

**PRELIMINARY SYDNEY WATER BUILDING PLAN  
APPROVAL ASSESSMENT/ASSETS OPTIONS  
REPORT for**

**74 Edinburgh Rd  
MARRICKVILLE 2204**

**Project No: 2020-0198**

**Second Revision  
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**Prepared For**

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## Revision Control

Issue/Rev	Date	Purpose of Issue/Nature of Revision	Issue Authorised by:	Signed
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## **1.0 INTRODUCTION**

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### **1.1 EXECUTIVE SUMMARY**

Woolworths Group have requested this report to be prepared to assess the options for the Sydney Water assets that are impacted by this development.

This report will assist in identifying the available infrastructure services, the impacts a proposed development will have to this infrastructure and any impacts these services may have on the proposed building works.

Sydney Water Building Plan Approval is required prior to the Construction Certificate stage for any development where building works or demolition are taking place.

The development involves the conversion of an industrialised area into a Woolworths distribution development comprising of car parking, offices, warehouse and a fulfilment centre. The fulfilment centre will have staff prepare shopping orders for a home shopping system. Small trucks will be utilised to deliver orders to customers. This is not a public shopping centre.

The infrastructure review will principally review the following services;

- Water Supply
- Sewer
- Stormwater

### **1.2 EXISTING DEVELOPMENT SITE**

The existing site is located at 74 Edinburgh Rd Marrickville 2204. The site has frontage to both Edinburgh Road and part of Sydney Steel Road.

There are significant Sydney Water sewers and a stormwater culvert that traverse the proposed development site.

The area is within the Sydney Water Marrickville stormwater catchment area.

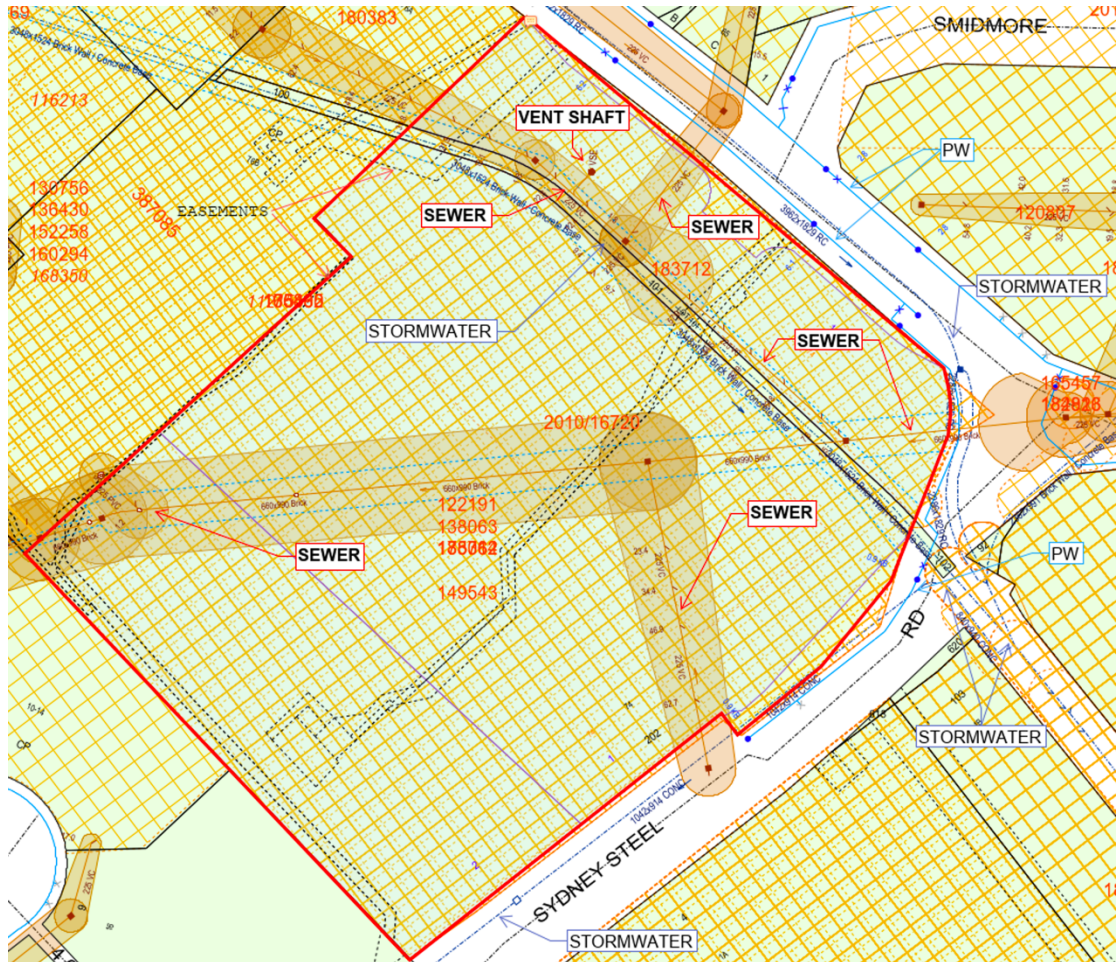
The Development covers Lot 202, 1, 2 & 101 of DP 1133999, 1213640, 1213640 & 1237269.



