAY PROPOSE TO REUSE SITE WON FILLING MATERIAL.
2. SITE WON FILLING MATERIAL MUST BE OF LOW MOISTURE REACTIVITY, FREE OF ORGANIC MATTER AND DELETERIOUS MATERIALS, COMPLY WITH SECTION 4 OF AS 3798.
3. SITE WON FILLING MATERIAL MUST BE ABLE TO ACHIEVE THE SPECIFIED COMPACTION.
4. THE CONTRACTOR MUST ALLOW FOR ALL COSTS ASSOCIATED WITH REUSE OF SITE WON MATERIALS INCLUDING POTENTIAL INCREASES IN FOOTING, SLAB AND BASE MATERIAL COSTS, AND DESIGN AND DOCUMENTATION FEES.
5. REUSE OF SITE-WON MATERIAL IS SOLELY AT THE CONTRACTOR'S RISK.
6. JACK ADCOCK CONSULTING PTY. LTD. RESERVES THE RIGHT TO REJECT ANY REQUEST FOR REUSE OF SITE WON MATERIALS.

STORMWATER PUMP NOTES:

1. PUMP SYSTEM SHALL BE DUAL SUBMERSIBLE PUMPS EACH CAPABLE OF THE DESIGN FLOW RATE.
2. PUMPS SHALL BE CONFIGURED TO AUTOMATICALLY ALTERNATE AS THE DUTY PUMP.
3. PUMP SYSTEM SHALL BE CONFIGURED TO AUTOMATICALLY REVERT TO THE ALTERNATE PUMP SHOULD THE DUTY PUMP FAIL.
4. AUDIBLE ALARM WITH FLASHING LIGHT SHALL BE PROVIDED.
5. BACKUP POWER SUPPLY SHALL BE CONNECTED TO THE PUMPS.

APPROVAL ISSUE
NOT FOR CONSTRUCTION

ISSUE	DATE	DETAILS	CHECKED
B	26-04-2023	ISSUED FOR APPROVAL	WL
A	25-04-2023	PRELIMINARY ISSUE	WL

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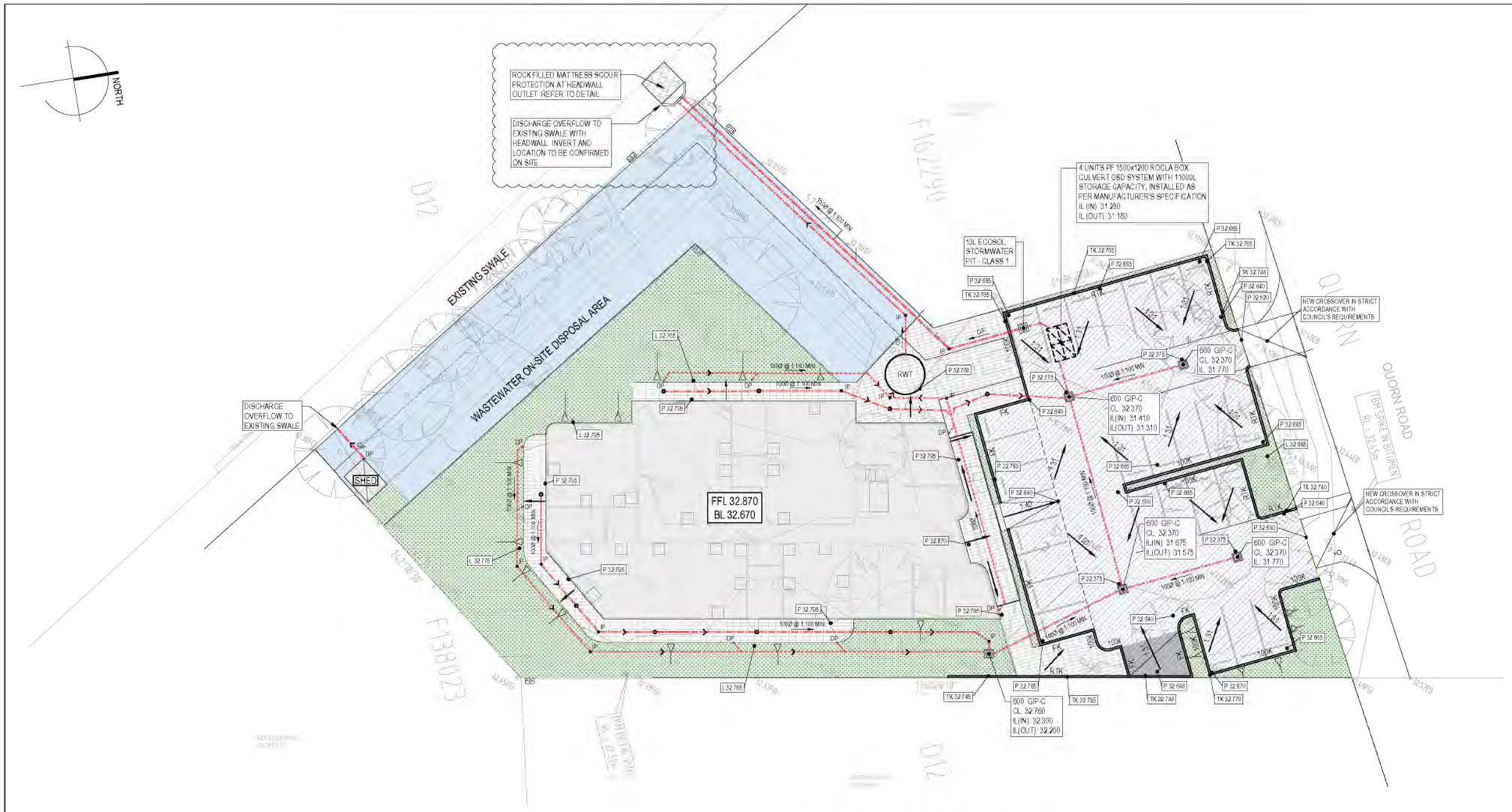
SHEET:	CIVIL NOTES
PROJECT:	STIRLING NORTH CHILDCARE
ADDRESS:	56 QUORN ROAD, STIRLING, S.A. 5710
CLIENT:	SMFA
DESIGNED:	W.L.
DRAWN:	S.P.J.
DRAWING No:	JAC230217-DRG- C001
SCALE:	1:200 @ A1
ISSUE:	B



SITEWORKS AND DRAINAGE PLAN

SCALE 1:200

LEGEND

- DENOTES GRATED INLET PIT. REFER SCHEDULE FOR DETAILS
- DENOTES DIRECTION OF SURFACE FALL
- DENOTES BATTERED SLOPE
- DENOTES 150 PVC RISER + GRATE
- IP — DENOTES INSPECTION POINT
- DP — DENOTES DOWNPIPE (TO ARCHITECTS SELECTION) TO FULLY SEALED SYSTEM. ENSURE COMPATIBILITY. LOCATIONS INDICATIVE ONLY, REFER ARCHITECTS DRAWINGS
- XXØ — DENOTES SEWER GRADE PVC STORMWATER PIPE SIZE AS NOTED
- OF — DENOTES OVERFLOW FROM RAINWATER TANK
- XXØ — DENOTES (FULLY SEALED) SEWER GRADE PVC STORMWATER PIPE SIZE AS NOTED
- 106.07 — DENOTES EXISTING SPOT LEVEL
- P XX.XX — DENOTES PROPOSED DESIGN LEVELS:
  - FFL - FINISHED FLOOR LEVEL
  - PL - PLATFORM LEVEL
  - BL - BENCHED LEVEL
  - EX - EXISTING LEVEL
  - IL - INVERT LEVEL
  - RL - RAISED LEVEL
  - TOW - TOP OF RETAINING WALL LEVEL
  - TOK - TOP OF RETAINING KERB LEVEL
  - L - LANDSCAPING LEVEL
  - P - PAVING LEVEL
  - RW - RETAINING WALL HEIGHT
- 600SD — DENOTES CIVIL CONCRETE ELEMENTS (HEIGHTS & SIZES INDICATIVE ONLY, REFER CIVIL PLAN) REFER DETAILS:
  - 100K - KERB
  - 100K&WT - KERB & WATER TABLE
  - 100RCK - ROLLOVER KERB
  - 600SD - SPOON DRAIN
  - FK - FLUSH KERB
  - MK - MEDIAN KERB
  - RTK - RETAINING KERB
  - MK&WT - MOUNTABLE KERB & WATER TABLE
  - RO&WT - ROLLOVER KERB & WATER TABLE
  - WS - WHEEL STOP
  - TR - THRESHOLD RAMP
- RWT — INDICATES 9,000L RAINWATER TANK TO CAPTURE 60% AREA OF ROOF STORMWATER WITH 1000L USABLE STORAGE CELL PLUMBED TO TOILET FLUSHING AND 8,000L DETENTION WITH AN 25Ø ORIFICE TO RESTRICT FLOW RATE TO 8L/s WITH 150 THK CONCRETE PLINTH UNDER, SL92 MESH CENTRAL. ALL PIPES CONNECTING TO DETENTION TANK TO BE A SEALED SYSTEM
- DENOTES LIGHT DUTY BLOCK PAVEMENT, REFER DETAILS ON DXG
- DENOTES LANDSCAPING AREA, REFER ARCHITECTS DRAWINGS
- DENOTES HEAVY DUTY ASPHALT PAVEMENT, REFER DETAILS ON DXG

APPROVAL ISSUE
NOT FOR CONSTRUCTION

ISSUE	DATE	DETAILS	CHECKED
D	09-08-2023	REVISIONS CLOUDED	WL
C	02-08-2023	ISSUED FOR APPROVAL	WL
B	26-04-2023	ISSUED FOR APPROVAL	WL
A	26-04-2023	PRELIMINARY ISSUE	WL

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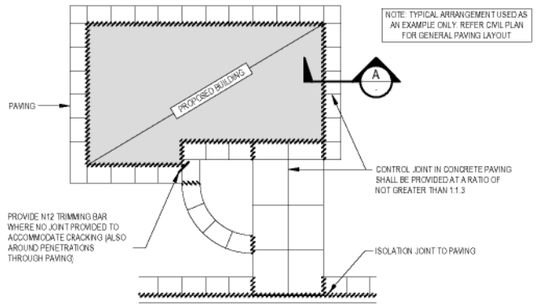
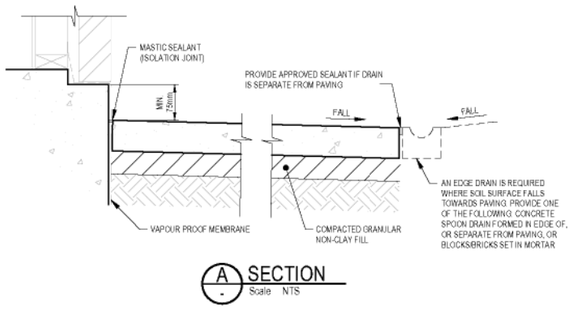
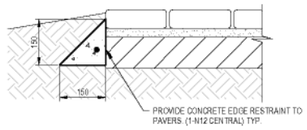
SHEET:	SITEWORKS AND DRAINAGE PLAN
PROJECT:	STIRLING NORTH CHILDCARE
ADDRESS:	56 QUORN ROAD, STIRLING, S.A. 5710
CLIENT:	SMFA
DESIGNED:	W.L.
DRAWN:	S.P.J.
DRAWING No:	JAC230217-DRG- C002
SCALE:	1:200 @ A1
ISSUE:	D



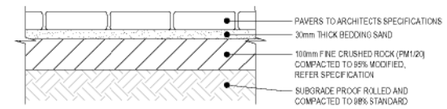
PAVING PLAN TO PERIMETER OF BUILDING
NOT TO SCALE



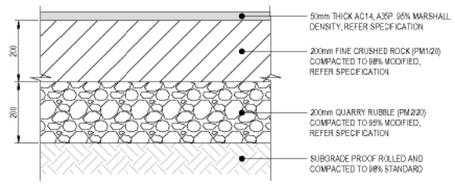
NOTES:
1. PAVING MUST NOT BRIDGE THE MASONRY DAMP-PROOF MEMBRANE.
2. PAVING SHALL BE GRADED SUFFICIENTLY TO ENSURE ALL WATER CAN DRAIN CLEAR FROM THE BUILDING.
3. PROVIDE EDGE DRAINS WHERE NECESSARY TO DIVERT RUNOFF CLEAR OF BUILDING.
4. PROVIDE TERMITE PROTECTION TO AS3660.1



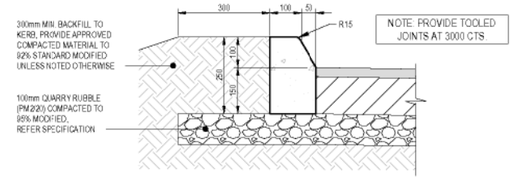
BLOCK PAVEMENT EDGE DETAIL
SCALE 1:10



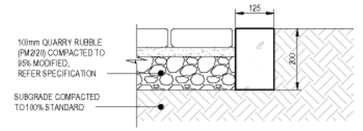
LIGHT DUTY BLOCK PAVEMENT
(PEDESTRIAN TRAFFIC)
SCALE 1:10



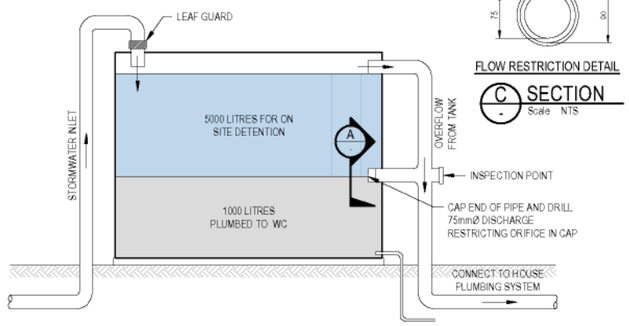
HEAVY DUTY ASPHALT PAVEMENT
(CARS, TRUCKS, B-DOUBLES)
SCALE 1:10



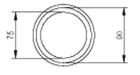
100 HIGH KERB - 100K
SCALE 1:10



FLUSH KERB - FK
SCALE 1:10

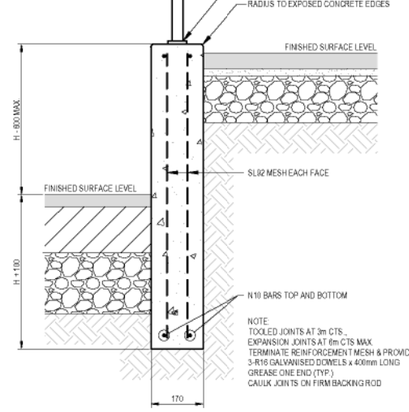


RAIN WATER TANK (RWT) DETAIL
NOT TO SCALE

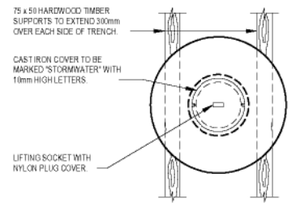


FLOW RESTRICTION DETAIL

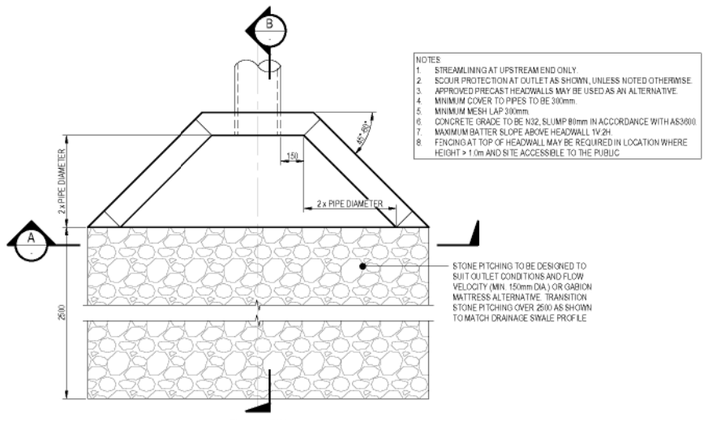
C SECTION
Scale NTS



RETAINING KERB DETAIL - RTK
SCALE 1:10



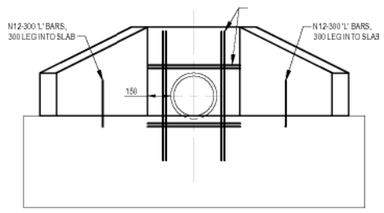
PLAN VIEW
SURROUNDING PAVING OMITTED FOR CLARITY



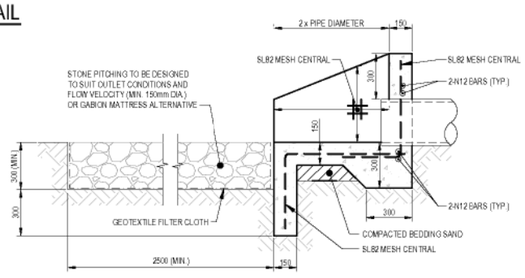
NOTES:
1. STREAMLINING AT UPSTREAM END ONLY
2. SCOUR PROTECTION AT OUTLET AS SHOWN, UNLESS NOTED OTHERWISE.
3. APPROVED PRECAST HEADWALLS MAY BE USED AS AN ALTERNATIVE.
4. MINIMUM COVER TO PIPES TO BE 300mm.
5. MINIMUM MESH LAP 200mm.
6. CONCRETE GRADE TO BE N32, SLUMP 80mm IN ACCORDANCE WITH AS3600
7. MAXIMUM BATTER SLOPE ABOVE HEADWALL 1V:2H.
8. FENCING AT TOP OF HEADWALL MAY BE REQUIRED IN LOCATION WHERE HEIGHT > 1.0m AND SITE ACCESSIBLE TO THE PUBLIC

PLAN VIEW

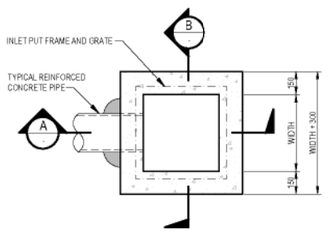
TYPICAL HEADWALL DETAIL FOR 300-375Ø PIPE DETAIL
SCALE 1:20



A SECTION
Scale 1:20



B SECTION
Scale 1:20

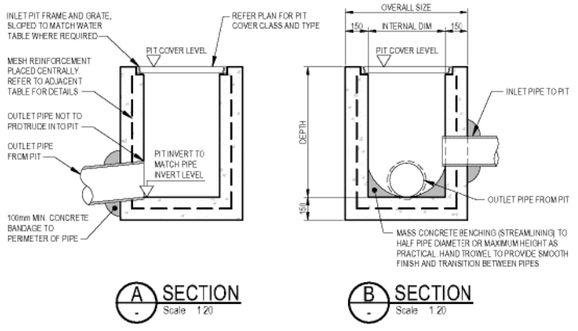


PLAN VIEW

DEPTH	MIN. INTERNAL DIMS
< 450	350 SQ
< 600	450 SQ / 600 Dia
> 600 - < 900	600 SQ / 900 Dia
>900 - <1200	600x900 SQ / 1000 Dia
>1200	900 SQ / 1000 DIA

DEPTH	REINFORCEMENT
00-1000	SL72 MESH
1001-1300	SL82 MESH
1301-1600	SL92 MESH
1601-1900	SL102 MESH
>1900	DESIGN

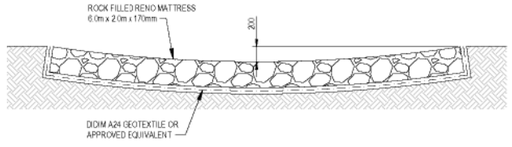
NOTES:
1. MINIMUM CONCRETE COMPRESSIVE STRENGTH (f'c=32MPa).
2. REINFORCEMENT MESH TO BE PLACED CENTRALLY, COVER TO BE 50mm (TYP.)



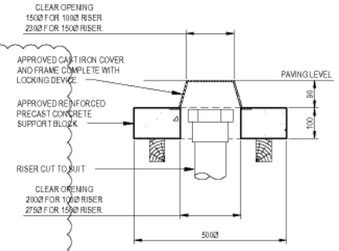
A SECTION
Scale 1:20

B SECTION
Scale 1:20

GRATED INLET PIT / JUNCTION BOX DETAILS
SCALE 1:20



ROCK FILLED MATTRESS DETAIL
NOT TO SCALE



TYPICAL SECTION

INSPECTION POINT DETAIL
BLOCK PAVEMENT ZONES
SCALE 1:10

APPROVAL ISSUE
NOT FOR CONSTRUCTION

ISSUE	DATE	DETAILS	CHECKED
C	09-08-2023	REVISIONS CLOUDED	W.L
B	26-04-2023	ISSUED FOR APPROVAL	W.L
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SHEET:	DETAILS
PROJECT:	STIRLING NORTH CHILDCARE
ADDRESS:	56 QUORN ROAD, STIRLING, S.A. 5710
CLIENT:	SMFA
DESIGNED:	W.L.
DRAWN:	S.P.J.
DRAWING No:	JAC230217-DRG- C003
SCALE:	1:200 @ A1
ISSUE:	C

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STORMWATER MANAGEMENT PLAN

Project No.	JAC230217
Project Name	Stirling North Childcare Centre
Site Address	56 Quorn Road, Stirling North SA

Architect	SMFA

Date	27 October 2023
Prepared By	WL

Revisions

No.	Date	Author	Reviewed	Notes
A	27/04/2023	WL		Issued for approval

1. INTRODUCTION

Jack Adcock Consulting Pty Ltd has been engaged by Stallard Meek Flightpath Architects on behalf of the client to prepare a stormwater management plan for the proposed development to be located at 56 Quorn Road Stirling North SA.

The development is within the City of Port Augusta.

This stormwater management plan outlines the design concept for the management of stormwater on the site, for planning approval purposes.

2. SITE DESCRIPTION

The site area is approximately 2,862 m^2.

The site in its current state, has a gentle gradient towards the rear and is almost entirely pervious. Refer to the below aerial photo. The stormwater drainage system is designed to be drained to existing swale outside the rear boundary.

Aerial Photo of the Existing Site

3. PROPOSED DEVELOPMENT

With reference to the Architect's planning drawings, the proposed development consists of the following:

- One childcare centre building
- External car parking
- Combined play area
- Wastewater on-site disposal area at rear of the building

4. DESIGN CRITERIA

In accordance with Council requirements, the following fundamental design requirements have been considered:

1. Post-development peak flow rates for minor (10 year ARI) and major (100 year ARI) storm events must not exceed the pre-development peak flow rate for minor (10 year ARI) and major (100 year ARI) storm event respectively.
2. Runoff calculations for pre-development flow calculations have been based on coefficients appropriate to the existing surface conditions.
3. Rainwater tank to capture 60% roof area and plug into toilet.
4. Runoff from the site must satisfy EPA and DPTI quality requirements.
5. The proposed development must not adversely affect the surrounding environment and adjacent sites after construction is completed.
6. Stormwater runoff shall be managed by detaining water on site so peak flow rates not to exceed pre-development conditions.
7. Discharge the stormwater to the existing swale out the rear boundary.

5. HYDROLOGY

A rational method approach has been taken in calculating stormwater runoff.

6. WATER QUALITY

In order to meet Council requirements, an ECOSOL storm pit 13L class 1 Gross Pollutant Trap is proposed for each carpark collection point.

7. STORMWATER CALCULATIONS

Refer to attached pages.

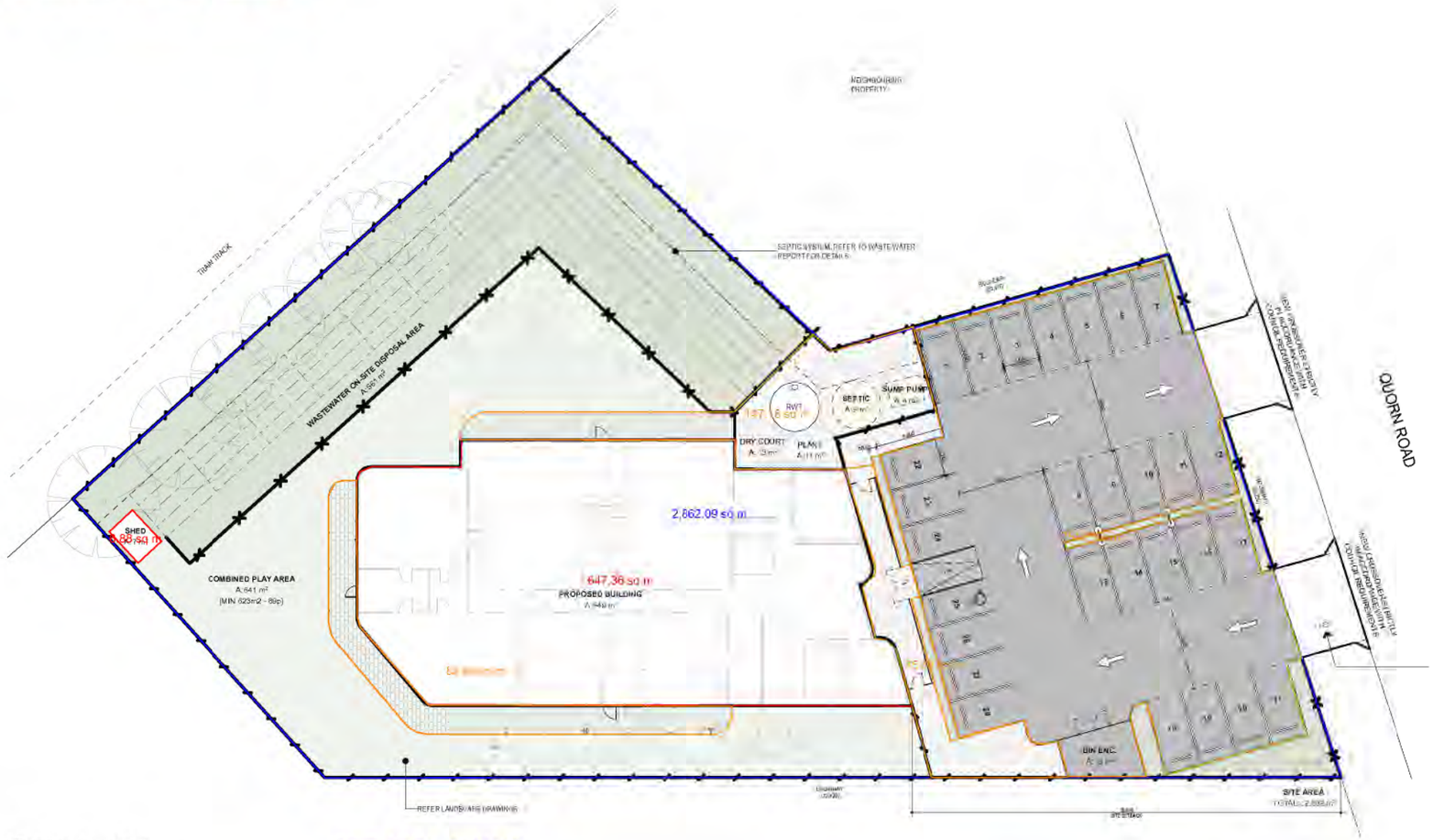
1 LOCATION PLAN
Scale 1:200

SUBJECT SITE

BUILDING AREA SCHEDULE	
	AREA m2
BUILDING	649
PLAY	641
SHED/OTHER [EXTERNAL]	50
WASTEWATER [SOAKAGE]	561
WASTEWATER [UNITS]	13
	1,914 m²

SITE PLAN LEGEND	
	EXISTING BOUNDARY LINE
	LANDSCAPING - REFER TO LANDSCAPING PLAN EXISTING TREES
	NEW TREES - REFER TO LANDSCAPING PLAN
	EXISTING CORRIGATED FENCE
	EXISTING FENCE
F01	TIMBER / PINE PALING FENCING HEIGHT	2400M
F02	OPEN ALUMINIUM BLADE FENCING COLOUR	BLACK HEIGHT	1200M
F03	HORIZONTAL ALUMINIUM SLAT FENCING COLOUR	BLACK HEIGHT	2400M
LP	LIGHT POLE

ABESCO SHEDS 3000m x 2260m x 2000m MONUMENT PREMIER DOUBLE DOOR GARDEN SHED



5 SITE AND DEMOLITION PLAN
1:200

SITE AREA: 2862M2

ROOF AREA: 647+8=655M2

PAVING AREA:
83+76+147+752=1058M2

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

S M F A

SITE PLAN
1:200 @ A1 | AR
26/4/2023 | SXD
22115 | SK101 | 02

PROJECT NO. **230217**
DATE 27/04/2023
AUTHOR WL

1 : 100 years

STORMWATER DETENTION DESIGN

A. Design Rainfall Data System 2016 from Bureau of Meterology

Suburb = North Stirling Latitude = -32.51814 Longitude = 137.842

Duration (mins)	Annual Exceedance Probability AEP (%)						
	63.2	50	20	10	5	2	1
5	45.8	54.7	85.3	108	133	169	199
10	34.6	41.3	64	81.2	99.6	126	149
15	28.2	33.6	52.2	66.3	81.3	103	122
20	23.9	28.6	44.5	56.6	69.4	88.2	104
25	20.9	25	39	49.6	61	77.5	91.5
30	18.6	22.3	34.9	44.4	54.6	69.4	82
45	14.3	17.1	26.8	34.1	42	53.5	63.2
60	11.7	14.1	22	28.1	34.5	44	51.9

B. Pre-development and Post-development Area

	Pre-development	Post-development
A_L, Land (m^2)	2862.0	2862.0
A_r, Roof (m^2)	0.0	393.0
A_i, impervious (m^2)	0.0	1349.0
A_p, pervious (m^2)	2862.0	1149.0

60% roof area:
0.6x655=393

40% roof: 262 with 1.0 coefficient = 262/0.9=291m2 impervious

total in pervious=291+1058=1349m2

1 : 100 years

PROJECT NO. 230217
DATE 27/04/2023
AUTHOR WL

C. Equivalent Impervious Area

Run-off coefficients	Pre-development	Post-development
C_r, roof	1.0	1.0
C_i, impervious	0.9	0.9
C_p, pervious	0.3	0.3
Equivalent run-off coefficient	0.30	0.68
∑CA, Equivalent Impervious Area (m^2)	858.6	1951.8

D. Design Flows and Detention Volume

Pre-development - $Q_R = \sum CA * I_R / 3600$

Design ARI =	1	in	100	year
Design AEP =			1	%
Design Duration =			5	minutes
Rainfall Intensity, I_R =			199.0	mm/hr
Calculated flow rate, Q_R =			47.5	L/s
Design restricted flow rate, Q_D =			47.5	L/s

ARI	AEP (%)
1	63.2
1.4	50
5	20
10	10
20	5
50	2
100	1

ARI =1/(-loge(1-AEP))

C - 2 *Post-development : separate into roof stormwater and surface stormwater detention* page

Design ARI = 1 in 100 year

Design AEP = 1 %

Post development - roof stormwater detention Restricted flow = 8.0 L/s

Duration (min)	Rain intensity (mm/hr)	Flow rate (L/s)	Flow to detain (L/s)	Detention (L)
5	199.0	21.7	13.7	4117.25
10	149.0	16.3	8.3	4959.5
15	122.0	13.3	5.3	4786.5
20	104.0	11.4	3.4	4024
25	91.5	10.0	2.0	2983.125
30	82.0	9.0	1.0	1713
45	63.2	6.9	-1.1	-2971.8
60	51.9	5.7	-2.3	-8403.3
			TOTAL	**4959.5**

Post development - surface stormwater detention Restricted flow = 39.5 L/s

Duration (min)	Rain intensity (mm/hr)	Flow rate (L/s)	Flow to detain (L/s)	Detention (L)
5	199.0	86.2	46.7	14011.65
10	149.0	64.5	25.1	15033.3
15	122.0	52.8	13.4	12028.05
20	104.0	45.0	5.6	6684.6
25	91.5	39.6	0.2	237
30	82.0	35.5	0.0	0
45	63.2	27.4	0.0	0
60	51.9	22.5	0.0	0
			TOTAL	**15033.3**

1 : 100 years

PROJECT NO. 230217
DATE 27/04/2023
AUTHOR WL

E. Detention System

Roof stormwater detention

Detention required = 4959.5 L

Using 2 x 11000 L rainwater tank with 11000 L detention each

→ Total detention provided = 22000 L > detention required OK

Tank orifice

Number of dwellings on block, n =	1		
Water head to orifice, h =	0.50	m	
Discharge loss coefficient, C_d =	0.60		(circular orifice)
Flow through orifice plate, Q_o =	8	L/s	
Orifice area, $A_o = Q_o/(C_d*\sqrt{(2gh)})$ =	4257	mm^2	
Orifice diameter, $d = \sqrt{(4*A_o/\pi)}$	73.6	mm	

1 : 10 years

PROJECT NO. 230217
DATE 27/04/2023
AUTHOR WL

STORMWATER DETENTION DESIGN

A. Design Rainfall Data System 2016 from Bureau of Meterology

Suburb = North Stirling Latitude = -32.51814 Longitude = 137.842

Duration (mins)	Annual Exceedance Probability AEP (%)						
	63.2	50	20	10	5	2	1
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10	34.6	41.3	64	81.2	99.6	126	149
15	28.2	33.6	52.2	66.3	81.3	103	122
20	23.9	28.6	44.5	56.6	69.4	88.2	104
25	20.9	25	39	49.6	61	77.5	91.5
30	18.6	22.3	34.9	44.4	54.6	69.4	82
45	14.3	17.1	26.8	34.1	42	53.5	63.2
60	11.7	14.1	22	28.1	34.5	44	51.9

B. Pre-development and Post-development Area

	Pre-development	Post-development
A_L, Land (m^2)	2849.0	2849.0
A_r, Roof (m^2)	0.0	393.0
A_i, impervious (m^2)	0.0	1349.0
A_p, pervious (m^2)	2849.0	1149.0

1 : 10 years

PROJECT NO. 200174
DATE 27/04/2023
AUTHOR JS

page

C. Equivalent Impervious Area

Run-off coefficients	Pre-development	Post-development
C_r, roof	1.0	1.0
C_i, impervious	0.9	0.9
C_p, pervious	0.3	0.3
Equivalent run-off coefficient	0.30	0.69
∑CA, Equivalent Impervious Area (m^2)	854.7	1951.8

D. Design Flows and Detention Volume

Pre-development - $Q_R = \sum CA * I_R / 3600$

Design ARI =	1	in	10	year
Design AEP =			10	%
Design Duration =			5	minutes
Rainfall Intensity, I_R =			108.0	mm/hr
Calculated flow rate, Q_R =			25.6	L/s
Design restricted flow rate, Q_D =			25.6	L/s

ARI	AEP (%)
1	63.2
1.4	50
5	20
10	10
20	5
50	2
100	1

ARI =1/(-loge(1-AEP))

C - 2 *Post-development : separate into roof stormwater and surface stormwater detention* page

Design ARI = 1 in 10 year

Design AEP = 10 %

Post development - roof stormwater detention Restricted flow = 8.0 L/s

Duration (min)	Rain intensity (mm/hr)	Flow rate (L/s)	Flow to detain (L/s)	Detention (L)
5	108.0	11.8	3.8	1137
10	81.2	8.9	0.9	518.6
15	66.3	7.2	-0.8	-686.025
20	56.6	6.2	-1.8	-2185.4
25	49.6	5.4	-2.6	-3878
30	44.4	4.8	-3.2	-5675.4
45	34.1	3.7	-4.3	-11549.025
60	28.1	3.1	-4.9	-17756.7
			TOTAL	**1137**

Post development - surface stormwater detention Restricted flow = 17.6 L/s

Duration (min)	Rain intensity (mm/hr)	Flow rate (L/s)	Flow to detain (L/s)	Detention (L)
5	108.0	46.8	29.1	8736.9
10	81.2	35.2	17.5	10511.16
15	66.3	28.7	11.1	9960.21
20	56.6	24.5	6.9	8240.16
25	49.6	21.5	3.8	5753.7
30	44.4	19.2	1.6	2851.56
45	34.1	14.8	0.0	0
60	28.1	12.2	0.0	0
			TOTAL	**10511.16**

Project NORTH STIRLING 6 Project No 23027

CHILDCARE Date

Designer WL Page

SURFACE DETENTION CHECK.

CARPARK DIVIDED INTO 4 AREAS WITH LOWEST POINT AT GIP.

H = 32.665 - 32.375 = 0.29 m

$V_{EACH} = 8 \times 17 \times 0.29 / 3 = 13.1 m^3$.

$V_{total} = 13.1 \times 4 = 52.4 m^3 = 52,400 L$

MINOR EVENT. NO PONDING ALLOWED

USE 13L ECOSOL STORMPIT FOR GROSS POLLUTION TREATMENT WITH 1200L STORAGE CAPACITY

+ 3 UNITS OF 1500X1200 ROCLA BOX CULVERT OSD SYSTEM WITH 11000L STORAGE CAPACITY

TOTAL = 12200L > 10511 L DETENTION REQUIREMENT FROM SPREADSHEET CALCS. → NO SURFACE DETAIN... ACHIEVED FOR MINOR EVEN...

MAJOR EVENT DETENTION REQUIREMENT 15,003L

TOTAL DETENTION 12200

15003 - 12200 = 2803L < 52,400L SURFACE PONDING CAPACITY ✓

Storage

Rocla® OSD Systems

Rocla® OSD systems are engineered structures that utilise Rocla's range of precast steel-reinforced concrete pipes, box culverts and Rocla® CPO pits.

Rocla® OSD tanks can easily be tailored to meet individual site requirements such as maximising outflows at the onset of storms, and can be fitted with outlet control devices to provide for permissible site discharge.

The wide range of standard sizes available in the range of Rocla® precast components provides multiple choices for every application. The volume table shows common sizes and detention volumes based on the number of pipe or box culvert cells. Other sizes are available. Rocla Water Quality can manufacture an OSD system to meet individual volume requirements. Components are designed to Australian Standards for trafficable loads and manufactured in a quality-assured factory environment. The resulting high strength and durability provide a permanent asset with low whole-of-life costs.

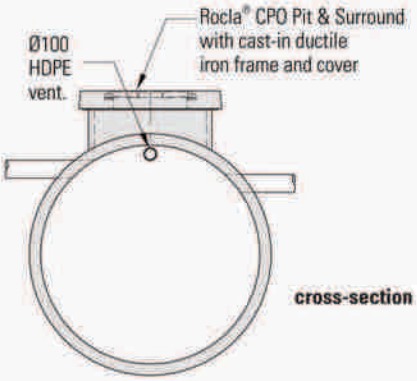
Also available for sewerage applications

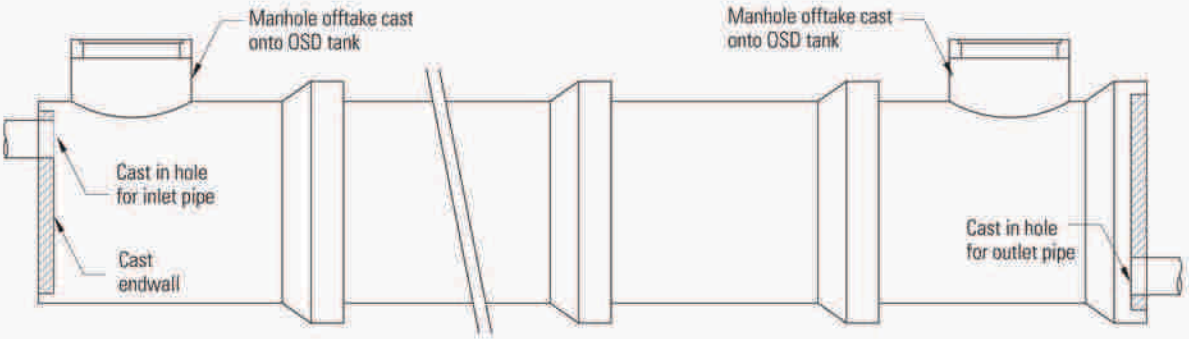
Call Rocla for more information.

Rocla® Pipe OSD System - Volume (m³)

OSD Nominal Size	Number of Cells									
	1	2	3	4	5	6	7	8	9	10
900mm dia	-	-	-	6	8	9	11	12	14	15
1200mm dia	-	-	8	11	13	16	19	22	24	27
1500mm dia	-	8	13	17	21	25	30	34	38	42
1650mm dia	-	10	15	20	26	31	36	41	46	51
1800mm dia	-	12	18	24	30	36	43	49	55	61
1950mm dia	-	14	21	29	36	43	50	57	64	71
2550mm dia	-	24	37	49	61	73	86	98	110	122

Typical Rocla® Pipe OSD System





Storage

Load-bearing OSD Structures

Rocla® OSD systems, in both pipe and box culvert options, can be designed and manufactured for construction and highway loadings.

Box culverts can be designed for zero fill conditions, providing a readymade running surface for carparks and saving on pavement materials.

Custom Solutions

Rocla® OSD systems can be adapted to any application, including sewage detention and oil retention, and supplied to specification with a wide range of inclusions, either factory fitted or supplied separately for installation on site.

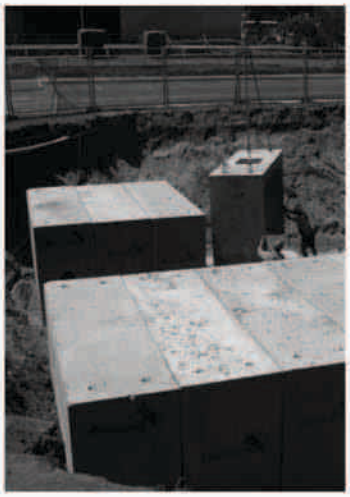
Options include:

- Cast-in inlet/outlet pipe stubs
- Access points for maintenance
- Leg cutouts and end blockouts
- Cast-in weirs
- Grates and trash racks
- Orifice plates
- Flow control devices

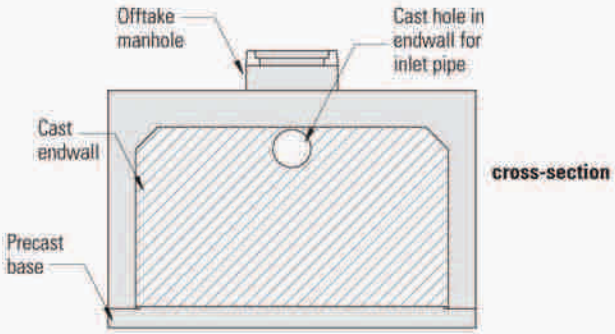
Call Rocla for more information.

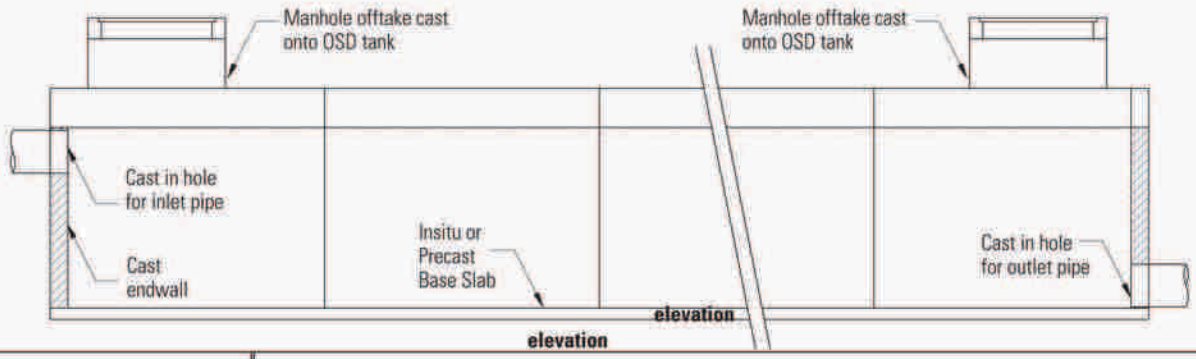
Rocla® Box Culvert OSD System - Volume (m³)

OSD Nominal Size	Number of Cells									
	1	2	3	4	5	6	7	8	9	10
1200 x 750	-	-	-	7	9	11	13	15	17	18
1200 x 900	-	-	7	9	11	13	16	18	20	23
1200 x 1200	-	-	9	12	15	18	22	25	28	31
1500 x 900	-	-	8	11	14	17	20	23	26	29
1500 x 1200	-	7	11	16	20	24	28	32	36	40
1500 x 1500	-	9	15	20	25	30	35	40	45	51
1800 x 1200	-	9	14	19	23	28	33	38	43	48
1800 x 1500	-	11	18	24	30	36	42	48	55	61
1800 x 1800	-	14	21	29	36	44	51	59	66	74
2100 x 1500	-	13	20	28	35	42	49	56	64	71
2100 x 1800	-	16	25	34	42	51	60	69	77	86
2100 x 2100	-	19	29	39	50	60	70	81	91	101
2400 x 1800	-	18	28	38	48	58	68	78	88	98
2400 x 2400	-	25	38	52	65	79	92	106	120	133
2700 x 2100	-	24	38	51	64	77	90	104	117	130
2700 x 2400	-	28	43	58	74	89	104	119	134	150
3000 x 2100	-	27	42	56	71	86	101	115	130	145
3000 x 2400	-	31	48	65	82	99	116	132	149	166
3300 x 2100	-	30	46	62	78	94	111	127	143	159
3300 x 2400	-	34	53	71	90	109	127	146	164	183
3600 x 2100	-	32	50	68	85	103	121	138	156	174
3600 x 2400	-	37	58	78	98	118	139	159	179	200

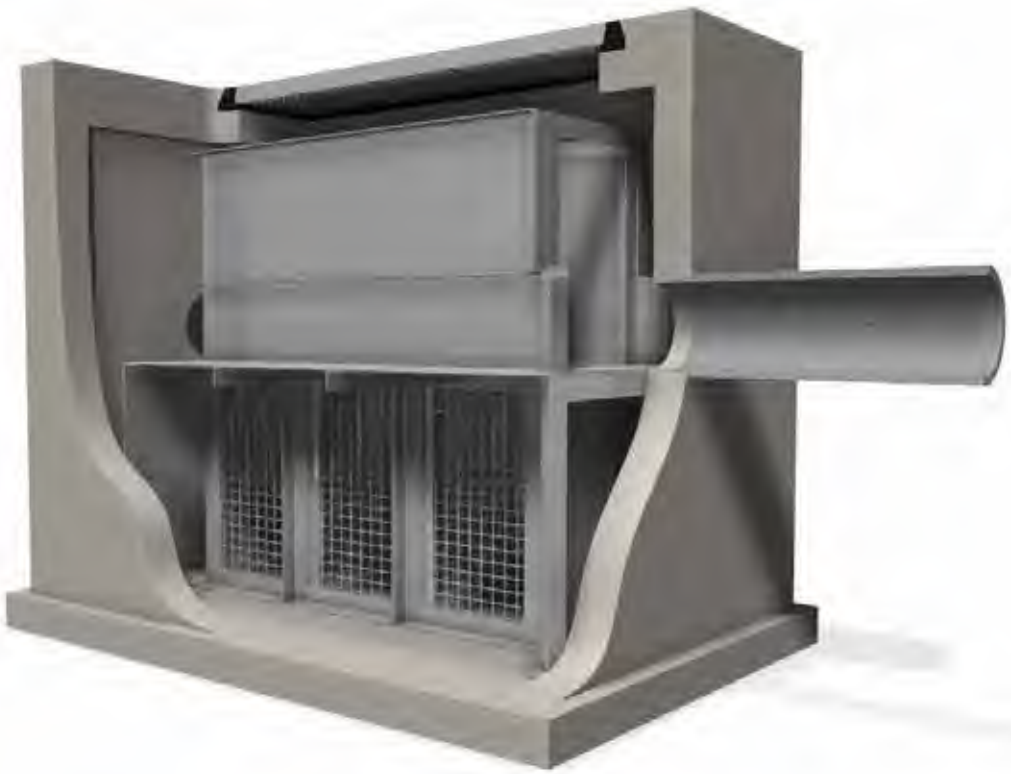


Typical Rocla® Box Culvert Crown OSD System





Ecosol™ Gross PollutantTrap Technical Specification



environmentally engineered
for a better future

URBAN
ASSET SOLUTIONS™

Contents

1.0 Introduction

Increasingly stringent environmental best management practice requires planners and developers to apply a fit-for-purpose treatment train approach to stormwater treatment to achieve today's water quality objectives (WQOs). An integral element to any good WSUD is primary treatment or pre-screening of stormwater flows to remove coarse sediment and gross pollutants prior to downstream secondary or tertiary treatment systems such as wetlands.

