

## NOTICE OF AN APPLICATION FOR PLANNING PERMIT

The land affected by the application is located at:	106 Ahern Road, Pakenham VIC 3810 LS2 PS815861 V12321 F732
The application is for a permit to:	Subdivision of land into three (3) lots
The applicant for the permit is:	MG Land Surveyors
The application reference number is:	T240020
You may look at the application and any documents that support the application at the office of the Responsible Authority:	Cardinia Shire Council 20 Siding Avenue Officer 3809  This can be done during office hours and is free of charge.  Documents can also be viewed on Council's website: <a href="https://www.cardinia.vic.gov.au/advertisedplanningapplications">https://www.cardinia.vic.gov.au/advertisedplanningapplications</a>

Any person who may be affected by the granting of the permit may object or make other submissions to the responsible authority.

- An objection must
- \* be sent to the Responsible Authority in writing, at Cardinia Shire Council, PO Box 7, Pakenham, Vic, 3810 or email at [mail@cardinia.vic.gov.au](mailto:mail@cardinia.vic.gov.au).
  - \* include the name and address of the objector/ submitter.
  - \* include the application number and site address.
  - \* include the reasons for the objection, and
  - \* state how the objector would be affected.

The Responsible Authority will not decide on the application before:	13 May 2024
----------------------------------------------------------------------	-------------

If you object, the Responsible Authority will tell you its decision.

Please be aware that copies of objections/submissions received may be made available to any person for the purpose of consideration as part of the planning process.

For additional information or advice contact Cardinia Shire Council, Planning Department on 1300 787 624 or [mail@cardinia.vic.gov.au](mailto:mail@cardinia.vic.gov.au).

Your objection/submission and personal information is collected by Cardinia Shire Council for the purposes of the planning process as set out in the *Planning and Environment Act 1987*. If you do not provide your name and address, Council will not be able to consider your objection/submission. Your objection/submission will be available free of charge at the Council office for any person to inspect and copies may be made available on request to any person for the relevant period set out in the *P&E Act*. You must not submit any personal information or copyright material of third parties without their informed consent. By submitting the material, you agree that the use of the material as detailed above does not breach any third party's right to privacy and copyright.

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## Application Summary

Portal Reference	A124999D
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## Basic Information

Proposed Use	3 lot subdivision
Current Use	existing dwelling on land
Site Address	106 Ahern Road Pakenham 3810

## Covenant Disclaimer

Does the proposal breach, in any way, an encumbrance on title such as restrictive covenant, section 173 agreement or other obligation such as an easement or building envelope?	Not Applicable, no such encumbrances apply.
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------

## Contacts

Type	Name	Address	Contact Details
Applicant	MG Land Surveyors	26 Ellen Road, Narre Warren South VIC 3805	W: 0479-104-727 E: admin@mglandsurveyors.com.au
Owner			
Preferred Contact	MG Land Surveyors	26 Ellen Road, Narre Warren South VIC 3805	W: 0479-104-727 E: admin@mglandsurveyors.com.au

## Fees

Regulation Fee Condition	Amount	Modifier	Payable
9 - Class 20 To subdivide land (3 Lots)	\$1,415.10	100%	\$1,415.10
	<b>Total</b>		<b>\$1,415.10</b>

## Documents Uploaded

Date	Type	Filename
23-01-2024	Subdivision Plan	PS919773T-VA.pdf
23-01-2024	Additional Document	Form 1.pdf
23-01-2024	Additional Document	Title.pdf



**Civic Centre**  
20 Siding Avenue, Officer, Victoria

**Council's Operations Centre (Depot)**  
Purton Road, Pakenham, Victoria

**Postal Address**  
Cardinia Shire Council  
P.O. Box 7, Pakenham VC, 3810

**Email:** mail@cardinia.vic.gov.au

Monday to Friday 8.30am–  
5pm  
**Phone:** 1300 787 624  
**After Hours:** 1300 787 624  
**Fax:** 03 5941 3784

Remember it is against the law to provide false or misleading information, which could result in a heavy fine and cancellation of the permit

## Lodged By

Site User	██████████ MG Land Surveyors	26 Ellen Road, Narre Warren South VIC 3805	W: 0403-616-682 E: admin@mglandsurveyors.com.au
Submission Date	23 January 2024 - 11:25:AM		

## Declaration

By ticking this checkbox, ██████████ declare that all the information in this application is true and correct; and the Applicant and/or Owner (if not myself) has been notified of the application.

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20 Siding Avenue, Officer, Victoria

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P.O. Box 7, Pakenham VC, 3810

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The Victorian Government acknowledges the Traditional Owners of Victoria and pays respects to their ongoing connection to their Country, History and Culture. The Victorian Government extends this respect to their Elders, past, present and emerging.

REGISTER SEARCH STATEMENT (Title Search) Transfer of Land Act 1958

VOLUME 12321 FOLIO 732

Security no : 124111701401M  
Produced 08/01/2024 12:00 PM

LAND DESCRIPTION

Lot 4 on Plan of Subdivision 815861B.  
PARENT TITLE Volume 09559 Folio 293  
Created by instrument PS815861B 29/07/2021

REGISTERED PROPRIETOR

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE PS815861B FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

-----END OF REGISTER SEARCH STATEMENT-----

Additional information: (not part of the Register Search Statement)

Street Address: 106 AHERN ROAD PAKENHAM VIC 3810

ADMINISTRATIVE NOTICES

NIL

DOCUMENT END

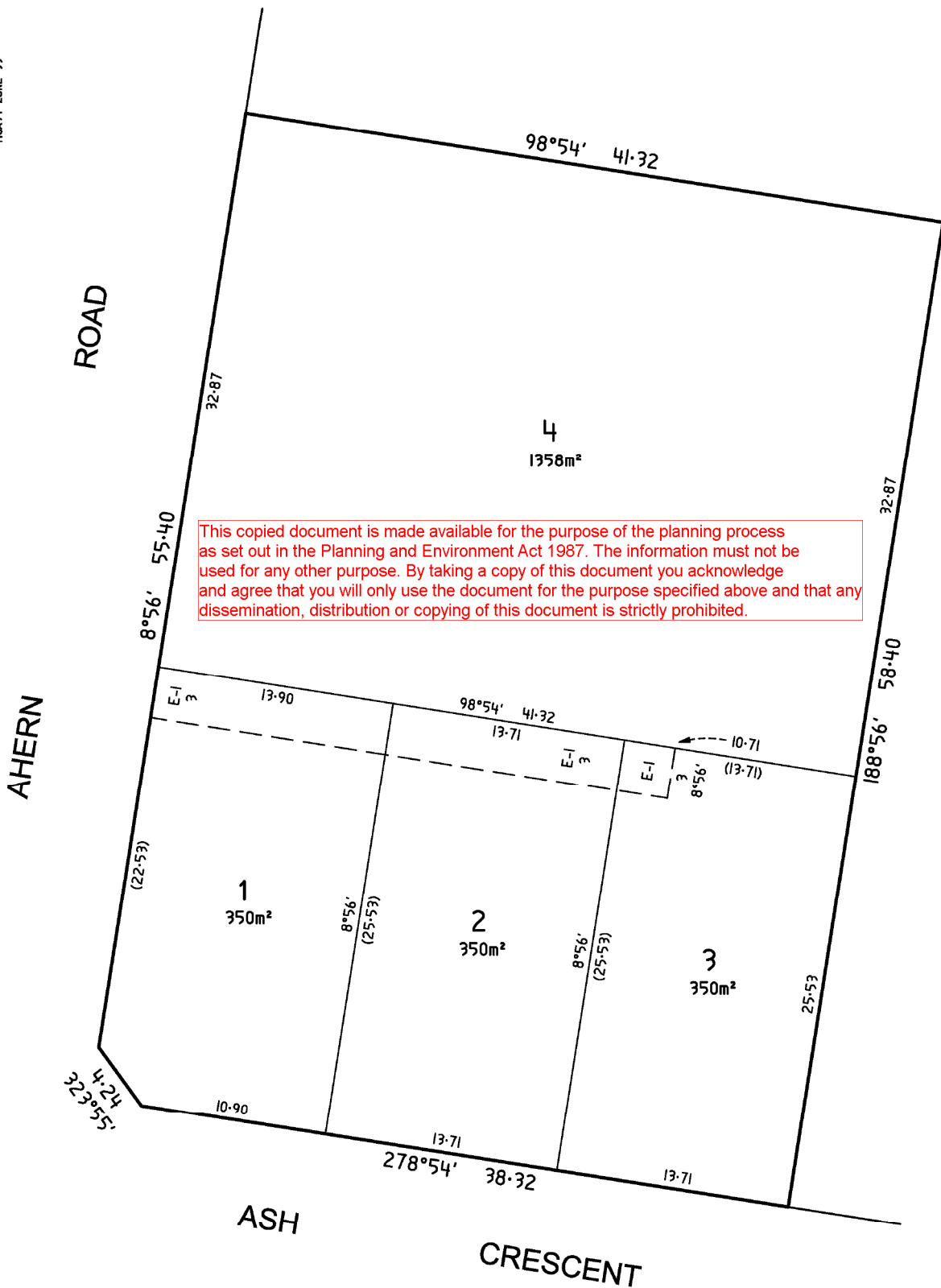
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<b>PLAN OF SUBDIVISION</b>		<b>LV USE ONLY EDITION 1</b>	<b>PLAN NUMBER PS 815861B</b>	
<p style="text-align: center;"><b>LOCATION OF LAND</b></p> <p><b>Parish:</b> NAR NAR GOON</p> <p><b>Township:</b> -</p> <p><b>Section:</b> -</p> <p><b>Crown Allotment:</b> -</p> <p><b>Crown Portion:</b> 7 (PART)</p> <p><b>Title Reference:</b> VOL 9559 FOL 293</p> <p><b>Last Plan Reference:</b> LOT 4 ON LP 144104</p> <p><b>Postal Address:</b> 102 - 106 AHERN ROAD, (at time of subdivision) PAKENHAM 3810</p> <p><b>MGA94 Co-ordinates:</b> E 367 230 Zone: 55 (of approx. centre of land in plan) N 5 786 590</p>		<p>Council Name: Cardinia Shire Council</p> <p>Council Reference Number: S18-057 Planning Permit Reference: T180155 SPEAR Reference Number: S119482S</p> <p><b>Certification</b></p> <p>This plan is certified under section 6 of the Subdivision Act 1988</p> <p>Public Open Space</p> <p>A requirement for public open space under section 18 of the Subdivision Act 1988 has been made and the requirement has not been satisfied at Certification</p> <p>Digitally signed by: Simone Norbury for Cardinia Shire Council on 17/06/2021</p> <p><b>Statement of Compliance</b> issued: 18/06/2021</p> <p>Public Open Space</p> <p>A requirement for public open space under section 18 of the Subdivision Act 1988 has been made and the requirement has been satisfied at Statement of Compliance</p>		
<b>VESTING OF ROADS AND / OR RESERVES</b>		<b>NOTATIONS</b>		
<b>IDENTIFIER</b>	<b>COUNCIL / BODY / PERSON</b>			
NIL	NIL			
<b>NOTATIONS</b>		<p><b>Other Purpose of Plan:</b></p> <p>Creation of Restriction (See Sheet 3)</p>		
<p><b>Depth Limitation:</b> DOES NOT APPLY</p> <p><b>Staging:</b> This is not a staged subdivision. Planning Permit No. T180155</p>				
<p><b>Survey:</b> This plan is based on survey. This survey has been connected to permanent marks no(s) In proclaimed Survey Area No. -</p>		<p>This copied document is made available for the purpose of the planning process as set out in the Planning and Environment Act 1987. The information must not be used for any other purpose. By taking a copy of this document you acknowledge and agree that you will only use the document for the purpose specified above and that any dissemination, distribution or copying of this document is strictly prohibited.</p>		
<b>EASEMENT INFORMATION</b>				
<b>LEGEND:</b> A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)				
<b>Easement Reference</b>	<b>Purpose</b>	<b>Width (Metres)</b>	<b>Origin</b>	<b>Land Benefited / In Favour Of</b>
E-1	DRAINAGE	3	THIS PLAN	CARDINIA SHIRE COUNCIL
E-1	SEWERAGE	3	THIS PLAN	SOUTH EAST WATER CORPORATION
<p><b>Nilsson, Noel &amp; Holmes (Surveyors) Pty. Ltd.</b> A.C.N. 067 949 615 Surveyors, Engineers &amp; Town Planners 8A Codrington Street, Cranbourne 3977 Phone (03) 5996 4133 Email: mail@nnhsurveyors.net.au</p>		<p><b>REF: 9494</b> DWG No. <b>9494S</b> 27/05/2020</p> <p>Digitally signed by: Grant Thomas Napper, I licensed Surveyor, Surveyor's Plan Version (3), 27/05/2020, SPEAR Ref: S119482S</p>	<p><b>ORIGINAL SHEET SIZE: A3</b> Sheet 1 of 3 sheets</p> <p><b>PLAN REGISTERED</b> TIME: 3.22PM DATE: 29/7/21 B. POWELL Assistant Registrar of Titles</p>	

# PLAN OF SUBDIVISION

PLAN NUMBER  
**PS 815861B**



**Nilsson, Noel & Holmes (Surveyors) Pty. Ltd.**

A.C.N. 067 949 615

Surveyors, Engineers & Town Planners

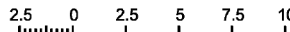
8A Codrington Street, Cranbourne 3977

Phone (03) 5996 4133

Email: mail@nnhsurveyors.net.au



SCALE  
1:250



LENGTHS ARE IN METRES

Digitally signed by: Grant Thomas Napper, Licensed Surveyor,  
Surveyor's Plan Version (3),  
27/05/2020, SPEAR Ref: S119402G

REF: **9494** DWG No. **9494S** 27/05/2020

ORIGINAL SHEET  
SIZE: A3

SHEET 2

Digitally signed by:  
Cardinia Shire Council,  
17/06/2021,  
SPEAR Ref: S119402G

# PLAN OF SUBDIVISION

PLAN NUMBER  
PS 815861B

## SUBDIVISION ACT 1988 CREATION OF RESTRICTION

Upon the registration of this plan the following restriction is to be created as directed in Planning Permit No. T180155 issued by the Cardinia Shire Council.

**Land to Benefit:** Lots 1, 2, 3 & 4 on this plan

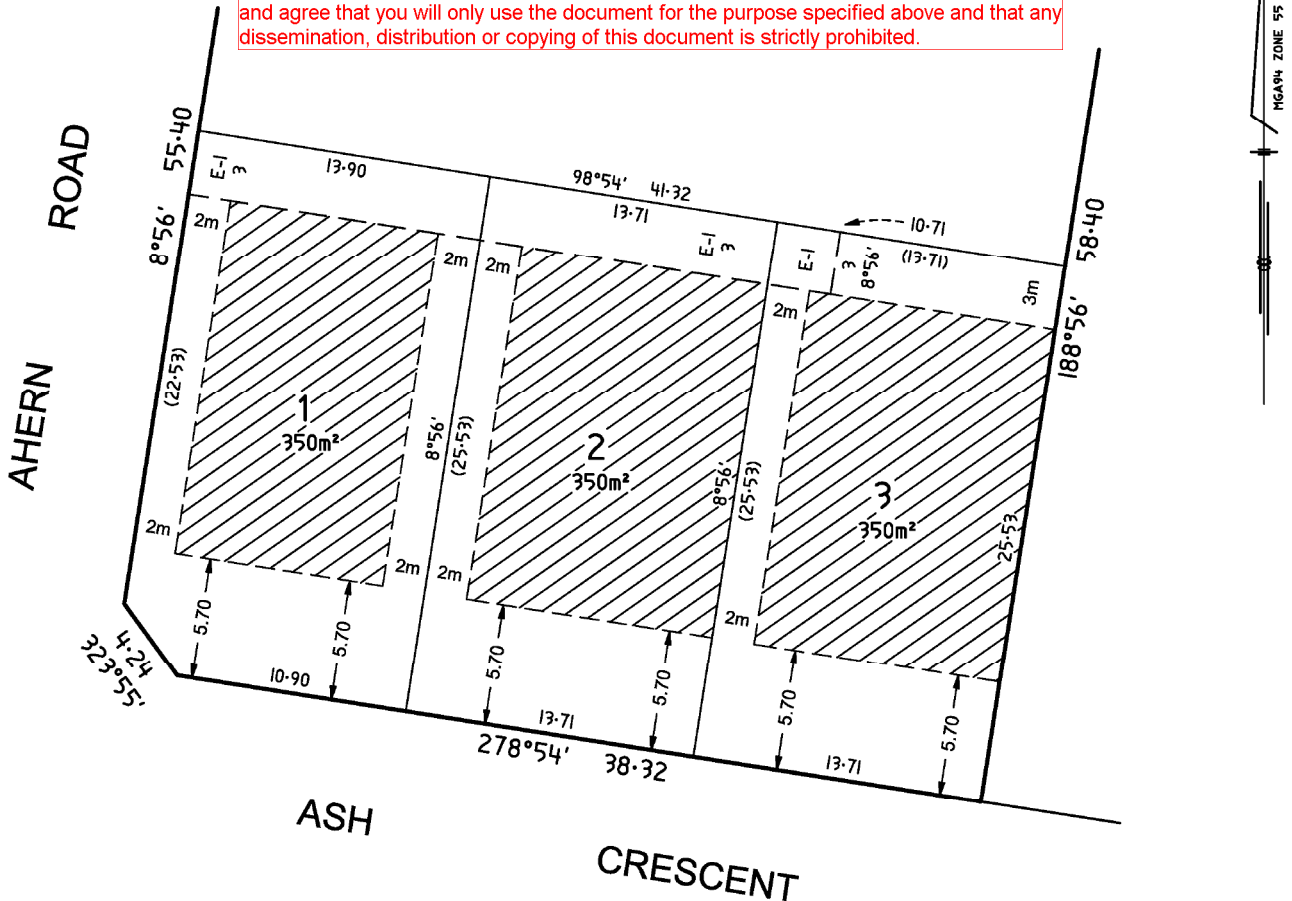
**Land to be Burdened:** Lots 1, 2 & 3 on this plan

### Description of the Restriction:

The registered proprietor or proprietors of Lots 1, 2 and 3 on this plan shall not:

1. Construct any building except for fascia boards, eaves and guttering outside the building envelope (area shown hatched) without the written consent of the Responsible Authority.
2. Set aside less than 25 percent of the lot as garden area (as defined by the Cardinia Planning Scheme).

