APPLICATION ON NOTIFICATION – CATEGORY 3

Applicant:	Leyton Properties PTY Ltd
Development Number:	490/E010/19
Nature of Development:	Proposed car wash, vacuum bays and signage.
Type of Development:	Merit
Zone / Policy Area:	Residential (Gawler East) –Mixed Use Centre Policy Area 3
Subject Land:	Calton Road, Gawler East, Lot 9010 CT 6205/146 (Proposed lots 2044 and 2050 in DA 490/D026/19)
Contact Officer:	Hannah Connell
Phone Number:	7109 7828
Start Date:	17 January 2020
Close Date:	5.00pm Monday, 3 February 2020

During the notification period, hard copies of the application documentation can be viewed at the Department of Planning, Transport and Infrastructure, Level 5, 50 Flinders St, Adelaide, during normal business hours. Application documentation may also be viewed during normal business hours at the local Council office (if identified on the public notice).

Written representations must be received by **5.00pm Monday, 3 February 2020** and can either be posted, faxed, hand-delivered or emailed to the State Commission Assessment Panel.

Any representations received after the close date will not be considered.

Postal Address:

The Secretary
State Commission Assessment Panel
GPO Box 1815
ADELAIDE SA 5001

Street Address:

Development Division
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders St
ADELAIDE SA 5000

Email Address:

scapreps@sa.gov.au

Fax Number: (08) 8303 0753

South Australian
DEVELOPMENT ACT, 1993
REPRESENTATION ON APPLICATION – CATEGORY 3

Applicant:	Leyton Properties PTY Ltd
Development Number:	490/E010/19
Nature of Development:	Proposed car wash, vacuum bays and signage
Development Type:	Merit
Zone / Policy Area:	Residential (Gawler East)- Mixed Use Centre Policy Area 3
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	(Proposed lots 2044 and 2050 in DA 490/D026/19)
Contact Officer:	Hannah Connell
Phone Number:	7109 7828
Close Date:	5.00pm Monday 3rd February 2020

My Name: _____ **My phone number**: _____

Primary method(s) of contact: **Email:** _____

Postal Address: _____ **Postcode:** _____

You may be contacted via your nominated PRIMARY METHOD(s) OF CONTACT if you indicate below that you wish to be heard by the State Commission Assessment Panel in support of your submission.

My interests are:
(please tick one)

- ☐ owner of local property
- ☐ occupier of local property
- ☐ a representative of a company/other organisation affected by the proposal
- ☐ a private citizen

The address of the property affected is: _____ **Postcode** _____

My interests are:
(please tick one)

- ☐ I support the development
- ☐ I support the development with some concerns
- ☐ I oppose the development

The specific aspects of the application to which I make comment on are: _____

_____

_____

_____

I: *(please tick one)*

- ☐ wish to be heard in support of my submission
- ☐ do not wish to be heard in support of my submission
  (Please tick one)

By: *(please tick one)*

- ☐ appearing personally
- ☐ being represented by the following person
  (Please tick one)

Signature: _____

Date: _____

Return Address: The Secretary, State Commission Assessment Panel, GPO Box 1815, Adelaide, SA 5001 /or
Email: scapreps@sa.gov.au

STATE COMMISSION ASSESSMENT PANEL

A COMMITTEE OF THE STATE PLANNING COMMISSION

Why have I received this notice?

The role of the State Commission Assessment Panel (SCAP) is to independently assess and determine specified kinds of development applications in South Australia in accordance with the *Development Act 1993*.

Some types of development application require public notification. This is determined by the relevant Development Plan and Schedule 9 of the *Development Regulations 2008*. Development applications fall into one of the following categories:

- Category 1: No public notification
- Category 2: Notice of the application to be given to an owner/occupier of adjacent land to where the development is proposed. A person contacted in this way has the right to make a written representation to the SCAP. Representations from those with a right to be heard must be taken into consideration by SCAP when assessing the development application.
- Category 3: Written notice of the application to be given to an owner/occupier of adjacent land to where the development is proposed and to any owner/occupier of land which the SCAP believes would be directly affected to a significant degree if the development were to proceed. Notice by newspaper advertisement to be given to the general public.

What is a valid representation?

Your representation must be made within the public notification period as described upon the notice you have received. Pursuant to the *Development Act 1993*, this period is 10 business days from the date notice is given.

Your representation must be signed, dated, set out the reasons for the representation and include your full name and address contact details.

What can I comment on?

It is important to be mindful that your representation should avoid raising matters that are not relevant to the planning assessment of the application. A planning assessment can only have regard to the relevant provisions of the Development Plan. A representation can raise issues both in support and in opposition to a development.

You can access the relevant Development Plan here: https://www.sa.gov.au/topics/planning-and-property/development-plans

What happens next?

All valid representations received through either a Category 2 or Category 3 process are forwarded to the applicant for a response and taken into consideration by a Planning Officer from the Department of Planning, Transport and Infrastructure in preparing their assessment.

Pursuant to the *Freedom of Information Act 1991* and *Development Act 1993* any information provided may become part of a public document and may be published as an attachment to the Planning Officer's report.

If you have indicated that you wish to be heard you will receive an invitation to appear personally before the SCAP, or be represented by counsel, solicitor or agent. This invitation must give five (5) business days notice of the meeting but, dependent on other issues to be assessed, this meeting may not occur for an indefinite period of time after your representation is made. Unfortunately, the meeting time and date cannot be adjusted to accommodate all attendees.

If you have not indicated that you wish to be heard in support of your submission, you will not receive any further correspondence on this matter until a decision is made.

What is a SCAP meeting?
SCAP meetings are generally held on the second and fourth Thursdays of each month in the Kardi Munaintya meeting room on the ground floor at 50 Flinders Street, Adelaide.

The SCAP will be assessing the development application against the relevant Council Development Plan. To assist, an assessment report will be prepared by a Planning Officer from the Department of Planning, Transport and Infrastructure. This report is publicly available from https://www.saplanningcommission.sa.gov.au/scap/agendas_minutes on the Monday afternoon prior to the meeting. This report will include a copy of your representation.

Representors wishing to be heard will be given the opportunity to make a short (5 minute maximum) verbal presentation to the SCAP. Please note that Representors are only provided with the opportunity to make a verbal presentation at the initial hearing of an application. At this meeting, the SCAP may also hear comments from the applicant, relevant agencies, and Council.

How do I know what decision is made?
You will be able to ascertain the outcome of the SCAP's deliberation when the meeting minutes are made available on the SCAP website on the afternoon of the day after a meeting.

Once a decision is made by the SCAP, valid representors will be sent a copy of the Decision Notification Form which includes any conditions relevant to the application.

Note: Dependent on the assessment process for the application, and if no Representors indicate that they wish to be heard, a decision may be made by a Delegate of the SCAP without the application being heard at a SCAP meeting.

Appeal rights
If the proposal is a Category 3 application, then you can appeal a decision made by the SCAP if you have made a valid representation

Such an appeal must be lodged at the Environment, Resources and Development Court fifteen (15) business days from the date of decision. The Court is located in the Sir Samuel Way Building, Victoria Square, Adelaide (telephone number 8204 0300).

Representors do not have a right of appeal in relation to Category 2 development applications.

For more information
Contact the SCAP Secretariat on:

Telephone: 1800 752 664 (Select Option 4)
Direct: 7109 7061
E-mail: scapadmin@sa.gov.au

Postal: GPO Box 1815, Adelaide SA 5001

Street: Level 5, 50 Flinders Street, Adelaide SA 5000

Website: https://www.saplanningcommission.sa.gov.au/scap

DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: Town of Gawler

APPLICANT: Leyton Properties Pty Ltd

Postal Address: Level 1, 22-26 Vardon Ave

Adelaide SA 5000

Owner: Five Ames Farming Pty Ltd

Postal Address: 63 Gawler Terrace, Gawler South

SA 5118

BUILDER: N/A

Postal Address: _____

Licence No: _____

CONTACT PERSON FOR FURTHER INFORMATION

Name: Kieron Barnes - Ekistics Planning & Design

Telephone: 7231 0286 [work] _____ [Ah]

Fax: _____ [work] _____ [Ah]

EXISTING USE: Vacant

FOR OFFICE USE

Development No: _____

Previous Development No: _____

Assessment No: _____

☐ Complying	Application forwarded to DA
☐ Non Complying	Commission/Council on
☐ Notification Cat 2	/ /
☐ Notification Cat 3	Decision: _____
☐ Referrals/Concurrences	Type: _____
☐ DA Commission	Date: / /

	Decision required	Fees	Receipt No	Date
Planning:				
Building:				
Land Division:				
Additional:				
Development Approval				

DESCRIPTION OF PROPOSED DEVELOPMENT: Proposed car wash, vacuum bays, landscaping and signage

LOCATION OF PROPOSED DEVELOPMENT: Proposed Lots 2044 and 2050 in DA 490/D026/19

House No: _____ Lot No: ____ Street: _____ Town/Suburb: Gawler East

Section No [full/part] _____ Hundred: _____ Volume: _____ Folio: _____

Section No [full/part] _____ Hundred: _____ Volume: _____ Folio: _____

LAND DIVISION:

Site Area [m^2] _____ Reserve Area [m^2] _____ No of existing allotments _____

Number of additional allotments [excluding road and reserve]: _____ Lease: **YES** ☐ **NO** ☐

BUILDING RULES CLASSIFICATION SOUGHT: _____ Present classification: _____

If Class 5,6,78 or 9 classification is sought, state the proposed number of employees: Male: ____ Female: _____

If Class 9a classification is sought, state the number o persons for whom accommodation is provided: _____

If Class 9b classification is sought, state the proposed number of occupants of the various spaces at the premises: _____

DOES EITHER SCHEDULE 21 OR 22 OF THE DEVELOPMENT REGULATIONS 2008 APPLY? **YES** ☐ **NO** ☒

HAS THE CONSTRUCTION INDUSTRY TRAINING FUND ACT 2008 LEVY BEEN PAID? **YES** ☐ **NO** ☒

DEVELOPMENT COST [do not include any fit-out costs]: $ 450,000

I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the Development Regulations 2008.

SIGNATURE: _____ Dated: / /

Government of South Australia
Department of Planning, Transport and Infrastructure

Product	Register Search (CT 6205/146)
Date/Time	22/08/2018 09:41AM
Customer Reference	a010816
Order ID	20180822001699
Cost	$28.75

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 6205 Folio 146

Parent Title(s) CT 6186/895

Creating Dealing(s) VE 12885392

Title Issued 26/03/2018 **Edition** 2 **Edition Issued** 06/07/2018

Estate Type

FEE SIMPLE

Registered Proprietor

FIVE AMES FARMING PTY. LTD. (ACN: 609 760 536)
OF 63 GAWLER TERRACE GAWLER SOUTH SA 5118

Description of Land

ALLOTMENT 9010 DEPOSITED PLAN 114845
IN THE AREA NAMED GAWLER EAST
HUNDRED OF BAROSSA

Easements

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED A ON D114845 TO THE MINISTER FOR INFRASTRUCTURE (T 1374106)

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED C ON D114845 TO TRANSMISSION LESSOR CORPORATION OF 1 UNDIVIDED 2ND PART (SUBJECT TO LEASE 9061500) AND ELECTRANET PTY. LTD. OF 1 UNDIVIDED 2ND PART (T 2370109)

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED E ON D114845 TO ELECTRANET PTY. LTD. (TG 12371822)

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED T ON D114845 (TG 9662213)

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED U ON D114845 (TG 10297076)

SUBJECT TO SERVICE EASEMENT(S) OVER THE LAND MARKED H ON D114845 FOR DRAINAGE PURPOSES TO THE COUNCIL FOR THE AREA (223LG RPA)

SUBJECT TO SERVICE EASEMENT(S) OVER THE LAND MARKED J ON F252234 FOR ELECTRICITY SUPPLY PURPOSES TO DISTRIBUTION LESSOR CORPORATION (SUBJECT TO LEASE 8890000) (223LG RPA)

SUBJECT TO SERVICE EASEMENT(S) OVER THE LAND MARKED K(T/F) ON F252234 FOR ELECTRICITY SUPPLY PURPOSES TO DISTRIBUTION LESSOR CORPORATION (SUBJECT TO LEASE 8890000) (223LG RPA)

Schedule of Dealings

Dealing Number	Description
11764743	AGREEMENT UNDER DEVELOPMENT ACT 1993 PURSUANT TO SECTION 57A
12459905	AGREEMENT UNDER DEVELOPMENT ACT, 1993 PURSUANT TO SECTION 57(2)
12915311	MORTGAGE TO NATIONAL AUSTRALIA BANK LTD. (ACN: 004 044 937)

Product	Register Search (CT 6205/146)
Date/Time	22/08/2018 09:41AM
Customer Reference	a010816
Order ID	20180822001699
Cost	$28.75

Notations

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

ekistics

26 November 2019 REF No.: 00846-002

State Commission Assessment Panel
Level 5, 50 Flinders Street
ADELAIDE SA 5000

Attention: Ms Hannah Connell
By Email: Hannah.Connell@sa.gov.au

Dear Hannah,

RE: DEVELOPMENT APPLICATION FOR A PROPOSED CAR WASH AT SPRINGWOOD, CALTON ROAD GAWLER EAST – PROPOSED LOTS 2044 & 2050 IN DA 490/D026/19

1. Background

Ekistics Planning & Design acts for Leyton Property Pty Ltd who are seeking to construct a car wash and vacuum bays on proposed lots 2044 and 2050 at Calton Road, Gawler East. It is intended that the car wash will complement a petrol filling station and shop which will be located on the same site and is progressing via a separate development application (490/E008/19).

By letter dated 15 November 2018, the State Coordinator General advised that the State Commission Assessment Panel (SCAP) would be the relevant authority to assess all of the remaining portions of the Springwood development. This 'call-in' by the State Coordinator General was conditional on the development proceeding via a series of 'Development Packages'. The first Development Package included a number of land divisions as well as the Springwood Sales Centre and the Springwood 'Supermarket and Speciality Shops'.

Development Package 2 included an application for a petrol filling station (490/E008/19) as well as a separate application for a childcare centre on proposed Lot 2048 (DA 490/E009/19). By email dated 8 November 2019, the State Coordinator General confirmed that the proposed car wash could also be lodged as part of Development Package 2 and assessed by SCAP (refer to ***Appendix 1***).

This letter provides:

- Information in relation the subject land and locality;
- A description of the proposed development;
- An outline of the relevant procedural matters; and
- An assessment of the proposal against the key, relevant provisions of the Town of Gawler Development Plan.

The assessment has been based on the following plans and documentation which also form part of the Development Application and is appended as follows:

- ***Appendix 2:*** Proposed plans and elevations prepared by Brown Falconer Architects;
- ***Appendix 3:*** Traffic and Parking Report prepared by CIRQA Traffic Consultants;
- ***Appendix 4:*** Environmental Noise Assessment prepared by Sonus; and
- ***Appendix 5:*** Stormwater Management Plan prepared by Sagero.

Please note that Appendices 3 to 5 also refer to the proposed petrol filling station which, as mentioned previously, is proceeding via a separate development application. This provides a clearer picture of how the site will ultimately operate in terms of traffic movements, stormwater management and acoustic treatments.

2. Subject Site

The subject site comprises proposed Allotments 2044 and 2050 in Development Application 490/D026/19 see ***Figures 2.1*** and ***2.2***.

Figure 2.1 *Associated land division – subject site is Lots 2044 and 2050*

Figure 2.2 *Associated land division (enlargement) – subject site is Lots 2044 and 2050*

Proposed Lots 2044 and 2050 have a combined area of 4,075m^2 and an irregular shape. The subject site has a maximum depth of 50.37m and a maximum width of 94.53m. The subject site will sit on a prominent corner at the junction of the Springwood north-south collector road and Calton Road.

3. Proposed Development

3.1 Description of Development

The proposed development involves the construction of a car wash and associated vacuum bays, signage and landscaping. The car wash and vacuum bays will only operate between the hours of 7:00am and 10:00pm.

A copy of the architectural plans and elevations prepared by Brown Falconer architects are contained within ***Appendix 2***. Key features of the development are summarised below:

- A drive-through car wash consisting of four open manual bays, a plant room and two enclosed auto-wash bays with a flat roof and precast concrete walls with a maximum height of 6.2 metres;
- Four vacuum bays to be located to the north of the car wash with vacuums on concrete plinths;
- 'Height bars' to be located to the south of the car wash to restrict the entry of 'over height' vehicles to the auto-wash bays;
- A new crossover to the proposed north-south collector road providing left-in, right-in and left out movements;
- A new crossover to Calton Road providing left in, right in and left out movements;

- Signage in the form of:
  - Three flat wall signs measuring 2.54m by 3.7m to be located on the northern, southern and eastern elevations of the proposed car wash;
  - One 'car wash' flat wall sign measuring 4.99m by 0.9m to be located on the eastern elevation of the car wash building;
- A stormwater management system which will manage water across the site and will include the following elements:
  - A Class 1 separator and treatment device such as a SPEL Puraceptor which will treat stormwater, separate oils, grease and hydrocarbons and contain any spills;
  - Three detention tanks each with a capacity of 23m^3 which will be positioned after the SPEL Puraceptor and prior to the managed discharge of treated water into the street water table on Calton Road; and
- Landscaping around the site including mass plantings of bushes and shrubs along the road frontages and around the buildings.

4. Procedural Matters

4.1 Relevant Authority

By letter dated 15 November 2018 and pursuant to Schedule 10(20) of the *Development Regulations 2008*, the State Coordinator General has assigned the State Commission Assessment Panel (SCAP) as the relevant Planning Authority. Further, by email dated 8 November 2019, the State Coordinator General confirmed that the application for a car wash would also be assessed by SCAP (see ***Appendix 1***).

4.2 Nature of Development

Based on the various components of the development described within Section 3.1 of this report, the development application is perhaps best described as follows:

Car wash and vacuum bays with associated signage and landscaping.

A 'car wash' is an un-defined use as it is not listed within Schedule 1 of the *Development Regulations 2008*. Similarly, within the 'Procedural Matters' section of the Residential (Gawler East) Zone, 'car wash' is neither listed as 'complying' or 'non-complying'. Consequently, the application is a consent development, to be assessed on its merits against the relevant provisions of the Development Plan.

4.3 Public Notification

Principle of Development Control (PDC) 45 of the Residential (Gawler East) Zone provides the following guidance in relation to public notification:

PDC 45 *Categories of public notification are prescribed in Schedule 9 of the Development Regulations 2008.*

Further, the following forms of development (except where the development is non-complying) are designated:

Category 1

Fencing (including a combination of fencing and retaining walls) up to a maximum height of 2.8 metres

Category 2

All development listed within Principle of Development Control 1 of the Residential (Gawler East) Zone, Mixed Use Policy Area 3 and Local Centre Policy Area 19.

Fencing (including a combination of fencing and retaining walls) with a height in excess of 2.8 metres.

We note that Schedule 9 of the *Development Regulations 2008* does not specifically assign a category of notification for a 'car wash' in the Residential (Gawler East) Zone. Therefore, it is necessary to refer to the lists of envisaged forms of development contained within PDC 1 of the Zone and PDC 1 of the Policy Area to determine the correct category of notification. Given that a 'car wash' is not listed as an envisaged form of development in either the Zone or the Policy Area, it is not a Category 2 form of development. Therefore, the proposal defaults to a '***Category 3***' form of development for the purposes of public notification.