The Ecosol™ Gross Pollutant Trap provides effective primary treatment of stormwater flows thereby significantly enhancing the operational life of downstream secondary and tertiary treatment systems.

Typical In-Line Ecosol™ GPT configuration

Typical Off-Line Ecosol™ GPT configuration

The system has been designed to provide a robust and durable cost effective primary treatment system that captures and retains solid pollutants conveyed in stormwater conduits.

In developing this innovative stormwater treatment system careful consideration has been given to durability, longevity, cost and maintainability. Key commercial technical features include:

- low visual impact and energy footprint;
- designed hydraulics with proven performance and longevity;
- scalable design; and
- cost effective maintenance regime.

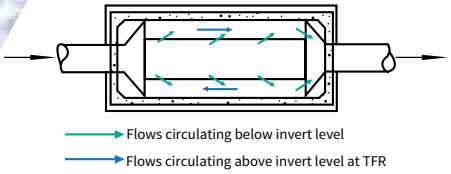
This technical manual describes the operation and performance characteristics of the system.

URBAN ASSET SOLUTIONS™

1.1 How and Why the Ecosol™ GPT Works

The objective of stormwater treatment is to achieve a real, visible, and sustainable improvement in water quality. Pollution control measures, including Gross Pollutant Traps (GPT's), such as the Ecosol™ GPT, litter baskets, sediment basins, grass swales, infiltration systems and sand filters all reduce the level and concentration of a variety of pollutants, thereby enhancing water quality.

The Ecosol™ GPT is a non-blocking, wet sump, tangential filtration system that has been specifically designed to filter stormwater pollutants conveyed in stormwater conduits by capturing and retaining all contaminants larger than 2mm up to a designed treatable flow rate (TFR). It can play and integral role in reducing pollution in urbanised catchments and help reduce the footprint of a total stormwater treatment train by providing essential prescreening.



Developed in 1996 and tested by the University of South Australia and also EngTest the commercial consulting division of the Adelaide University it remains today one of the most widely recognised and used stormwater primary treatment systems. Today as part of our continual product improvement program the modern Ecosol™ GPT is designed to provide high pollutant retention rates with little hydraulic impact on the drainage infrastructure.

2.0 Ecosol™ GPT Credentials and Case Studies

The Ecosol™ GPT is designed specifically to provide essential primary treatment of stormwater runoff. It is a compact, efficient and cost-effective solution to the ever-increasing problem of gross pollutants present in stormwater flows. Key to its success is the robust, engineered design and tangential screens housed in a pre-cast concrete pit that provides a significantly greater screening area than that of traditional direct screening trash rack designs. Further its large detention chamber enables gravitational separation to occur retaining fine particulate matter conveyed in stormwater.

Urban Water Resources Centre – University of South Australia
Product Performance Testing.

In 1997 and 1998 the University of South Australia (UniSA), was commissioned to undertake a series of tests on the widely-used Ecosol™ GPT (formerly known as the RSF 4000) to confirm the product's performance. The tests measured the capture efficiency of the system under varying flow conditions and gradients and also the hydraulic headloss of the system under varying flows and gradients.

EngTest Department of Civil and Environmental Engineering –
University of Adelaide – Product Performance Testing

In October 1998 after further product development Ecosol commissioned Engtest the Department of Civil and Environmental Engineering at the University of Adelaide to undertake further testing on the system to confirm hydraulic head loss and capture efficiencies.

2.0 Ecosol™ GPT Credentials and Case Studies Continued

Avocet Consulting - CFD modelling to determine pollutant trapping performance and fluid hydraulic characteristics under varying flow conditions.

In early 2000 to mid-2001 as part of the companys continuous product improvement program Ecosol engaged the services of Avocet Consulting to assess the Ecosol™ GPTs hydraulic performance, structural integrity, capture efficiency, treatable flow rates relevant to product sizing and scaling. Additional laboratory testing was also completed to monitor its performance as it filled and also to review the non-blocking, tangential filtration longevity of the system under varying flow conditions and percentage of fill.

EngTest Department of Civil and Environmental Engineering – University of Adelaide – Performance Review

In June 2013 the University of Adelaide (EngTest) completed a series of additional product tests to further verify product performance and concurrently reviewed all past laboratory and field testing on the performance of the product to comprehensively determine its performance for current industry applications.

3.0 Warranty and Life Expectancy

The Ecosol™ GPT has a one-year warranty covering all components and workmanship. Urban Asset Solutions Pty Ltd will rectify any defects that fall within the warranty period. The warranty does not cover damage caused by vandalism and may be invalidated by inappropriate cleaning procedures or where the unit is not cleaned within the recommended frequency. The Ecosol™ GPT is designed to meet strict engineering guidelines and manufacturers guarantees and is one of the most durable stormwater treatment systems available. The stainless steel components have a life expectancy of 15 years while the pre-cast concrete pit has a life expectancy of 50 years providing appropriate maintenance practices are employed.

4.0 Safety Considerations

The simple, yet effective design of the Ecosol™ GPT reduces OH&S risks as most of the work is undertaken in a controlled factory environment. The unit arrives to site complete and ready for installation reducing significantly on-site time, an important factor given the costs associated with delays that can be caused by inclement weather.

5.0 Key Features and Benefits

The Ecosol™ GPT captures and retains more than 98% of pollutants larger than 2000µm and whilst designed as a primary treatment solution, can capture and retain attached particulate Suspended Solids, Phosphorous and Nitrogen at its design Treatable Flow Rate (TFR).

Its efficiency is largely dependant on the chemical composition of the particles and the bonding of these chemical constituents to the surface of particles and the body of pollutants forming a media within the device.

Easily installed, the pre-cast modular Ecosol™ GPT can be fitted to conduits of almost any size and shape, either within the drainage network or off-line adjacent to creeks or open channels. Its range of applications include industrial and commercial sites, such as car parks, shopping centres and wash-bays, residential developments, airports, freeways, civil construction projects and wetlands.

Key Features	Benefits
Hydraulics	• Low headloss (k) factor • Designed and managed hydraulics eliminates blockage risk • Patented hydraulically-driven barrier reduces premature by-pass • Non-blocking tangential filtration screening
Pollutant Capture and Retention	• Captures and retains more than 98% of solid pollutants > 2000µm • Captures and retains up to 99% free oils and grease in spill situations • No remobilisation of captured settled Gross Pollutants
Design and Construction	• Can be sized to suit a wide range of flows, gradients and pipe sizes • Up to a GPT 4900 unit comes complete to site making installation easy and safe • Shallow depth below invert reduces water table problems • Product is made in-house thereby reducing lead times significantly
Cleaning and Maintenance	• Cost-effective vacuum cleaning so no need for the pollutants to be handled • Large pollutant storage capacity • Baffle design for emergency spill storage
Environmental Impact	• Effective pre-screening as part of a treatment train to achieve water quality objectives • Positive effect on natural ecosystem by improving water quality • Unit is housed in its own pit with little effect on the site aesthetics
Tried and Tested	• Independently laboratory field tested • Meets industry standards and guidelines

Table 1 - Ecosol™ GPT key features and benefits.

6.0 Key Dimensions

The table below shows the approximate dimensions and holding capacities for, the Ecosol™ GPT. Their capacity to retain large quantities of captured pollutants ensures that its specified capture efficiency is maintained between scheduled cleaning events.

Ecosol GPT Product Code	Maximum Inlet/Outlet Pipe Diameter	Treatable Flow Rate (L/s)	Approximate External Dimensions (L x W x D from inlet invert level) (mm)	Pollution Holding Capacities		
				Solid Pollutants >2mm	Free Oils and Grease	Water
				m^3	Litres	Litres
GPT 4200	Up to 300mm	Up to 51	2200 x 900 x 750	0.23	268	667
GPT 4300	Up to 525mm	Up to 120	2700 x 1350 x 750	0.32	469	1,181
GPT 4450	Up to 600mm	Up to 260	3600 x 1650 x 1050	1.03	1,347	3,348
GPT 4600	Up to 900mm	Up to 470	4500 x 1950 x 1350	2.43	2,994	7,211
GPT 4750	Up to 1050mm	Up to 730	5600 x 2300 x 1650	4.83	5,711	13,608
GPT 4900	Up to 1350mm	Up to 1,050	6500 x 2600 x 1975	8.30	9,576	22,768
GPT 41050	Up to 1500mm	Up to 1,430	7450 x 2950 x 2300	13.11	14,850	35,262
GPT 41200	Up to 1800mm	Up to 1,870	8630 x 3300 x 2625	19.52	22,793	51,698
GPT 41350	Up to 1950mm	Up to 2,370	9700 x 3700 x 2950	27.70	30,578	72,495
GPT 41500	Up to 2100mm	Up to 2,930	10680 x 4000 x 3250	37.94	41,491	98,317
GPT 41800	Up to 2400mm	Up to 4,210	12730 x 4700 x 3900	65.33	70,452	166,836

Table 2 - Key product dimensions

Notes:
1. The unit can be sized to suit almost any type of pipe or box culvert.
2. Unit dimensions can vary depending on the vehicle load requirements and the wall thickness.

The Ecosol™ GPT is available in four configurations:
- In-line/End of Line;
- Off-Line;
- Fixed tangential screens for vacuum truck cleaning;
- Removable basket configuration for cleaning by crane truck.

Unit Design Loading

The range of Ecosol™ GPT's are designed for Class B, D and up to Class G loadings suitable for underground installations in highways, airport and wharf applications.

7.0 Capture Efficiencies

In order to determine a meaningful characterisation of the products collection efficiency, an extensive verification phase was undertaken by Avocet Consulting Pty Ltd, Ecosol and EngTest (The University of Adelaide). Tables 3 and 4 summarise these results.

Particulate Size (Micron)	Capture Efficiency
20 - 60	23%
60 - 200	67%
200 - 600	94%
600 - 2000	98%

Table 3 – Typical PSD results

ECOSOL GPT CAPTURE EFFICIENCY PERFORMANCE SUMMARY		
Pollutants	**Capture Efficiency**	**Details**
Gross Pollutants (GP)	98%	Particulate >2000 micron
Total Suspended Solids (TSS)	61%	Particulate 20-2000 micron (mean averages)
Total Phosphorous (TP)	29%	Particulate and dissolved mean average efficiency less standard deviation
Total Nitrogen (TN)	1%	Particulate and dissolved mean average efficiency less standard deviation
Total Petroleum/Hydrocarbon (TPH)	99%	In dry weather emergency oil spill solutions
	23%	In a high flow event

Table 4 – Mean average pollutant percentage reductions

Figures quoted are mean collection efficiency statistics based on available product testing data. It is important to note that the water quality CE values are indicative of potential field CEs given that the product is designed as a primary treatment solution providing physical screening and the removal of chemical constituents is largely dependent on the chemical composition of the particles and the bonding of these chemical constituents to the surface of particles. Further, finer and attached particle filtration performance of the product is also dependent on the body of pollutants forming a media already captured by the filter. Quoted CE values are intended as a general guide, please consult with your Urban Asset Solutions Pty Ltd representative for site specific product sizing and modelling.

8.0 MUSIC Modelling Guidelines

These guidelines provide instruction to the creation and application of a treatment node for the Ecosol™ GPT for the Model for Urban Stormwater Improvement Conceptualisation (MUSIC). The Ecosol™ GPT can be modelled in MUSIC using the Gross Pollutant Trap Treatment node to represent the results derived from independent laboratory testing and field testing by the University of South Australia and the University of Adelaide (Engtest The school of Civil, Environmental and Mining Engineering). The guidelines apply to the creation of the treatment node within MUSIC V6.1.0.

8.1 Creating the Node

Insert a GPT treatment node into your model by selecting "GPT" under the treatment nodes menu. When the node is created the node properties dialog is displayed. There are several changes that need to be made in this dialog.

- Adjust the text in the location box to read "Ecosol GPT" plus any other relevant information (4200, 4300 etc.).
- Adjust the low flow bypass to reflect any flow (m^3/ sec) diverted away from the unit before treatment (usually zero)
- Adjust the high flow bypass to reflect the treatable flow rate (TFR values are detailed in table 2) (m^3/sec) any higher flows will bypass treatment.

NOTES: Can be used to describe assumptions or location of reduction values for authority approvals.

Adjust the transfer function for each pollutant selecting the pollutant and editing (right click on the function point) the input and output values on the graph below to reflect capture efficiencies (CE) of the treatment device. Table 5 provides the input and output values for the Ecosol™ GPT based on High Flows. Table 5 provides input and output nodes for the Ecosol™ based on Low Flows.

Pollutant	Removal Rate (%)	Entered Input Value	Entered Output Value
Total Suspended Solids (20 - 2000µm)	61	1000	390
Total Phosphorus	29	1000	710
Total Nitrogen	1	1000	990
Gross Pollutants (>2000µm)	98	1000	20

Table 5 - Ecosol™ Gross Pollutant Trap – input and output values

9.0 Design Guidelines

To ensure your system is appropriately designed for its intended application and meets local water quality objectives it is essential that the following minimum information is provided.

- Confirm the required treatable flow rate – this is the minimum stormwater run-off volume that must be treated. Typically this is the 1 in 3 month to 1 in 1 year ARI.
- Confirm the maximum design flow capacity of the drainage line. This is important as it allows us to appropriately design and model the system to cater for these peak flows at minimal head-loss.
- Confirm the proposed number and locations of Ecosol™ GPT's to be installed. Where possible please provide clearly marked drainage plans indicating the proposed locations.
- Confirm local water quality objectives - Recent state governmental planning policies have established clear stormwater quality bench mark objectives for local and regional councils. Accordingly local and regional council water sensitive urban design objectives have been amended to meet these stormwater pollution reduction targets. It is important we are provided this information specific to your site and local council regulations so that we can clearly advise you of the products removal efficiency relevant to these WQO's.

For further assistance in sizing or specifying a system for your next project please complete the form in Appendix 1 and forward to your local Urban Asset Solutions Pty Ltd representative.

Urban Asset Solutions Pty Ltd engineering team is able to provide a comprehensive design proposal for almost any project where the Ecosol™ GPT is proposed either individually or in conjunction with any other filtration systems working together in a treatment-train approach. Services offered include preliminary hydraulic, structural, and total concept designs, as well as consideration to access and hardstand designs for cleaning and maintenance. This includes MUSIC (Model for Urban Stormwater Improvement Conceptualisation) modelling, CAD drawings and product specifications together with maintenance schedules and associated costs.

Further, Urban Asset Solutions Pty Ltd can also undertake all civil and structural installation works, and our complete turnkey service also includes full maintenance of the proposed stormwater treatment systems and reporting.

10.0 Hydraulic Specification

Gross Pollutant Traps (GPT's), such as the Ecosol™ GPT, are primarily designed to remove gross pollutants (>2mm) from stormwater at high treatable flow rates (TFR) and can play an integral role in reducing pollution in heavily-urbanised catchments that discharge into our waterways.

The Treatable Flow Rate (TFR) is the minimum flow that a GPT must treat, without by-pass, to achieve the desired pollutant capture criteria for a particular development. It varies dependent on that catchment size and percentage of impervious area thereby determining the pipe size and gradient. Typically, the Ecosol™ GPT is designed to treat the 1-in-3 month Annual Rainfall Intensity (ARI) discharges, with greater flows by-passing the unit.

Ecosol GPT Product Code	maximum Inlet/Outlet Pipe Diameter	Treatable Flow Rate (L/s)	Approximate External Dimensions (L x W x D from inlet invert level) (mm)
GPT 4200	Up to 300mm	Up to 51	2200 x 900 x 750
GPT 4300	Up to 525mm	Up to 120	2700 x 1350 x 750
GPT 4450	Up to 600mm	Up to 260	3600 x 1650 x 1050
GPT 4600	Up to 900mm	Up to 470	4500 x 1950 x 1350
GPT 4750	Up to 1050mm	Up to 730	5600 x 2300 x 1650
GPT 4900	Up to 1350mm	Up to 1,050	6500 x 2600 x 1975
GPT 41050	Up to 1500mm	Up to 1,430	7450 x 2950 x 2300
GPT 41200	Up to 1800mm	Up to 1,870	8630 x 3300 x 2625
GPT 41350	Up to 1950mm	Up to 2,370	9700 x 3700 x 2950
GPT 41500	Up to 2100mm	Up to 2,930	10680 x 4000 x 3250
GPT 41800	Up to 2400mm	Up to 4,210	12730 x 4700 x 3900

Table 6 - Ecosol GPT indicative product Treatable Flow Rates

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10.1 By-Pass Capacity and Head-Loss

The range of Ecosol™ GPT's has been designed to cater for maximum flow by-pass at minimal head-loss. The placement of any structure into a stormwater line will induce headloss. The extent of this head-loss is a function of the velocity in the outlet pipe and the k factor adopted. The k factor must be representative of the type of structure and its operation during full-flow conditions as distinct from the TFR.

The Ecosol™ GPT has one of the lowest k factors of any GPT currently available. Extensive independent testing has been carried out to confirm the unit's k factor for a range of pipe and unit sizes based on full flow, worst case scenarios. These tests show that the k factor can vary between 0.6 and 1.5 depending on the pipe configuration and the relative unit size, as shown below.

Gradient	*k* Factor
1%	0.6
2%	1.0
3%	1.5

Table 7 – Measured maximum k factor for the Ecosol™ GPT at the suggested treatable flow rate for non surcharged flows.

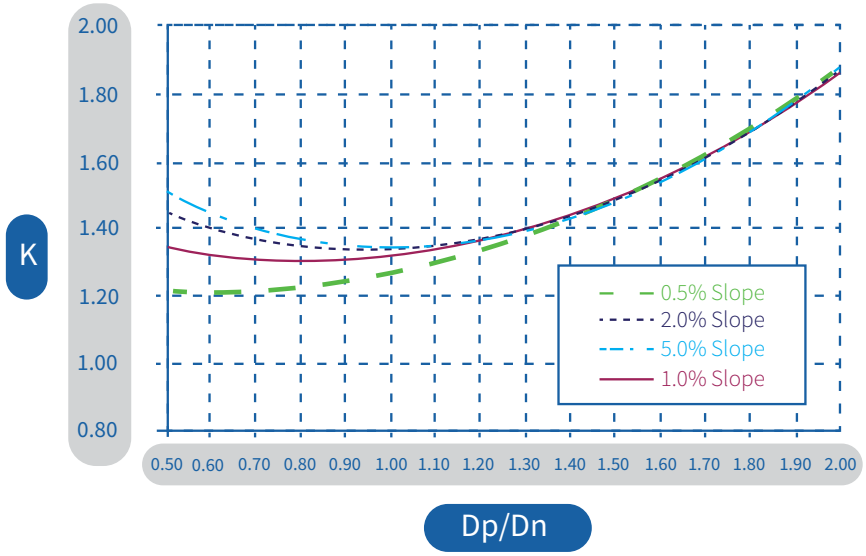

Figure 1 Measured maximum k factors for the Ecosol™ GPT at its designed maximum by-pass flow rate (designed discharge rates) in a surcharged environment.

11.0 Cleaning and Maintenance

The cleaning frequency and the cost, depends heavily on the catchment size and type, the unit's proximity to a waste facility and the quality and quantity of stormwater runoff

Cleaning frequencies are based on typical pollution loads of 0.280m³ /ha/year for gross pollutants and 0.380m³ /ha/year for sediment generated on typical fully developed fully developed urban catchment. For larger catchments or during extended dry weather periods additional system cleaning may be required.

Urban Asset Solutions Pty Ltd specialises in the cleaning and maintenance of all Stormwater Treatment Devices including vegetated solutions and would be pleased to assist you with your ongoing asset maintenance.

Ecosol GPT Product Code	Pollution Holding Capacities			Optimal Catchment Area (Ha)	Recommended Cleaning Frequency
	Solid Pollutants >2mm	Free Oils and Grease	Water		
	m³	Litres	Litres	Ha	Per Annum
GPT 4200	0.23	268	667	0.35	1
GPT 4300	0.32	469	1,181	0.50	1
GPT 4450	1.03	1,347	3,348	1.50	1
GPT 4600	2.43	2,994	7,211	3.60	1
GPT 4750	4.83	5,711	13,608	7.30	1
GPT 4900	8.30	9,567	22,768	12.50	1
GPT 41050	13.11	14,850	35,262	19.80	1
GPT 41200	19.52	22,793	51,698	29.50	1
GPT 41350	27.70	30,578	72,495	41.90	1
GPT 41500	37.94	41,491	98,317	57.40	1
GPT 41800	65.33	70,452	166,836	98.90	1

Table 8 - Ecosol™ GPT Recommended Cleaning Frequencies

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12.0 Monitoring

Under normal weather and operating conditions, your Ecosol™ GPT should be checked, minimum every 3 months depending on quality and quantity of the inflow to the unit. Initially, Urban Asset Solutions Pty Ltd recommends that monitoring is undertaken monthly or immediately after a major rain event. Once the unit has been in operation for an extended period of time (say, 12 months) then the monitoring schedule can be adjusted to reflect the actual operating conditions specific to the catchment.

Under normal operating conditions the unit would normally require cleaning approximately every 12 months.

13.0 Monitoring, Cleaning and Maintenance Service

An essential element of any good stormwater management program includes regular inspections, cleaning, and maintenance of installed Stormwater Quality Improvement Devices (SQIDS) to ensure that they continue to capture and retain pollutants to their designed specifications without premature by-pass and without any adverse impact on the drainage capacity of the stormwater conduit that it is installed on.

Cleaning frequencies, methodologies and even they equipment used to maintain these systems will vary depending on the type of device installed the catchment type, size and rainfall patterns.

At Urban Asset Solutions Pty Ltd we offer:

- a competitive cleaning and maintenance service;
- a long-standing record in safe work practices, supported by Quality Assured processes;
- in-depth knowledge and experience with all popular types and brands of GPTs;
- a complete understanding of pollution removal and disposal regulations and processes that ensures your unit is cleaned effectively and efficiently without risk of damage and;
- useful, easy-to-read reports, allowing you to track performance and pollution loading.

14.0 Applications and Configurations Continued

The Ecosol™ GPT is usually installed In-Line/end-of-line on stormwater pipes or box culverts ranging in size from 200mm to 1800mm, although is suitable for larger pipes and box culverts. The product can be easily integrated into most drainage designs for residential, commercial or industrial applications .

Commercial Precincts

Car Parks

Residential Developments

The unit is also suitable for installation off-line adjacent to large open channels or drains.

The Ecoso™ GPT is able to be custom designed specific to you application. We can vary the loading class, pit depth and accommodate varying pipe types and sizes.

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15.0 Turnkey Services

Urban Asset Solutions Pty Ltd design and estimating staff provide a dedicated management approach towards your project. In addition all staff are capable of liaising with the client, the consulting engineer, the contractor, and all other interested third parties to achieve a successful outcome.

16.0 Accreditation

Urban Asset Solutions Pty Ltd is accredited to ISO 14001 (Environment) and AS/NZS 9001 (Quality). Our commitment to continuously improving our products and services is demonstrated by our ongoing accreditation for Quality and Environmental Management. Urban Asset Solutions Pty Ltd is also committed to a safe environment for its employees. We are fully third-party accredited to AS/NZS 4801and OHSAS 18001.

17.0 Suppiler and Technical Product Contact Details

For any maintenance or technical product enquiries please contact:
Urban Asset Solutions Pty Ltd
Tel: 1300 706 624
Fax: 1300 706 634
Email: info@urbanassetsolutions.com.au

Appendix 1

Ecosol™ GPT Essential Information Form

To ensure your system is appropriately designed for its intended application and meets local water quality objectives it is essential that the following minimum information is provided:

Customer Details

Contact Person:

Company Name:

Phone:

Fax:

Email:

Project and Site Information

Project Name:

Project Address:

Type of Development/Catchment Type:

Pollutant Removal Targets (%):
Site Water Quality Objectives (WQO's)

- Gross Pollutants (>2000µm)
- Total Suspended Solids (20 – 2000µm)
- Total Phosphorus
- Total Nitrogen
- Heavy Metals
- Total Petroleum/ Hydrocarbon
- Other

Local Authority:

Device Location:

Designed Discharge (Peak ARI Flow Rate) L/s:

Treatable Flow Rate (L/s):

Tidal or submerged (inundated) system:

Inlet Pipe Diameter/Size

Depth to Inlet pipe invert level

Preferred access cover type and loading
(Grated or solid top) (Class A, B or D)

Other essential design or site relevant information:

Please forward the above information for your next project to your local Urban Asset Solutions Pty Ltd representative. On receipt Urban Asset Solutions Pty Ltd will model and design the most appropriately sized system to suit your application to assist you achieve the project Water Sensitive Urban design objectives.
Email: info@urbanassetsolutions.com.au - Fax: 1300 706 634.

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Appendix 2

References

Please note that the Ecosol™ GPT was originally known as the Ecosol RSF 4000.

Mr J Pisaniello & Assoc. Porf. J Argue (1998) Testing of the Ecosol RSF 4000 (commonoly known as the Ecosol™ GPT) for Hydraulic Headloss – Urban Water Resources Centre University of South Australia.

Mr I Charlton (1998) RSF 4000 (commonoly known as the Ecosol™ GPT) Field Testing Report Playford City Council – Ecosol

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Appendix 2 Continued

References

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Prof. M Lambert, Dr. A Zecchin (2013) Performance Review of the Ecosol GPT Stormwater Pollutant Filter – EngTest , The Department of Civil and Environmental Engineering – The Adelaide University.

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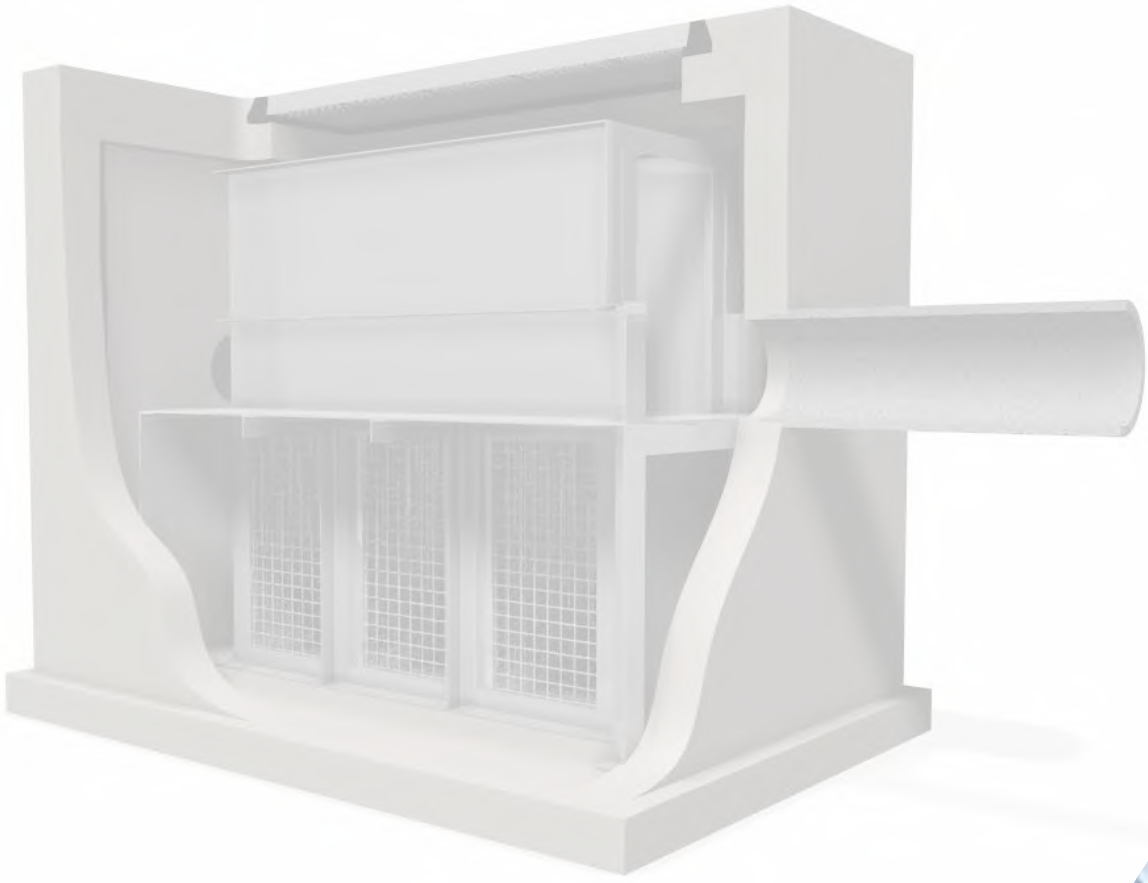

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Stirling North Child Care Centre

Environmental Noise Assessment

S7601C2

May 2023

sonus.

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Document Title	: Stirling North Child Care Centre Environmental Noise Assessment
Client	: SMFA
Document Reference	: S7601C2
Date	: May 2023
Author	: Chris Turnbull, MAAS

1 INTRODUCTION

An environmental noise assessment has been conducted for the proposed child care centre to be located at 56 Quorn Road, Stirling North.

The proposed child care centre will include three outdoor play areas, with associated car parking areas accessed via Quorn Road. The closest existing noise sensitive receivers to the development are located to the south, the east and the north and at a greater setback distance to the west. Due to the vacant land adjacent to the south of the site boundary, as well as the residential nature of the zone, future residences are also accounted for. The site and its surroundings are shown in Figure 1 and the layout of the site is shown in Appendix A.

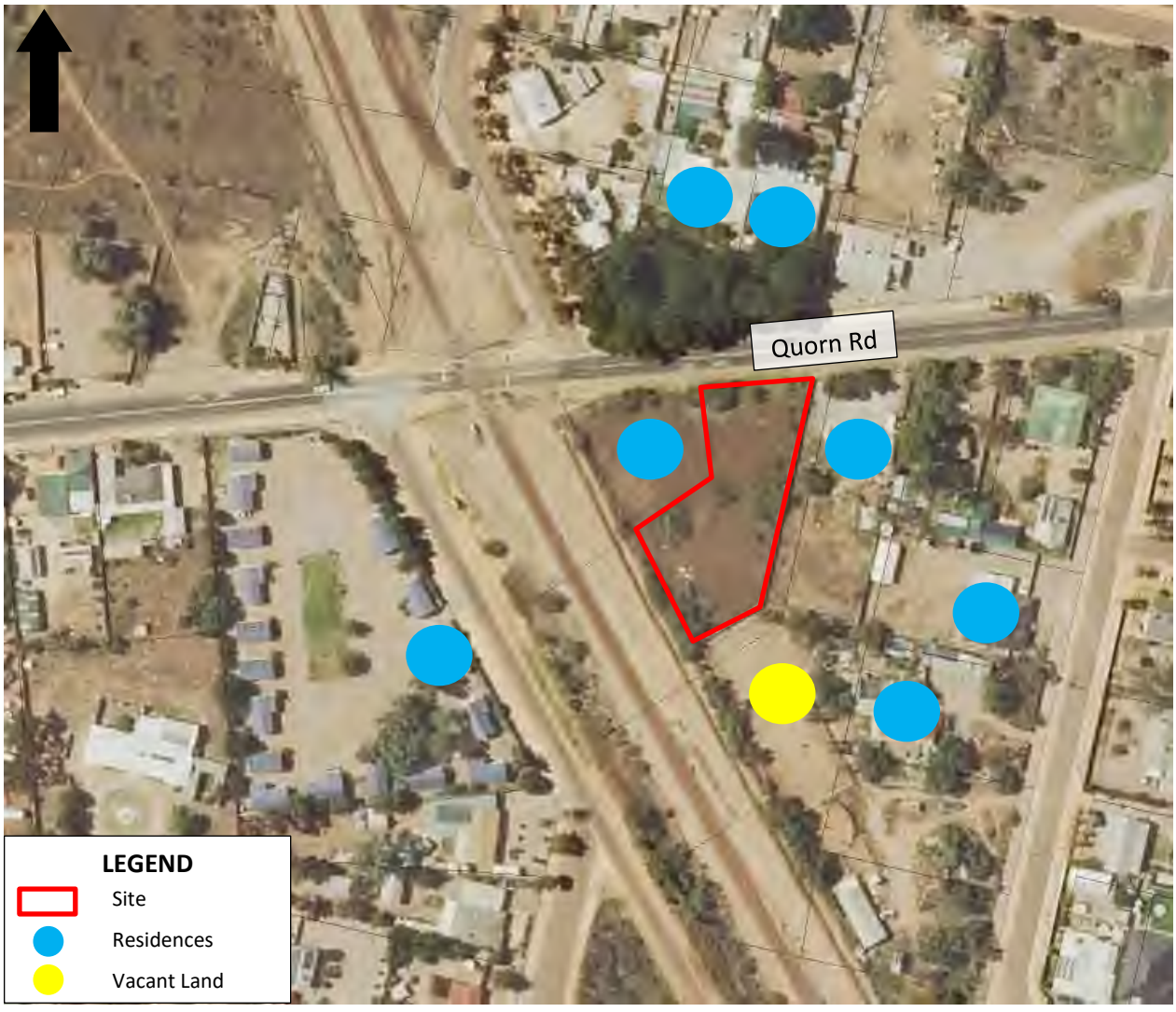


Figure 1: The Site and its Surroundings

The assessment considers the noise levels at the surrounding residences from children playing in outdoor areas, rubbish collection, car park activity, and mechanical plant operation that is associated with the development.

The assessment has been based on the following:

- Drawing set by SMFA, Job No: 22115, drawing numbers SK100 through SK103, dated 11 April 2023;
- Previous noise measurements and noise data from similar sites for mechanical plant and car parking activity;
- The understanding that the total number and age of the children at the centre will be:
    - 16 x 0–2-year-olds;
    - 29 x 2–3-year-olds; and,
    - 44 x 3–5-year-olds.
- The understanding that children will be outside for an average of 6 hours per day.

2 PLANNING AND DESIGN CODE

The site is located within the *Neighbourhood Zone* and closest receivers are located within the *Neighbourhood Zone and Suburban Activity Centre* of the *South Australian Planning and Design Code* (the **Code**).

The Code defines sensitive receivers to include "*any use for residential purposes or land zoned primarily for residential purposes.*" The assessment therefore considers noise sensitive receivers to be all existing or approved residential land uses in the vicinity and also any currently vacant land which is within the Neighbourhood Zone.

The Code has been reviewed and the provisions considered most relevant to the noise assessment are included in Appendix B.

3 OUTDOOR PLAY AREAS

Preschools, schools, child care centres and playgrounds are often located immediately adjacent to residences and the sound of children playing during the day is rarely a concern. However, in some situations, where adjacent residences are sensitive to the sound of children's voices, the noise can be annoying. For the purposes of this assessment, it has been assumed that the existing and the future residents in the vicinity of the proposed development are sensitive to the sound of children's voices.

3.1 Criteria

The *Deemed-to-Satisfy / Designated Performance Feature* provision for *PO4.1* of the Code references the *Environment Protection (Noise) Policy 2007* (the **Policy**). However, the noise from children playing is specifically excluded from assessment under the Policy. In these circumstances, reference is made to the recommendations of the *Guidelines for Community Noise* (the **Guidelines**) published by the *World Health Organisation* (the **WHO**) with regard to annoyance during the day.

The Guidelines include:

> "*To protect the majority of people from being seriously annoyed during the daytime, the sound pressure level on balconies, terraces and outdoor living areas should not exceed 55 dB L_{Aeq} for a steady continuous noise. To protect the majority of people from being moderately annoyed during the daytime, the outdoor sound pressure level should not exceed 50 dB L_{Aeq}.*"

Based on the above, it is proposed that noise reduction measures be designed for the proposal such that the equivalent noise levels (L_{Aeq}) during the daytime hours from children playing are no greater than 50 dB(A) at the existing residences and the vacant land.

3.2 Assessment

The noise from children in outdoor areas has previously been measured at similar child care facilities. Based on these measurements, the noise from the proposed facility has been predicted for the centre operating at full capacity in all age groups, totalling 89 children.

The noise levels generated from children of various ages playing in outdoor areas, that have been used as the basis of this assessment, are provided in Appendix C.

Based on the above, the assessment criteria are predicted to be achieved, provided that the 2.4m high *Timber/Pine Paling* fences documented in the drawing SK100 as *FO1* are sealed airtight at all junctions including between panels and at the ground.

With the fence sealed, the highest predicted noise level resulting from children playing is 50 dB(A) at existing residences and 49 dB(A)at the vacant land.

4 RUBBISH COLLECTION

4.1 Criteria

The *Deemed-to-Satisfy / Designated Performance Feature* provision for *PO4.1* of the Code references the *Environment Protection (Noise) Policy.* The Policy deals with rubbish collection by effectively limiting the hours to the least sensitive period of the day. Division 3 of the Policy requires rubbish collection to only occur between the hours of 9:00am and 7:00pm on Sundays or public holidays and between 7:00am and 7:00pm on any other day, unless it can be shown that the instantaneous maximum (L_{max}) noise level from the rubbish collection activity is less than 60 dB(A).

4.2 Assessment

In order to satisfy the requirements of the Policy, it is recommended that rubbish collection only occur between the hours of 9:00am and 7:00pm on a Sunday or public holiday and between 7:00am and 7:00pm on any other day. The hours correspond to the least sensitive period of the day and when noise levels from other activity in the environment would be highest.

5 CAR PARK ACTIVITY AND MECHANICAL PLANT

5.1 Criteria

The *Deemed-to-Satisfy / Designated Performance Feature* provision for *PO4.1* of the Code references the *Environment Protection (Noise) Policy.* The Policy is based on preventing adverse impacts on the amenity of a locality and it is therefore considered that where the noise from car park activity and mechanical plant at the facility achieve the Policy, other *Performance Outcomes* are also achieved.

The Policy provides goal noise levels to be achieved at residences, based on the principally promoted land uses of the zones within the Code in which the noise source (child care centre) and the noise receivers (the existing and future residences) are located. The Policy applies noise goals that are 5 dB(A) lower when assessed at existing residences. In this instance, the Policy provides the following goal noise levels:

- At existing residences within the Neighbourhood Zone:
  - An equivalent noise level (L_{Aeq}) of 47 dB(A) during the day (7:00am to 10:00pm);
  - An equivalent noise level (L_{Aeq}) of 40 dB(A) during the night (10:00pm to 7:00am); and,
  - An instantaneous maximum noise level (L_{max}) of 60 dB(A) during the night (10:00pm to 7:00am).
- At future residences (vacant land) within the Neighbourhood Zone:
  - An equivalent noise level (L_{Aeq}) of 52 dB(A) during the day (7:00am to 10:00pm); and,
  - An equivalent noise level (L_{Aeq}) of 45 dB(A) during the night (10:00pm to 7:00am).
- At existing residences within the Suburban Activity Centre Zone:
  - An equivalent noise level (L_{Aeq}) of 52 dB(A) during the day (7:00am to 10:00pm); and,
  - An equivalent noise level (L_{Aeq}) of 45 dB(A) during the night (10:00pm to 7:00am).

When measuring or predicting noise levels for comparison with the Policy, adjustments may be made for each “annoying” characteristic of tonality, impulsiveness, low frequency, and modulation of the noise sources. The characteristic must be considered dominant in the acoustic environment and therefore the application varies depending on the assessment location, time of day, the noise source being assessed and the predicted noise levels. The application of penalties is discussed further in the following section.

5.2 Assessment

The noise levels at residences from the proposed site activity have been predicted based on a range of previous noise measurements and observations at similar facilities. These include:

- General car park activity such as people talking as they vacate or approach their vehicles, the opening and closing of car doors, vehicles starting, vehicles idling, and vehicles moving into and accelerating away from parked positions;
- Vehicle movements on site; and,
- Mechanical plant serving the building.

As is typical at the Development Application stage, the proposed mechanical plant units have not yet been designed or selected. Therefore, the assessment of the mechanical plant has been based on a typical selection, consisting of two outdoor air conditioning units. The sound power level of the equipment is as shown in Appendix C.

The predictions have been based on the following assumed activity levels within any 15-minute period (the default assessment period of the Policy):

- Day Time (7:00am to 10:00pm):
    - 10 vehicles movements into or out of the car park and corresponding general car park activity at the available car parks; and,
    - Continuous operation of the mechanical plant within the services area as designated in drawing *SK100*.
- Night Time (10:00pm to 7:00am):
    - 5 vehicles movements into or out of the car park and corresponding general car park activity at the available car parks; and,
    - Continuous operation of the mechanical plant within the services area as designated in drawing *SK100*.

A 5dB(A) penalty associated with the modulation of noise has been applied at all residences exposed to the character of noise from the onsite vehicles.

Based on the predictions, in order to achieve the assessment criteria, parking prior to 7:00am should be restricted to specific parking areas. That is, any vehicles parking during this time should not be within the bays marked as **ORANGE** in Figure 2.

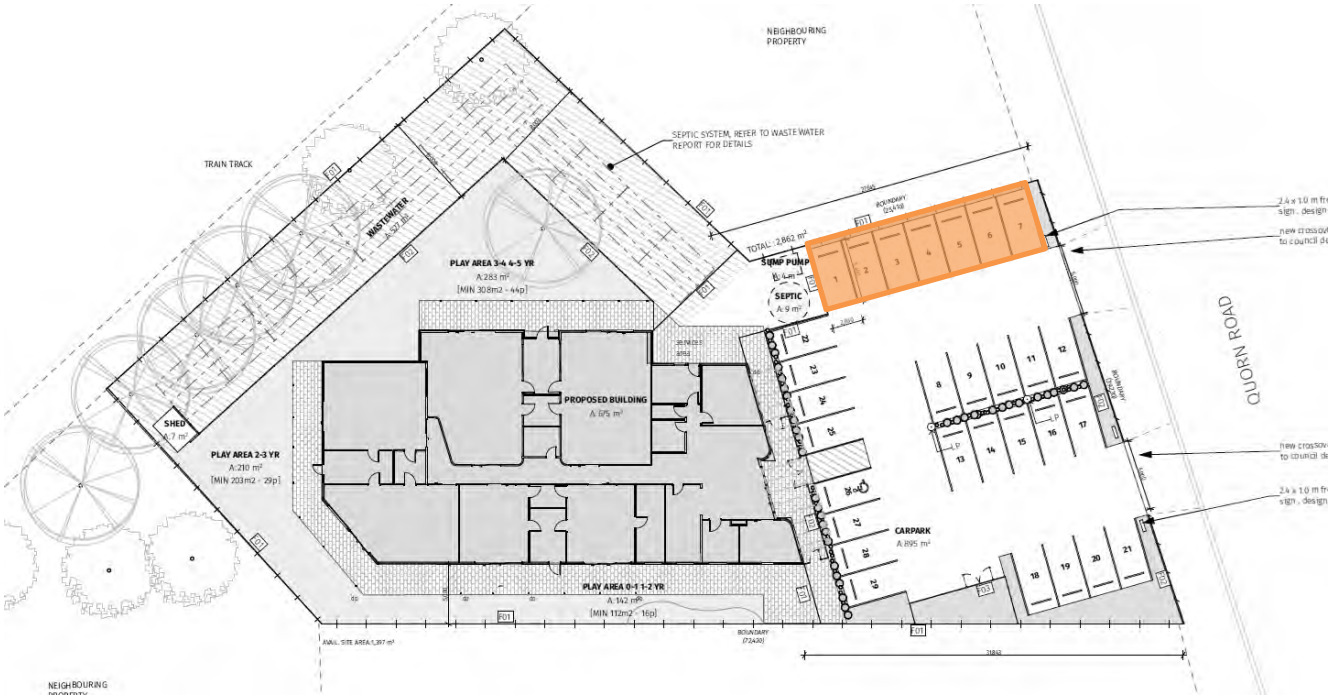


Figure 2: Treatment Summary

With the application of the penalty and the assumed level of activity at the site, the average noise levels (L_{eq}) predicted are shown in Table 1.

Table 1: Predicted Noise Levels (L_{eq})

	Day Period (7:00am to 10:00pm)		Night Period (10:00pm to 7:00am)	
	Criterion	**Prediction**	**Criterion**	**Prediction**
Existing Residence within Neighbourhood Zone	47 dB(A)	47 dB(A)	40 dB(A)	40 dB(A)
Existing Residence within Suburban Activity Centre Zone	52 dB(A)	33 dB(A)	40 dB(A)	32 dB(A)
Vacant Land	52 dB(A)	<30 dB(A)	45 dB(A)	<30 dB(A)

The instantaneous maximum noise levels have also been predicted for all existing residences within the Neighbourhood Zone. Predicted maximum noise levels have been based on measurements at a variety of different similar sites and include noise sources such as car doors slamming and vehicles accelerating.

The predicted maximum noise levels at any existing residence are no more than 56 dB(A), therefore achieving the maximum noise level (L_{max}) criterion of the Policy.

6 CONCLUSION

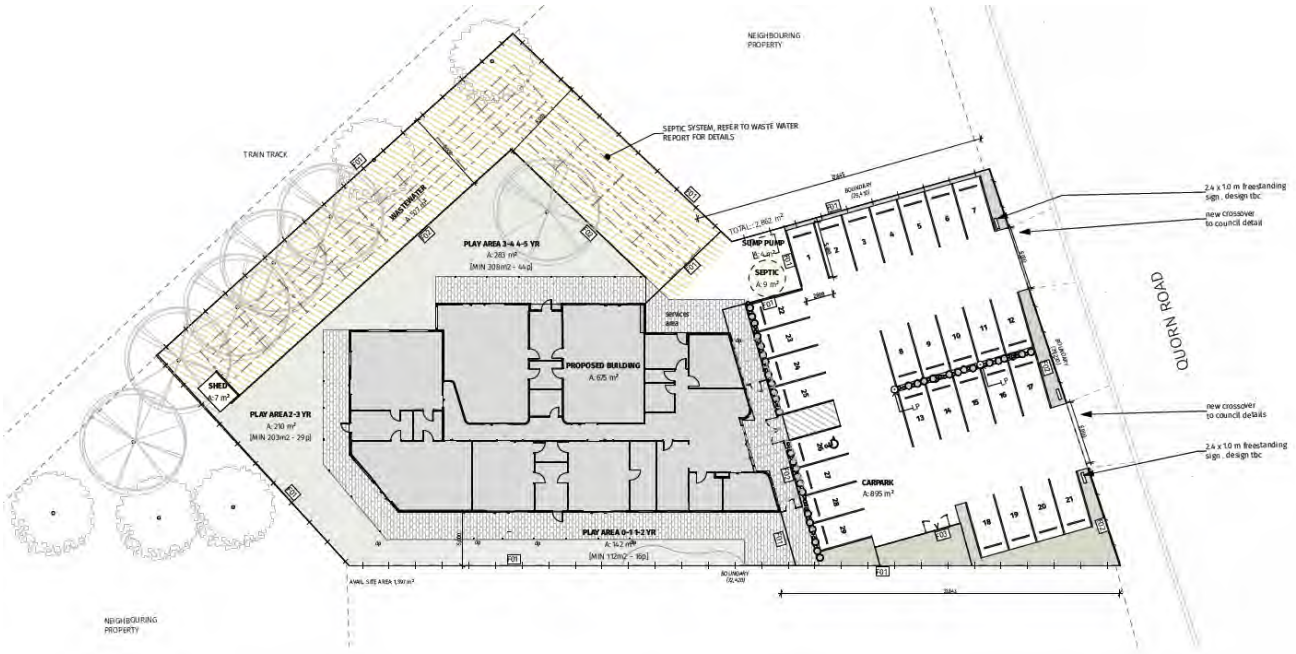
An environmental noise assessment has been prepared for the proposed child care centre to be located at 56 Quorn Road, Stirling North.

The assessment has considered noise at noise sensitive receivers in the vicinity, from children playing in outdoor areas, rubbish collection, car park activity and mechanical plant operation.