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A.C.N. 067 949 615

Surveyors, Engineers & Town Planners

8A Codrington Street, Cranbourne 3977

Phone (03) 5996 4133

Email: mail@nnhsurveyors.net.au



SCALE

2.5 0 2.5 5 7.5 10

1:250

LENGTHS ARE IN METRES

REF: 9494 DWG No. 9494S 27/05/2020

ORIGINAL SHEET  
SIZE: A3

SHEET 3

Digitally signed by: Grant Thomas Napper, Licensed Surveyor,  
Surveyor's Plan Version (3),  
27/05/2020, SPEAR Ref: S119402S

Digitally signed by:  
Cardinia Shire Council,  
17/06/2021,  
SPEAR Ref: S119402S



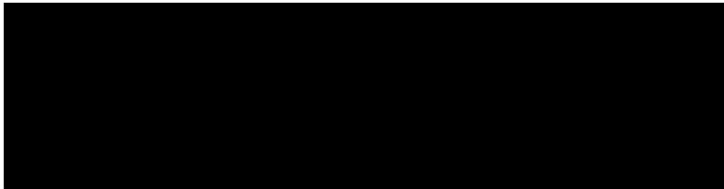
**Form 1**  
**Reg. 22 Subdivision (Procedures) Regulations 2011**  
**SUBDIVISION ACT 1988**  
**APPLICATION FOR CERTIFICATION**

OWNERS CONSENT

Surveyors Reference: 23180

**Plan No: PS919771X**

**To:** Cardinia Shire Council  
PO Box 7  
Pakenham VIC 3810



Apply to have attached the plan of subdivision to be certified under the Subdivision Act 1988 and to have advice of street numbers allocated.

1. Situation of land

106 Ahern Road, Pakenham 3810

2. Name and address of registered proprietor of land or owner:



3. Name and address of applicant

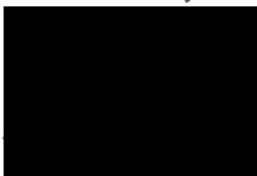


MG Land Surveyors Pty Ltd  
26 Ellen Road Narre Warren South 3805

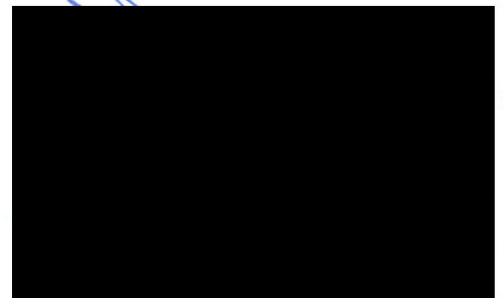
Date 23 / 01 / 2024

**Signed**

Licensed Surveyor



**Signed**



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# PLANNING REPORT

106 Ahern Road  
Pakenham

Three (3) Lot Subdivision

March 2024



ST WISE PTY LTD | ABN 12 108 837 921

PO BOX 2336 CAULFIELD JUNCTION 3161 T 03 9500 0865 E INFO@ST-WISE.COM.AU W ST-WISE.COM.AU



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## ATTACHMENT

CLAUSE 56 (RESCODE) ASSESSMENT

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## INTRODUCTION

This is a report to accompany a planning permit application for a three (3) lot subdivision at the subject site – 106 Ahern Road, Pakenham. This report includes a description of the site context and identification of the State and local planning policies that influence the application.

An assessment against these policies is included in this report, and including an assessment against Clause 56 (Residential subdivision) as it relates to matters pertinent to this subdivision. This report should be read in conjunction with the following:

- Plan of Subdivision prepared by MG Land Surveyors;



Figure 1 – subject site

## 1. SITE ANALYSIS

### 1.1 THE SITE

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The subject site is located on the east side of Ahern Road, and north of Ash Crescent in Pakenham. The site is rectangular in shape with a width of 32.87m, a depth of 41.32m (max.), and a site area of 1,358sqm. The site has a slope of around 4m (av.) towards the southwest corner near the street. There is a power-pole in the nature strip at the northern end of the site.

The site is occupied by a single-storey masonry dwelling setback over 15m from the site frontage. Vehicular access to the dwelling is via a crossover and driveway towards the southern end of the site frontage. There is no front fencing, while the front setback is mainly lawn. There is no meaningful vegetation around the site. There is a pool in the rear yard.

## 1.2 THE SURROUNDING AREA

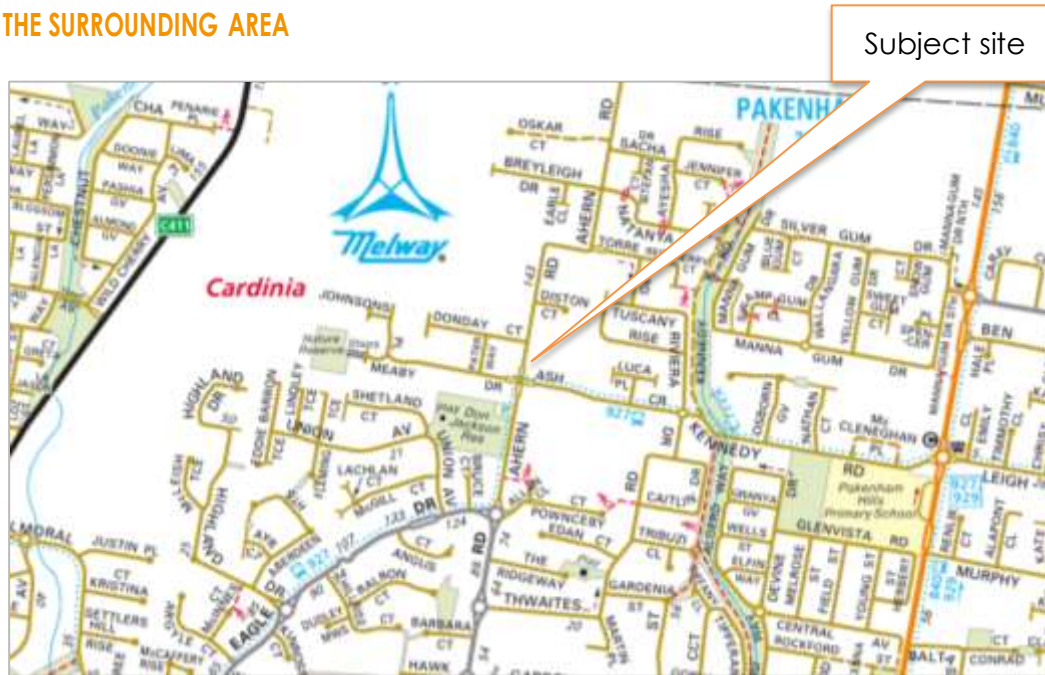


Figure 2 – locality plan

The subject site is within an area of Pakenham north of the Princes Highway and east of Pakenham Road. Ahern Road is a north-south collector road through the area. The subject site is near a bus route and within walking distance of a school (see Figure 2).

It is a suburban area with curvilinear roads and a mix of site sizes. Consistent with the zoning of the land, the area has been developed residentially, and with a share of medium-density-housing (MDH). Sites in the area are mainly between 400sqm and 600sqm. Most allotments are developed with single storey dwellings of a modest scale. There are examples of two-storey dwellings in the wider area, often on sloping land with access to views.

The dwellings sit in modest garden settings. This area has a sloping topography with the site being in an area with a fall to the west – it is not on a ridgeline. Most sites along Ahern Road do not have front fencing creating an open edge to the street.

## 1.3 INTERFACES

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The subject site has several interfaces. To the north the site abuts the entry driveway to a larger development featuring smaller single-storey dwellings. Beyond this at 108A Ahern Road is a brick dwelling with a 5.2m front setback.

To the south the site abuts three (3) sites with frontage to Ash Crescent. Each contains a single dwelling (see Figure 3 below).



Figure 3 – dwellings to the south

These dwellings are setback between 3m and 4.3m from the common boundary. The dwelling closest to the corner establishes a 2.1m setback to Ahern Road.

To the east the site has abuttal to three dwellings forming part of a larger subdivision (see Figure 4). The closest dwellings are between 2.9m and 4m from the common boundary.



Figure 4 – dwellings to the rear (east) of subject site

## 2. THE PROPOSAL

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It is proposed to subdivide the site into three (3) allotments. The following are the main details of the proposal:

- The lots will each have a street frontage.

- The allotment sizes will be as follows:

Lot 1 (south): 452sqm

Lot 2 (middle): 453sqm

Lot 3 (north): 453sqm

- Each lot will have a similar width of 10.95m or 10.96m.
- No building envelopes are intended.
- The dwelling and pool would be removed to enable three (3) independent lots.

### 3. ZONING & PLANNING CONTROLS

#### 3.1 ZONING

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Figure 5 – Zoning plan

The subject site is within a General Residential Zone – Schedule 1 (GRZ1). Clause 32.08 of the Cardinia Planning Scheme governs use and development in this zone. The purposes of the GRZ are as follows:

- To encourage development that respects the neighbourhood character of the area.
- To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport.
- To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.

Subject to Clause 32.08-3 a permit is required to subdivide land.

### 3.2 OVERLAYS

The site is within a Development Contributions Plan Overlay – Schedule 1 (DCPO1). This does not impact the consideration of this subdivision application.

### 3.3 STATE PLANNING POLICY

The following clauses and policies have the most relevance to this application.

#### Clause 11.02 – Managing Growth

Clause 11.02-1S includes the following strategies:

- *Ensure the ongoing provision of land and supporting infrastructure to support sustainable urban development.*
- *Ensure that sufficient land is available to meet forecast demand.*
- *Planning for urban growth should consider... opportunities for the consolidation, redevelopment and intensification of existing urban areas.*

#### Clause 12 – Environmental & Landscape Values

This Clause seeks to protect the health of ecological systems and the biodiversity they support (including ecosystems, habitats, species and genetic diversity) and conserve areas with identified environmental and landscape values.

#### Clause 15 – Built Environment and Heritage

This clause seeks to achieve high quality urban design and architecture that reflects the particular characteristics, aspirations and cultural identity of the community. It also provides objectives for subdivision that emphasises varying lot sizes, liveability and amenity.

#### Clause 16.01 - Housing

Clause 16.01-1S (Housing supply) includes the following strategies:

*Increase the proportion of housing in designated locations in established urban areas (including under-utilised urban land) and reduce the share of new dwellings in greenfield, fringe and dispersed development areas.*

*Identify opportunities for increased residential densities to help consolidate urban areas.*

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### 3.4 LOCAL PLANNING POLICY

Council's planning policies are generally contained within Clauses 21 and 22 of the Cardinia Planning Scheme. The following is the main clause relevant to the consideration of this proposal.

#### Clause 21.03 – Settlement and Housing

This Clause identifies this part of Pakenham as being an established urban area. Therefore, there is an expectation for more housing growth in these areas. The following strategies are stated:

- *Encourage a range of lot sizes and housing types in new developments that satisfy the needs and aspirations of the community.*
- *Encourage an increase in densities that has a high standard of urban design, timely provision of infrastructure and is consistent with the existing and/or preferred neighbourhood character.*
- *Encourage medium density housing to be located within or at the interface of activity centres and overlooking local and linear open space.*
- *Ensure residential development and subdivisions are designed to be responsive to existing urban character.*



Figure 6 – Streetscape opposite subject site

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## 4. Response to Planning Policies

### 4.1 GENERAL

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Both State and local planning policy place an emphasis on increased densities of housing in the existing urban area to avoid sprawl, minimise vehicle use and to maximise existing infrastructure. But housing growth will not always be uniform across the metropolitan area. Clause 11.02 (Managing Growth) lists the following strategy:

*Planning for urban growth should consider:*

- *Opportunities for the consolidation, redevelopment and intensification of existing urban areas.*
- *Neighbourhood character and landscape considerations.*
- *The limits of land capability and natural hazards and environmental quality.*
- *Service limitations and the costs of providing infrastructure.*

Each of these objectives applies to subdivision at the subject site. The area is an established urban area where more development and greater densities of development are expected. This is reinforced by the GRZ applying to this part of Pakenham. Like other municipalities at the urban fringe, Cardinia acknowledges a need to increase densities in existing areas to protect rural areas from development. In turn, that supports Council's environmental goals.

#### Layout and siting

Each of the lots to be created will have its own street frontage, a width of over 10m and an area exceeding 450sqm. They would have no need for common property. They can easily each accommodate a dwelling meeting all requirements of the Building Code.

For that reason it is submitted that there is no need for building envelopes for these blocks. The following are noted:

- Each site is large enough to support a dwelling at an appropriate street setback.
- The neighbouring setbacks are 2.1m and 5.2m. An average street setback of 3.65m (or more) will still allow an extensive area to develop given the 41.32m depth of each site.
- Rear setbacks of just 3m would provide all secluded private open space needs for each site.

It is noted that Amendment VC243 to all planning schemes removed the need for a permit for dwelling developments or additions on sites over 300sqm. For consistency, building envelopes should not be required for these larger lots.

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## Interfaces

The interfaces with the subject site have been detailed above. The neighbouring sites to the south and east (rear) are each developed with single dwellings with open space areas at the interface. These lots are likely to be developed with similar built form and consistent setbacks.

Matters of overlooking, overshadowing and daylight to windows would be governed by the Building Code. It is considered that the new lots would allow for a built form outcome that would be respectful to each interface.



Figure 7 – Aerial view of area

## **4.2 CLAUSE 32.08 – GRZ SUBDIVISION**

Subject to Clause 32.08-3 a permit is required to subdivide the land. The following decision guidelines are considered relevant to this proposal.

### General

- *The Municipal Planning Strategy and the Planning Policy Framework.*
- *The purpose of this zone.*
- *The objectives set out in a schedule to this zone.*
- *Any other decision guidelines specified in a schedule to this zone.*
- *The impact of overshadowing on existing rooftop solar energy systems on dwellings on adjoining lots in a General Residential Zone, Mixed Use Zone, Neighbourhood Residential Zone, Residential Growth Zone or Township Zone.*

### Subdivision

- *The pattern of subdivision and its effect on the spacing of buildings.*
- *For subdivision of land for residential development, the objectives and standards of Clause 56.*

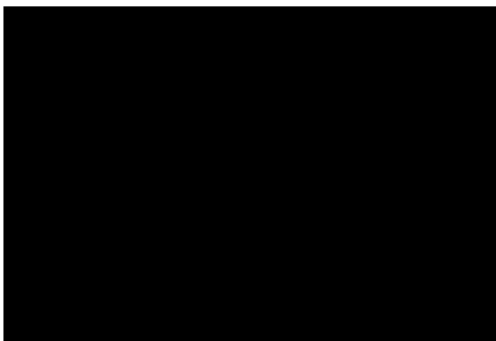
Firstly, it is noted that Schedule 1 to the GRZ provides for no character objectives and no changes to normal ResCode standards. It provides no real guidance on the preferred nature of development and built form. Again, these would still be governed by the Building Code.

The pattern of subdivision is considered the most appropriate to this site. The three (3) lots would each have street frontage. They each have adequate width and depth to achieve appropriate built form outcomes and open space provision. They can each achieve garden areas to the front and rear. The spacing of buildings is likely to be the same as developments to the south and east.

The objectives and standards within Clause 56 are considered in Attachment 1 to this report.

### In Summary

The proposed subdivision at the site has strong strategic support at both State and local levels. The proposed subdivision ensures that development can occur consistent with expectations within the General Residential Zone.



Director – St-wise Pty Ltd

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**106 AHERN ROAD, PAKENHAM****TWO (2) LOT SUBDIVISION - CLAUSE 56 (RES CODE) ASSESSMENT**

*This is an assessment of a three (3) lot subdivision at the above property, against the standards and objectives of Clause 56 - Residential subdivision.*

**APPLICATION**

- These provisions apply to an application to subdivide land in the Neighbourhood Residential Zone, General Residential Zone, Residential Growth Zone, Mixed Use Zone or Township Zone and any Comprehensive Development Zone or Priority Development Zone that provides for residential development
- These provisions do not apply to an application to subdivide land into lots each containing an existing dwelling or car parking space.

Firstly, it is noted that Clause 56.01-1 seeks a subdivision site context and description, while Clause 56.01-2 seeks a subdivision design response. These are provided in the accompanying report.

It is also noted that not all of the Standards within Clause 56 are necessarily relevant to all subdivisions. Therefore, only those Standards that are immediately relevant are included in the following assessment.

CLAUSE 56.03 LIVABLE AND SUSTAINABLE COMMUNITIES	
CLAUSE 56.03-5 NEIGHBOURHOOD CHARACTER  Objective To design subdivisions that respond to neighborhood character.  Standard C6 <ul style="list-style-type: none"> <li>• Subdivision should:               <ul style="list-style-type: none"> <li>- Respect the existing neighborhood character or achieve a preferred neighborhood character consistent with any relevant neighborhood character objective, policy or statement set out in this scheme.</li> <li>- Respond to and integrate with the surrounding urban environment.</li> <li>- Protect significant vegetation and site features.</li> </ul> </li> </ul>	<b>Complies</b>  The expectations for character are generally defined by the General Residential Zone applying to the land and Clause 21.03 – Settlement & housing.  These allow that housing growth and housing diversity are encouraged in existing built up areas of the municipality.  As discussed within the report, the proposal subdivision layout is appropriate to the character of the area.

