

Preliminary Infrastructure and Stormwater Assessments

	NILL		
JUD	INU	IVIDER	.

S61859 - 284420

SITE:

CLIENT:

White Hut Road, Stanley Flat, SA 5453

DATE:

March 2023

URPS

А

REVISION:

Engineering your success.

ADELAIDE MELBOURNE SYDNEY

© Koukourou Pty Ltd trading as FMG Engineering

The work carried out in the preparation of this report has been performed in accordance with the requirements of FMG Engineering's Quality Management System which is certified by a third party accredited auditor to comply with the requirements of ISO9001.

This document is and shall remain the property of FMG Engineering. The document is specific to the client and site detailed in the report. Use of the document must be in accordance with the Terms of Engagement for the commission and any unauthorised use of this document in any form whatsoever is prohibited. No part of this report including the whole of same shall be used for any other purpose nor by any third party without prior written consent of FMG Engineering.

FMG Engineering provides this document in either printed format, electronic format or both. FMG Engineering considers the printed version to be binding. The electronic format is provided for the client's convenience and FMG Engineering requests that the client ensures the integrity of this electronic information is maintained. Storage of this electronic information should at a minimum comply with the requirements of the Electronic Transactions Act 2000 (Cth).

Document Status

REV NO.	STATUS	AUTHOR	REVIEWER			APPROVED FOR ISSUE		
			NAME	SIGNATURE	DATE	NAME	SIGNATURE	DATE
А	Preliminary	Ghasem Ashtijou	Chris Clarke		29.03.23	Jordan Colbert		30.03.23

Table of contents

Introduction	4
Site understanding	5
Proposed Rezoning	8
Services investigation	8
Stormwater	9
Water mains	14
Electrical	15
Communications	16
Staging of Infrastructure Upgrades	17
Summary	17
Appendix A	18
Correspondence from Service Authorities	18

Executive Summary

FMG Engineering had prepared this preliminary services assessment based on the information provided by URPS on the proposed rezoning of the subject site and through desktop investigation (via DBYD, GIS, SAPPA and Aquamap) and discussion with Council, SA Water, and SAPN. At this stage, we believe there to be sufficient capacity in some of the services to the subject site except for potable water. We have consulted with SA Water to an extent and a 150mm connection from Moccundunda road would be the most likely augmentation point to link into water system to ensure there is enough pressure flow; Therefore, there will be a significant external augmentation charge for future development for potable water; however awaiting further feedback on augmentation charge. Augmentation to CWMS system may not be required as onsite wastewater disposal is anticipated to be acceptable. There will be a need for detention storage for the proposed development to restrict the stormwater from the development. Total storage required is in the order of 4,000-4,500m³ which can be a combination of detention/retention basin onsite.

Introduction

FMG Engineering (FMG) has been engaged by URPS to undertake a service infrastructure investigation to obtain preliminary, high-level assessment of existing and potential future infrastructure needs in respect of the proposed rezoning.

The proponent is proposing to rezone allotments 1, 2 and 3 (Plan Parcel D48966) White Hut Road, Stanley Flat (the Affected Area) from Rural to Rural-Neighbourhood. A Code Amendment will support the future expansion of residential development in the greater Clare region. The Affected Area is approximately 30 hectares in area and highlighted in the Figure1 below. The land is currently utilised for cropping and grazing purposes. There is strong demand for land in the Rural Neighbourhood Zone which has resulted in the existing supply reaching capacity.



Figure 1-Affected Area

FMG Engineering has prepared this high-level infrastructure assessment by utilising information obtained via Before-You-Dig-Australia (BYDA), and discussion with the service authorities, wherever viable. FMG Engineering has attempted to contact the following service authorities for further information:

- Clare and Gilbert Valleys Council
- SA Water (water and wastewater utilities)
- South Australian Power Networks SAPN (power authority)

The purpose of our investigation is to provide a desktop assessment of the infrastructure currently available to the subject site and to assess the current capacity of the existing infrastructure.

Site understanding

The subject site is as shown in Figure 2 below.



Figure 2: Site location

The subject land is quite steep with two high points dividing the site into two parts: northern half grades towards the east and northeast with approximately 6% on average and southern half grades towards the east and south with approximately 12% average slope and is currently accessible via White Hut Road. Parts of the site have existing slopes steeper than 20%, indicated by the darker shading in Figure 3 (20% grade = 11.3 degrees slope).