4.4 Agency Consultancy

Pursuant to Schedule 8 of the *Development Regulations*, the proposed development does not trigger any referrals to Government Agencies. However, given that SCAP is the relevant Authority, the proposal will be referred to the Town of Gawler for comments.

5. Planning Considerations

5.1 Overview

The subject site is located within the Town of Gawler and, accordingly, the relevant Development Plan is the Gawler (CT) Development Plan – consolidated 18 July 2019. More specifically, the subject site is located within the '**Residential (Gawler East) Zone**', and the '**Mixed Use Centre Policy Area 3**'.

The following section provides an assessment of the proposal against the Gawler (CT) Development Plan. For convenience, this assessment has been grouped under a series of headings which reflect the key relevant planning 'themes' from the Development Plan.

5.2 Land Use

The Residential (Gawler East) Zone contemplates a wide range of land uses within broadly defined areas that are illustrated at a high-level on the *Gawler East Structure Plan Map Ga/1 (Overlay 1) Enlargement G*. The Structure Plan identifies areas that will be developed for residential uses as well as other areas that are intended to be developed as a 'Mixed Use Centre' and 'Neighbourhood Centres'. This desired mix of land uses is expressed within Objective (Obj) 1 and the Desired Character of the Zone as well as Obj 1 and the Desired Character of the Policy Area:

Zone

Obj 1 *A predominately residential area comprising a range of low and medium-density dwellings, with associated integrated infrastructure, retail, commercial, recreational, educational and community development in master-planned locations in accordance with Structure Plan Map Ga/1 (Overlay 1) Enlargement G.*

Desired Character (extract)

The zone will accommodate a diversity of housing forms. The Mixed Use Centre Policy Area 3 will comprise a mix of residential development and a range of commercial, retail, educational, recreational and community facilities. A smaller range of retail facilities, together with compact housing are anticipated within the Local Centre Policy Area 19.

Policy Area

Obj 1: *A functional and diverse zone accommodating a mix of commercial, retail, recreation, community, residential, office, consulting rooms and educational uses.*

Desired Character (extract)

Mixed Use Centre Policy Area 3 will accommodate retail, commercial, community, education and formal recreation facilities and clubrooms to service the local community.

Low impact, commercial business activities that provide employment opportunities for the local population are envisaged. Such development will need to have particular regard to ensuring that minimal off-site impacts occur with respect to noise, air, water and waste emissions, commercial traffic generation and movement.

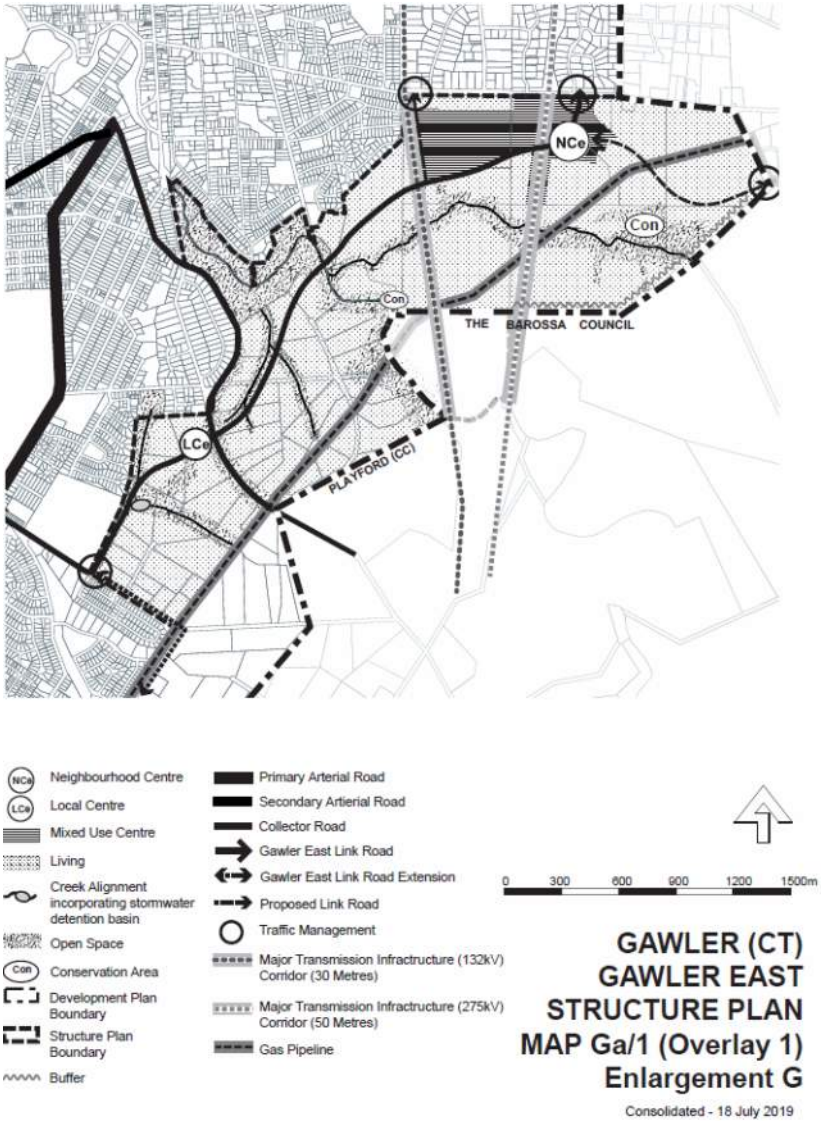
Commercial business activities and retail facilities will be established in the Neighbourhood Centre area indicated on Structure Plan Map Ga/1 (Overlay 1) Enlargement G.

In addition, specific guidance in relation to envisaged land uses is provided in PDC 1 of the Policy Area. PDC 1 lists a 'petrol filling station' as an envisaged use but does not specifically identify all of the various elements that are often associated with petrol filling stations – such as a car wash.

Given the proposed development's close connection to the proposed petrol filling station and given that the Policy Area seeks a diverse mix of land uses (including commercial development), the car wash is an appropriate land use on the subject site.

In terms of the strategic location of the proposed car wash, *Structure Plan Map Ga/1 (Overlay 1) Enlargement G* provides indicative, high-level direction for development within the Springwood development. In particular, it provides indicative locations for a potential Neighbourhood Centre (see ***Figure 5.1***). The proposed car wash and other proposed development in the Springwood 'village centre' are located within the designated Neighbourhood Centre nominated on the Structure Plan and reflect the alignment of the Gawler East Link Road. For this reason, the location of the car wash is consistent with the strategic direction provided by the Structure Plan.

Figure 5.1 *Gawler East Structure Plan*



5.3 Design and Appearance

The Development Plan contains a variety of provisions which seek to ensure that development is of a high architectural standard, complements the character of the locality and minimises any visual impact on nearby existing development. For example, the Desired Character of the Policy Area provides the following guidelines in relation to the design and appearance of development.

Desired Character *(extract)*

In terms of urban design and built form, a 'main street' environment will be created, where buildings address the street and car parks are primarily located to the rear. In order to minimise the overall extent of off street parking shared car parking is encouraged, and the convenience, availability and function of on street parking in mixed use environments will be recognised.

Gathering points for formal and informal community events will be established, either by means of a central pedestrian plaza, a village green or series of nodes.

Commercial and mixed use buildings will be established close to the street frontage and incorporate verandas and other protruding elements in order to create a pedestrian-friendly environment and outdoor dining opportunities. These areas will be enhanced by large street trees, high quality paving, lighting and street furniture. Building facades will be designed in a manner to create diversity of interest through the appearance of an aggregation of smaller buildings.

The Desired Character of the Policy Area is reinforced by the following PDCs which seek to provide more specific guidance in terms of the design and appearance of new buildings:

PDC 3 *Development should be designed to ensure that:*

(a) buildings are designed to address the street frontage with servicing areas located internal to the centre and appropriately screened from public view;

(b) the establishment of shared car parking areas to the rear of buildings and on-street.

PDC 4 *Public space established should be activated by uses around its edges.*

PDC 5 *Buildings should have a maximum of 5 storeys in height.*

PDC 6 *Development should not be undertaken unless it is consistent with the desired character for the policy area.*

The proposed car wash directly responds to the design and appearance provisions in the following ways:

- The buildings will address the Calton Road frontage of the site;
- Visual interest has been created through the use of a range of building materials and colours as well as landscaping; and
- The proposed development will assist to activate the entrance to the Springwood development by establishing a use where people and vehicles are frequently entering and exiting the site.

Additional guidance for the design, appearance and function of commercial development is provided in PDC 25 of the Council Wide section of the Development Plan:

PDC 25 *Development or redevelopment within business, centre, shopping or mixed use zone or associated policy areas, should:*

(a) conform with the objectives and desired character of the zone or policy area;

(b) preserve buildings of historical or architectural significance;

(c) provide for the integration of existing and future facilities so as to promote ease of pedestrian movement and sharing of facilities as well as to retain the opportunity for future expansion within the zone.

(d) stage development taking into consideration any future expansion of the zone, or policy area, as a whole.

(e) make multiple use of facilities and share utility spaces.

(f) unified design of buildings to produce a close relationship between uses in a lively setting.

(g) use materials compatible with the natural features of the site and adjacent buildings.

(h) be designed and laid out to avoid nuisance or hazard arising from:

(i) microclimatic conditions;

(ii) excessive noise;

(iii) odours;

(iv) overlooking;

(v) overshadowing; or

(vi) visual intrusion.

(i) be designed to be compatible with existing development through:

(i) a buffer between development in the zone and adjacent areas;

(ii) landscaping which complements adjacent development and enhances the visual appearance and character of the zone;

(iii) pedestrian paths and spaces which are shaded, defined and protected from the wind; and

(iv) service yards, loading areas and outdoor storage areas which are screened;

(v) foster human scale, define spaces, reinforce paths and edges, screen utility areas, and generally enhance the visual amenity of the area.

(j) ensure outdoor signs, both free-standing and attached to buildings, are located and designed in such a way as to:

(i) be in scale with the development as a whole, the building therein, and the desired character of the zone or policy area, or otherwise be compatible with the character of the locality;

(ii) not impair the view of or from nearby developments;

(iii) not distract attention from traffic control information; and

(iv) illumination from signs or floodlights should not spill over to adjacent areas.

(k) provide access and car parking for residential areas located within centres separate from the access and car parking areas serving the other centre facilities.

(l) integrate of public transport requirements and sheltered waiting areas for passengers.

(m) provide retail showrooms for the trading of bulky goods on the periphery of centres, or in designated precincts within zones or policy areas.

(n) provide:

(i) off-street loading, service areas and service vehicle manoeuvring areas;

(ii) lighting for buildings and ancillary areas, with no light-spill causing nuisance or hazard; and

(iii) unobtrusive facilities for storage and removal of waste materials;

(iv) parking, access and facilities for the disabled;

(v) public spaces such as malls, plazas and courtyards;

(vi) public facilities including toilets, infant changing facilities for parents, seating, telephones and community information boards; and

(vii) design of buildings and infrastructure to minimise energy consumption for lighting, heating, cooling and ventilation and reuse of stormwater.

The proposed development appropriately responds to PDC 25 in the following ways:

- Through the integration of facilities across the site and the broader Springwood 'village centre' to ensure pedestrians can move between areas easily and conveniently;
- By establishing a unified design theme for the car wash on a prominent location at the entrance to the 'village centre' which responds to the overall Urban Design Masterplan for Springwood;
- Through the careful design and placement of the loading area, vehicular access and parking areas in order to minimise the potential for conflict and ensure the free movement of traffic and pedestrians through the development; and
- Through the design of the signage which is in scale with the development as a whole, which doesn't impair the view of or from nearby developments and which will not cause a distraction for traffic.

5.4 Access and Parking

In order to address the relevant transportation and access provisions of the Development Plan, CIRQA Traffic Consultants has been engaged to review the proposed development and provide a traffic and parking report ***(Appendix 3***). As mentioned previously, the CIRQA report also addresses the traffic and parking requirements of the separate development application for the petrol filling station.

In terms of the supply of parking spaces, CIRQA has indicated that the majority of car parking will be accommodated within the car wash facility itself as well as the adjacent queuing areas. In any event, two car

parking spaces will be provided near the vacuum bays which, in CIRQA's opinion, will easily accommodate the parking demands of this element of the proposal.

CIRQA has also assessed the proposed access arrangements to Calton Road and the Gawler East Link Road and has confirmed that the access points will comply with the requirements of the Australian Standards.

Based on CIRQA's assessment, the proposed development appropriately addresses the following key provisions in the Council Wide section of the Development Plan in relation to transportation and access.

PDC 26 *Provision for the movement of people and goods within business, centre, shopping or mixed use zones or associated policy areas, should:*

(a) *not cause inconvenient and unsafe traffic and pedestrian movements;*

(b) *provide safe and convenient access for private cars, cyclists, pedestrians, service vehicles, emergency vehicles and public utility vehicles;*

(c) *concentrate development for pedestrian convenience, and not extend unnecessarily along road frontages; (increasing the depth of development is a more desirable alternative);*

(d) *separate pedestrian and vehicle movements within zones or areas, for pedestrian safety and convenience.*

(e) *provide access points onto the arterial roads as shown on the relevant Structure Plans to: minimize traffic hazards; queuing on the roads; right turn movements; and interference with the function of intersections, junctions and traffic control devices.*

(f) *not cause congestion or detract from the safety of traffic on abutting roads, and minimize: traffic hazards; queuing on public roads; and intrusion into adjacent residential areas.*

(g) *provide for service vehicles and the storage and removal of waste goods and materials.*

(h) *provide sufficient off-street parking to accommodate customer, employee and service vehicles if there is insufficient public car parking in the locality.*

(i) *consolidate and co-ordinate parking areas into convenient groups, rather than located individually, and the access points minimized, and so located and designed that:*

(i) *vehicular movement between them does not require the use of public roads;*

(ii) *the number of access points is minimized; and*

(iii) *it is not necessary for vehicles to back onto public roads.*

(j) *locate, design and orientate car parks in such a way as to facilitate safe, direct and convenient access of pedestrians between them and the facilities they serve, safe and convenient traffic circulation, minimal conflict between customer and service vehicles, and should include adequate provision for manoeuvring into and out of parking bays.*

(k) *provide on-site parking determined by:*

(i) *the amount, type and timing of movement generated by the use;*

(ii) *the design, location and configuration of parking spaces;*

(iii) *the ability of the site to accommodate the parking spaces;*

(iv) *the potential for shared use of parking spaces; and*

(v) *the effect on surrounding activities and uses.*

(l) *share use of car parking between developments to reduce the total extent of car parking areas.*

(m) *provide for landscaping in order to screen, shade and enhance the appearance of car parking areas.*

(n) *ensure that all sources of noise, including refrigeration and air conditioning equipment, garbage collection and car parking, do not cause excessive or disturbing noise at neighbouring properties.*

PDC 340 *Development should provide safe and convenient access for all anticipated modes of transport including cycling, walking, public and community transport, and motor vehicles.*

PDC 362 *Development should be consistent with Australian Standard AS 2890 Parking facilities.*

5.5 Stormwater and Flooding Considerations

A site specific Stormwater Management Plan for the subject site has been prepared by Sagero (***Appendix 5***). This plan complements and builds upon the overall Stormwater Management Plan for the entire Springwood development which has been submitted with the land division applications. As mentioned previously, the Sagero report also addresses stormwater requirements of the separate development application for the petrol filling station.

The Stormwater Management Plan identifies how the proposed development will meet the Council's guidelines in terms of detention. This will include the installation of a Class 1 separator and treatment device such as a SPEL Puraceptor which will treat stormwater, separate oils, grease and hydrocarbons and contain any spills. In addition, three detention tanks each with a capacity of 23m^3 will be positioned after the SPEL Puraceptor and prior to the managed discharge of treated water into the street water table on Calton Road.

For these reasons, the proposal addresses the key provisions under the Natural Resources heading in the Council Wide Section of the Development Plan.

Obj 58*: Storage and use of stormwater which avoids adverse impact on public health and safety.*

PDC 150 *Development should be sited and designed to:*

(a) *capture and re-use stormwater, where practical;*

(b) *minimise surface water runoff;*

(c) *prevent soil erosion and water pollution;*

(d) *protect and enhance natural water flows;*

(e) *protect water quality by providing adequate separation distances from watercourses and other water bodies;*

(f) *not contribute to an increase in salinity levels;*

(g) *avoid the water logging of soil or the release of toxic elements;*

(h) *maintain natural hydrological systems and not adversely affect:*

(i) *the quantity and quality of groundwater;*

(ii) *the depth and directional flow of groundwater;*

(iii) *the quality and function of natural springs.*

PDC 151 *Water discharged from a development site should:*

(a) *be of a physical, chemical and biological condition equivalent to or better than its pre-developed state;*

(b) *not exceed the rate of discharge from the site as it existed in pre-development conditions.*

PDC 152 *Development should include stormwater management systems to protect it from damage during a minimum of a 1-in-100 year average return interval flood.*

PDC 153 *Development should have adequate provision to control any stormwater over-flow runoff from the site and should be sited and designed to improve the quality of stormwater and minimise pollutant transfer to receiving waters.*

PDC 154 *Development should include stormwater management systems to mitigate peak flows and manage the rate and duration of stormwater discharges from the site to ensure the carrying capacities of downstream systems are not overloaded.*

PDC 155 *Development should include stormwater management systems to minimise the discharge of sediment, suspended solids, organic matter, nutrients, bacteria, litter and other contaminants to the stormwater system.*

PDC 157 *Stormwater management systems should:*

(a) *maximise the potential for stormwater harvesting and re-use, either on-site or as close as practicable to the source;*

(b) *utilise, but not be limited to, one or more of the following harvesting methods:*

(i) *the collection of roof water in tanks;*

(ii) *the discharge to open space, landscaping or garden areas, including strips adjacent to car parks;*

(iii) *the incorporation of detention and retention facilities;*

(iv) *aquifer recharge.*

5.6 Signage

The proposed development includes a number of signs which reflect the intended use of the site as a car wash. The design, extent and size of the signage reflects the proposed use of the site without visually dominating the associated buildings. Further, the proposed signage will:

- Complement the design of the building;
- Be contained within the boundaries of the site;
- Not affect existing street trees or obscure views to attractive landscaping;
- Not cause a distraction for drivers or obstruct their views of other vehicles; and
- Be limited to information relating to the proposed use of the land.

For these reasons, the signage satisfies the relevant provisions of the Development Plan.

5.7 Landscaping

A conceptual landscaping plan has been prepared for the development and is included with the architectural plans contained in ***Appendix 2.*** The proposal includes landscaping around the perimeter of the site as well as around the buildings. These landscaped areas will be planted with a range of species of bushes and groundcovers which will complement the overall landscape theme of the Springwood development. More specifically, the proposed landscaping will assist to soften the appearance of the buildings and hard stand areas when viewed from the surrounding streets. Accordingly, the development satisfies PDC 25 of the Development Plan which seeks:

PDC 25 *Development or redevelopment within business, centre, shopping or mixed use zone or associated policy areas, should:*

(i) be designed to be compatible with existing development through:

(i) a buffer between development in the zone and adjacent areas;

(ii) landscaping which complements adjacent development and enhances the visual appearance and character of the zone;

(iii) pedestrian paths and spaces which are shaded, defined and protected from the wind; and

(iv) service yards, loading areas and outdoor storage areas which are screened;

(v) foster human scale, define spaces, reinforce paths and edges, screen utility areas, and generally enhance the visual amenity of the area.