CLAUSE 56.04 LOT DESIGN	
<p>CLAUSE 56.04-2 LOT AREA AND BUILDING ENVELOPES</p> <p>Objective To provide lots with areas and dimensions that enable the appropriate siting and construction of a dwelling, solar access, private open space, vehicle access and parking, water management, easements and the retention of significant vegetation and site features.</p> <p>Standard C8</p> <ul style="list-style-type: none"> <li>• An application to subdivide land that creates lots less than 300 square meters should be accompanied by information that shows: <ul style="list-style-type: none"> <li>- That the lots are consistent or contain building envelope that is consistent with a development approved under the scheme, or</li> <li>- That the dwelling may be constructed on each lot in accordance with the requirements of this scheme</li> </ul> </li> <li>• Lots of between 300 square meters and 500 square meters should: <ul style="list-style-type: none"> <li>- Contain a building envelope that is consistent with a development of the lot approved under this scheme, or</li> <li>- If no development of the lot has been approved under this scheme, contain a building envelope and be able to contain a rectangle measuring 10 meters by 15 meters, or 9 meters by 15 meters if a boundary wall is nominated as part of the building envelope.</li> </ul> </li> <li>• If lots of between 300 square meters and 500 square meters are proposed to contain dwellings that are built to the boundary, the long axis of the lots should be within 30 degrees east and 20 degrees west of north unless there are significant physical constraints that make this difficult to achieve.</li> </ul>	<p><b>Complies</b></p> <p>The plan of subdivision provided shows 3 lots, each being around 453sqm in area.</p> <p>Each lot is capable of containing a rectangle of 10m x 15m as sought; however, this would imply extensive boundary walls. In fact, each lot can contain an envelope of 8m x 30m, a larger envelope than sought.</p> <p>Such envelopes would still allow that each dwelling has suitable front and rear setback. Potentially no boundary walls would be required, though garage walls on boundaries are common to the area.</p> <p>As stated in the report:</p> <p><i>It is noted that Amendment VC243 to all planning schemes removed the need for a permit for dwelling developments or additions on sites over 300sqm. For consistency, building envelopes should not be required for these larger lots.</i></p>

<ul style="list-style-type: none"><li>• Lots greater than 500 square meters should be able to contain a rectangle measuring 10 meters by 15 meters, and may contain a building envelope.</li><li>• A building envelope may specify or incorporate any relevant siting and design requirement.</li><li>• Any requirement should meet the relevant standards of Clause 54, unless:<ul style="list-style-type: none"><li>- The objectives of the relevant standards are met, and</li><li>- The building envelope is shown as a restriction on a plan of subdivision registered under the Subdivision Act 1988, or is specified as a covenant in an agreement under Section 173 of the Act.</li></ul></li><li>• Where a lot with a building envelope adjoins a lot that is not on the same plan of subdivision or is not subject to the same agreement relating to the relevant building envelope:<ul style="list-style-type: none"><li>- The building envelope must meet Standards A10 and All of Clause 54 in relation to the adjoining lot, and</li><li>- The building envelope must not regulate siting matters covered by Standards A12 to A15 (inclusive) or Clause 54 in relation to the adjoining lot. This should be specified in the relevant plan of subdivision or agreement</li></ul></li><li>• Lot dimensions and building envelopes should protect:<ul style="list-style-type: none"><li>- Solar access for future dwellings and support the siting and design of dwellings that achieve the energy rating requirements of the Building Regulations.</li><li>- Existing or proposed easements on lots.</li><li>- Significant vegetation and site features.</li></ul></li></ul>	
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<p>CLAUSE 56.04-3 SOLAR ORIENTATION OF LOTS</p> <p>Objective To provide good solar orientation of lots and solar access for future dwellings.</p> <p>Standard C9</p> <ul style="list-style-type: none"> <li>• Unless the site is constrained by topography or other site conditions, at least 70 percent of lots should have appropriate solar orientation.</li> <li>• Lots have appropriate solar orientation when: <ul style="list-style-type: none"> <li>- The long axis of lots are within the range north 20 degrees west to north 30 degrees east, or east 20 degrees north to east 30 degrees south</li> </ul> </li> <li>• Lots between 300 square meters and 500 square meters are proposed to contain dwellings that are built to the boundary; the long axis of the lots should be within 30 degrees east and 20 degrees west of North.</li> <li>• Dimensions of lots are adequate to protect solar access to the lot, taking into account likely dwelling size and the relationship of each lot to the street.</li> </ul>	<p><b>Complies</b></p> <p>The resulting Lots will be east-west oriented, and indeed, all lots along Ahern Road are the same.</p> <p>Importantly, each lot will be east facing at the rear. Within modern architecture, living areas and open space are generally at the rear of dwellings. This would enable good solar access to each site and dwelling in the morning.</p>
<p>CLAUSE 56.04-5 COMMON AREA</p> <p>Objectives To identify common areas and the purpose for which the area is commonly held. To ensure the provision of common area is appropriate and that necessary management arrangements are in place.</p> <p>To maintain direct public access throughout the neighborhood street network.</p> <p>Standard C11</p> <p>An application to subdivide land that creates common land must be accompanied by a plan and a report Identifying:</p> <ul style="list-style-type: none"> <li>- The common area to be owned by the body corporate, including any streets and</li> </ul>	<p><b>Complies</b></p> <p>The 3 lots would be independent of each other, and requiring no common property.</p>



<p>open space.</p> <ul style="list-style-type: none"> <li>- The reasons why the area should be commonly held.</li> <li>- Lots participating in the body corporate.</li> <li>- The proposed management arrangements including maintenance standards for streets and open spaces to be commonly held.</li> </ul>	
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CLAUSE 56.06 ACCESS AND MOBILITY MANAGEMENT	
<p>CLAUSE 56.06-8 LOT ACCESS</p> <p>Objective To provide for safe vehicle access between roads and lots.</p> <p>Standard C21</p> <ul style="list-style-type: none"> <li>• Vehicle access to lots abutting arterial roads should be provided from service roads. Side or rear access lanes, access places or access streets where appropriate and in accordance with the access management requirements of the relevant roads authority.</li> <li>• Vehicle access to lots of 300 square meters or less in area and lots with a frontage of 7.5 meters or less should be provided via rear or side access lanes, places or streets</li> <li>• The design and construction of a crossover should meet the requirements of the relevant road authority.</li> </ul> <p>Table C1 Design of Roads and Neighborhood Streets</p> <p>Access Lane A side or rear lane principally providing access to parking on 1015 with another street frontage.</p> <ul style="list-style-type: none"> <li>• Traffic volume': 300Vpd</li> <li>• Target speed 10kph</li> <li>• Carriageway width &amp; parking provision within street reservation: 5.5m6 wide with no parking spaces to be provided.</li> </ul> <p>Appropriately signed.</p> <ul style="list-style-type: none"> <li>• Verge width4: No verge required.</li> </ul>	<p><b>Complies</b></p> <p>The layout of this subdivision allows that each lot would have access from Ahern Road.</p> <p>Three (3) new crossovers would occupy only 30% of the 30m+ site frontage.</p>

<ul style="list-style-type: none"> <li>• Kerbing<sup>5</sup></li> <li>• Footpath provision: None. Carriageway designed as a shared zone and appropriately signed.</li> <li>• Cycle path provision: None</li> </ul> <p>Access Place</p> <p>A minor street providing local residential access with shared traffic, pedestrian and recreation use, but with pedestrian priority.</p> <ul style="list-style-type: none"> <li>• Traffic volume<sup>1</sup>: 300Vpd to 1000vpd</li> <li>• Target speed 15kph</li> <li>• Carriageway width<sup>3</sup> &amp; parking provision within street reservation: 5.5m wide with 1 hard standing verge parking space per 2 lots or 5.5m wide with parking on carriageway - one side. Appropriately signed.</li> <li>• Verge width<sup>4</sup>: 7.5m minimum total width. For services provide a minimum of 3.5m on one side and a minimum of 2.5m on the other.</li> <li>• Kerbings: Semi-mountable rollover or Hush and swale or other water sensitive urban design treatment area.</li> <li>• Footpath provision: Not required if serving 5 dwellings or less and the carriageway is designed as a shared zone and appropriately signed or 1.5m wide footpath offset a minimum distance of 1m from the kerb.</li> <li>• Cycle path provision: None</li> </ul> <p>Access Street- level 1</p> <p>A street providing local residential access where traffic is subservient, speed and volume are low and pedestrian and bicycle movements are facilitated.</p> <ul style="list-style-type: none"> <li>• Traffic volume<sup>1</sup> : 000Vpd to 2000vpd</li> <li>• Target speed 30kph</li> <li>• Carriageway width<sup>3</sup> &amp; parking provision within street reservation: 5.5m wide with 1 hard standing verge parking space per 2 lots.</li> <li>• Verge width<sup>4</sup>: 4m minimum each side</li> <li>• Kerbing: Semi-mountable rollover or flush and swale or other water sensitive urban design treatment area.</li> <li>• Footpath provision: 1.5m wide footpaths on both sides. Footpaths should be widened to 2.0m in vicinity of a school, shop or other activity centre.</li> </ul>	
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Be offset a minimum distance of 1m from the kerb.

- Cycle path provision: Carriageway designed as a shared zone and appropriately signed.

#### Access Street- level 2

A street providing residential access where traffic is subservient, speed and volume are low and pedestrian and bicycle movements are facilitated.

- Traffic volume: 2000vpd to 3000vpd
- Target Speed: 40kph
- Carriageway width<sup>3</sup> & parking provision within street reservation: 7m-7.5m 7 wide with parking on both sides of carriageway
- Verge width<sup>4</sup>: 4.5m minimum each side
- Kerbings: Semi-mountable rollover or flush and swale or other water sensitive urban design treatment area.
- Footpath provision: 1.5m wide footpaths on both sides.

Footpaths should be widened to 2.0m in vicinity of a school, shop or other activity centre. Be offset a minimum distance of 1m from the kerb.

- Cycle path provision: Carriageway designed as a shared zone and appropriately signed.

#### Connector Street - Level 1

A street that carries higher volumes of traffic. It connects access places and access streets through and between neighborhoods.

- Traffic volume<sup>1</sup>: 3000vpd
- Target speed<sup>1</sup>: 50kph<sup>8</sup> reduced to 40kph at schools and 20kph at pedestrian and cycle crossing points.
- Carriageway width<sup>3</sup> & parking provision within street reservation: 6m -6.5m wide with indented parking on both sides on a bus route or 7m-7.5m wide with indented parking on one side and kerbside parking opposite on a bus route or 7.2m -7.5m wide with parking on both sides of carriageway.
- Verge width<sup>4</sup>: 4.5m minimum each side with adequate road reserve width for widening for future bus route if required.
- Kerbing: Layback or Hush and swale or other water sensitive urban design treatment area.
- Footpath & cycle path provision: 2.5m wide

shared path on each side or 1.5m wide footpath on each side and 1-1.5m cycle lane marked on carriageway on each side.

#### Connector Street - Level 2

A street that carries higher volumes of traffic. It connects access places and access streets through and between neighborhoods.

- Traffic volume<sup>1</sup>: 3000vpd to 7000vpd
- Target speed<sup>2</sup>: 60kph
- Carriageway width<sup>3</sup> & parking provision within street reservation: 2x 5.5m wide carriageways with central median. Parallel parking should be provided in locations that allow cars to exit in a forward direction or 7.2m-7.5m wide carriageway with indented parking on both sides and turning lanes at intersections with other Level 2 connector Streets and Arterial Roads. Bus bays to be indented.
- Verge width<sup>4</sup>: 6m minimum each side (plus central median).
- Kerbing<sup>5</sup>: Layback or flush and swale or other water sensitive urban design treatment area.
- Footpath & cycle path provision: 2.5m wide shared path on each side or 1.5m wide footpath on each side and 1-1.5m cycle lane marked on carriageway on each side appropriately signed

#### Arterial Road

- Traffic volume<sup>1</sup>: Greater than 7000vpd
- Target speed<sup>2</sup>: Arterial road design as required by the relevant roads authority.
- Carriageway width<sup>3</sup> & Parking provision within street reservation: Arterial road design as required by the relevant roads authority.
- Verge width<sup>4</sup>: Arterial road as required by relevant roads authority
- Kerbing<sup>5</sup>: Arterial road design as required by the relevant roads authority
- Footpath & cycle path provision: 2.5 wide shared path on each side or as otherwise required by the relevant roads authority

Key to Table C1:

1. Indicative maximum traffic volume for 24-hour period. These volumes depend upon location. Generation rates may vary between existing and newly developing areas.
2. Target speed is the desired speed at which motorists should travel. This is not necessarily the design speed and is not greater than the marked legal speed limit.
3. The maximum width within the range should be used when bus use is anticipated or when upright kerbs are used. Width is measured from kerb invert to kerb invert. Widening may be required at bends to allow for wider vehicle paths using appropriate Australian Standards for on street and off-street parking but should not negate the function of bends serving as slow points.
4. Verge width includes footpaths. Additional width may be required to accommodate a bicycle path.
5. Where drainage is not required a Hush pavement edge treatment can be used. Layback kerbs are preferred for safety reasons. Upright kerbs may be considered for drainage purposes or in locations where on-street parking should be clearly defined and parking within the verge is not desired.
6. Turning requirements to access and egress parking on abutting lots may require additional carriageway width. The recommended carriageway width of 5.5m will provide adequate access to a standard 3.5m wide single garage built to the property line.
7. 7m-7.5m widths should be used when parking is required on each side.
8. 50kph is the default urban speed limit in Victoria.
9. Target speed must not exceed the legal speed limit

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CLAUSE 56.07 INTEGRATED WATER MANAGEMENT	
<p>CLAUSE 56.07-1 DRINKING WATER SUPPLY</p> <p>Objectives To reduce the use of drinking water.</p> <p>To provide an adequate, cost-effective supply of drinking water.</p> <p>Standard C22</p> <ul style="list-style-type: none"> <li>• The supply of drinking water must be: <ul style="list-style-type: none"> <li>- Designed and constructed in accordance with the requirements and to the satisfaction of the relevant water authority.</li> <li>- Provided to the boundary of all lots in the subdivision to the satisfaction of the relevant water authority.</li> </ul> </li> </ul>	<p><b>Complies</b></p> <p>There is already reticulated water provision along Ahern Road – each lot can be connected to this.</p>
<p>CLAUSE 56.07-2 REUSED AND RECYCLED WATER</p> <p>Objective</p> <p>To provide for the substitution of drinking water for non- drinking purposes with reused and recycled water.</p> <p>Standard C23</p> <ul style="list-style-type: none"> <li>• Reused and recycled water supply systems must be: <ul style="list-style-type: none"> <li>- Designed, constructed and managed in accordance with the requirements and to the satisfaction of the relevant water authority, Environment Protection Authority and Department of Human Services.</li> <li>- Provided to the boundary of all lots in the subdivision where required by the relevant water authority.</li> </ul> </li> </ul>	<p><b>Complies</b></p> <p>The size of these allotments and building envelopes allows that on-site stormwater can be directed to water tanks for re-use.</p>

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<p>CLAUSE 56.07-3 WASTE WATER MANAGEMENT</p> <p>Objective</p> <p>To provide a waste water system that is adequate for the maintenance of public health and the management of effluent in an environmentally friendly manner.</p> <p>Standard C24</p> <ul style="list-style-type: none"> <li>• Waste water systems must be: <ul style="list-style-type: none"> <li>- Designed, constructed and managed in accordance with the requirements and to the satisfaction of the relevant water authority and the Environment Protection Authority.</li> <li>- Consistent with any relevant approved domestic waste water management plan.</li> </ul> </li> <li>• Reticulated waste water systems must be provided to the boundary of all lots in the subdivision where required by the relevant water authority.</li> </ul>	<p><b>Complies</b></p> <p>Waste water systems will not be required given each lot can connect to reticulated sewerage systems.</p> <p>Each lot can be connected to the stormwater system extant along Ahern Road, but also having on-site detention through water tanks.</p>
<p>CLAUSE 56.07-4 URBAN RUN-OFF MANAGEMENT</p> <p>Objectives</p> <p>To minimize damage to properties and inconvenience to residents from urban run-off.</p> <p>To ensure that the street operates adequately during major storm events and provides for public safety.</p> <p>To minimize increases in storm water run-off and protect the environmental values and physical characteristics of receiving waters from degradation by urban run-off.</p> <p>Standard C25</p> <ul style="list-style-type: none"> <li>• The urban stormwater management system must be: <ul style="list-style-type: none"> <li>- Designed and managed in accordance with the requirements and to the satisfaction of the relevant drainage authority.</li> </ul> </li> </ul>	<p><b>Complies</b></p> <p>Water tanks within each lot will facilitate on-site detention of rainwater.</p>

<ul style="list-style-type: none"> <li>- Designed and managed in accordance with the requirements and to the satisfaction of the water authority where reuse of urban run-off is proposed.</li> <li>- Designed to meet the current best practice performance objectives for stormwater quality as contained in the Urban Stormwater – Best Practice Environmental Management Guidelines (Victorian Stormwater Committee 1999) as amended.</li> <li>- Designed to ensure that flows downstream of the subdivision site are restricted to predevelopment levels unless increased flows are approved by the relevant drainage authority and there are no detrimental downstream impacts. <ul style="list-style-type: none"> <li>• The stormwater management system should be integrated with the overall development plan including the street and public open space networks and landscape design.</li> <li>• For all storm events up to and including the 20% Average Exceedence Probability (AEP) standard: <ul style="list-style-type: none"> <li>- Stormwater flows should be contained within the drainage system to the requirements of the relevant authority.</li> </ul> </li> <li>- Ponding on roads should not occur for longer than 1 hour after the cessation of rainfall.</li> <li>• For storm events greater than 20% AEP and up to and including 1% AEP standard: <ul style="list-style-type: none"> <li>- Provision must be made for the safe and effective passage of storm water flows</li> <li>-All new lots should be free from inundation or to a lesser standard of flood protection where agreed by the relevant floodplain management authority</li> <li>- Ensure that streets footpaths and cycle paths that are subject to flooding meet the safety criteria <math>da Vave &lt; 0.35m^2/s</math> (where, <math>da</math> = average depth in meters and <math>Vave</math> = average velocity in meters per second).</li> <li>• The design of the local drainage network should: <ul style="list-style-type: none"> <li>- Ensure run-off is retarded to a standard required by the responsible drainage authority.</li> <li>- Ensure every lot is provided with drainage to a standard acceptable to the relevant drainage authority. Wherever possible, run-off should be</li> </ul> </li> </ul> </li> </ul> </li> </ul>	
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<p>directed to the front of the lot and discharged into the street drainage system or legal point of discharge.</p> <ul style="list-style-type: none"> <li>- Ensure that inlet and outlet structures take into account the effects of obstructions and debris build up. Any surcharge drainage pit should discharge into an overland flow in a safe and predetermined manner.</li> <li>- Include water sensitive urban design features to manage run-off in streets and public open space. Where such features are provided, an application must describe maintenance responsibilities, requirements and costs.</li> <li>• Any flood mitigation works must be designed and constructed in accordance with the requirements of the relevant floodplain management authority.</li> </ul>	
<p>CLAUSE 56.08 SITE MANAGEMENT</p>	
<p>CLAUSE 56.08-1 SITE MANAGEMENT</p> <p>Objectives</p> <p>To protect drainage infrastructure and receiving waters from sedimentation and contamination.</p> <p>To protect the site and surrounding area from environmental degradation or nuisance prior to and during construction of subdivision works.</p> <p>To encourage the re-use of materials from the site and recycled materials in the construction of subdivisions where practicable.</p> <p>Standard C26</p> <ul style="list-style-type: none"> <li>• A subdivision application must describe how the site will be managed prior to and during the construction period and may set out requirements for managing:             <ul style="list-style-type: none"> <li>- Erosion and sediment.</li> <li>- Dust.</li> <li>- Run-off.</li> </ul> </li> </ul>	<p><b>Complies</b></p> <p>It is anticipated that construction management issues will be governed by appropriate permit conditions.</p> <p>In addition, construction of dwellings on each lot will need to be in accordance with all applicable minimal requirements of the Building Code of Australia, including erosion management, dust management, avoidance of any run-off or leaching to the street or neighboring sites.</p> <p>Compliance with the Building Code will ensure there are no unreasonable impacts upon any established amenity levels of adjoining and surrounding residential properties.</p>

