

# ROCKDALE ERF 1051, MIDDELBURG, MPUMALANGA



## CIVIL SERVICES REPORT

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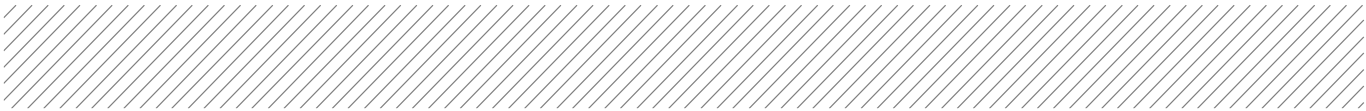
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# 1 Civil Services Report

## 1.1 Introduction

Urban Dynamics appointed Tirisano Consulting Engineers (Pty) Ltd to provide professional services for the investigation and compiling the civil services report for the proposed new development of ERF 1051, Rockdale, Middelburg. The purpose of this service report is to present the available civil services around the new proposed development and to highlight any concerns. This report will cover information for services regarding domestic water, sewer and storm water. Other services like power supply, data network services or access roads will not be covered in this report.

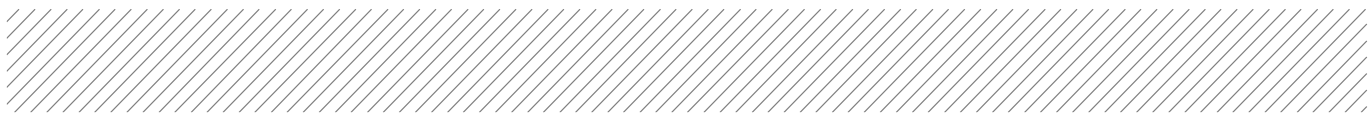
## 1.2 Civil services available around ERF 1051

An investigation was conducted by Anton Kloppers, a professional civil engineer and Conrad Booysen, a civil engineer. The available civil services around ERF 1051 was investigated and reported as follows.

### 1.2.1 Domestic water network

During investigation conducted by Tirisano Consulting Engineers (Pty) Ltd which studied the existing water reticulation system in the surroundings of Rockdale, Middelburg. The assessment is summarised as follows:

The surrounding area domestic water reticulation consist mostly of 75mmØ Class 9 uPVC pipes. The only 110mmØ pipe available closest to the new development are on the corner of Ekukhanyeni and Sol Plaatjie street. The largest available connection will be the 110mmØ uPVC pipe. During investigation no data was available for any pressures in the existing domestic water pipe network. For design purposes water pressures need to be confirmed before the new development starts. The peak head required for the new development will determine if the available pipe networks and pressures are sufficient.



### **1.2.2 Sewer network**

According to the research and investigation that was conducted by Tirisano Consulting Engineers (Pty) Ltd on the existing sanitation system within the surroundings of Rockdale, Middelburg. The assessment is summarised as follows:

The surrounding area sewer reticulation consist of 160mmØ uPVC pipes only. Three available connection points are available on the back yard area of the proposed new development. For design purposes the peak head flows have to be estimated in order to determine the optimum pipe sizes required.

### **1.2.3 Stormwater network**


Stormwater management plays an integral part in the sustainability of a development. There must be a need to manage, control and regulate the quantity, quality, flow and velocity of storm water runoff from any property which it is proposed to develop or is in the process of being developed or is fully developed, in order to prevent or mitigate:

- Erosion
- Sedimentation in ponds and watercourses and;
- Excess storm water runoff onto a public road which may pose a danger to life or property or both.

The stormwater system will consists of combined surface, road and pipe systems. Stormwater will flow from the respective catchment areas into the nearest downstream kerb inlet of the stormwater pipe network.

According to the research and investigation that was conducted by Tirisano Consulting Engineers (Pty) Ltd on the existing stormwater system within the surroundings of Rockdale, Middelburg. The assessment is summarised as follows:

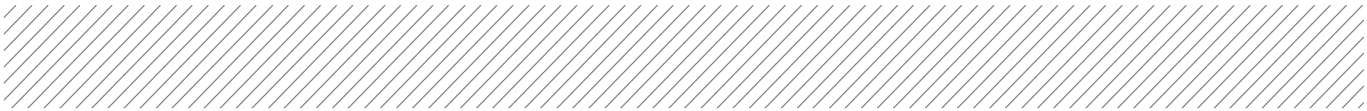
The closest stormwater network to the new development are in Ekukhanyeni street, close to the one corner of the proposed new development. The runoff from the new property will need to drain into the road and then into the existing stormwater pipe network. Stormwater on the



development will be treated as surface runoff as far as practicable. During investigation no data was available for any pipe sizes but only the layout. For design purposes the pipe sizes need to be confirmed and then be check if it's still sufficient to drain additional stormwater.

## **2 CONCLUSION**

We trust that the information presented in this report is sufficient to enable Urban Dynamics to present the available civil services for the proposed new site. Further investigation will be required once the design phase starts. The different peak flow demands for the domestic water and sewer will determine if the available services are still sufficient. The existing stormwater network should be checked if it is still sufficient to drain the additional runoff from the new development. All information used in this report was sourced from the local municipality.