5.8 Interface Considerations

The subject site is located within the Mixed Use Centre Policy Area 3 which clearly anticipates a neighbourhood level centre (including a range of commercial development) in this area. Currently, the site and land to the south is vacant but will be developed over time to create a master-planned community comprising residential development supported by a range of non-residential land uses. On this basis, potential interface issues have

been carefully considered during the preparation of the Springwood masterplan and as part of the urban design of the whole project.

Further to the above, the nearest residential development to the north of the site is separated and shielded from the subject site by a 20m wide vegetated reserve running along the northern side of Calton Road. Presumably, this reserve assisted to provide a visual and acoustic buffer between the residential area and the former quarrying activities on the southern side of Calton Road. In any event, the vegetated buffer provides an effective screen between the dwellings to the north and the subject site which will reduce any impacts associated with noise and lights.

In addition, Sonus has prepared an Environmental Noise Assessment (***Appendix 4***) which assessed the proposed development against the *Environment Protection (Noise) Policy 2007* and the relevant 'interface' provisions of the Development Plan. Sonus concludes that the proposed development will achieve the relevant noise criteria expressed in the *Environment Protection (Noise) Policy 2007* subject to a number of relatively modest treatments which have generally been reflected on the architectural plans. In addition, Sonus has recommended that the automatic and manual wash bays and the vacuums bays not be used between the hours of 10pm and 7am. Similarly, Sonus has recommended that waste collection only occur between the hours of 9am and 7pm on a Sunday or public holiday and 7am and 7pm on any other day.

Sonus concludes as follows:

> *An environmental noise assessment has been made of the proposed development at the corner of Calton Road and the Gawler East Link Road, Springwood.*
>
> *The assessment considers noise levels at nearby existing residences from vehicle movements, car park activity, fuel deliveries, automatic and manual wash bays, vacuum bays, rubbish collection and mechanical plant servicing the facility.*
>
> *The predicted noise levels from the development will achieve the relevant noise criteria, derived in accordance with the Environment Protection (Noise) Policy 2007 subject to the treatments in this report, comprising;*
>
> - *Installing doors to the automatic wash bays;*
> - *Installing acoustic absorption within the manual wash bays;*
> - *Upgrading the roof of the automatic wash bay and plant room;*
> - *Screening the roof top plant and restricting its noise levels subject to a subsequent design phase review;*
> - *Reducing the noise from any alarms as far as practical;*
> - *Ensuring all inspection points, grated trenches, etc. are correctly fixed;*
> - *Restricting the times for rubbish collection and fuel deliveries; and*
> - *Restricting the times for use of the wash facilities.*

It is therefore considered that the facility has been designed to minimise adverse impacts, avoid unreasonable interference on amenity, and will not detrimentally affect the locality by way of noise, thereby achieving the relevant provisions of the Development Plan related to environmental noise.

For the reasons outlined above, the proposed development appropriately responds to the following relevant interface provisions within the Development Plan:

Zone

PDC 34 *Development should be designed and sited to minimise negative impact on existing and potential future land uses considered appropriate in the locality.*

Council Wide

Obj 42: *Development located and designed to minimise adverse impact and conflict between land uses.*

Obj 43: *Protect community health and amenity from adverse impacts of development.*

PDC 107 *Development should not detrimentally affect the amenity of the locality or cause unreasonable interference through any of the following:*

(a) the emission of effluent, odour, smoke, fumes, dust or other airborne pollutants;

(b) noise;

(c) vibration;

(d) electrical interference;

(e) light spill;

(f) glare;

(g) hours of operation;

(h) traffic impacts.

PDC 108 *Development should be sited and designed to minimise negative impacts on existing and potential future land uses desired in the locality.*

6. Conclusion

Following a detailed review of the proposed development against the relevant provisions of the Development Plan, we have formed the opinion that the proposal warrants Development Plan Consent for the following reasons:

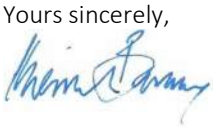
- The proposed land use is consistent with the intent of the Mixed Use Centre Policy Area 3 which seeks a "… functional and diverse zone accommodating a mix of commercial, retail, recreation, community, residential, office, consulting rooms and educational uses";
- The subject site is identified as a Neighbourhood Centre within the *Gawler East Structure Plan Map Ga/1 (Overlay 1) Enlargement G* as well as the Springwood Masterplan;

- The location and design of the proposed development will complement other proposed development in the Springwood 'village centre' such as the petrol filling station proposed to be co-located on the subject site (forming part of a separate Development Application) as well as the supermarket and specialty shops to the south (forming part of a separate Development Application);
- The proposed development has been designed to address Calton Road, and the building provides visual interest through the use of a variety of building materials, complementary colours and articulation;
- A coordinated signage theme is proposed, with the signage reflective of the proposed use as a car wash;
- The proposed development has been designed to accommodate safe and convenient movements for vehicles, and the CIRQA report concludes that sufficient onsite parking will be provided to cater for the anticipated parking demand;
- Stormwater will be managed and treated appropriately through the use of a SPEL Puraceptor (or similar) and a series of detention tanks;
- Interface issues have been addressed appropriately to ensure that the proposed development will achieve the criteria of the *Environment Protection (Noise) Policy 2007* as demonstrated in the Environmental Noise Assessment prepared by Sonus; and
- The proposed landscaping will assist to soften the appearance of the building and hardstand areas when viewed from the adjoining streets which will assist to enhance the amenity of the locality

The proposed development is therefore highly aligned with the most relevant provisions of the Development Plan and warrants Development Plan Consent, subject to reasonable and relevant conditions.

Should you have any questions or queries please do not hesitate to contact the undersigned on (08) 7231 0286.

Yours sincerely,



Kieron Barnes
Senior Associate

Appendix 1. Email from State Coordinator General

Kieron Barnes

From: Mason, Kerrieanne (DTTI) <Kerrieanne.Mason@sa.gov.au> on behalf of Hallion, Jim (DTTI) <Jim.Hallion@sa.gov.au>
Sent: Friday, 8 November 2019 6:49 AM
To: Warwick Mittiga
Cc: Richard Dwyer; Kieron Barnes; 'Hamish Brown'; Hallion, Jim (DTTI)
Subject: RE: CM: Springwood Applications [DLM=For-Official-Use-Only]

For Official Use Only

Warwick,

Thanks for your email and update on development applications. The decision to close the office was made by cabinet on the basis that once the PDI Act and regulations become operational across the state by mid-2020 the regulatory powers of the State Coordinator-General can be performed by staff in DPTI. I have informed the Premier that I will not be seeking a contract renewal beyond 31 December 2019. In moving forward, I have not made any plans.

It would appear that the Planning Officers in DPTI may have some issues with the current application hence the suggested approach. There will however be two application fees. As there is no variation to the land division proposed nor any variation in the operation of this use, I agree with proceeding with two applications rather than the current single application proposed.

Regards

Jim Hallion
State Coordinator-General
Office of the State Coordinator-General

T +61 (8) 8303 2084 | **M** +61 0419 811 041
E jim.hallion@sa.gov.au | **W** dtti.sa.gov.au

GPO Box 320, ADELAIDE SA 5001
Level 9, 131-139 Grenfell Street, ADELAIDE SA 5000

Government of South Australia
Department for Trade, Tourism and Investment

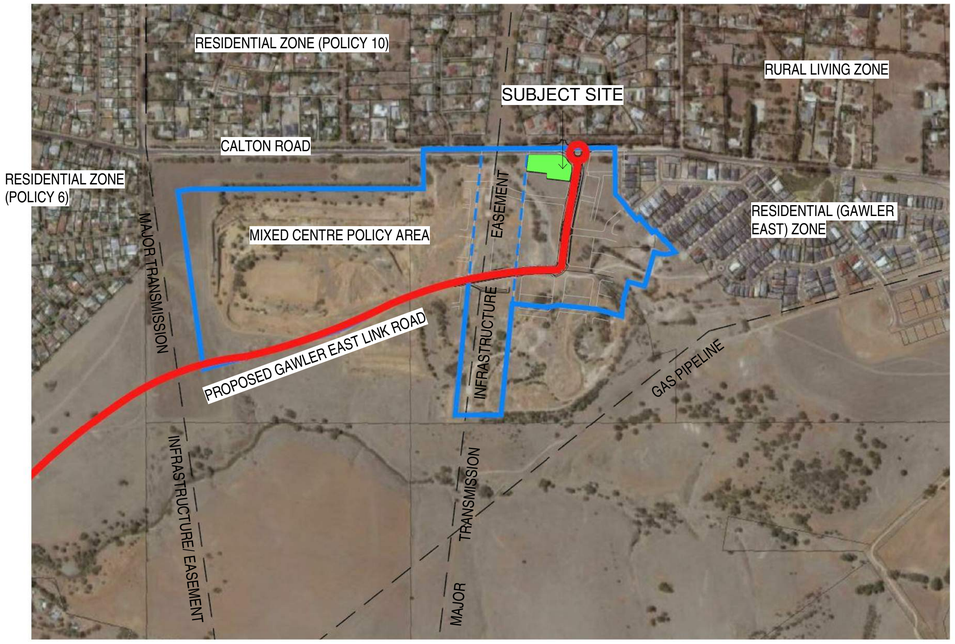
Appendix 2. Architectural Plans and Elevations

DA ISSUE
ISSUED FOR DEVELOPMENT APPROVAL
11/11/2019 12:19:52 PM

Rev.	Amendment	Date
1	ISSUED FOR DEVELOPMENT APPROVAL	11/11/19

LEYTON PROPERTY PTY LTD
PROPOSED CARWASH DEVELOPMENT

CORNER OF CALTON ROAD & GAWLER EAST LINK ROAD, SPRINGWOOD



SITE CONTEXT PLAN
1 : 5000

BROWN FALCONER
28 Chesser Street, Adelaide, South Australia 5000
Telephone : 08 8203 5800 ABN 65 007 846 586
brownfalconer.com.au

LEYTON PROPERTY

PROPOSED CARWASH CNR
CALTON RD & GAWLER EAST LINK
ROAD, SPRINGWOOD

COVER SHEET

Scale 1 : 5000
Date 01/16/18
Job No. 2018001
Dwg No. **3298 DA10** Rev: **1** A1 SHEET

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11/11/2019 12:19:52 PM

SITE PLAN

1 : 200

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22/11/2019 4:47:17 PM

DA ISSUE

ISSUED FOR DEVELOPMENT APPROVAL

22/11/2019 4:47:17 PM

Rev.	Amendment	Date
1	ISSUED FOR DEVELOPMENT APPROVAL	11/11/19
2	ISSUED FOR DEVELOPMENT APPROVAL	22/11/19

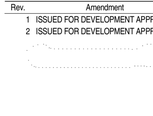
DEVELOPMENT SUMMARY

SITE AREA	4068m²
SHOP	194m²
CANOPY/FORECOURT	372m²
CAR WASH	354m²
LANDSCAPING	596m² (14.65%)
PARKING PROVIDED	12

NOTES:

1. SPEL UNIT IS TO BE A 'SPEL PURACEPTOR CLASS 1 FULL RETENTION SEPARATOR'. REFER TO CIVIL FOR SPEL AND DETENTION SIZES.
2. WASTE WATER COLLECTED IN THE SPEL PURACEPTOR WILL BE REMOVED BY AN EPA LICENSED WASTE TRANSPORTER TO LICENSED WASTE DEPOT AUTHORISED TO RECEIVED SUCH WASTE.
3. FUEL SYSTEMS TO INCLUDE:
   - DOUBLE WALLED FIBREGLASS TANKS.
   - ATG SYSTEM.
   - DOUBLE WALLED FUEL LINES.
   - PRESSURE LEAK DETECTION SYSTEM TO AS4897-2008, THE DESIGN, INSTALLATION AND OPERATION OF UNDERGROUND PETROLEUM STORAGE SYSTEMS.
   - STAGE 1 VAPOUR RECOVERY (VR1).
4. CAR PARK LIGHTING DESIGN IS TO COMPLY WITH AS/NZS 1158.1.3.

FENCE TYPES



FENCE-1

1800MM HIGH ALUMINIUM PICKET FENCING MOUNTED ON TOP OF RETAINING WALL.
COLOUR: 'MONUMENT'

FENCE-2

1800MM HIGH COLORBOND GOOD NEIGHBOUR FENCING MOUNTED ON TOP OF RETAINING WALL.
COLOUR: 'MONUMENT'

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LEYTON PROPERTY

PROPOSED CARWASH CNR CALTON RD & GAWLER EAST LINK ROAD, SPRINGWOOD

SITE PLAN

Scale	As indicated
Date	02/12/18
Job No.	2018001
Dwg No.	3298 DA11
Rev:	2
	A1 SHEET

DA ISSUE

ISSUED FOR DEVELOPMENT APPROVAL

11/11/2019 12:19:59 PM

Rev.	Amendment	Date
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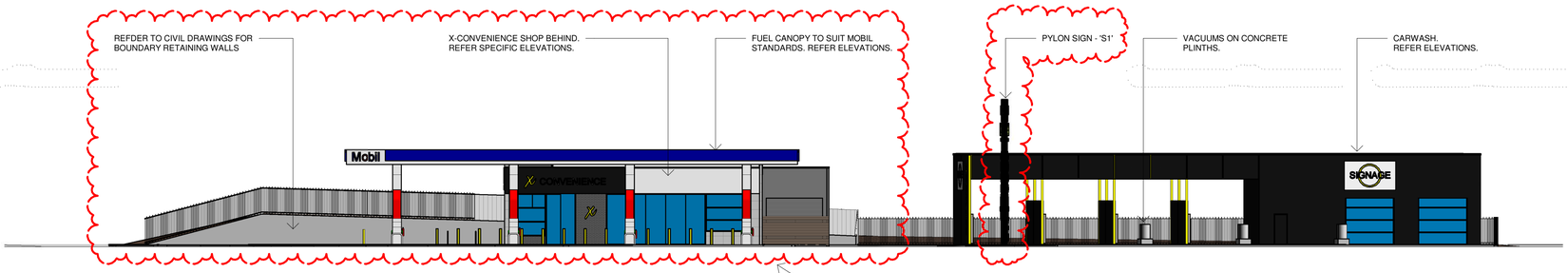


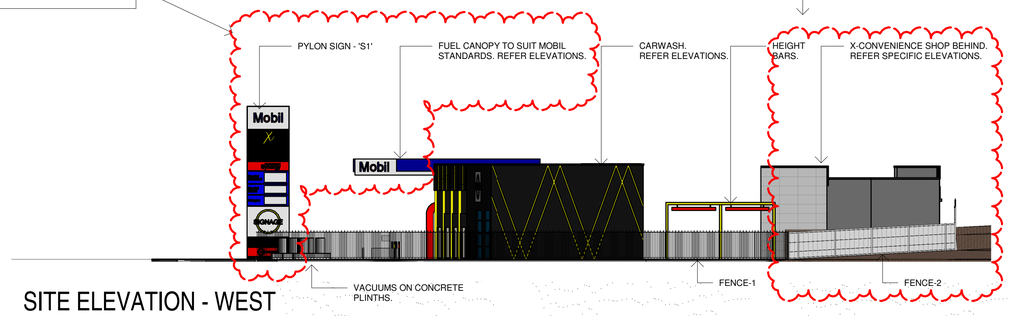
SITE ELEVATION - NORTH

1 : 200

NOT PART OF THIS APPLICATION

SITE ELEVATION - EAST

1 : 200



SITE ELEVATION - WEST

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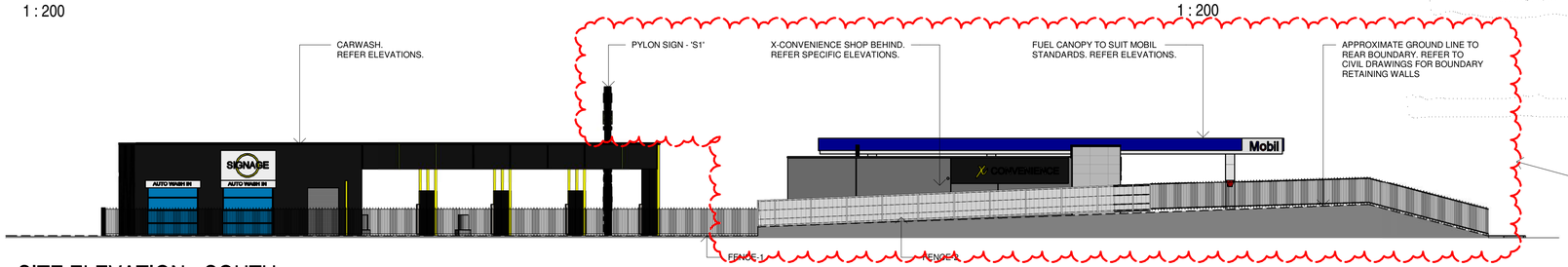
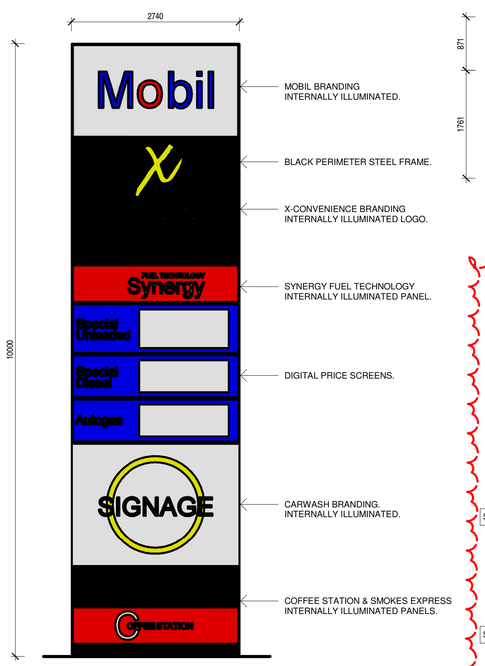


SITE ELEVATION - SOUTH

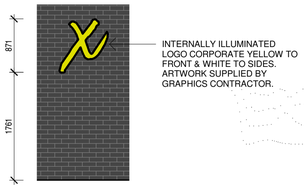
1 : 200

NOT PART OF THIS APPLICATION



Sign S1

1 : 50



Sign S2

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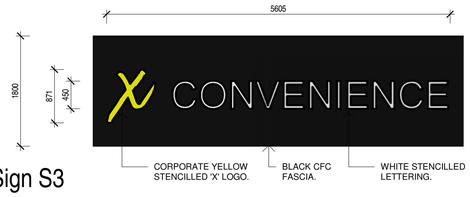

Sign S3

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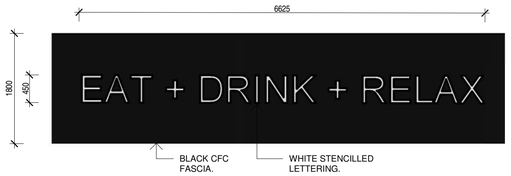

Sign S4

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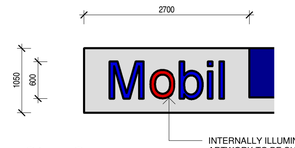
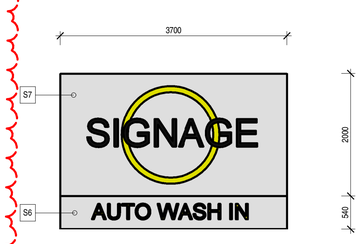