<ul style="list-style-type: none"> <li>- Litter, concrete and other construction wastes.</li> <li>- Chemical contamination.</li> <li>- Vegetation and natural features planned for retention.</li> <li>• Recycled material should be used for the construction of streets, shared paths and other infrastructure where practicable.</li> </ul>	
<b>CLAUSE 56.09 UTILITIES</b>	
<p><b>CLAUSE 56.09-1 SHARED TRENCHING</b></p> <p>Objectives</p> <p>To maximize the opportunities for shared trenching.</p> <p>To minimize constraints on landscaping within street reserves.</p> <p>Standard C27</p> <ul style="list-style-type: none"> <li>• Reticulated services for water, gas, electricity and telecommunications should be provided in shared trenching to minimize construction costs and land allocation for underground services.</li> </ul>	<p><b>Complies</b></p> <p>This would normally apply to a new subdivision where a new road system and all reticulated services need to be provided at the outset. In this case, these services exist along Ahern Road.</p> <p>As there is no common property intended each lot is likely to have independent servicing.</p>
<p><b>CLAUSE 56.09-2 ELECTRICITY, TELECOMMUNICATIONS AND GAS</b></p> <p>Objectives</p> <p>To provide public utilities to each lot in a timely, efficient and cost effective manner.</p> <p>To reduce greenhouse gas emissions by supporting generation and use of electricity from renewable sources.</p> <p>Standard C28</p> <ul style="list-style-type: none"> <li>• The electricity supply system must be</li> </ul>	<p><b>Complies</b></p> <p>Each lot is expected to be connected to the reticulated electricity services along the street.</p>

<p>designed in accordance with the requirements of the relevant electricity supply agency and be provided to the boundary of all lots in the subdivision to the satisfaction of the relevant electricity authority.</p> <ul style="list-style-type: none"><li>• Arrangements that support the generation or use of renewable energy at a lot or neighborhood level are encouraged.</li><li>• The telecommunication system must be designed in accordance with the requirements of the relevant telecommunications servicing agency and should be consistent with any approved strategy, policy or plan for the provision of advanced telecommunications infrastructure, including fibre optic technology. The telecommunications system must be provided to the boundary of all lots in the subdivision to the satisfaction of the relevant telecommunications servicing authority.</li><li>• Where available the reticulated gas supply system must be designed in accordance with requirements of the relevant gas supply agent and be provided to the boundary of all lots in the subdivision to the satisfaction of the relevant gas supply agency.</li></ul>	
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# ENGINEERING VISION

## STRUCTURAL & CIVIL ENGINEERS

### DRAINAGE PROPOSAL FOR MULTI-DWELLING DEVELOPMENT

### NO 106 AHERN ROAD, PAKENHAM

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#### GENERAL DRAINAGE NOTES

- GD1. ALL RELEVANT PERMITS SHALL BE OBTAINED BY THE BUILDER/ DEVELOPER PRIOR COMMENCING CONSTRUCTION WORK.
- GD2. ANY PAVEMENT OR FEATURES DAMAGED DUE TO THE CONSTRUCTION WORK SHALL BE REINSTATED TO ITS PREVIOUS CONDITION.
- GD3. ALL EXISTING PIT COVERS, DOWNPIPE CONNECTIONS AND SIMILAR FEATURES ARE TO BE ADJUSTED TO SUIT.
- GD4. ALL CONCRETE PAVEMENT SHALL BE FINISHED WITH A NON SKID FLOAT.
- GD5. TEMPORARY BENCHMARK IS TO BE ESTABLISHED PRIOR COMMENCING CONSTRUCTION WORK. BENCHMARK TO BE LOCATED IN SUCH MANNER TO AVOID SAFE DISTURBANCE.
- GD6. EXCAVATED MATERIAL SHALL BE STOCKPILED ON SITE IN ACCORDANCE WITH THE SITE MANAGER AND SOIL TESTER DIRECTIONS.
- GD7. TOPSOIL TO BE REMOVED TO A DEPTH OF 150mm. EXCESS SOIL TO BE REMOVED FROM SITE ON THE DEVELOPER/ BUILDER EXPENSE.
- GD8. ALL STORMWATER PIPES SHALL BE BEDDED ON A MIN' 80mm COMPACTED THICKNESS 20 N.S. CLASS 3 CRUSHED ROCK. SOIL BASED TRENCHES TO ACCOMMODATE 200mm OF COMPACTED CLASS 3 CRUSHED ROCK.
- GD9. ALL STORMWATER DRAINS TO BE LAID AT MIN' GRADE AS FOLLOW:

NOMINAL SIZE	MIN' GRADIENT
90	1:100
100	1:100
150	1:100
225	1:200
300	1:250
375	1:300

- GD10. ALL DAMAGED FEATURES AS A RESULT OF THE DEVELOPMENT, SUCH AS: FOOTPATHS, DRIVEWAYS, ROADWAYS, KERBS, ETC' TO BE REINSTATED ACCORDING TO LOCAL AUTHORITY REQUIREMENTS AND ITS SATISFACTION.
- GD11. WHEN EXISTING CONCRETE PATHWAY SHALL BE REMOVED, CONCRETE TO BE SAW CUT AND BROKEN OUT TO THE NEAREST JOINT.
- GD12. ALL ADDITIONAL FILL MATERIAL REQUIRED DUE TO LACK OF SUITABLE EXCAVATED MATERIAL SHALL BE IMPORTED AT THE DEVELOPER/ BUILDER EXPENSE.
- GD13. IS THE DEVELOPER/ BUILDER RESPONSIBILITY TO ARRANGE COUNCIL SUPERVISION AND INSPECTION AS PER THE LOCAL AUTHORITY REQUIREMENTS.
- GD14. CONTRACTOR TO READ AND APPLY THE SOIL REPORT'S RECOMMENDATIONS. EXPANSION JOINTS TYPE TO BE DETERMINED BASED ON THE SITE CLASSIFICATION.

CHARACTERISTIC SURFACE MOVEMENT (y <sub>s</sub> )mm	SITE CLASSIFICATION
<21	S
<41	M
<61	H1
<76	H2
>75	E

#### DRAINAGE NOTES

- D1. ALL DRAINAGE WORK TO COMPLY WITH AS 3500.
- D2. CLASS OF PIPES TO BE USED (U.N.O.) :
  - a. UPVC SEWER GRADE CLASS SN8 (FORMALLY SEH) TO CONFORM WITH AS 2032,AS1260
  - b. FIBRE REINFORCED CONCRETE PIPE (FRCP) RUBBER RING JOINTED CLASS 2 TO CONFORM WITH AS 4139
- D3. CONTRACTOR SHALL VERIFY ON SITE PRIOR TO COMMENCING CONSTRUCTION:
  - ALL LOCATIONS AND DEPTH OF EXISTING SERVICES.
  - LEVEL OF EXISTING SERVICES AT DRAIN CROSSINGS
  - IL OF EXISTING DRAIN AT LEGAL POINT OF DISCHARGE
- D4. DOWN PIPE CONNECTIONS ARE TO BE 150mm DIAMETER UPVC SEWER GRADE CLASS SN8 (FORMALLY SEH), GRADIENT OF 1 IN 100 AND MINIMUM COVER OF 300mm. DOWN PIPES CONNECTIONS UNDER PAVEMENT TO BE CAST IRON.
- D5. EXCAVATION PRACTICE TO CONFORM TO REQUIREMENTS OF CURRENT MINES ACT AND OH&S.
- D6. ALL EXISTING LEVELS SHOWN ARE TO BE CONFIRMED ON SITE.
- D7. WHERE A DRAIN IS LAID PARALLEL TO A FOOTING CONTACT THIS OFFICE FOR FURTHER INSTRUCTIONS BEFORE COMMENCING EXCAVATION WORK.

LOCATION	CAST IRON/DUCTILE IRON/GALVANISED STEEL	OTHER AUTHORIZED PRODUCT
I. NOT SUBJECT TO VEHICULAR LOADING		
A. WITHOUT PAVEMENT:		
I. FOR SINGLE DWELLING	NILL	100
II. FOR OTHER THAN ITEM (I)	NILL	300
B. WITH PAVEMENT		
	NILL	50+
E. SUBJECT TO VEHICULAR LOADING		
A. OTHER THAN ROADS:		
I. WITHOUT PAVEMENT	300	450
II. WITH PAVEMENT	NILL	100
B. ROADS		
	300	500
B. SUBJECT TO CONSTRUCTION EQUIPMENT LOADING OR EMBANKMENT CONDITIONS		
	300	500

- COVER TO BE MEASURED FROM THE UNDERSIDE OF THE PAVEMENT TO THE TOP OF THE PIPE.  
-ROADS COVER SUBJECT TO COMPLIANCE WITH AS 1762, AS 2566.1, AS 3725 OR AS 4060.

#### PREPARING SUBGRADE FOR PAVING

- PS1. UNDER ALL PAVING AND BUILDING AREAS, EXCAVATE TO DESIGN SUBGRADE LEVEL. ALL VEGETATION, TOP SOIL AND FILL MATERIAL SHALL BE REMOVED FROM THE PAVING AREA AND EXTENDING 300mm PAST THE EDGE OF THE PAVING TO EXPOSE THE SUBGRADE MATERIAL AS NOTED IN THE SOIL REPORT.
- PS2. CUT AND FILL AS REQUIRED TO PRODUCE FINISHED LEVELS LESS PAVEMENT THICKNESS AS SHOWN ON PLANS.
- PS3. COMPACT SITE SURFACE TO 98% STANDARD MAXIMUM DRY DENSITY (SMDD) PRIOR TO ANY COMPACTED FILL BEING PLACED.
- PS4. CLEAN STABLE GRANULAR MATERIAL SHALL BE USED AS FILL. PLACED IN 150mm LAYERS UNDER PAVEMENT COMPACTED TO 98 % STANDARD COMPACTION.
- PS5. UNREQUIRED MATERIAL RESULTING FROM CLEARING, STRIPPING AND SITE EXCAVATION SHALL BE REMOVED FROM THE SITE TO A PLACE OF LEGAL DISPOSAL.
- PS6. SOFT SPOTS SHALL BE EXCAVATED AND BACKFILLED AS SPECIFIED IN CLAUSE PS4.
- PS7. THE EXCAVATED SURFACE UNDER ALL PAVEMENTS SHALL BE SPRAYED WITH AN APPROVED WEED KILLER WITH RESIDUAL CAPABLE OF KILLING WEEDS AND GRASSES. CARE MUST BE TAKEN TO AVOID CONTAMINATION TO GARDEN BEDS AND GRASSED AREAS.

#### DRAINAGE REQUIREMENTS AS 2870

THESE GENERAL REQUIREMENTS FOR DRAINAGE ARE PART OF THE FOOTING DESIGN PLAN AND MUST BE COMPLIED BY THE BUILDER/OWNER. THE BUILDER MUST NOTIFY THE OWNER OF HIS RESPONSIBILITY TO COMPLY WITH THESE REQUIREMENTS IN CASE THIS WORK IS NOT INCLUDED IN THE CONTRACT. GARDEN LANDSCAPING SHALL COMPLY WITH THE REQUIREMENTS BELOW AND CSIRO BTf 18 RECOMMENDATIONS. HOME OWNER SHALL BE AWARE OF HIS RESPONSIBILITY TO MAINTAIN THE FOOTING SYSTEM AS PER THE RECOMMENDATIONS ON CSIRO BTf 18.

#### DRAINAGE REQUIREMENTS:

- d. THE MINIMUM HEIGHT OF THE SLAB ABOVE FINISHED GROUND/LANDSCAPING/PAVING LEVEL SHALL BE 150 mm. THIS HEIGHT MAY BE REDUCED TO 50mm WHERE ADJOINING PAVING AREA SLOPE AWAY FROM THE BUILDING.
- e. SURFACE DRAINAGE OF THE SITE SHALL BE CONTROLLED FROM THE START OF THE SITE PREPARATION AND CONSTRUCTION. THE DRAINAGE SYSTEM SHALL BE COMPLETED BY THE FINISH OF CONSTRUCTION OF THE BUILDING.
- f. THE BASE OF TRENCHES SHALL BE SLOPED AWAY FROM THE BUILDING. TRENCHES SHALL BE BACKFILLED WITH CLAY IN THE TOP 300mm WITHIN 1.5m OF THE BUILDING. THE CLAY USED FOR BACKFILLING SHALL BE COMPACTED. WHERE PIPES PASS UNDER THE FOOTING SYSTEM, THE TRENCH SHALL BE BACKFILLED FULL DEPTH WITH CLAY OR CONCRETE TO RESTRICT THE INGRESS OF WATER BENEATH THE FOOTING SYSTEM.
- g. WHERE PIPES PASS UNDER THE FOOTING SYSTEM, THE TRENCH SHALL BE BACKFILLED FULL DEPTH WITH CLAY TO ACT AS A BARRIER TO THE INGRESS OF WATER BENEATH THE FOOTING SYSTEM. ALTERNATIVELY, A PLASTIC MEMBRANE ACROSS THE CROSS-SECTION OF THE TRENCH, TAPED TO THE PIPE AND KEYED INTO THE SIDES AND BASE OF THE TRENCH MAY BE USED.
- h. SUBSURFACE DRAINS TO REMOVE GROUNDWATER SHALL NOT BE USED WITHIN 1.5m OF THE BUILDING UNLESS DESIGNED IN ACCORDANCE WITH ENGINEERING PRINCIPLES.
- i. SITES SHOULD BE DRAINED SO THAT WATER CANNOT POND AGAINST OR NEAR THE HOUSE. REFER TO DETAIL 'GROUND SURFACE APRON' FOR MORE INFORMATION.

#### PLUMBING REQUIREMENTS:

- a. PENETRATIONS THROUGH THE EDGE/INTERNAL BEAMS AND STRIP FOOTINGS SHALL BE AVOIDED, BUT WHERE NECESSARY, WORK SHALL BE IN ACCORDANCE WITH THE DETAIL HEREIN. CLOSED CELL POLYETHYLENE LAGGING SHALL BE USED AROUND ALL STORMWATER AND SANITARY PLUMBING DRAIN PIPE PENETRATIONS THROUGH FOOTINGS. THE LAGGING SHALL BE A MIN 40mm THICK FOR CLASS H2 AND CLASS E SITES.
- b. DRAINS ATTACHED TO OR EMERGING FROM UNDERNEATH THE BUILDING SHALL INCORPORATE FLEXIBLE JOINTS IMMEDIATELY OUTSIDE THE FOOTING AND COMMENCING WITHIN 1.0m OF THE BUILDING PERIMETER TO ACCOMMODATE A TOTAL RANGE OF DIFFERENTIAL MOVEMENT IN ANY DIRECTION EQUAL TO THE ESTIMATED CHARACTERISTIC SURFACE MOVEMENT OF THE SITE (y<sub>s</sub>). REFER TO GEOTECHNICAL REPORT FOR DETAILS. FITTINGS OR OTHER DEVICES THAT ARE PROVIDED TO ALLOW FOR THE MOVEMENT SHALL BE SET AT THE MID POSITION OF THEIR RANGE OF POSSIBLE MOVEMENT AT THE TIME OF INSTALLATION, SO AS TO ALLOW FOR MOVEMENT EQUAL TO 0.5y<sub>s</sub> IN ANY DIRECTION FROM THE INITIAL SETTINGS. THIS REQUIREMENTS APPLIES TO ALL STORMWATER AND SANITARY PLUMBING DRAINS AND DISCHARGE PIPES.
- c. ON-SITE WASTEWATER TREATMENT UNITS AND ASSOCIATED LAND APPLICATION AREAS SHALL BE LOCATED TO MINIMIZE SOIL MOISTURE INCREASE WITHIN THE FOUNDATION.
- d. DRAINAGE UNDER THE SLAB SHALL BE AVOIDED WHERE PRACTICABLE.
- e. COLD WATER PIPES AND HEATED OR HOT WATER PIPES SHALL NOT BE INSTALLED UNDER THE SLAB UNLESS THE PIPES INSTALLED WITHIN A CONDUIT SO THAT IF THE PIPE LEAKS IT WILL BE NOTICED ABOVE OR OUTSIDE THE SLAB AND WILL NOT LEAK UNNOTICED UNDER THE SLAB. WATER AND HEATED WATER PIPES INSTALLED UNDER THE SLAB SHOULD COMPLY WITH THE RELEVANT REQUIREMENTS OF AS3500.1 AND AS3500.4.
- f. STORMWATER PIPES INSTALLED UNDER FOOTINGS SHALL HAVE A MINIMUM CLEARANCE OF 75mm AND SHALL BE GUARDED FROM MECHANICAL DAMAGE.

#### REINSTATEMENT AND CLEANUP

- R1. CONTRACTOR SHALL REINSTATE ALL EXISTING ASSETS AFFECTED BY THE WORKS AND CLEAN UP TO THE SATISFACTION OF THE RELEVANT AUTHORITIES.

#### RAINWATER TANK

- A. ALL RIGID AND FLEXIBLE TANK OPENINGS MUST BE SECURED TO PREVENT INAPPROPRIATE ENTRY OF HUMANS.
- B. WATER TANK TO BE SEALED TO AVOID LEAKAGE, LIDS TO BE WATERTIGHT.
- C. PROVIDE INSECT AND VERMIN CONTROL INCLUDES MOSQUITO -PROOF SCREENS NOT COARSER THAN 1.6mm APERTURE MASH. RAINWATER TANK LIDS, COVERS, OVERFLOW AND INLET DOWNPIPES MUST BE CLOSE FITTED TO EXCLUDE MOSQUITOES.
- D. REFER TO ARCHITECTURAL PLANS FOR LOCATION OF THE RAINWATER TANK. SETBACK REQUIREMENTS MUST BE COMPLIED AS PER THE RESPONSIBLE REGULATORY AUTHORITY.
- E. RAINWATER TANKS SHOULD BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH AS 4766 AND AS 2865.
- F. IN-GROUND RAINWATER TANKS MUST COMPLY WITH LOCAL AUTHORITY AND AS 1547 REQUIREMENTS FOR HORIZONTAL SEPARATION DISTANCES FROM WASTEWATER TREATMENT INSTALLATION.
- G. MATERIALS AND PRODUCTS USED IN A RAINWATER TANK INSTALLATION SHOULD COMPLY WITH THE REQUIREMENTS OF THE NATIONAL PLUMBING PRODUCTS CERTIFICATION SCHEME AND BE OF AN APPROVED TYPE AS SPECIFIED IN THE APPROPRIATE STANDARD LISTED IN AS 5200 AND IN ACCORDANCE WITH THE PLUMBING CODE OF AUSTRALIA.