Figure 3-Site Topography

The subject site is bounded by rural residential interface to the west and south, and White Hut Rd and Riesling trail to the east. As shown in Figure 2, there are existing stormwater depression storages and basins within the subject site. An existing stormwater culvert exists within the White Hut Road reserve which has been suggested as the legal point of discharge for the site. This culvert conveys runoff along a pre-existing watercourse through private property.

Lots 1 and 2 White Hut Road have several easements contained within the sites. Easement A which traverses the sites diagonally is vested to ETSA Corporation (SA Power Network) and contains overhead power lines. These could be considered for relocation through the possible future development stages of the site, however it is possible to retain the current location within a design solution. A further 2 minor easements are located along the western boundary are vested to Distribution Lessor Corporation. Neither of these easements will have impact to the overall design intent. Figure 4 shows the indicative location of the easements mentioned above.



Figure 4-Easement Plan

Proposed Rezoning

According to the proposed rezoning (draft master plan shown in Figure 5), future development of the subject site may include a rural residential land with approximately 62 dwellings considering average 3,000m² for each dwelling plus local access roads and local reserves.



Figure 5-Indicative Master Plan

Services investigation

FMG has undertaken a Before You Dig Australia Investigation which has located the following utilities adjacent to the site:

- NBN Co
- SA Power Networks
- SA Water
- Telstra

Stormwater

FMG Engineering had contacted Council to obtain information for the stormwater management required for the subject site. Through discussion with Council, it is understood that future development will be assessed against the Code and the Clare and Gilbert Valleys Council conditions for stormwater management, achieving the below requirements:

- A Music Model showing that Stormwater reduction targets are met:
 - 80% reduction in average annual Total Suspended Solids
 - o 60% reduction in average annual Total Phosphorous
 - 45% reduction in average annual Total Nitrogen
 - o 90% reduction in Gross Pollutants
- Hydrology calculations: Restrict the post-development peak flow rates peak to match that of the predevelopments
- Manages up to and including the 1% AEP flood event to avoid flooding of buildings
- Existing Culvert within White Hut Rd will be the appropriate point of discharge
 - Runoff from the northern two-thirds of the site will be collected into detention basins, and conveyed into this culvert. A high level analysis suggests this culvert may need to be upgraded to safely convey this combined, detained, peak flow.
 - It is noted that the southern third of the site is at a lower elevation than this culvert, and accordingly will be collected and discharged separately to the White Hut Road reserve.

Whilst peak flows will be reduced to pre-development conditions, it is likely that the total volume of runoff from the site may increase, and accordingly, downstream watercourse infrastructure may need to be assessed. Some further analysis may be required at detailed design stage to ensure the emergency overflow weir at the downstream basin for example, is sufficient for the post-development scenario.

Flooding map from SAPPA (South Australian Property and Planning Atlas), does not show any flooding for the subject site. It should also be assumed that finished floor levels of future development will be set a minimum of 300mm above the Peak water level within the development, and adjacent watercourse, during the 1% AEP storm event. Local flood data is not available for the site yet. However, Council have done a flood study for this area recently. The report will be updated if we receive further information from Council.

The subject site consists of approximately 95% pervious area currently and grades towards White Hut Rd with a variable slope. New rezoning (rural residential land use) will increase the total stormwater discharge from the site as it will consist of a larger impervious area (45% approximately) in comparison to the pre-development conditions. FMG suggests that there will be a need for on-site detention storage to achieve Council requirements. Future development should implement of Water Sensitive Urban Design (WSUD) principles such as:

- 1. Detention storage underground or above ground (Rainwater tanks, Basin, swale, etc.) or a combination of both
- 2. Stormwater quality improvement, such as raingarden and landscape infiltration and irrigation, wherever possible

The volume of detention storage will vary depending on design outcomes. However, having regard to current concept plans, it is anticipated that total onsite stormwater detention may be in the order of 4,000-4,500m³ across the three sub catchments. Catchments A and B are observed to have existing dams or basins which will need to be upgraded or reconfigured to meet detention requirements, whilst Catchment C will feature a new detention basin. Detention storage could be achieved via a combination of the above ground via storage tanks in back of house areas, raingardens, swales, basins, and below ground. This volume is considered feasible within the proposed land use.

Figure 6 indicates the draft option of internal stormwater management plan. This catchment plan divided the future development into 3 catchments. In this catchment plan, it has been assumed that each catchment will include a separate detention basin to control the discharge from the site and restrict it to pre-development peak flows leaving the site currently. Moreover, a proprietary treatment device may be considered prior to discharging flows to council's stormwater system. Basin A and Basin B will have a separate outlet which will be connected to a junction pit, and finally be connected to the existing culvert discharge point.