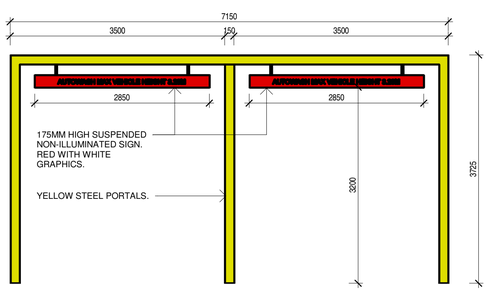
Sign S5

1 : 50



Sign S6, S7

1 : 50



Sign S8

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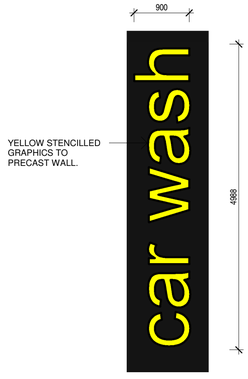

Sign S9

1 : 50

Sign S10

1 : 50

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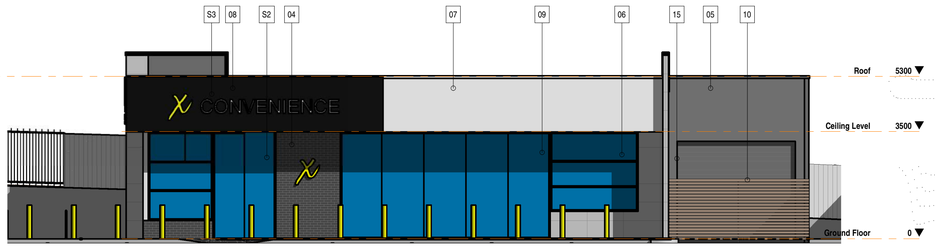
LEYTON PROPERTY

PROPOSED CARWASH CNR CALTON RD & GAWLER EAST LINK ROAD, SPRINGWOOD

SITE ELEVATIONS & SIGNAGE SCHEDULE

Scale	As indicated
Date	08/01/19
Job No.	2018001
Dwg No.	**3298 DA12**
Rev:	**1**

A1 SHEET



Mobil-X - North Elevation

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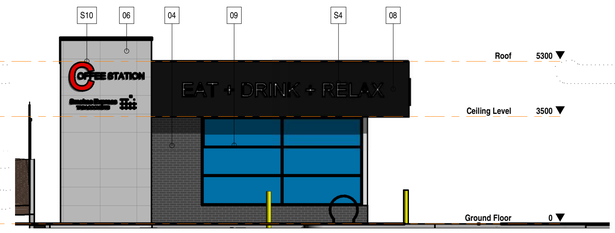

Mobil-X - East Elevation

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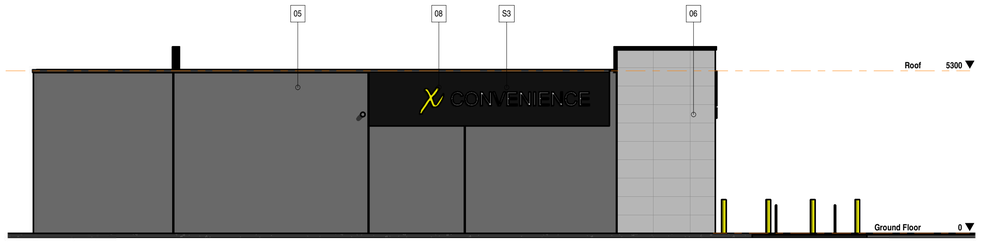
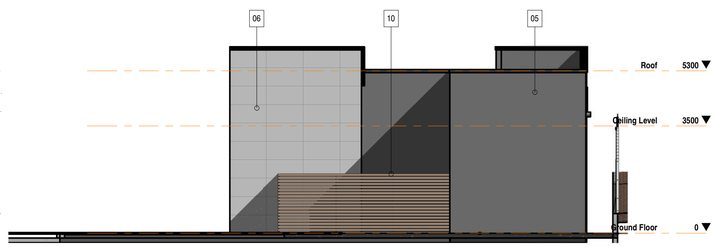


Mobil-X - South Elevation

1 : 100

NOT PART OF THIS APPLICATION



Mobil-X - West Elevation

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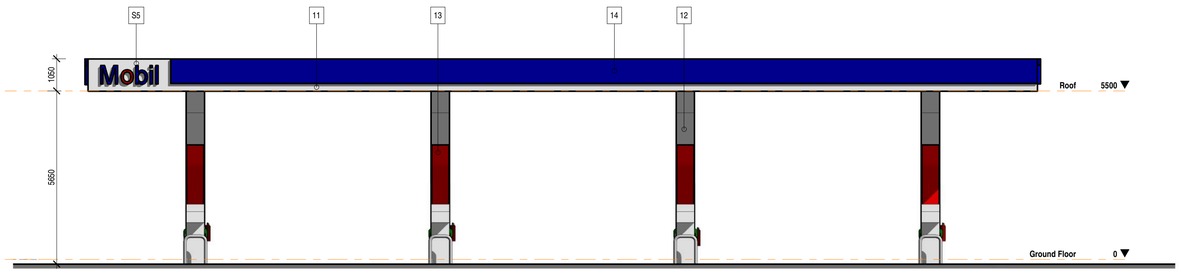
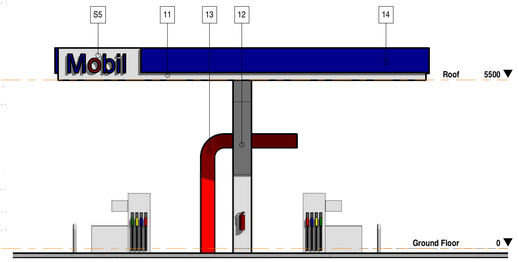


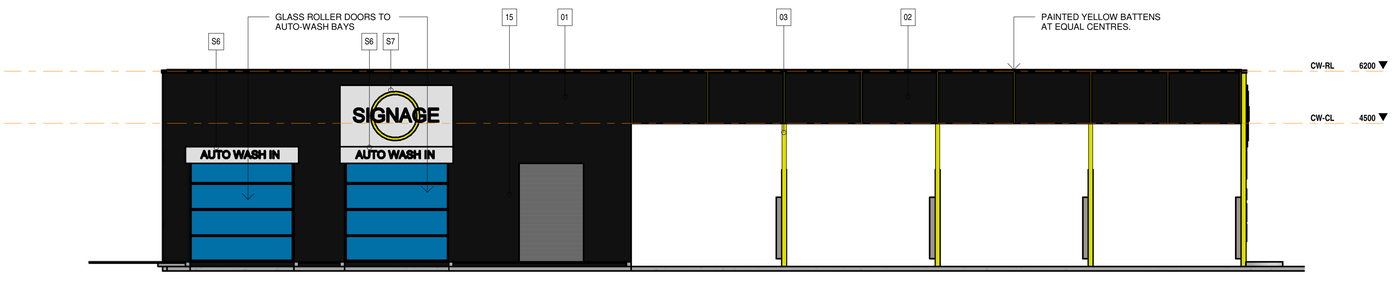
Mobil-X - Canopy North Elevation (South similar)

1 : 100



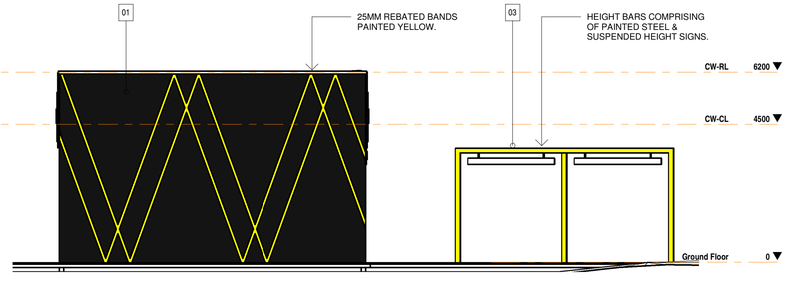
Mobil-X - Canopy West Elevation (East similar)

1 : 100



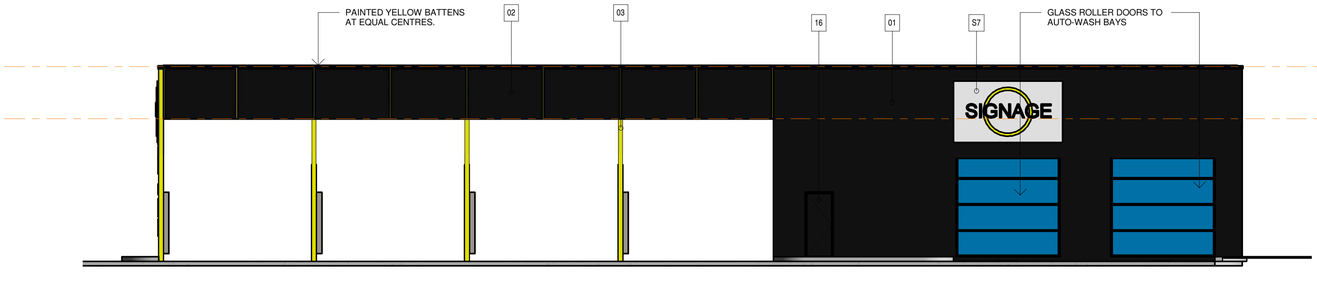
Carwash - South Elevation

1 : 100



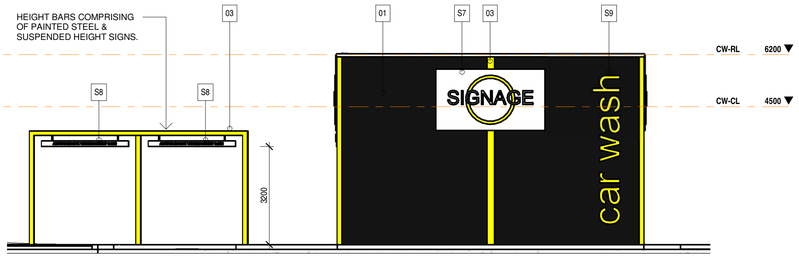
Carwash - West Elevation

1 : 100



Carwash - North Elevation

1 : 100



Carwash - East Elevation

1 : 100

DA ISSUE

ISSUED FOR DEVELOPMENT APPROVAL
11/11/2019 12:20:03 PM

Rev.	Amendment	Date
1	ISSUED FOR DEVELOPMENT APPROVAL	11/11/19

MATERIALS LEGEND

01 CAR WASH WALL
PRECAST CONCRETE - PAINT FINISH
CORPORATE COLOUR - BLACK

02 CAR WASH CLADDING
CFC SHEET - PAINT FINISH
CORPORATE COLOUR - BLACK

03 CARWASH EXPOSED STEEL STRUCTURE
PAINT FINISH
CORPORATE COLOUR - YELLOW

04 MOBIL-X (SHOP) WALL TREATMENT
FACE BRICK
AUTRAL - WILDERNESS - BLACKBUTT

05 MOBIL-X (SHOP) WALL TREATMENT
PRECAST CONCRETE - PAINT FINISH
CORPORATE COLOUR 'WHITE'

06 MOBIL-X (SHOP) WALL TREATMENT
TEXTURE PAINTED CONCRETE PANEL
WITH 25MM DEEP REBATED GROOVES.

07 MOBIL-X (SHOP) FASCIA
EXPRESSED JOINT CFC - PAINT FINISH
CORPORATE COLOUR 'WHITE'

08 MOBIL-X (SHOP) FASCIA
EXPRESSED JOINT CFC - PAINT FINISH
CORPORATE COLOUR 'BLACK'

09 SHOPFRONT GLAZING ALUMINIUM FRAMED
POWDERCOAT - BLACK

10 WOODGRAIN FINISH ALUMINIM SLAT GATES
TO LOADING BAY.

11 MOBIL CANOPY FASCIA
PREFINISHED METAL CLADDING
CORPORATE COLOUR - 'WHITE'.

12 MOBIL CANOPY COLUMN CLADDING
PREFINISHED 3MM ALUMINIUM PANEL
CORPORATE COLOUR 'WHITE'

13 MOBIL FORECOURT 'RED' ELEMENT.

14 MOBIL CANOPY FASCIA BLUE BAND
INTERNALLY ILLUMINATED
CORPORATE COLOUR - 'BLUE'

15 ROLLER SHUTTERS - TO SELECTION
PAINTED STEEL - 'GREY'

16 PA DOOR (STEEL FACING)
PAINTED STEEL - 'GREY'

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LEYTON PROPERTY

PROPOSED CARWASH CNR
CALTON RD & GAWLER EAST LINK
ROAD, SPRINGWOOD

BUILDING ELEVATIONS

Scale As indicated
Date 02/12/18
Job No. 2018001
Dwg No. **3298 DA13** Rev: **1** A1 SHEET

11/11/2019 12:20:03 PM X:\2019\2019048-Leyton Springwood\Drawings\DA\2019048 DA.rvt

MASS PLANTING:
ASSORTED GROUNDCOVERS &
LOW SHRUBS TO FRONT OF SITE.

STAFF/ MAINT.
VAC BAY 1
BIN
VAC BAY 2
BIN
VAC BAY 3
BIN
VAC BAY 4
11
12

VACUUM BAYS

CARWASH

AUTO-WASH 1
AUTO-WASH 2
WC
PLANT ROOM
ACOUSTIC ABSORPTION
MANUAL WASH 1
MANUAL WASH 2
MANUAL WASH 3
MANUAL WASH 4

NOT PART OF THIS APPLICATION

FUEL CANOPY

1 2 3 4 5 6 7 8

NOT PART OF THIS APPLICATION

LOADING ZONE

FUEL SHOP

9
10

MASS PLANTING:
ASSORTED GROUNDCOVERS
& LOW SHRUBS.

MASS PLANTING:
ASSORTED TALLER
SHRUBS TO REAR OF SITE.

LANDSCAPING PLAN
1 : 200

DA ISSUE
ISSUED FOR DEVELOPMENT APPROVAL
22/11/2019 4:52:33 PM

Rev.	Amendment	Date
1	ISSUED FOR DEVELOPMENT APPROVAL	11/11/19
2	ISSUED FOR DEVELOPMENT APPROVAL	22/11/19

PLANTING LIST


DIANELLA REVOLUTA
BLACK ANTHER FLAX LILY
0.4M (H) X 0.4M (W)


DIANELLA
TAS RED
0.4M (H) X 0.5M (W)


ANIGOZANTHOS BUSH GEM
BUSH BLITZ
0.6M (H) X 0.4M (W)


CORREA ALBA 'STAR SHOWER'
NATIVE FUSHCIA
0.4M (H) X 2.0M (W)


CORREA
DUSKY BELLS
0.5M (H) X 2.0M (W)


DAMPIERA ROSMARNIFOLIA
BLUE FLOWERED FORM
0.5M (H) X 1.0M (W)

PLANTING NOTES

- ALL GARDEN BEDS TO BE MULCHED 100MM MINIMUM DEEP AND DRIP IRRIGATED.
- MASS PLANTING TO SUIT AREAS, SCREENING AND/OR SIGHTLINES. GENERALLY TO HAVE LOW LEVEL PLANTING TO STREET FRONTAGES & MEDIUM TO HIGH LEVEL PLANTING TO THE REAR OF THE SITE.

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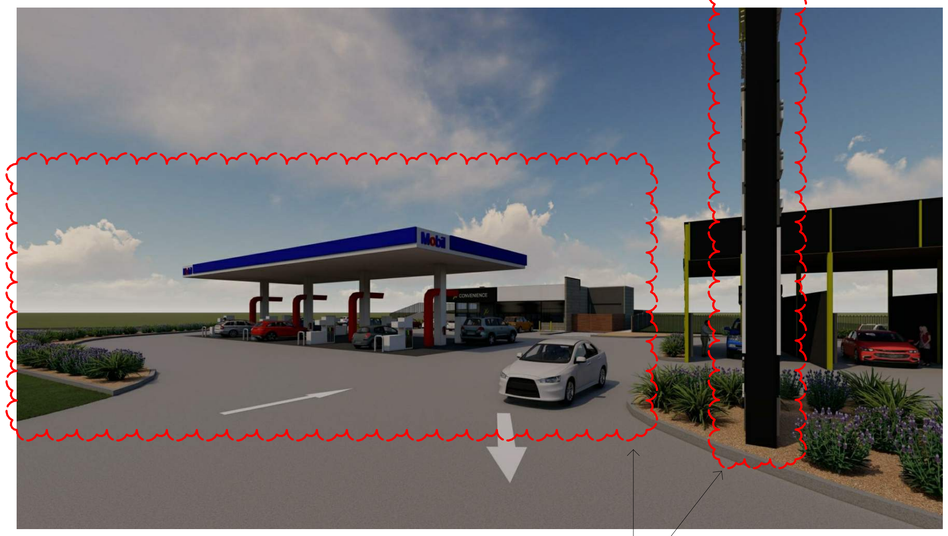
LEYTON PROPERTY

PROPOSED CARWASH CNR
CALTON RD & GAWLER EAST LINK
ROAD, SPRINGWOOD

LANDSCAPING PLAN

Scale As indicated
Date 09/02/19
Job No. 2018001
Dwg No. **3298 DA14** Rev: **2** A1 SHEET



VIEW FROM CALTON ROAD ENTRY

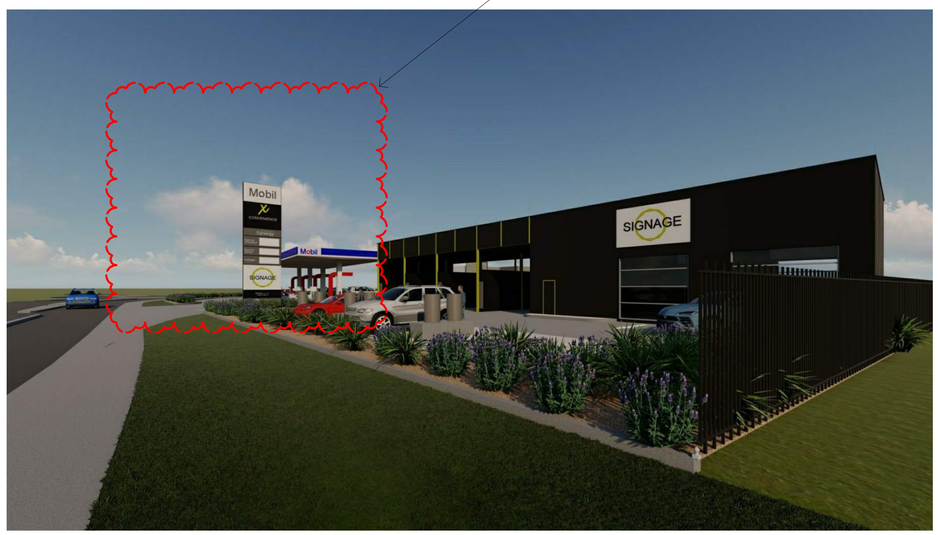
VIEW FROM CALTON ROAD & CONNECTOR RD INTERSECTION

NOT PART OF THIS APPLICATION

VIEW OF CARWASH ENTRY

VIEW OF SHOP FROM CONNECTOR ROAD

NOT PART OF THIS APPLICATION



VIEW OF CARWASH FROM CALTON ROAD

VIEW OF SHOP & CANOPY FROM CONNECTOR ROAD ENTRY

DA ISSUE

ISSUED FOR DEVELOPMENT APPROVAL

11/11/2019 12:27:13 PM

Rev.	Amendment	Date
1	ISSUED FOR DEVELOPMENT APPROVAL	11/11/19

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LEYTON PROPERTY

PROPOSED CARWASH CNR CALTON RD & GAWLER EAST LINK ROAD, SPRINGWOOD

3D IMAGES

Scale
Date 02/12/18
Job No. 2018001
Dwg No. **3298 DA15** Rev: **1** A1 SHEET

ekistics

Appendix 3. Traffic and Parking Report

SERVICE STATION AND CAR WASH
CALTON ROAD, SPRINGWOOD

TRAFFIC AND PARKING REPORT

CIRQA™

DISCLAIMER

DOCUMENT CONTROL

Report title:	Service Station and Car Wash, Calton Road, Springwood Traffic and Parking report
Project number:	19158
Client:	Leyton Property
Client contact:	Hamish Brown

Version	Date	Details/status	Prepared by	Approved by
Draft	29 Aug 19	For review	BC	BNW
V1	10 Sep 19	For submission	BC	BNW

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1. INTRODUCTION

CIRQA has been engaged to provide design and assessment advice for the proposed petrol filling station and car wash at Calton Road, Springwood.