Relevant assessment criteria have been established based on the *South Australian Planning and Design Code*, the *Environment Protection (Noise) Policy 2007* and the *World Health Organisation* recommendations to protect against annoyance. Specific fence constructions and restrictions to the car park have been recommended in order to achieve the noise criteria.

Based on the above, the Development has been designed to *not unreasonably impact the amenity of sensitive receivers*, thereby achieving the relevant provision of the *South Australian Planning and Design Code* related to environmental noise.

APPENDIX A: SITE LAYOUT



APPENDIX B: SOUTH AUSTRALIAN PLANNING AND DESIGN CODE – RELEVANT PROVISIONS

PART 4 – GENERAL DEVELOPMENT POLICIES

Interface between Land Uses

Desired Outcome (DO)

DO 1 *Development is located and designed to mitigate adverse effects on or from neighbouring and proximate land uses.*

<table>
<tr><th>Performance Outcome</th><th>Deemed-to-Satisfy Criteria / Designated Performance Feature</th></tr>
<tr><td colspan="2">General Land Use Compatibility</td></tr>
<tr><td>PO 1.2
Development adjacent to a site containing a sensitive receiver (or lawfully approved sensitive receiver) or zone primarily intended to accommodate sensitive receivers is designed to minimise adverse impacts.</td><td>DTS/DPF 1.2
None are applicable.</td></tr>
<tr><td colspan="2">Hours of Operation</td></tr>
<tr><td>PO 2.1
Non-residential development does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers) or an adjacent zone primarily for sensitive receivers through its hours of operation having regard to:
(a) the nature of the development
(b) measures to mitigate off-site impacts
(c) the extent to which the development is desired in the zone
(d) measures that might be taken in an adjacent zone primarily for sensitive receivers that mitigate adverse impacts without unreasonably compromising the intended use of that land.</td><td>DTS/DPF 2.1
Development operating within the following hours:
<table>
<tr><th>Class of Development</th><th>Hours of operation</th></tr>
<tr><td>Consulting room</td><td>7am to 9pm, Monday to Friday
8am to 5pm, Saturday</td></tr>
<tr><td>Office</td><td>7am to 9pm, Monday to Friday
8am to 5pm, Saturday</td></tr>
<tr><td>Shop, other than any one or combination of the following:
(a) restaurant
(b) cellar door in the Productive Rural Landscape Zone, Rural Zone or Rural Horticulture Zone</td><td>7am to 9pm, Monday to Friday
8am to 5pm, Saturday and Sunday</td></tr>
</table></td></tr>
</table>

Activities Generating Noise or Vibration	
PO 4.1 Development that emits noise (other than music) does not unreasonably impact the amenity of sensitive receivers (or lawfully approved sensitive receivers).	*DTS/DPF 4.1* *Noise that affects sensitive receivers achieves the relevant Environment Protection (Noise) Policy criteria.*
PO 4.2 *Areas for the on-site manoeuvring of service and delivery vehicles, plant and equipment, outdoor work spaces (and the like) are designed and sited to not unreasonably impact the amenity of adjacent sensitive receivers (or lawfully approved sensitive receivers) and zones primarily intended to accommodate sensitive receivers due to noise and vibration by adopting techniques including:* *(a) locating openings of buildings and associated services away from the interface with the adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers* *(b) when sited outdoors, locating such areas as far as practicable from adjacent sensitive receivers and zones primarily intended to accommodate sensitive receivers* *(c) housing plant and equipment within an enclosed structure or acoustic enclosure* *(d) providing a suitable acoustic barrier between the plant and / or equipment and the adjacent sensitive receiver boundary or zone.*	*DTS/DPF 4.2* *None are applicable.*

APPENDIX C: SOUND POWER LEVELS

Activity		Sound Power Level
Car Park Activities	Vehicle Movement	82 dB(A)
	General Activity	83 dB(A)
Mechanical Plant	A/C Condenser Unit	73 dB(A)
Children	0–2-year-old (per child)	74 dB(A)
	2–3-year-old (per child)	78 dB(A)
	3–5-year-old (per child)	80 dB(A)

Mace Engineering Services

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ABN: 89615046930
6 Lennon Street
P.O. Box 156
Clare SA 5453

ON-SITE WASTEWATER MANAGEMENT REPORT

BUILDER/AGENT: **Hydroscape Pty Ltd**

OWNER: **Meinhardt Australia**

SITE: **56 Quorn Road, Stirling North**

JOB NO: **13754**

DATE: **12/04/2023**

RECOMMENDED SYSTEM:

- **2400L Grease Arrestor**
- **RI Industries 20,000L Septic tank with outlet filter**
- **3000L pump sump with Pedrollo D30-N pump (or similar) and high level alarm**
- **230m^2 ABSORBS unlined sand filter. Base of sand filter beds shall be ripped to 1200mm deep and gypsum shall be applied at a rate of 1kg/m^2.**

ENCLOSURES:

1. SITE CHARACTERISTICS

Site Location:	56 Quorn Road, Stirling North
Land Use:	Commercial
Area of Allotment:	Approximately 3140m^2
Land Slope:	Approximately level
Distance to Watercourse:	Greater than 50m
Distance to Wells / Dams / Bores:	Greater than 50m
Surface Drainage:	Average
Flooding / Floodplain:	No
Distance to Coast High Water Mark:	Greater than 100m away
Climate / Rainfall:	247 mm/year
Evaporation:	2447 mm/year
Rocks / Rocky Outcrops:	No
Erosion Potential:	Minor
Vegetation Type:	Pasture, Isolated trees

2. SOIL CHARACTERISTICS **Refer to Surface Soil Borelogs**

Soil Classification (AS1547):	Category 4
Depth to Water Table:	Greater than 3.0 metres
Depth to Refusal:	Greater than 3.0 metres
Soil Type:	Low plasticity silty sand topsoil overlaying low to medium plasticity clayey sandy silt.
Permeability Classification Design Loading Rate:	DLR = 25 mm/day (secondary treated effluent via aerobic bottomless sand filter)

3. WASTEWATER SYSTEM DESIGN REQUIREMENTS

Child Care Centre
Number of Children & Staff P1 = 104

Sludge/Scum Accumulation Rate S: 58L/person/year

Daily Flow DF: 55L/person/day

BOD_5 loading = 45g/person/day

4. SEPTIC TANK SIZING CALCULATIONS

Minimum Effective Capacity (L) = (S x P1 x Y) + (P2 x DF)
(104 x 58 x 2) + (104 x 55)
17,784L

ADOPT: RI Industries 20,000L septic tank with outlet filter

Annual Sludge/Scum Accumulation Rate: 6032L/year

Desludging Frequency: 2 years

Daily Flow Rate: 5720L/day (38 EP)

5. ORGANIC CAPACITY

Organic Capacity BOD_5 (g/day) = ($P2 \times BOD_5$)
(104 x 45)
4680g/day (67 EP)

As the organic capacity exceeds 40 EP, this system will require SA Health approval.

6. SAND FILTER CALCULATIONS

Hydraulic Load = 5720L per day

- Maximum hydraulic load to sand filter = 50 litres/m^2
- Required area of sand filter for hydraulic load = 5720/50
  = 114.4m^2

Organic Load = 4680 grams per day

- Maximum BOD_5 organic load to sand filter = 25g/m^2
- Required area of sand filter for organic load = 4680/25
  = 187.2m^2

⇒ **Adopt minimum size of top of sand filter =** 200m^2

7. LAND APPLICATION AREA

The sand filter will be constructed as a bottomless sand filter, with the basal area of the sand filter sized in accordance with AS1547-2012 Appendix L 'Trenches and Beds'

Table L1, secondary treated effluent DLR = 25mm/day

Required soakage contact area (m^2) = P2 x DF/DLR
= 5720/25
= 230m^2

8. RECOMMENDED WASTEWATER MANAGEMENT SYSTEM

- **2400L Grease Arrestor**
- **RI Industries 20,000L Septic tank with outlet filter**
- **3000L pump sump**
- **Pedrollo D30N pump and high level alarm**
- **230m^2 ABSORBS unlined sand filter. Base of sand filter beds shall be ripped to 1200mm deep and gypsum shall be applied at a rate of 1kg/m^2.**

It is a condition of the ABSORBS™ product approval with SA Health that all installations of the system be carried out by a licenced plumber engaged by the product owner (Arris).

Setback Distances

Septic tank:-

- 2.5 m from any buildings or property boundary
- 10 m from water courses, wells, bores and dams

Sand Filter:-

- 3.0 m from septic tank, pump sump, property boundary
- 3.0 m down slope from building or swimming pool
- 6.0 m upslope from building or swimming pool
- 50 m from any watercourse, well, bore or dam.

9. DESCRIPTION OF INVESTIGATIVE TECHNIQUES

The field work for the geotechnical assessment was carried out on 27th January 2023 and comprised of a site inspection and soil sampling of six sites located within and adjacent to the proposed wastewater disposal area to a depth of 3.0 metres. The investigation and assessment has been carried out in accordance with the requirements and recommendations in Australian Standard AS/NZS 1547:2012.

Specific site features were noted and an understanding of the adjacent land was gained. Particular note was made of the fall of the land, current drainage paths and the proximity of any water sources. A summary of the site specific features can be seen on page 2 of this report.

The field work was conducted under the direction of a geotechnical engineer from Mace Engineering Services who were responsible for positioning the test sites and logging the subsurface profile encountered. The subsurface profile encountered in the boreholes is described on the attached surface soil borelogs. The logs are preceded by explanation sheets that outline the terms and symbols used in their preparation.

Further research was undertaken in the office to establish previously known information about the site, with a particular interest in soil testing results on near-by sites to compare and review the soil profiles. Aerial photographs have also been reviewed to identify any features that were not obvious at the site inspection.

10. GENERAL NOTES

The estimated percolation rate and soakage trench details are based on the soil profile shown in the attached borelogs. If the soil profile or site characteristics vary in any way, installation shall cease and this office shall be contacted to undertake further assessment of the current design and its suitability for use. The investigation and assessment has been carried out in accordance with Australian Standard AS/NZS 1547:2012

The septic tank and waste water disposal system shall be installed in accordance with SA Health 'On-Site Waste Water Systems Code'

All soil, waste and vent pipes shall be installed in accordance with AS3500-2018.

The site has been classified as "Category 4" therefore flexible plumbing fittings will be required.

Site inspections by the Wastewater Engineer are recommended at the following stages of construction:

- Completion of the excavation of the ABSORBS beds to ensure the soil profile is as described in soil borelogs
- During pre-commissioning testing of the system.

Note these inspections will incur additional fees and 24 hours notice is required when booking inspections.

11. SAFETY IN DESIGN

Mace Engineering Services has a strong focus on Work Health and Safety (WH&S), including Safety in Design. Safety in Design, is the consideration of the health and safety of all users of the infrastructure, from construction, operation, demolition and decommissioning has been considered in this design, in accordance with the Work Health and Safety Act 2012 (SA). Eliminating hazards improves Work Health and Safety outcomes and potentially reduces the long-term cost implications of remediating design oversights.

The construction of small-scale on-site wastewater treatment systems, if undertaken by a licensed contractor and to 'industry standard' techniques, is considered to be a low risk operation, and the subject site does not pose any unusual hazards. Excavations exceeding 1.5m in depth shall have shoring provided in accordance with Safe Work SA Excavation Work Code of Practice.

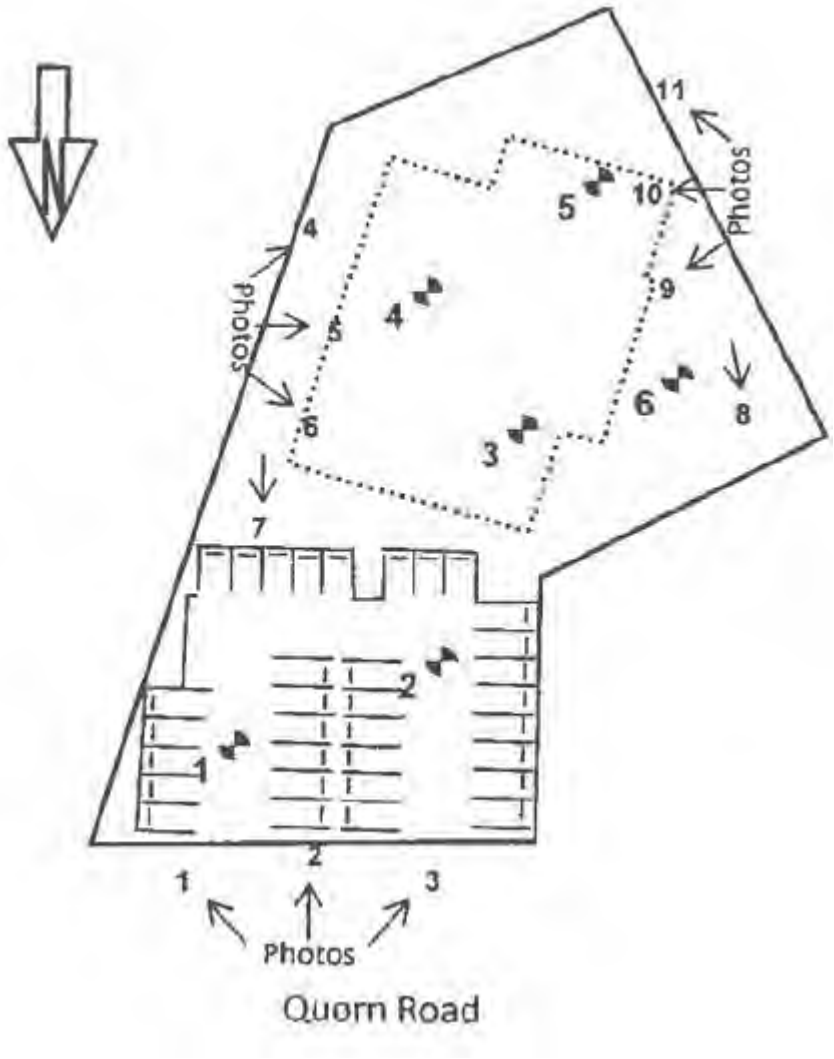
It is recommended that the contractor is licensed and experienced in on-site wastewater treatment system construction to further minimize construction hazards. Further advice should be sought during construction on the any aspects of the on-site wastewater management report if required.

Considering the above, and providing all other parties associated with the design and construction undertake their duties in accordance with WH&S and other legislative requirements, to a professional and industry standard level, we cannot foresee any significant WH&S implications or hazards that can be avoided by design.

Michelle C Verco **FIEAust, CPEng NER**
DIRECTOR

APPENDIX A

MACE	**6 Lennon Street** **CLARE 5453**	**DATE: 12/04/2023** **JOB NO: 13754**	**BD 1 OF 1**
ENGINEERING	**Tel. (08) 88 421242**	**BOREHOLE LOCATION PLAN**	
SERVICES	**ABN 89 615 046 930**	**56 QUORN ROAD, STIRLING NORTH**	



NOTES:

1. CORE DEPTHS

BH1	3.0 m	BH4	3.0 m
BH2	3.0 m	BH5	3.0 m
BH3	3.0 m	BH6	3.0 m

2. APPROX FALL OF SITE

				✓
1:10	1:15	1:20	1:25	Approx. Level

FALL OF SITE SHOWN IS APPROX. AND MUST NOT BE USED FOR COSTING PURPOSES.

3. SURFACE

✓				✓		
DRY	MOIST	WET	SOFT	FIRM	LOOSE	HARD

	✓	✓		
GRAVEL	GRASS	TREES	PAVED	EARTH

4. RESISTANCE (AVE.)

	✓	
LOW	MEDIUM	HIGH

5. DATE DRILLED 27/01/2023

MACE ENGINEERING SERVICES

6 Lennon Street
CLARE 5453

ABN 89 615 046 930

Tel. (08) 88 421242

SURFACE SOIL BORE LOG	DATE: 12/04/2023 JOB NO: 13754	CR2 1 OF 3
DATE DRILLED: 27/01/2023	THIS SHEET TO BE READ IN CONJUNCTION WITH SSB1-2 & SSB2-2.	
SITE: 56 QUORN ROAD, STIRLING NORTH		

DEPTH IN METRES		VISUAL ASSESSMENT OF PROPERTIES						LAB. ASSESS.
BORE 1	BORE 2	COLOUR	CONSISTENCY, TEXTURE AND STRUCTURE	SOIL DESCRIPTION	U.S.C.	MOIST	BEARING	Ipt (Ave)
0 – 0.2		Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
0.2 – 0.7		Brown	Moderately dense, layer	Sandy SILT, trace clay, low-medium plasticity	ML	B	L	0.015
0.7 – 1.1		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
1.1 – 1.6		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
1.6 – 1.9		Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
1.9 – 2.6		Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
2.6 – 3.0		Pale Orange Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
	0 – 0.1	Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
	0.1 – 0.2	Brown	Loose, layer	TOPSOIL, silty SAND, trace clay, low-medium plasticity	SM/SC	B	L	0.015
	0.2 – 0.6	Brown	Moderately dense, layer	Sandy SILT, trace clay, low-medium plasticity	ML	B	L	0.015
	0.6 – 0.9	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
	0.9 – 1.5	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
	1.5 – 2.0	Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
	2.0 – 3.0	Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025

REMARKS: 1. The soil profile possesses some reactive clays with a potential of active movement (swelling and shrinking due to soil moisture variations).

MACE ENGINEERING SERVICES

6 Lennon Street
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SURFACE SOIL BORE LOG	DATE: 12/04/2023 JOB NO: 13754	CR2 2 OF 3
DATE DRILLED: 27/01/2023	THIS SHEET TO BE READ IN CONJUNCTION WITH SSB1-2 & SSB2-2.	
SITE: 56 QUORN ROAD, STIRLING NORTH		

DEPTH IN METRES		VISUAL ASSESSMENT OF PROPERTIES						LAB. ASSESS.
BORE 3	BORE 4	COLOUR	CONSISTENCY, TEXTURE AND STRUCTURE	SOIL DESCRIPTION	U.S.C.	MOIST	BEARING	Ipt (Ave)
0 – 0.1		Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
0.1 – 0.3		Brown	Loose, layer	TOPSOIL, silty SAND trace clay, low-medium plasticity	SM/SC	B	L	0.015
0.3 – 0.7		Brown	Moderately dense, layer	Sandy SILT trace clay, low-medium plasticity	ML	B	L	0.015
0.7 – 1.1		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
1.1 – 1.6		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
1.6 – 2.1		Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
2.1 – 3.0		Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
	0 – 0.2	Brown	Loose, layer	TOPSOIL, silty SAND trace clay, low-medium plasticity	SM/SC	B	L	0.015
	0.2 – 0.5	Brown	Moderately dense, layer	Sandy SILT trace clay, low to medium plasticity	ML	B	L	0.015
	0.5 – 0.9	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
	0.9 – 1.5	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
	1.5 – 2.1	Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
	2.1 – 3.0	Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025

REMARKS: 1. The soil profile possesses some reactive clays with a potential of active movement (swelling and shrinking due to soil moisture variations).

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SURFACE SOIL BORE LOG	DATE: 12/04/2023 JOB NO: 13754	CR2 3 OF 3
DATE DRILLED: 27/01/2023	THIS SHEET TO BE READ IN CONJUNCTION WITH SSB1-2 & SSB2-2.	
SITE: 56 QUORN ROAD, STIRLING NORTH		

DEPTH IN METRES		VISUAL ASSESSMENT OF PROPERTIES						LAB. ASSESS.
BORE 5	BORE 6	COLOUR	CONSISTENCY, TEXTURE AND STRUCTURE	SOIL DESCRIPTION	U.S.C.	MOIST	BEARING	Ipt (Ave)
0 – 0.1		Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
0.1 – 0.3		Brown	Loose, layer	TOPSOIL, silty SAND trace clay, low-medium plasticity	SM/SC	B	L	0.015
0.3 – 0.5		Brown	Moderately dense, layer	Sandy SILT trace clay, low-medium plasticity	ML	B	L	0.015
0.5 – 1.0		Light Brown & Brown	Moderately dense, layer	Silty SAND, low plasticity	SM	B	L-M	0.005
1.0 – 1.7		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
1.7 – 2.2		Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
2.3 – 3.0		Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
	0 – 0.3	Brown	Loose, layer	TOPSOIL, silty SAND trace clay, low-medium plasticity	SM/SC	B	L	0.015
	0.3 – 0.6	Brown	Moderately dense, layer	Sandy SILT trace clay, low-medium plasticity	ML	B	L	0.015
	0.6 – 1.0	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
	1.0 – 1.6	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.02
	1.6 – 2.3	Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025
	2.3 – 3.0	Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ML	B	L-M	0.025

REMARKS: 1. The soil profile possesses some reactive clays with a potential of active movement (swelling and shrinking due to soil moisture variations).

MACE

ENGINEERING

SERVICES

6 Lennon Street
CLARE 5453

Tel. (08) 88 421242

ABN 89 615 046 930

SURFACE SOIL BORELOG EXPLANATORY NOTES

1. GENERAL

The surface soil borelog is based on visual-tactile logging of the drilled core. Unless specifically reported the characteristics are estimated and are not measured by a specific test.

One must not place sole reliance on the surface soil borelogs as a means of being an absolute representation of all sub-surface features existing on the site.

The soil borelogs are usually based upon 40mm diameter continuous core samples in one or more locations on the site in accordance with AS 2870 - 2011. It is not possible by this means to detect all surface features which may exist and the Owner is advised to seek information from Local Council, Department of Health and other statutory Authorities regarding any unnatural features (eg wells, mineshafts, filled areas etc) land use (eg toxic waste, waste disposal etc), or other features typical to the area (eg landslip, springs etc).

This office uses not only the borelog information but may take into account such matters as the known geology of the area taken from published soil maps, the known performance of existing structures in the general area and engineering judgement to make an assessment of soil classification for design purposes. Therefore this borelog shall not be used to produce a footing construction report without written permission.

2. UNIFIED SOILS CLASSIFICATIONS (U.S.C.)

GW - Gravel :	well graded.
GP - Gravel :	poorly graded; gravel sand mixtures, little or no fines.
GM - Gravel :	excess silty fines, poorly graded gravel-sand-silt mixtures.
GC - Gravel :	excess clayey fines; poorly graded gravel-sand-clay mixtures.
SW - Sand :	well graded.
SP - Sand :	poorly graded; poorly graded sands, gravelly sands, little or no fines.
SM - Sand :	excess silty fines; poorly graded sand-silt mixtures.
SC - Sand :	excess clayey fines; poorly graded sand-clay mixtures.
ML - Silt :	low plasticity; inorganic silts and very fine silty or clayey sands rock flour.

CL - Clay	:	low plasticity; inorganic clays of low to medium plasticity, gravelly clay, sand, clays, silty clays, lean clays.
OL - Organic:		low plasticity; organic silts and silt clays of low plasticity.
MH - Silt	:	high plasticity, inorganic silts, micaceous or dialomaceous fine sandy or silty soils, elastic silts.
CI - Clay		Medium plasticity; inorganic clays of medium to high plasticity.
CH - Clay	:	high plasticity; inorganic clays of high plasticity, fat clays.
OH - Organic:		high plasticity; organic clays of medium to high plasticity.

3. MOISTURE CONTENT

Relative to the Plastic Limit (P.L.) of the soil for cohesive soils or relative to the optimum moisture content of the soil (O.M.C.) of the soil for cohesionless soils ie. non plastic.

W.B. Well Below - B. Below - N. Near - A. Above - W.A. Well Above

4. BEARING STRENGTH

The descriptive term used relates to the in-situ strength at the time of logging.

It must be noted that site works and changes in soil moisture may significantly affect the bearing strength. It must also be noted that as the soils are disturbed in the drilling and sampling process the bearing strength in-situ may be different from that logged.

Term	Description	Bearing Capacity (kPa)
VL	Very low (loose granular material or soft, possibly collapsing soil)	Less than 50
L	Low (Firm)	50 – 100
M	Medium (Stiff)	100 – 200
H	High (Very stiff to hard)	Greater than 200

Sites with very low or low bearing strength in the founding soil strata may be classified as 'P' problem site.

5. PLASTICITY

NP, LP, MP, HP refers to non, low, medium and high plasticity respectively.

6. CONSISTENCY

VS – Very Soft	VL – Very Loose
S – Soft	L – Loose
F – Firm	MD – Medium Dense
St – Stiff	D – Dense
VS – Very Stiff	VD – Very Dense
H – Hard	

7. REACTIVITY

The reactivity of the soil is defined as the potential for undergoing changes in volume with changes in the soil moisture content.

The reactivity is measured in terms of Instability Index. This term does not apply to sands.

Term	Description	Instability Index (Ipt.)
L	Low	1% or less
M	Medium	2%
H	High	3% or greater

8. SOIL CLASSIFICATION

	CHARACTER	CLASS
Sand and rock Silt and some clay	Stable	A S
Moderately reactive clay Highly reactive clay Extremely reactive clay	Reactive	M, M-D H1, H2, H1-D, H2-D E, E-D
Sand Material other than sand	Controlled fill	A A to P
Mine subsidence Uncontrolled fill Landslip Soft Collapsing Soils	Problem	P

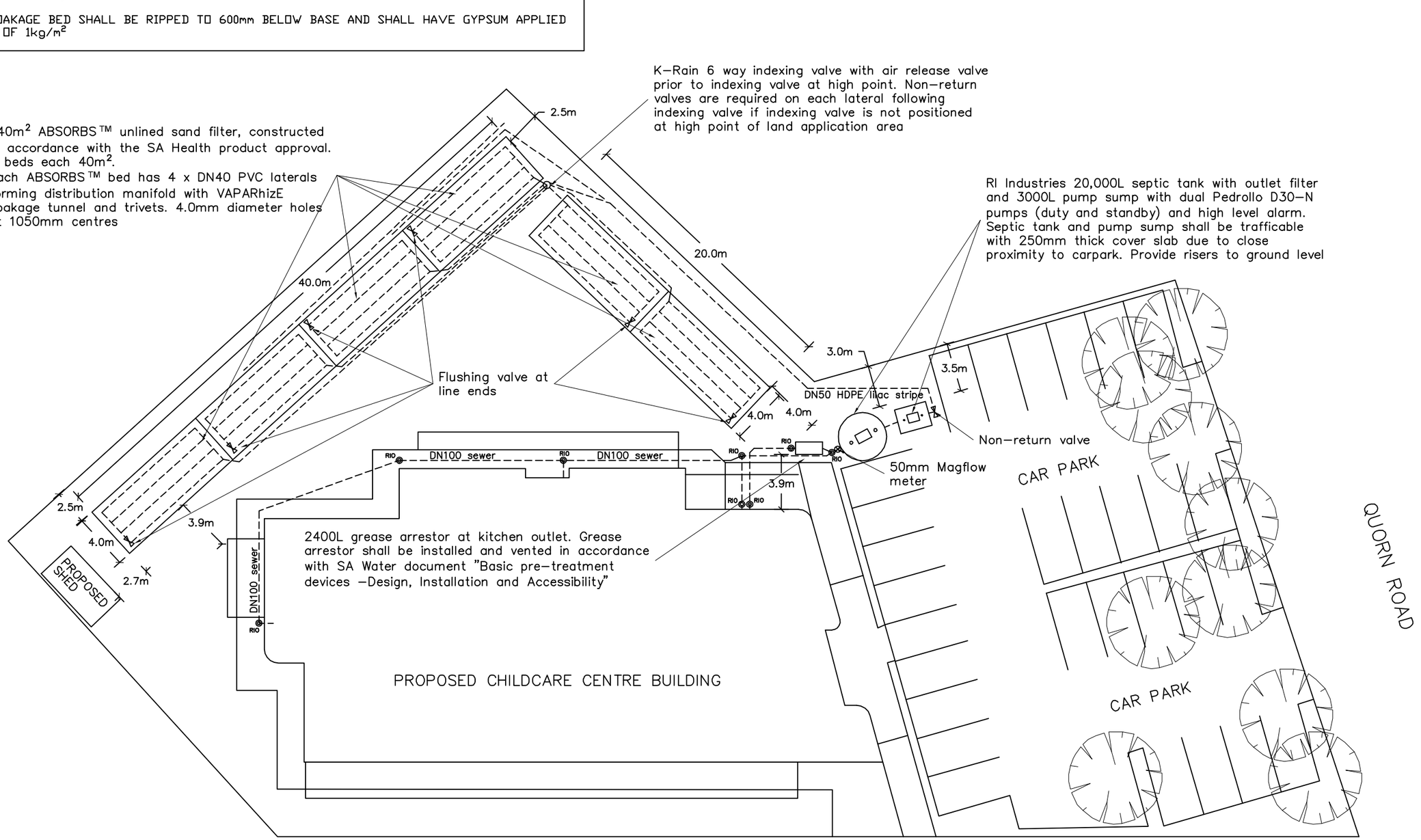
Class	Surface Movement
S	Ys < 20mm
M, M-D	20mm < Ys < 40mm
H1, H1-D	40mm < Ys < 60mm
H2, H2-D	60mm < Ys < 75 mm
E, E-D	Ys > 75mm

Note: M-D, H1-D, H2-D and E-D are classifications for sites where deep moisture change occurs.

Further site investigation may be required for a Class E or Class P site.

THIS SITE IS A CATEGORY 4 SITE. FLEXIBLE FITTINGS WILL BE REQUIRED, REFER TO PLUMBING JOINT MANUFACTURER, SUCH AS STORM PLASTICS FOR APPROPRIATE FITTING

BASE OF SOAKAGE BED SHALL BE RIPPED TO 600mm BELOW BASE AND SHALL HAVE GYPSUM APPLIED AT A RATE OF 1kg/m²



NOTES:

1. REFER TO ARCHITECTURAL PLANS AND SITE SURVEY FOR EXACT LOCATION OF BUILDINGS AND OTHER SITE FEATURES
2. SEPTIC TANK SHALL BE SET BACK 2.5m FROM ANY BUILDINGS AND PROPERTY BOUNDARY
3. SAND FILTER SHALL BE SET BACK 2.5m FROM SEPTIC TANK AND PROPERTY BOUNDARY. 3.0m FROM BUILDING OR SWIMMING POOL IF BED IS LOCATED DOWNSLOPE OF BUILDING OR SWIMMING POOL, AND 6.0m IF UPSLOPE
4. LAYOUT OF PLUMBING IS SCHEMATIC ONLY. PLUMBER SHALL CHECK ON–SITE AND MODIFY ACCORDINGLY. PLUMBING SHALL BE IN ACCORDANCE WITH AS3500–2018
5. SITE PLAN IS TO BE READ IN CONJUNCTION WITH ON–SITE WASTEWATER MANAGEMENT REPORT
6. THE INSTALLER OF THE SAND FILTER SHALL PROVIDE CERTIFICATION THAT THE WASTEWATER SYSTEM INCLUDING THE TYPE OF SAND USED FOR THE FILTER CONSTRUCTION HAS BEEN INSTALLED IN ACCORDANCE WITH THE SA HEALTH PRODUCT APPROVAL,
7. PLUMBER SHALL UNDERTAKE DIAL BEFORE YOU DIG ENQUIRY AND SERVICE LOCATION PRIOR TO CONSTRUCTION
8. PRE–COMMISSIONING TESTING SHALL BE UNDERTAKEN PRIOR TO BACKFILL IN ACCORDANCE WITH AS1547. A SITE INSPECTION SHALL BE UNDERTAKEN DURING TESTING TO ENSURE THAT THE SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE DESIGN DOCUMENTS AND THAT THE SYSTEM IS OPERATING AS INTENDED
9. ABSORBS SAND FILTER IS A PROPRIETARY WASTEWATER MANAGEMENT SYSTEM, & SHALL BE CONSTRUCTED BY ARRIS PTY LTD ARRIS SHALL PROVIDE AN OPERATION AND MAINTENANCE MANUAL TO THE OWNER.

MACE ENGINEERING SERVICES

6 LENNON STREET
CLARE 5453

A.B.N. 89 615 046 930

TEL. (08) 88 421242

TITLE: ON–SITE WASTEWATER MANAGEMENT SITE PLAN	DATE: MARCH 2023
SITE: 56 QUORN ROAD, STIRLING NORTH	SCALE: 1:300 @ A3
CLIENT: MEINHARDT AUSTRALIA	DWG No.: 13754 – 01

Mace Engineering Services

Email: admin@maceeng.com.au
Website: www.maceeng.com.au
Phone: (08)88421242
Mobile: 0409091160

ABN: 89615046930
6 Lennon Street
P.O. Box 156
Clare SA 5453

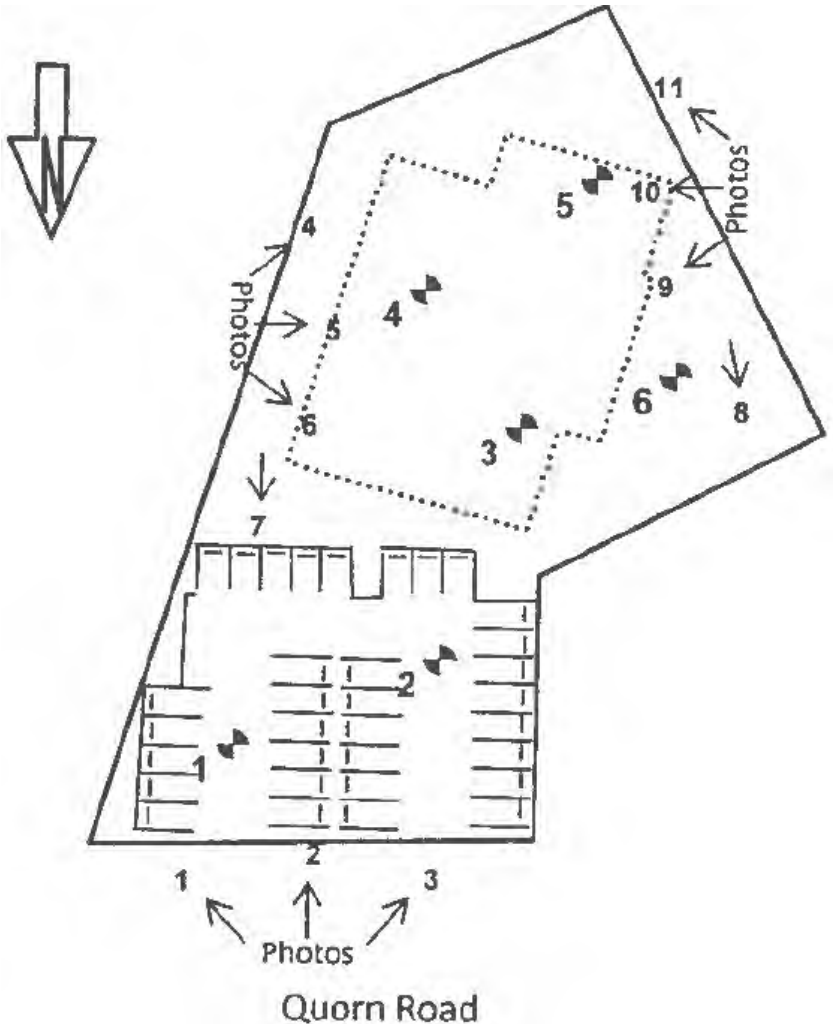
SITE ASSESSMENT REPORT

BUILDER/AGENT:	**Meinhardt Australia**
OWNER:	**Meinhardt Australia**
SITE:	**56 Quorn Road, Stirling North**
JOB NO:	**13754**
DATE:	**15/02/2023**
SITE CLASSIFICATION:	**Soils on this site are classified as "H1-D/P(TREES)" in accordance with AS 2870 – 2011.**

ENCLOSURES:

BOREHOLE LOCATION PLAN
SURFACE SOIL BORELOGS
SURFACE SOIL BORELOGS - EXPLANATORY NOTES
POTENTIAL GROUND MOVEMENT
GENERAL NOTES - SITE ASSESSMENT

MACE	**6 Lennon Street** **CLARE 5453**	**DATE: 15/02/2023** **JOB NO: 13754**	**BD 1 OF 1**
ENGINEERING	**Tel. (08) 88 421242**	**BOREHOLE LOCATION PLAN**	
SERVICES	**ABN 89 615 046 930**	**56 QUORN ROAD, STIRLING NORTH**	



NOTES:

1. CORE DEPTHS

BH1	3.0 m	BH4	3.0 m
BH2	3.0 m	BH5	3.0 m
BH3	3.0 m	BH6	3.0 m

2. APPROX FALL OF SITE

				✓
1:10	1:15	1:20	1:25	Approx. Level

FALL OF SITE SHOWN IS APPROX. AND MUST NOT BE USED FOR COSTING PURPOSES.

3. SURFACE

✓				✓		
DRY	MOIST	WET	SOFT	FIRM	LOOSE	HARD

	✓	✓		
GRAVEL	GRASS	TREES	PAVED	EARTH

4. RESISTANCE (AVE.)

	✓	
LOW	MEDIUM	HIGH

5. DATE DRILLED 27/01/2023

MACE ENGINEERING SERVICES
6 Lennon Street
CLARE 5453
ABN 89 615 046 930
Tel. (08) 88 421242

SURFACE SOIL BORE LOG

DATE: 15/02/2023 **JOB NO:** 13754 **CR2** **1 OF 3**

DATE DRILLED: 27/01/2023

THIS SHEET TO BE READ IN CONJUNCTION WITH SSB1-2 & SSB2-2.

SITE: 56 QUORN ROAD, STIRLING NORTH

DEPTH IN METRES		VISUAL ASSESSMENT OF PROPERTIES						LAB. ASSESS.
BORE 1	BORE 2	COLOUR	CONSISTENCY, TEXTURE AND STRUCTURE	SOIL DESCRIPTION	U.S.C.	MOIST	BEARING	Ipt (Ave)
0 – 0.2		Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
0.2 – 0.7		Brown	Moderately dense, layer	Sandy SILT, trace clay, low to medium plasticity	ML	B	L	0.015
0.7 – 1.1		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
1.1 – 1.6		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
1.6 – 1.9		Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
1.9 – 2.6		Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
2.6 – 3.0		Pale Orange Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
	0 – 0.1	Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
	0.1 – 0.2	Brown	Loose, layer	TOPSOIL, silty SAND, trace clay, low to medium plasticity	SM/ SC	B	L	0.015
	0.2 – 0.6	Brown	Moderately dense, layer	Sandy SILT, trace clay, low to medium plasticity	ML	B	L	0.015
	0.6 – 0.9	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
	0.9 – 1.5	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
	1.5 – 2.0	Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
	2.0 – 3.0	Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025

REMARKS: 1. The soil profile possesses some reactive clays with a potential of active movement (swelling and shrinking due to soil moisture variations).

MACE ENGINEERING SERVICES
6 Lennon Street
CLARE 5453
ABN 89 615 046 930
Tel. (08) 88 421242

SURFACE SOIL BORE LOG	DATE: 15/02/2023 JOB NO: 13754	CR2 2 OF 3
DATE DRILLED: 27/01/2023	THIS SHEET TO BE READ IN CONJUNCTION WITH SSB1-2 & SSB2-2.	
SITE: 56 QUORN ROAD, STIRLING NORTH		

DEPTH IN METRES		VISUAL ASSESSMENT OF PROPERTIES						LAB. ASSESS.
BORE 3	BORE 4	COLOUR	CONSISTENCY, TEXTURE AND STRUCTURE	SOIL DESCRIPTION	U.S.C.	MOIST	BEARING	Ipt (Ave)
0 – 0.1		Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
0.1 – 0.3		Brown	Loose, layer	TOPSOIL, silty SAND, trace clay, low to medium plasticity	SM/ SC	B	L	0.015
0.3 – 0.7		Brown	Moderately dense, layer	Sandy SILT, trace clay, low to medium plasticity	ML	B	L	0.015
0.7 – 1.1		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
1.1 – 1.6		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
1.6 – 2.1		Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
2.1 – 3.0		Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
	0 – 0.2	Brown	Loose, layer	TOPSOIL, silty SAND, trace clay, low to medium plasticity	SM/ SC	B	L	0.015
	0.2 – 0.5	Brown	Moderately dense, layer	Sandy SILT, trace clay, low to medium plasticity	ML	B	L	0.015
	0.5 – 0.9	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
	0.9 – 1.5	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
	1.5 – 2.1	Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
	2.1 – 3.0	Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025

REMARKS: 1. The soil profile possesses some reactive clays with a potential of active movement (swelling and shrinking due to soil moisture variations).

MACE	**6 Lennon Street CLARE 5453**	**SURFACE SOIL BORE LOG**	**DATE: 15/02/2023** **JOB NO: 13754** **CR2 3 OF 3**
ENGINEERING	**ABN 89 615 046 930**	**DATE DRILLED: 27/01/2023**	**THIS SHEET TO BE READ IN CONJUNCTION WITH SSB1-2 & SSB2-2.**
SERVICES	**Tel. (08) 88 421242**	**SITE: 56 QUORN ROAD, STIRLING NORTH**	

DEPTH IN METRES		VISUAL ASSESSMENT OF PROPERTIES						LAB. ASSESS.
BORE 5	**BORE 6**	**COLOUR**	**CONSISTENCY, TEXTURE AND STRUCTURE**	**SOIL DESCRIPTION**	**U.S.C.**	**MOIST**	**BEARING**	**Ipt (Ave)**
0 – 0.1		Brown	Loose, layer	TOPSOIL, silty SAND, low plasticity	SM	B	L	0.005
0.1 – 0.3		Brown	Loose, layer	TOPSOIL, silty SAND, trace clay, low to medium plasticity	SM/ SC	B	L	0.015
0.3 – 0.5		Brown	Moderately dense, layer	Sandy SILT, trace clay, low to medium plasticity	ML	B	L	0.015
0.5 – 1.0		Light Brown & Brown	Moderately dense, layer	Silty SAND, low plasticity	SM	B	L-M	0.005
1.0 – 1.7		Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
1.7 – 2.2		Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
2.3 – 3.0		Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
	0 – 0.3	Brown	Loose, layer	TOPSOIL, silty SAND, trace clay, low to medium plasticity	SM/ SC	B	L	0.015
	0.3 – 0.6	Brown	Moderately dense, layer	Sandy SILT, trace clay, low to medium plasticity	ML	B	L	0.015
	0.6 – 1.0	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
	1.0 – 1.6	Light Brown & Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.02
	1.6 – 2.3	Light Brown	Moderately dense, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025
	2.3 – 3.0	Light Brown	Firm, layer	Clayey sandy SILT, medium plasticity	SC/ ML	B	L-M	0.025

REMARKS: 1. The soil profile possesses some reactive clays with a potential of active movement (swelling and shrinking due to soil moisture variations).

MACE 6 Lennon Street
CLARE 5453

ENGINEERING

SERVICES Tel. (08) 88 421242

ABN 89 615 046 930

SURFACE SOIL BORELOG EXPLANATORY NOTES

1. GENERAL

The surface soil borelog is based on visual-tactile logging of the drilled core. Unless specifically reported the characteristics are estimated and are not measured by a specific test.

One must not place sole reliance on the surface soil borelogs as a means of being an absolute representation of all sub-surface features existing on the site.

The soil borelogs are usually based upon 40mm diameter continuous core samples in one or more locations on the site in accordance with AS 2870 - 2011. It is not possible by this means to detect all surface features which may exist and the Owner is advised to seek information from Local Council, Department of Health and other statutory Authorities regarding any unnatural features (eg wells, mineshafts, filled areas etc) land use (eg toxic waste, waste disposal etc), or other features typical to the area (eg landslip, springs etc).

This office uses not only the borelog information but may take into account such matters as the known geology of the area taken from published soil maps, the known performance of existing structures in the general area and engineering judgement to make an assessment of soil classification for design purposes. Therefore this borelog shall not be used to produce a footing construction report without written permission.

2. UNIFIED SOILS CLASSIFICATIONS (U.S.C.)

GW - Gravel :	well graded.
GP - Gravel :	poorly graded; gravel sand mixtures, little or no fines.
GM - Gravel :	excess silty fines, poorly graded gravel-sand-silt mixtures.
GC - Gravel :	excess clayey fines; poorly graded gravel-sand-clay mixtures.
SW - Sand :	well graded.
SP - Sand :	poorly graded; poorly graded sands, gravelly sands, little or no fines.
SM - Sand :	excess silty fines; poorly graded sand-silt mixtures.
SC - Sand :	excess clayey fines; poorly graded sand-clay mixtures.
ML - Silt :	low plasticity; inorganic silts and very fine silty or clayey sands rock flour.

CL - Clay	:	low plasticity; inorganic clays of low to medium plasticity, gravelly clay, sand, clays, silty clays, lean clays.
OL - Organic:		low plasticity; organic silts and silt clays of low plasticity.
MH - Silt	:	high plasticity, inorganic silts, micaceous or dialomaceous fine sandy or silty soils, elastic silts.
CI - Clay		Medium plasticity; inorganic clays of medium to high plasticity.
CH - Clay	:	high plasticity; inorganic clays of high plasticity, fat clays.
OH - Organic:		high plasticity; organic clays of medium to high plasticity.

3. MOISTURE CONTENT

Relative to the Plastic Limit (P.L.) of the soil for cohesive soils or relative to the optimum moisture content of the soil (O.M.C.) of the soil for cohesionless soils ie. non plastic.

W.B. Well Below - B. Below - N. Near - A. Above - W.A. Well Above

4. BEARING STRENGTH

The descriptive term used relates to the in-situ strength at the time of logging.

It must be noted that site works and changes in soil moisture may significantly affect the bearing strength. It must also be noted that as the soils are disturbed in the drilling and sampling process the bearing strength in-situ may be different from that logged.

Term	Description	Bearing Capacity (kPa)
VL	Very low (loose granular material or soft, possibly collapsing soil)	Less than 50
L	Low (Firm)	50 – 100
M	Medium (Stiff)	100 – 200
H	High (Very stiff to hard)	Greater than 200

Sites with very low or low bearing strength in the founding soil strata may be classified as 'P' problem site.

5. PLASTICITY

NP, LP, MP, HP refers to non, low, medium and high plasticity respectively.

6. CONSISTENCY

VS – Very Soft
S – Soft
F – Firm
St – Stiff
VS – Very Stiff
H – Hard

VL – Very Loose
L – Loose
MD – Medium Dense
D – Dense
VD – Very Dense

7. REACTIVITY

The reactivity of the soil is defined as the potential for undergoing changes in volume with changes in the soil moisture content.

The reactivity is measured in terms of Instability Index. This term does not apply to sands.

Term	Description	Instability Index (Ipt.)
L	Low	1% or less
M	Medium	2%
H	High	3% or greater

8. SOIL CLASSIFICATION

	CHARACTER	CLASS
Sand and rock Silt and some clay	Stable	A S
Moderately reactive clay Highly reactive clay Extremely reactive clay	Reactive	M, M-D H1, H2, H1-D, H2-D E, E-D
Sand Material other than sand	Controlled fill	A A to P
Mine subsidence Uncontrolled fill Landslip Soft Collapsing Soils	Problem	P

Class	Surface Movement
S	Ys < 20mm
M, M-D	20mm < Ys < 40mm
H1, H1-D	40mm < Ys < 60mm
H2, H2-D	60mm < Ys < 75 mm
E, E-D	Ys > 75mm

Note: **M-D, H1-D, H2-D and E-D are classifications for sites where deep moisture change occurs.**

Further site investigation may be required for a Class E or Class P site.

Job No. 13754

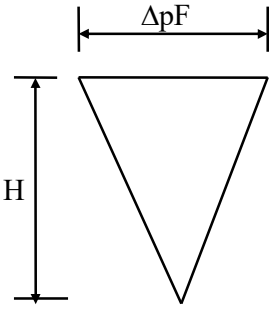
POTENTIAL GROUND MOVEMENT

$Ys = \sum Ipt \times \Delta H \times \Delta pF$

Ipt has been determined from laboratory testing in accordance with AS1289.

ΔH represents the thickness of each soil strata.

ΔpF represents the estimated change in suction at the mean depth of the soil strata. ΔpF varies linearly as follows:



For centre heave or edge heave

ΔpF max = 1.2 at surface

H = 4.0m or to G.W.L. if encountered

Where bedrock has been encountered, the 'SUCTION TRIANGLE' has been truncated at the rock surface

Design heave valued C/H Ym = 0.7 Ys
E/H Ym = 0.5 Ys

NOTE: Footing design in accordance with AS 2870 - 2011.