#### CONCRETE

- C1. CONCRETE CRUSHING STRENGTH AT 28 DAYS SHALL BE AT LEAST:
  - KERBING WORKS 25 MPa U.N.O.
  - DRAINAGE WORKS 20MPa U.N.O.
  - PAVING WORKS 32 MPa U.N.O.
  - STRUCTURAL WORKS AS SPECIFIED ON PLAN

SHEET NUMBER	SHEET TITLE
1	GENERAL NOTES
2	SITE DRAINAGE PLAN
3	DRAINAGE DETAILS
4	DRAINAGE DETAILS

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Drawing Title:  
GENERAL NOTES

Address:  
NO 106 AHERN ROAD,  
PAKENHAM  
Client:  
MG LAND SURVEING

Drawn: A.S.  
Designed: M.E.  
Project ref: C242512  
Scale: N.T.S.  
Sheet: A1  
Rev: P1  
Drawing No: 1/4

**NOTE:**  
FOOTPATH TO BE SAW-CUT FROM NEAREST JOINT AND TO BE REINSTATED AS PER COUNCIL'S STANDARDS AND REQUIREMENTS.

**NOTE:**  
A DRAINAGE INSPECTION PERMIT MUST BE OBTAINED PRIOR TO THE CONNECTION TO A DRAINAGE SYSTEM AND/OR WORKS UNDERTAKEN WITHIN AN EASEMENT

**NOTE:**  
BUILDER TO OBTAIN A VEHICLE CROSSING PERMIT FROM COUNCIL FOR ALL VEHICULAR CROSSINGS PRIOR TO CONSTRUCTION OF CROSSINGS.

**NOTE:**  
BUILDER TO OBTAIN A CIVIL WORKS PERMIT FROM COUNCIL PRIOR TO THE COMMENCEMENT OF ANY WORKS UNDERTAKEN WITHIN THE ROAD RESERVATION AND EASEMENTS

PITS 1-4 AND 225 DIA' PIPES ARE PART OF OSD(ON SITE DETENTION SYSTEM). OSD IS PROVIDED TO RETAIN ABOUT 5 CUBIC METER OF STORMWATER AND DISCHARGE IT SLOWLY AS PER THE COUNCIL REQUIREMENTS.

3000L RAINWATER TANKS FOR REUSED AND RECYCLED WATER SUPPLY SYSTEM

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SITE DRAINAGE SYSTEM TO BE CONNECTED TO COUNCIL PIT IN ACCORDANCE TO LOCAL AUTHORITY REQUIREMENTS AND STANDARDS. LOCATION, SIZE AND DEPTH TO BE CONFIRMED PRIOR STARTING CONSTRUCTION WORK. ANY DISCREPANCY TO BE REFERRED TO ENGINEER FOR FURTHER INSTRUCTIONS.

COUNCIL LPOD. SUBJECT TO COUNCIL APPROVAL.

PROPOSED VEHICLE CROSSING SHALL BE BUILT IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS AND STANDARDS.

COUNCIL LPOD. SUBJECT TO COUNCIL APPROVAL.

SITE DRAINAGE SYSTEM TO BE CONNECTED TO COUNCIL PIT IN ACCORDANCE TO LOCAL AUTHORITY REQUIREMENTS AND STANDARDS. LOCATION, SIZE AND DEPTH TO BE CONFIRMED PRIOR STARTING CONSTRUCTION WORK. ANY DISCREPANCY TO BE REFERRED TO ENGINEER FOR FURTHER INSTRUCTIONS.

T.B.M 64.92m AHD

PROPOSED VEHICLE CROSSING SHALL BE BUILT IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS AND STANDARDS.

COUNCIL LPOD. SUBJECT TO COUNCIL APPROVAL.

**NOTE:**  
ALL EXISTING SERVICES TO BE LOCATED BEFORE COMMENCING CONSTRUCTION WORKS AND PROTECTED DURING CONSTRUCTION WORKS.

**NOTE:**  
THE EXACT LOCATION, INVERT LEVEL AND DEPTH OF LEGAL POINT OF DISCHARGE MUST BE CONFIRMED PRIOR COMMENCING THE DRAINAGE WORKS. THE ENGINEER MUST BE INFORMED FOR ANY DISCREPANCY IN ORDER TO REDESIGN AND OBTAIN LOCAL AUTHORITY APPROVAL.

**NOTE:**  
REFER TO ARCHITECTURAL PLANS FOR THE EXACT SIZE AND LOCATION OF DOWNPIPES. ALL DOWNPIPES CONNECTIONS TO BE SOLVENT GLUED AND WATER TIGHT IN ACCORDANCE WITH NCC VOL 3 AND AS 3500.3.

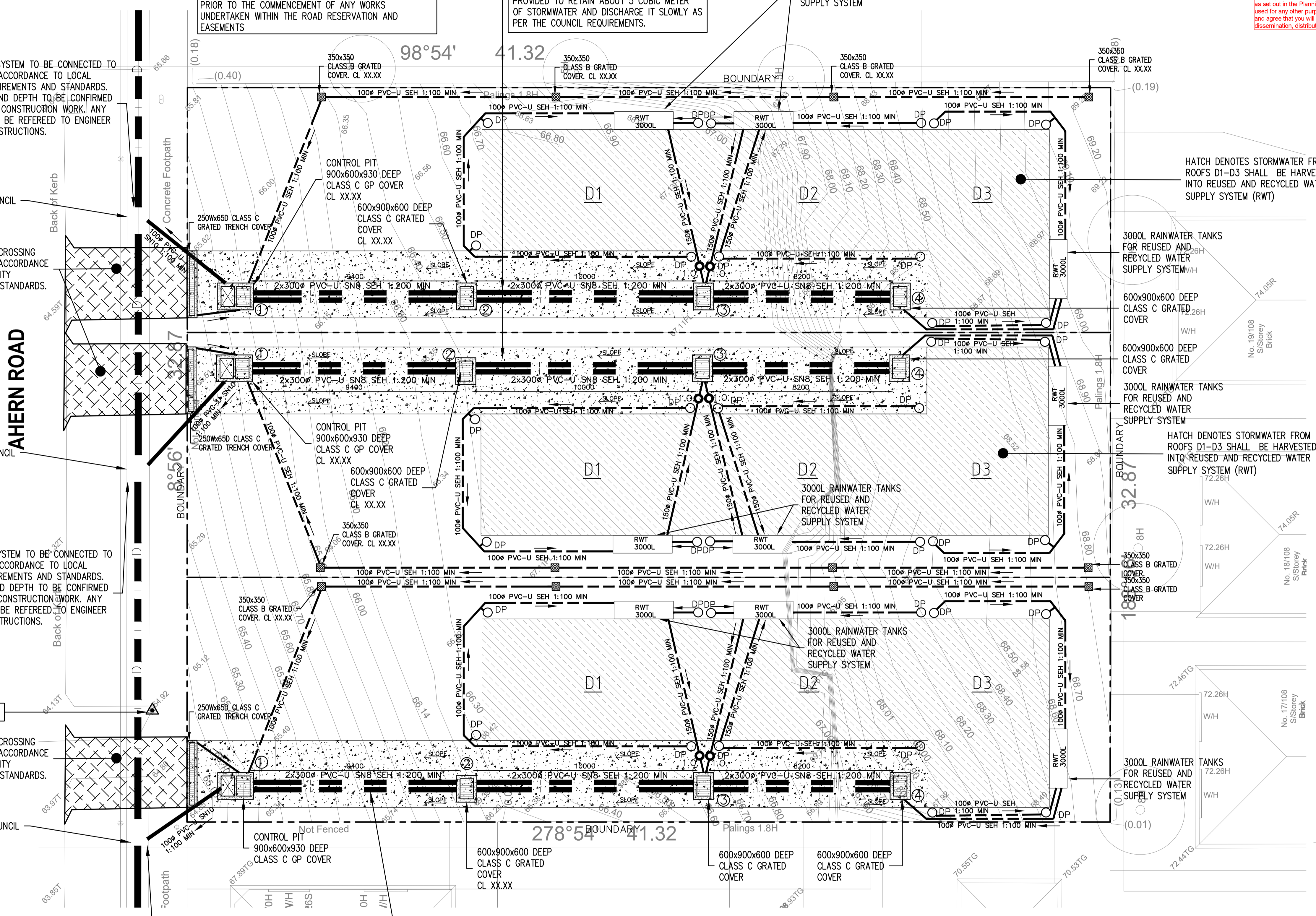
**NOTE:**  
BUILDER TO CHECK ALL DIMENSIONS, LEVELS AND SERVICES ON SITE PRIOR TO COMMENCEMENT OF ANY WORKS. ANY DISCREPANCIES TO BE REFERRED BACK TO ENGINEER.

**NOTE:**  
KERB AND CHANNEL, FOOTPATH AND NATURE STRIP TO BE REINSTATED TO COUNCIL REQUIREMENTS AND STANDARDS.

SITE DRAINAGE SYSTEM TO BE CONNECTED TO COUNCIL PIT IN ACCORDANCE TO LOCAL AUTHORITY REQUIREMENTS AND STANDARDS. LOCATION, SIZE AND DEPTH TO BE CONFIRMED PRIOR STARTING CONSTRUCTION WORK. ANY DISCREPANCY TO BE REFERRED TO ENGINEER FOR FURTHER INSTRUCTIONS.

PITS 1-4 AND 225 DIA' PIPES ARE PART OF OSD(ON SITE DETENTION SYSTEM). OSD IS PROVIDED TO RETAIN ABOUT 5 CUBIC METER OF STORMWATER AND DISCHARGE IT SLOWLY AS PER THE COUNCIL REQUIREMENTS.

WHERE SUMPS/PITS ARE CAST INTO A CONCRETE SLAB/PAVEMENT, PROVIDE 4-N12 REINFORCEMENT BARS AT THE CORNERS. BARS ARE TO BE 1500mm LONG AND TIED TO THE TOP LAYER OF SLAB/PAVEMENT REINFORCEMENT.  
PIT/SUMPS - CRACK CONTROL BARS  
DETAIL



**LEGEND**

- +PL 0.000 PAVEMENT LEVEL
- +KL 0.000 TOP OF KERB LEVEL
- +WL 0.000 TOP OF WALL LEVEL
- +PL 0.000 TOP OF PIT LEVEL
- IL 0.000 INVERT LEVEL OF INLET PIPE
- FFL 00.000 FINISH FLOOR LEVEL
- FSL 00.000 FINISH SURFACE LEVEL
- GRADE STORMWATER DRAIN
- GRADE 1:100 MIN 100 UPVC SEH 1:100 MIN U.N.O
- GRATED PIT, GP
- 350x350 MIN GRATED PIT/SUMP
- JUNCTION PIT (JP)
- GRATED TRENCH DRAIN
- DOWNPIPE
- STORMWATER INSPECTION POINT CAP SHALL BE SEALED AND SCREWED.
- DIRECTION OF SURFACE RUNOFF
- BOUNDARY SITE BOUNDARY
- S.C.J. SAWCUT JOINT
- C.J. CONSTRUCTION JOINT
- AGI AGRICULTURAL DRAINAGE PIPE 90°
- S EXISTING SEWER PIPE
- D EXISTING DRAIN PIPE
- W EXISTING WATER PIPE
- G EXISTING GAS PIPE
- EXISTING TELSTRA CABLE
- K CONCRETE KERB
- K&C CONCRETE KERB AND CHANNEL
- CONCRETE DRIVEWAY PAVEMENT
- CONCRETE FOOTPATH PAVEMENT
- CONCRETE CROSSOVER
- REINSTATEMENT
- T.B.M
- DNOTES PIPE CROSSES OVER/UNDER OTHER STORMWATER PIPE



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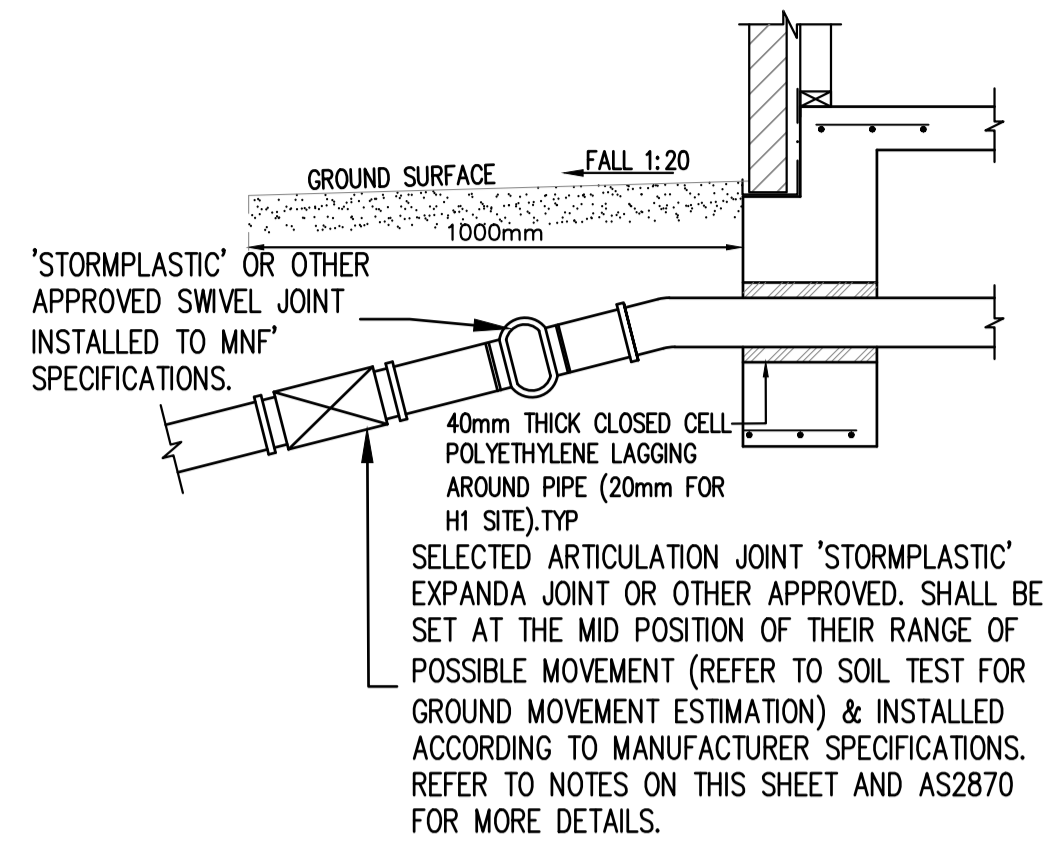
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SITE DRAINAGE PLAN

Address:  
NO 106 AHERN ROAD,  
PAKENHAM  
Client:  
MG LAND SURVEING

Drawn: A.S. Scale: 1:100  
Designed: M.E. Sheet: A1  
Rev: P1  
Project ref: C242512  
Drawing No: 2/4

Rev	Comment	Date
P1	PRELIMINARY ISSUE	09.04.2024

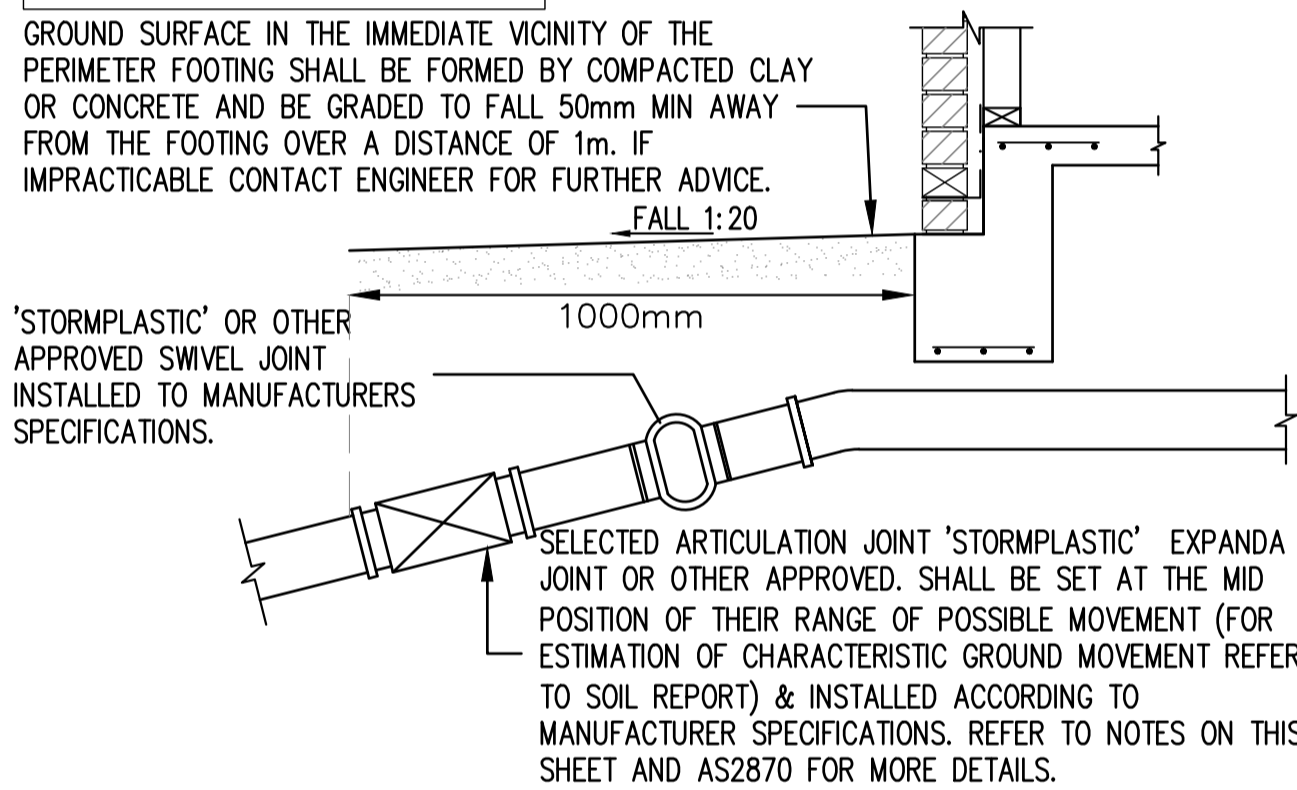
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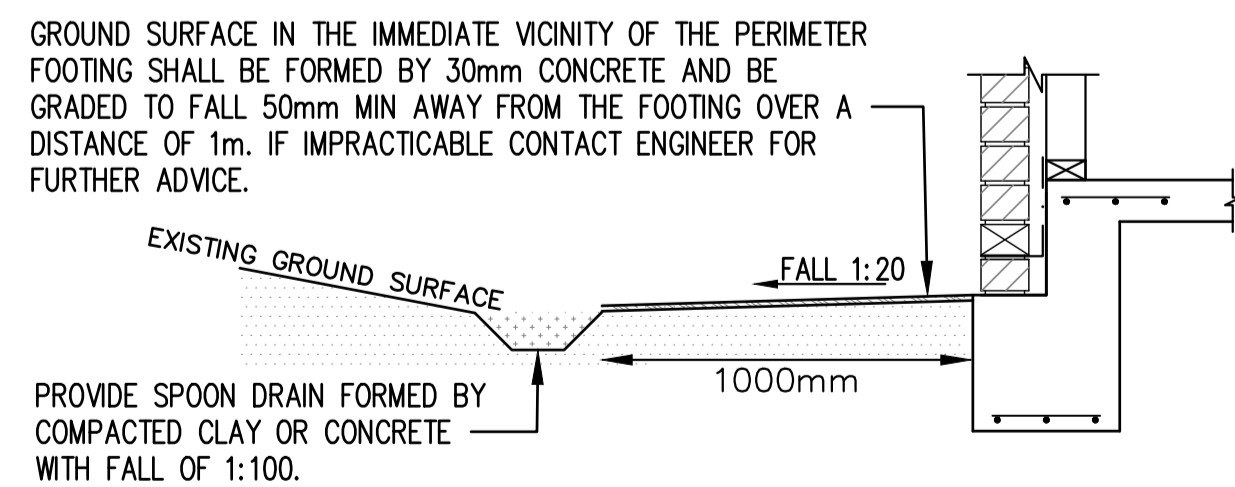
PIPE THROUGH FOOTING  
FLEXIBLE JOINTS TYPICAL  
N.T.S.