As the catchment C currently grades towards southeast (and at a lower elevation than the existing culvert beneath White Hut Road, outlet from basin C will be discharged to the road reserve (open channel along White Hut Road) which is its current discharge point.

- Runoff from individual properties will be conveyed into the road reserve, the use of detention and retention tanks for roof areas may be considered to meet detention requirements.
- Combined with the above, runoff from the remaining surfaces (carpark, local access road, and landscaping areas) will be collected via internal pits and pipes system and will be diverted to the detention basins allocated for each catchment.



Figure 6- Draft option for internal stormwater plan

Catchment Analysis

Site catchments were determined based on aerial imagery, and concept drawings as per Appendix A. Predevelopment catchment includes 95% pervious and 5% impervious areas with a footprint of approximately 30 hectares based on current aerial imagery of the site.

Table **1** summarises the post-development sub-catchment areas and percentages of pervious/impervious. A DRAINS model was prepared (Figure 7) to demonstrate the feasibility of controlling peak flows to match predevelopment flows. It is anticipated that minor changes will be incorporated into the final construction documentation as design details are resolved.

SUB-CATCHMENT	AREA (HA)	% IMPERVIOUS	% PERVIOUS
CATCHMENT A	11.3	35	65
CATCHMENT B	15.3	45	55
CATCHMENT C	3.2	40	60





Figure 7 – DRAINS Layout

DRAINS modelling results

The results of the DRAINS modelling for minor (10-year ARI) and major (100-year ARI) storm event are summarised in Figure 8-9. The results demonstrate that the post development peak discharges during the major/minor storm do not exceed the pre-development peak discharges from the site during equivalent storm events.

Three onsite detention basins are considered, one basin per catchment, in modelling to satisfy council's detention requirements. Results of DRAINS modelling of post development flows and onsite detention storages during minor and major storm events is concluded in table 2, This detention storages may consist of a combination of underground detention basins, oversized pipes and some surface storage within the local roads. Preliminary modelling demonstrates that outlet pipes from Basin in Catchment A (Basin A), Basin B, and Basin C are 600mm, 675mm, and 300mm diameter RCP respectively. Also, the culvert has been modelled as 1200x900mm.

Table 2: DRAINS modelling

SCENARIO	MINOR STORM		MAJOR STORM		
	10% AEP / 1:1	U YEAR ARI	1% AEP / 1:1	UU YEAR ARI	
	PEAK FLOW	DETENTION VOLUME	PEAK	DETENTION VOLUME	
			FLOW		
Pre-Development	620 L/s		1,310 L/s		
Catchment A&B					
Post-Development	619 L/s	780m ³ detained in Basin A	1,260 L/s	1,360m ³ Basin A	
Catchment		1,400m ³ detained in Basin B		2,280m³ Basin B	
A&B					
Pre-Development C	104 L/s		217 L/s		
Post-Development C	97 L/s	200m ³ detained in Basin C	119 L/s	490m ³ detained in Basin C	







Figure 9: DRAINS modelling results during major (1% AEP) storm events

As there is sufficient area to achieve biofiltration / water quality improvement basins on the subject site, another option to achieve the water quality targets is to use raingardens, basins, etc. This could be supplemented with the installation of proprietary water quality improvement devices as necessary to meet the water quality objectives.

Water mains

A review of the Before You Dig Australia investigation indicates that there is no water supply in front boundary (White Hut Rd). Available GIS data in SA Water Website (Aquamaps) shows that there is a 100PVCM within the existing residential allotments (at rear of allotment) which will require easement through the existing dwellings in Norman Drive. In addition to the easement requirement, this option would require a significant amount of earthwork and the capacity of water main should be approved by SA Water. Also, there is a 250DICL at Moccundunda Rd which has the capacity to supply potable water for the subject development. This option requires a considerable construction augmentation and associated earthworks / traffic control in roads. As a result of future development on the subject site, there may be a need for booster pumps to assist with the supply demand of water. FMG has contacted SA Water to obtain preliminary information on the anticipated augmentation works for the site to facilitate rural residential rezoning. Below is the SA Water response in our query:

'The 100 is unlikely to support an additional 62 lots. You would likely need to bring at least a 150 up from Moccundunda road to ensure there is enough pressure flow. This would be what I bank on from a developer's perspective. Once we have timing and rezoning completely, we can have an official investigation done. This investigation may lower the amount of works required but will be understood at that point in time. All internal retics would need to be designed and installed also.'