# APPENDIX A: ROCKDALE ERF 1051 SITE MAP

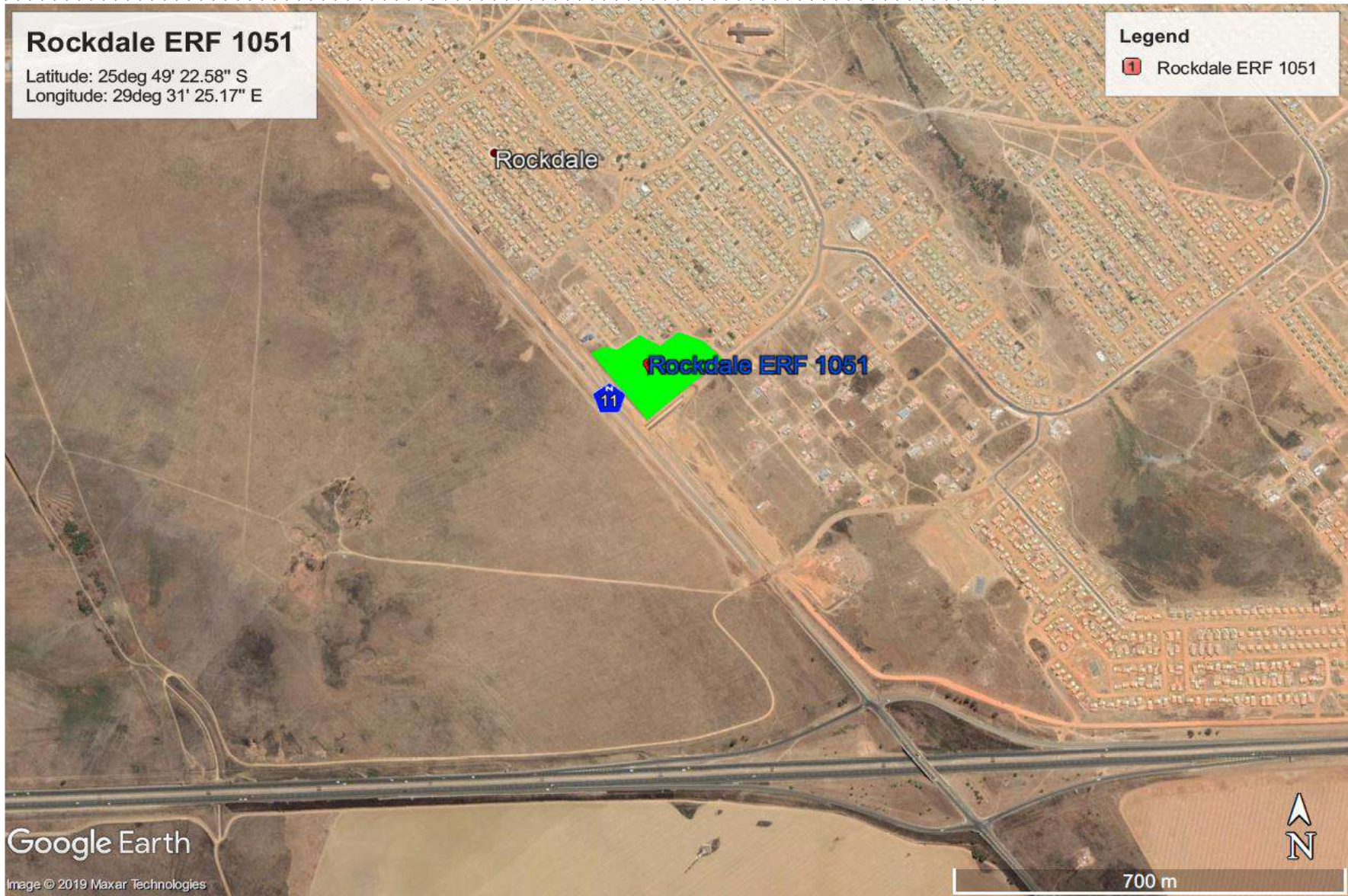


# Rockdale ERF 1051

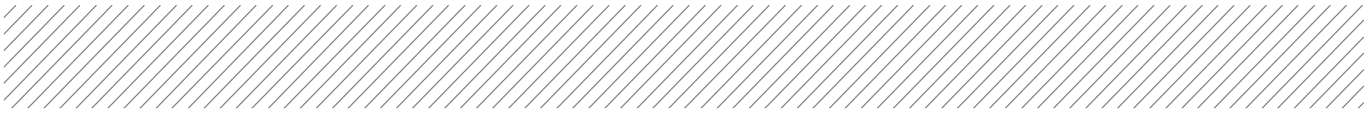
Latitude: 25deg 49' 22.58" S  
Longitude: 29deg 31' 25.17" E