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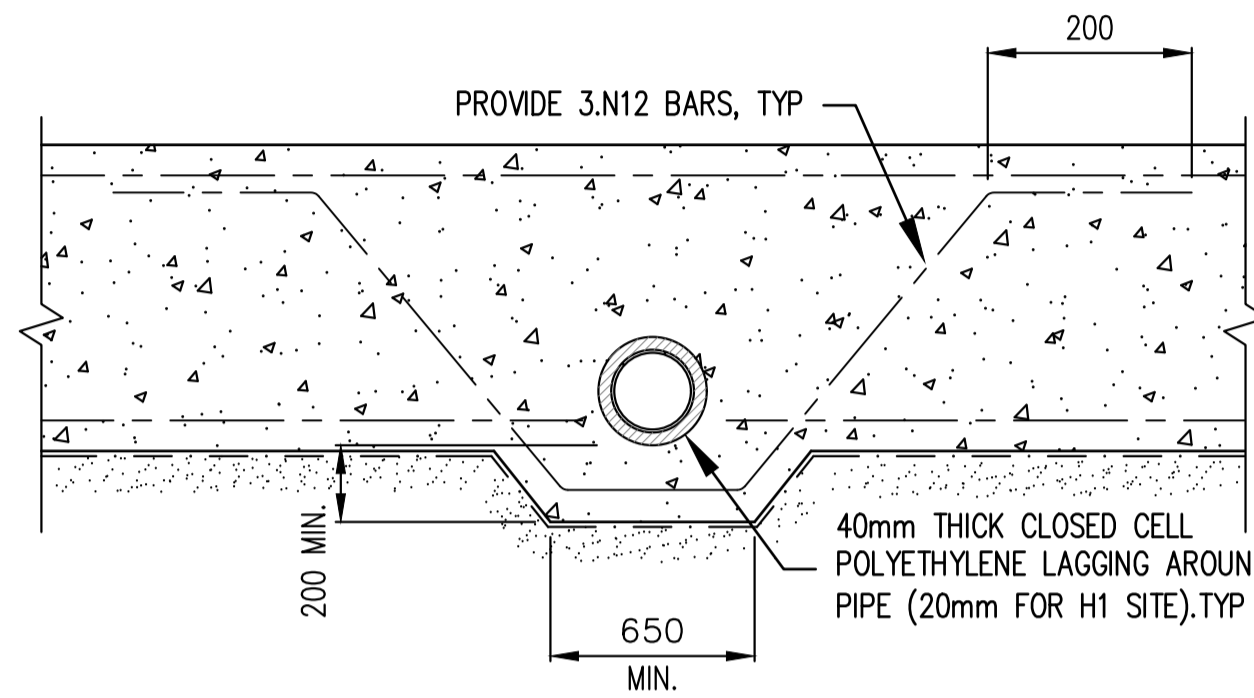
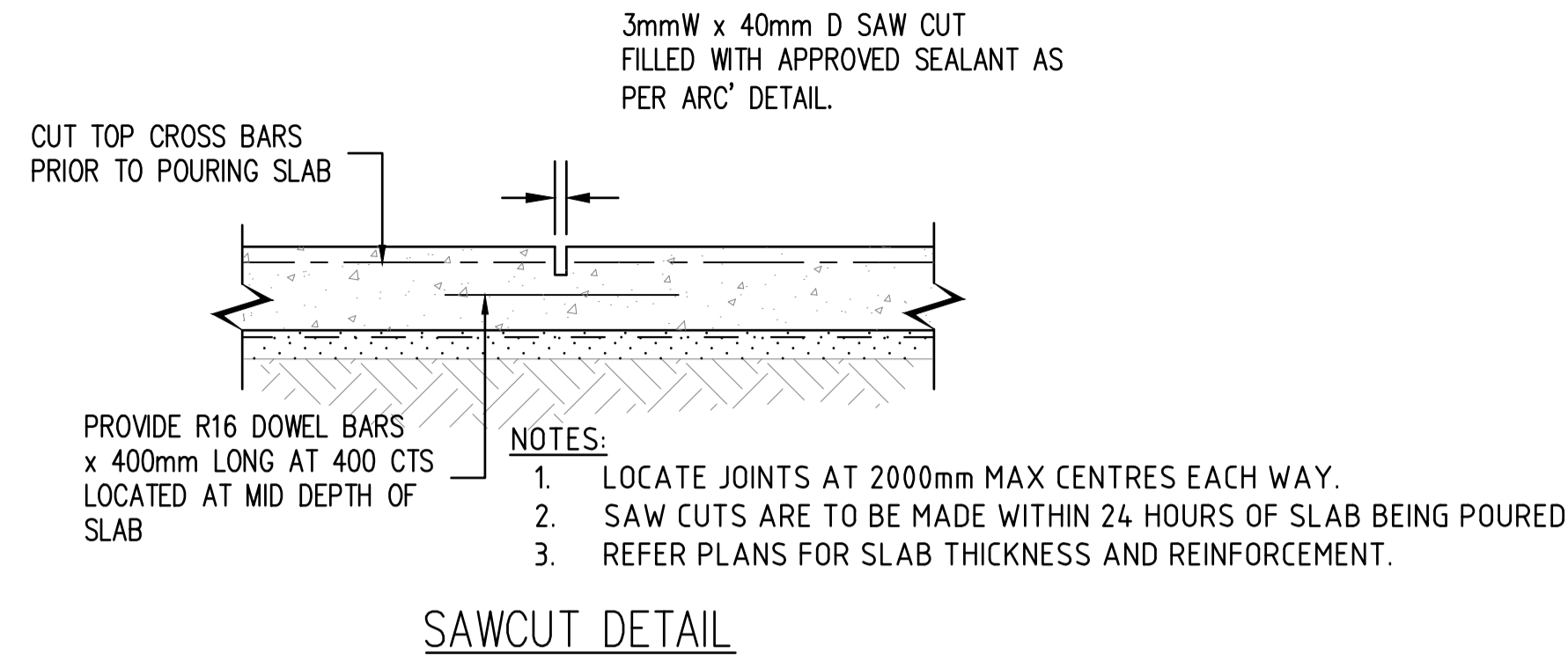
NOTE: STORMWATER PIPES UNDER SLAB TO BE WATER-TIGHT AS PER AS 3500. TYP.



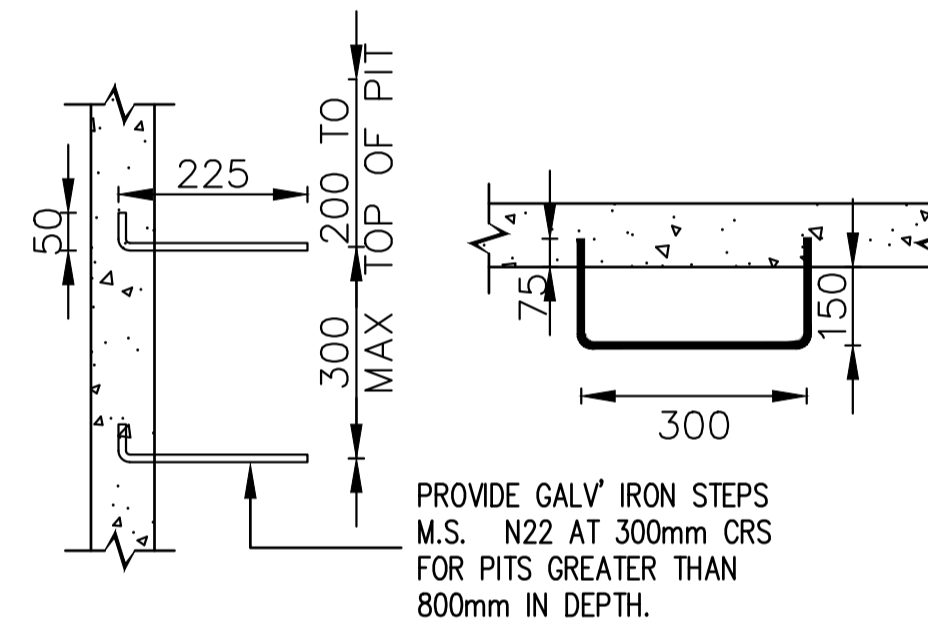
PIPE UNDER FOOTING  
FLEXIBLE JOINTS TYPICAL, N.T.S.



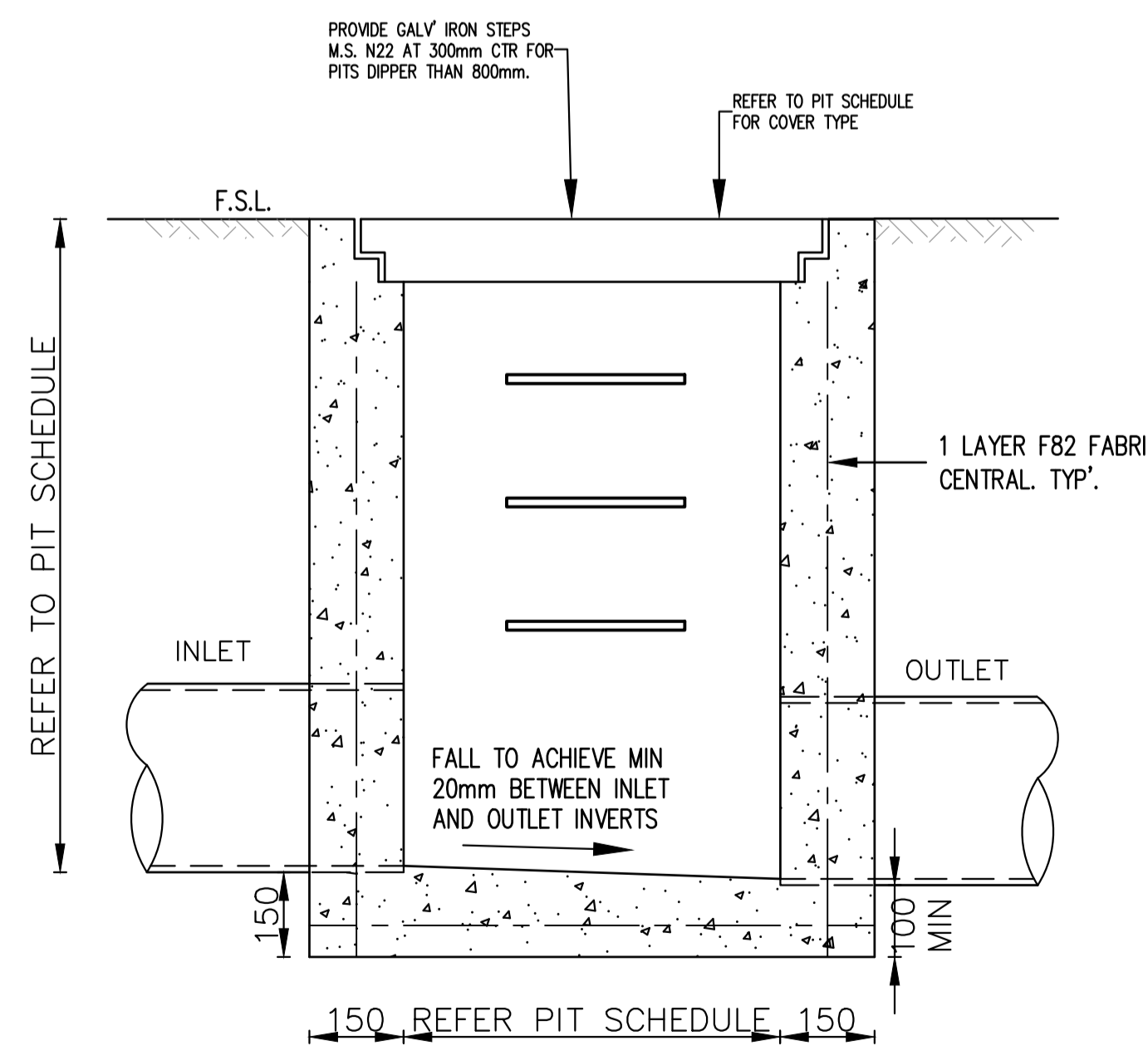
GROUND SURFACE APRON DETAIL  
TYPICAL, N.T.S.



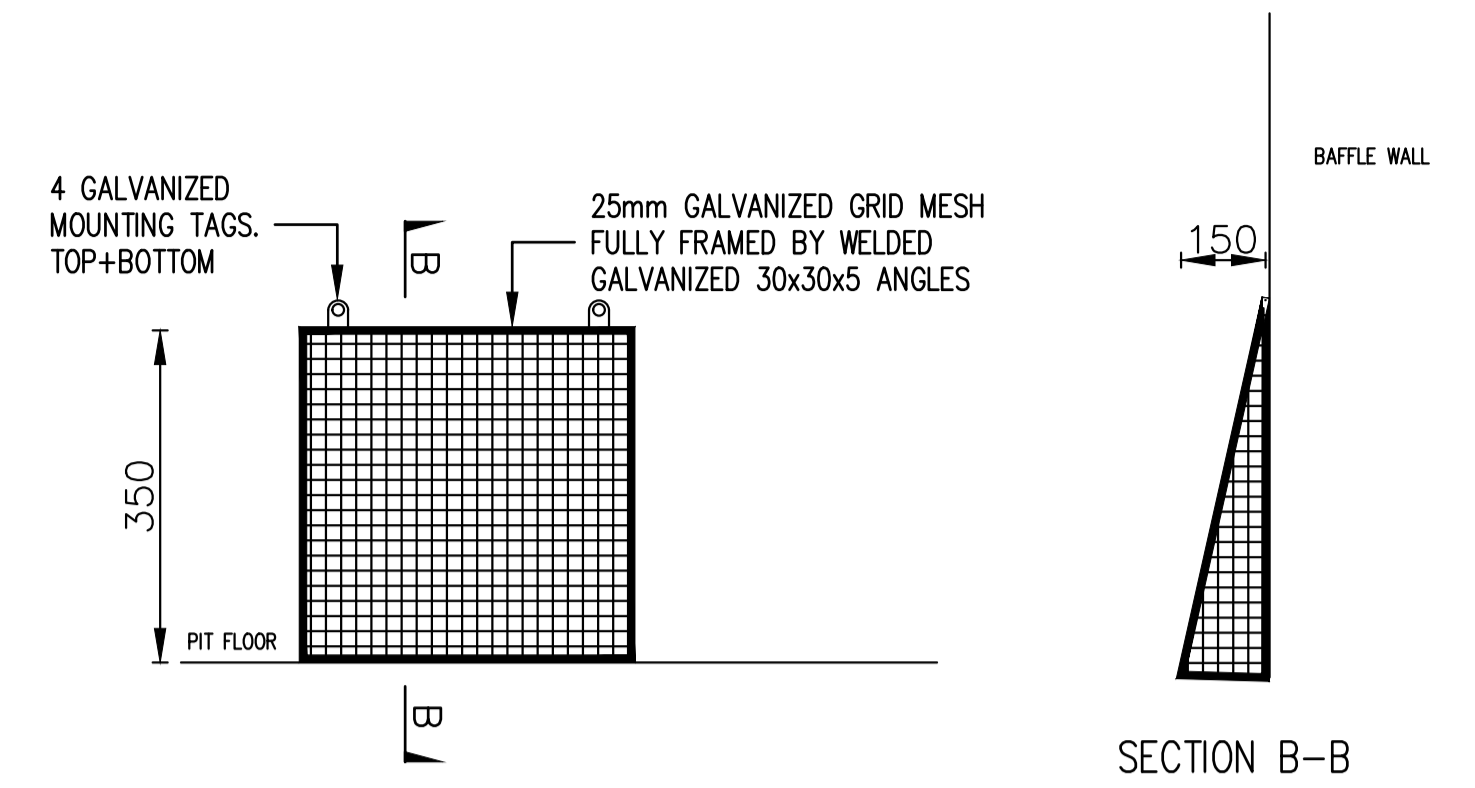
SERVICES THROUGH STRIP/RAFT RIB



IRON PIT STEPS DETAIL  
TYP, N.T.S.