BORE NO.	SOIL HORIZON	ΔPF	Ipt	ΔH	Δpf x Ipt x ΔH	REMARKS
BH4	0 – 200	1.17	0.015	200	3.51	By inspection, BH4
	200 – 500	1.095	0.015	300	4.93	is the critical borehole
	500 – 900	0.99	0.02	400	7.92	
	900 – 1500	0.84	0.02	600	10.08	
	1500 – 2100	0.66	0.025	600	9.0	
	2100 – 4000	0.285	0.025	1900	13.54	
				TOTAL	**48.98**	

Ys = 50 mm, ∴ Class "H1-D/P(TREES)" site

Mace Engineering Services

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6 Lennon Street
P.O. Box 156
Clare SA 5453

Job No. 13754

GENERAL NOTES - SITE ASSESSMENT

1. The soil profile as indicated by the test bores, forms the basis of the site assessment. The soil profile is only particular to the test location and the soil samples obtained may not disclose all the soil variations on the site.

2. It is not economically possible or practical to determine every sub surface feature on a site. Because of this any variations or discrepancies in soil type, colour, or horizon depth, as compared to the test bores shall be referred to the Engineer immediately.

3. The site assessment has been undertaken on the basis of the recognised characteristics of the soil profile. These characteristics have been assessed through visual, tactile and laboratory testing.

4. The site assessment has only taken into account tree effects if existing large trees are present adjacent to the construction site. Post construction planting should be in accordance with CSIRO information sheet to home owners.

5. The footing design for this site can now be designed based upon Australian Standard AS 2870 – 2011 "Residential Slabs and Footings" and this Site Assessment.

6. This site has been assessed as Class "H1-D/P(TREES)", therefore flexible plumbing fittings will be required.

7. It is recommended that to minimise risk to the building on this site particular care and attention is given to the footing construction, site preparation and site management. General notes covering these aspects in detail are available from this office.

8. Site inspections by the Engineer are **MANDATORY** at the following stages:-

   - Upon completion of excavation for the footing beams and piers prior to the placement of any damp-proof membrane or reinforcement.

   - Upon completion of fixing of reinforcement and prior to the commencement of the concrete pour.

   Work cannot be certified unless it is inspected.

   Each inspection will incur an additional charge. 24 hours notice is required when booking inspections.

Michelle C Verco **FIEAust, CPEng, NER**
DIRECTOR

APPLICATION FOR AN ON-SITE WASTEWATER WORKS APPROVAL

Pursuant to the SA Public Health (Wastewater) Regulations 2013, all on-site wastewater systems and alterations to on-site wastewater systems are subject to a wastewater works approval. Refer to the South Australian Department for Health and Ageing **ON-SITE WASTEWATER SYSTEMS CODE (the Code)** for further information to assist in the completion of this application form. The Code can be accessed online at http://www.health.sa.gov.au/pehs/branches/wastewater/new-regulations-and codes.htm

Each application must include **two copies** of a detailed sanitary plumbing and drainage lay-out (refer to Section 8 of the Code), a site and soil report (refer to Section 3.6.1 of the Code) and the appropriate fee as determined by the relevant authority. Applications where necessary, must include a detailed assessment of the land capability of the site via a soil report (i.e. the suitability of the site for treatment and disposal/reuse of domestic wastewater).

Please contact the relevant authority for details regarding the fee and method of payment. The relevant authority is:

- The local council for the installation of on-site wastewater systems with a capacity up to 40EP or connection to a Community Wastewater Management System (CWMS)
- The South Australian Department for Health and Ageing for systems to be installed with a capacity greater than 40EP, Community Wastewater Management Systems (CWMS) and for wastewater systems in areas of the state not under local government control

FAILURE TO PROVIDE THE CORRECT INFORMATION OR FEE WILL RESULT IN APPROVAL DELAYS

OFFICE USE ONLY

WS No. /

DA No. /

Date Received:

Fee Paid:

Receipt No:

1. APPLICANT/OWNER DETAILS

Enquiries regarding this application will be directed to the applicant:

Applicant's name Bao Hoang

Applicant's address Level 11,44 Waymouth Street

Township or Suburb Adelaide Postcode 5000

Phone 08 8227 1544 Mobile

Email bao.hoang@meinhardtgroup.com

If the applicant is not the owner, please also fill in the details below:

Owner's name John Cerchi

Owner's address 22 Lawson Place

Township or Suburb Barden Ridge Postcode 2234

Phone Mobile 0400990450

Email john_cerchi@yahoo.com

2. LOCATION OF INSTALLATION

Property No. 56 Street Quorn Road

Township or Suburb Stirling North, SA

Lot Section CT No

3. PREMISES DETAILS

PREMISES DESCRIPTION: ☐ Dwelling ☐ Units ☑ Commercial ☐ Other

OCCUPANCY (RESIDENTIAL PREMISES): _____ (number of persons)

OCCUPANCY (NON-RESIDENTIAL PREMISES): Refer to **APPENDIX E** of the Code to decide on a suitable premises category to calculate the capacity of the septic tank and the effluent disposal requirements.

Premises Category: Child Care Centre P1: 104 P2: 104

WATER SUPPLY TO PREMISES:

☑ Reticulated mains water supplied to premises

If not, what water supply is used:

☐ Roof catchment / storage or carted supply ☐ Other (please specify) _____

NON-STANDARD FIXTURES:

☐ Food waste disposal unit ☐ Spa bath capacity (litres) _____

4. PROPOSED TYPE OF WASTEWATER WORKS

☑ New system ☐ Alteration/addition to an existing system

For an alteration/addition to the system or a design utilising more than one of the options below, please provide a brief description of works here or attach a covering letter to the application:

_____

_____

_____

Please ensure that the submitted plans show the existing pipework and fittings (as known) and the intended additions, making a clear visual distinction between the two

TYPE OF SYSTEM:

☑ **Onsite Disposal** ☐ **CWMS Connection**

☑ Septic tank

Tank capacity 20,000L Make RI Industries

☐ Aerobic ☐ Sand Filter ☐ Reed Bed ☐ Composting Toilet

☐ Grey Water Treatment ☐ Grey Water Diversion

Make _____ Model _____

☐ Other (please specify): _____

_____

☑ Pump

Make Pedrollo Model D30-N

Sump Capacity 3000L Type and location of Alarm SJE Rhombus High level alarm in office

☐ Trade waste – *Please refer to Section 7*

Please ensure that all nominated systems and components are on the Department for Health and Ageing Approved Products List:
http://www.health.sa.gov.au/pehs/branches/wastewater/wastewater-products.htm

5. EFFLUENT DISPOSAL METHOD

LAND APPLICATION OF EFFLUENT:
Please ensure that Section 6 is also completed

☐ SUBSURFACE DISPOSAL
Required contact area for subsurface disposal *(in square metres)* _____

☐ Plastic tunnel ☐ Perforated pipe

Length *(m)* _____ Width *(m)* _____ Depth *(mm)* _____

Depth below natural ground surface to base of trench _____

☐ SUBSURFACE IRRIGATION DISPOSAL
Irrigation area required *(in square metres)* _____

☐ SURFACE IRRIGATION DISPOSAL
Irrigation area required *(in square metres)* _____

☑ AS/NZS 1547 LAND APPLICATION DESIGN
Type ABSORBS unlined sand filter Basal area 240 m²
Length *(m)* 6 x 10m Width *(m)* 4.0m Depth *(mm)* 1100 mm

OTHER:

☐ OFF-SITE DISPOSAL – Connection to CWMS or sewer

☐ TEMPORARY ON-SITE CONTAINMENT FOR TANKER REMOVAL

Holding tank capacity *(litres)* _____

☐ OTHER METHOD - *Please provide full details with attachments as appropriate*

_____

6. LAND CAPABILITY ASSESMENT

This section is relevant for applications intending land application for effluent:

Within 50m of a well, bore, or dam used or likely to be used for human or domestic purposes	☐ Yes	☑ No
Within 50m of a watercourse as identified on a 1:50 000 SA Government topographic map and used or likely to be used for human or domestic purposes	☐ Yes	☑ No
Within 100m of the pool level of the River Murray and its lakes	☐ Yes	☑ No
Within the 1956 River Murray and lakes flood zone	☐ Yes	☑ No
Above shallow underground water supplies used for human or domestic purposes	☐ Yes	☑ No
Within 100m of the mean high water mark along coastal foreshore areas	☐ Yes	☑ No
Within 50m of a water source used for agriculture, aquaculture or stock purposes	☐ Yes	☑ No
In an area likely to be subject to flooding or inundation in a 1:10 year recurrent event	☐ Yes	☑ No

SOIL REPORT: For applications involving the land application of effluent, please provide a site and soil suitability report from a Wastewater Engineer if applicable

DLR/DIR or EPR nominated by the wastewater engineer DIR = 25mm/day (Secondary treatment)

7. TRADE WASTE DISCHARGES

☑ New connection ☐ Alteration to a system with an existing trade waste connection

Provide details of the proposed activity and processes which produce wastewater for discharge to CWMS.

Provide details of pre-treatment system (e.g. grease arrestor, pH correction, solid settling) including its size and capability.

2400L grease arrestor at kitchen outlet

Provide details of proposed cross connection and backflow prevention devices, where required:

Details of the wastewater discharge

☑ Gravity ☐ Pumped Peak flow rate (L/second): _____

(Please attach additional information where required)

8. DECLARATION AND SIGNATURE OF OWNER AND APPLICANT

The application ***must*** be signed by both the owner and applicant.

I / We hereby declare that the information provided in this application, attachments and accompanying plans are true and correct.

It is acknowledged that:

- Pursuant to Regulation 11 of the SA Public Health (Wastewater) Regulations, the plumbing contractor(s) must provide a **Certificate of Compliance** to the relevant authorities following installation of an on-site wastewater system or components.
- All work on the wastewater system must be carried out by persons licensed pursuant to the Plumbers, Gas Fitters and Electricians Act 1995.
- Penalties apply for the provision of false or misleading information or failure to install and maintain the system in accordance with approval conditions.

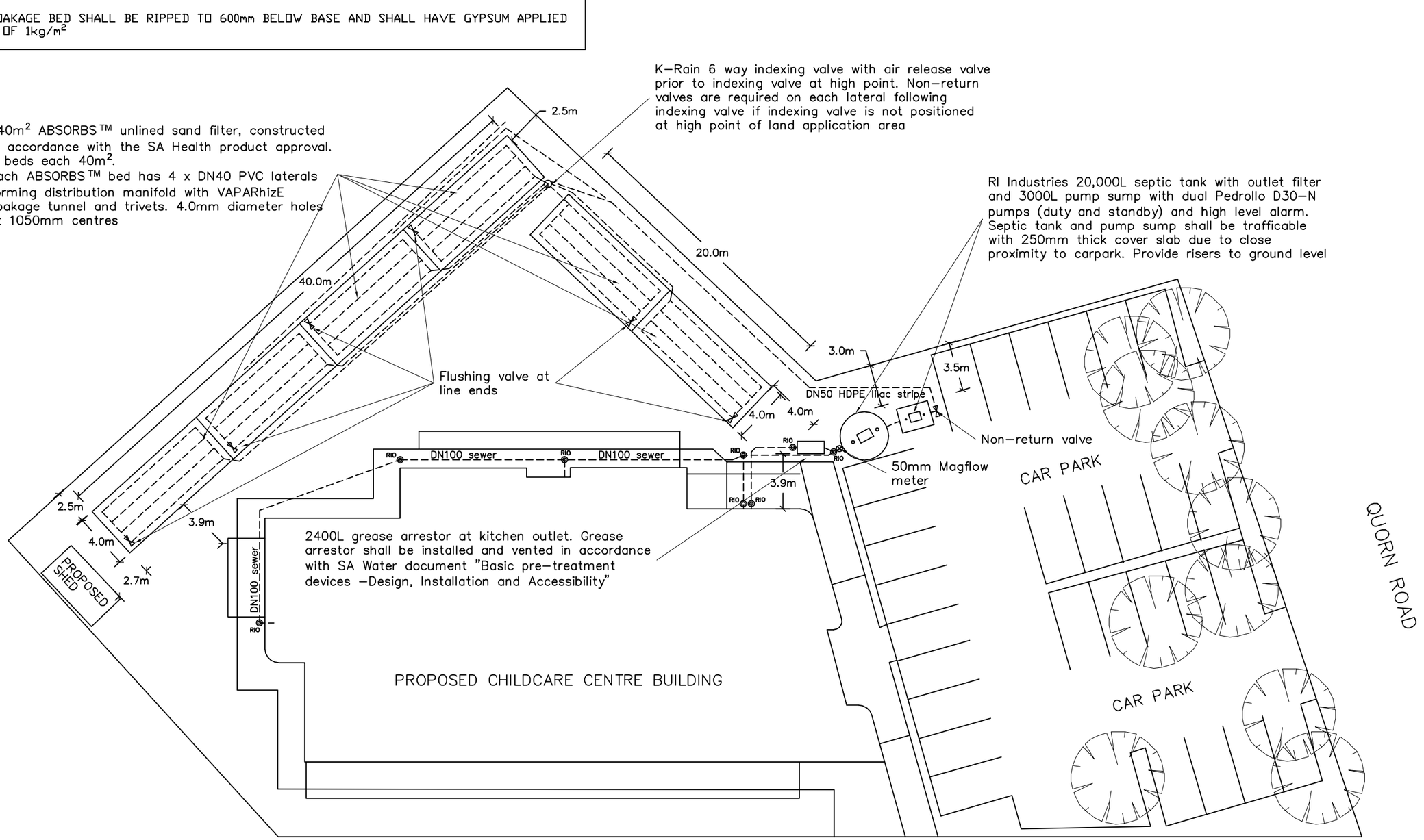
It is the responsibility of the applicant to ensure that the wastewater works are installed in accordance with the approved plan and relevant conditions.

Owner's signature _____ Date 20/04/2023

Applicant's signature _____ Date 20.04.2023

THIS SITE IS A CATEGORY 4 SITE. FLEXIBLE FITTINGS WILL BE REQUIRED, REFER TO PLUMBING JOINT MANUFACTURER, SUCH AS STORM PLASTICS FOR APPROPRIATE FITTING

BASE OF SOAKAGE BED SHALL BE RIPPED TO 600mm BELOW BASE AND SHALL HAVE GYPSUM APPLIED AT A RATE OF 1kg/m²



NOTES:

1. REFER TO ARCHITECTURAL PLANS AND SITE SURVEY FOR EXACT LOCATION OF BUILDINGS AND OTHER SITE FEATURES
2. SEPTIC TANK SHALL BE SET BACK 2.5m FROM ANY BUILDINGS AND PROPERTY BOUNDARY
3. SAND FILTER SHALL BE SET BACK 2.5m FROM SEPTIC TANK AND PROPERTY BOUNDARY. 3.0m FROM BUILDING OR SWIMMING POOL IF BED IS LOCATED DOWNSLOPE OF BUILDING OR SWIMMING POOL, AND 6.0m IF UPSLOPE
4. LAYOUT OF PLUMBING IS SCHEMATIC ONLY. PLUMBER SHALL CHECK ON–SITE AND MODIFY ACCORDINGLY. PLUMBING SHALL BE IN ACCORDANCE WITH AS3500–2018
5. SITE PLAN IS TO BE READ IN CONJUNCTION WITH ON–SITE WASTEWATER MANAGEMENT REPORT
6. THE INSTALLER OF THE SAND FILTER SHALL PROVIDE CERTIFICATION THAT THE WASTEWATER SYSTEM INCLUDING THE TYPE OF SAND USED FOR THE FILTER CONSTRUCTION HAS BEEN INSTALLED IN ACCORDANCE WITH THE SA HEALTH PRODUCT APPROVAL,
7. PLUMBER SHALL UNDERTAKE DIAL BEFORE YOU DIG ENQUIRY AND SERVICE LOCATION PRIOR TO CONSTRUCTION
8. PRE–COMMISSIONING TESTING SHALL BE UNDERTAKEN PRIOR TO BACKFILL IN ACCORDANCE WITH AS1547. A SITE INSPECTION SHALL BE UNDERTAKEN DURING TESTING TO ENSURE THAT THE SYSTEM HAS BEEN INSTALLED IN ACCORDANCE WITH THE DESIGN DOCUMENTS AND THAT THE SYSTEM IS OPERATING AS INTENDED
9. ABSORBS SAND FILTER IS A PROPRIETARY WASTEWATER MANAGEMENT SYSTEM, & SHALL BE CONSTRUCTED BY ARRIS PTY LTD ARRIS SHALL PROVIDE AN OPERATION AND MAINTENANCE MANUAL TO THE OWNER.

MACE ENGINEERING SERVICES

6 LENNON STREET
CLARE 5453

A.B.N. 89 615 046 930

TEL. (08) 88 421242

TITLE: ON–SITE WASTEWATER MANAGEMENT SITE PLAN	DATE: MARCH 2023
SITE: 56 QUORN ROAD, STIRLING NORTH	SCALE: 1:300 @ A3
CLIENT: MEINHARDT AUSTRALIA	DWG No.: 13754 – 01

Government of South Australia
SA Health

Contact: Callum Brady
Telephone: (08) 8226 7100
Email: healthwastewatermanagement@sa.gov.au

Health Protection and Licensing Services
Citi Centre Building
11 Hindmarsh Square
Adelaide SA 5000
PO Box 6
Rundle Mall SA 5000
DX 243
Tel 08 8226 7100
Fax 08 8226 7102
ABN 97 643 356 590
www.health.sa.gov.au

Our reference: WWI-11164

John Cerchi
22 Lawson Place
BARDEN RIDGE NSW 2234

Dear Mr Cerchi,

RE: Septic tank and ABSORBS™ sand filter system servicing a childcare centre at 56 Quorn Road, Stirling North SA (CT 5706/123)

I refer to your application relating to on-site wastewater management at the above address.

Pursuant to the South Australian Public Health (Wastewater) Regulations 2013, the application has been approved by the Department for Health and Wellbeing (DHW) subject to the following conditions:

1. The approved system incorporates:
   1.1. A 2.4kL grease arrestor
   1.2. A 20kL septic tank
   1.3. A 3kL pump sump with duty/standby pump arrangement
   1.4. An on-site land application system of 5,750L/d capacity, consisting of six ABSORBS™ unlined sand filter beds, each 10m long x
   1.5. Sanitary plumbing and drainage.

2. The system is to be installed, commissioned, operated and maintained in accordance with:
   2.1. The plans, specifications and reports referenced in this approval.
   2.2. Designers, manufacturers, installers and equipment suppliers' instructions and recommendations.
   2.3. AS/NZS 3500 Plumbing and drainage.
   2.4. AS/NZS 1547 On-site domestic wastewater management.
   2.5. The South Australian On-site Wastewater Systems Code.
   2.6. Operation and maintenance manuals for the system.
   2.7. All other relevant standards and codes.
   2.8. Conditions of this approval.

3. A suitably qualified person, as defined under the South Australian Public Health (Wastewater) Regulations 2013, must install and certify the wastewater system. Alternatively, the wastewater system, excluding the sanitary plumbing and drainage components, may be certified by a wastewater engineer to verify that the installation has been undertaken in accordance with the referenced plans and design requirements, supported with as-constructed drawings.

4. System lids and access openings must be childproof, and gas and watertight.

5. Where tanks are subject to vehicular loads, they must be fitted with suitable trafficable covers

6. The following discharges must not enter the on-site wastewater system:
   - 6.1. Stormwater.
   - 6.2. Backflush waters from a swimming pool or water softener.
   - 6.3. Discharge or backflush from a spa bath/pool in excess of 680 litres.
   - 6.4. Sanitary napkins, clothing, plastic material, wet wipes or liners.
   - 6.5. Paint, petroleum products, strong alkaline, acids or other flammable or explosive substance, whether solid, liquid or gas.
   - 6.6. Trade wastes, other than those receiving pre-treatment as per Condition 1.1.

7. With regard to the on-site land application system:
   - 7.1. There shall be no pooling or runoff of wastewater.
   - 7.2. The area must not be subject to vehicle traffic or structural loadings.

8. The septic tank must be de-sludged on a minimum 2-yearly basis.

9. The grease arrestor shall be maintained in accordance with manufacturer's instructions and de-sludged at a frequency that ensures the device is operating as intended.

10. Removal of wastewater and sludge must be undertaken by an EPA licenced waste transporter. Records of pump-outs shall be maintained by the wastewater system operator.

11. There shall be no cross connections with any other water supply without backflow prevention to protect that supply, as per AS/NZS 3500 and the requirements of SA Water and the Office of the Technical Regulator (OTR).

12. Personnel responsible for the operation and maintenance of the system must be adequately trained to do so in accordance with the manufacturers' procedures and supporting systems.

13. The following operational monitoring must be undertaken for the system:

13.1. Totalised flow discharged to the land application system must be recorded quarterly.

13.2. Pump sump levels must be monitored using an audible and visual high-level alarm meeting the requirements of the On-site Wastewater Systems Code.

13.3. The land application system must be inspected monthly to ensure that run-off or pooling is not occurring.

14. Monitoring records, including records of corrective action, must be maintained for a period of at least 4 years.

15. Upon request, an annual report must be submitted in a format as determined by the DHW by 30 September each year, for the financial period from 1 July to 30 June.

16. Non-compliance with the conditions of approval shall be reported as soon as practicable by email to the Minister for Health and Wellbeing (c/o Wastewater Management Section, DHW).

17. Within eight weeks of practical completion of the installation, "as constructed" drawings must be provided to the DHW.

18. Extensions, upgrades or modifications to the wastewater system will be subject to approval from the Minister for Health and Wellbeing (C/- Wastewater Management Section, DHW).

Approved by: Date: 5 June 2023

Karen Bennink
Manager, Wastewater Management
Delegate of the Minister for Health and Wellbeing

CC: Mace Engineering Services
Meinhardt Australia

References: - "On-site Wastewater Management Report", job no. 13754, by Mace Engineering Services, dated 12 April 2023

Note 1. The approval does not abrogate responsibilities under other Acts or Regulations to obtain the necessary approvals, permits or licences from other agencies, including but not limited to:

- Environment Protection Authority
- Water Industry Entity
- Department for Environment and Water
- Office of the Technical Regulator
- Department of Primary Industries and Regions SA
- State Planning Commission
- Local Council

Note 2. This approval is issued on the basis of information provided by Mace Engineering Services, and that operation and maintenance of the system will be carried out by the system owner or their agents.

Note 3. Expiry of approval

(1) A wastewater works approval expires if the works are not commenced, or are commenced but are not substantially completed, within 24 months after the date of the approval.

(2) A relevant authority may, on application and payment of the prescribed fee, postpone the expiry of a wastewater works approval for a specified period.

Note 4. The DHW may vary the approval conditions, and require the repair, replacement, rectification, or alteration of the system or any part thereof should:

- The system be considered defective and unable to perform the function for which the approval is issued.
- The system be operated in a manner that is prejudicial to public and environmental health, or cause environmental nuisance.

12 Greenhill Road
Wayville SA 5034

PRELIMINARY SITE INVESTIGATION

June 2023
PS204288

Stallard Meek Flightpath Architects

56 Quorn Road, Stirling North

greencap.com.au

ABN 76 006 318 010

Adelaide | Auckland | Brisbane | Canberra | Darwin | Melbourne | Newcastle | Perth | Sydney | Wollongong

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This Report should be read in whole and should not be copied in part or altered. The Report as a whole set outs the findings of the investigations. No responsibility is accepted by Greencap for use of parts of the Report in the absence (or out of context) of the balance of the Report.

Document Control

Document Quality Management Details		
Report Name:	Preliminary Site Investigation	
Site Details:	56 Quorn Road, Stirling North, SA 5710	
Project Number:	PS204288	
Client Name:	Stallard Meek Flightpath Architects	
Signatures:	Prepared By:  **Ellie Powell** Graduate Environmental Scientist	Approved By:  **Andrew Durand** Principal Environmental Engineer

Issue Status

Version No.	Status	Date	Author	Reviewer
1	Final	June 2023	EP	AD

Document Circulation

Version	Type	Issued to:
1	Electronic	Stallard Meek Flightpath Architects

EXECUTIVE SUMMARY

Greencap was commissioned by Stallard Meek Flightpath Architects to undertake a Preliminary Site Investigation for the site at 56 Quorn Road, Stirling North. The objective of the investigation was to assess the potential for significant site contamination issues in terms of the proposed development of the site for use as a childcare centre.

The available historical information indicates that the site has remained essentially undeveloped and vacant. The site may have been used for broad acre farming purposes (grazing) prior to the surrounding area being developed. There were possibly some smaller structures located on the site in the 1940s and 1950s, but no other significant historical infrastructure has been identified.

The identified activities of interest associated with past and present site uses include:

- *Use of pesticides, herbicides and fertilisers (including for broadacre farming and for general weed and pest control).*
- *Historical use of fill from unknown sources and illegal dumping.*

Activities of interest on adjacent land include:

- *A service station located approximately 20 metres to the northeast across Quorn Road.*
- *A railway corridor along the south western site boundary.*

This Preliminary Site Investigation has been prepared to specifically address the planning authority's request for information in support of a development application. Activities of interest associated with past and present site use were identified onsite, but these activities are not 'classed' under the State Planning Commission's Practice Direction 14. Offsite activities (within 60 metres of the site) include a service station and railway corridor, which are Class 1 and Class 2 activities, respectively in accordance with Practise Direction 14.

No intrusive investigations have been undertaken at the site. The absence of significant potentially contaminating activities at the site suggests the likelihood of any complete source-pathway-receptor linkages from onsite sources may be low. However, there is uncertainty and a higher risk associated with the identified offsite activities (particularly the service station) given the proposed sensitive land use. The presence of any potentially complete linkages could only be assessed through intrusive investigations.

Preliminary Site Investigation
Stallard Meek Flightpath Architects
56 Quorn Road, Stirling North

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Report Figures

Report Tables

1 INTRODUCTION

Greencap Pty Ltd (Greencap) was commissioned by Stallard Meek Flightpath Architects 'the client' to undertake a Preliminary Site Investigation (PSI) for the land located at 56 Quorn Road, Stirling North, South Australia 'the site.' The approximate location of the site is presented in Figure 1.

Source: www.nearmap.com (viewed 22 May 2023)

Figure 1: Approximate Site Location

Greencap's engagement relates to an application for the proposed development of the site for use as a childcare centre. Greencap understands the planning authority has requested a PSI and site contamination declaration form be prepared in accordance with Practice Direction 14 – Site Contamination Assessment 2022 (State Planning Commission, 14 April 2023) as the development application proposes a change to a sensitive land use. The proposed development is discussed further in Section 2.3.

The objective of the PSI was to assess the potential for significant site contamination issues in terms of the proposed redevelopment of the site as a childcare centre.

The scope of work has included: -

- A desktop study to identify site characteristics - site location, site layout, building construction, geological and the hydrogeological setting.
- A site history - identifying historical owners/operators/occupiers, land uses and activities.
- A site inspection - to validate anecdotal evidence / historical information and to identify additional evidence of potential site contamination.

This investigation has been prepared with reference to industry standards and guidelines, including:

- National Environment Protection (Assessment of Site Contamination) 1999 as amended 2013 (NEPM).
- SA EPA publication 'Guidelines for the assessment and remediation of site contamination', November 2019 revision.
- State Planning Commission's Practice Direction 14 (Site Contamination Assessment).

2 SITE DETAILS

2.1 Site Identification

The site is described by one Certificate of Title. The Certificate of Title and legal description of the site is summarised in Table 1. Copies of the current Certificate of Title and the property parcel report from the South Australian Property Parcel Atlas (SAPPA) are presented in Appendix A.

Table 1: Site Details

Category	Details
Certificate of Title and allotment and plan details	CT 5706/123 – Allotment 793, Filed Plan 186495
Address	56 Quorn Road, Stirling North
Municipality	Port Augusta City Council
Zoning	Neighbourhood (Z4201)

2.2 Site Description and Current Use of site and Surrounds

The site is an irregular shaped parcel of vacant unsealed land with an area of 2,860 square metres (m^2). The site is bound by Quorn Road to the north, a railway corridor, and a residential property to the west, and residential properties to the east and south.

A plan showing the subject site on a recent aerial image (dated 9 March 2023) is presented as Figure 2 and a site survey plan is provided in Appendix B. Photographs showing the current site condition are presented as Photographs 1 to 3.

Source: www.nearmap.com.au (image date: 9 March 2023)

Figure 2: Aerial image showing the investigation area

Photograph 1 – View looking south from the north-eastern corner of the site (May 2023)

Photograph 2 – View looking northwest from the south-eastern corner of the site (May 2023)

Photograph 3 – View looking north from the south-western corner of the site (May 2023)

2.3 Proposed Site Use and Development

It is understood the proposed development will comprise a childcare centre and associated car parking and landscaping. Copies of the proposed development plans are presented in Appendix B.

3 ENVIRONMENTAL SETTING

The government portal: 'Location SA' was accessed to identify and assess water bodies and water courses (potential sensitive receptors) within a 2-kilometre radius of the site. The nearest potential sensitive ecological receptor is the Saltia Creek, an ephemeral creek located approximately 570m to the east of the site.

3.1 Geology

The regional geology of the site is summarised in Table 2.

Table 2: Regional Geology

Item *(data source)*	Detail
Surface Geology (DEW / SARIG)	Pleistocene aeolian unit 4 described as Pleistocene coastal plain dune sand.
Soil Units and classifications (Atlas of Australian Soils)	Calcarosol soils consisting of: • broad plains of brown calcareous earths with areas of exposed caliche and crusty loamy soils. • clay pans, saline soils (unclassified), swamps, and intermittent lakes in the lower-lying portions. • isolated tracts of dunes of brown sands and brown calcareous earths.
Acid Sulphate soil potential (Australian Soil Resource Information System)	C - Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small, localised areas.

3.2 Hydrogeology

The online South Australian Resource Information Gate (SARIG) map produced by the Department of Primary Industries and Resources of South Australia was accessed to identify the depth to the shallow water table and associated salinity (total dissolved solids - TDS). The depth to groundwater was expected to be between 10 and 20 metres below ground level and the salinity between 14,000 and 35,000 mg/L TDS.

The groundwater aquifers are described regionally as sedimentary rocks - basins include limestone, often cavernous, sandstone, sand shale and clay.

Details of registered groundwater bores within a 2-kilometre search radius of the site obtained from publicly available Department for Environment and Water information are provided in Appendix C. There were no wells identified onsite or on adjacent properties. There were 11 wells identified within a 2-kilometre radius of the site. The nearest well, unit number 6432-538 is approximately 641m to the northwest. The available information indicates the well was drilled for domestic (stock) purposes in 1987 to a depth of 55 metres below ground level (m bgl). The standing water level was recorded as 21.0m bgl and the TDS was 12,100mg/L.

4 SITE HISTORY

The history of the site has been researched to identify the characteristics of the site including the location and layout, current and past site activities, and uses of the site. A detailed site inspection has also been conducted and is incorporated into the site history summary. A property report for the site and surrounding area from a historic land use database was provided by LotSearch Pty Ltd. This report, which is included in Appendix C, provides supporting information for much of the discussion in this section and should be referred to where relevant.

4.1 Previous Owners and Occupiers of the Site

4.1.1 History of Ownership

A historical ownership search was conducted on the Certificate of Title. The available information indicates that from the 1850s until the 1940s the site was owned by Alexander Grace. In 1940, portion of a larger parcel of land was vested to the Railway Commissioner, but it is not clear what happened to the ownership of the balance of the land. The next listing indicates a transfer from the Minister of Lands in 1954 indicating that at some point the land was transferred to them (through the Rates and Taxes Recovery Act 1945), but there are no other details in relation to this. The ownership since this time has included:

- Walter J L Nancarrow (Victualler) – 1954 to 1959.
- William Bentley Greenwood (Grazier) – 1959 – 1961.
- Elva Maude Greenwood – 1961 to 1972.
- Percy Graham Rehn – July 1972 to November 1972.
- Michael Bertram Scholz (Clerk) and Susan Clarice Scholz – 1972 to 1974.
- Desmond Huart Larsson (carpenter) and Joan Teresa Larsson – 1974 to 1999.
- Kevin William Smith and Sharon Anne Kelly – 1999 to 2000.
- Kevin William Smith – 2000 to 2022
- Cerchi Investments Pty Ltd – 2022 to present.

Historical Certificates of Title are attached to this report in Appendix D.

4.1.2 Historical Business Directory Searches

Searches of the Universal Business Directory and Sands and McDougall Directory records, from years 1991, 1973, 1965, 1955, 1950, 1940, 1930, 1920 and 1910, mapped to a premise or road intersection identified no records within 150m of the site.

In addition, records mapped to a road or an area were reviewed. There were several listings matched to Quorn Road in 1991 including quarry proprietors, government departments, associations and/or societies, supermarkets and delicatessens. Although the location of these businesses is not known, none of these listings are considered of significant in terms of potential site contamination.

Further details and the search results are provided in the LotSearch included in Appendix C.

4.2 Historical Maps & Aerial Photography

The approximate location of the site is indicated in a series of historical plans presented within the Lotsearch report in Appendix C. The historical maps indicate the railway adjacent the site was first present in plans dated 1958. There are no other features of interest evident on the site or immediate surrounding areas on the historical plans reviewed.

Aerial photographs of the site dating from 1946 in approximate 10-year intervals were reviewed, refer Appendix C. Greencap notes that the geo-referencing of the images appears to be slightly out of alignment compared to the Certificate of Title boundary.

The **1946** aerial photograph is of extremely poor quality but appears to show the site as vacant and undeveloped. The present-day Quorn Road is visible to the north of the site, and a linear feature likely to be the railway corridor is also visible to the west of the site. The surrounding land appears largely undeveloped.

The **1954** aerial photograph is of poor quality but shows some evidence of possible structures on the central and south western portions of the site. These may be small structures or possibly containers, or similar. Some other structured are also evident to the east and west of the site fronting Quorn Road. The parcel of land approximately 150m north of the site, beyond Quorn Road, has an orchard and several unsealed roads. To the south of the site, adjacent the railway line is a cluster of buildings, one of which is quite large.

The **1969** aerial photograph shows several small features without vegetation in the southern and central portions of the site. It is not clear what these relate to, but they are in similar areas to the indiscernible structures/features visible in 1954. The adjacent land to the north and east of the site has undergone development with dwellings and shed like structures visible. The buildings visible in 1954 adjacent the railway line to the south appear to have been demolished.

The **1974** aerial photograph is of poor quality but appears to show evidence of soil disturbance across the entire site. The present-day service station has been constructed to the northeast, but there are no other significant changes to the surrounding land.

The **1984** aerial photograph shows no significant changes to the site. The site appears vacant and unsealed with vegetation covering most of the site and trees present in the south-western corner. The land beyond Quorn Road to the north has undergone significant development with several new dwellings visible. Development has also occurred further to the east and southwest of the site.

the **1996** aerial photograph shows no significant changes to the site, other than some small tracks. The surrounding land has undergone further development with a residential dwelling visible on the adjacent site to the south along with several shed-like structures.

The **2005** aerial photograph shows no significant changes to the site. The parcel of land beyond the railway corridor to the west has been redeveloped with several cabin structures visible. Further development is evident to the southeast and southwest of the site.

The **2015** and **2022** aerial photographs show no significant changes to the site apart from what appears to be illegally dumped waste visible near the southwestern site boundary. There are also no significant changes evident on surrounding land except for a new dwelling constructed to the northwest of the site, fronting Quorn Road.

4.3 Products spills, losses, incidents, and accidents (including fire)

4.3.1 EPA Section 7 Search

The South Australia Environment Protection Authority (EPA) has a statutory obligation under the *Land and Business (Sale and Conveyancing) Act, 1994* to provide information relating to environment protection. The EPA holds information relating to records or issues associated with:

- particulars of mortgages, charges, prescribed encumbrances affecting the land; or
- particulars relating to environmental protection including:
  - environmental assessments.
  - waste depots.
  - production of certain waste; and
  - waste on land.

The searches found that the EPA holds no records of the above particulars / activities being undertaken on the site. A copy of the EPA statement to Form 1 Section 7 response is provided in Appendix E.

4.3.2 Government Searches

EPA Site Contamination Index

A search was conducted of the EPA's online Site Contamination Index for information relating to notifications and reports received by the EPA. The Index provides information relating to Site Contamination, Audit notifications and reports that relate to specific suburbs or towns. The subject site was not listed, nor were there any listings for nearby properties within 1km of the site. A copy of the Site Contamination Index search results is presented with the LotSearch results in Appendix C.

EPA Public Register Authorisations, Applications and EPA Assessment and Groundwater Prohibition Areas

In relation to licenses and exemptions, pollution, and site contamination applicable for the property or immediately adjacent sites, there was one license issued for a petrol station at 47 Quorn Road, located 21m northeast of the site.

There were no EPA protection orders of clean up orders listed for the site or adjacent properties.

PFAS Investigation Sites

No Defence PFAS investigation and management programs or Airservices Australia National PFAS management programs were reported within a 1 km radius search of the site.

Waste Management and Liquid Fuel Facilities

A search for waste management and liquid fuel facilities was undertaken within a 1 km radius of the site. One listing for a petrol station 21m northeast of the site was noted.

Heritage

Searches were undertaken for Commonwealth Heritage List, National Heritage List, State Heritage Areas and SA Heritage Places on-site or within a 1 km radius of the site. The site and surrounding land were not listed on any of the search results.

4.4 Services to the Property

A search of Sanitary Drainage Plans (https://maps.sa.gov.au/drainageplans/) identified no drainage plans for the site.

4.5 Interview with Site Owner

Greencap contacted the current site owner, Mr John Cerchi, who purchased the site in 2022. Mr Cerchi advised the site is regularly cleared of vegetation to mitigate fire hazards. He was not aware of any incidents associated with activates undertaken onsite or on adjacent sites which may cause contamination. However, he was aware of the presence of some illegally dumped waste on the site.

4.6 Site Inspection

A site inspection was conducted by Greencap on 17 May 2023, with the objective of confirming information collected on the site as part of the desktop study and to gain additional relevant site information including the collection of additional evidence of potential contamination such as:

- structures and storage areas including underground storage tanks, waste pits, hazardous materials storage, electrical transformers and hydraulic equipment, asbestos products, and septic tanks; and
- obvious visual contamination indicators such as disturbed vegetation, discoloured, oily or disturbed soil and / or the presence of any odours.

The findings of the site inspection are detailed below, along with photographs of interest taken during the inspection.

Waste materials

Illegally dumped waste was noted in isolated portions of the site, particularly along the northern and western site boundaries. The waste appeared inert and largely associated with building materials.

Some pieces of larger concrete were observed (photograph 5). While these may be associated with illegal dumping activities, they may also be remnants of possible former site structures visible (although indiscernible) in aerial photograph in the 1950s.

Photograph 4 – Illegally dumped waste located along the northern site boundary (May 2023).

Photograph 5 – waste in the north-western portion of the site (May 2023).

4.7 Information Sources

- Department of Primary Industries and Resources of South Australia – South Australian Information Resources Gateway – provision of geology and hydrogeology information.
- Department for Planning Infrastructure and Transport, Lands Titles Office, South Australia – provision of Certificate of Title information.
- LotSearch Pty Ltd – Provision of spatial intelligence and risk mapping. A detailed list of data sets and custodians used is provided within Appendix C.
- Nearmap.com and Google Maps– provision of recent site aerial photographs and maps.
- South Australian Environment Protection Authority – information on any known environmental issues on the site.
- South Australian Property and Planning Atlas – site boundaries and property information.
- The Government of South Australia Sanitary Drainage Plans portal.
- Interview with site owner – John Cerchi.

5 PRELIMINARY CONCEPTUAL SITE MODEL

5.1 Potentially Contaminating Activities

The review of the previous assessment works undertaken at the site as well as site inspections and a review of updated information have identified several potentially contaminating activities (PCAs). Table 3 details the activities of interest, associated chemicals and potentially affected media with regard to the identified PCA and 'Class' of the activity as defined in Practice Direction 14 - Site Contamination Assessment 2021 issued by the State Planning Commission.

Table 3: Details of Potentially Contaminating Activities

PCA and location	PCA Class	Chemicals of Interest	Persistence and mobility	Potentially Affected Media	Comments
Onsite					
Use of herbicides, pesticides, and fertilisers across the site for agricultural purposes.	-	Metals, OCP, OPP & herbicides (including triazines), TRH	Heavy metals – mobility = low, persistence = high OCP – mobility = low to moderate, persistence = high OPP – mobility = low to moderate, persistence = low Herbicides – mobility = low to moderate, persistence = moderate to high TRH – mobility = moderate, persistence = moderate	Soil	Agricultural activities are specifically excluded in the *Environment Protection Regulations 2009*, for routine spraying, in accordance with manufacturers' instructions. Intensive application or misuse of chemicals is not considered likely based on the available information.
Historical use of fill along with Illegal dumping of materials from various unknown sources.	-	Metals, PAH, TRH, BTEX, Asbestos	Heavy metals – mobility = low, persistence = high TRH – mobility = moderate, persistence = moderate BTEX – mobility = moderate, persistence = high Asbestos – mobility = Low (although high in the form of fibres), persistence = high	Soil	Fill or soil importation is not a potentially contaminating activity for the purposes of the State Planning Commission's Practice Direction 14: (Site Contamination Assessment) but remains a potentially contaminating activity under the *Environment Protection Regulations*, 2009. Minor volumes of inert waste were noted during the site inspection undertaken by Greencap in May 2023.
Offsite					
Service station located approximately 20m to the northeast	Class 1	TRH/BTEXN Metals, PAHs	TRH – mobility = moderate, persistence = moderate BTEXN – mobility = moderate, persistence = high Heavy metals – mobility = low, persistence = high PAHs - mobility = low, persistence = high	Soil, groundwater, vapour	A service station is located approximately 20 metres to the northeast. Aerial photographs indicate that the service station may have been operational since the 1970s. The subject site is potentially down-hydraulic gradient of the service station based on the expected groundwater flow direction.

PCA and location	PCA Class	Chemicals of Interest	Persistence and mobility	Potentially Affected Media	Comments
Railway corridor adjacent the site to the southwest	Class 2	Metals, OCP, OPP & herbicides (including triazines), TRH, PAH	Heavy metals – mobility = low, persistence = high OCP – mobility = low to moderate, persistence = high OPP – mobility = low to moderate, persistence = low Herbicides – mobility = low to moderate, persistence = moderate to high TRH – mobility = moderate, persistence = moderate PAHs - mobility = low, persistence = high	Soil	A railway corridor has been present adjacent the site since the 1940s. While there is some evidence of the 'operation of rail infrastructure' (A Class 1 activity) to the south of the site in the 1950s, this appears to be greater than 60 metres from the site. The activities on adjacent land are likely to be limited to the operation of rolling stock on a railway and other activities. Herbicides and pesticides for maintenance purposes may have been applied to the rail infrastructure adjacent the site, possibly resulting in overspray onto the site. Any impacts would likely be limited to near surface soils. There may also have been wastes associated with railway activities.

BTEX = benzene, toluene, ethylbenzene, xylenes
PAH = polycyclic aromatic hydrocarbons
OCP = organochlorine pesticides
OPP = organophosphorus pesticides
TRH = total recoverable hydrocarbons
TPH = total petroleum hydrocarbons

5.2 Potential Receptors

The site is currently vacant and will likely be redeveloped for childcare purposes. The potential human receptors identified include:

- Future workers, children, and visitors to the site.
- Construction / maintenance workers.
- Offsite residential properties
- Offsite users of extracted groundwater.

No significant environmental receptors were identified at the site or in the immediate surrounds. The nearest potential sensitive ecological receptor is the Saltia Creek located approximately 570m to the east of the site.

5.3 Potential Exposure Pathways

As indicated in the ASC NEPM (Schedule B4), '*The fundamental concept of risk assessment is that there should be an exposure pathway linking the source of contamination and the exposed population. Where this linkage exists, an assessment of the nature and significance of the exposure pathway is required to determine the level of risk.*'

Exposure in relation to site contamination means an exposure pathway that a chemical substance takes from its source to reach a receptor, such as ingestion of soil, inhalation of dust, or consumption of home grown produce. Potential exposure pathways considered relevant for the site are:

Human

- Indoor inhalation of dust.
- Outdoor inhalation of dust.
- Dermal contact with shallow soil and dust.
- Incidental ingestion of shallow soil and dust.
- Ingestion of home-grown vegetables and fruit.
- Ingestion of home-grown poultry and/or eggs.
- Ingestion of soil adhering to home-grown produce.
- Indoor inhalation of vapours from soil.
- Outdoor inhalation of vapour from soil.
- Contact or ingestion of groundwater.

Ecological

- Direct contact / uptake of contaminated airborne particles, soil, sediment, surface water, surface water run-off or groundwater.
- Ingestion of contaminated flora or fauna.

5.4 Source-Pathway-Receptor Linkages

Several potentially contaminating activities of interest were identified for the site, but none were 'classed' activities as defined in Practice Direction 14.

Two adjacent sites (within 60m of site) were noted to have 'classed' activities in accordance with Practise Direction 14. The site approximately 20 metres to the northeast is a service station, defined as 'class 1' activity, and the site adjacent to the west undertook railway operations, defined as a 'class 2' activity.

No intrusive investigations have been undertaken at the site. The absence of significant potentially contaminating activities on the site suggests the likelihood of any complete source-pathway-receptor linkages from onsite sources may be low. However, there is uncertainty and a higher risk associated with the identified offsite activities (particularly the service station) given the proposed childcare use. The presence of any potentially complete linkages could only be assessed through intrusive investigations.

6 CONCLUSIONS

The available historical information indicates that the site has remained essentially undeveloped and vacant. The site may have been used for broad acre farming purposes (grazing) prior to the surrounding area being developed. There were possibly some smaller structures located on the site in the 1940s and 1950s, but no other significant historical infrastructure has been identified.

The identified activities of interest associated with past and present site uses include:

- Use of pesticides, herbicides and fertilisers (including for broadacre farming and for general weed and pest control). No specific areas of intensive application of chemicals were identified.
- Historical use of fill from unknown sources and illegal dumping. Fill or soil importation is not a potentially contaminating activity for the purposes of Practice Direction 14 but remains a potentially contaminating activity under the Environment Protection Regulations, 2009.

Activities of interest on adjacent land include:

- A service station located approximately 20 metres to the northeast across Quorn Road - a Class 1 potentially contaminating activities under the State Planning Commissions Practice Direction 14.
- A railway corridor on adjacent land to the southwest - a Class 2 potentially contaminating activity under the State Planning Commissions Practice Direction 14.

This Preliminary Site Investigation has been prepared to specifically address the planning authority's request for information in support of a development application. Onsite activities of interest associated with past and present site uses were identified, but none of these activities were 'classed' under the State Planning Commission's Practice Direction 14. Class 1 and Class 2 offsite activities have been identified on adjacent land (within 60 metres of the site) including a service station and railway corridor.

No intrusive investigations have been undertaken at the site. The absence of significant potentially contaminating activities onsite suggests the likelihood of any complete source-pathway-receptor linkages from onsite sources may be low. However, there is uncertainty and a higher risk associated with the identified offsite activities (particularly the service station) given the proposed childcare use. The presence of any potentially complete linkages could only be assessed through intrusive investigations.

Preliminary Site Investigation
Stallard Meek Flightpath Architects
56 Quorn Road, Stirling North

APPENDIX A CERTIFICATE OF TITLE & SAPPA REPORT

Product	Register Search Plus (CT 5706/123)
Date/Time	07/09/2022 03:11PM
Customer Reference	
Order ID	20220907007407

REAL PROPERTY ACT, 1886
South Australia

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.