This report provides a review of the subject site, the proposed development, its access and parking provisions and the associated traffic impact on the adjacent road network. The traffic and parking assessments have been based upon plans prepared by Brown Falconer (drawing no. 8888 DA02, refer Appendix A).

2. BACKGROUND

2.1 SUBJECT SITE

The subject site is located on the southern side of Calton Road and forms part of the broader Springwood residential development (which will also include supporting retail and commercial components). The site is currently vacant. Ultimately, the site will be bound by Calton Road to the north, a new collector road to the east and residential development to the south and west. The Town of Gawler's Development Plan identifies that the site is located within the Residential (Gawler East) Zone.

Figure 1 illustrates the location of the subject site and associated existing access points.

Figure 1 – Location of the subject site and adjacent roads

(Source: Brown Falconer, 2019)

2.2 ADJACENT ROAD NETWORK

Calton Road is a local road under the care and control of the Town of Gawler. Adjacent the site, Calton Road comprises a 6.6 m wide carriageway (approximate) with a single traffic lane in each direction. Traffic data indicates that Calton Road has an Annual Average Daily Traffic (AADT) volume in the order of 4,600 to 5,000 vehicles per day (vpd), albeit are forecast to increase to 5,500 vpd on completion of the Springwood development. A 50 km/h speed limit applies on Calton Road.

The future road (to east of the subject site) will be a collector road under the care and control of the Town of Gawler. It is understood that the collector road will comprise single traffic lanes in each direction separated by a central median (in the vicinity of the subject site). Traffic forecasts (prepared by others) indicate that the collector road will ultimately accommodate in the order of 6,500 vpd. A 50 km/h speed limit will apply on the collector road.

The intersection of Calton Road and the collector road will be controlled with a single lane roundabout.

2.3 WALKING AND CYCLING

There are no footpaths provided on Calton Road. However, a shared pedestrian/cyclist path will be provided within the Springwood Estate verge on the southern side of Calton Road.

No formal cycling facilities are provided on Calton Road. Cyclists are required to either share the traffic lane with vehicles or (in the future) ride on the dedicated shared pedestrian/cyclist path provided on the southern side.

2.4 PUBLIC TRANSPORT

There are no immediate public transport facilities, however the Gawler East Circuit bus service (clockwise loop) is provided within approximately 760 m in Cheek Avenue/Cork Road. This service connects with the Gawler Train Station, however, only operates Monday to Friday. Ultimately, it is anticipated that additional services will operate within the Springwood development.

3. PROPOSED DEVELOPMENT

3.1 LAND USE AND YIELD

The proposed development comprises the construction of a new petrol filling station. The petrol filling station will comprise eight domestic (light) vehicle fuel bowsers (in a 'domino' configuration) and an associated 190 m² convenience store. In addition, a car wash will be developed on the western portion of the petrol station site comprising two automatic car wash bays, three manual car

wash bays and six vacuum bays plus additional queuing areas behind the car wash bays.

3.2 ACCESS AND PARKING DESIGN

Access to the site is proposed to be provided via two two-way access points. One access will be left-in/right-in/left out to Calton Road while the second will be left-in/right-in/left-out only from the collector road. Simultaneous turning movements will be accommodated at both accesses. All vehicles will be able to enter and exit the site in a forward direction.

Adequate storage will be provided at the fuel bowsers to ensure vehicles queued behind bowsers do not impact other movements into and out of the site as illustrated in Figure 2.

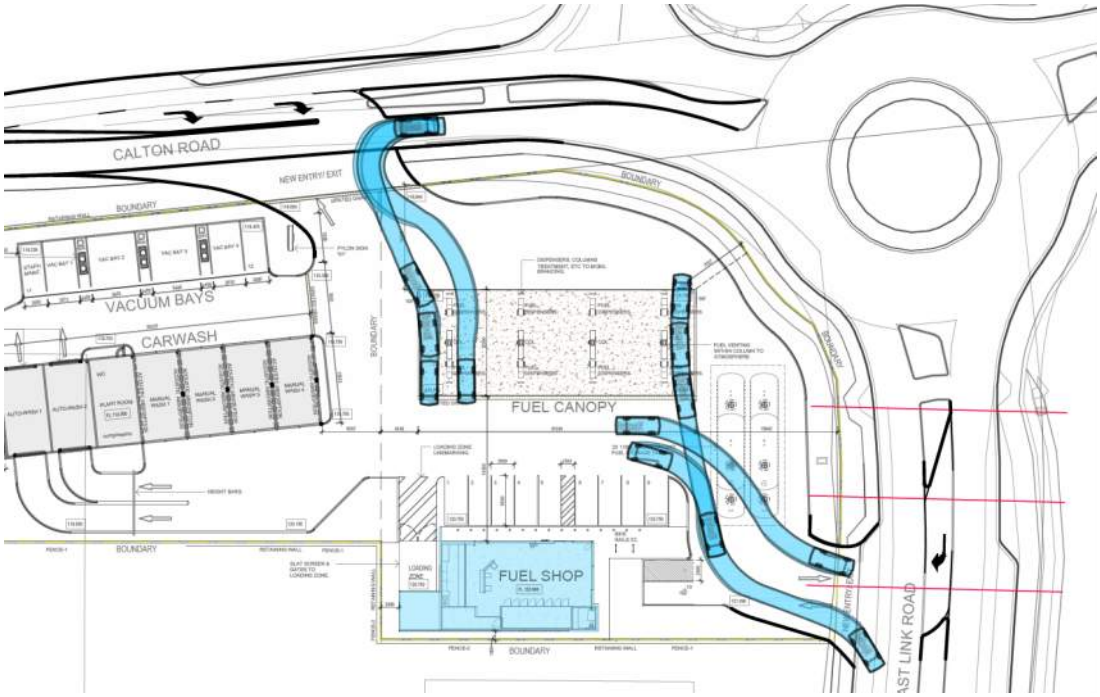


Figure 2 – Queuing provisions for bowsers closest to the access points

The site will be serviced by 12 parking spaces including one space for use by persons with disabilities. The parking area will comply with the requirements of the Australian/New Zealand Standard for *"Parking Facilities – Part 1: Off-street car parking"* (AS/NZS 2890.1:2004) and the Australian/New Zealand Standard for *"Parking Facilities – Part 6: Off-street parking for people with disabilities"* (AS/NZS 2890.6:2009) in that:

- regular spaces will be 5.4 m long and 2.6 m wide;
- the parking space for use by persons with disabilities will be 2.4 m wide and 5.4 m long with an adjacent shared area of the same dimension; and

- a minimum aisle width of 6.2 m will be provided.

Two bicycle parking rails will be provided on-site (capable of accommodating two bicycles each).

3.3 COMMERCIAL VEHICLE SERVICING

Delivery and service movements would typically be undertaken outside of peak demand periods associated with the site and the peak commuter periods associated with the adjacent road network. Fuel tankers would be anticipated to access the site two to three times per week with additional movements made by medium and small rigid vehicles to service the retail store (say ten vehicles per week). The number of commercial movements is low and would easily be accommodated on site and on the adjacent road network. All vehicles (including commercial vehicles) will be able to enter and exit the site in a forward direction.

Figure 3 illustrates the turn path of the largest vehicle anticipated to access the site (a 19 m Semi-Trailer tanker).

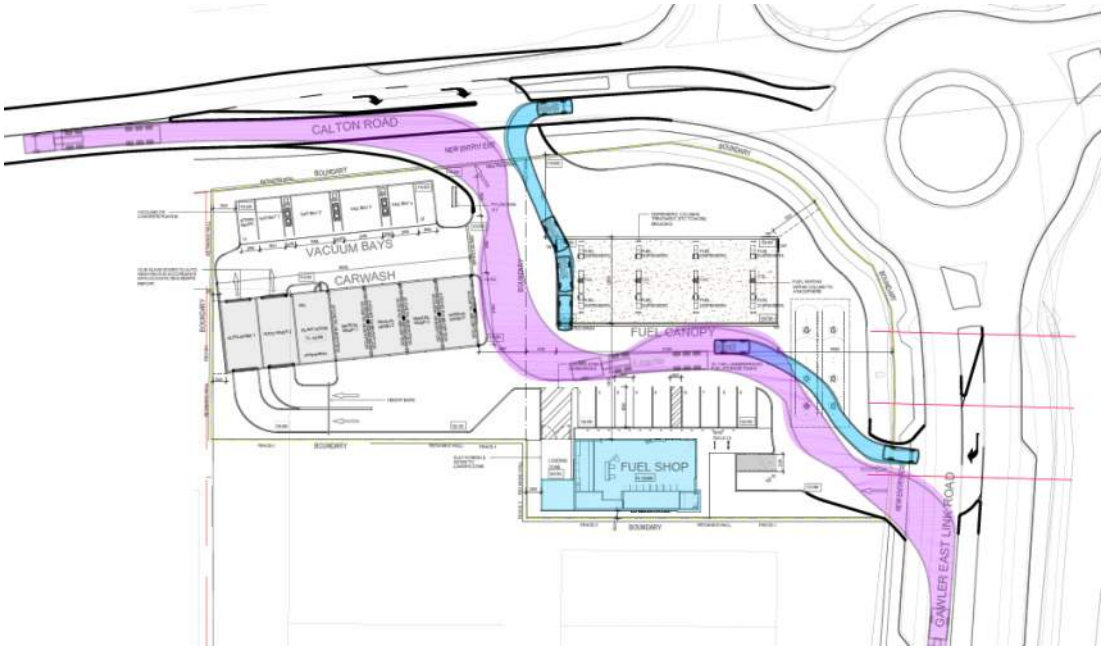


Figure 3 – 19.0 m Semi-Trailer tanker turn path into and out of the site

4. PARKING ASSESSMENT

4.1.1 PETROL FILLING STATION

The Town of Gawler's Development Plan identifies a minimum parking rate of one space per service bay plus five spaces per 100 m² of retail floor space. Based upon the convenience store (retail) floor area of 190 m², there is a parking requirement for 9.5 parking spaces (no service bays are proposed on-site). The

proposed provision of 10 spaces therefore exceeds the requirement of the Development Plan for the petrol filling station component. In reality, recent survey data for petrol filling stations indicates lower demand rates than that suggested by the Development Plan and the peak demand associated with the site will likely be lower than forecast above.

4.1.2 CAR WASH FACILITY

No parking rate is identified for car wash facilities in the Town of Gawler's Development Plan. In reality, the majority of demand associated with the car wash facility will be accommodated in the bays themselves (12 spaces) and adjacent queuing areas rather than separate parking spaces. There would be minimal demand for separate parking spaces associated with this component of the proposal, other than an occasional requirement for maintenance staff parking. The provision of two spaces for the car wash will easily accommodate demands associated with this component.

On the basis of the above assessment, it is considered that more than sufficient car parking will be provided as part of the proposal.

4.2 BICYCLE PARKING

The Development Plan does not provide a specific rate for the provision of bicycle parking at petrol filling stations (or similar uses). The proposal includes the provision of two bicycle parking rails (capable of accommodating four bicycles). Such a provision is considered adequate for the proposed use.

5. TRAFFIC ASSESSMENT

5.1 TRAFFIC GENERATION AND DISTRIBUTION

5.1.1 PETROL FILLING STATION

The NSW Roads and Traffic Authority's (now Roads and Maritime Services) "*Guide to Traffic Generating Developments*" identifies two trip generation formulae for developments classified as "service stations and convenience stores", dependant on site area and gross floor area of an associated convenience store (if applicable). These formulae are listed as:

(1) Evening peak hour trips = 0.04 A(S) + 0.3 A(F); or

(2) Evening peak hour trips = 0.66 A(F); where:

A(S) = area of site (m²); and
A(F) = gross floor area of convenience store (m²).

Based upon the above formulae, an approximate site area (for the petrol station component) of 2,450 m² and a convenience store gross floor area of 190 m², it is

forecast that the site could generate between 125 trips (formula 2) and 155 trips (formula 1) in the pm (evening) peak hour.

In addition, it is commonly accepted that in the order of 70% of vehicle trips associated with petrol filling stations are related to passing trade (i.e. vehicles already on the road network), with the remaining 30% of vehicle trips considered to be additional trips on the adjacent road network. This equates to a pm trip generation of approximately 109 trips associated with "passing trade" and 46 trips associated with additional (new) movements (based on the higher of the above rates).

5.1.2 CAR WASH FACILITIES

The RTA Guide provides no rate specific to car wash facilities. It is, therefore, common to assess such uses on a 'first principles' basis. A single automated car wash typically has a service rate of between 5 to 10 minutes per vehicle. On this basis, the two automatic car wash bays could service between 12 and 24 vehicles in a single hour. A single manual car wash has a lower service rate of approximately one car every 15 minutes. Therefore, the manual car wash bays could service approximately 16 vehicles per hour. The vacuum bays are then utilised by patrons associated with the automatic and manual car washes and generally don't generate additional traffic (above that already associated with the car wash bays). On the basis of the above, the car wash facilities could service up to 36 vehicles in an hour (at full occupancy). As with the petrol station, it is assumed that a reasonable proportion of the traffic generated by these facilities will be passing.

In reality, the level of traffic generated by the wash facilities would be below its theoretical capacity (particularly during the peak commuter hours when use of such a facility would be relatively low). Furthermore, a proportion of trips generated by the wash facilities would also likely to be associated (shared) with the petrol filling station.

5.1.3 TOTAL TRAFFIC

On the basis of the above, it is conservatively forecast that there will be in the order of 110 'passing trade' trips and 80 additional ('new') trips associated with the overall development in the peak hour.

It is anticipated that these movements will be relatively evenly distributed between Calton Road (to/from the west of the site) and the collector road (to/from the south of the site) with only a small proportion of movements distributed to/from the east along Calton Road.

5.2 TRAFFIC IMPACT

The potential traffic generation associated with future commercial development on the subject site was included as part of previous traffic assessments prepared for the broader Springwood development. The analysis of the overall traffic impacts has therefore considered the impact of the development of the site and the future road network and infrastructure interventions have been designed accordingly. Detailed analysis of the traffic impact of the proposal is therefore not warranted.

Nevertheless, it is noted that right-turn out movements from the site will be restricted (by central median on both frontage roads). This will minimise impacts on through bound movements on Calton Road and the collector road, and maximise safety at the site access points. Drivers wishing to head right-out on Calton Road or right-out on the collector road will be able to undertake a left-out of the collector road access point and then utilise the roundabout to complete their desired journey. The remaining movements at the access points are low conflict movements. There will be adequate sight distance provisions and drivers will be able to safely and appropriately enter and exit the traffic stream. Separated right-turn treatments are also proposed to minimise impact of right turning vehicles on through bound movements on the adjacent roads.

On the basis of the above, it is considered that the impact of the proposal on the adjacent road network will be minimal (particularly given the broader assessment and associated road layout has taken into account the potential development of the site).

6. SUMMARY

The proposed development at Calton Road, Springwood, comprises the construction of a new petrol filling station, associated shop and a car wash facility. Access to the site will be provided via separate access points on Calton Road and on the collector road (with right-out movements restricted). The parking areas and associated access points will comply with the requirements of the Australian Standards.

An assessment of parking demands identified that the provision of 12 parking spaces will adequately satisfy the parking demand associated with the petrol filling station and the car wash.

The proposal is forecast to generate approximately 80 additional peak hour movements on the adjacent roads (excluding passing trade). However, the traffic generation of the site has previously been taken into account with the previous assessments for the broader Springwood development. Accordingly, the forecast traffic generation is considered to be within the capacity of the adjacent

roads and intersections. The movements associated with the site will be readily accommodated at the site's access points and on the adjacent road network.

APPENDIX A

BROWN FALCONER PLANS

SITE PLAN

1 : 200

X:\2019\2019048-Leyton Springwood\Drawings\DA\2019048 DA.rvt

22/11/2019 4:47:17 PM

DA ISSUE

ISSUED FOR DEVELOPMENT APPROVAL

22/11/2019 4:47:17 PM

Rev.	Amendment	Date
1	ISSUED FOR DEVELOPMENT APPROVAL	11/11/19
2	ISSUED FOR DEVELOPMENT APPROVAL	22/11/19

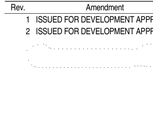
DEVELOPMENT SUMMARY

SITE AREA	4068m²
SHOP	194m²
CANOPY/FORECOURT	372m²
CAR WASH	354m²
LANDSCAPING	596m² (14.65%)
PARKING PROVIDED	12

NOTES:

1. SPEL UNIT IS TO BE A 'SPEL PURACEPTOR CLASS 1 FULL RETENTION SEPARATOR'. REFER TO CIVIL FOR SPEL AND DETENTION SIZES.
2. WASTE WATER COLLECTED IN THE SPEL PURACEPTOR WILL BE REMOVED BY AN EPA LICENSED WASTE TRANSPORTER TO LICENSED WASTE DEPOT AUTHORISED TO RECEIVED SUCH WASTE.
3. FUEL SYSTEMS TO INCLUDE:
   - DOUBLE WALLED FIBREGLASS TANKS.
   - ATG SYSTEM.
   - DOUBLE WALLED FUEL LINES.
   - PRESSURE LEAK DETECTION SYSTEM TO AS4897-2008, THE DESIGN, INSTALLATION AND OPERATION OF UNDERGROUND PETROLEUM STORAGE SYSTEMS.
   - STAGE 1 VAPOUR RECOVERY (VR1).
4. CAR PARK LIGHTING DESIGN IS TO COMPLY WITH AS/NZS 1158.1.3.

FENCE TYPES



FENCE-1

1800MM HIGH ALUMINIUM PICKET FENCING MOUNTED ON TOP OF RETAINING WALL.
COLOUR: 'MONUMENT'

FENCE-2

1800MM HIGH COLORBOND GOOD NEIGHBOUR FENCING MOUNTED ON TOP OF RETAINING WALL.
COLOUR: 'MONUMENT'

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LEYTON PROPERTY

PROPOSED CARWASH CNR CALTON RD & GAWLER EAST LINK ROAD, SPRINGWOOD

SITE PLAN

Scale	As indicated
Date	02/12/18
Job No.	2018001
Dwg No.	3298 DA11
Rev:	2
	A1 SHEET

ekistics

Appendix 4. Acoustic Report

Retail Development

Springwood

Environmental Noise Assessment

S6185C2

September 2019

sonus.

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Document Title	:	Retail Development - Corner Calton Road & Gawler East Link Road, Springwood Environmental Noise Assessment
Document Reference	:	S6185C3
Date	:	September 2019
Prepared By	:	Jason Turner, MAAS
Reviewed By	:	Chris Turnbull, MAAS

INTRODUCTION

An environmental noise assessment has been made of the proposed development at the corner of Calton Road & the Gawler East Link Road, Springwood.

The development comprises a service station facility which includes a control building, car parking, automatic and manual wash bays, vacuum bays and landscaping.