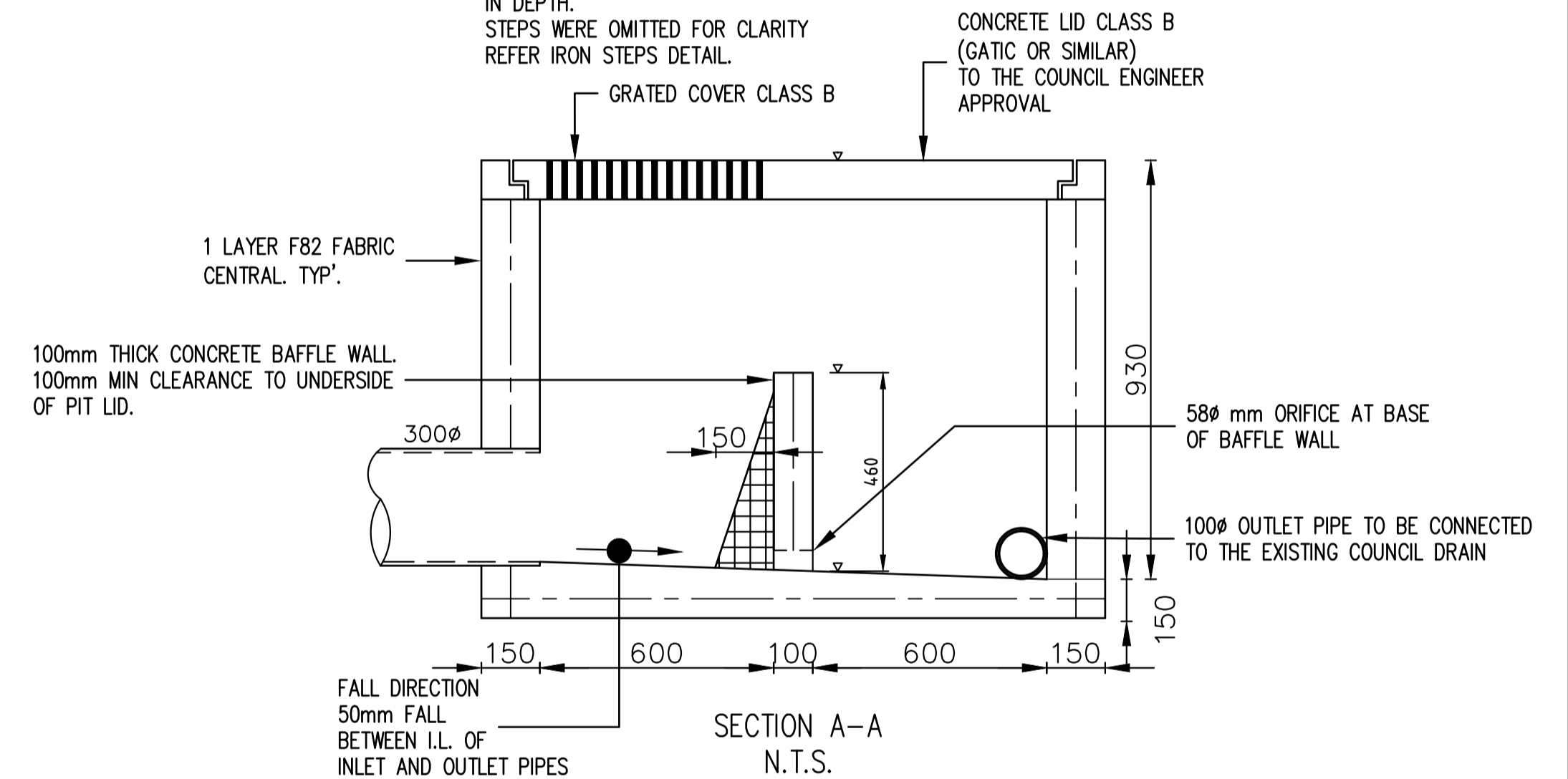


STANDARD PIT DETAIL  
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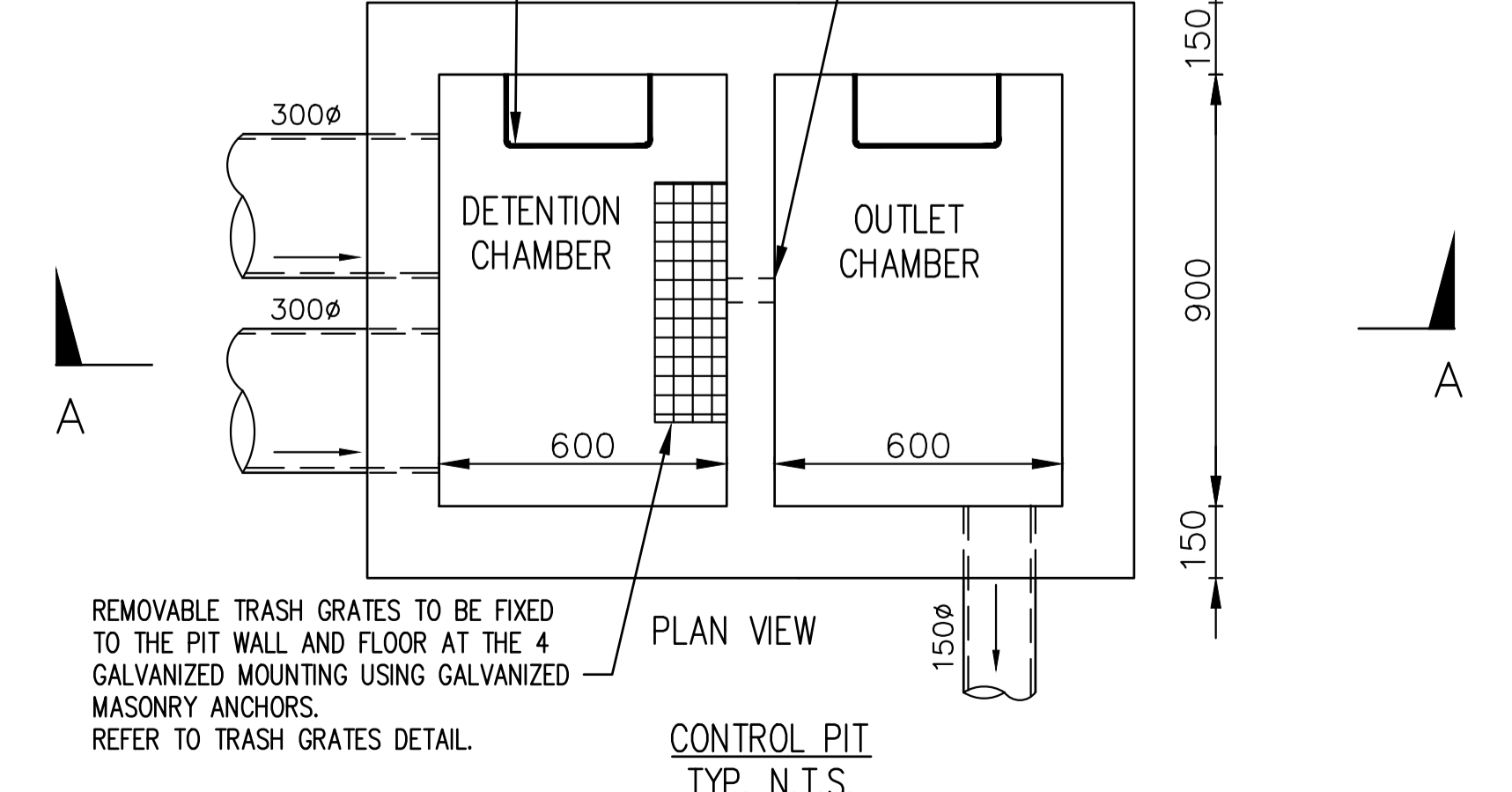


TRASH GRATES  
TYP, N.T.S.

NOTE: BOTH CHAMBERS TO BE PROVIDED WITH GALV IRON STEPS M.S. N20 AT 300mm CRS FOR PITS GREATER THAN 800mm IN DEPTH. STEPS WERE OMITTED FOR CLARITY REFER IRON STEPS DETAIL.



PROVIDE GALV IRON STEPS M.S. N22 AT 300mm CRS FOR PITS GREATER THAN 800mm IN DEPTH.



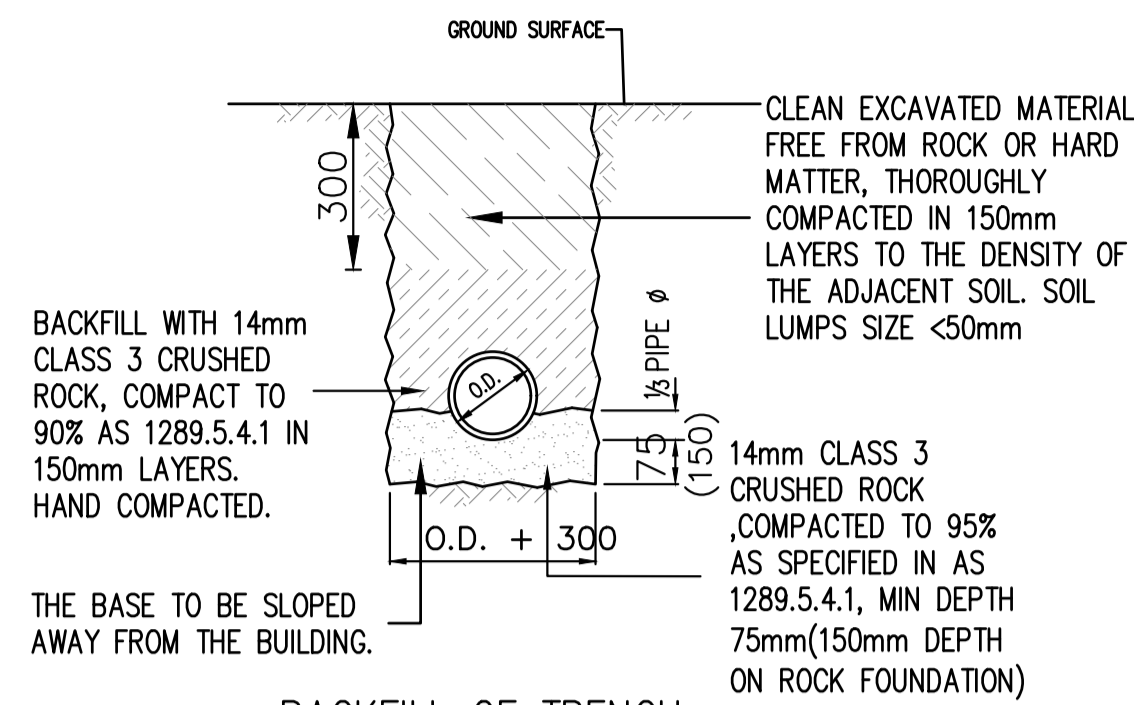
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Drawing Title: DRAINAGE DETAILS

Address: NO 106 AHERN ROAD  
PAKENHAM  
Client: MG LAND SURVEING

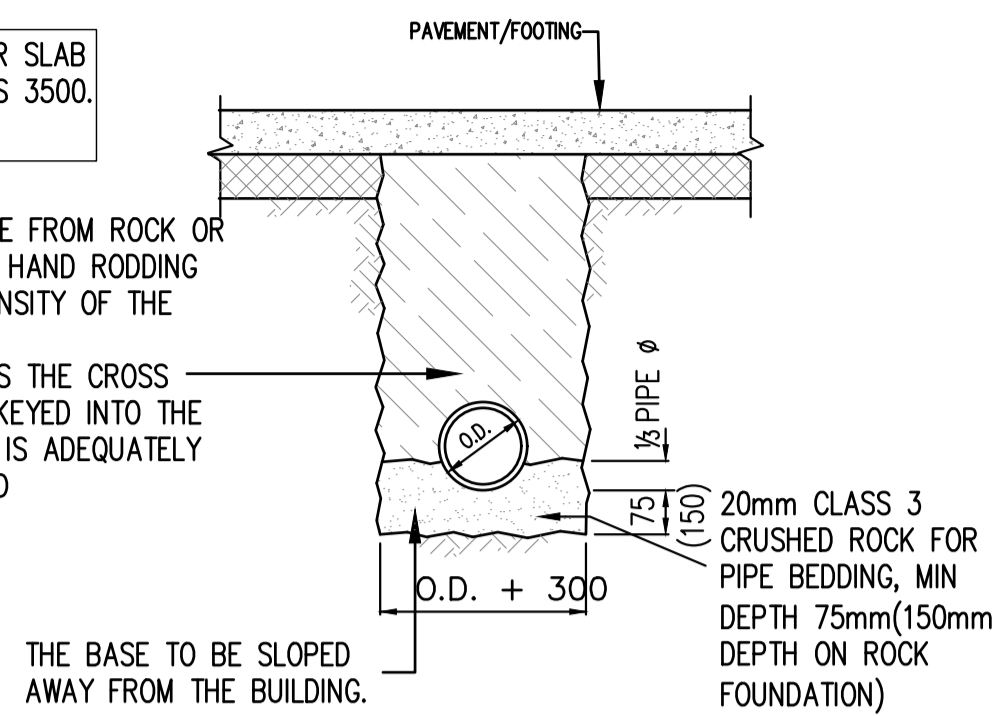
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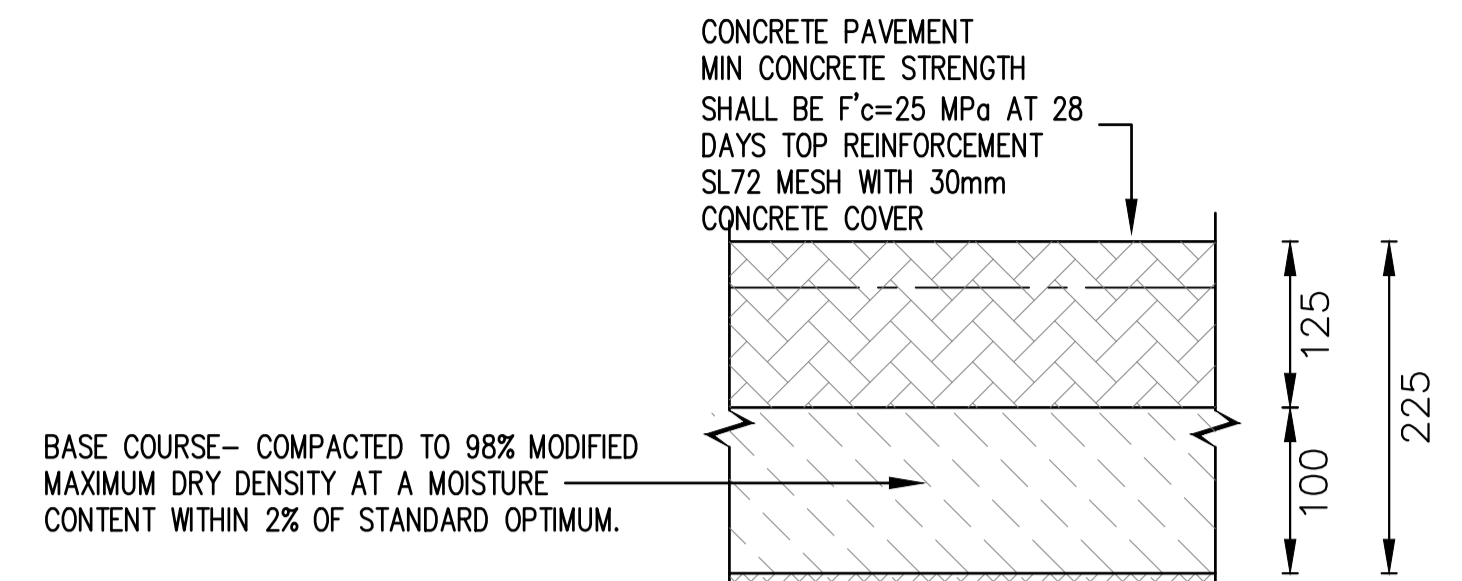
BACKFILL OF TRENCH UNDER LANDSCAPING  
N.T.S

NOTE: STORMWATER PIPES UNDER SLAB TO BE WATER-TIGHT AS PER AS 3500. TYP.

CLEAN CLAY MATERIAL (OR CONCRETE) FREE FROM ROCK OR HARD MATTER, THOROUGHLY COMPACTED BY HAND RODDING OR TAMPING IN 150mm LAYERS TO THE DENSITY OF THE ADJACENT SOIL. SOIL LUMPS SIZE < 50mm ALTERNATIVELY, PLASTIC MEMBRANE ACROSS THE CROSS SECTION OF THE TRENCH, TAPED TO PIPE & KEYPED INTO THE SIDES AND BASE OF THE TRENCH. THE PIPE IS ADEQUATELY PROTECTED FROM MECHANICAL DAMAGE AND SUPERIMPOSED LOADS.

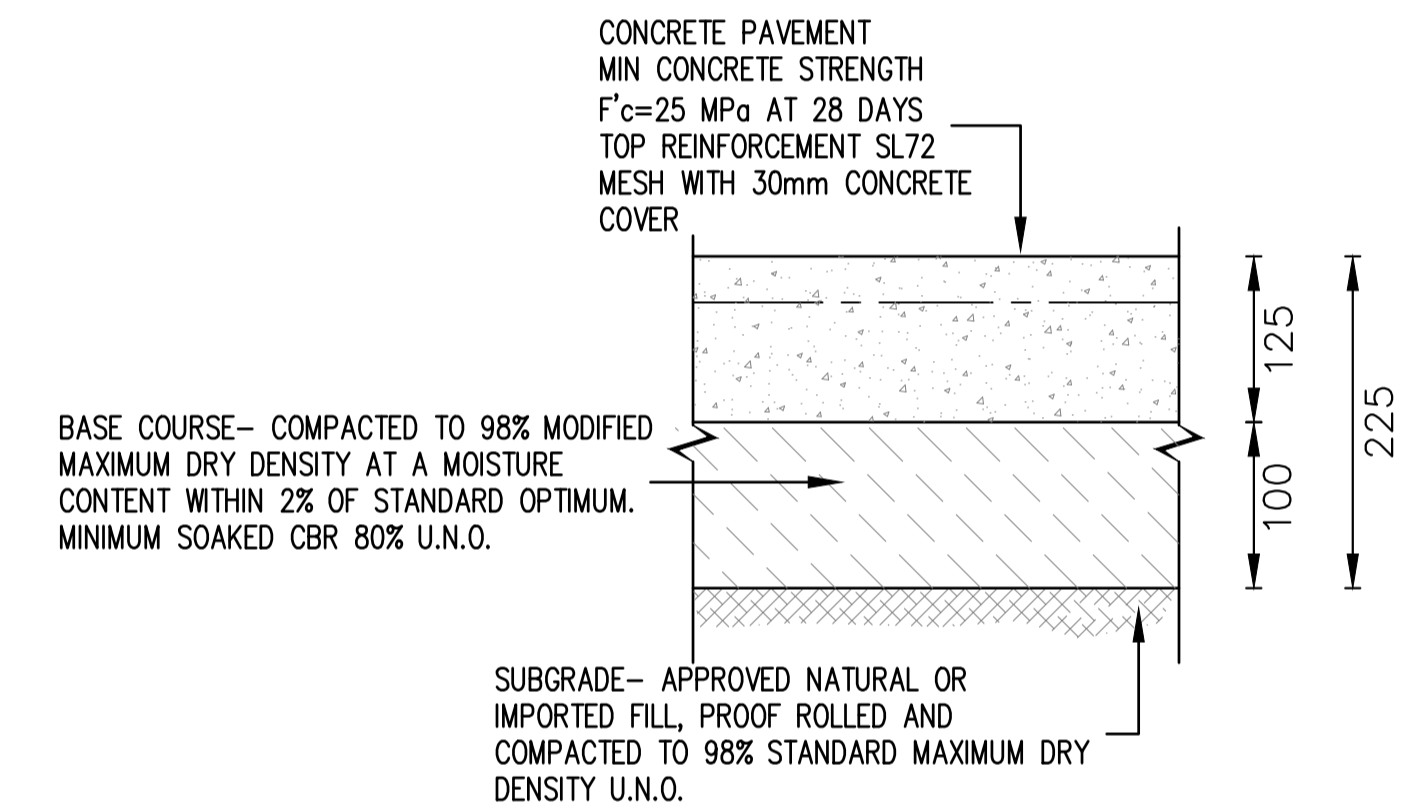


BACKFILL OF TRENCH UNDER PAVING/FOOTING  
N.T.S



SUBGRADE- APPROVED NATURAL OR IMPORTED FILL, PROOF ROLLED AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY U.N.O.