Figure 7 - SA water supply mains

To conclude It is likely that there will be a significant external augmentation charge for future development. It is also noted that there may be additional costs / infrastructure to meet fire code requirements. Future investigations to verify the capacity of the SA Water network at this location would include a flow test at the metered location. SA Water requirements for future development would be resolved at the development application stage for future development. FMG has contacted SA Water to obtain preliminary information on the anticipated augmentation works for the site to facilitate rural residential rezoning.

Wastewater

The Clare and Gilbert Valley Council area is not serviced by SA Water wastewater systems, and instead are serviced by a council operated Community Wastewater Management System (CWMS) in township areas such as Clare. No information was found indicating that this collection system extends to Stanley Flat (no visible manhole covers, etc) and Council confirmed CWMS does not extend to sites (Refer Appendix A for Council's response). Therefore, it is highly likely that future development will require individual onsite septic systems and wastewater management. However, in the instance, they require connection to CWMS the following needs to be considered:

- New buildings containing wet areas situated within a Community Wastewater Management System (CWMS) area will be required to be connected to the system. Owners of existing buildings are to be encouraged to connect to the system where appropriate.
- All connections shall be by application which provides a site plan showing the location of the septic tank, all associated pipe work, and accompanied by the statutory connection fee.
- Division of land within the CWMS area or an extension of it, must provide for extension to the network including easements to Council's requirements, entirely at the developer's costs.
- Any development, or part of development, which impacts existing CWMS infrastructure within an existing or new allotment and requires any alterations to that infrastructure will be entirely at the cost of the developer.
- If there is no existing connection point on the allotment, all costs associated with connecting into the CWMS infrastructure, including new pipes and connection points, shall be entirely at the cost of the developer.
- In addition to the above costs, the developer is required to pay to Council \$5,000 (incl GST), for each additional connection point required (per each additional allotment to be created), prior to land division or septic tank approval being granted. This will be facilitated by an infrastructure agreement between the developer and Council.

Electrical

FMG Engineering does not provide electrical engineering services in house, however, has previously been supplied an approximation of ~6kVA per residential standalone dwelling. On this basis, the total estimated demand for future development on the subject site would be in the magnitude of (400-500 kVA).

Regarding the existing above ground power network within Lot1 and Lot2, it can be concluded that there is not adequate power supply for the subject site from these connections. Easement A which traverses the sites diagonally is vested to ETSA Corporation (SA Power Network) and contains overhead power lines.

The overhead lines could be considered for relocation through the possible future development stages of the site, however it is possible to retain the current location within a design solution. Regarding the previous experience, FMG suggest that for the required load, an upgrade of supply with relevant infrastructure may be required:

- > Additional transformer(s) would be required.
- New extension of high voltage cables from existing network would be required. Trenching required for establishing cable routes and transformer vault/pad location.
- Easements required for the pad mount transformer and depending on network analysis there may be requirement for a separate high voltage switching cubicle, with its own easement on the site.

FMG have contacted SAPN regional managers for further information on existing infrastructure and whether it is likely that further augmentation will be required. Preliminary information supplied by SAPN indicates;

There is two options for connecting the proposed residential development as follows:-

Option 1 – Connection at 11kV connection point on Lewcock Rd

Option 2 – Connection at 11kV via Lot 35 Norman Drive however this does not meet TS-100 and as part of this option a 11kV tie would need to be constructed between pad TF 16858 and the over to under pole on lot 58 Square Mile Rd to be treated as Extension works

On this basis, FMG notes that there is no clear infrastructure alignment for electrical connection via Option 1, and this may require land acquisition or other arrangements. On this basis Option 2 appears most feasible, however will require further review during detailed design to verify costs and viability. It is also noted that no connection to the existing overhead power lines is nominated, suggesting these are not possible to connect to directly (i.e. may be HV DC).



Communications

A review of the Dial Before You Dig investigation shows that there is NBN infrastructure within the vicinity of the subject site. We believe this can be connected to, with new pit and pipe design to supplement this system internally. It is assumed that connection to these services to support future development will not require significant augmentation works.