The closest existing noise sensitive locations to the site are the residences located to the north on the opposite side of Calton Road and further to the east on the opposite side of the proposed Gawler East Link Road, as shown in Appendix A. The site is within a mixed use policy area which will be the subject of future development. The assessment therefore considers noise levels at the existing residences only from the following activity:

- On-site vehicle movements;
- General car park activity;
- Automatic and manual car wash bays;
- Vacuum bays;
- Fuel deliveries;
- Rubbish collection; and,
- Mechanical plant servicing the facility.

The assessment has been based on:

- *Brown Falconer* drawings of the proposal with job number "2018001", drawing numbers "DA01" to "DA05" inclusive and dated August 2019;
- Operating hours of the facility being up to 24 hours per day, 7 days per week with the exception of the automatic and manual wash bays and vacuum bays;
- The assumption that;
    - The site will have no LPG facilities; and,
    - The automatic and manual wash bays and vacuum bays will not operate at night.
- Previous noise measurements and manufacturer noise data from similar sites, including plant and equipment, car parking activity, car wash and vacuum bay operation and fuel delivery.

CRITERIA

Development Plan

The subject site is located within the *Mixed Use Centre Policy Area* of the *Residential (Gawler East) Zone* within the *Gawler Council Development Plan*[1] (the Development Plan). The nearest existing residences on the opposite side of Calton Road are located within the *Residential Zone*, while the residences to the east are within the *Residential (Gawler East) Zone.* The Development Plan has been reviewed and the following provisions considered relevant to the noise assessment.

Interface Between Land Uses

Objective 42: *Development located and designed to minimise adverse impact and conflict between land uses.*

Objective 43: *Protect community health and amenity from adverse impacts of development.*

Objective 44: *Protect desired land uses from the encroachment of incompatible development.*

PRINCIPLES OF DEVELOPMENT CONTROL

107 *Development should not detrimentally affect the amenity of the locality or cause unreasonable interference through any of the following:*

(b) noise;

108 *Development should be sited and designed to minimise negative impacts on existing and potential future land uses desired in the locality.*

111 *Sensitive uses likely to conflict with the continuation of lawfully existing developments and land uses desired for the zone should be designed to minimise negative impacts.*

112 *Non-residential development on land abutting a residential zone should be designed to minimise noise impacts to achieve adequate levels of compatibility between existing and proposed uses.*

[1] Consolidated 18 July 2019.

Noise Generating Activities

113 Development that emits noise (other than music noise) should include noise attenuation measures that achieve the relevant Environment Protection (Noise) Policy criteria when assessed at the nearest existing noise sensitive premises.

114 Development with the potential to emit significant noise (e.g. industry) should incorporate noise attenuation measures that prevent noise from causing unreasonable interference with the amenity of noise sensitive premises.

Environment Protection (Noise) Policy 2007

Interface between Land Uses PDC 113 from the Development Plan references the *Environment Protection (Noise) Policy 2007*, which provides goal noise levels to be achieved at residences from general activity at a site and specific provisions for other activity such as rubbish collection.

The Policy is based on the World Health Organisation Guidelines to prevent annoyance, sleep disturbance and unreasonable interference on the amenity of an area. Therefore, compliance with the Policy is considered to be sufficient to satisfy all provisions of the Development Plan relating to environmental noise.

Rubbish Collection

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 9am and 7pm on Sundays or public holidays, and between 7am and 7pm on any other day, except where it can be shown that the maximum (L_{max}) noise level from such activity is less than 60 dB(A).

General Activity other than Rubbish Collection

The Policy provides goal noise levels to be achieved at residences based on the principally promoted land use of the Development Plan zones in which the noise source (the development) and the noise receivers (residences) are located.

Based on the principally promoted land uses in the Development Plan, the following goal noise levels are provided by the Policy to be achieved at all existing residences:

- An average (L_{eq}) noise level of 50 dB(A) during the day time (7am to 10pm);
- An average (L_{eq}) noise level of 43 dB(A) during the night time (10pm to 7am); and,
- A maximum (L_{max}) noise level of 60 dB(A) during the night time.

When measuring or predicting noise levels for comparison with the Policy, adjustments may be made to the average goal noise levels for each "annoying" characteristic of tone, impulse, low frequency, and modulation of the noise source. The characteristic must be dominant in the existing acoustic environment and therefore the application of a penalty varies depending on the assessment location, time of day, the noise source being assessed, and the predicted noise level. The application of penalties is discussed further in the Assessment section of this report.

ASSESSMENT

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

- Car park activity such as people talking as they vacate or approach their vehicles, the opening and closing of vehicle doors, vehicles starting, vehicles idling, and vehicles moving into and accelerating away from their park position;
- General vehicle movements and idling on site;
- Automatic and manual wash bays and the associated plant room;
- Vacuum bays;
- Fuel delivery trucks; and,
- Mechanical plant serving the control building.

At the Development Application stage of a project, it is usual practice that the mechanical plant is not yet designed or selected. Therefore, the assessment has considered typical air conditioning, refrigeration and exhaust fans operating at other similar facilities to provide an indicative assessment.

Noise predictions have been made based on manufacturer's data and previous noise measurements of the following indicative air conditioning and refrigeration equipment;

Equipment	Quantity
Display fridges	2
Freezer	1
Packaged cooling units	2
Amenity exhaust fan	1

The final design should ensure the relevant goal noise levels of the *Environment Protection (Noise) Policy 2007* are achieved at all residences when accounting for the other noise sources on the site.

The sound power levels for the above activities are provided as Appendix D.

Rubbish Collection

In order for rubbish collection to achieve the requirements of the Policy, the hours for collection should be restricted to that of Division 3 of the Policy. That is, rubbish collection should only be between the hours of 9am and 7pm on a Sunday or public holiday, and 7am and 7pm on any other day.

General Activity

The predictions of noise from sources other than rubbish collection at the facility have been based on the following operational assumptions for the level of activity in any 15-minute[2] period:

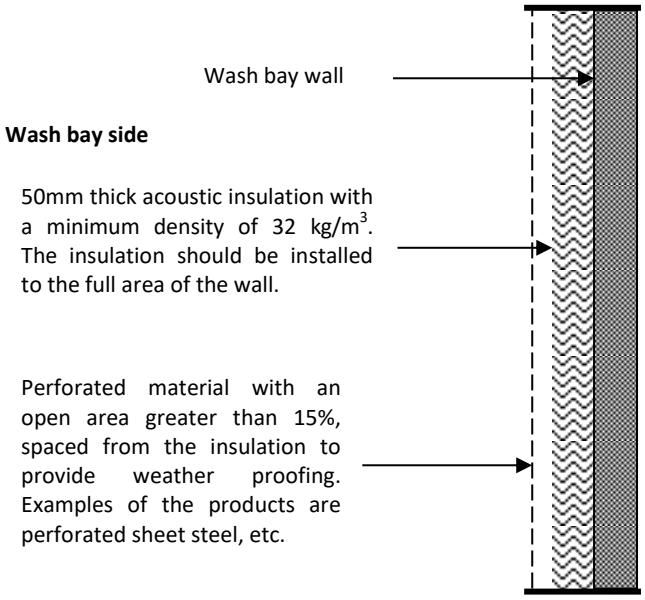
- during the day (7am to 10pm):
    - continuous operation of all mechanical plant on the control building roof;
    - 15 vehicle movements through the site using the petrol filling stations;
    - A stationary vehicle idling continuously at half of the refuelling bays (while waiting to use the filling station);
    - 8 vehicle movements through the site using the car park bays or car wash facilities;
    - A stationary vehicle idling continuously at both of the automatic car washes (while waiting to use the wash bay);
    - Continuous operation of both automatic car wash bays;
    - 5 minutes of high pressure spray in each of the manual wash bays;
    - Continuous use of 2 vacuum units; and,
    - A single fuel delivery.
- During the night (10pm to 7am):
    - continuous operation of all mechanical plant on the control building roof;
    - 10 vehicle movements through the site using the petrol filling stations; and,
    - 5 vehicle movements through the site using the car park bays.

Based on the above, the following acoustic treatments are recommended for the site to achieve the goal noise levels of the Policy:

[2] Default assessment period of the Policy.

Car Wash & Vacuum Bays

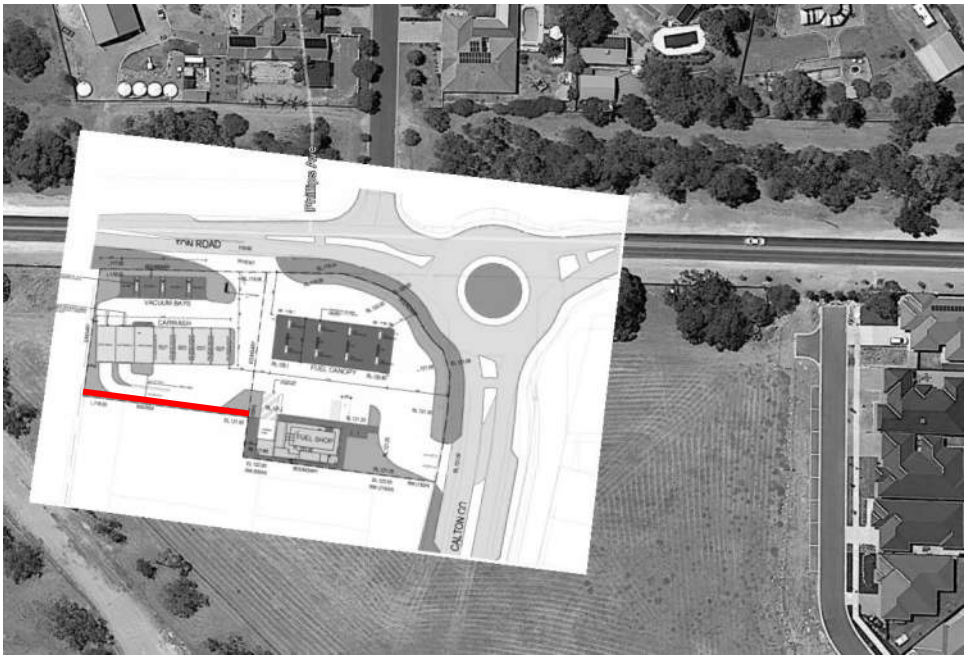
- Ensure that the automatic and manual wash bays and vacuum bays are not used during the night time hours of the Policy (10pm to 7am);
- As has been documented, install glass doors (minimum 10.38mm thick laminated glass) to the entry and exit of the automatic car washes, which automatically before the wash cycle starts and do not open until the dry cycle has finished. Roller door brush seals should be installed to the doors to seal as close as possible to air tight when closed;
- As has been documented, install acoustic absorption material to the walls of the manual wash bays. Minimum 50mm thick polyester insulation of 32kg/m^3 density may be used in accordance with the following detail to provide weather proofing, or a proprietary weather proof product with a minimum NRC rating of 0.8 may be used without the weather proofing detail.



- In addition to the above, install acoustic absorption material to the underside of the manual wash bay ceiling to the same specification as the wall treatment. The absorption may be held in place by any material with a minimum open area of 15%.
- Ensure the roof of the automatic car washes and the plant room incorporate a layer of 9mm thick compressed fibre cement sheet, with 50mm thick acoustic insulation having a minimum density of 32 kg/m^3 laid over the top (between the ceiling and the sheet metal roof deck).

General Activity

- Restrict fuel deliveries to the daytime hours of the Policy. That is, between 7am and 10pm only;
- Should amplified music played outdoors be proposed, it should be set at a level which is inaudible at any dwelling at any time.
- Reduce noise from any alarms produced by site equipment, such as for compressed air, carwash bays or vacuum bays as far as practical.
- Ensure there are no irregularities on the site and all inspection points, grated trenches, etc. are correctly fixed to remove the potential for impact noise being generated when driven over.
- Should a solid fence, such as "Colorbond" sheet steel, be constructed for the portion shown below for other reasons, then acoustic absorption material should be installed to the same specification as the manual car wash wall treatment on the site side of the fence for its full extent. Should an acoustically open fence, such as tubular steel, be proposed, no further treatment will be required.



Mechanical Plant

- Locate all mechanical plant (other than for the car wash facilities) on the control building roof;
- Construct a barrier between the roof top plant and the residences to the north (on the opposite side of Calton Road), which is at least the same height as the tallest condensing unit and is constructed from a minimum 0.42 BMT sheet metal (*Colorbond*) or an acoustic equivalent.
- If a barrier is constructed on the opposite side of the units (southern side), the construction should incorporate acoustic absorption material to the same specification as the manual wash bay wall treatment to the full extent on the plant side of the barrier

The noise level and any acoustic treatment associated with mechanical plant should be reviewed during the detailed design phase, should the final equipment selections have different sound power levels or should a different number of units be proposed to those specified within this report.

With the inclusion of the acoustic treatments described above and the assumed level of activity at the site, the predicted average (L_{eq}) noise levels at the existing residences are no more than 50 dB(A) during the day time and 42 dB(A) during the night. Given the potential for low noise levels in the environment and modulating vehicle noise to be audible for periods during the night time when there is limited activity on Calton Road & the Gawler East Link Road but activity on the site, a 5 dB(A) penalty has been added to the night time predicted noise level which conservatively applies to all activity after 10pm and before 7am. That is, the predicted noise level at night of 37 dB(A) has been penalised to become 42 dB(A).

Based on the above, the goal noise levels of 50 dB(A) during the day time and 43 dB(A) during the night time are predicted to be achieved at all existing residences.

In addition, based on the inclusion of the acoustic treatment described above, the predicted maximum noise level at any existing residence is no more than 54 dB(A), therefore achieving the Policy requirement of 60 dB(A) for night time activity.

CONCLUSION

An environmental noise assessment has been made of the proposed development at the corner of Calton Road and the Gawler East Link Road, Springwood.

The assessment considers noise levels at nearby existing residences from vehicle movements, car park activity, fuel deliveries, automatic and manual wash bays, vacuum bays, rubbish collection and mechanical plant servicing the facility.

The predicted noise levels from the development will achieve the relevant noise criteria, derived in accordance with the *Environment Protection (Noise) Policy 2007* subject to the treatments in this report, comprising;

- Installing doors to the automatic wash bays;
- Installing acoustic absorption within the manual wash bays;
- Upgrading the roof of the automatic wash bay and plant room;
- Screening the roof top plant and restricting its noise levels subject to a subsequent design phase review;
- Reducing the noise from any alarms as far as practical;
- Ensuring all inspection points, grated trenches, etc. are correctly fixed;
- Restricting the times for rubbish collection and fuel deliveries; and
- Restricting the times for use of the wash facilities.

It is therefore considered that the facility has been designed to *minimise adverse impacts*, *avoid unreasonable interference on amenity*, and *will not detrimentally affect the locality by way of noise*, thereby achieving the relevant provisions of the Development Plan related to environmental noise.

APPENDIX A: Site locality and nearby residences.

APPENDIX B: Noise level data.

Equipment/Activity		Sound Power Level
General activity	General activity	83 dB(A) SWL
	Idling car	75 dB(A) SWL
	Moving car	82 dB(A) SWL
	Moving fuel truck	96 dB(A) SWL
	Car door slam	94 dB(A) L_{max}
	Vehicle accelerating quickly	97 dB(A) L_{max}
Car Wash	Automatic Car Wash – Wash Cycle	87 dB(A) (noise level within building)
	Automatic Car Wash – Dry Cycle	92 dB(A) (noise level within building)
	Manual Wash Bay	96 dB(A) SWL
	Plant Room	78 dB(A) (noise level within building)
	Vacuum Bay (loaded)	82 dB(A) SWL
	Vacuum Bay (un loaded)	76 dB(A) SWL
Mechanical Plant	AC condenser unit (2 off)	75 dB(A) SWL
	Freezer (1 off)	75 dB(A) SWL
	Display fridge (2 off)	81 dB(A) SWL
	Amenity exhaust fan (1 off)	67 dB(A) SWL

ekistics

Appendix 5. Stormwater Management Plan

SAGERO
CIVIL & STRUCTURAL

253 Flinders Street., ADELAIDE SA 5000
Telephone: +61 8 8100 5000
Facsimile: +61 8 8232 8743
A.C.N. 162 095 847

CIVIL STORMWATER CALCULATIONS

REFERENCE NO	**SA190020**
ISSUE DATE	**AUGUST 2019**
AGENT	**BROWN FALCONER**
SITE LOCATION	**PETROL STATION GAWLER EAST SPRINGWOOD**

Note:

1. These calculations are to be read in conjunction with relevant Construction Reports, Structural Drawings and Architectural Drawings

2. All work to comply with the Building Code of Australia and relevant Australian and Australian and New Zealand Standards,

AS 1012 - Ready Mixed Concrete
AS 1254 - PVC Pipes and fittings for Storm/Surface Water Applications
AS 1260 - Unplasticised PVC (UPVC) Pipes and Fittings for Sewerage Applications
AS 1289 - Method of Testing Soils for Engineering Purposes
AS 1342 - Precast Concrete Drainage Pipes
AS 1379 - Specification and Supply of Concrete
AS 1415 - Unplasticised PVC Pipes and Fittings for Soil, Waste and Vent Applications
AS 1428.1 - Design for access and mobility
AS 1478 - Chemical Admixtures for use in Concrete
AS 4049.1 - Paints and Related Materials
AS 1646 - Rubber Joint Rings for Water Supply, Sewerage and Drainage Purposes
AS 1742 - Manual of Uniform Traffic Control Devices
AS 2008 - Residual Bitumen for Pavements
AS 2302 - Code of Practice for Installation of UPVC Pipe Systems
AS 2566 - Plastics Pipe Laying Design
AS 2758 - Concrete Aggregates
AS 3500 - National Plumbing and Drainage
AS 3600 - Concrete Structures
AS 3610 - SAA Formwork for Concrete
AS 3725 - Loads on Buried Concrete Pipes
AS 3792 - Portland and Blended Cements
AS/NZS 2890 1 - Parking Facilities - Off-street car parking
AS/NZS 2890 6 - Off-street parking for people with disabilities

Title: Spring wood, Gawler
Reference: SA190020
Date: August 2019

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CIVIL AND STRUCTURAL

253 Flinders Street, ADELAIDE SA 5000
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Pre developed site

Existing details:

Total area=	3981	m^2		
Exisiting roof area =	0	m^2	C' roof=	0.9
Exist. pavement area=	0	m^2	C' pave=	0.75
Existing land area =	3981	m^2	C' land=	0.3

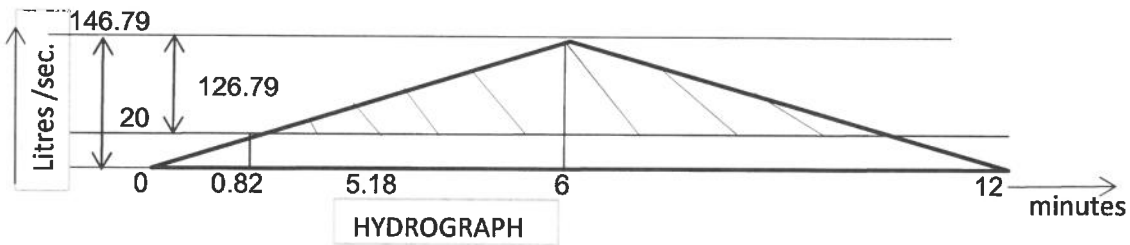
ARI (in years) 'y' =	5	Years
t_c (in minutes) 'm' =	6	minutes
Intensity of rainfall 'I^y_m' =	71.6	mm/Hour
Discharge 'Q' =CIA/3600 =	23.75	Litres/Sec
Allowable discharge =	20	Litres/Sec