74 Edinburgh Road Marrickville. Image from Google Maps.



Hydra view of Sydney Water assets servicing the site.





## **2.0 EXISTING AUTHORITY INFRASTRUCTURE**

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### **2.1 EXISTING SEWER ASSETS**

MGP have undertaken an online services infrastructure search via a Dial Before You Dig investigation. The investigation has identified the following authority infrastructure that is located in the vicinity of the proposed development site;

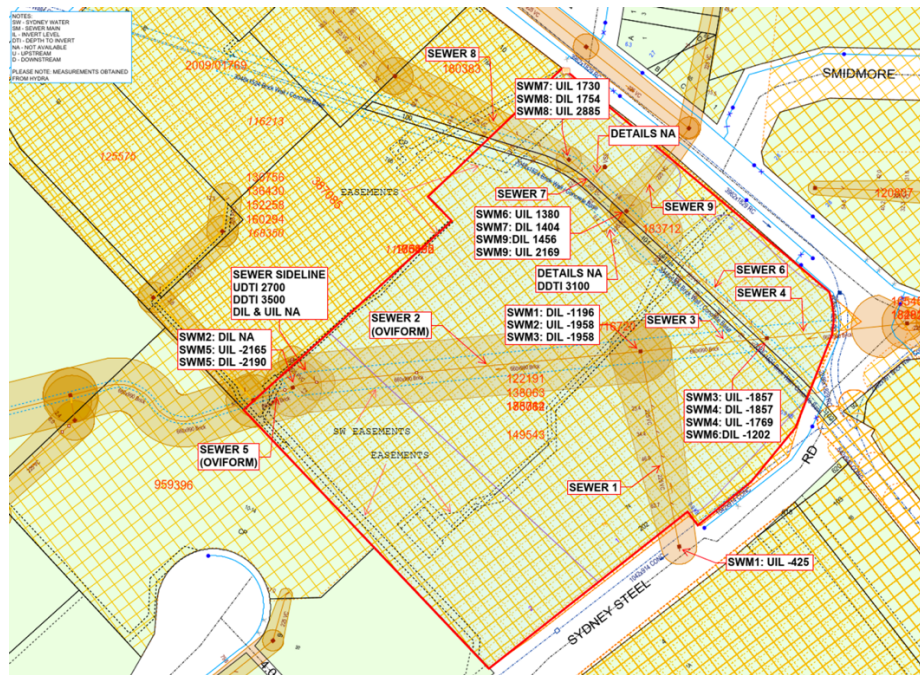
- Ausgrid Electricity
- Inner West Council
- Jemena Gas & Petroleum
- NBN Communications
- Optus and / or Uecomm Communications
- Roads and Maritime Services Electricity
- Sydney Water
- Telstra Communications



## 2.2 EXISTING SEWER DRAINAGE

MGP Building & Infrastructure services have reviewed the existing Sydney Water sewer main infrastructure services located within the development site.

According to Sydney Water record's an existing 660x990 oviform concrete sewer located within an easement, multiple 225 VC sewer's, sewer sidelines and a Vent Shaft traverse the site. The invert levels of these sewer's are identified in the plan below which have been obtained from Sydney Water's HYDRA records. Vent shaft details will need to be surveyed.









### **3.0 FUTURE CONNECTION REQUIREMENTS & ADDITIONAL CONDITIONS**

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#### **3.1 WATER SUPPLY CONNECTION REQUIREMENTS**

The proposed building will need to make new connections to Sydney Water's existing infrastructure. The final connection arrangement will depend on the final development flow rate requirements and Sydney Water's connection requirements which will be identified in the Letter of Advice. Flow and pressure results will be provided by Sydney Water and are to be annexed to this report.