Staging of Infrastructure Upgrades

FMG Engineering is not a qualified cost estimator, however, has been requested to provide some industry advice on how costs may be divided amongst stages. Whilst indicative in nature, we can provide the following opinions on how costs may be apportioned between the relevant stages, with some supplementary notes;

Stormwater

- Provision of 3 detention basins (Upgrade of existing basins within Catchment A and B, new basin within Catchment C) with total volume of ~4000-5000 cubic metres of stormwater detention across entire site.
- Connection to existing stormwater infrastructure, noting considerable traffic requirements
- Tertiary level stormwater quality treatment including filter media or cartridge systems

Water mains

- Connection to existing mains infrastructure, noting considerable traffic requirements
- Booster/'s may be required to service upper levels

Electrical

No firm advice provided, electrical engineer input required to determine final augmentation requirements, however indicative advice suggests:

- A new larger size transformer would be required.
- New extension of high voltage cables from existing network would be required. Trenching required for establishing cable routes and transformer vault/pad location.
- Easements required for the pad mount transformer and depending on network analysis there may be requirement for a separate high voltage switching cubicle, with its own easement on the site.

Communications

It is not anticipated significant augmentation works will be required.

- Telstra cabling is available in Norman Drive to the West and up to the development site at the south along White Hut Road
- Fixed Wireless NBN is available in the area

Gas

• Reticulated Gas supply is currently unavailable in the area. Individual allotments can be supplied with Gas via individual tanks if this service is required.

Summary

FMG Engineering had prepared this preliminary services assessment based on the information provided by URPS on the proposed rezoning of the subject site and through desktop investigation (via DBYD, GIS, SAPPA and Aquamap) and discussion with Council, SA Water, and SAPN. At this stage, we believe there to be sufficient capacity in many of the services to the subject site except for Sewer and potable water, however, are awaiting final detailed feedback from SA Water to verify these assumptions.



Appendix A

Correspondence from Service Authorities BYDA CWMS SA Water Council Meeting Minute



Job No 33718943

Caller D	Details				
Contact:	Tracey Crannitch	Caller Id:	3013729	Phone:	(08) 8132 6600
Company:	Not supplied				
Address:	67 Greenhill Road Wayville SA 5034	Email:	tracey.crannitch@fn	ngengineering.	com.au

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



Your Responsibilities and Duty of Care

- The lodgement of an enquiry does not authorise the project to commence. You must obtain all necessary information from any and all likely impacted asset owners prior to excavation.
- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.byda.com.au
- · For more information on safe excavation practices, visit www.byda.com.au

Asset Owner Details

The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days.

Additional time should be allowed for information issued by post. It is your responsibility to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Before You Dig service, so it is your responsibility to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash # require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
221779364	Clare and Gilbert Valleys Council	(08) 8842 6400	NOTIFIED
221779366	SA Power Networks	(08) 8292 0218	NOTIFIED
221779367	SA Water	(08) 7424 1117	NOTIFIED
221779365	Telstra SANT	1800 653 935	NOTIFIED

END OF UTILITIES LIST



Notification number:	33718943
Sequence number:	221779367
Enquiry date:	1 March 2023
Enquiry location:	245 White Hut Road Stanley Flat
	SA 5453

Dear Tracey Crannitch

Thank you for contacting Before You Dig (**BYDA**) before starting any work or activities which may affect the water and sewerage infrastructure of SA Water.

Our records indicate there has been SA Water infrastructure identified within your nominated search area and has been shown on the attached plan.

The requirements concerning works undertaken near SA Water infrastructure are contained in SA Water Technical Standard TS0136 (Third Party Works Near SA Water Pipework), which is available on the SA Water website.

Disclaimer

The information has been generated by an automated system based on the area highlighted. It is your responsibility to ensure that the dig site is properly defined when submitting your Before You Dig enquiry. If the information does not match the dig site or you have received this message in error, please resubmit your enquiry.

This advice and/or information is given for your private use only. The accuracy of the advice and information is not guaranteed, and no responsibility is accepted by the crown, the South Australian Water Corporation or their officers, agents or servants for any loss or damage caused by reliance upon this advice and/or information, as a result of any error, omission, incorrect description or statement therein whether caused by negligence or otherwise.

The information contained in this message may be confidential and may also be subject of legal, professional or public interest immunity. If you are not the intended recipient any use, disclosure or copying of this document is unauthorised. If you have received this message in error, please contact Dial Before You Dig.

For further enquiries or assistance with interpretation of plans and search content, or to report any obvious errors with the data provided, please contact our BYDA support team via email <u>dialbefore.youdig@sawater.com.au</u>

Thank you for contacting SA Water's BYDA section.