Certificate of Title - Volume 5706 Folio 123

Parent Title(s)	CT 2339/156				
Creating Dealing(s)	CONVERTED TITLE				
Title Issued	02/11/1999	**Edition**	5	**Edition Issued**	29/08/2022

Estate Type

FEE SIMPLE

Registered Proprietor

CERCHI INVESTMENTS PTY. LTD. (ACN: 158 442 187)
OF 22 LAWSON PLACE BARDEN RIDGE NSW 2234

Description of Land

ALLOTMENT 793 FILED PLAN 186495
IN THE AREA NAMED STIRLING NORTH
HUNDRED OF DAVENPORT

Easements

NIL

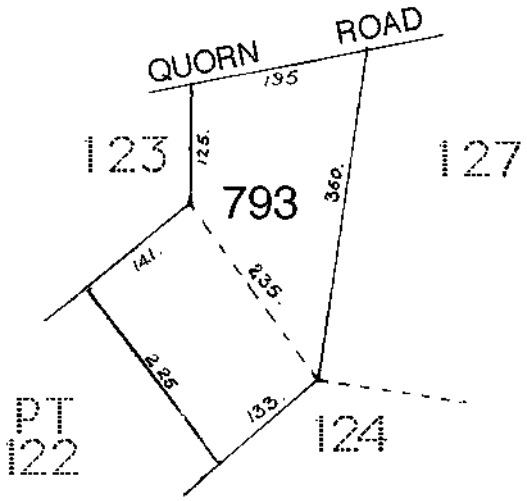
Schedule of Dealings

NIL

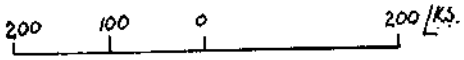
Notations

Dealings Affecting Title	NIL
Priority Notices	NIL
Notations on Plan	NIL
Registrar-General's Notes	NIL
Administrative Interests	NIL

THIS PLAN IS SCANNED FOR CERTIFICATE OF TITLE 2339/156 **LAST PLAN REF: DP 12**



DP 12



DISTANCES ARE IN LINKS
FOR METRIC CONVERSION
1 LINK = 0·201168 METRES
1 CHAIN = 100 LINKS

NOTE: SUBJECT TO ALL LAWFULLY EXISTING PLANS OF DIVISION

Product	Historical Search
Date/Time	07/09/2022 03:11PM
Customer Reference	
Order ID	20220907007407

Certificate of Title

Title Reference: CT 5706/123

Status: CURRENT

Parent Title(s): CT 2339/156

Dealing(s) Creating Title: CONVERTED TITLE

Title Issued: 02/11/1999

Edition: 5

Dealings

Lodgement Date	Completion Date	Dealing Number	Dealing Type	Dealing Status	Details
24/08/2022	29/08/2022	13860943	TRANSFER	REGISTERED	CERCHI INVESTMENTS PTY. LTD. (ACN: 158 442 187)
09/03/2022	15/03/2022	13739235	DISCHARGE OF MORTGAGE	REGISTERED	8937444
01/08/2000	24/08/2000	8937444	MORTGAGE	REGISTERED	WESTPAC BANKING CORPORATION
01/08/2000	24/08/2000	8937443	TRANSFER	REGISTERED	KEVIN WILLIAM SMITH
01/08/2000	24/08/2000	8937442	DISCHARGE OF MORTGAGE	REGISTERED	8764349
08/10/1999	15/12/1999	8764349	MORTGAGE	REGISTERED	WESTPAC BANKING CORPORATION
08/10/1999	15/12/1999	8764348	TRANSFER	REGISTERED	KEVIN WILLIAM SMITH, SHARON ANNE KELLY

SAPPA Parcel Report

Date Created: May 22, 2023

The South Australian Property and Planning Atlas is available at the Plan SA website https://sappa.plan.sa.gov.au/

Address Details

Unit Number:

Street Number: 56

Scale ≈ 1:771 (on A4 page)

25 metres≈

Street Name: QUORN

Street Type: RD

Suburb: STIRLING NORTH

Postcode: 5710

The information provided, is not represented to be accurate, current or complete at the time of printing this report.

The Government of South Australia accepts no liability for the use of this data, or any reliance placed on it.

Property Details:

Council: PORT AUGUSTA CITY COUNCIL

State Electorate: STUART (2014), STUART (2018), STUART (2022)

Federal Electorate: GREY (2013), GREY (2016), GREY (2019)

Hundred: DAVENPORT

Valuation Number: 6616931003

Title Reference: CT5706/123

Plan No. Parcel No.: F186495A793

Zoning details next page

Government of South Australia
Attorney-General's Department

Zone Details

Zones

Neighbourhood (Z4201) - N

Overlays

Affordable Housing (O0306)

The Affordable Housing Overlay seeks to ensure the integration of a range of affordable dwelling types into residential and mixed use development.

Hazards (Flooding - Evidence Required) (O2416)

The Hazards (Flooding - Evidence Required) Overlay adopts a precautionary approach to mitigate potential impacts of potential flood risk through appropriate siting and design of development.

Key Railway Crossings (O3302)

The Key Railway Crossings Overlay seeks to ensure safe, efficient and uninterrupted operation of key railway crossings.

Native Vegetation (O4202)

The Native Vegetation Overlay seeks to protect, retain and restore areas of native vegetation.

Urban Transport Routes (O6301)

The Urban Transport Routes Overlay seeks to ensure safe and efficient vehicle movement and access along urban transport routes.

Variations

Maximum Building Height (Metres) (V0002) - 8

Maximum building height is 8m

Minimum Frontage (V0004) - _15_12__15_

Minimum frontage for a detached dwelling is 15m; semi-detached dwelling is 12m; group dwelling is 15m

Minimum Site Area (V0005) - _600_450__500_

Minimum site area for a detached dwelling is 600 sqm; semi-detached dwelling is 450 sqm; group dwelling is 500 sqm

Maximum Building Height (Levels) (V0008) - 2

Maximum building height is 2 levels

Preliminary Site Investigation
Stallard Meek Flightpath Architects
56 Quorn Road, Stirling North

APPENDIX B SITE SURVEY & DEVELOPMENT PLAN

LEGEND

- SIGN
- BENCH MARK (TBM)
- EDGE BITUMEN
- GI FENCE
- FENCE
- BOUNDARY

NS = NATURAL SURFACE
FGI = GI FENCE
EB = EDGE OF BITUMEN

QUORN ROAD

TBM SPIKE IN BITUMEN
RL = 32.45m

TBM METAL PIN
RL = 32.31m

F162290

F138023

D12

793
2860m²

CONTOUR INTERVAL OF 0.100m
HEIGHT DATUM IS AHD VIDE PSM 6432/1101 RL = 31.672m
CO-ORDINATE DATUM IS MGA 2020 ZONE 53
SCALE FACTOR = 1.000474 (1.000m = 1.000474m)
BOUNDARIES ARE SHOWN FOR PLOT PURPOSES ONLY AND HAVE BEEN DERIVED FROM SURVEY DATA AND FENCES.
AN IDENTIFICATION SURVEY IS REQUIRED TO DETERMINE THE CORRECT POSITION

WEBER FRANKIW SURVEYORS
Licensed and Engineering Surveyors
Land Division Consultants
178 Main Road McLaren Vale South Australia 5171
Telephone (08) 8323 8991
Email : admin@wfasurvey.com.au
www.wfasurvey.com.au

NOTES

PRINT SCALE A2@ 1:200

SURVEY	AC	DATE 09/09/22
APPROVED	AN	DATE 13/09/22

DETAIL AND CONTOUR SURVEY

ALLOTMENT 793 INFP186495
56 QUORN ROAD
STIRLING NORTH

SCALE 0 5 10 15 20 METRES

JOB NO.	8941
CAD REF.	8941dtl
SHEET	1
REV	A

SMFA

STIRLING NORTH CHILDCARE
22115

56 Quorn Road Stirling North SA 5710

28/4/23

1 LOCATION PLAN
Scale 1:200

SUBJECT SITE

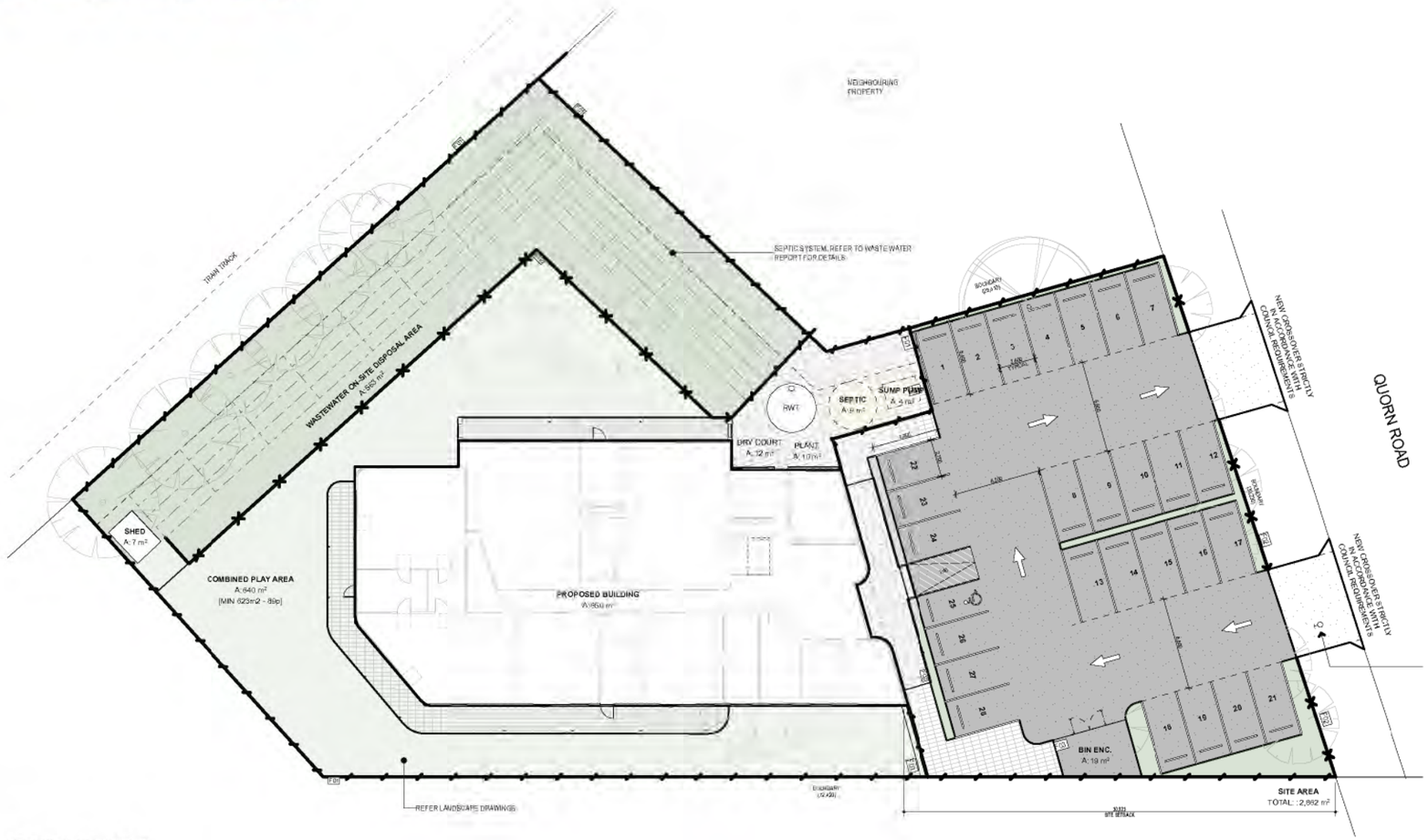
BUILDING AREA SCHEDULE

	AREA m2
BUILDING	650
PLAY	640
SHED/OTHER [EXTERNAL]	48
WASTEWATER [SOAKAGE]	563
WASTEWATER [UNITS]	13
	1,914 m²

SITE PLAN LEGEND

- EXISTING BOUNDARY LINE
- LANDSCAPING - REFER TO LANDSCAPING PLAN EXISTING TREES
- NEW TREES - REFER TO LANDSCAPING PLAN
- EXISTING CORRIGATED FENCE
- EXISTING FENCE
- F01 TIMBER / PINE PALING FENCING HEIGHT | 2400M
- F02 OPEN ALUMINIUM BLADE FENCING COLOUR | BLACK HEIGHT | 1200M
- F03 HORIZONTAL ALUMINIUM SLAT FENCING COLOUR | BLACK HEIGHT | 2400M
- LP LIGHT POLE

ABESCO SHEDS 3000m x 2260m x 2000m MONUMENT PREMIER DOUBLE DOOR GARDEN SHED



5 SITE AND DEMOLITION PLAN
1:200

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

SMFA

SITE PLAN
1:200 @ A1 | AR
29/4/23 | BXD
22115 | SK101 | 02

TOTAL AREA

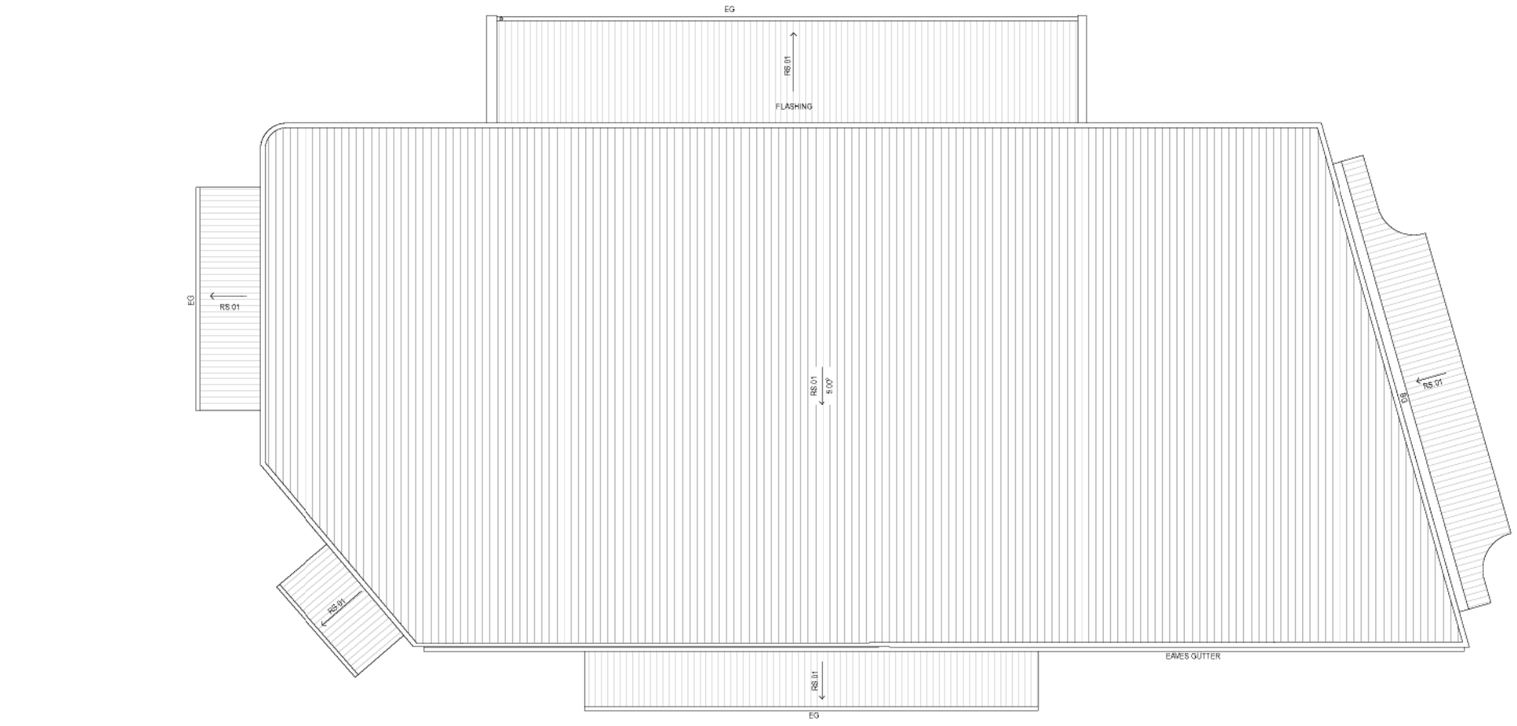
	AREA m2
ADMIN	84
AMENITIES	89
CARE	339
OTHER [INTERNAL]	72
PLAY	640
SHED/OTHER [EXTERNAL]	48
	1,272 m²

2 GROUND FLOOR
1:100

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

S M F A

GROUND FLOOR
Scale: 1:1, 1:100 @ A1
Date: 28/4/23
Drawn: AR
Approved: SXD
Job No: 22115
Dwg No: SK102
Dwg Issue: 02



ROOF
1:100

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

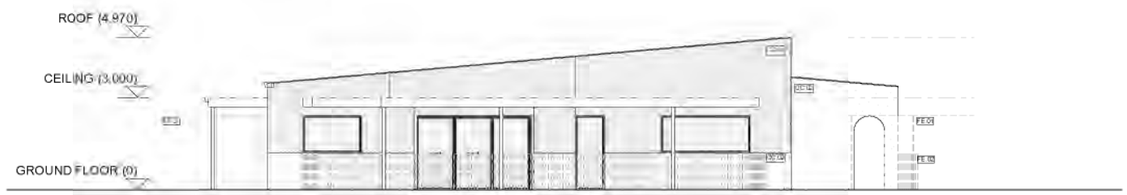
S M F A

ROOF PLAN

Scale	Drawn
1:100 @ A1	AR
Date	Appvd
29/4/23	BXD

Job No.	Dwg No.	Dwg Issue
22115	SK103	02

1 ELEVATION
1:100



2 ELEVATION
1:100

3 ELEVATION
1:100

4 ELEVATION
1:100

STIRLING NORTH CHILDCARE
56 Quorn Road Stirling North SA 5710

S M F A

ELEVATIONS

1:100, 1:1 @ A1 | AR
29/4/23 | 8XD

22115 | SK104 | 02

Preliminary Site Investigation
Stallard Meek Flightpath Architects
56 Quorn Road, Stirling North

APPENDIX C LOTSEARCH REPORT (MAPS, AERIAL, HISTORIC BUSINESS RECORDS, ETC)

Date: 17 May 2023 14:10:05

Reference: LS043647 EP

Address: 56 Quorn Road, Stirling North, SA 5710

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Precisely	23/03/2023	23/03/2023	Quarterly	-	-	-	-
EPA Site Contamination Index	EPA South Australia	04/05/2023	04/05/2023	Monthly	1000m	0	0	0
EPA Environmental Protection Orders	EPA South Australia	05/05/2023	05/05/2023	Monthly	1000m	0	0	0
EPA Environmental Authorisations	EPA South Australia	05/05/2023	05/05/2023	Monthly	1000m	0	2	2
EPA Assessment Areas	EPA South Australia	02/05/2023	02/05/2023	Quarterly	1000m	0	0	0
EPA Groundwater Prohibition Areas	EPA South Australia	05/05/2023	20/08/2022	Monthly	1000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	09/05/2023	09/05/2023	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	09/05/2023	09/05/2023	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	09/05/2023	09/05/2023	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	02/09/2022	02/09/2022	Quarterly	2000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	0
EPA Collection Depots	EPA South Australia	30/03/2023	20/08/2022	Quarterly	1000m	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	23/08/2022	15/03/2012	Annually	1000m	0	1	1
Historical Business Directories (Premise & Intersection Matches)	Hardie Grant, Sands & McDougall			Not required	150m	0	0	0
Historical Business Directories (Road & Area Matches)	Hardie Grant, Sands & McDougall			Not required	150m	-	5	5
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant, Sands & McDougall			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant, Sands & McDougall			Not required	500m	-	0	0
Mines and Mineral Deposits	Department for Energy and Mining	13/02/2023	13/02/2023	Quarterly	1000m	0	0	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	20/03/2023	19/08/2019	As required	1000m	1	1	1
Groundwater Aquifers	Department for Environment and Water	29/03/2021	01/01/2008	Annually	1000m	1	1	1
Drillholes	Department for Environment and Water	19/10/2022	07/10/2022	Quarterly	2000m	0	0	11
Surface Geology 1:100,000	Department for Energy and Mining	12/07/2018	01/07/2018	As required	1000m	1	1	2
Geological Linear Structures 1:100,000	Department for Energy and Mining	12/07/2018	01/07/2018	As required	1000m	0	0	0
Atlas of Australian Soils	ABARES	19/05/2017	17/02/2011	As required	1000m	1	1	1
Soil Types	Department for Environment and Water	12/07/2018	01/07/2009	As required	1000m	0	0	0
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	1
Acid Sulfate Soil Potential	Department for Environment and Water	06/04/2022	18/02/2020	Annually	1000m	0	0	0
Soil Salinity - Watertable Induced	Department for Environment and Water	23/06/2022	09/06/2016	Annually	1000m	0	0	0
Soil Salinity - Non-watertable	Department for Environment and Water	19/04/2022	18/02/2020	Annually	1000m	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Soil Salinity - Non-watertable (magnesia patches)	Department for Environment and Water	19/04/2022	18/02/2020	Annually	1000m	0	0	0
Planning and Design Code - Zones	Attorney-General's Department	09/05/2023	16/03/2023	Monthly	1000m	1	2	5
Planning and Design Code - Subzones	Attorney-General's Department	09/05/2023	16/03/2023	Monthly	1000m	0	0	0
Land Use Generalised 2020	Department of Planning, Transport and Infrastructure	18/10/2022	07/03/2022	Annually	1000m	1	5	11
Commonwealth Heritage List	Australian Government Department of Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of Agriculture, Water and the Environment	03/06/2022	13/04/2022	Annually	1000m	0	0	0
State Heritage Areas	Department for Environment and Water	06/04/2022	18/02/2020	Annually	1000m	0	0	0
SA Heritage Places	Department for Environment and Water	19/10/2022	23/09/2021	Quarterly	1000m	0	0	0
Aboriginal Land	Department for Energy and Mining	06/04/2022	08/04/2018	Annually	1000m	0	0	0
Planning and Design Code - Overlays - Bushfire	Attorney-General's Department	09/05/2023	09/05/2023	Monthly	1000m	0	0	1
Bushfires and Prescribed Burns History	Department for Environment and Water	06/04/2022	24/02/2020	Annually	1000m	0	0	0
Planning and Design Code - Overlays - Flooding	Attorney-General's Department	09/05/2023	09/05/2023	Monthly	1000m	1	1	2
Native Vegetation Floristic Areas - NVIS - State-wide	Department for Environment and Water	21/03/2023	14/02/2022	As required	1000m	0	0	5
Groundwater Dependent Ecosystems Atlas	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	2
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	3
Ramsar Wetland Areas	Department for Environment and Water	09/05/2023	01/11/2022	Annually	1000m	0	0	0

Site Diagram

56 Quorn Road, Stirling North, SA 5710

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 3175m²

Total Perimeter: 254m

Scale: 0 10 20 Meters

Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Coordinate System:
GDA 1994 MGA Zone 54

Date: 17 May 2023

Topographic Features

56 Quorn Road, Stirling North, SA 5710

Legend

Site Boundary	Major Road	Railway Track	Waterbody
Buffer 1000m	Road	Levee Bank	Biosphere Reserve
Property Boundary	Track/Pathway	Watercourse	Conservation Reserve

Scale: 0 100 200 400 600 Meters

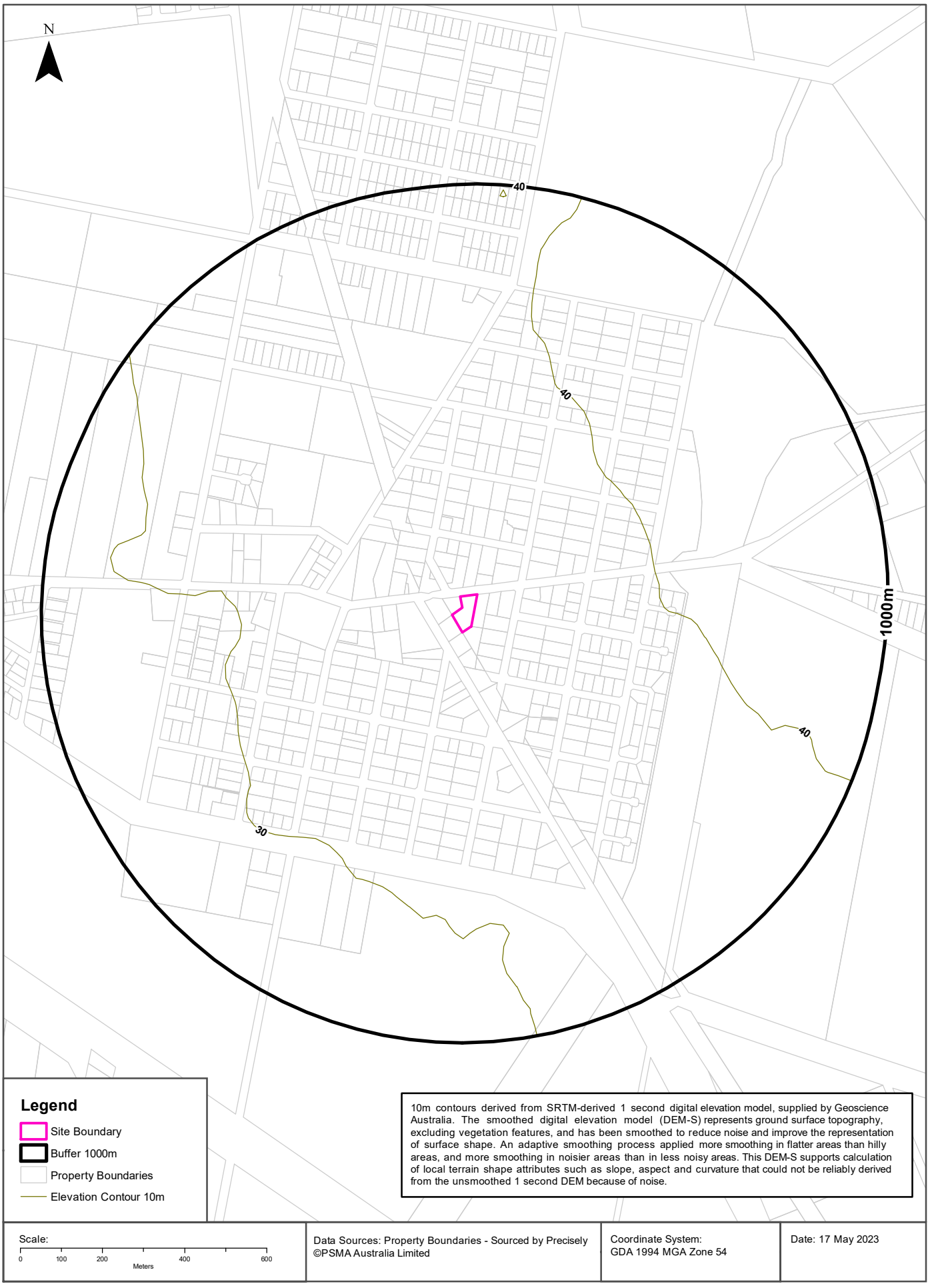
Data Sources: Property Boundaries - Sourced by Precisely
©PSMA Australia Limited

Coordinate System:
GDA 1994 MGA Zone 54

Date: 17 May 2023

Elevation Contours

56 Quorn Road, Stirling North, SA 5710



EPA Contaminated Land

56 Quorn Road, Stirling North, SA 5710

EPA Site Contamination Index

Sites on the EPA Contamination Index within the dataset buffer:

Notification No	Type	Address	Activity	Status	LocConf	Dist	Dir
N/A	No records in buffer						

Site Contamination Index Data Source: EPA South Australia

EPA Public Register

56 Quorn Road, Stirling North, SA 5710

EPA Environment Protection and Clean Up Orders

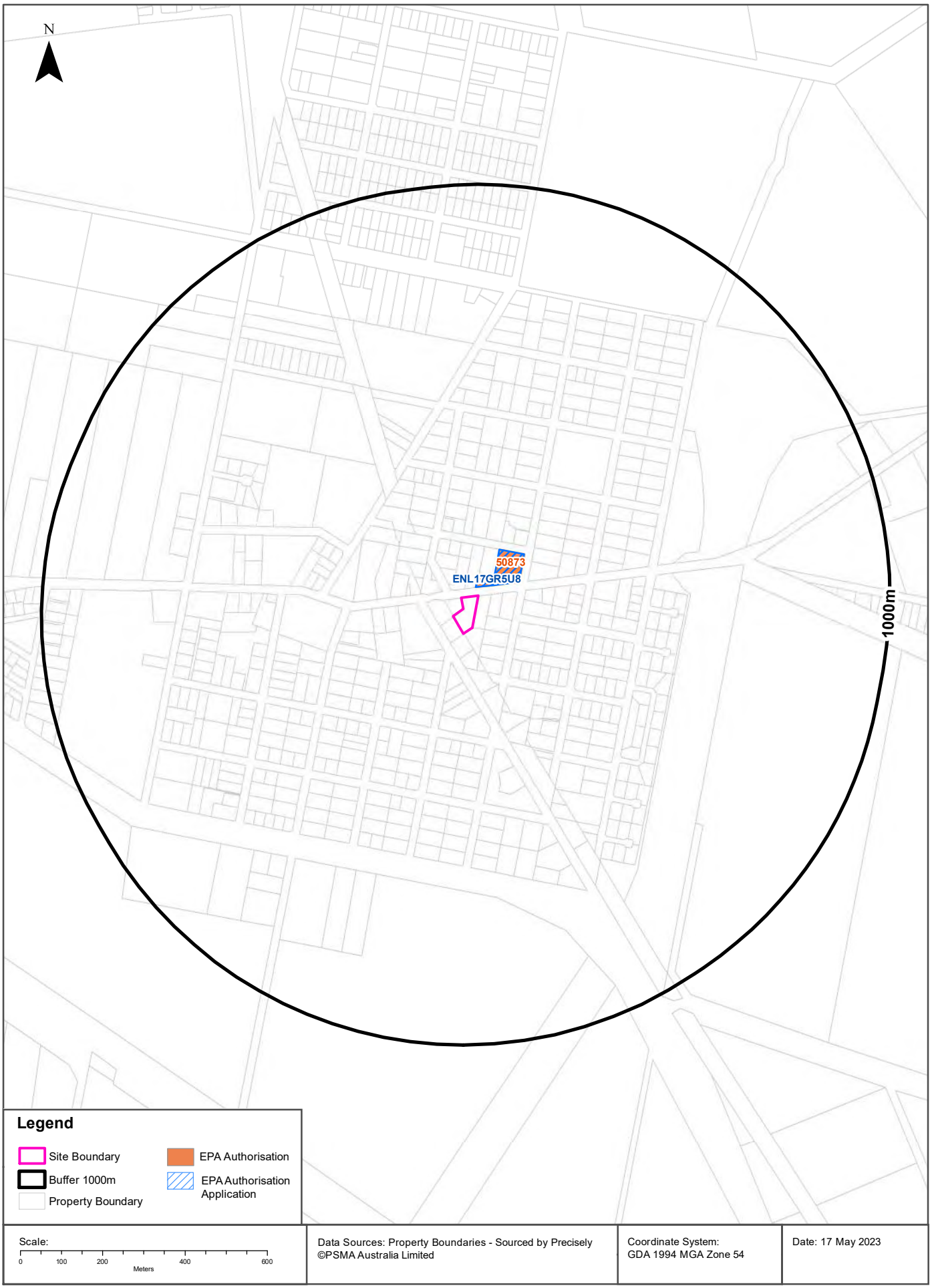
EPA Environment Protection and Clean Up Orders, within the dataset buffer:

Record No.	Record Type	Record Status	Entity	Site Address	Activity	EPA Register Status	LocConf	Dist	Dir
N/A	No records in buffer								

Authorisations Data Source: EPA South Australia

EPA Authorisations and Applications

56 Quorn Road, Stirling North, SA 5710



EPA Public Register

56 Quorn Road, Stirling North, SA 5710

EPA Authorisations and Applications

EPA Authorisations and Authorisation Applications within the dataset buffer:

Record No.	Record Type	Record Status	Entity	Site Address	Activity	EPA Register Status	LocConf	Dist	Dir
50873	LICENCE	Issued	ANTONIO DI PAOLO, ANTONIA DI PAOLO	47 Quorn Road, STIRLING NORTH SA 5710	Petrol stations	Current EPA Register	Premise Match	21m	North East
ENL17 GR5U8	LICENCE APPLICATION	Authorisation Updated	ANTONIO DI PAOLO, ANTONIA DI PAOLO	47 Quorn Road, STIRLING NORTH SA 5710	Petrol stations	Current EPA Register	Premise Match	21m	North East

Authorisations Data Source: EPA South Australia

EPA Assessment and Groundwater Prohibition Areas

56 Quorn Road, Stirling North, SA 5710

EPA Assessment Areas

EPA Assessment Areas within the dataset buffer:

Map Id	Supplied Ref	Area Name	Map Link	Status	Location Confidence	Distance	Direction
N/A	No records in buffer						

Assessment Areas Data Source: EPA South Australia

EPA Assessment and Groundwater Prohibition Areas

56 Quorn Road, Stirling North, SA 5710

EPA Groundwater Prohibition Areas

EPA Groundwater Prohibition Areas within the dataset buffer:

Map Id	Site Name	Location Confidence	Distance	Direction
N/A	No records in buffer			

Groundwater ProhibitionAreas Data Source: EPA South Australia

PFAS Investigation & Management Programs

56 Quorn Road, Stirling North, SA 5710

Defence PFAS Investigation & Management Program Investigation Sites

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Location Confidence	Distance	Direction
N/A	No records in buffer				

Defence PFAS Investigation & Management Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Investigation & Management Program Management Sites

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Location Confidence	Distance	Direction
N/A	No records in buffer				

Defence PFAS Investigation & Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

Map ID	Site Name	Impacts	Location Confidence	Distance	Direction
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

56 Quorn Road, Stirling North, SA 5710

Defence 3 Year Regional Contamination Investigation Program

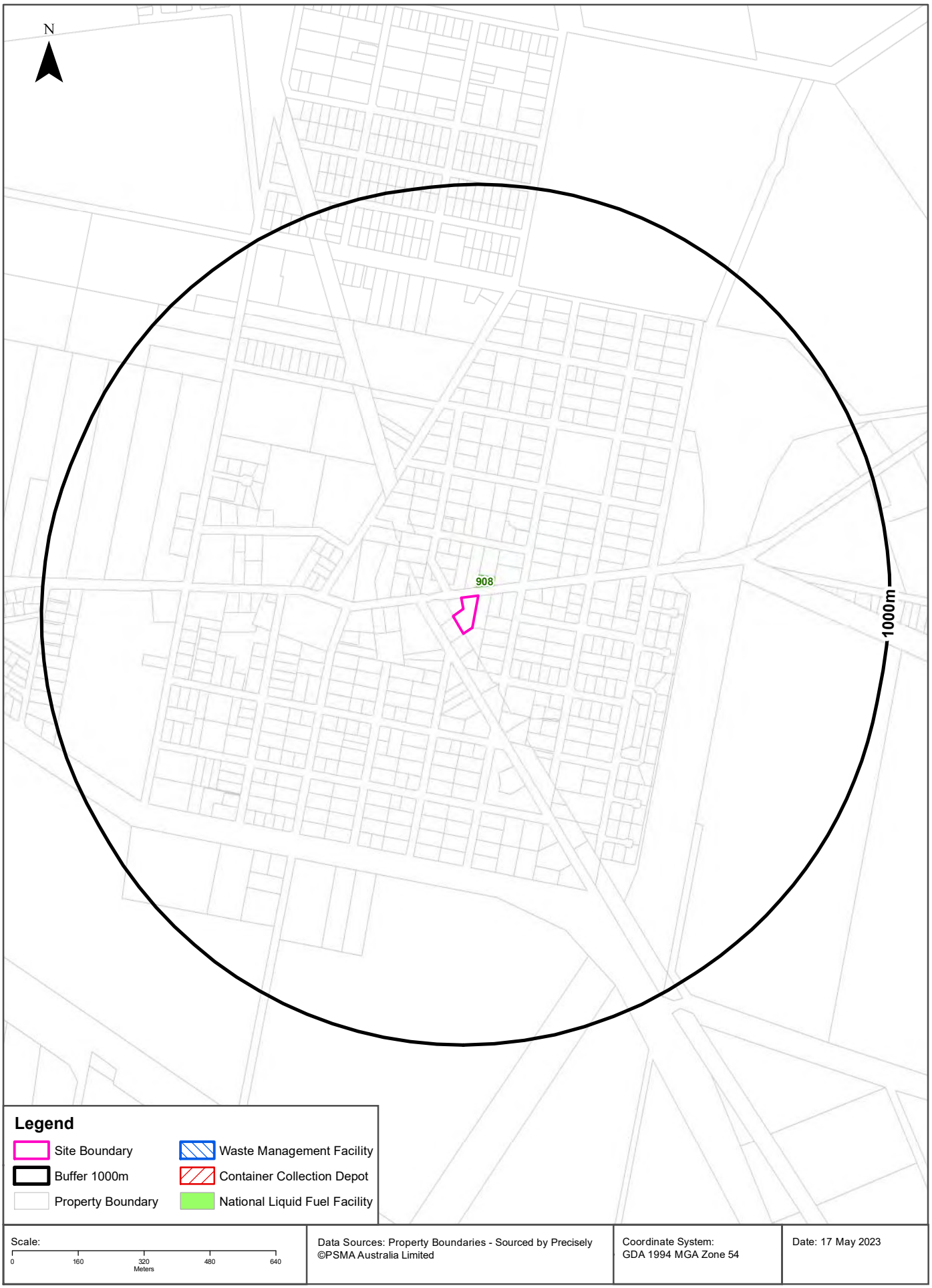
Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
N/A	No records in buffer					

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

Waste Management & Liquid Fuel Facilities

56 Quorn Road, Stirling North, SA 5710



Waste Management and Liquid Fuel Facilities

56 Quorn Road, Stirling North, SA 5710

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Revised Date	Location Confidence	Distance	Direction
N/A	No records in buffer								

Waste Management Facilities Data Source: Australian Government Geoscience Australia

EPA Approved Container Collection Depots

EPA approved container collection depots within the dataset buffer:

MapId	Name	Address	Suburb	Loc Conf	Distance	Direction
N/A	No records in buffer					

Collection Depot Data Source: EPA South Australia

National Liquid Fuel Facilities

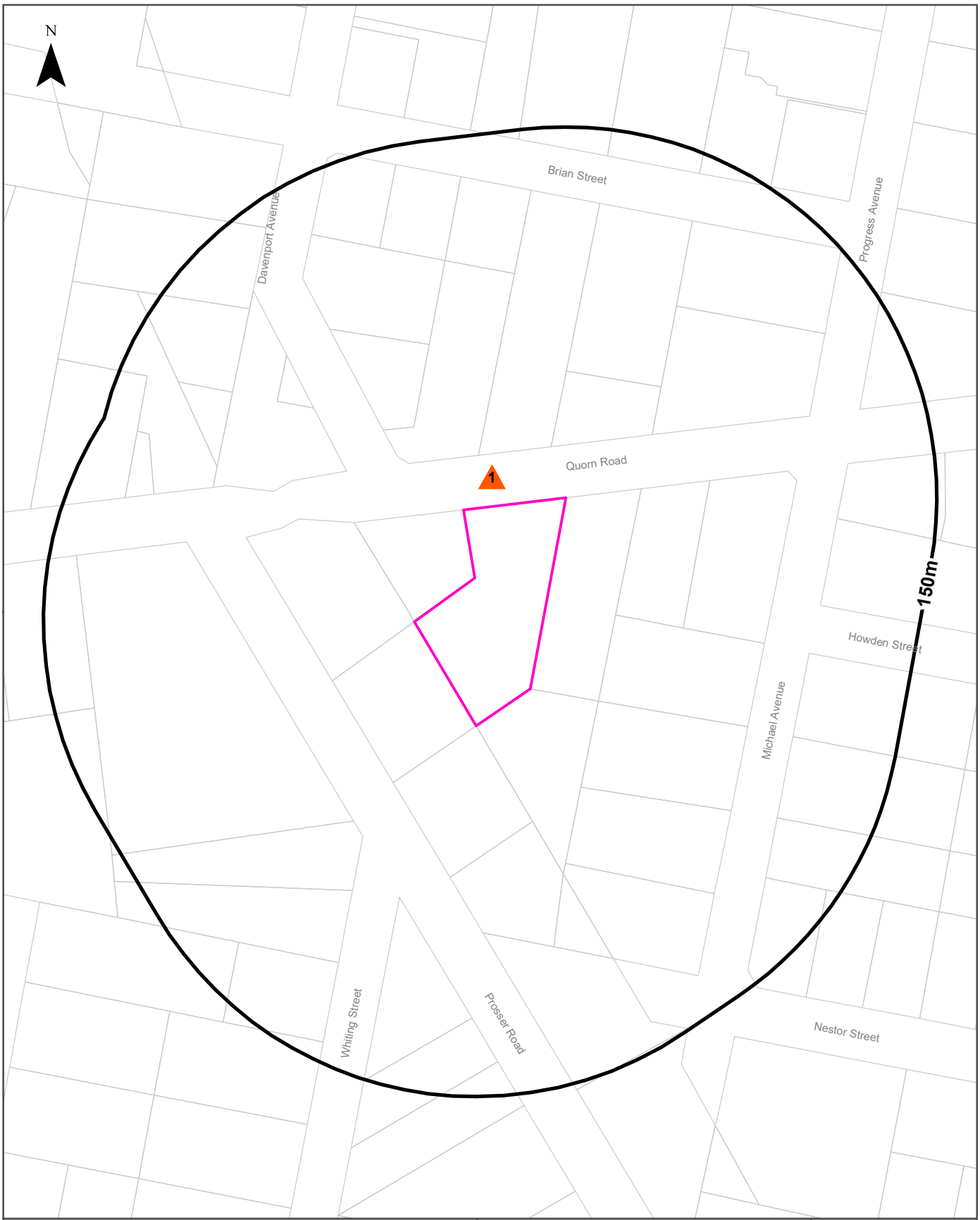
National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Dir
908	7-Eleven Pty Ltd	Mobil Stirling North	47 Quorn Road	Stirling North	Petrol Station	Operational		13/07/2012	Premise Match	21m	North East

National Liquid Fuel Facilities Data Source: Geoscience Australia

Historical Business Directories

56 Quorn Road, Stirling North, SA 5710



Legend

- Site Boundary
- Buffer 150m
- Property Boundary
- Business directory records mapped to a specific premise
- Business directory records mapped to a road intersection
- Business directory records mapped to a road corridor
- Business directory records mapped to a general area

Scale: 0 25 50 75 100 Meters

Coordinate System: GDA 1994 MGA Zone 54

Date: 17 May 2023

Historical Business Directories

56 Quorn Road, Stirling North, SA 5710

Business Directory Records 1910-1991
Premise or Road Intersection Matches

Universal Business Directory and Sands & McDougall Directory records, from years 1991, 1973, 1965, 1955, 1950, 1940, 1930, 1920 & 1910, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

Business Directory Records 1910-1991
Road or Area Matches

Universal Business Directory and Sands & McDougall Directory records, from years 1991, 1973, 1965, 1955, 1950, 1940, 1930, 1920 & 1910, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	GOVERNMENT DEPARTMENTS	Post Oflice, Quom Rd., Stirling North. Port Augusta	12643	1991	Road Match	10m
	QUARRY PROPRIETORS,	Quarry Industries, Quorn Rd.. Stirling North. Port Augusta	13024	1991	Road Match	10m
	ASSOCIATIONS &/OR SOCIETIES,	Stirling Progress Association, Quorn Rd.. Stirling North. Port Augusta	12204	1991	Road Match	10m
	SUPERMARKETS.	Stirling Super Mart, Queen Rd , Stirling North Port Augusta	13130	1991	Road Match	10m
	DELICATESSENS.	Stirling Super Mart, Quorn Rd.. Stirling North. Port Augusta	12470	1991	Road Match	10m

Historical Business Directories

56 Quorn Road, Stirling North, SA 5710

Dry Cleaners, Motor Garages & Service Stations 1930-1991 Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories and Sands & McDougall's Directories, from years 1991, 1973, 1965, 1955, 1950, 1940 & 1930, mapped to a premise or road intersection, within the dataset buffer.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
N/A	No records in buffer						

Dry Cleaners, Motor Garages & Service Stations 1930-1991 Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories and Sands & McDougall's Directories, from years 1991, 1973, 1965, 1955, 1950, 1940 & 1930, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer					

Aerial Imagery 2022

56 Quorn Road, Stirling North, SA 5710

Aerial Imagery 2015

56 Quorn Road, Stirling North, SA 5710

Aerial Imagery 2005

56 Quorn Road, Stirling North, SA 5710

Scale:
0 25 50 75 100
Meters

Data Source Aerial Imagery: © 2023 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 54

Date: 17 May 2023

Aerial Imagery 1996

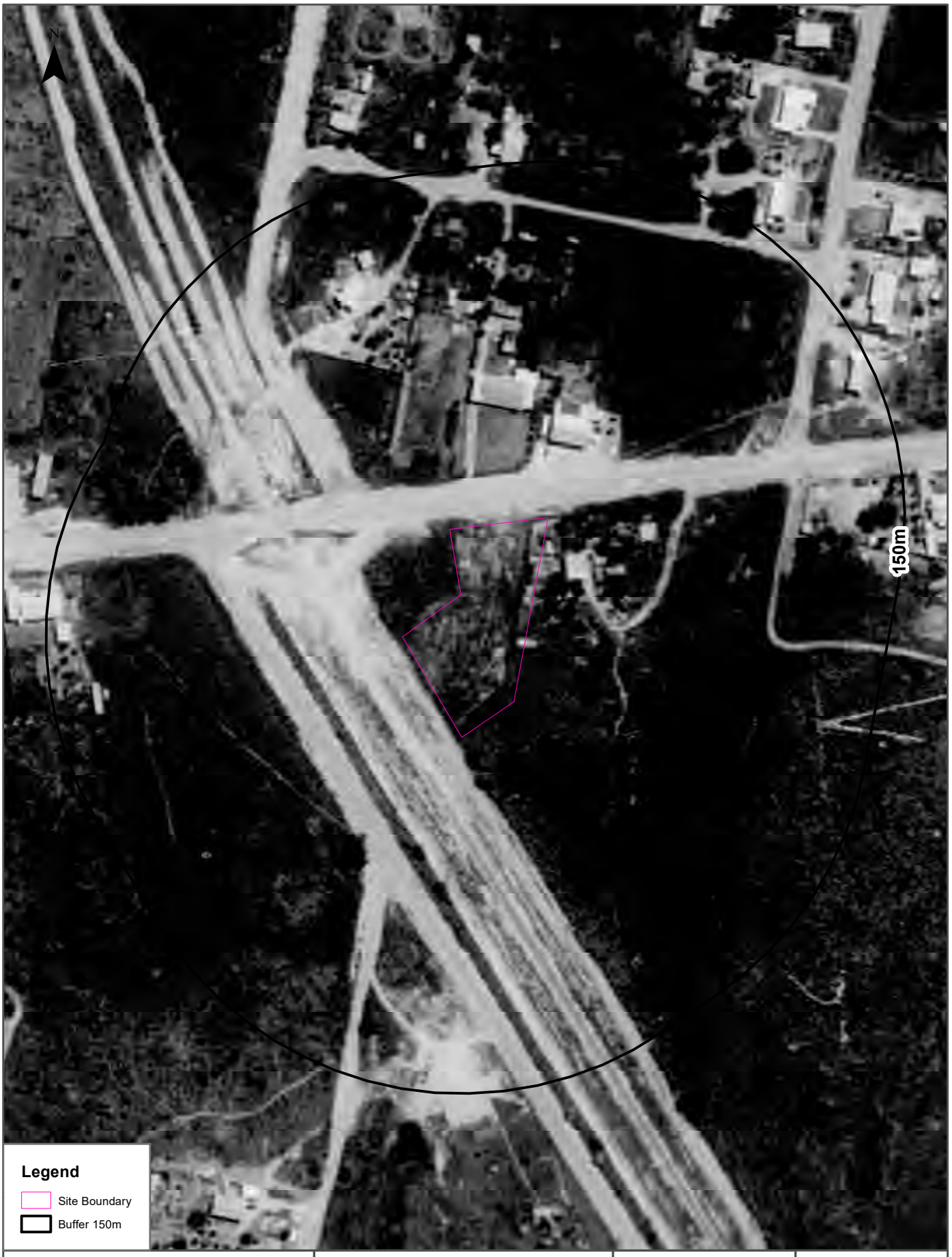
56 Quorn Road, Stirling North, SA 5710

Aerial Imagery 1984

56 Quorn Road, Stirling North, SA 5710

Aerial Imagery 1974

56 Quorn Road, Stirling North, SA 5710



Data Sources Aerial Imagery: © South Australia Department for Environment & Water