Post developed site

Proposed details: Area= 3981

Roof area=	1131	m^2	C'roof=	0.9	1.2xC'roof≤1.0=	1.08	1
Pavement area=	2268	m^2	C' pave.=	0.75	1.2xC'pave≤1.0=	0.9	0.9
Land area=	582	m^2	C' land=	0.1	1.2xC'land≤1.0=	0.12	0.12

ARI (in years) 'y' =	100	Years
t_c (in minutes) 'm' =	6	minutes
Intensity of rainfall 'I^y_m' =	163	mm/Hour
Discharge 'Q' =CIA/3600 =	**146.79**	Litres/Sec



Detention volume = **126.79** X 5.18 X60/1000= **39.43** m^3

Title: Spring wood, Gawler
Reference: SA190020
Date: August 2019

SAGERO
CIVIL AND STRUCTURAL

253 Flinders Street, ADELAIDE SA 5000
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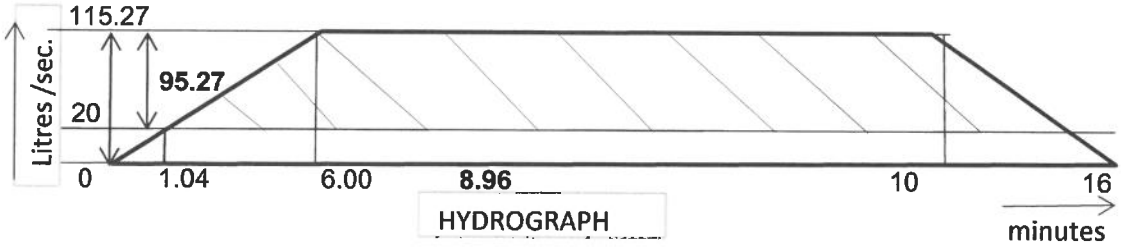
A.C.N. 162 095 847

Check for critical storm

Try duration: **10** minutes

Intensity of rainfall 'I^{y}_{m}' = 128 mm/Hour

Discharge 'Q'
=CIA/3600 = **115.27** Litres/Sec



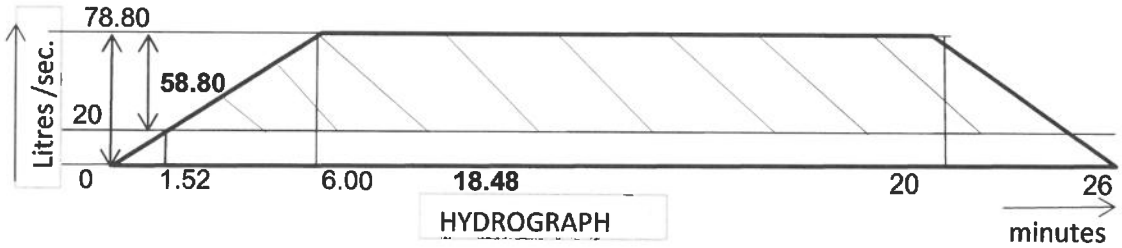
Detention volume : **95.27** X 8.96 X60/1000= **51.21** m^3

Check for critical storm

Try duration: **20** minutes

Intensity of rainfall 'I^{y}_{m}' = 87.5 mm/Hour

Discharge 'Q'
=CIA/3600 = **78.80** Litres/Sec

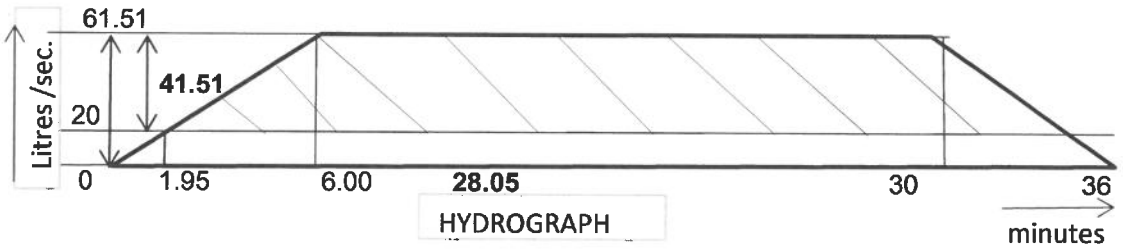


Detention volume : **58.80** X 18.48 X60/1000= **65.19** m^3

Try duration: **30** minutes

Intensity of rainfall 'I^{y}_{m}' = 68.3 mm/Hour

Discharge 'Q'
=CIA/3600 = **61.51** Litres/Sec



Detention volume : **41.51** X 28.05 X60/1000= **69.86** m^3

Title: Spring wood, Gawler
Reference: SA190020
Date: August 2019

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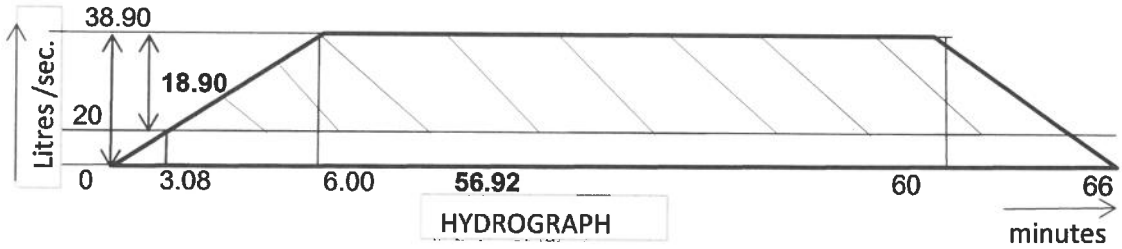
A.C.N. 162 095 847

Try duration: **60** minutes

Intensity of rainfall 'I^{y}_{m}' = 43.2 mm/Hour

Discharge 'Q'
=CIA/3600 = **38.90** Litres/Sec

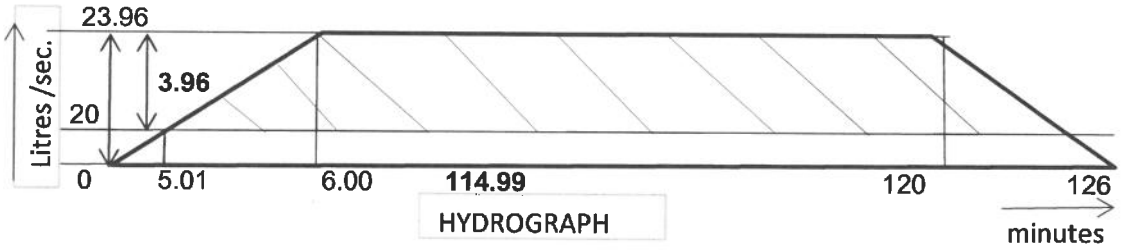


Detention volume = **18.90** X 56.92 X60/1000= **64.56** m^3

Try duration: **120** minutes

Intensity of rainfall 'I^{y}_{m}' = 26.6 mm/Hour

Discharge 'Q' **23.96** Litres/Sec

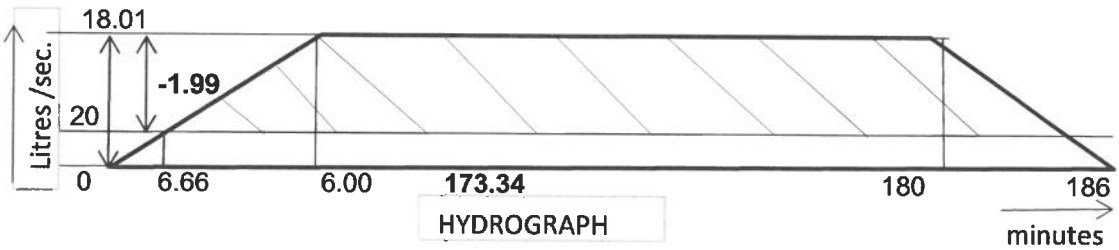


Detention volume = **3.96** X 114.99 X60/1000= **27.29** m^3

Try duration: **180** minutes

Intensity of rainfall 'I^{y}_{m}' = 20 mm/Hour

Discharge 'Q' **18.01** Litres/Sec



Detention volume = **-1.99** X 173.34 X60/1000= **-20.68** m^3

SAGERO
CONSULTING ENGINEERS

253 Flinders St., Adelaide SA 5000
Telephone +61 8 8100 5000
Facsimile +61 8 8232 8743

JOB NO : SA 190020
DATE : August 2019
DESIGN : PH
SHEET : ..... OF: .....

Summary

1. Maximum flow: 146.79 litres/sec
2. Pump discharge rate: 20.0 litres/sec
3. Max. Detention volume: 69.86 m^3
4. Detention tanks: $3 \times 23 = 69 m^3$

Onsite detention GIP3

$V = \frac{13 \times 27 \times 0.15}{3} = 17.55 m^3 + 69 = 86.55 m^3 > 69.86$ ∴ O/C!.

Australian Government
Bureau of Meteorology

LOCATION 34.600 S 138.775 E * NEAR.. Springwood Gawler

LIST OF COEFFICIENTS TO EQUATIONS OF THE FORM

$$ln(I) = A + B \times (ln(T)) + C \times (ln(T))^2 + D \times (ln(T))^3 + E \times (ln(T))^4 + F \times (ln(T))^5 + G \times (ln(T))^6$$

T = TIME IN HOURS AND I = INTENSITY IN MILLIMETRES PER HOUR

RETURN PERIOD	A	B	C	D	E	F	G
1	2.418745	-0.62900E+0	-0.29561E-1	0.82908E-2	-0.39968E-4	-0.24783E-3	0.64088E-6
2	2.706118	-0.63565E+0	-0.28892E-1	0.88203E-2	-0.19397E-3	-0.30188E-3	0.14209E-4
5	3.018133	-0.65022E+0	-0.29093E-1	0.84686E-2	-0.39026E-4	-0.24144E-3	-0.30020E-5
10	3.188971	-0.65958E+0	-0.28101E-1	0.87913E-2	-0.21068E-3	-0.25537E-3	0.41782E-5
20	3.380490	-0.66707E+0	-0.27704E-1	0.85809E-2	-0.20143E-3	-0.21523E-3	-0.36965E-5
50	3.607510	-0.67692E+0	-0.27126E-1	0.92117E-2	-0.33248E-3	-0.27406E-3	0.91723E-5
100	3.765617	-0.68317E+0	-0.26563E-1	0.92200E-2	-0.40947E-3	-0.26494E-3	0.10373E-4

RAINFALL INTENSITY IN mm/h FOR VARIOUS DURATIONS AND RETURN PERIODS

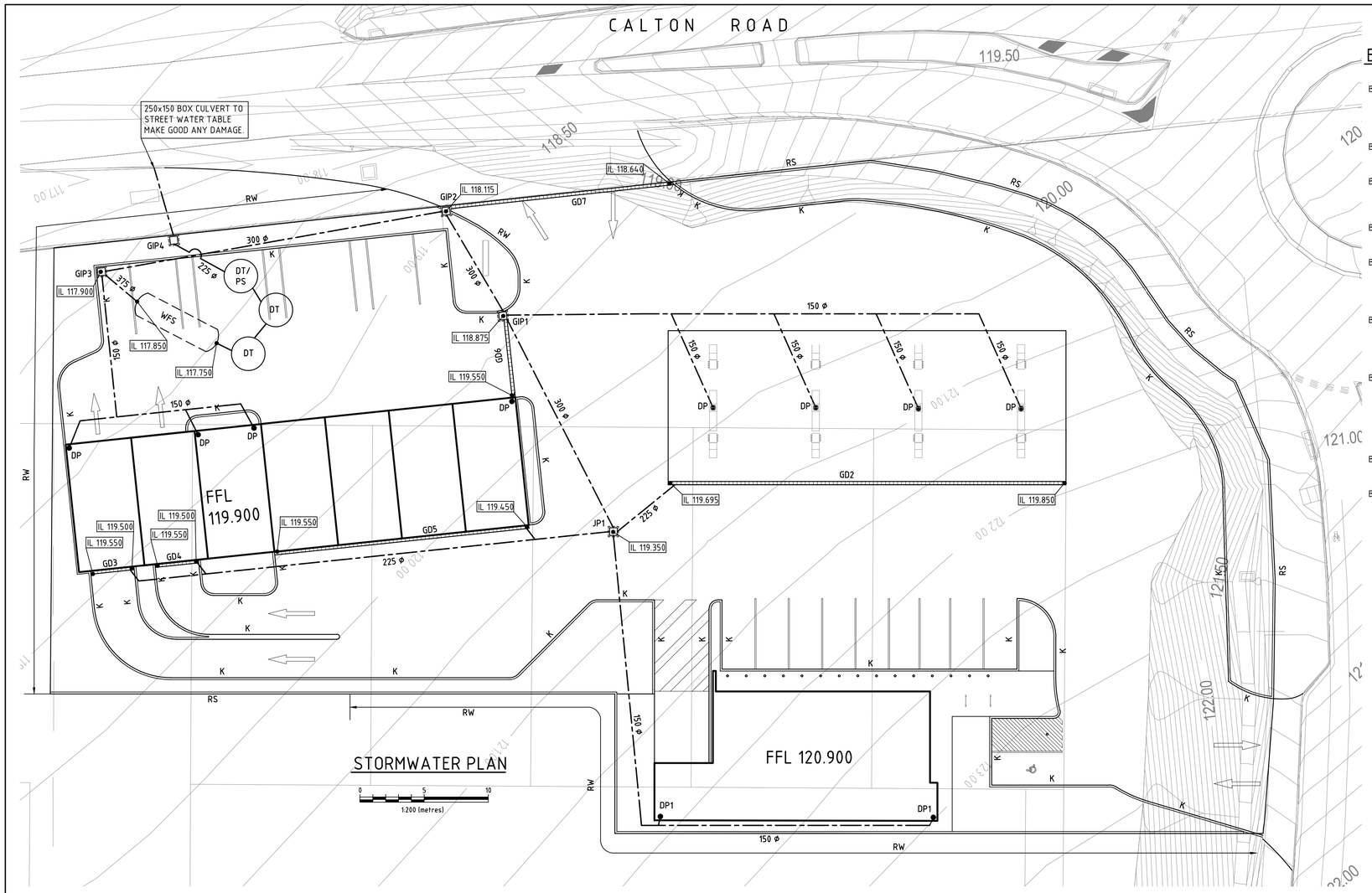
RETURN PERIOD (YEARS)

DURATION	1	2	5	10	20	50	100
5 mins	40.2	54.4	77.1	93.4	115.	148.	176.
6 mins	37.5	50.7	71.6	86.7	107.	137.	163.
10 mins	30.2	40.7	57.1	68.9	84.7	108.	128.
20 mins	21.4	28.7	39.9	47.9	58.5	74.2	87.5
30 mins	17.1	22.9	31.6	37.7	45.9	58.0	68.3
1 hour	11.2	15.0	20.5	24.3	29.4	36.9	43.2
2 hours	7.18	9.53	12.9	15.2	18.3	22.8	26.6
3 hours	5.49	7.27	9.77	11.5	13.8	17.2	20.0
6 hours	3.45	4.56	6.07	7.10	8.50	10.5	12.2
12 hours	2.17	2.86	3.77	4.39	5.23	6.44	7.44
24 hours	1.35	1.78	2.33	2.69	3.20	3.91	4.50
48 hours	.818	1.07	1.39	1.60	1.89	2.30	2.64
72 hours	.590	.771	.991	1.14	1.34	1.63	1.87

(Raw data: 15.48, 2.95, 0.79, 33.37, 5.89, 1.50,skew= 0.440)

HYDROMETEOROLOGICAL ADVISORY SERVICE

* ENSURE THE COORDINATES ARE THOSE REQUIRED SINCE DATA IS BASED ON THESE AND NOT LOCATION NAME.



STORMWATER PLAN

0 5 10
1:200 (metres)

BULK EXCAVATION AND PAVEMENT NOTES

B1. AFTER BULK EXCAVATION HAS BEEN COMPLETED THE FORMED SURFACE SHALL BE PROOF ROLLED AND TESTED IN ACCORDANCE WITH THE SPECIFICATION. AFTER TOPSOIL STRIP IN FILL ZONES HAS BEEN COMPLETED THE SURFACE SHALL BE PROOF ROLLED AND TESTED IN ACCORDANCE WITH THE SPECIFICATION.

B2. ANY SOFT, WET OR UNSUITABLE SUBGRADE MATERIALS, AS DEFINED IN THE SPECIFICATION, SHALL BE REMOVED AND REPLACED WITH AN APPROVED MATERIAL.

B3. ALL SURPLUS EXCAVATED MATERIALS (EXCLUDING TOPSOIL) SHALL BE REMOVED FROM THE SITE AT THE BUILDER's EXPENSE TO A PLACE OF LEGAL DISPOSAL UNLESS DIRECTED OTHERWISE BY THE PROJECT MANAGER.

B4. EXCAVATED MATERIAL WHICH CONFORMS WITH THE SPECIFICATION REQUIREMENTS FOR CLAY FILL MAY BE USED AS FILL REFER SPECIFICATION.

B5. APPROVED FILL MATERIALS SHALL BE PLACED IN UNIFORM LAYERS, COMPACTED ,TESTED AND PROOF ROLLED IN ACCORDANCE WITH THE SPECIFICATION. THE FINISHED EARTHWORKS LEVEL SHALL BE PROOF ROLLED AND TESTED AS SPECIFIED PRIOR TO PAVEMENT CONSTRUCTION.

B6. DURING CONSTRUCTION THE BUILDER SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING A TEMPORARY SITE DRAINAGE SYSTEM AND TO MAINTAIN THE SITE IN A DRY AND STABLE CONDITION. DETAILS OF THE DRAINAGE SYSTEM SHALL BE TO THE APPROVAL OF THE PROJECT MANAGER.

B7. UNLESS NOTED OTHERWISE ALL BATTERS SHAPED TO FINAL PROFILE SHALL BE CONSTRUCTED AT A SLOPE OF 1 IN 4 (CUT AND FILL), TEMPORARY CONSTRUCTION BATTERS SHALL BE LIMITED TO 1 IN 2. STEEPER SLOPES SHALL NOT BE CONSTRUCTED UNLESS APPROVED BY THE PROJECT MANAGER. STABLISATION AND EROSION PROTECTION SHALL BE PROVIDED AS DIRECTED BY THE PROJECT MANAGER, AT THE BUILDER'S EXPENSE. THE BUILDER SHALL BE RESPONSIBLE FOR THE STABILITY OF HIS TEMPORARY WORKS.

B8. ALL UNDERGROUND SERVICES SHALL BE LAID PRIOR TO FINAL SEALING OF PAVEMENTS.

B9. REFER ARCHITECT'S DRAWING FOR PAVEMENT LINEMARKING AND KERB SETOUT.

NOTE:
BEFORE STARTING ANY PAVEMENT AND BUILDING WORKS, ENSURE THE SUB-GRADE COMPACTION IS AS REQUIRED IN THE STRUCTURAL AND CIVIL SPECIFICATIONS. PROOF ROLLING AND OR COMPACTION TESTS SHALL BE CARRIED OUT.