Kind regards,

Before You Dig Support Team **SA Water BYDA**

Please note: Any damage to SA Water infrastructure must be reported immediately to our Faults Team (24 hours, 7 days) on 1300 SA WATER (1300 729 283)





Plans Generated [3/1/2023 12:28 PM] by SmarterWX[™] Automate (valid for 30 days)



Plans Generated [3/1/2023 12:28 PM] by SmarterWX[™] Automate (valid for 30 days)



SA	5034
	SA

Enquiry Details	
Utility ID	50800
Sequence Number	221779366
Enquiry Date	01/03/2023 11:56
Response	AFFECTED
Address	245 White Hut Road Stanley Flat
Location in Road	Road,Nature Strip,Footpath
Activity	Manual Excavation

Enquirer Details				
Customer ID	3013729			
Contact	Tracey Crannitch			
Company				
Email	tracey.crannitch@fmgengineering.com.au			
Phone	+61881326600	Mobile		



Underground cable locations **ASSETS FOUND**

The process:

- 1. You made an enquiry with Dial Before You Dig (1100).
- 2. Dial Before You Dig referred your enquiry to SA Power Networks (South Australia's Distribution Network).
- SA Power Networks has checked their records and have found underground assets in your request 3. area.
- 4. Please review the attached Asset Map(s) in regard to your excavation, as there may be some restrictions that apply if your excavation is greater than 300mm below ground level and less than 3.0m from an SA Power Networks Asset. Further explanation of restricted and exclusion zones can be found at http://www.sapowernetworks.com.au/public/download.jsp?id=1775 OR search sapowernetworks.com.au for NICC 404 and by referring to the figure on page 10, 11 or 12.
- 5. An on-site assessment and/or technical drawings may also be necessary to ascertain the exact cable/asset location. This service can be provided by SA Power Networks and may incur a cost.
- 6. Please contact your local SA Power Networks Location Officer to schedule work or make further enquiries regarding this request either by return email or the contact number supplied. Other general enquiries can be made on (08) 8292 0218.
- If you have damaged SA Power Networks Assets immediately notify Faults & Emergencies on 7. (08) 8404 4496.

Please note: Underground services in the vicinity of any proposed earthworks must be located by hand digging (pot-holing) prior to the commencement of works. Persons conducting works will be held responsible for any resulting loss or damage to the services associated with infrastructure

Important information and conditions of use for users of underground services information supplied by SA Power Networks

Indicative information only

The accompanying information is intended only to indicate the presence of SA Power Networks' underground services and/or to convey general indicative information in respect of the location marked on the plans. The information does not necessarily provide current, comprehensive or accurate description or location of the underground services or associated infrastructure.

The information may also describe or indicate the presence of underground services or infrastructure not owned by SA Power Networks, for example, electrical services connected to an SA Power Networks' service point. SA Power Networks takes no responsibility for services or infrastructure that is not owned or operated by SA Power Networks or the accuracy or completeness of their description or location in the accompanying information.

Additional technical information may be requested from SA Power Networks for planning or engineering design (non-digging) purposes. Such requests are to be directed to SA Power Networks Builders and Contractors Electrical Service Line (1300 650 014).



Identifying the location of underground services

Working near or around live electrical cables can be hazardous. An on-site assessment is strongly recommended prior to undertaking ANY works and is necessary to determine the location of the underground services. This can be undertaken by SA Power Networks or an alternative professional locating service provider. Enquiries can be made about SA Power Networks' cable location service by telephoning (08) 8292 0218.

Restrictions may apply in regard to your excavation particularly if your excavation is greater than 300mm below ground level and less than 3.0m from an SA Power Networks asset. Further explanation regarding restricted exclusion zones can be found at http://www.sapowernetworks.com.au/public/download.jsp?id=1775 OR search sapowernetworks.com.au for NICC 404 and by referring to the figures on pages 10, 11 or 12.

Underground services in the vicinity of any proposed earthworks must be located by hand digging (pot-holing) prior to the commencement of the works. Persons conducting works will be held responsible for any resulting loss or damage to the services or associated infrastructure.

Working near high voltage 66kV underground cables

Persons intending to conduct earthworks in the vicinity of an SA Power Networks high voltage 66kV underground cable MUST first obtain a site-specific clearance by contacting the SA Power Networks Cable Management Technical Officer on 0403 582 174.