Coordinate System: GDA 1994 MGA Zone 54

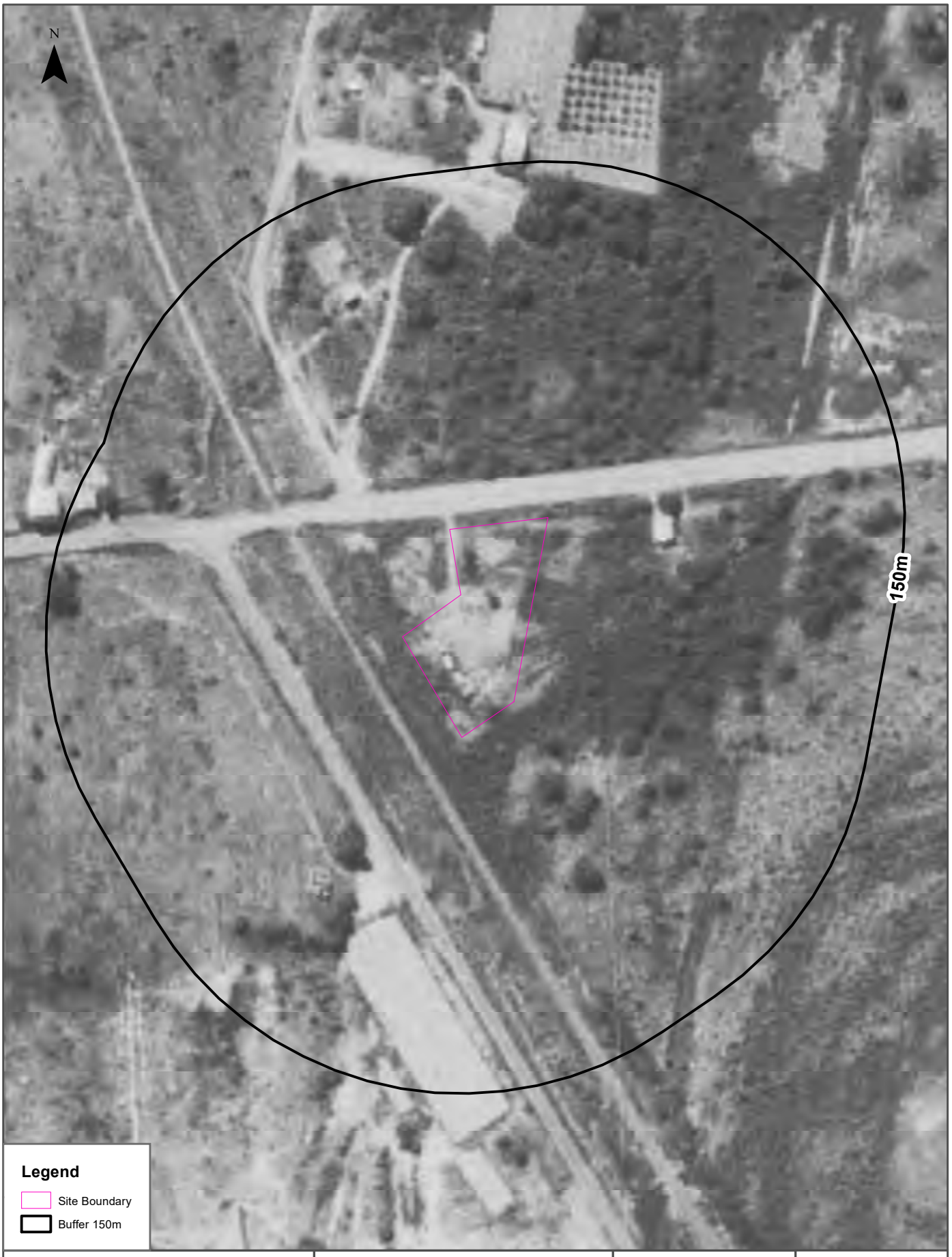
Date: 17 May 2023

Aerial Imagery 1969

56 Quorn Road, Stirling North, SA 5710

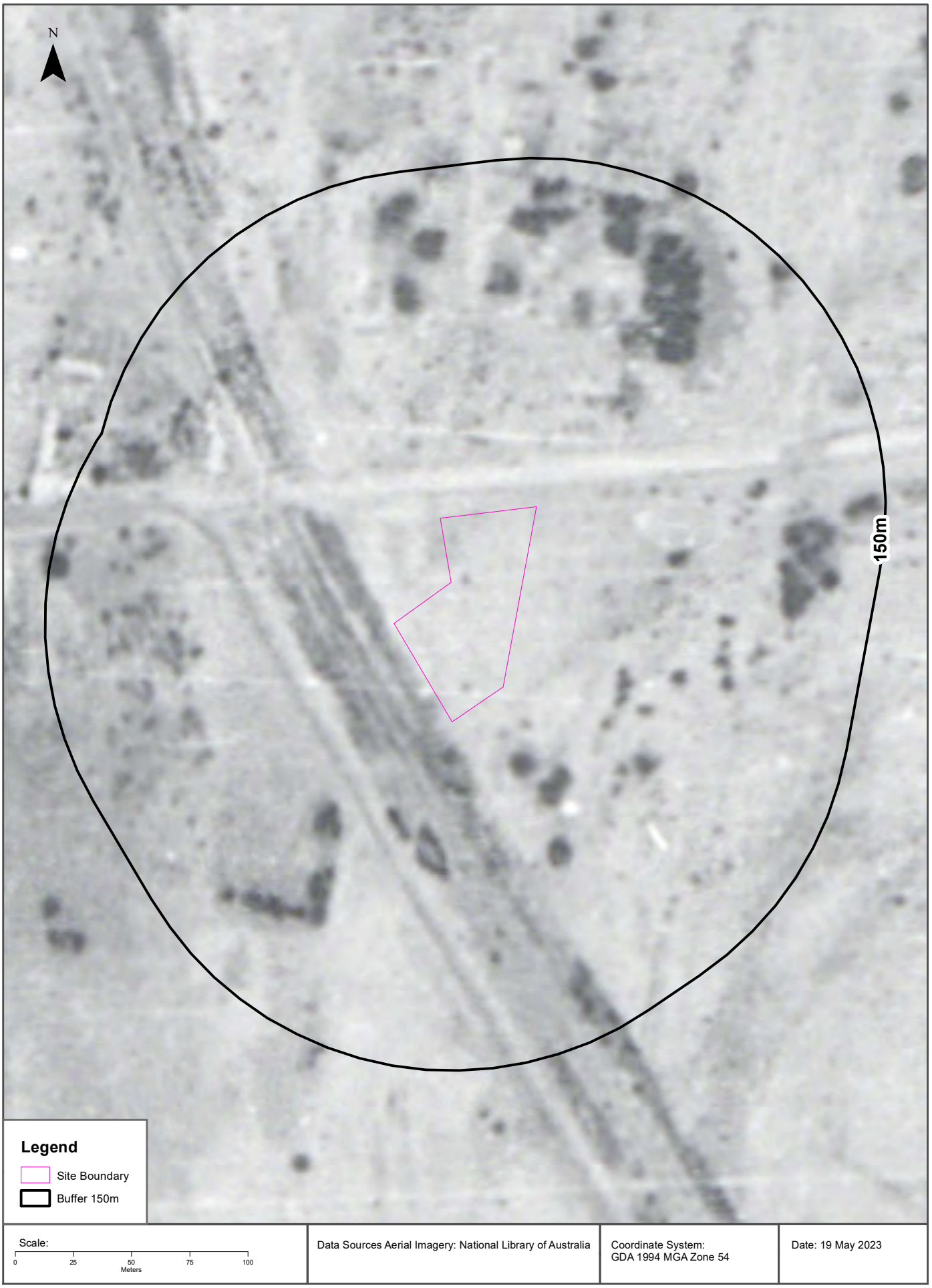
Aerial Imagery 1954

56 Quorn Road, Stirling North, SA 5710



Aerial Imagery 1946

56 Quorn Road, Stirling North, SA 5710

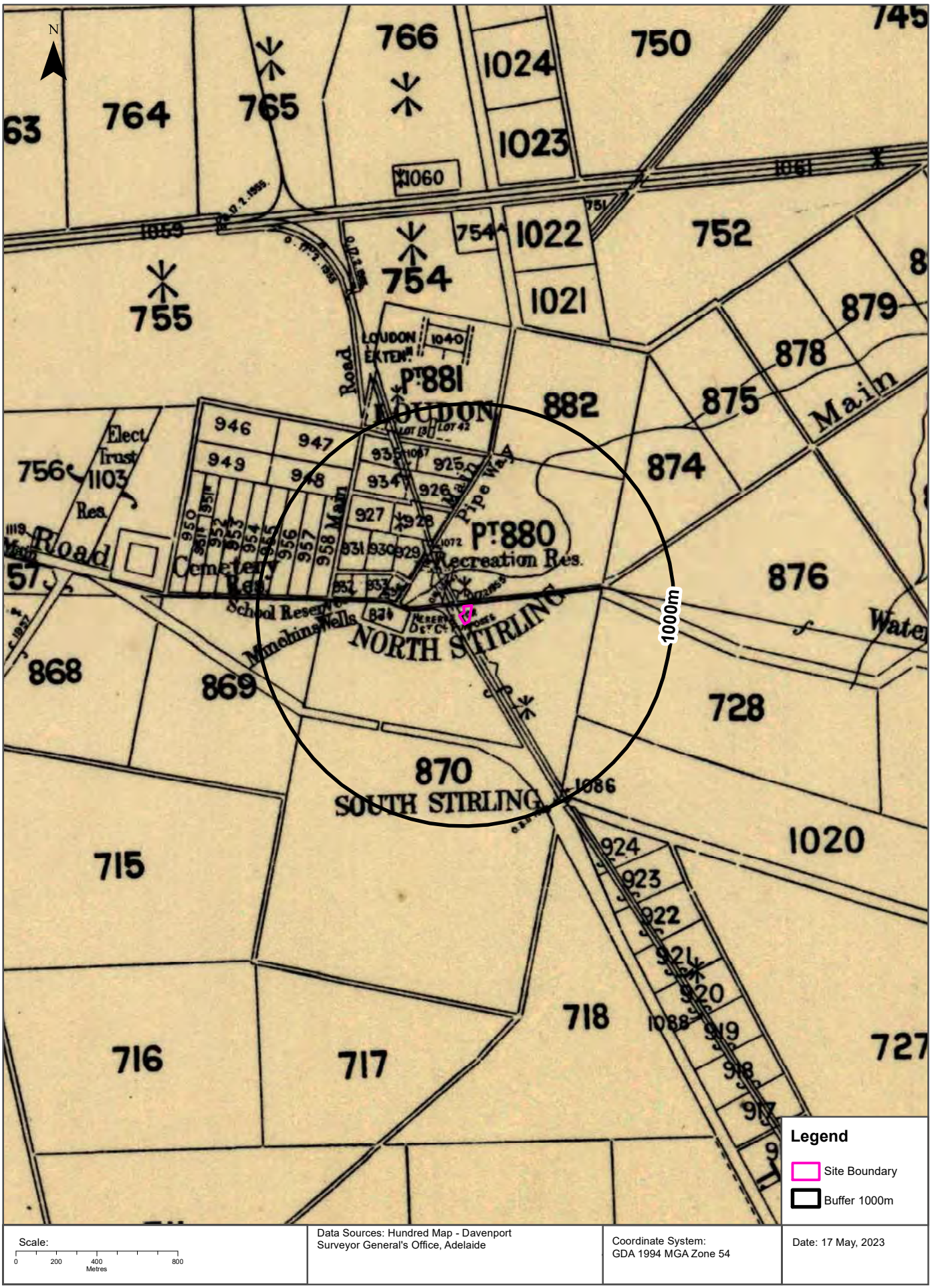


Historical Map 1982

56 Quorn Road, Stirling North, SA 5710

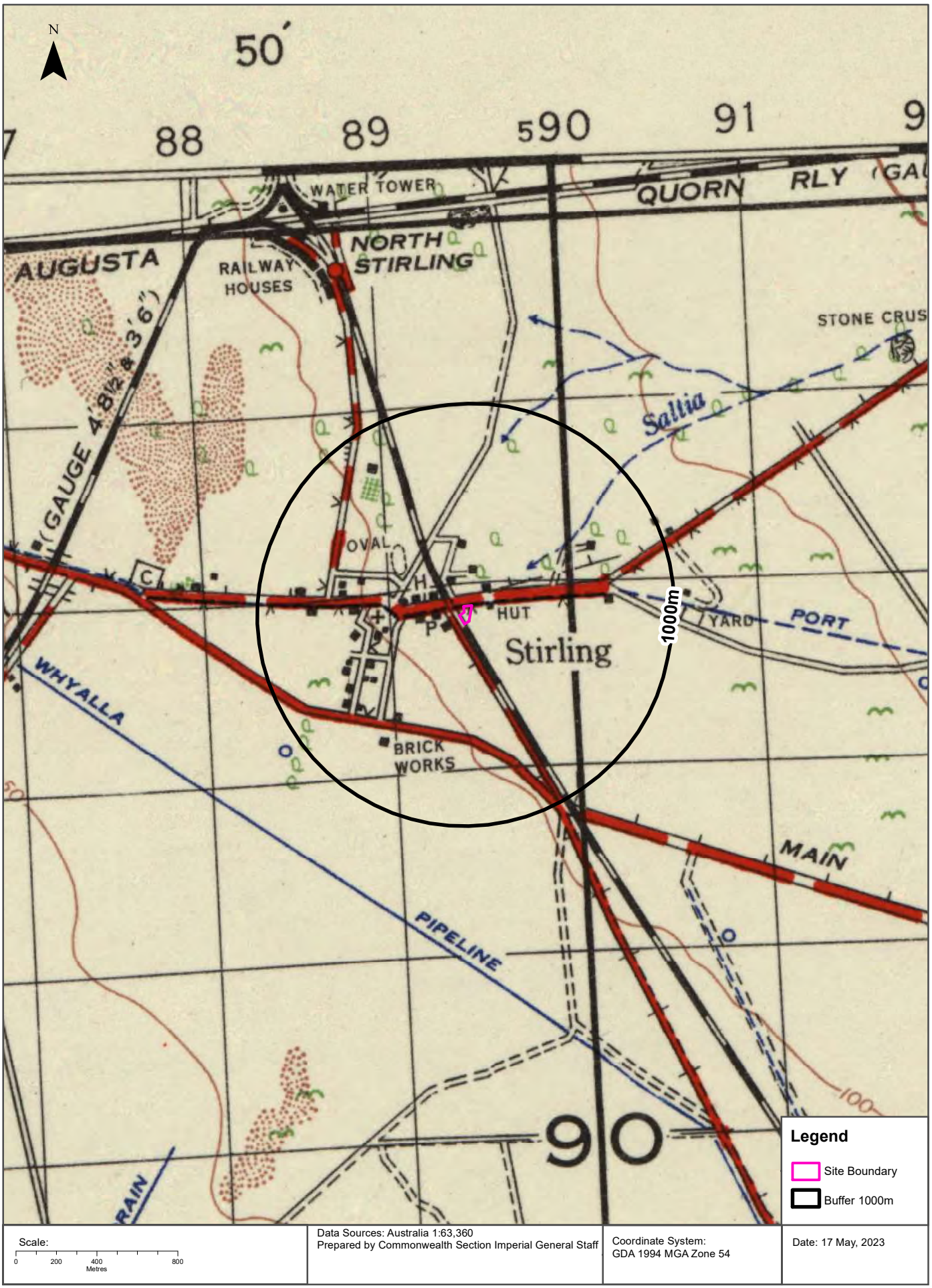
Historical Map 1960

56 Quorn Road, Stirling North, SA 5710



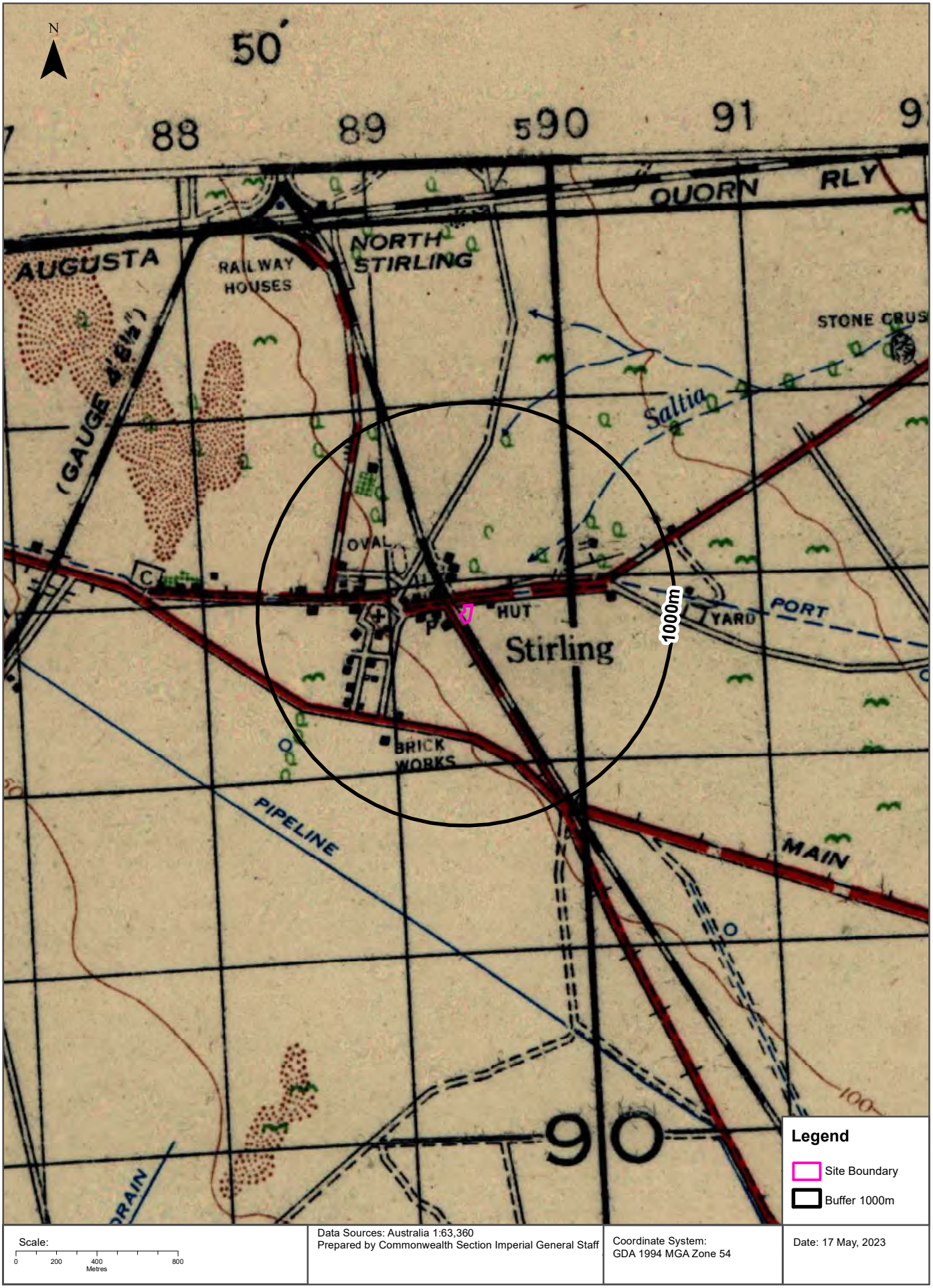
Historical Map c.1958

56 Quorn Road, Stirling North, SA 5710



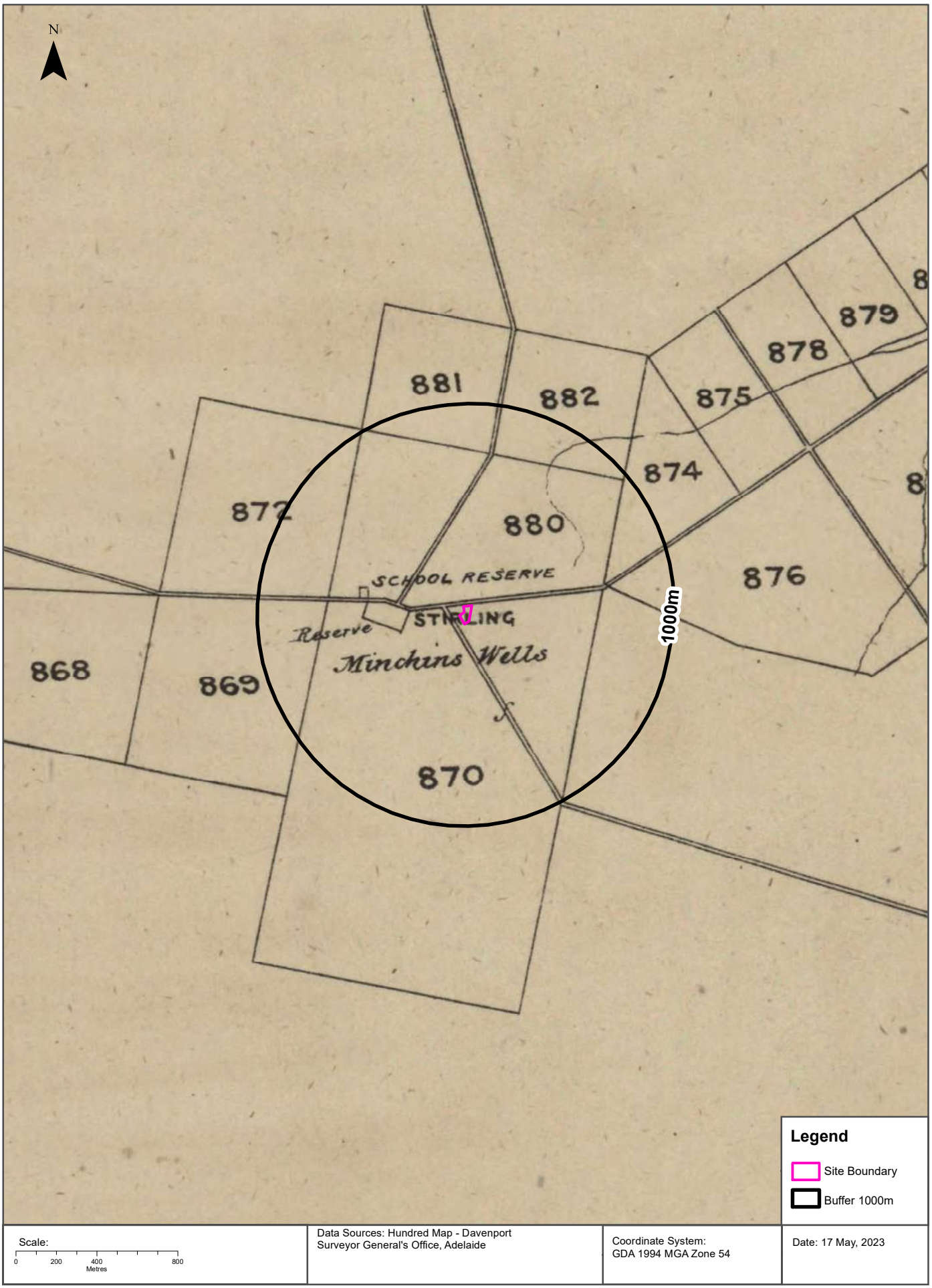
Historical Map c.1955

56 Quorn Road, Stirling North, SA 5710



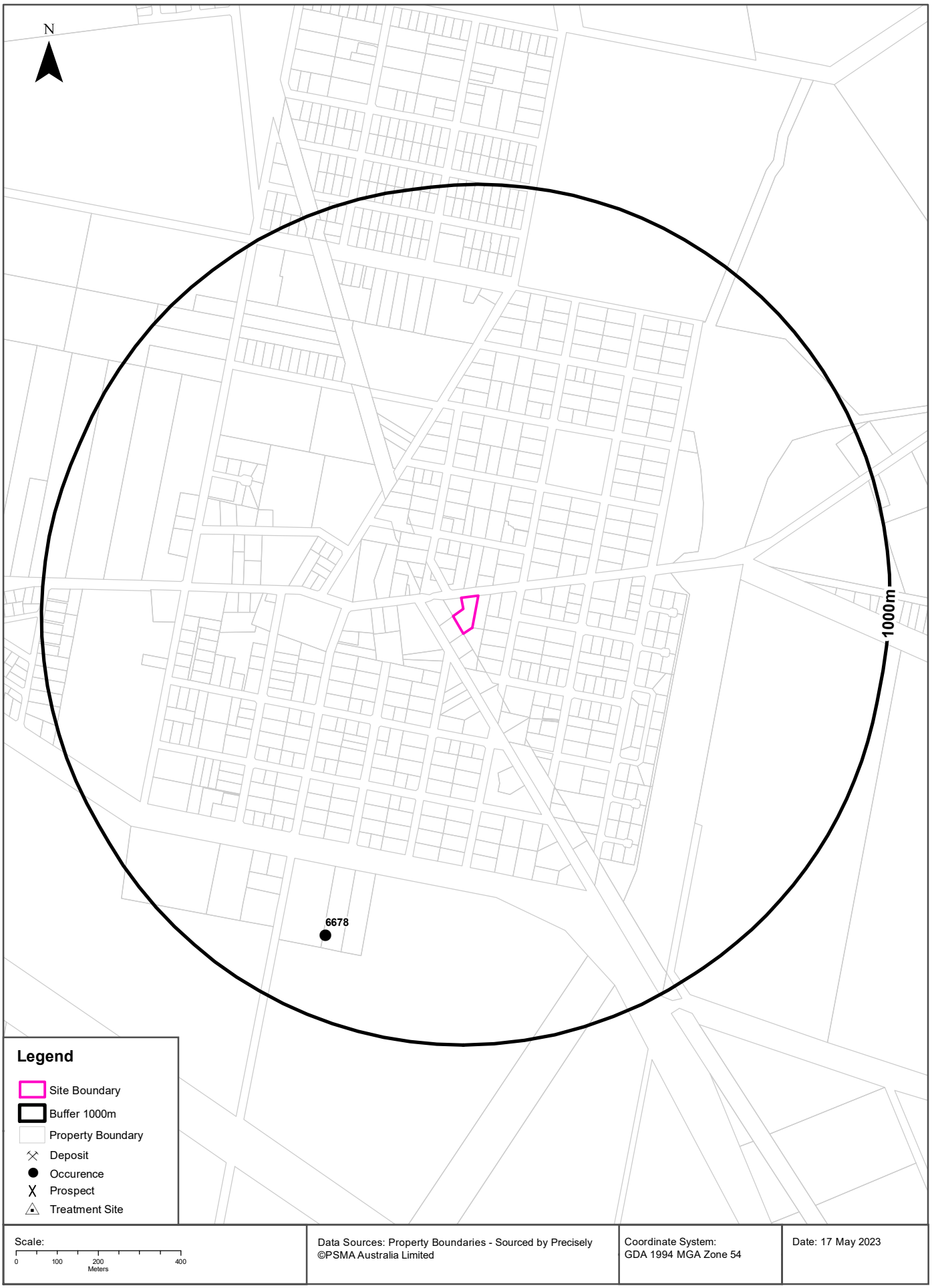
Historical Map 1874

56 Quorn Road, Stirling North, SA 5710



Mines and Mineral Deposits

56 Quorn Road, Stirling North, SA 5710



Mining

56 Quorn Road, Stirling North, SA 5710

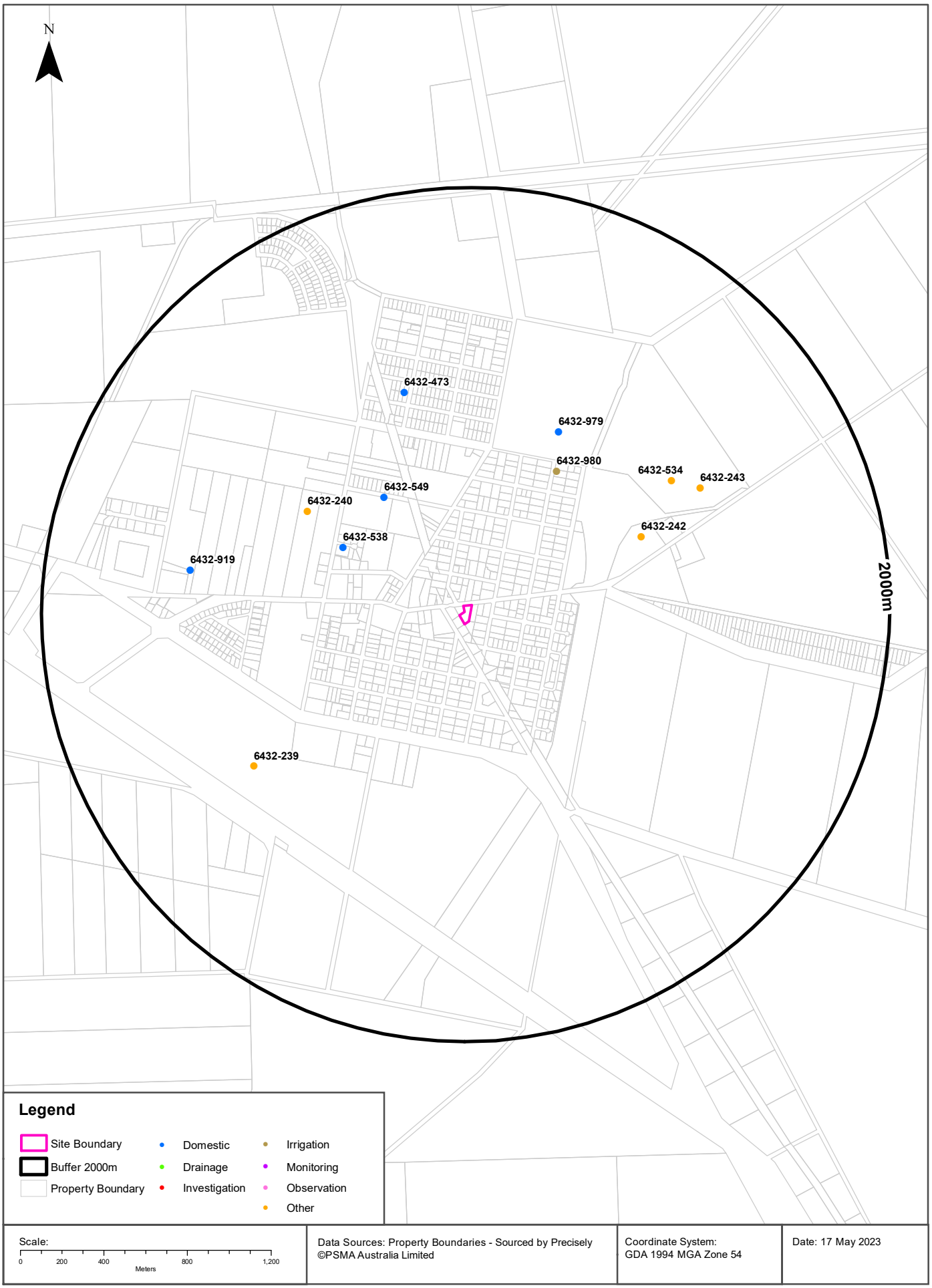
Mines and Mineral Deposits

Mines and mineral deposits within the dataset buffer:

Deposit No.	Name	Class	Status	Commodity	Year	Description	Dist	Dir
6678	ZANKERS	OCCURRENCE	Abandoned	Clay	1972	clay pit possibly partially filled. Only production figure located was 356 tonne in July-Dec 1972. .	806m	South West

Drillholes

56 Quorn Road, Stirling North, SA 5710



Hydrogeology & Groundwater

56 Quorn Road, Stirling North, SA 5710

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive aquifers of low to moderate productivity	0m	On-site

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
Creative Commons 4.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/4.0

Groundwater Aquifers

Groundwater aquifers within the dataset buffer:

Aquifer Code	Description	Distance	Direction
20	Sedimentary Rocks - basins include limestone, often cavernous, sandstone, sand shale and clay	0m	On-site

Groundwater Aquifers Data Source: Dept. of Environment, Water and Natural Resources - South Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Drillholes

Drillholes within the dataset buffer:

Unit No	Drillhole No	Name	Status	Purpose	Drill Date	Max Depth	Ref Elev	Ground Elev	PH	TDS	EC	Yield	DTW	SWL	RSWL	Dist	Dir
6432-538	24631		Operational	Domestic; Stock	1987-03-15	55.00		32.03	6.60	12100	20431	2.0000	21.00	21.00	11.03	641m	North West
6432-549	24642		Operational	Domestic	1989-10-06	56.00		34.37	7.00	5070	8932	0.5000				643m	North West
6432-980	184132			Irrigation	2001-02-09	56.00		41.09		2835	5070	1.1000	24.00	24.00	17.09	756m	North East
6432-240	24333		Unknown			21.00		30.11								873m	North West
6432-242	24335		Abandoned			21.34		45.16				0.3157				873m	North East
6432-979	184068			Domestic; Stock	2001-01-30	37.00		42.63		2732	4890	1.1000	26.00	26.00	16.63	925m	North East
6432-473	24566		Abandoned	Domestic	1989-10-11	73.00		35.60								1059m	North
6432-534	24627		Operational	Stock	1989-03-22	79.20		45.98								1126m	North East
6432-239	24332		Unknown			15.24		20.46				0.0789				1217m	South West
6432-243	24336		Operational			26.25		47.09	7.30	3309	5900		21.50	21.50	25.59	1227m	North East
6432-919	169782		Abandoned	Domestic	1998-07-31	41.00		25.00		10318	17580	0.2000	23.00	23.00	2.00	1306m	West

Drillholes Data Source: Dept of Environment, Water and Natural Resources - South Australia
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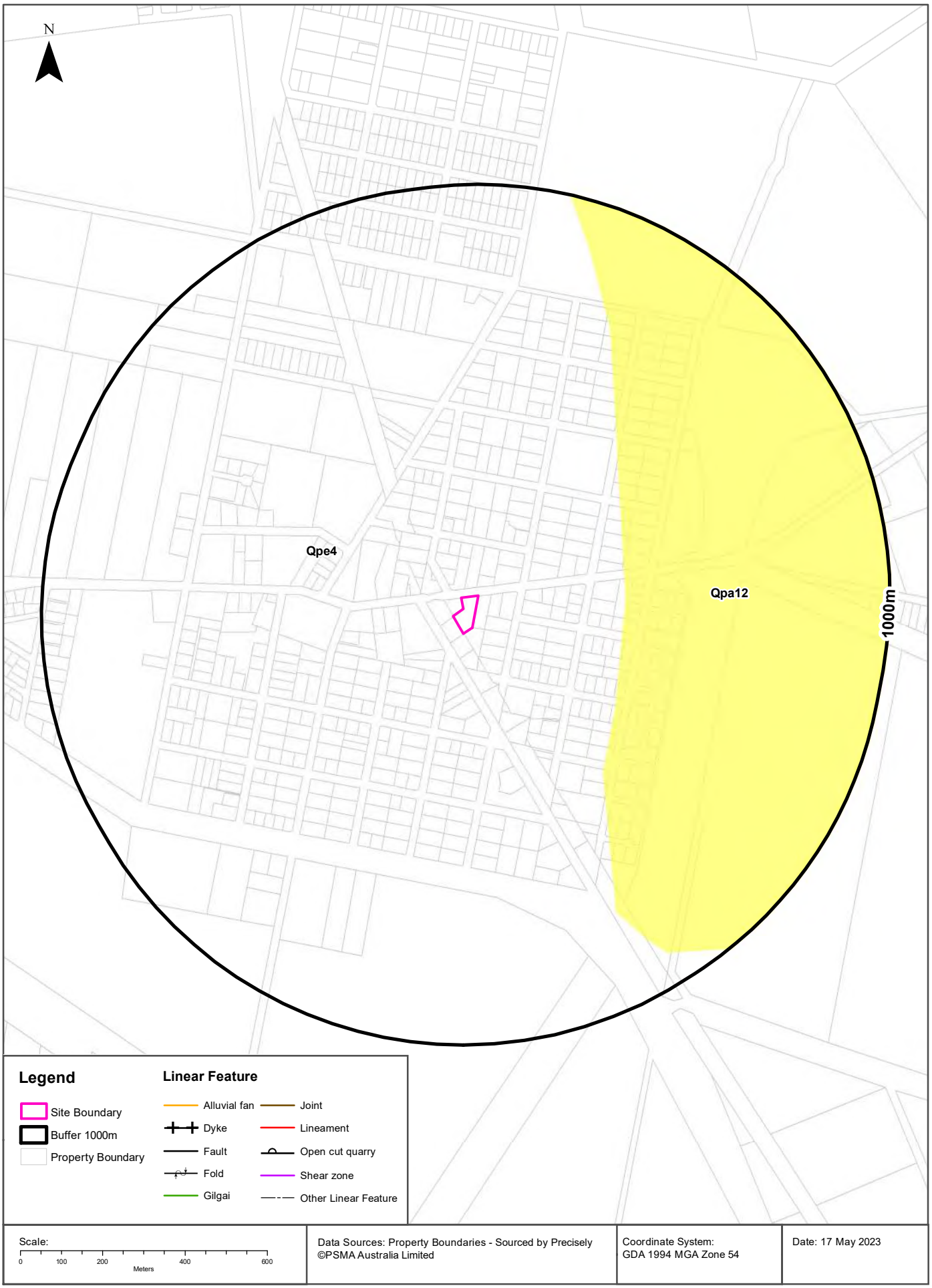
Geology 1:100,000

56 Quorn Road, Stirling North, SA 5710



Geology

56 Quorn Road, Stirling North, SA 5710

Surface Geology 1:100,000

Surface Geology Units within the dataset buffer:

Map Unit Code	Name	Description	Parent Name	Province	Age	Min Age	Max Age	Dist	Dir
Qpe4	Unnamed GIS Unit - see description	Pleistocene coastal plain dune sand.	Unnamed GIS Unit - see description	UNKNOWN	PLEISTOCENE	Pleistocene	Pleistocene	0m	On-site
Qpa12	Unnamed GIS Unit - see description	Pleistocene sand and gravel of low angle alluvial fans.	Unnamed GIS Unit - see description	MURRAY BASIN	PLEISTOCENE	Pleistocene	Pleistocene	355m	East

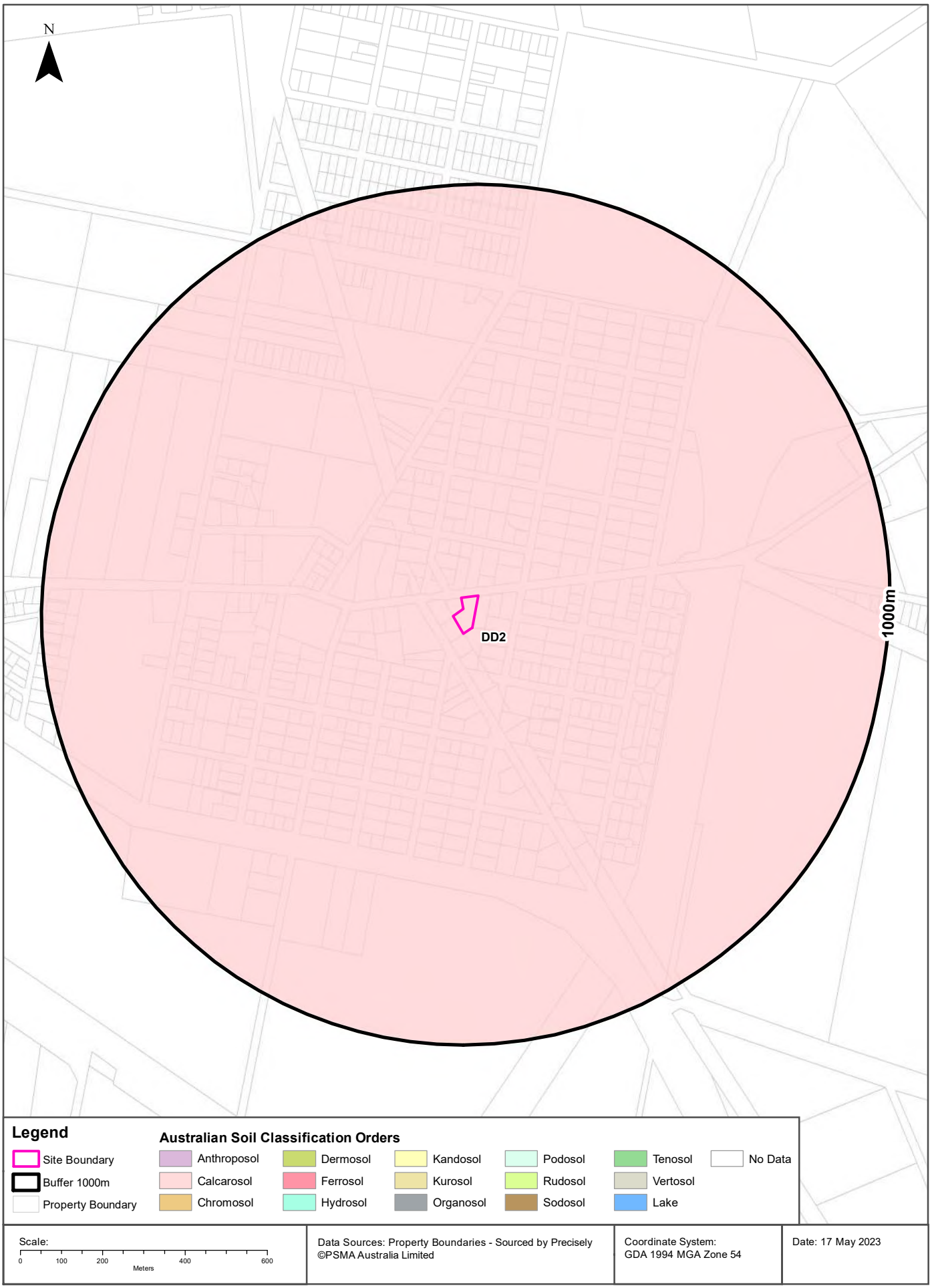
Linear Structures 1:100,000

Linear geological structures within the dataset buffer:

Map Code	Description	Distance	Direction
N/A	No records in buffer		

Atlas of Australian Soils

56 Quorn Road, Stirling North, SA 5710



Soils

56 Quorn Road, Stirling North, SA 5710

Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
DD2	Calcarosol	Plains with more or less isolated tracts of dunes: broad plains of brown calcareous earths (especially Gc1.12) with areas of exposed caliche and crusty loamy soils (Dr1.33), (Dr1.43), and (Dr1.13), with clay pans, saline soils (unclassified), swamps, and intermittent lakes in the lower-lying portions; also dunes of brown sands (Uc5.1) and brown calcareous earths (Gc1.22).	0m	On-site

Soils

56 Quorn Road, Stirling North, SA 5710

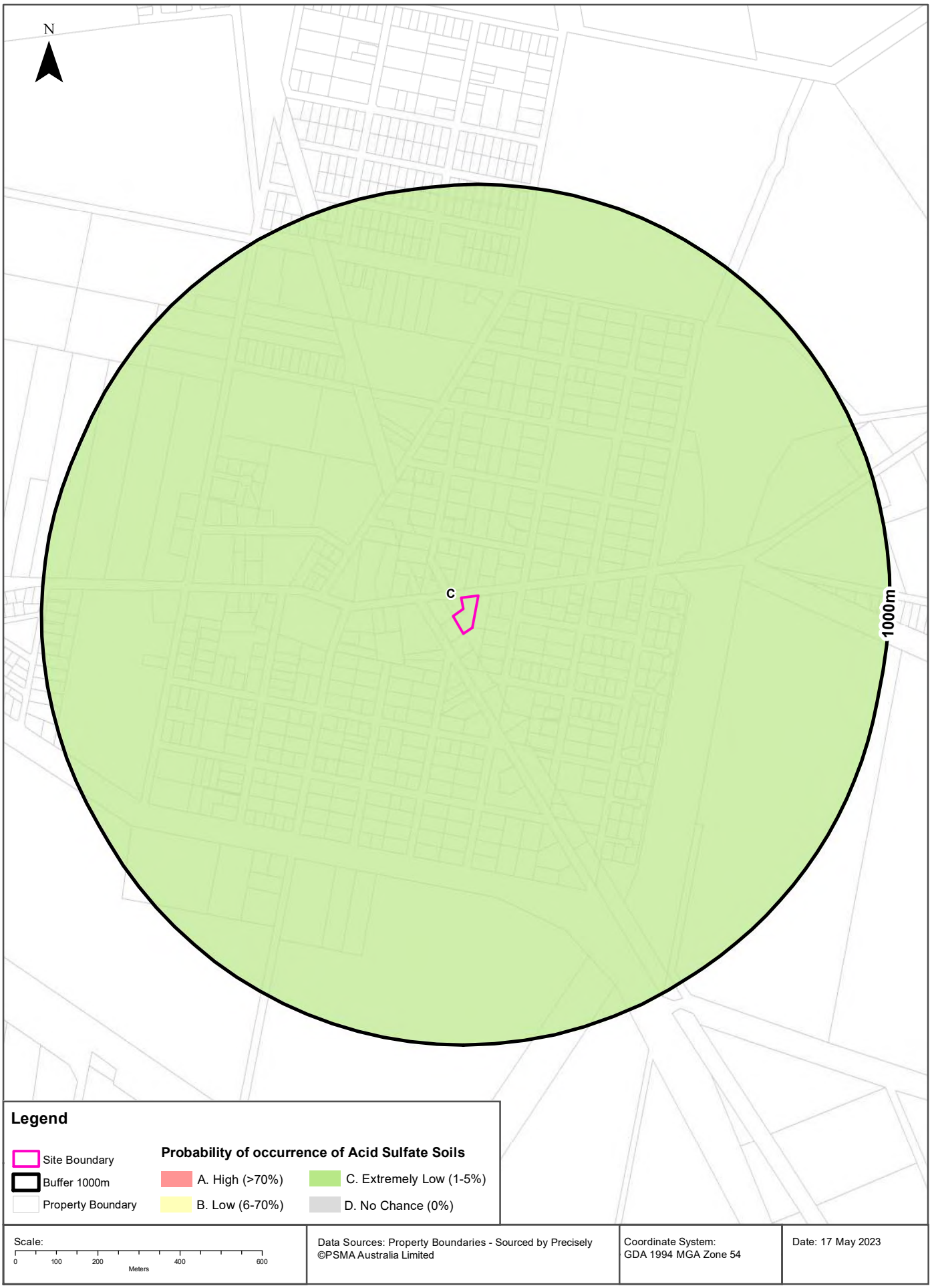
Soil Types

Soil types within the dataset buffer:

Map category code	Soil type description	Distance	Direction
N/A	No records in buffer		

Atlas of Australian Acid Sulfate Soils

56 Quorn Road, Stirling North, SA 5710



Acid Sulfate Soils

56 Quorn Road, Stirling North, SA 5710

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site

Acid Sulfate Soils

56 Quorn Road, Stirling North, SA 5710

Acid Sulfate Soil Potential

Acid sulfate soil potential within the dataset buffer:

Map category code	Proportion of land susceptible to the development of acid sulfate soils	Distance	Direction
N/A	No records in buffer		

Soil Salinity

56 Quorn Road, Stirling North, SA 5710

Soil Salinity - Watertable Induced

Watertable induced soil salinity within the dataset buffer:

Map category code	Severity description	Distance	Direction
N/A	No records in buffer		

Soil Salinity - Non-Watertable

Non-watertable soil salinity within the dataset buffer:

Map category code	Severity description	Surface ECe (dS/m)	Subsoil ECe (dS/m)	Distance	Direction
N/A	No records in buffer				