## Legend

 Rockdale ERF 1051





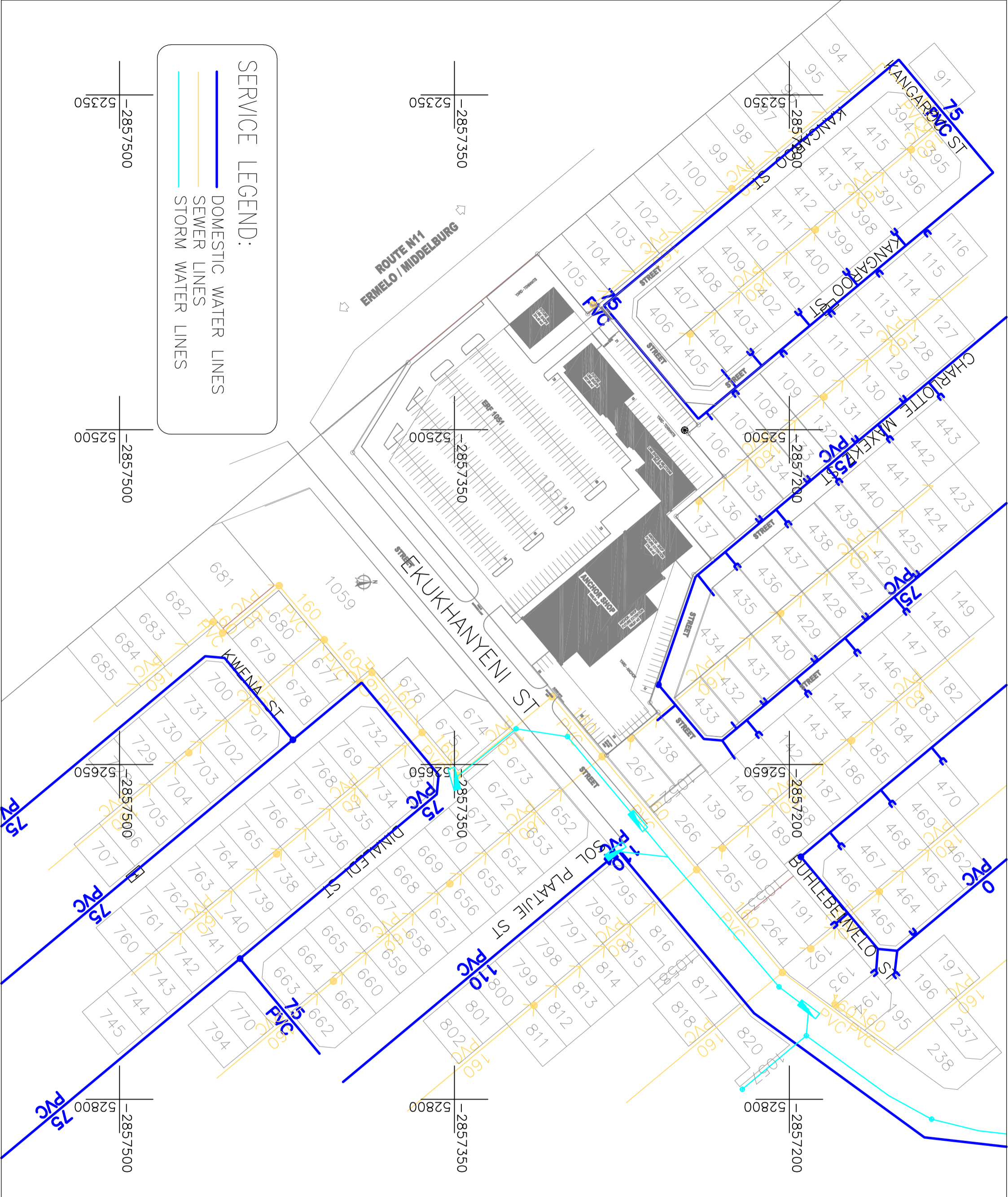


# APPENDIX B: DRAWING 0327-UDP-CIV-GL-001 – SERVICES LAYOUT



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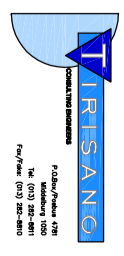
**SERVICE LEGEND:**

- DOMESTIC WATER LINES
- SEWER LINES
- STORM WATER LINES

LEGEND



"THE MASTER HELD AT IRISANO, BEARS THE ORIGINAL SIGNATURE OF APPROVAL."



ARCHITECT

CLIENT

URBAN DYNAMICS

REV / DATE	REVISION/DETAILS	APPROVED
0 / 11/2019	FOR INFORMATION	A. KLOPPERS

SCALE	SIZE	FOR INFORMATION
AS SHOWN	A1	
DRAWN		
DESIGNED		
CHECKED		

PROJECT

ROCKDALE ERF 1051

TITLE

SERVICES LAYOUT:  
DOMESTIC WATER,  
SEWER, STORM WATER

PROJECT No.	WBS	DRAWING NUMBER	TYPE	DATE	REV
0327	UDP	CIV - GL	001	0	0