Basis of information supply

The accompanying information is supplied at the request of, and is only provided for use by, the requestor. The information is valid for 30 days from the date of issue.

SA Power Networks, its employees, agents and contractors shall accept no responsibility for any inaccuracy or incompleteness in the information provided or liability in respect of any personal injury, death, loss or damage to any real or personal property or otherwise that arises out of or in connection with, directly or indirectly, the provision of or reliance upon the information.

It is the requestor's responsibility to ensure that the information provided accords with the area depicted on the requestor's Dial Before You Dig request. The information provided should not be used in respect of any area outside of the area depicted on the Dial Before You Dig request. SA Power Networks does not warrant that the information is suitable for the requestor's intended purposes.

Any use of the accompanying information is subject to the requestor's agreement to the conditions contained in this document. Upon acceptance of these conditions, SA Power Networks grants the requestor permission to use the information. The information must be returned to SA Power Networks if the conditions are not accepted.

Important note: It is an offence under the Electricity Act 1996 (SA) to cause damage to or interfere with electrical infrastructure







Overview Map

Sequence No: 221779366

245 White Hut Road Stanley Flat



Powered by States

Networks if you fail to accept the conditions of use.



Map 1

Sequence No: 221779366

245 White Hut Road Stanley Flat



Powered by



2



Sequence No: 221779366

245 White Hut Road Stanley Flat



Other HV

Not In Service

Low Voltage

LV Switching Cubicle/Pit

🛞 Electrical Earthing Area

Pit

•

Substation Electricity Pole

Light Column

•

Other HV

Not In Service

Low Voltage







Map 3

Sequence No: 221779366

245 White Hut Road Stanley Flat



Powered by



Powered by



Map 5

Sequence No: 221779366

245 White Hut Road Stanley Flat



Powered by Standard



Map 6

Sequence No: 221779366

245 White Hut Road Stanley Flat







Powered by Stand



8



Sequence No: 221779366 245 White Hut Road Stanley Flat

Note: The presence of lighting columns and cable exits may indicate unidentified additional cables.

Cable Exits Cables LEGEND: DBYD Requested Area 66kV/132kV 66kV/132kV V Fibre Cable/Duct \sim 33kV \sim 33kV HV Switch Unit Fibre Pit 19kV 19kV Transformer Unit Pilot Cable 11kV 11kV HV Joint Bay Pilot Manhole/Pit Other HV \sim Other HV LV Switching Cubicle/Pit Substation • Electricity Pole Not In Service Not In Service Pit \sim • 0.009km 🛞 Electrical Earthing Area Light Column Low Voltage Low Voltage •



ő



Powered by



Powered by





y 🐼 dbyd





Powered by Standard



Map 14

Sequence No: 221779366 245 White Hut Road Stanley Flat

14



33kV

19kV

11kV

Cable Exits

66kV/132kV

Cables

33kV

19kV

11kV

66kV/132kV

 \otimes

Pit

LEGEND:

ő 0.009km

▼	Other HV	\sim	Other HV
▼	Not In Service	\sim	Not In Service
▼	Low Voltage	~	Low Voltage





d by 🔊 🐼 dbyd

Powered by



Powered by Stand



Powered by Stand

Ghasem Ashtijou

From:	Andrew Christiansen <achristiansen@cgvc.sa.gov.au></achristiansen@cgvc.sa.gov.au>
Sent:	Tuesday, 28 March 2023 1:13 PM
То:	Ghasem Ashtijou; David Petruzzella; Amy Neubauer
Subject:	RE: Stanley Flat Code Amendment

Hey Ghasem,

There is no CWMS in that area. The residential land to the west does not have CWMS either. I had a chat to David about this and just flagging that Council has a policy which requires new developments to hook up to the CWMS - https://www.claregilbertvalleys.sa.gov.au/ data/assets/pdf_file/0023/1166432/Additional-Connections-to-CWMS-Policy-2022.pdf

"Division of land within the CWMS area or an extension of it, must provide for extension to the network including easements to Council's requirements, entirely at the developer's costs"

"Any development, or part of development, which impacts existing CWMS infrastructure within an existing or new allotment and requires any alterations to that infrastructure will be entirely at the cost of the developer."

Keeping that in mind, an exemption can be sought from Council to connect to the system, given the large allotment size this could be considered by Council by way of a request. It's probably premature at this time but if you decide to go lower than the 3,000sqm allotment size you may need to connect into the system.