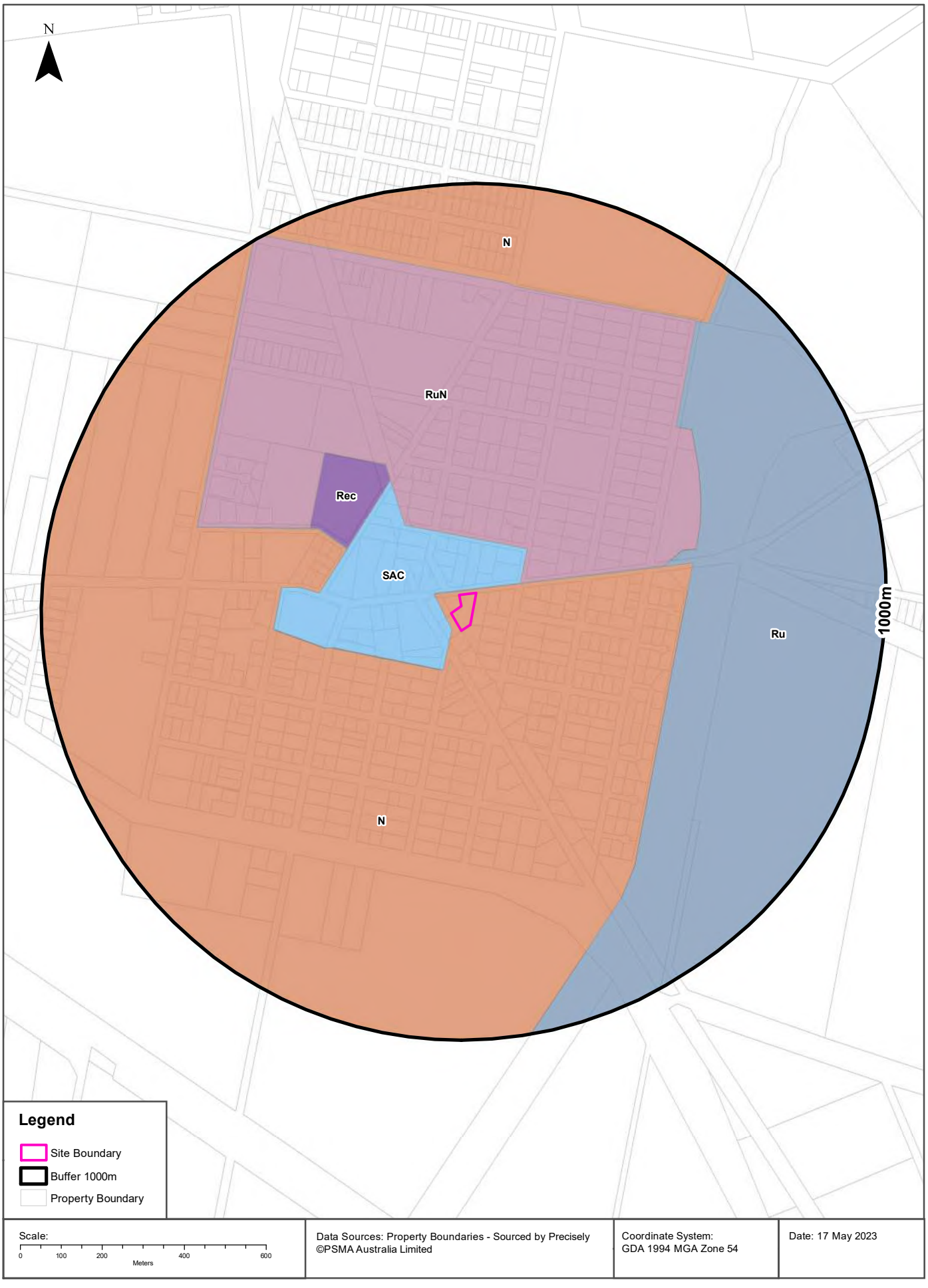
Soil Salinity - Non-Watertable (Magnesia Patches)

Magnesia patches within the dataset buffer:

Map category code	Proportion of land affected by magnesia patches	Distance	Direction
N/A	No records in buffer		

Planning and Design Code Zones

56 Quorn Road, Stirling North, SA 5710



Planning

56 Quorn Road, Stirling North, SA 5710

Planning and Design Code - Zones

Planning and Design Code zones within the dataset buffer:

Map Id	Zone Code	Zone Name	Legal Start Date	Status	Distance	Direction
N	Z4201	Neighbourhood	19/03/2021	0	0m	On-site
SAC	Z5705	Suburban Activity Centre	19/03/2021	0	11m	West
RuN	Z5408	Rural Neighbourhood	19/03/2021	0	109m	North
Rec	Z5401	Recreation	19/03/2021	0	293m	North West
Ru	Z5404	Rural	19/03/2021	0	462m	East

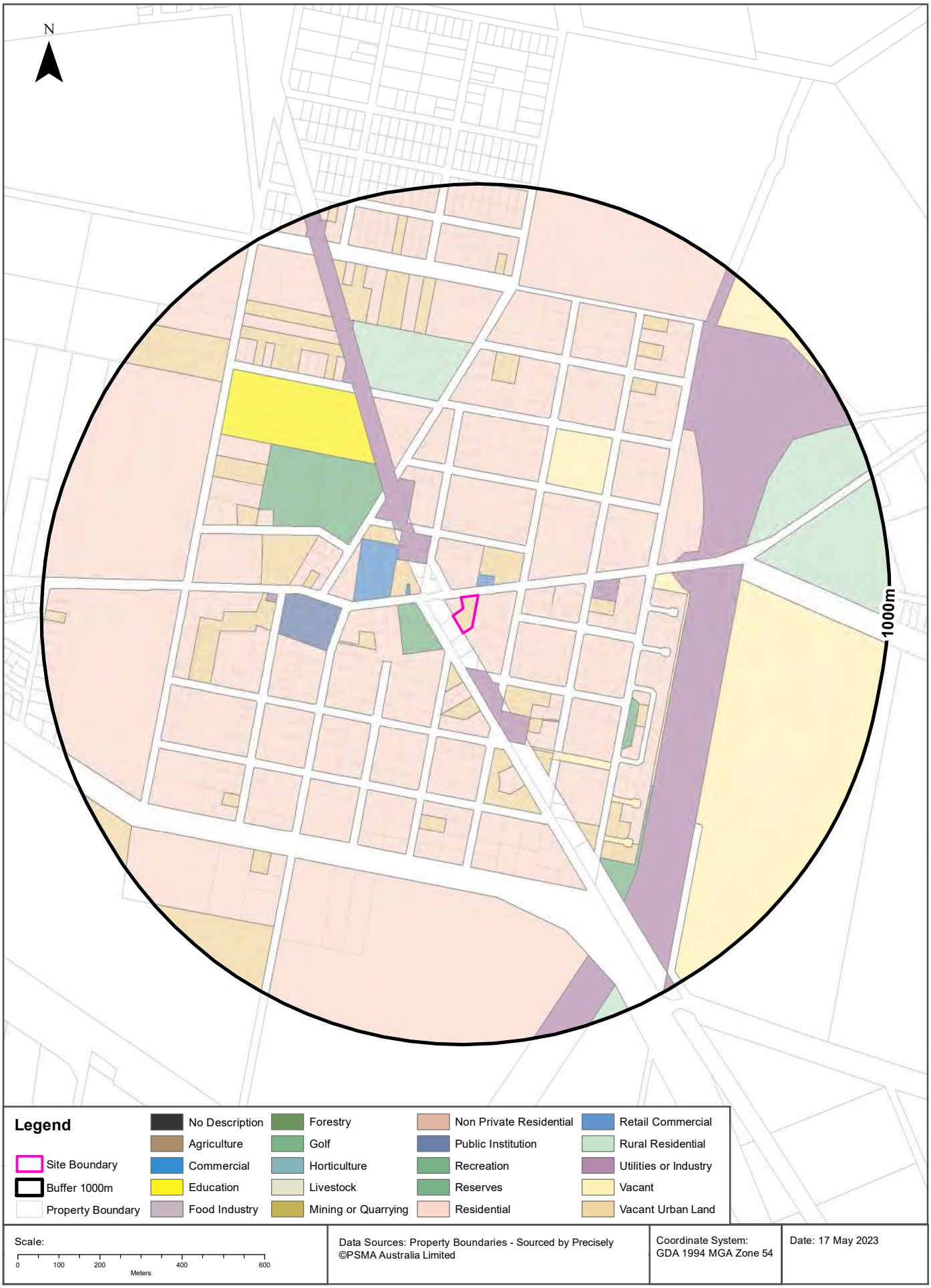
Planning and Design Code - Subzones

Planning and Design Code subzones within the dataset buffer:

Map Id	Subzone Code	Subzone Name	Legal Start Date	Status	Distance	Direction
N/A	No records in buffer					

Land Use Generalised

56 Quorn Road, Stirling North, SA 5710



Planning

56 Quorn Road, Stirling North, SA 5710

Land Use Generalised

Land use classes within the dataset buffer:

Description	Distance	Direction
Vacant Urban Land	0m	On-site
Residential	0m	South East
Retail Commercial	21m	North East
Recreation	62m	West
Utilities or Industry	84m	South
Commercial	117m	West
Public Institution	272m	West
Vacant	318m	North East
Education	385m	North West
Reserves	422m	South East
Rural Residential	480m	North

Heritage

56 Quorn Road, Stirling North, SA 5710

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch

National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

Place Id	Name	Address	Place File No	Class	Status	Register Date	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch

State Heritage Areas

State Heritage Areas within the dataset buffer:

Heritage Id	Name	Distance	Direction
N/A	No records in buffer		

Heritage Areas Data Source: Dept of Environment, Water and Natural Resources - South Australia

SA Heritage Places

SA Heritage Places within the dataset buffer:

Heritage No	Location	Heritage Class	Australian Class	Details	Auth Date	Distance	Direction
N/A	No records in buffer						

Heritage Places Data Source: Dept of Environment, Water and Natural Resources - South Australia

Aboriginal Land

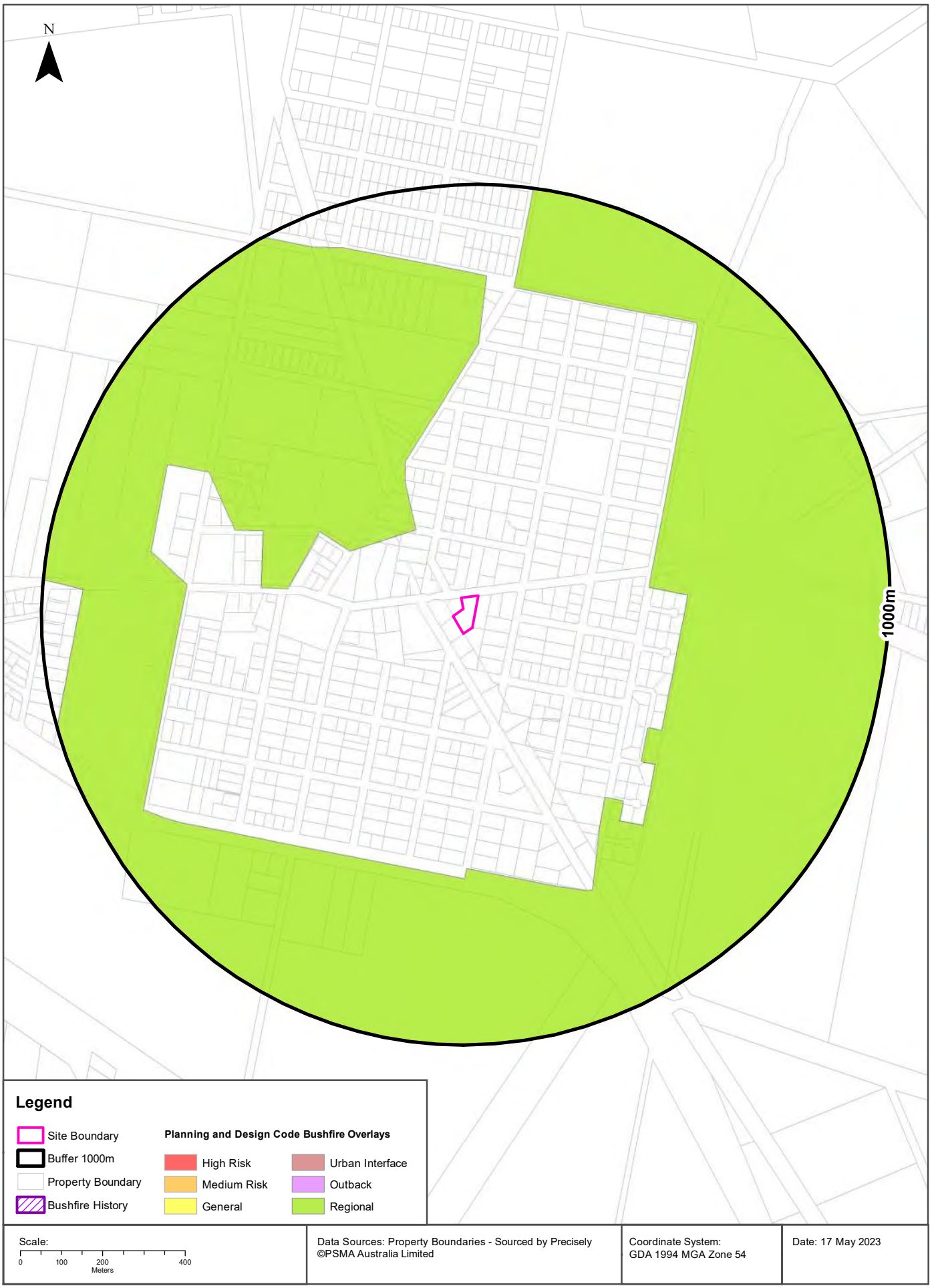
Aboriginal Land within the dataset buffer:

Map Id	Grant Date	Address	Locality	Description	Title	Distance	Direction
N/A	No records in buffer						

Aboriginal Land Data Source: Department of State Development, Resources and Energy - South Australia

Natural Hazards - Bushfire

56 Quorn Road, Stirling North, SA 5710



Natural Hazards

56 Quorn Road, Stirling North, SA 5710

Bushfire Overlays

Bushfire Overlays from the Planning and Design Code within the dataset buffer:

Overlay Id	Name	Description	Legal Start Date	Legal End Date	Distance	Direction
O2408	Hazards (Bushfire - Regional)	The Hazards (Bushfire - Regional) Overlay seeks to ensure development is located to minimise the threat and impact of bushfires on life and property and facilitate access for emergency service vehicles in regional areas.	19/03/2021		199m	North West

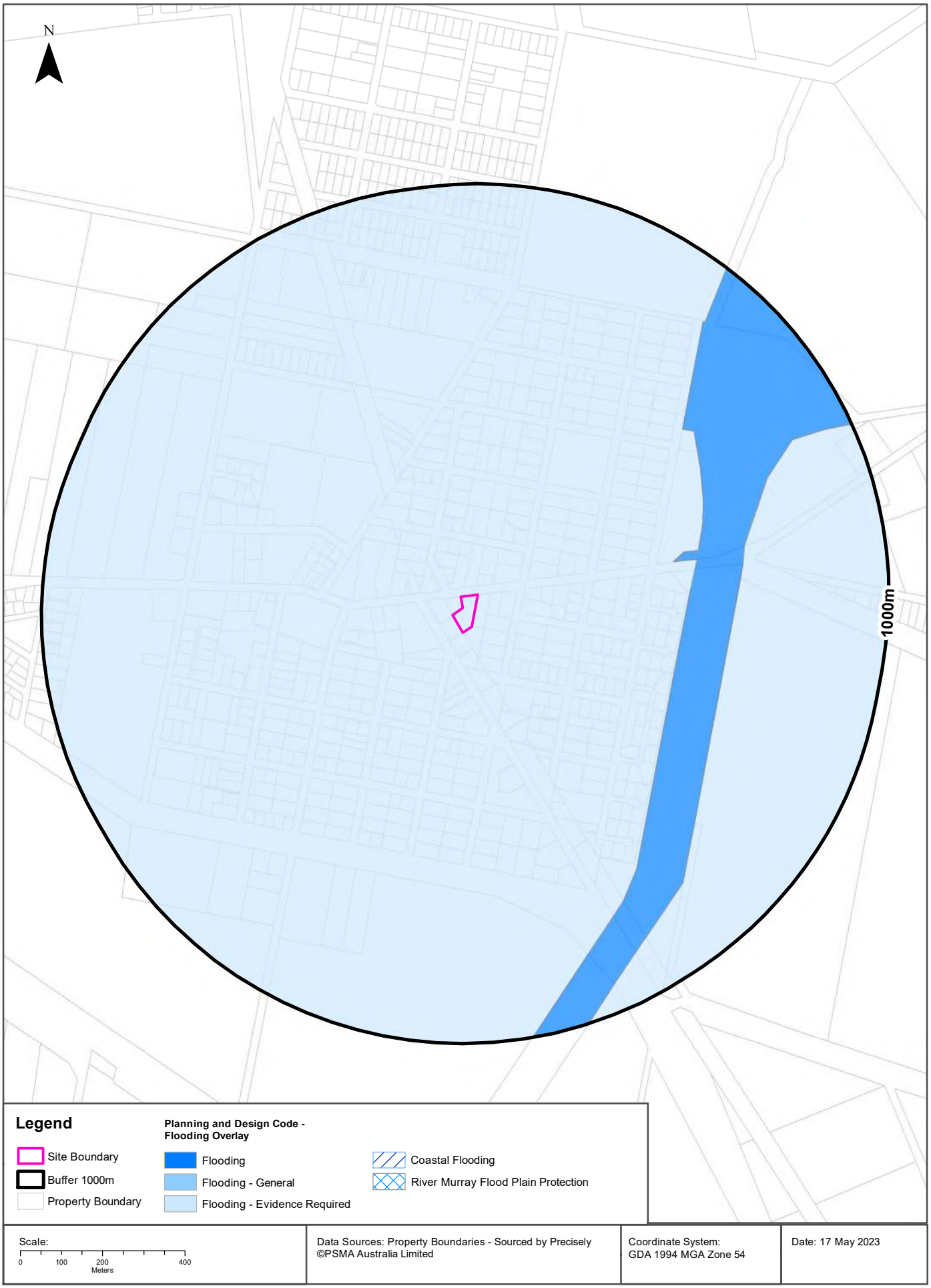
Bushfires and Prescribed Burns History

Bushfires and prescribed burns within the dataset buffer:

Map Id	Incident No.	Incident Name	Incident Type	Date of Fire	Area of Fire (ha)	Distance	Direction
N/A	No records in buffer						

Natural Hazards - Flood

56 Quorn Road, Stirling North, SA 5710



Natural Hazards

56 Quorn Road, Stirling North, SA 5710

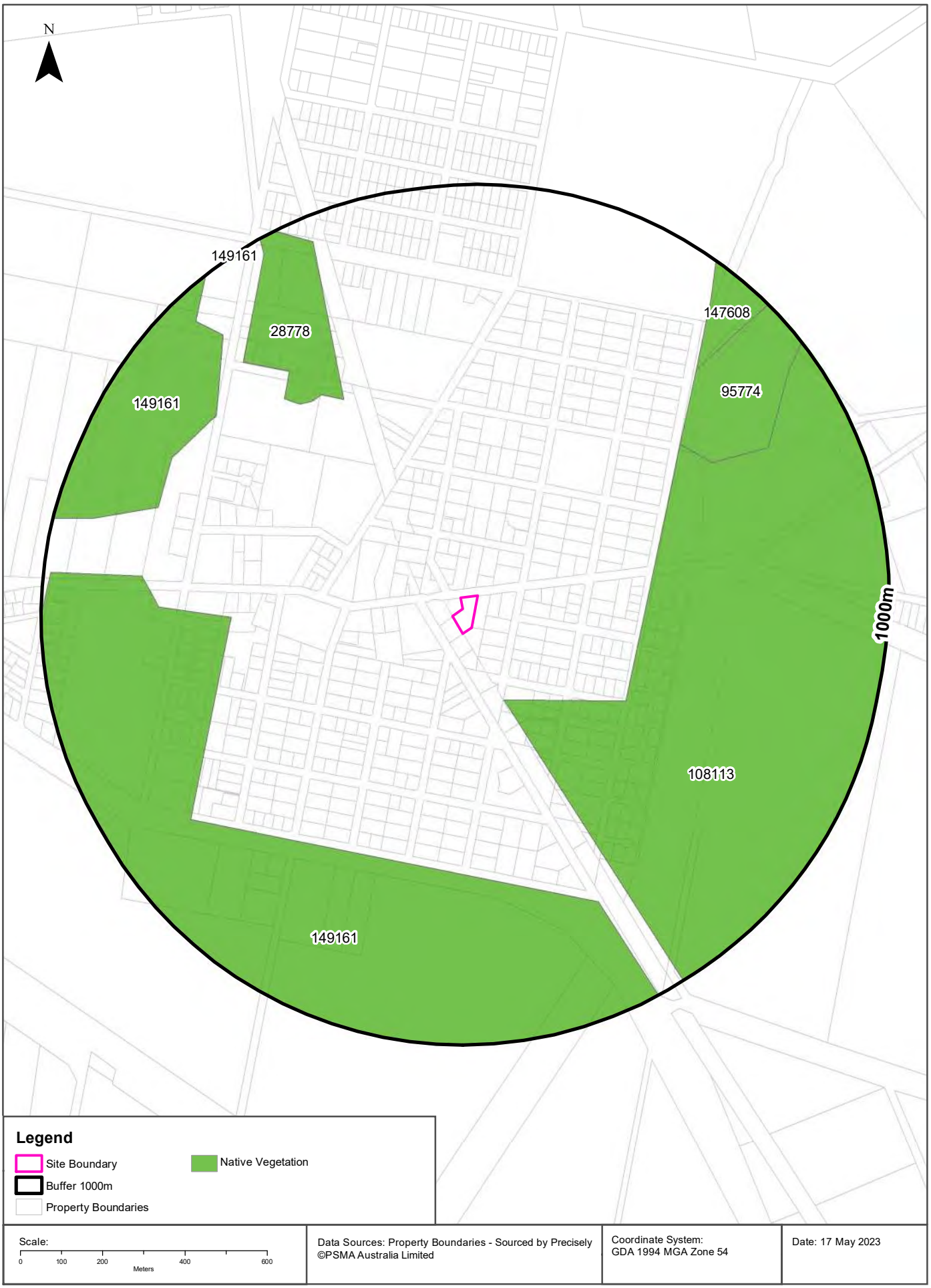
Flooding Overlays

Flooding Overlays from the Planning and Design Code within the dataset buffer:

Overlay Id	Name	Description	Legal Start	Legal End	Distance	Direction
O2416	Hazards (Flooding - Evidence Required)	The Hazards (Flooding - Evidence Required) Overlay adopts a precautionary approach to mitigate potential impacts of potential flood risk through appropriate siting and design of development.	10/11/2022		0m	On-site
O2403	Hazards (Flooding)	The Hazards (Flooding) Overlay seeks to minimise flood hazard risk to people, property, infrastructure and the environment.	10/11/2022		479m	East

Ecological Constraints - Native Vegetation

56 Quorn Road, Stirling North, SA 5710



Ecological Constraints

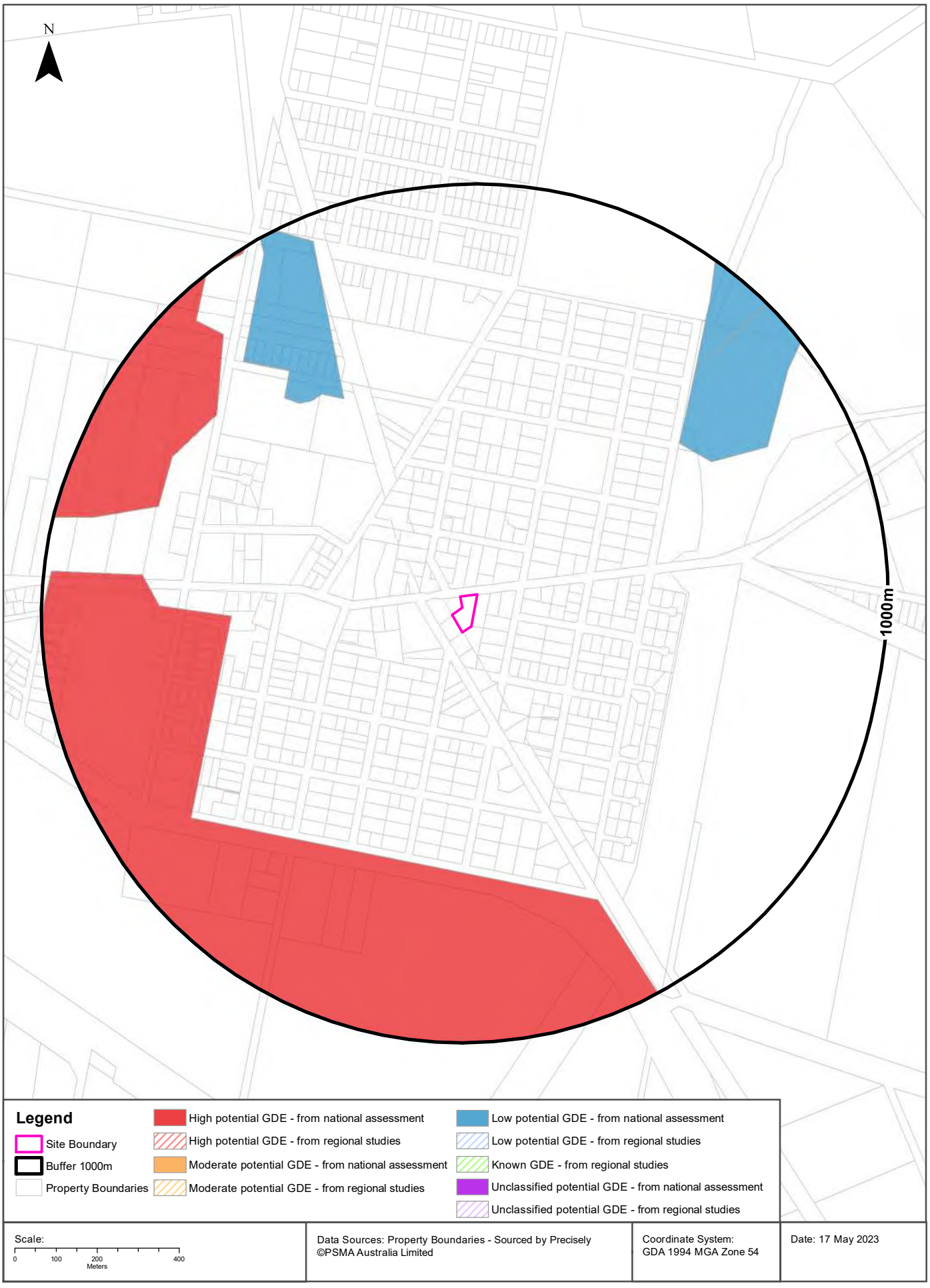
56 Quorn Road, Stirling North, SA 5710

Native Vegetation

Record ID	Vegetation Group	Vegetation Group Percentage	Structural Formation Description	Species and Stratum Details	Description of the Environment	Ground Truth Methodology	Capture Scale	Distance	Direction
108113	MM2801	100	chenopod shrubland	Maireana pyramidata mid sparse shrubland	Plain;Clay loam	Survey Site	27000	189m	East
149161	YE0003	100	chenopod shrubland	Atriplex vesicaria ssp. +/-Maireana sedifolia +/-Maireana pentatropis low shrubland	Pan;Saline soils;Sandy loam - Loamy clay;Over moist compacted clay;Salt lake margin	Needs Checking – based on interpretation during mapping	27000	538m	South West
28778	MM2801	100	chenopod shrubland	Maireana pyramidata mid sparse shrubland	Plain;Clay loam	Needs Checking – based on interpretation during mapping	27000	560m	North West
95774	MN2101	100	Eucalyptus forest and woodland	Eucalyptus camaldulensis ssp.+/-Callitris glaucophylla mid woodland	Plains, Flats, Depressions, Gully and Hill slopes;Sand to Clay loam;Loamy;Drainage depressions	Survey Site	27000	614m	North East
147608	MN3201	100	Acacia shrubland	Acacia victoriae ssp. +/-Lycium ferocissimum tall shrubland	Plains, Flats and Hill footslopes;Clay loam to Loam	Ground Truth Trip - general field work undertaken	27000	763m	North East

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

56 Quorn Road, Stirling North, SA 5710



Ecological Constraints

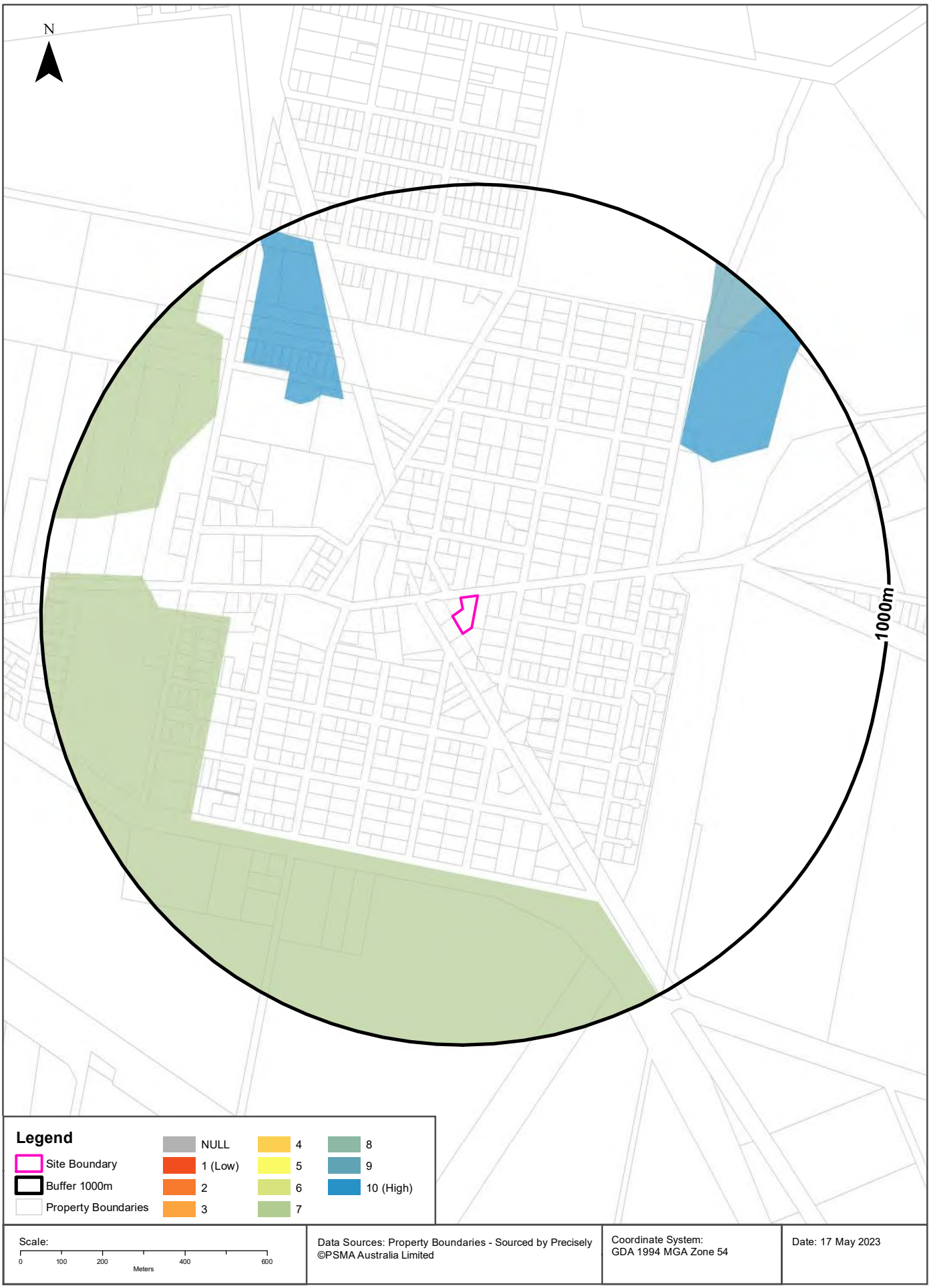
56 Quorn Road, Stirling North, SA 5710

Groundwater Dependent Ecosystems Atlas

Type	Name	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial		High potential GDE - from national assessment	Salt lake and bahadas in north; alluvial and littoral plains in south; north-west/south-east longitudinal dunes, mainly stabilized.	Vegetation		538m	South West
Terrestrial		Low potential GDE - from national assessment	Salt lake and bahadas in north; alluvial and littoral plains in south; north-west/south-east longitudinal dunes, mainly stabilized.	Vegetation		560m	North West

Ecological Constraints - Inflow Dependent Ecosystems Likelihood

56 Quorn Road, Stirling North, SA 5710



Ecological Constraints

56 Quorn Road, Stirling North, SA 5710

Inflow Dependent Ecosystems Likelihood

Type	Name	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial		7	Salt lake and bahadas in north; alluvial and littoral plains in south; north-west/south-east longitudinal dunes, mainly stabilized.	Vegetation		538m	South West
Terrestrial		10	Salt lake and bahadas in north; alluvial and littoral plains in south; north-west/south-east longitudinal dunes, mainly stabilized.	Vegetation		560m	North West
Terrestrial		9	Salt lake and bahadas in north; alluvial and littoral plains in south; north-west/south-east longitudinal dunes, mainly stabilized.	Vegetation		763m	North East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

Ecological Constraints

56 Quorn Road, Stirling North, SA 5710

Ramsar Wetlands

What Ramsar wetland areas exist within the dataset buffer?

Wetland	Distance	Direction
No records in buffer		

Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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      (ii) content which is derived from content described in paragraph (i);
   (b) Neither Lotsearch nor Third Party Content Suppliers takes any responsibility for or give any warranty in relation to the accuracy or completeness of any Third Party Content included in the Report including any contaminated land assessment or other assessment included as part of a Report;
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   (i) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of Land or Property for any particular purpose
   (j) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
   (k) the End User should undertake its own inspections of the Land or Property to satisfy itself that there are no defects or failures
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    (b) any loss of profit, loss of revenue, loss of interest, loss of data, loss of goodwill or loss of business opportunities, business interruption arising directly or indirectly out of or in relation to the Report or these Terms,

    irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.
12. These Terms are subject to New South Wales law.

Preliminary Site Investigation
Stallard Meek Flightpath Architects
56 Quorn Road, Stirling North

APPENDIX D HISTORICAL CERTIFICATES OF TITLE

South Australia.

(CERTIFICATE OF TITLE.)

Register Book,

Vol. 2339 *Folio* 156

Pursuant to Memorandum of Transfer No.1844205 Registered on Vol.10 Folio 139

WALTER JOHN LYALL NANCARROW of Stirling North Licensed Victualler

is the proprietor of an estate in fee simple

subject nevertheless to such encumbrances liens and interests as are notified by memorial underwritten or endorsed hereon in THAT piece of land situate in the HUNDRED of DAVENPORT COUNTY of FROME being the ALLOTMENT 125 and PORTION OF ALLOTMENT 122 of the subdivision of portion of Section 670 laid out as SOUTH STIRLING and more particularly delineated and bounded as appears in the plan in the margin hereof and therein colored green WHICH said Allotments are

bounded as appears in the plan deposited in the Lands Titles Registration Office No. 12 Which said Section is delineated in the public map of the said Hundred deposited in the Land Office at Adelaide.

In witness whereof I have hereunto signed my name and affixed my seal this First day of August 1954

Signed the First day of August 1954, in the presence of [signature]

Registrar-General.

REGISTRAR-GENERAL SOUTH AUSTRALIA

TRANSFER No. 2122083 FROM Walter John Lyall Nancarrow to William Bentley Greenwood of Orroroo Grazier OF THE WITHIN LAND. PRODUCED 24 4 1959 AT 2 pm

DEP. REG. GEN.

P/A 1967394 [signature]

TRANSFER No. 3270536 to Elva Maude Greenwood of Kulgera N.T. Married Woman OF THE WITHIN LAND. PRODUCED 4 3 1961 AT 9.30 am

[signature] DEP. REG. GEN.

TRANSFER No. 3335916 To Percy Graham Rehn of 1 Butler Street Elizabeth Park 5113 Health and Building Inspector and Ella Jean Rehn Librarian OF THE WITHIN LAND PRODUCED 6-7-1972 AT 12.5 pm

[signature] DEP REG GEN

T386710

TRANSFER No. 386710. To
Michael Bertram Scholz of 12 Wells street
Port Augusta Clerk and Susan Clarice Scholz
his wife.
OF THE WITHIN LAND. PRODUCED 22-11-1972 AT 2.30 p.m.
DEP. REG. GEN.
J. A. Hughes.
T764/98-73

TRANSFER No. 649873 To
Desmond Hoart Larsson of Price Street
Caltowie 5490 carpenter and
Joan Teresa Larsson his wife.
OF THE WITHIN LAND. PRODUCED 30.7.1974 at 2.30 Pm
D. J. Newell
DEP. REG. GEN.

CANCELLED
CONVERTED TO A COMPUTERISED TITLE

(A) **South Australia.** [CERTIFICATE OF TITLE.

Register Book

Vol. X *Folio* 139

[illegible] under [illegible] 1st [illegible] day of January [illegible] Smith
Alexander Grace of [illegible] Esquire . . . . . is now seised
of an estate in fee simple . . . . . subject, nevertheless, to such encumbrances, liens, and interests as are notified by memorandum endorsed hereon, in that piece of land situated in the Township of South Stirling being portion of the section numbered 870 in the County of Grey and which said piece of land forms the allotments numbered 122 and 125 in the said Township containing together one acre and twenty three perches more or less and bounded as [illegible] in the plan of the said Township deposited in the Lands Titles Registration Office No. [illegible] and in the plan in the margin hereof [illegible] [illegible] Together with a right of way at all times hereafter for the said Alexander Grace and all persons claiming under him with horses cattle carts and carriages over and along all the streets and roads of the said Township shown in the said deposited plan. Which said section is delineated in the public map of the said County deposited in the Office of the Surveyor General and was originally granted under the hand and seal of Sir Richard Graves MacDonnell Governor in Chief of the said Province on the eighteenth day of June 1856 to the said Robert Barr Smith . . . . .

as appears by Certificate of Title Register Book Vol. 12 Folio 69
now delivered up and cancelled.

In witness whereof, I have hereunto signed my name and affixed my seal this sixth day of February
one thousand eight hundred and sixty.

Signed, sealed, and delivered the 6th day of Feby 1860, in presence of [signature] [signature] Registrar-General.

Acquisition No. 1331448.

WHEREBY portion of the within Lot 122 IS NOW VESTED IN THE COMMONWEALTH ~~OF AUSTRALIA~~ Railways Commissioner FOR AN ESTATE IN FEE SIMPLE PURSUANT TO THE REAL PROPERTY (COMMONWEALTH TITLES) ACT 1924

PRODUCED FOR REGISTRATION THE 23 DAY OF November 1960 AT 11-10 am (CT - not prod)

[signature] DEP. REG. GENL.

CANCELLED AS REGARDS LAND IN ~~TRANSFER~~ Acquisition No. 1331448. AND NEW CERTIFICATE OF TITLE ISSUED VOL. 3035 FOLIO 102

[signature] DEP. REG. GENL.

~~Transfer~~

TRANSFER No. 1844205 FROM The Minister of Lands and by virtue of the ~~provisions~~ Crown Rates and Taxes Recovery Act 1945 to Walter John Lyall Nancarrow

OF THE WITHIN land of the Balance

PRODUCED FOR REGISTRATION THE 19 DAY OF July 1954 AT 11-20 am [CT not Prod.]

[signature] DEP. REG. GENL.

CANCELLED AS REGARDS LAND IN TRANSFER No. 1844205 AND NEW CERTIFICATE OF TITLE ISSUED VOL. 2339 FOLIO 156

[signature] DEP. REG. GENL.

Preliminary Site Investigation
Stallard Meek Flightpath Architects
56 Quorn Road, Stirling North

APPENDIX E EPA SECTION 7 RESPONSE

Environment Protection Authority
GPO Box 2607 Adelaide SA 5001
211 Victoria Square Adelaide SA 5000
T (08) 8204 2004
Country areas 1800 623 445

WSP Australia Pty Limited
Level 1
1 King William Street
ADELAIDE SA 5000

Contact: Section 7
Telephone: (08) 8204 2026
Email: epasection7@sa.gov.au

Contact: Public Register
Telephone: (08) 8204 9128
Email: epa.publicregister@sa.gov.au

23 May, 2023

EPA STATEMENT TO FORM 1 - CONTRACTS FOR SALE OF LAND OR BUSINESS

The EPA provides this statement to assist the vendor meet its obligations under section 7(1)(b) of the *Land and Business (Sale and Conveyancing) Act 1994*. A response to the questions prescribed in Schedule 1-Contracts for sale of land or business-forms (Divisions 1 and 2) of the *Land and Business (Sale and Conveyancing) Act 1994* is provided in relation to the land.

I refer to your enquiry concerning the parcel of land comprised in

Title Reference	CT Volume 5706 Folio 123
Address	56 Quorn Road, STIRLING NORTH SA 5710

Schedule – Division 1 – *Land and Business (Sale and Conveyancing) Regulations 2010*

PARTICULARS OF MORTGAGES, CHARGES AND PRESCRIBED ENCUMBRANCES AFFECTING THE LAND

8. Environment Protection Act 1993

Does the EPA hold any of the following details relating to the *Environment Protection Act 1993*:

8.1	Section 59 - Environment performance agreement that is registered in relation to the land.	NO
8.2	Section 93 - Environment protection order that is registered in relation to the land.	NO
8.3	Section 93A - Environment protection order relating to cessation of activity that is registered in relation to the land.	NO
8.4	Section 99 - Clean-up order that is registered in relation to the land.	NO
8.5	Section 100 - Clean-up authorisation that is registered in relation to the land.	NO
8.6	Section 103H - Site contamination assessment order that is registered in relation to the land.	NO
8.7	Section 103J - Site remediation order that is registered in relation to the land.	NO

8.8	Section 103N - Notice of declaration of special management area in relation to the land (due to possible existence of site contamination).	NO
8.9	Section 103P - Notation of site contamination audit report in relation to the land.	NO
8.10	Section 103S - Notice of prohibition or restriction on taking water affected by site contamination in relation to the land.	NO

Schedule – Division 2 – ***Land and Business (Sale and Conveyancing) Regulations 2010***

PARTICULARS RELATING TO ENVIRONMENT PROTECTION

3-Licences and exemptions recorded by EPA in public register

Does the EPA hold any of the following details in the public register:

a)	details of a current licence issued under Part 6 of the *Environment Protection Act 1993* to conduct any prescribed activity of environmental significance under Schedule 1 of that Act at the land?	NO
b)	details of a licence no longer in force issued under Part 6 of the *Environment Protection Act 1993* to conduct any prescribed activity of environmental significance under Schedule 1 of that Act at the land?	NO
c)	details of a current exemption issued under Part 6 of the *Environment Protection Act 1993* from the application of a specified provision of that Act in relation to an activity carried on at the land?	NO
d)	details of an exemption no longer in force issued under Part 6 of the *Environment Protection Act 1993* from the application of a specified provision of that Act in relation to an activity carried on at the land?	NO
e)	details of a licence issued under the repealed *South Australian Waste Management Commission Act 1979* to operate a waste depot at the land?	NO
f)	details of a licence issued under the repealed *Waste Management Act 1987* to operate a waste depot at the land?	NO
g)	details of a licence issued under the repealed *South Australian Waste Management Commission Act 1979* to produce waste of a prescribed kind (within the meaning of that Act) at the land?	NO
h)	details of a licence issued under the repealed *Waste Management Act 1987* to produce prescribed waste (within the meaning of that Act) at the land?	NO

4-Pollution and site contamination on the land - details recorded by the EPA in public register

Does the EPA hold any of the following details in the public register in relation to the land or part of the land:

a)	details of serious or material environmental harm caused or threatened in the course of an activity (whether or not notified under section 83 of the *Environment Protection Act 1993*)?	NO

b)	details of site contamination notified to the EPA under section 83A of the *Environment Protection Act 1993*?	NO
c)	a copy of a report of an environmental assessment (whether prepared by the EPA or some other person or body and whether or not required under legislation) that forms part of the information required to be recorded in the public register?	NO
d)	a copy of a site contamination audit report?	NO
e)	details of an agreement for the exclusion or limitation of liability for site contamination to which section 103E of the *Environment Protection Act 1993* applies?	NO
f)	details of an agreement entered into with the EPA relating to an approved voluntary site contamination assessment proposal under section 103I of the *Environment Protection Act 1993?*	NO
g)	details of an agreement entered into with the EPA relating to an approved voluntary site remediation proposal under section 103K of the *Environment Protection Act 1993?*	NO
h)	details of a notification under section 103Z(1) of the *Environment Protection Act 1993* relating to the commencement of a site contamination audit?	NO
i)	details of a notification under section 103Z(2) of the *Environment Protection Act 1993* relating to the termination before completion of a site contamination audit?	NO
j)	details of records, held by the former *South Australian Waste Management Commission* under the repealed *Waste Management Act 1987*, of waste (within the meaning of that Act) having been deposited on the land between 1 January 1983 and 30 April 1995?	NO

5-Pollution and site contamination on the land - other details held by EPA

Does the EPA hold any of the following details in relation to the land or part of the land:

a)	a copy of a report known as a "Health Commission Report" prepared by or on behalf of the *South Australian Health Commission* (under the repealed *South Australian Health Commission Act 1976*)?	NO
b)	details (which may include a report of an environmental assessment) relevant to an agreement entered into with the EPA relating to an approved voluntary site contamination assessment proposal under section 103I of the *Environment Protection Act 1993?*	NO
c)	details (which may include a report of an environmental assessment) relevant to an agreement entered into with the EPA relating to an approved voluntary site remediation proposal under section 103K of the *Environment Protection Act 1993*?	NO
d)	a copy of a pre-1 July 2009 site audit report?	NO
e)	details relating to the termination before completion of a pre-1 July 2009 site audit?	NO

All care and diligence has been taken to access the above information from available records. Historical records provided to the EPA concerning matters arising prior to 1 May 1995 are limited and may not be accurate or complete.

SITE CONTAMINATION DECLARATION FORM

Council area: Port Augusta City Council

Regarding the land comprised in Certificate(s) of Title Register Book Volume 5706, Folio 123

I Andrew Durand, a site contamination consultant, certify the following details:

Part 1—Investigations

(a) I have relied on the following reports to complete this statement:

'*Preliminary Site Investigation – 56 Quorn Road, Stirling North*', prepared by Greencap (June 2023)

(b) Investigations were conducted in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM).

The report reviewed as a part of this declaration was undertaken in general accordance with the requirements of the ASC NEPM.

Part 3—Site contamination exists or may exist*

(a) site contamination exists or may exist on or below the surface of the land* as a result of a class 1 activity (including where a class 1 activity exists or previously existed on adjacent land*), class 2 activity, class 3 activity (see the *State Planning Commission Practice Direction 14 (Site Contamination Assessment)*), or notification of site contamination of underground water (as shown on the South Australian Property and Planning Atlas) including where such a notification exists on adjacent land*;

(b) the site contamination or potential site contamination originated or is likely to have originated—

(ii) on adjacent land (i.e. class 1 activity ~~or notification of site contamination of underground water (as shown on the South Australian Property and Planning Atlas)~~)*—

(A) as a result of the following activities carried on there:

Class 1 – Service Station approximately 20 metres to the northeast

Signed:  Date: 20 June 2023

☒ *If being lodged electronically, please tick to indicate agreement to this declaration.*

Name of company or business / accreditation body and number

Greencap Pty Ltd

**Delete whichever is not applicable*

Adapted from Schedule 3 of Practice Direction 14 – Site Contamination Assessment – Version 2 (23 June 2022)

Note 1—Investigations found the existence of 'fill or soil importation' on-site (i.e. importation, to a premises of a business, of soil or other fill originating from a site at which another potentially contaminating activity has taken place pursuant Schedule 3 of the *Environment Protection Regulations 2009*). Fill or soil importation is not a potentially contaminating activity for the purposes of the *State Planning Commission Practice Direction: (Site Contamination Assessment)*, but remains a potentially contaminating activity under the *Environment Protection Regulations 2009*. The EPA's Industry Guideline on *'Construction environmental management plans (CEMP)'* provides assistance on meeting the obligations of the *Environment Protection Act 1993.*

Note 2—It is an offence to provide false or misleading information on this Form. Maximum penalty: $20 000 pursuant to section 217 of the *Planning, Development and Infrastructure Act 2016.*

Note 3—The "subject land" is the land the subject of the subject development application.