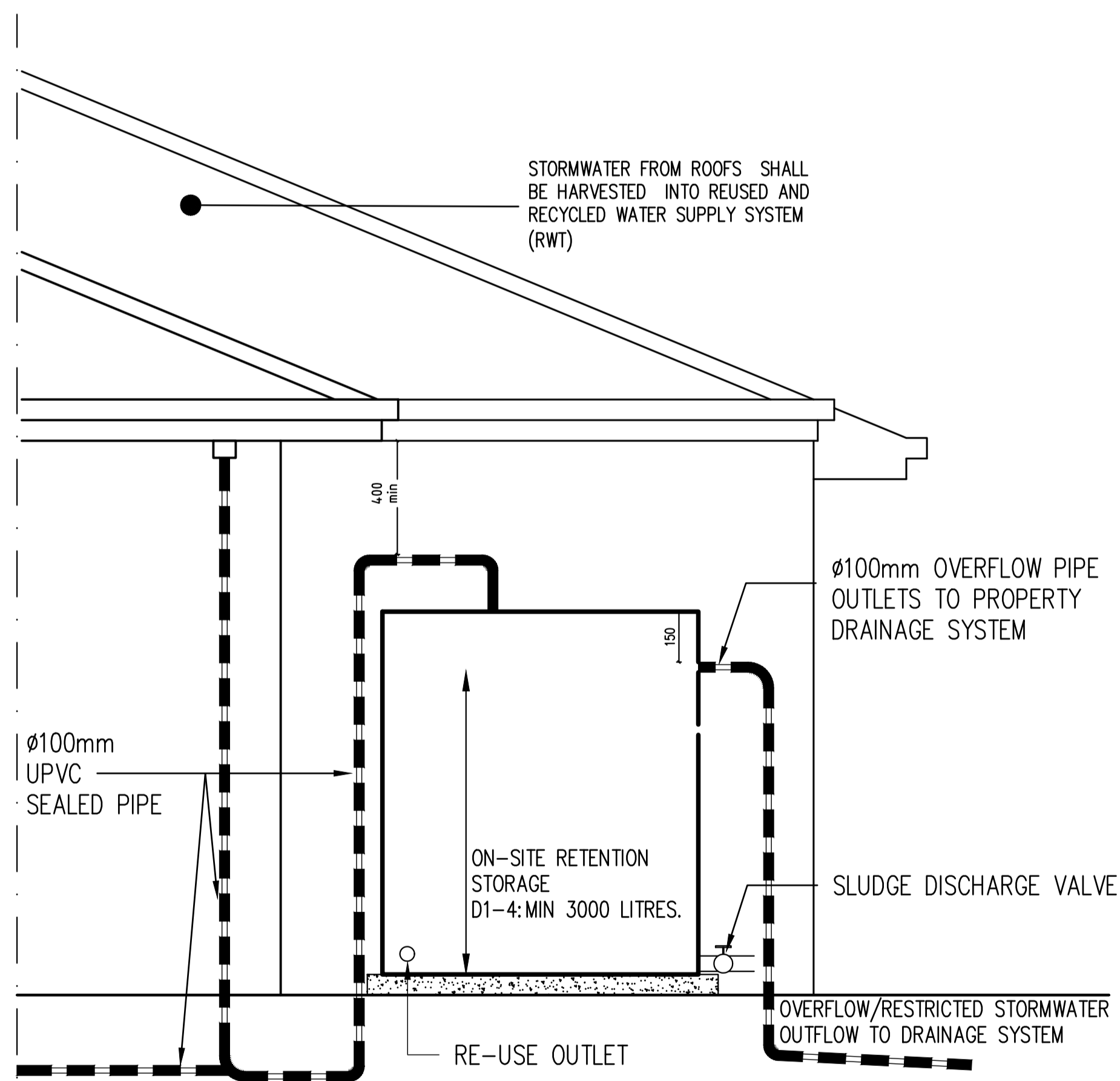
CONCRETE FOOTPATH PAVEMENT  
N.T.S



BASE COURSE- COMPACTED TO 98% MODIFIED MAXIMUM DRY DENSITY AT A MOISTURE CONTENT WITHIN 2% OF STANDARD OPTIMUM. MINIMUM SOAKED CBR 80% U.N.O.

SUBGRADE- APPROVED NATURAL OR IMPORTED FILL, PROOF ROLLED AND COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY U.N.O.

CONCRETE DRIVEWAY PAVEMENT  
N.T.S



STORMWATER FROM ROOFS SHALL BE HARVESTED INTO REUSED AND RECYCLED WATER SUPPLY SYSTEM (RWT)

Ø100mm UPVC SEALED PIPE

Ø100mm OVERFLOW PIPE OUTLETS TO PROPERTY DRAINAGE SYSTEM

ON-SITE RETENTION STORAGE D1-4: MIN 3000 LITRES.

SLUDGE DISCHARGE VALVE

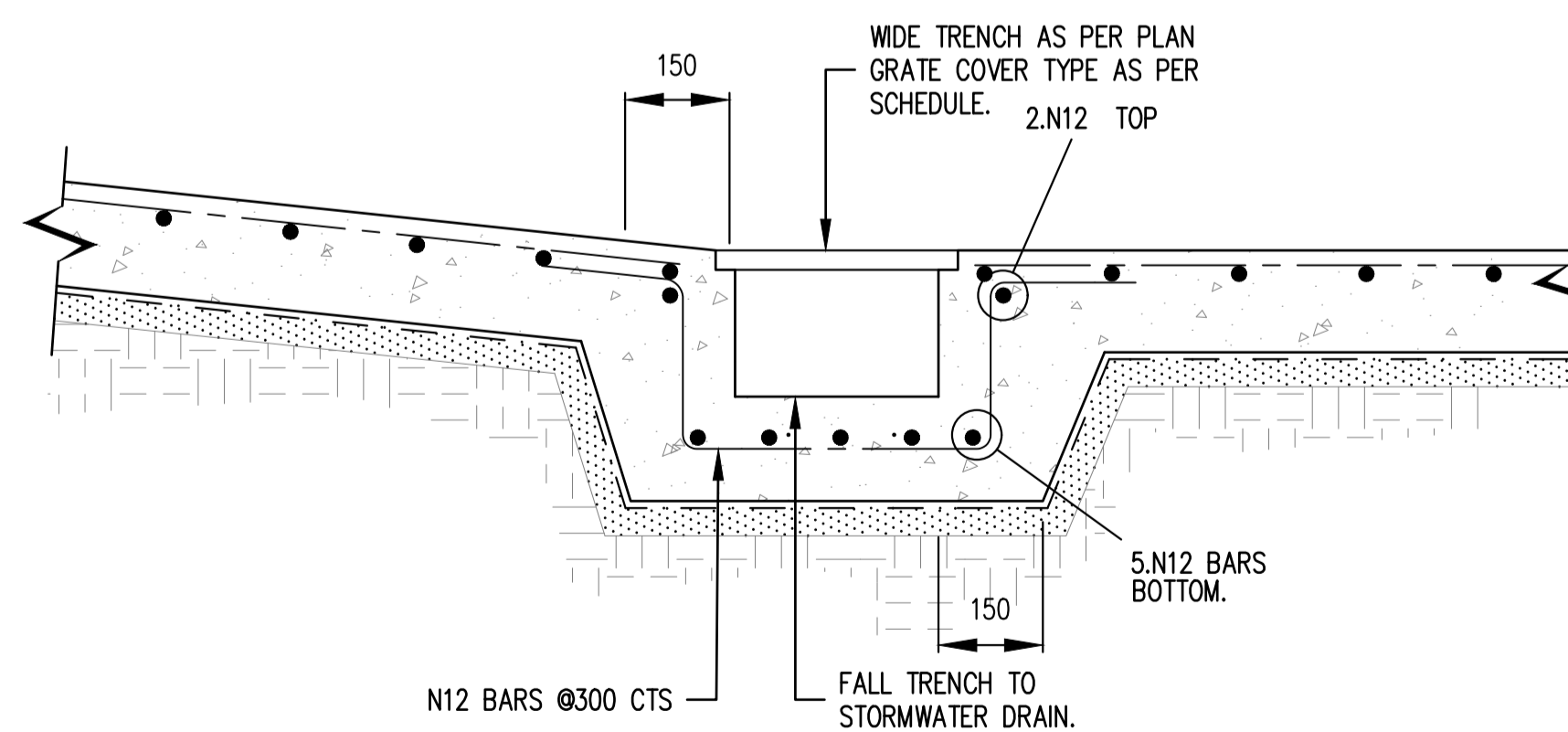
OVERFLOW/RESTRICTED STORMWATER OUTFLOW TO DRAINAGE SYSTEM

RE-USE OUTLET

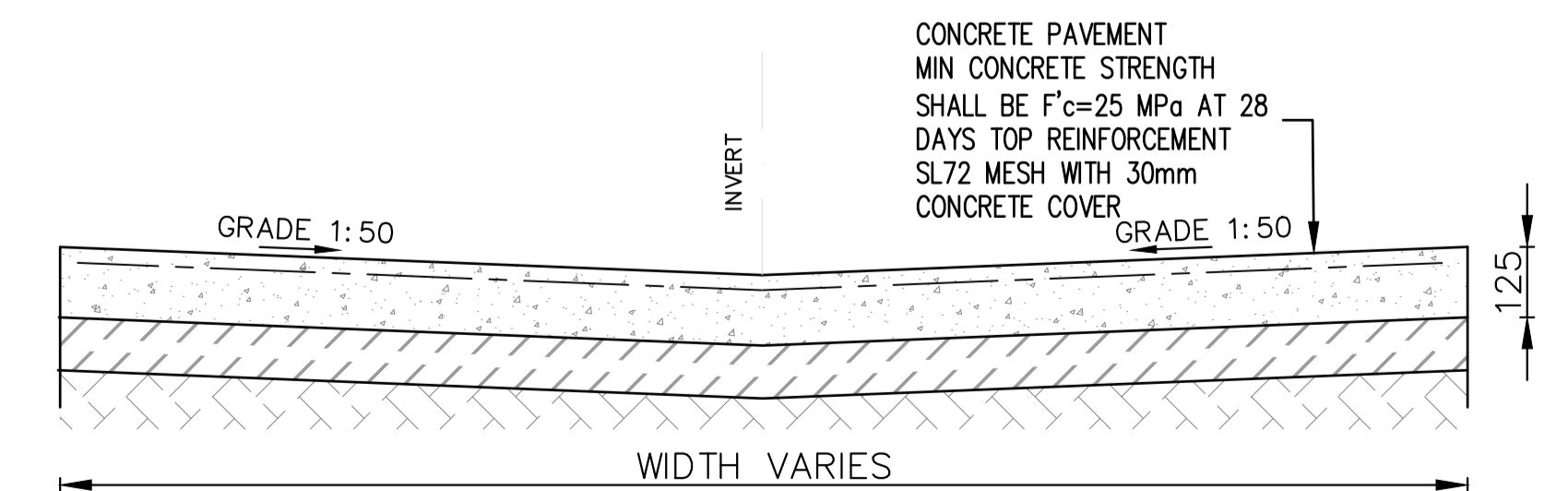
NOTES:

1. THE RAINWATER DIAGRAM SHOWS THE REQUIREMENTS FOR RAINWATER TANK SIZE, FEATURES AND CONNECTIONS OF DOWNPIPES AND OVER FLOW PIPE. BUILDER TO FOLLOW THIS DIAGRAM TO MAKE SURE THE DESIGN INTENT IS CONDUCTED AS FOLLOW:  
-DOWNPIPES CHARGE FROM THE HIGHEST POINT OF THE TANK.  
-OVERFLOW PIPE IS 150mm LOWER FROM THE DOWNPIPES CHARGING POINT.
2. FOR ADDITIONAL REQUIREMENTS REFER TO NOTES ON SHEET 2.

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TRENCH GRATE DETAIL  
N.T.S



DRIVEWAY CROSS SECTION TYPICAL, N.T.S

REUSE AND RECYCLE STORM-WATER SYSTEM -RWT

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P1	PRELIMINARY ISSUE	09.04.2024
Rev	Comment	Date

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A.B.N. 32 649 078 937 Ph: 0434 129 640  
info@engineeringvision.com.au

Drawing Title:  
DRAINAGE DETAILS

Address:  
NO 106 AHERN ROAD  
PAKENHAM  
Client:  
MG LAND SURVEING

Drawn:  
M.E.  
Scale: N.T.S.  
Sheet: A1  
Rev: P1  
Project ref:  
C242512  
Drawing No:  
4/4

# PLAN OF SUBDIVISION

# PS919773T

## LOCATION OF LAND

PARISH: NAR-NAR-GOON

PORTION:

CROWN ALLOTMENT:

CROWN PORTION: 7 (PART)

TITLE REFERENCE: C/T VOL 12321 FOL 732

LAST PLAN REFERENCE: Lot 4 on PS815861B

POSTAL ADDRESS: 106 AHERN ROAD  
(at time of subdivision) PAKENHAM 3810

MGA94 CO-ORDINATES: E: 367229 ZONE: 55  
(of approx centre of land in plan) N: 5786610 GDA 2020

Council Name: Cardinia Shire Council

SPEAR Reference Number: S224688A

## VESTING OF ROADS AND/OR RESERVES

## NOTATIONS

IDENTIFIER	COUNCIL/BODY/PERSON
NIL	NIL

DEPTH LIMITATION DOES NOT APPLY

## NOTATIONS

### SURVEY:

This plan is based on survey.

### STAGING:

This is not a staged subdivision.

Planning Permit No. T240020

This survey has been connected to permanent marks NAR-NAR-GOON PM 265

Not in a Proclaimed Survey Area.

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## EASEMENT INFORMATION

LEGEND: A - Appurtenant Easement E - Encumbering Easement R - Encumbering Easement (Road)

Easement Reference	Purpose	Width (Metres)	Origin	Land Benefited/In Favour Of

 **MG LAND SURVEYORS** Pty Ltd  
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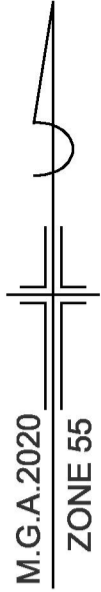
SURVEYORS FILE REF: 23180

ORIGINAL SHEET  
SIZE: A3

SHEET 1 OF 2 SHEETS

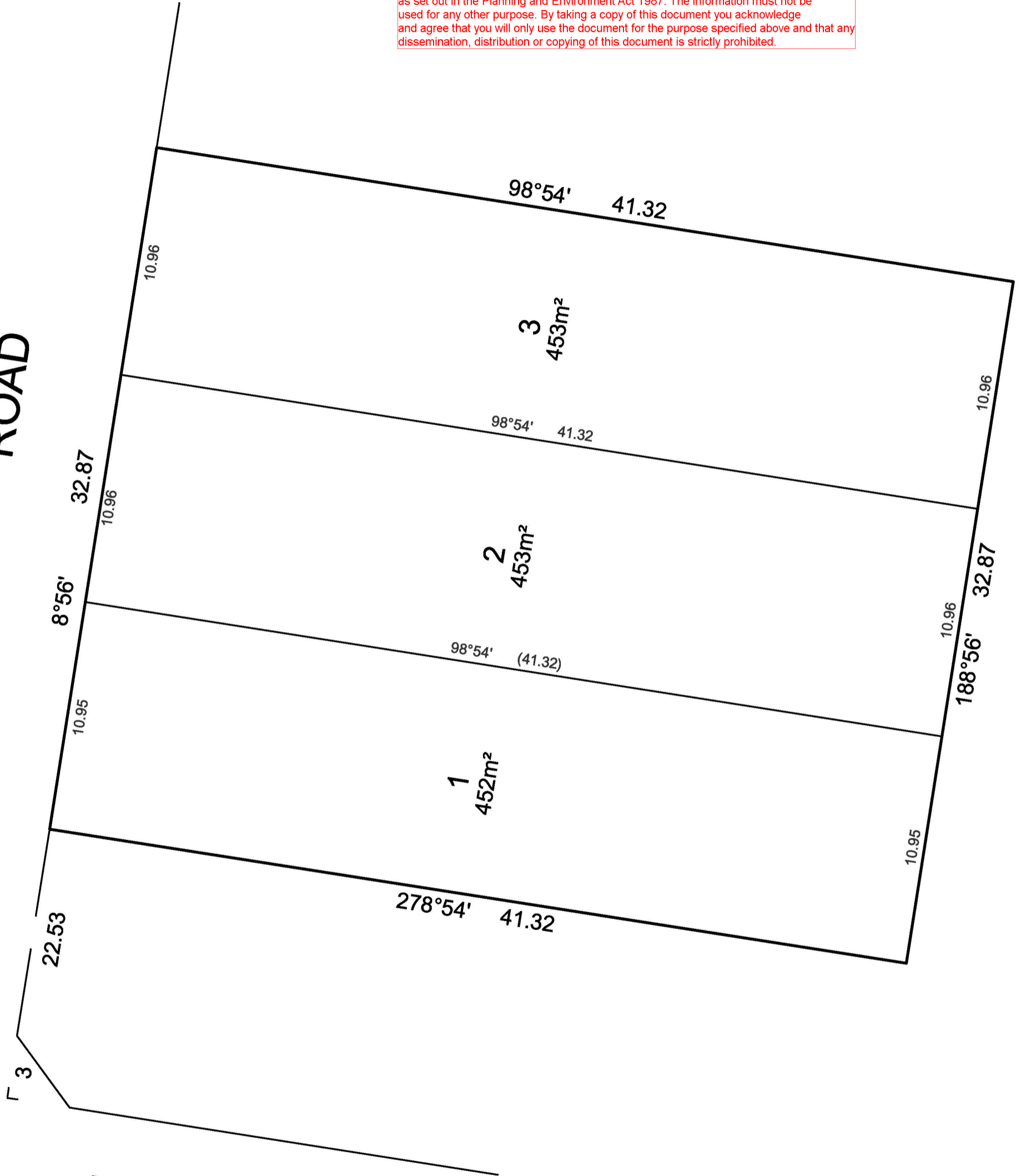
VERSION C





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AHERN ROAD

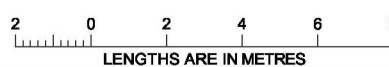


ASH CRESCENT



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SCALE  
1 : 200



ORIGINAL SHEET  
SIZE: A3

SHEET 2 OF 2 SHEETS

23180