Regards

Andrew Christiansen

From: Ghasem Ashtijou <ghasem.ashtijou@fmgengineering.com.au>
Sent: Tuesday, 28 March 2023 10:15 AM
To: David Petruzzella <dpetruzzella@urps.com.au>; Amy Neubauer <aneubauer@cgvc.sa.gov.au>
Cc: Andrew Christiansen <achristiansen@cgvc.sa.gov.au>
Subject: RE: Stanley Flat Code Amendment

[EXTERNAL]

Hi Amy,

Hope you are doing great.

In addition to the flooding map, would you please provide info about the local sewer (or CWMS) network if there is any available for the subject site if there is any? There is no data of SA water network and we assume there is not any network in this vicinity.

Regards,

Ghasem Ashtijou Civil Engineer

Ghasem Ashtijou

From:	Grapentin, Corey <corey.grapentin@sawater.com.au></corey.grapentin@sawater.com.au>
Sent:	Tuesday, 21 March 2023 11:40 AM
То:	Ghasem Ashtijou
Cc:	Jordan Colbert; Majorld; Pugh, Danni
Subject:	FW: Code amendment- Potable Water

Hi Gashem,

I don't have any topography for this area so can only comment on the existing pipe work. The 100 is unlikely to support an additional 62 lots. You would likely need to bring at least a 150 up from Moccundunda road to ensure there is enough pressure flow. This would be what I bank on from a developer's perspective. Once we have timing and rezoning completely, we can have an official investigation done. This investigation may lower the amount of works required but will be understood at that point in time. All internal retics would need to be designed and installed also.

If you have contour information, timing final lot layout and a closing date of the code amendment I may be able to have an investigation run at a high level in time. But please note we have a backlog currently, so we do have delays in this space.

Cheers

Corey Grapentin

Account Manager, Development Services

corey.grapentin@sawater.com.au • 7424 1633 • 0414 661 277 250 Victoria Square/Tarntanyangga ADELAIDE SA 5000









×

sawater.com.au



MINUTES

Stanley Flat Code Amendment - Meeting with Council

Microsoft Teams

23 March 2023 – 10am

Attendees David Petruzzella (URPS)

Ghasem Ashtijou (FMG)

Andrew Christiansen (Council) Amy Neubaer (Council)

1. Minutes / Notes

Council is awaiting a flooding study – It may capture the affected area. Council is happy to provide this information if it is of relevance to the Code Amendment

Site is not likely to present any significant flooding issues

Key consideration for Council is that SW discharge does not affect properties downstream of the creek. Creek flows should be maintained and largely unaffected by development.

Unsure of easement question – We will need to contact landowner

The creek is the current and anticipated discharge point for SW.



Adelaide 12/154 Fullarton Rd Rose Park, SA 5067

08 8333 7999

urps.com.au

We acknowledge the Kauma People as the Traditional Custodians of the land on which we work and pay respect to Elders past, present and emerging.



Ghasem Ashtijou

From:	Mark Menadue <mark.menadue@sapowernetworks.com.au></mark.menadue@sapowernetworks.com.au>
Sent:	Friday, 31 March 2023 11:03 AM
То:	Ghasem Ashtijou; Ben Trewartha
Cc:	Jordan Colbert; David Petruzzella
Subject:	RE: high level infrastructure assessment(Plan Parcel D48966) White Hut Road,
	Stanley Flat

Hi

There is two options for connecting the proposed residential development as follows:-

Option 1 – Connection at 11kV connection point on Lewcock Rd

Option 2 – Connection at 11kV via Lot 35 Norman Drive however this does not meet TS-100 and as part of this option a 11kV tie would need to be constructed between pad TF 16858 and the over to under pole on lot 58 Square Mile Rd to be treated as Extension works

Kind Regards

Mark Menadue Senior Network Project Officer

Direct: 08 8842 6950 Mobile: 0427 012 630 mark.menadue@sapowernetworks.com.au

14 Lennon St, CLARE SA 5453 sapowernetworks.com.au

<u>sapowernetworks.com.au</u>



G

in

O,

Networks Empowering South Australia





ADELAIDE

67 Greenhill Road Wayville SA 5034 Ph: 08 8132 6600

MELBOURNE

2 Domville Ave Hawthorn VIC 3122 Ph: 03 9815 7600

SYDNEY

Suite 28, 38 Ricketty St Mascot NSW 2020 Ph: 1300 975 878

ABN: 58 083 071 185