Note 4—"Adjacent land" is defined in section 3(1) of the *Planning, Development and Infrastructure Act 2016* to mean "in relation to other land, means land that is no more than 60 metres from the other land".

Details of Representations

Attachment 2

Application Summary

Application ID	23012328
Proposal	Child care centre (89 places), landscaping, car park, fencing, outbuilding and new wastewater disposal system
Location	56 QUORN RD STIRLING NORTH SA 5710

Representations

Representor 1 - Josie Pollard

Name	Josie Pollard
Address	43 QUORN ROAD STIRLING NORTH SA, 5710 Australia
Submission Date	25/07/2023 10:12 AM
Submission Source	Email
Late Submission	No
Would you like to talk to your representation at the decision-making hearing for this development?	No
My position is	I support the development with some concerns

Reasons

To the City of Port Augusta, I am sending this email with regard to the New Child Care Centre being built across the road from our Place at 43 Quorn Rd, Stirling North. We do not have any objections to the centre but our concerns are with the parking. The Quorn Road is a busy road and at times it can be difficult getting out of our driveway especially if there is a car parked out the front as we cannot see cars coming from the railway line side. These cars are only there at rare occasions and our concerns are that if cars are parked out the front for long periods (perhaps Hours) not only do we have trouble exiting our driveway but also when our rubbish is collected and the street sweeper comes. Hope these concerns are taken into consideration.

Attached Documents

EmailRepresentationFrom43QuornRoad-Childcare-56QuronRoad-6078033.pdf

From: josey2@bigpond.com
To: Development Services Admin
Subject: Proposed plans for 56 Quorn Rd Stirling North
Date: Tuesday, 25 July 2023 9:31:45 AM

To the City of Port Augusta,
I am sending this email with regard to the New Child Care Centre being built across the road from our Place at 43 Quorn Rd, Stirling North.
We do not have any objections to the centre but our concerns are with the parking.
The Quorn Road is a busy road and at times it can be difficult getting out of our driveway especially if there is a car parked out the front as we cannot see cars coming from the railway line side. These cars are only there at rare occasions and our concerns are that if cars are parked out the front for long periods (perhaps Hours) not only do we have trouble exiting our driveway but also when our rubbish is collected and the street sweeper comes.
Hope these concerns are taken into consideration.

Regards
Josie & Robert Pollard
Ph 0438 436 241

Attachment 3

In reply please quote 2023/00453/01, 23012328
Enquiries to Ms Yee-May Chang
Telephone (08) 7133 2856
E-mail: dit.landusecoordination@sa.gov.au

Government of South Australia
Department for Infrastructure and Transport

TRANSPORT STRATEGY AND PLANNING DEVISION

Transport Assessment

GPO Box 1533
ADELAIDE SA 5001

ABN 92 366 288 135

26 July 2023

Mr Joshua Skinner
City of Port Augusta
PO Box 1704
Port Augusta SA 5700

Dear Mr Skinner

SCHEDULE 9 - REFERRAL RESPONSE

Development No.	23012328
Applicant	Mr John Cerchi
Location	56 Quorn Road, Stirling North (CT 5706/123)
Proposal	Childcare Centre (89 places)

The above application has been referred to the Commissioner of Highways (CoH) in accordance with Section 122 of the *Planning, Development and Infrastructure Act 2016*, as the prescribed body listed in Schedule 9 of the *Planning, Development and Infrastructure (General) Regulations 2017*.

CONSIDERATION

The subject site abuts Quorn Road, an arterial road under the care, control and management of the CoH. Quorn Road is identified as a Freight Route and Tourist Route under DIT's *'A Functional Hierarchy for South Australia's Land Transport Network'*. This section of Quorn Road carries 3600veh/day with 13.5% Commercial vehicles.

The subject development proposes the construction of a childcare centre with two access points on Quorn Road, one for entry (on eastern side) and one for exit (on western side). The Department is supportive of the proposal and notes that the proposed entry point maximises separation form the adjacent rail crossing and that the stagger between the entry points to the subject development and adjacent petrol station should be sufficient to minimise potential conflict.

Notwithstanding this, it is noted that low lying power lines across the frontage of this development may create and issue for waste collection trucks accessing the site. This may need to be reviewed. Additionally, heavy vehicles parking on the eastern side of the Quorn Road opposite the service station may create sightline issues for motorists exiting the site. Council should consider installing parking restrictions to address this issue prior to the operation of the childcare centre.

As the development is likely to increase pedestrian movements in the vicinity of the site and across Quorn Road, it is recommended that Council consider the provision of pedestrian facilities to facilitate safe access to and from the site.

ADVICE

The Department supports the proposed development and advises the planning authority to attach the following conditions to any approval:

1. All access to/from the development shall be gained in accordance with the site plan produced by SMFA, Job No. 22115, Drawing No. SK101, dated 25.7.2023.

2. The access point/s shall be constructed in concrete extending from the property boundary to the edge of the road seal in order to maximise traction for vehicles exiting the site and minimise

debris being dragged onto the carriageway. The access points shall incorporate generous flaring.

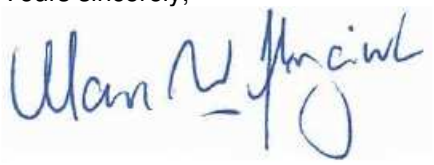
3. Clear sightlines, as shown in Figure 3.3 'Minimum Sight Lines for Pedestrian Safety' in *AS/NZS 2890.1:2004*, shall be provided at the property line to ensure adequate visibility between vehicles leaving the site and pedestrians on the adjacent footpath/verge.

4. All vehicles shall enter and exit the site in a forward direction. The largest vehicle permitted on-site shall be restricted to a 10m refuse vehicle.

5. The entry and exit points shall be suitably signed and line-marked to reinforce the desired traffic flow.

6. Stormwater run-off shall be collected on-site and discharged without impacting the safety or integrity of the adjacent road. In addition, longitudinal drainage of the adjacent road shall be maintained (including any required trafficable headwalls) adjacent and across the access to minimise the impact on the integrity and safety of the adjacent road network. Any alterations to the road drainage infrastructure required to facilitate this shall be at the applicant's expense.

Yours sincerely,



MANAGER, TRANSPORT ASSESSMENT
for **COMMISSIONER OF HIGHWAYS**

Environment Protection Authority
GPO Box 2607 Adelaide SA 5001
211 Victoria Square Adelaide SA 5000
T (08) 8204 2004
Country areas 1800 623 445

EPA Reference: PDI 635

19 July 2023

Joshua Skinner
City of Port Augusta
PO Box 1704
Port Augusta South Australia

Josh.Skinner@portaugusta.sa.gov.au

Dear Joshua Skinner

EPA Development Application Referral Response

Development Application Number	23012328
Applicant	John Cerchi
Location	56 Quorn Road, Stirling North
Proposal	Childcare centre (89 places), landscaping, car park, fencing, outbuilding and new wastewater disposal system

This application was referred to the Environment Protection Authority (EPA) by the Regional Assessment Panel at Upper Spencer Gulf in accordance with section 122 of the *Planning, Development and Infrastructure Act 2016*, Schedule 9(3)(9A) of the *Planning, Development and Infrastructure (General) Regulations 2017* and Part 9.1 of the *Planning and Design Code*.

The following response is provided in accordance with section 122(5)(b)(ii) of the Planning, Development and Infrastructure Act.

PROPOSAL

The application proposes a change in the use of land to a more sensitive use as the relevant authority has determined the land, whilst currently vacant, may also have been previously used for broadacre cropping (primary production, being Item 6 of the Land Use Sensitivity Hierarchy of the *State Planning Commission Practice Direction 14 (Site Contamination Assessment) 2021* ('Practice Direction 14')) and the proposed use is a childcare facility (categorised as Educational premises class 1 being Item 1 of the Land Use Sensitivity Hierarchy).

The Site Contamination Declaration Form submitted with the development application (prepared by Andrew Durand of Greencap Pty Ltd and dated 20 June 2023) identifies site contamination exists or may exist as a result of the following activities on adjacent land:

- Service station approximately 20 metres to the northeast (Class 1).

SITE CONTAMINATION ASSESSMENT

The purpose of this referral is to ensure that an appropriate and proportionate assessment of site contamination occurs to ensure land is suitable, or can be made suitable, for the proposed use. Through the referral, the EPA provides direction to the relevant authority on whether they must consider the advice of either a site contamination consultant or a site contamination auditor regarding site suitability.

The EPA's *Site contamination referral decision-making framework* describes how the EPA makes decisions on referred development applications and outlines the preconditions which must exist for a site contamination audit ('audit').

The EPA has considered the following reports and documents lodged with the development application:

- *Preliminary Site Investigation – 56 Quorn Road, Stirling North* dated June 2023 prepared by Greencap Pty Ltd (the PSI report).

The EPA has reviewed and considered the above reports taking into account the relevant guidance provided in the *National Environment Protection (Assessment of site contamination) Measure 1999* and the EPA's *Guidelines for the assessment and remediation of site contamination (2019)*. The EPA has also considered other information considered to be directly relevant to the application and proposed change in land use.

The EPA notes the following in relation to the reviewed information:

- The PSI report site history information shows the site has been vacant or open space since at least the 1950s. Some small structures used for an unknown use were previously present at the site for a relatively short period of time.
- No potentially contaminating activities were identified to have occurred or been undertaken at the site. A service station is located adjacent the site, with a railway line to the south-west.
- No site contamination information is held by the EPA for the adjacent service station site. The EPA has issued an EPA licence for the operation of a petrol station, which requires the site to have a leak monitoring and detection system in place.
- Some minor illegal dumping has occurred at the site.
- No intrusive investigations were undertaken, with the PSI report stating that the absence of significant potentially contaminating activities onsite suggests that the likelihood of complete source-pathway-receptor linkages from onsite sources would be low. However there is some uncertainty around potential impacts from the off-site adjacent service station.

The EPA notes that the pre-conditions for an audit do not exist, taking into account:

- the identification of realistic human health exposure pathways
- the need for remediation to mitigate exposure risk based on the proposed sensitive use.

CONCLUSION

Based on the information submitted with the development application and the information held by the EPA, the EPA is satisfied that the site could be made suitable for the proposed use subject to the directed conditions below. Further, a site contamination consultant is the most appropriate site contamination professional to determine site suitability.

DIRECTION

The relevant authority is directed to attach the following condition to any approval:

1. A certificate of occupancy must not be granted in relation to a building on the relevant site until a statement of site suitability is issued by a site contamination consultant certifying the land is suitable for the proposed use.

The following note provides important information in relation to the development and is requested to be included in any approval:

- The applicant/owner/operator are reminded of its general environmental duty, as required by section 25 of the *Environment Protection Act 1993*, to take all reasonable and practicable measures to ensure that activities on the site and associated with the site (including during construction) do not pollute the environment in a way which causes or may cause environmental harm.

If you have any questions about this response, please contact Alexandra Winston on 8204 2129 or email alexandra.winston@sa.gov.au

Yours faithfully

Hayley Riggs
Delegate
ENVIRONMENT PROTECTION AUTHORITY

DEVELOPMENT NO.:	22041021
APPLICANT:	Phillip Leech
ADDRESS:	22 Field St Whyalla Playford SA 5600
NATURE OF DEVELOPMENT:	Variation to DA 850/101/20 for changes to originally approved structure
ZONING INFORMATION:	**Zones:** • General Neighbourhood **Overlays:** • Affordable Housing • Building Near Airfields • Hazards (Flooding - Evidence Required) • Native Vegetation
LODGEMENT DATE:	13 Jan 2023
RELEVANT AUTHORITY:	Regional assessment panel/Assessment manager at Upper Spencer Gulf Regional Assessment Panel
PLANNING & DESIGN CODE VERSION:	Version 2022.24 22/12/2022
CATEGORY OF DEVELOPMENT:	Code Assessed - Performance Assessed
NOTIFICATION:	Yes
RECOMMENDING OFFICER:	Lucas Trevisan Planning Officer
REFERRALS STATUTORY:	Nil
REFERRALS NON-STATUTORY:	Nil

CONTENTS:

1.0 DETAILED DESCRIPTION OF PROPOSAL:

The development proposes the retrospective approval of an outbuilding to the side of an existing dwelling. The outbuilding is mostly enclosed, with winterlite screening proposed between the top of the existing boundary fence and the top of the outbuilding structure, and a roller-door to the front of the structure. The structure would be perceived as enclosed when viewed externally to the site.
An outbuilding is not a restricted form of development within the General Neighbourhood Zone and as such, is to be Code Assessed, Performance Assessed.

2.0 BACKGROUND:

2.1 Previous application

A similar application was submitted and approved in 2020. Application 850/101/20, lodged and approved under the *Development Act 1993* sought development consent for a 3.5m x 9m x 3m post height open carport. However, due to the natural slope of the site, the elevation closest to the street frontage once completed featured a 3.6m post height. Additionally, cladding had been installed to the side of the structure presenting as an enclosed structure. Ultimately it was decided that a fresh application was required to resolve any variances.

3.0 SUBJECT LAND & LOCALITY:

3.1 Land Description

The subject land is comprised of one allotment with an area of 1094m^2, Certificate of Title 5678/49. The site is a parallelogram where the eastern and western boundaries are angled to match local street networks. The site has 24.91 metres of street frontage to Field Street and 24.57 metres of laneway frontage at the rear of site.
The land currently contains a dwelling and domestic shed.

3.2 Locality

The locality features a predominantly residential character with all but one adjoining allotment supporting an existing residential use. Lot 1949 known as the Field Street Hall, directly opposite Field Street from the subject land is for community use with an outdoor playground and hireable hall facilities.

Image 1 – Subject land and locality

Image 2 – Proposed structure viewed from Field Street

Image 3 – Angled view of structure and associated dwelling

3.3 Zoning

The subject land is located within the General Neighbourhood Zone. The General Neighbourhood Zone encapsulates all adjoining allotments of the subject land.

4.0 PROCEDURAL MATTERS

4.1 Relevant Authority

The Upper Spencer Gulf Regional Assessment Panel is the relevant authority for this planning application under the *Planning, Development and Infrastructure Act 2016.* This is due to the application being subject to a Performance Assessment process under the Planning and Design Code with notification being undertaken and representation having been received.

4.2 Consent Required

Planning Consent

4.3 Category of development

- **PER ELEMENT:**
  Outbuilding (Carport or garage): Code Assessed - Performance Assessed

- **OVERALL APPLICATION CATEGORY:**
  Code Assessed - Performance Assessed

- **REASON**
  P&D Code; Pursuant to Section 107 of the PDI Act 2016.

5.0 PUBLIC NOTIFICATION

5.1 Reason for notification

The notification criteria found within table 5 of the General Neighbourhood Zone excludes the classes of development listed in Column A from notification provided that they do not fall within a corresponding exclusion prescribed in Column B.
For the purposes of this application, the outbuilding element required notification as it fell within the corresponding B column. The outbuilding is proposed to be constructed abutting the allotment boundary with a post height of 3.6 metres, exceeding the 3 metre threshold set within column B.

5.2 Representations

1 representation was received during the notification period.

Supports with concerns

No. of representation	Name	Address	Matters raised	Request to be heard
1	Richard Winkless	24 Field Street, Whyalla	• Fence-line of garage is an “eyesore”. • Takes from the view out of front window and porch. • Depreciation of 24 Field Street.	Yes

Complete representation can be found within the attachments.

5.3 Applicant’s response

In response to the received representation the Applicant has opted to vary the application, installing perforated Winterlite to soften the perceived bulk of the structure and allow natural light and air to flow. A formal response to the representation addressing the proposed winterlite addition has been supplied, prepared by Craig Rowe of C L Rowe & Associates, and can be found within the attachments.

6.0 REFERRALS

6.1 Agency referrals

Agency referrals not required.

6.2 Internal referrals

Internal referrals not required.

7.0 PLANNING ASSESSMENT

The application has been assessed against the relevant provisions of the Planning & Design Code.

7.1 Overlays

Overlay	Desired Outcome	Performance Outcomes	Assessment
Affordable Housing	1 Affordable housing is integrated with residential and mixed use development. 2 Affordable housing caters for a variety of household structures.	N/A	Not applicable. Nature of development does not form affordable housing.
Building Near Airfields	1 Maintain the operational and safety requirements of certified commercial and military airfields, airports, airstrips and helicopter landing sites through management of non-residential lighting, turbulence and activities that may attract or result in the congregation of wildlife.	PO 1.1 PO 1.2 PO 1.3	No impact on airfield safety.
Hazards (Flooding – Evidence Required)	1 Development adopts a precautionary approach to mitigate potential impacts on people, property, infrastructure and the environment from potential flood risk	PO 1.1	Natural ground level slopes away from the proposed outbuilding and existing dwelling. Finished floor level of outbuilding exceeds the minimum allowable 300mm above top of

	through the appropriate siting and design of development.		kerb. No flooding as a result of stormwater will occur.
Native Vegetation	1 Areas of native vegetation are protected, retained and restored in order to sustain biodiversity, threatened species and vegetation communities, fauna habitat, ecosystem services, carbon storage and amenity values.	PO 1.1 PO 1.4	The applicant has appropriately completed and signed a declaration stating that no native vegetation is to be removed. No additional landscaping is proposed, although sufficient landscaping already exists within the site.

The development achieves the Performance Outcomes of the applicable Overlays.

7.2 Land Use

Applicable Performance Outcomes are as follows:

> Zone - *PO 1.1*
> *Predominantly residential development with complementary non-residential uses that support an active, convenient, and walkable neighbourhood.*

The proposal is considered acceptable from a land use perspective as the outbuilding is specifically envisaged within the zone as per DPF 1.1, as an outbuilding is a listed land use. The proposed outbuilding upholds the established character within the locality.

7.3 Building Height and Setbacks

The outbuilding is to be attached to the western side of the existing dwelling. Due to the existing slope of the land, the outbuilding has achieved a 3.6m height at the southern elevation to allow a typical height towards the northern elevation.
Performance Outcomes relating to the building heights and setbacks are as follows:

> *Zone - PO 5.1*
> *Buildings are setback from primary street boundaries to contribute to the existing/emerging pattern of street setbacks in the streetscape.*
> *Zone - PO 8.1*
> *Building walls are set back from side boundaries to provide:*
> *a) separation between buildings in a way that contributes to a suburban character*
> *and*
> *b) access to natural light and ventilation for neighbours.*

What is proposed meets all relevant Performance Outcomes relating to the building height and setbacks.

As the subject allotment and all neighbouring allotments with the same street frontage are angled to match the existing street networks, the built form of the locality has naturally developed a staggered setback. This staggered development is evident for dwellings and ancillary outbuilding structures.

While the structure is proposed to be abutting the side boundary, the staggered setback of the street provides an appropriate setback between what is proposed and the existing dwelling at 24 Field Street. The proposed will have no negative impact on the access of natural light and ventilation to adjoining allotments.

7.4 Design and Appearance

The proposed structure is of a typical flat-roof carport/garage design. The structure will not exceed the height of the eaves of the associated dwelling.

Performance Outcomes relating to the design and appearance are as follows:

> *Zone - PO 3.1*
> *Building footprints allow sufficient space around buildings to limit visual impact, provide an attractive outlook and access to light and ventilation.*
> *Zone - PO 11.1*
> *Residential ancillary buildings are sited and designed to not detract from the streetscape or appearance of primary residential buildings on the site or neighbouring properties.*
> *Zone - PO 11.2*
> *Ancillary buildings and structures do not impede on-site functional requirements such as private open space provision, car parking requirements or result in over-development of the site.*
> *Design in Urban Areas – PO 20.3*
> *The visual mass of larger buildings is reduced when viewed from adjoining allotments or public streets.*

The structure is cohesive with the dwelling to which it is associated. Through the setbacks behind the building line of the dwelling and from the prominent front porch, and the paperbark colour blending with the dwelling, the proposed structure would remain secondary to the dwelling and would not form a prominent feature of the site. The visual mass of the dwelling exceeds that of the proposed outbuilding.

CONCLUSION

The application proposes an outbuilding to be constructed at the western side of the existing dwelling. The outbuilding would have a floor area of 40m^2, a post height of 3m at the northern end, and achieving a post height of 3.6m at the southern end due to the existing natural slope of the allotment. The form of development is appropriate within the General Neighbourhood zone.

From a design and built form perspective, the outbuilding balances the setbacks and design standards sought by the Planning and Design Code with the site constraints and achieves an outcome which does not detract from the primary dwelling of the land, nor the dwellings of neighbouring allotments.

Overall, the development is appropriate for the site and the locality and satisfies the relevant Performance Outcomes of the Planning and Design Code. As such, it is my professional opinion that this proposal warrants the granting of Planning Consent, subject to the recommended conditions.

RECOMMENDATION

It is recommended that the Upper Spencer Gulf Regional Assessment Panel resolves that:

1. Pursuant to Section 107(2)(c) of the Planning, Development and Infrastructure Act 2016, and having undertaken an assessment of the application against the Planning and Design Code, the application is NOT seriously at variance with the provisions of the Planning and Design Code; and

2. Development Application Number 22041021, by Phillip Leech is granted Planning Consent subject to the following conditions:

CONDITIONS

Conditions imposed by the planning authority:

Condition 1
The development granted Planning Consent shall be undertaken and completed in accordance with the stamped plans and documentation, except where varied by conditions below (if any).

Condition 2
That all stormwater design and construction shall be in accordance with Australian Standards and recognised engineering best practices to ensure that stormwater does not adversely affect any adjoining property.

Condition 3
The external colours of the structure herein approved are to match or blend in with the existing dwelling to the reasonable satisfaction of the Council.

ADVISORY NOTES

Planning Consent

Advisory Note1
The applicant has a right of appeal against the conditions which have been imposed on this Planning Consent. Such an appeal must be lodged at the Environment, Resources and Development Court within two months from the day of receiving this notice or such longer time as the Court may allow. The applicant is asked to contact the Court if wishing to appeal. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide, (telephone number 8204 0289).

OFFICER MAKING RECOMMENDATION:

Name: Lucas Trevisan
Title: Planning Officer
Date: 3 October 2023

JELFS BUILDING DESIGN
Victor Harbor & Whyalla
PO Box 644 Victor Harbor SA 5211
08 8552 5933 0408 110 735
info@jbdesign.net.au
www.jbdesign.net.au

WORKING DRAWINGS

PROPOSED CARPORT

P LEECH
22 FIELD STREET
WHYALLA PLAYFORD

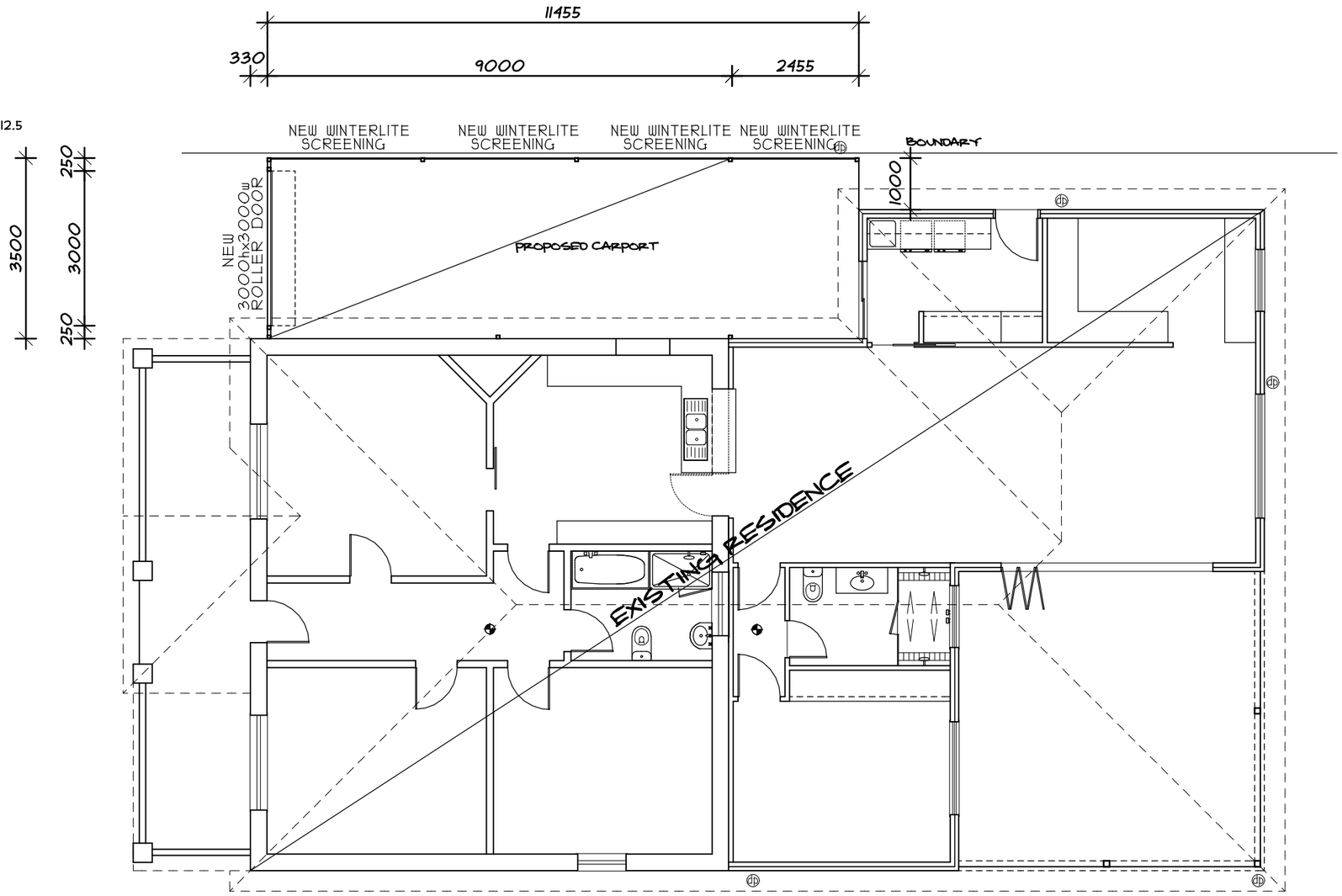
APPROVED PLAN

SHEET:
1 OF 4
DATE :
13th SEPT '23

E:\JB\1_2020\Leech Phil Chelsa 22 Field Street Whyalla\leech13carport

NOTE :

TO BE BUILT IN STRICT ACCORDANCE WITH BCA
SMOKE ALARMS TO AS 3786 INTERCONNECTED TO BCA PART 3.7.2.2
CONTROL JOINTS TO ENGINEERS DETAIL
TIE DOWN TO TRUSS MANUFACTURERS SPECS.
GLAZING TO BE SELECTED AND INSTALLED IN ACCORDANCE WITH AS 1288
LIFT OFF HINGES TO WC TO COMPLY WITH BCA
BUSHFIRE REGS TO AS3959 EXCLUDED
ALL EXTERNAL FIXTURES IN ACCORDANCE WITH BCA CORROSION PROTECTION
ARTICULATED LAYOUT IN STRICT ACCORDANCE WITH ENGINEERS BRICKWORK ARTICULATION LAYOUT
ALL BI-FOLD'S LINTEL SIZE TO BE CONFIRMED AFTER BI-FOLD SELECTION
ALL BUILDING FABRIC THERMAL INSULATION TO SATISFY BCA 3.12.1.1
BUILDING SEALING TO SATISFY BCA 3.12.3
BUILDING SERVICES INCLUDING HWS, INSULATION OF SERVICES AND LIGHTING TO SATISFY BCA 3.12.5
A RESTRICTIVE DEVICE FOR OPENABLE WINDOWS WHERE THE FLOOR BELOW THE WINDOW IS MORE THAN 2m ABOVE THE SURFACE BENEATH AND THE LOWEST LEVEL OF THE WINDOW OPENING IS LESS THAN 1.7m ABOVE FLOOR TO BCA-P2.5.2



ELEVATION DIRECTIONS

AREAS:

CARPORT ext	40.09m²
TOTAL	40.09m²

FLOOR PLAN
1 : 100

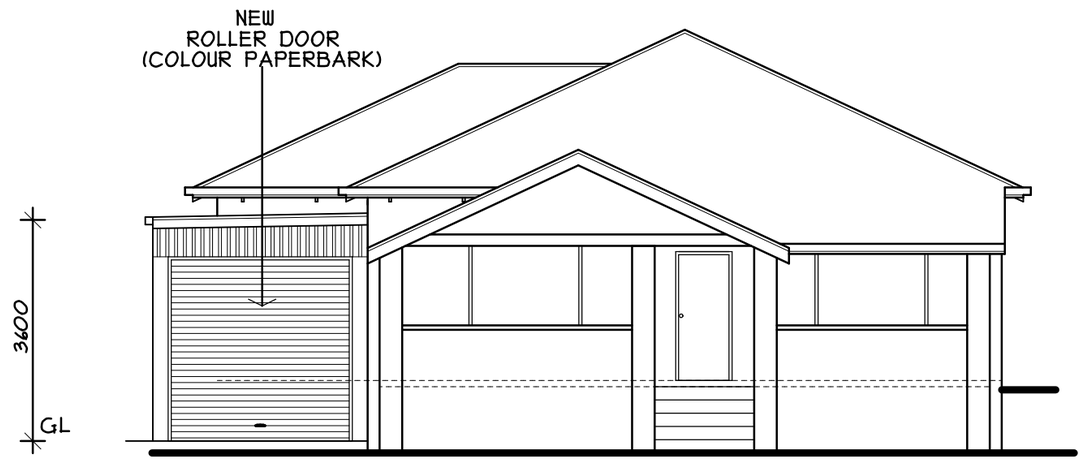
CONFIRM ALL EXISTING BUILDING WORKS, HEIGHTS, PITCHES AND DIMENSIONS PRIOR TO NEW CONSTRUCTION

APPROVED PLAN

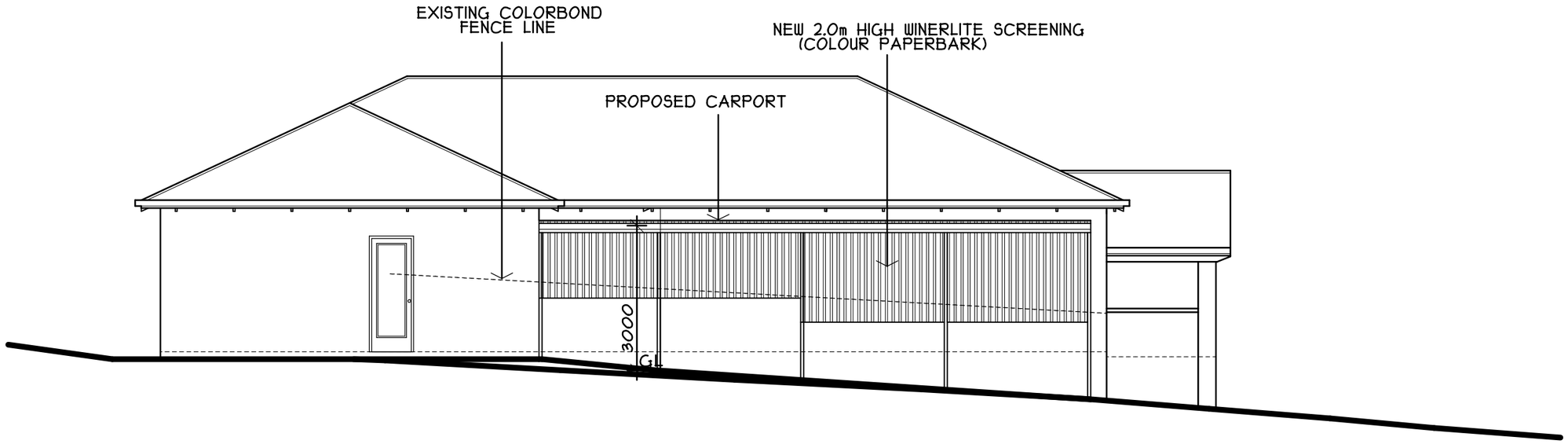
PROPOSED CARPORT
FOR P LEECH
AT: 22 FIELD STREET
WHYALLA PLAYFORD
E:\JBV_2020\Leech PM Chelsa 22 Field Street Whyalla\leech3carport

SHEET: 2 OF 4
DATE : 13th SEPT '23

JELFS BUILDING DESIGN



ELEVATION 1
1 : 100



ELEVATION 2
1 : 100

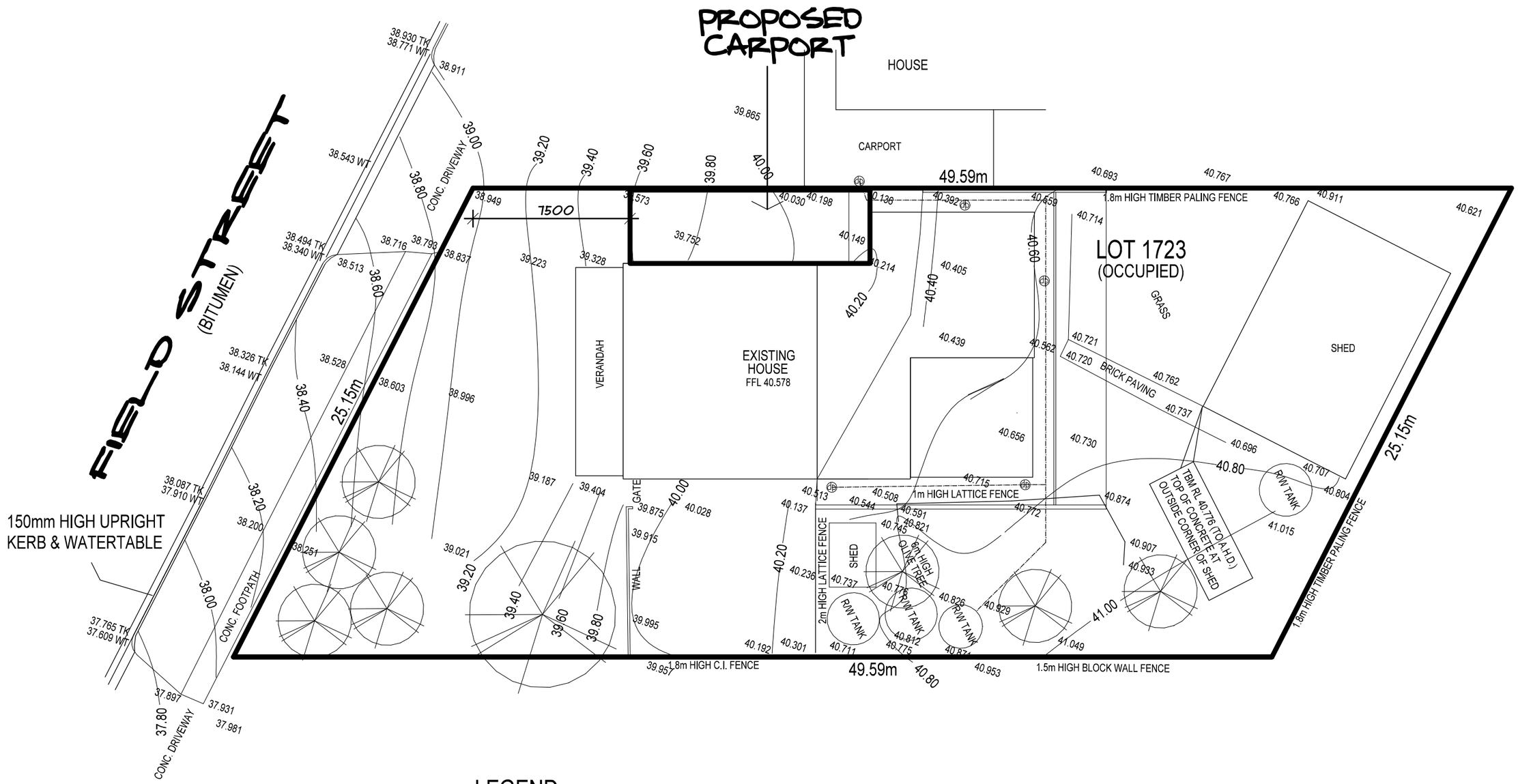
CONFIRM ALL EXISTING BUILDING WORKS, HEIGHTS, PITCHES AND DIMENSIONS PRIOR TO NEW CONSTRUCTION

APPROVED PLAN

PROPOSED CARPORT
FOR P LEECH
AT: 22 FIELD STREET
WHYALLA PLAYFORD
E:\JBVL_2020\Leech Phil Chelsa 22 Field Street Whyalla\leech3carport

SHEET: 3 OF 4
DATE : 13th SEPT '23

JELFS BUILDING DESIGN



LEGEND

16.27	EXISTING SPOT LEVELS
16.00	EXISTING CONTOUR LEVELS
TK	TOP OF KERB
WT	WATERTABLE INVERT
W/M	WATER METER
SAPN	SA POWER NETWORK BOX
T	TELSTRA PIT
S.I.P.	SEWER IP
	LIGHT POLE
	BOREHOLE LOCATION
STK	STAKE / MARKER

SITE PLAN

1 : 200

NOTE:

THIS IS AN ENGINEERING SURVEY ONLY

- TO LOCATE THE EXACT BOUNDARY, A BOUNDARY IDENTIFICATION SURVEY WILL BE REQUIRED.
- ANY DIMENSIONS INDICATED TO BE VERIFIED BY THE BUILDING CONTRACTOR.
- THE EXACT LOCATION OF ALL SERVICES AND SITE FEATURES INDICATED ON THIS PLAN ARE TO BE CONFIRMED BY THE BUILDING CONTRACTOR.
- IT REMAINS THE RESPONSIBILITY OF THE BUILDING CONTRACTOR TO LOCATE ALL UNDERGROUND SERVICES PRIOR TO COMMENCEMENT OF ANY BUILDING WORK.

50m² OF ROOF AREA TO BE COLLECTED IN A 10000L MIN. RAINWATER TANK PLUMBED TO AT LEAST A WATER CLOSET, OR WATER HEATER, OR ALL THE LAUNDRY COLD WATER OUTLETS. OVERFLOW CONNECTED TO STORMWATER DRAIN. TO COMPLY WITH BCA REQUIREMENTS

dp = 80mm DIAM. PVC DOWNPIPE

---- STORMWATER TO EXISTING RAINWATER TANK VIA 100mm DIAM PVC SEALED SYSTEM, OVERFLOW DIVERTED TO STREET WATER TABLE CONNECTING TO EXISTING DRAIN

CONFIRM ALL EXISTING BUILDING WORKS, HEIGHTS, PITCHES AND DIMENSIONS PRIOR TO NEW CONSTRUCTION

APPROVED PLAN

PROPOSED CARPORT
FOR P LEECH
AT: 22 FIELD STREET
WHYALLA PLAYFORD
E:\JBVL_2020\Leech Phil Chelsa 22 Field Street Whyalla\leech3carport

SHEET: 4 OF 4
DATE : 13th SEPT '23

JELFS BUILDING DESIGN

Details of Representations

Attachment 2

Application Summary

Application ID	22041021
Proposal	Variation to DA 850/101/20 for changes to originally approved structure
Location	22 FIELD ST WHYALLA PLAYFORD SA 5600

Representations

Representor 1 - Richard Winkless

Name	Richard Winkless
Address	24 Field Street WHYALLA PLAYFORD SA, 5600 Australia
Submission Date	07/04/2023 10:51 AM
Submission Source	Online
Late Submission	No
Would you like to talk to your representation at the decision-making hearing for this development?	No
My position is	I support the development with some concerns

Reasons
The current fence line of the garage is an eyesore from our view out of out front window and front porch. The current design will depreciate our property.

Attached Documents

Attachment 3

C L Rowe & Associates

Urban & Regional Planners
Local Government Consultants

PO Box 573
Goolwa SA 5214

t: 0430 348 377
e: clrowe@internode.on.net

13 September 2023

Lucas Trevisan
City of Whyalla
PO Box 126
WHYALLA SA 5600

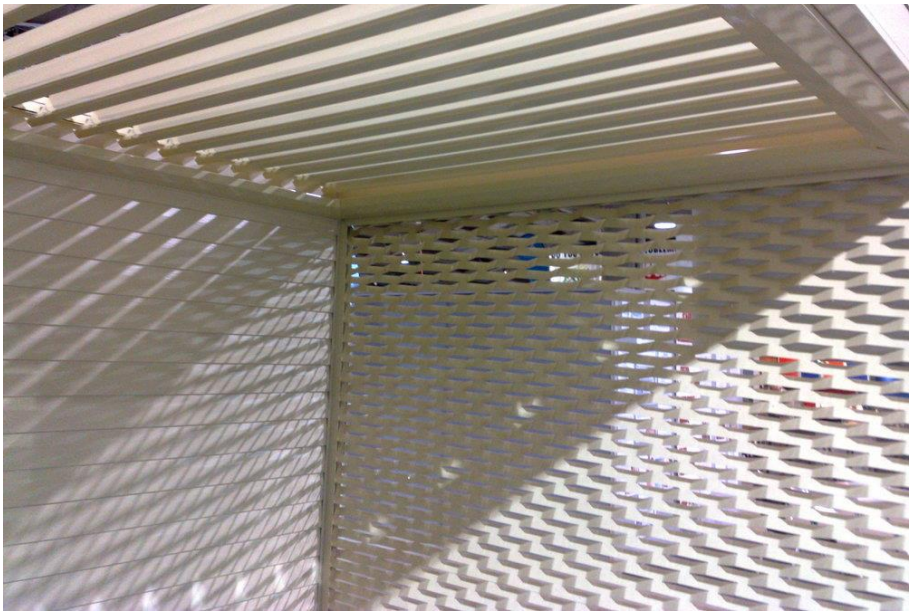
Dear Lucas

Re: Development Application 22041021 – Variation to previously approved structure, 22 Field Street, Whyalla Playford (Phillip Leech).

I refer to the representation submitted by Richard Winkless in relation to the above development proposal, and your subsequent correspondence of the 3rd May 2023 regarding the iron screening which has been erected along the side of the carport structure.

It is noted that Mr Winkless is supportive of the proposed development, but expressed concerns regarding the aforementioned iron screening.

Please be advised that the applicant now proposes to remove the existing iron screening and replace it with "Winterlite" aluminium screening (refer indicative images). The screening will be ("Paper bark") in colour to match the existing fencing.



Amended plans depicting the use of the "Winterlite" screening have been provided.

I trust the information provided herein will be of some assistance in the assessment process.

Should you require any additional information or wish to discuss the subject development application, please do not hesitate to contact the undersigned on telephone 0430 348 377.

Yours faithfully

Craig Rowe MPIA
C L ROWE AND ASSOCIATES PTY LTD

ANNUAL REPORT
2022-2023

UPPER SPENCER GULF
REGIONAL ASSESSMENT PANEL

The Upper Spencer Gulf Regional Assessment Panel consists of the Whyalla City Council, the Port Augusta City Council and the Port Pirie Regional Council.

The Upper Spencer Gulf Regional Assessment Panel Terms of Reference requires that the Assessment Manager prepares and presents an annual report detailing the activities of the USGRAP to each of the member Councils prior to the 30th September each year.

Governance

A review of the USGRAP Terms of Reference and Service Agreement documentation is currently being undertaken to identify if any amendments are required.

During the reporting period, all members have applied for renewal of their accreditation status as planning level 2. This is the minimum accreditation level required to sit as a member of a panel in South Australia as per the Accredited Professional Scheme. All members have since secured their accreditation for a further 12 months and will be reviewed again in 2024.

Current Members term is due to expire in August 2024, therefore a report will be prepared for the USGRAP Councils to seek direction in relation to the membership expression of interest of extension process for the next 2 year term.

USGRAP Membership

The USGRAP membership is comprised of a five- member panel that does not consist of any Council Members. The members are as follows:

Stewart Payne – Presiding Member
Fiona Barr – Independent Member
Rob Donaldson- Independent Member
Angela Stokes - Independent Member
Nick Stassinopoulos - Independent Member

Panel Meetings and Attendance

The USGRAP met 6 times during the reporting period and determined 8 items. The Panel granted consent for 7 applications and refused 1 application.

Panel members attendance during the reporting period is summarised below:

Member	Meetings Held	Meetings Attended
Stewart Payne	6	6
Fiona Barr	6	6
Rob Donaldson	6	6
Angela Stokes	6	6
Nick Stassinopoulos	6	6

Appeals

No appeals were lodged for any decisions of the USGRAP as the relevant authority during the reporting period.

No requests were made through the USGRAP for review of any decisions made by the Assessment Manager/delegates.

Delegated Decisions

During the reporting period, the USGRAP were the relevant authority for a significantly larger number of development applications than what was presented to the Panel as they were the subject of notification, however determined under delegation of the Assessment Manager/delegates. These applications may have been of a more minor nature and did not receive representation during the notification period, or staff were able to satisfy representors in relation to their concerns/queries regarding the development. Applications of this nature can be determined under delegation, but only without valid representation being received.

Applications that require notification and have a development value greater than 5 million dollars, or in the opinion of the Assessment Manager are of major significance to the Council area, must be referred to the USGRAP for determination even if no representation is received as per the Schedule of Conditions of the USGRAP delegations register. These forms of applications are considered to be of a nature that warrants the USGRAP determination.

Statistical Snapshot - Reporting Period

Applications Submitted per Council and Development Cost

Council	**DA's Submitted**	**Development Cost**
Port Augusta City Council	222	$159.06 million
Port Pirie Regional Council	268	$343.85 million
Whyalla City Council	297	$58.12 million
TOTAL	**787**	**$561.03 million**

Consent Category across the USGRAP Councils

Development Category	No.	%
Accepted	190	21.96%
Deemed to Satisfy	112	12.94%
Performance Assessed	561	64.85%
Exempt	2	0.25%
Restricted	0	0.00%
TOTAL	**865**	**100%**

Assessment Manager

The Assessment Manager is responsible for the continued governance and operations of the USGRAP. The Assessment Manager also supports the recruitment of new staff across the three Councils and provides delegations appropriately in accordance with skills and experience to ensure that thorough and considered planning decisions are made across the USGRAP.

The Assessment Manager provides advice, support and guidance to all planning staff and management across the three Councils as well as reviewing and amending delegations as appropriate. The Assessment Manager is the relevant authority for all applications that are Performance Assessed (not requiring notification) and Deemed to Satisfy, and provides delegation to staff across the USGRAP Councils.

The role of Assessment Manager has transitioned on the 19th of March 2023 from David Altmann at Development Answers, who was fundamental in the successful establishment of the USGRAP, to Jodie Perone who holds a Planning Level 1 Accreditation as required to hold the position of Assessment Manager. The transition now provides for local management as was the intention of the Councils when they resolved to establish the Regional Assessment Panel.

Host Council

Whyalla City Council was Host Council for the last 12 months, this arrangement will continue into the new year. Thanks must be extended to Cristina Schubert (Technical Officer Development Assessment) and Joanne Blayney (Executive Coordinator – City Development) for their assistance in the preparation and distribution of Agendas and Minutes, calendar arrangements and setting up for meetings, and administration of payment for members attendance.

Conclusion

The staff and consultants across the three Councils have assessed a variety of complex applications for presentation to the Panel for determination over the last 12 months. The Presiding Member and Independent Members have been professional in their conduct in determining applications and respectful when dealing with staff, applicants and representors alike.

I thank the members, staff and Management for their support and cooperation which has ensured the success of the panel over the last 12 months, and I look forward to working with the team for the next 12 months.

Jodie Perone
Assessment Manger
Upper Spencer Gulf Regional Assessment Panel
24 September 2023