LEGEND

- EXISTING SPOT LEVEL
- IL 70.190 — INVERT LEVEL GD OR STORMWATER PIPE
- K — CONCRETE KERB 100 HEIGHT
- RS — CONCRETE RETAINING STRIP
- VHK — VARIABLE HEIGHT CONCRETE KERB. HEIGHT VARIES 0 TO 100
- K2 — CONCRETE KERB 100 HEIGHT ON TOP OF PAVEMENT
- BD — CONCRETE BUND. REFER TYPICAL DETAIL ON C02 DRAWING.
- 150 ø — STORMWATER PIPE
- B — BOLLARD REFER ARCH. DRAWINGS
- DP — DOWNPIPE - 100 PVC DWV SN6 MIN. AT 1.0% MIN. OR DP SIZE FOR CONNECTION TO DRAIN U.N.O.
- DP1 — DOWNPIPE - 150 PVC DWV SN6 MIN. AT 1.0% MIN. OR DP SIZE FOR CONNECTION TO DRAIN U.N.O.
- SD1 — SPOON DRAIN
- GIP — GRATED INLET PIT
- JP — JUNCTION PIT
- GD1-GD7 — "ACO" S200K POWER DRAIN STEPPED CHANNELS WITH CLASS C DUCTILE IRON INTERCEPT GRATES WITH ANTI-SHUNT LUGS AND POWERLOK BOLTLESS LOCKING SYSTEM, OR APPROVED EQUIVALENT.

NOTES

STORMWATER DRAINAGE

1. ALL PIPEWORK TO BE CLASS DWV WITH SOLVENT WELDED JOINTS U.N.O.
2. GIP = REINFORCED CONCRETE PIT WITH CAST IRON GRATE AND FRAME. REFER TO PIT SCHEDULE.
   JP = REINFORCED CONCRETE PIT WITH CAST IRON GRATE AND COVER. REFER TO PIT SCHEDULE.

FOR PAVEMENT NOTES REFER DRG. C02

WFS = WASTE WATER FILTRATION SYSTEM

P.060.L.C1.2C
SPEL PURACEPTOR CLASS ONE FULL RETENTION OIL SEPARATOR WITH ALARM. ADDITIONAL RETENTION 10,000 LITRES.

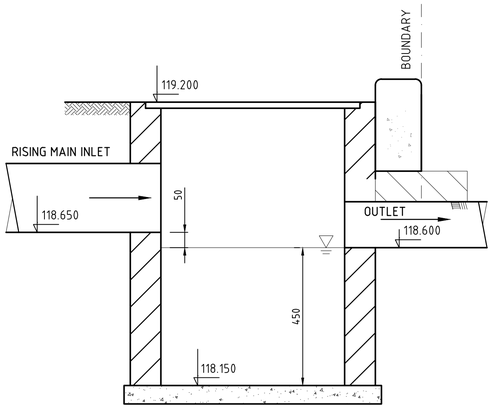
PROVIDE CLASS "D" FRAME AND LID INSPECTION COVERS OVER INSPECTION OPENINGS.
INLET IL 117.850
OUTLET IL 117.750

DT/PS = STORMWATER DETENTION TANK/PUMPING STATION

23 M^3 DETENTION TANK.
PUMPING DESIGN BASED ON 2 No. PUMPS WITH DISCHARGE = 20.0 L/S EACH.
USE 2 No. PUMPS IN CASE OF A PUMP FAILURE.

DT = STORMWATER DETENTION TANK

2x23 M^3 DETENTION TANK.



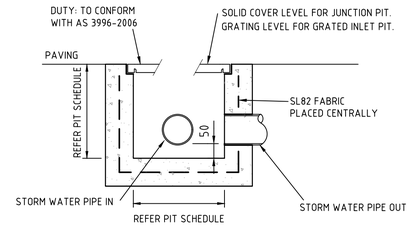
STORMWATER GRATED INLET PIT - GIP4

STORMWATER PIT SCHEDULE

PIT No.	SIZE (INERNAL)	TOP R.L.	INVERT R.L.	COVER TYPE
GIP1	600 x 600	119.350	118.875	CLASS D CAST IRON FRAME AND GRATE
GIP2	600 x 600	118.600	118.040	CLASS D CAST IRON FRAME AND GRATE
GIP3	600 x 600	119.235	117.900	CLASS D CAST IRON FRAME AND GRATE
GIP4	600 x 600	119.200 X	118.600	CLASS D CAST IRON FRAME AND GRATE
JP1	600 x 600	120.030 X	119.350	CLASS D CAST IRON FRAME AND COVER

X APPROXIMATE R.L. - MATCH TO ADJACENT LEVELS.

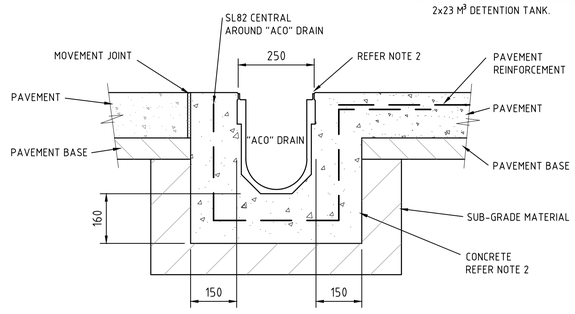
X X ENSURE TOP OF GRATE IS A MIN. 50 ABOVE ADJACENT SURFACE.



NOTES (FOR PRECAST UNITS)

1. PENETRATION FOR PIPES SHALL BE APPROX. 50 GREATER THAN THE O/D OF PIPE.
2. PIPES SHALL BE FINISHED FLUSH WITH THE INTERNAL FACE OF THE SUMP.
3. A STIFF MORTAR MIX SHALL BE PACKED INTO THE SPACE FROM BOTH SIDES OF STRUCTURE.
4. THE INTERNAL FACE SHALL BE FINISHED SMOOTH AND A 150 THICK BAND OF CONCRETE SHALL BE POURED OUTSIDE THE SUMP TO SEAL THE PENETRATION.

STORMWATER GRATED INLET PIT - GIP
STORMWATER JUNCTION PIT - JP



"ACO" S200K DRAIN INSTALLATION DETAIL

NOTES:

1. CONCRETE STRENGTH N32. VIBRATE CONCRETE TO ELIMINATE AIR POCKETS.
2. THE FINISHED LEVEL OF THE CONCRETE SURROUND MUST BE APPROXIMATELY 3mm ABOVE THE TOP OF THE CHANNEL EDGE.
3. ALL MATERIALS AND COMPONENTS WITHIN THE SCOPE OF THIS SYSTEM SHALL BE OBTAINED FROM "ACO" AND THE WORK CARRIED OUT AS DETAILED ON THE DRAWING.
4. INSTALL DRAIN IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS.

DO NOT SCALE

FOR INFORMATION

Issue.	Description	Date	Drawn	Chkd
C	LEVELS REVISED	29.08.19	CPS	RGS
B	REVISED DRAINAGE AND ELEVATIONS	22.08.19	NGS	RGS
A	ISSUED FOR INFORMATION	26.07.19	NGS	RGS

1:1 0 1cm at full size 10cm

North

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Architect
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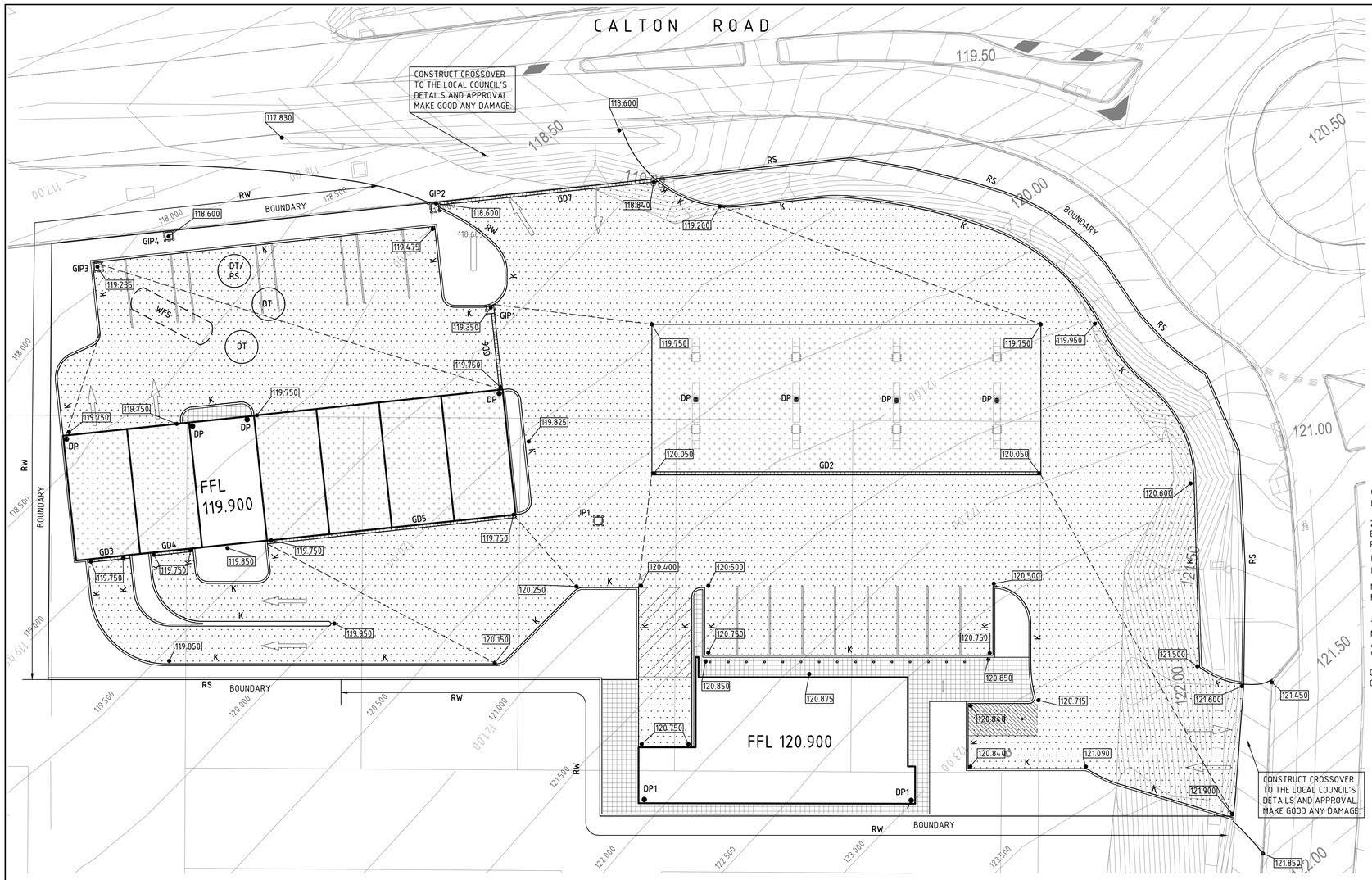
A.C.N. 162 095 847

Project
PETROL STATION,
GAWLER
EAST-SPRINGWOOD

Drawing Title
STORMWATER PLAN
NOTES, LEGEND AND
SCHEDULE

Drawn		Scale A1	Q.A. Check	Date
NGS	AUG 2019	1:200 AND AS NOTED		
Designed	Project No.	Dwg. No.	Issue
RGS	SA190020	C01	C



CONCRETE PAVEMENT NOTES

R1. ALL WORKMANSHIP AND MATERIALS SHALL BE GENERALLY IN ACCORDANCE WITH THE SPECIFICATION.

R2. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION.

R3. ALL FABRIC LAPS SHALL BE FULL STRENGTH TO AS3600.

R4. WELDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT THE APPROVAL OF THE PROJECT MANAGER.

R5. ALL REINFORCEMENT SHALL BE SECURELY SUPPORTED IN ITS CORRECT POSITION DURING CONCRETING BY APPROVED BAR-CHAIR, SPACERS OR SUPPORT BARS.

R6. REINFORCEMENT FABRIC SHALL BE IN ACCORDANCE WITH AS1304

R7. CONCRETE STRENGTH SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE AND SHALL BE SUPPLIED IN ACCORDANCE WITH AS1379 (READY MIXED CONCRETE)
- CONCRETE VECHICULAR PAVEMENTS ..... 32 MPa (28 DAY COMPRESSIVE STRENGTH)
- ELSEWHERE ..... 25 MPa (28 DAY COMPRESSIVE STRENGTH)

R8. DETAILS OF CONCRETE MIX, AGGREGATE SIZE AND COLOUR, METHOD OF CURING AND FINISH ARE TO BE SUBMITTED TO THE PROJECT MANAGER FOR APPROVAL BEFORE

R9. PROVIDE ISOLATION JOINTS TO THE PERIMETER OF ALL PIT LIDS AND VALVE COVERS COMMENCING CONCRETE WORKS.

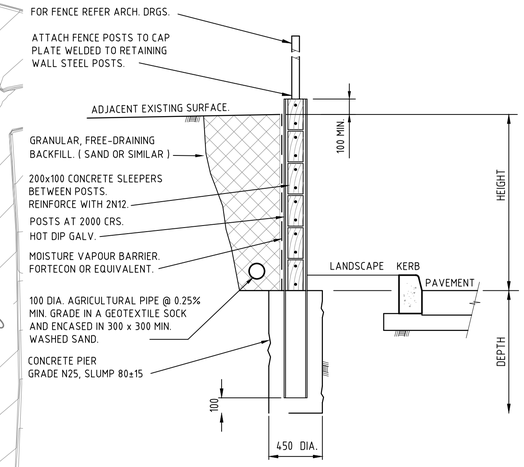
LEGEND

- +5.78 — EXISTING SPOT LEVEL
- • 6.100 — DESIGN LEVEL - FINISHED SURFACE
- • TW 6.050 — DESIGN LEVEL - TOP OF "RS" OR "RW1"
- • TL 5.880 — DESIGN LEVEL - TOP OF TURRET
- K — CONCRETE KERB 100 HEIGHT
- RS — CONCRETE RETAINING STRIP
- oB — BOLLARD REFER ARCH. DRAWINGS
- LM — LINE MARKING

NOTES

SET-OUT AND GRADING

1. REFER TO ARCHITECTS DRAWINGS FOR SETOUT.
2. GRADE EVENLY BETWEEN DESIGN SPOT LEVELS.



PAVEMENT LEGEND

CONCRETE PAVING AND DRIVEWAYS
160mm THICK SLAB WITH
SL92T (40 TOP COVER)
GRADE N32 CONCRETE
100mm PM2/200G COMPACTED TO 95% MMDD
COMPACTED SUB-GRADE
JOINTS AS SHOWN

CONCRETE PAVING UNDER COVER
160mm THICK SLAB WITH
SL92T (40 TOP COVER)
GRADE N32 CONCRETE
100mm PM2/200G COMPACTED TO 95% MMDD
COMPACTED SUB-GRADE
JOINTS AS SHOWN
BLACK OXIDE FINISH - REFER SPECIFICATION

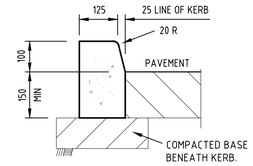
CONCRETE PAVING ABOVE TANKS
200mm THICK SLAB WITH
SL92T&B (40 TOP COVER)
GRADE N32 CONCRETE
100mm PM2/200G COMPACTED TO 95% MMDD
COMPACTED SUB-GRADE
JOINTS AS SHOWN
SEE BP STANDARD DESIGN

CONCRETE PEDESTRIAN PAVING
100mm THICK SLAB WITH
SL72T (40 TOP COVER)
GRADE N20 CONCRETE
50mm THICK SAND BASE
COMPACTED SUB-GRADE
TOOLED JOINTS AT 1200mm MAX. CENTRES
EXPANSION JOINTS AT 4800mm MAX. CENTRES

RETAINING WALL DETAIL - RW

GRADING PLAN

0 5 10
1:200 (metres)



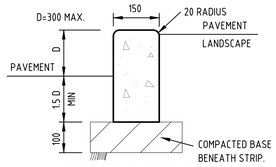
100 mm KERB (K)

SCALE 1:10

FORM JOINTS AT MAX. 2.4m CTS. SEE AS 2876

SHRINKAGE CONTROL JOINTS: (EVERY 2.4M.)
50% OF THE AREA OF THE SECTION SHALL BE CUT. THE RESULTANT SLOT IN THE SECTION SHALL BE TOOLED TO A DEPTH OF NOT LESS THAN 20MM, TO PRODUCE A NEAT GROOVE OF NOT LESS THAN 5MM IN WIDTH.

EXPANSION JOINTS: (EVERY 24.0M.)
SHALL BE 15MM WIDE AND FILLED WITH AN APPROVED PRESHAPED FILLER, WHICH SHALL EXTEND FOR THE FULL WIDTH AND DEPTH OF THE EDGING.



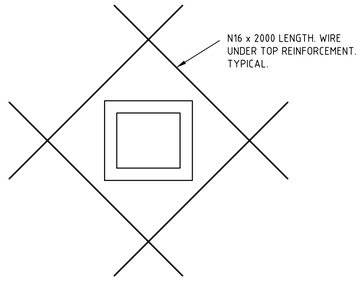
RETAINING STRIP

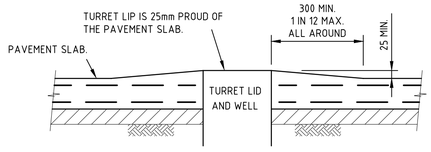
SCALE 1:10

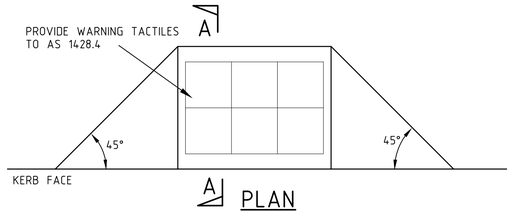
FORM JOINTS AT MAX. 2.4m CTS. SEE AS 2876

SHRINKAGE CONTROL JOINTS: (EVERY 2.4M.)
50% OF THE AREA OF THE SECTION SHALL BE CUT. THE RESULTANT SLOT IN THE SECTION SHALL BE TOOLED TO A DEPTH OF NOT LESS THAN 20MM, TO PRODUCE A NEAT GROOVE OF NOT LESS THAN 5MM IN WIDTH.

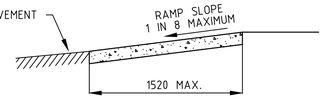
EXPANSION JOINTS: (EVERY 24.0M.)
SHALL BE 15MM WIDE AND FILLED WITH AN APPROVED PRESHAPED FILLER, WHICH SHALL EXTEND FOR THE FULL WIDTH AND DEPTH OF THE EDGING.







A PLAN



SECTION A-A

NOTES

1. SURFACE TEXTURE OF RAMP TO BE NON-SLIP TYPE.
2. ORIENTATION OF RAMP IS TO GENERALLY BE PERPENDICULAR TO KERB ALIGNMENT.

RAMP DETAIL

CONCRETE FINISH NOTES

1. ALL KERBS, RETAINING STRIPS AND RETAINING WALLS TO HAVE BLACK OXIDE FINISH ON EXPOSED SURFACES.

FOR BULK EXCAVATION NOTES REFER DRG. C01

FOR SIGNS REFER OTHER CIVIL DRAWINGS

DO NOT SCALE

FOR INFORMATION

Issue.	Description	Date	Drawn	Chkd
C	LEVELS REVISED	29.08.19	NGS	RGS
B	REVISED DRAINAGE AND ELEVATIONS	22.08.19	NGS	RGS
A	ISSUED FOR INFORMATION	26.07.19	NGS	RGS

1cm at full size

North

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Project
PETROL STATION,
GAWLER
EAST-SPRINGWOOD

Drawing Title
GRADING PLAN AND DETAILS

Drawn		Scale A1	Q.A. Check	Date
NGS	AUG 2019	1:200 AND AS NOTED		
Designed	Project No.	Dwg. No.	Issue
RGS	SA190020	C02	C