Your development must have a frontage to a water main that is the right size and can be used for connection.

Sydney Water has assessed your application and found that:

- The site has frontage to multiple 150mm drinking water mains. Each of these mains are capable of supplying the domestic water usage of the proposed Dark Store as supplied by the WSC.
- The Developer will need to investigate the ability of the water network to provide for the fire fighting requirements of the development.

#### **3.2 SEWER DRAINAGE CONNECTION REQUIREMENTS**

Sydney Water's requirements for sewer supply are that a suitable point of connection is to be provided 1.0m inside the property boundary. The current Sydney Water sewerage system has multiple points of connection within the property boundary. Your development must have a sewer main that is the right size and can be used for connection. That sewer must also have a connection point within your development's boundaries.

Sydney Water has assessed your application and found that:

- The site is traversed by a Brick Oviform wastewater main. This is a critical asset and the Developer will need to come up with a plan to protect or deviate the main around the proposed building.
- Multiple 225mm mains are located within the site and are available for connection. Some of these may be disused. Others will require protection or deviation.
- This site is at a low ground level and is subject to the risk of surcharge from the wastewater network in wet weather.
- Any work on the wastewater assets will need to be assessed by SAP group within Sydney Water. It is recommended that a concept plan detailing likely new Invert Levels and grades of affected assets be submitted as soon as possible, this should be done prior to any Section 73 application.
- If a Section 73 Application is lodged without this information it will cause delays for the project.



### 3.3 STORMWATER CONNECTION REQUIREMENTS

Sydney Water has assessed your application and found that:

#### **Building over or adjacent to stormwater assets**

Sydney Water objects to the current proposal as it does not comply with current Sydney Water's building over and adjacent to Sydney Water stormwater assets policy and guidelines.

Our available records indicate a 3,048mm width x 1,524mm height open stormwater channel with a private cover is draining through this property. In addition, there is a variable width Sydney Water easement also exists along the Sydney Water's stormwater channel.

No buildings or permanent structures are to be proposed over the stormwater channel or within 1m from the outside wall of the stormwater channel or within Sydney Water easement whichever is larger. Permanent structures include (but are not limited to) basement car park, hanging balcony, roof eaves, hanging stairs, stormwater pits, stormwater pipes, elevated driveway, basement access or similar structures. This clearance requirement would apply for unlimited depth and height.

The applicant is required to submit the elevation drawings with the stormwater channel/pipe, to ensure that the proposed buildings and permanent structures are 1m away from the outside face of the stormwater channel and away from the Sydney Water easement for an unlimited depth and height.

As per the submitted details, it appears car park and office buildings are proposed over the Sydney Water's stormwater channel and easement. Proponent is required to revise the proposed development such a way that there are no buildings or permanent structures proposed over the Sydney Water's Stormwater Channel or within 1m from the outside face of the stormwater channel or Sydney Water easement for an unlimited depth and height. Woolworths are in discussion with Sydney Water to facilitate a satisfactory engineered solution.

If the proposed development is required to discharge stormwater into Sydney Water's stormwater channel, then a separate application is to be forwarded to Sydney Water. All stormwater connections should comply with Sydney Water's On-Site Detention policy and connection requirements. For further details please contact Sydney Water's Stormwater Team.



### **3.4 ANCILLARY MATTERS**

#### **Asset adjustments**

After Sydney Water issues this Notice (and more detailed designs are available), Sydney Water may require that the water main/sewer main/stormwater located in the footway/your property needs to be adjusted/deviated. If this happens, you will need to do this work as well as the extension we have detailed above at your cost. The work must meet the conditions of this Notice and you will need to complete it before we can issue the Certificate. Sydney Water will need to see the completed designs for the work and we will require you to lodge a security. The security will be refunded once the work is completed.

#### **Entry onto neighbouring property**

If you need to enter a neighbouring property, you must have the written permission of the relevant property owners and tenants. You must use Sydney Water's Permission to Enter form(s) for this. You can get copies of these forms from your Coordinator or the Sydney Water website. Your Coordinator can also negotiate on your behalf. Please make sure that you address all the items on the form(s) including payment of compensation and whether there are other ways of designing and constructing that could avoid or reduce their impacts. You will be responsible for all costs of mediation involved in resolving any disputes. Please allow enough time for entry issues to be resolved.

Please refer to CN185737 NOR for "Other Things You May Need To Do" beginning on page 6 of NOR document.



## **4.0 BPA (BUILDING PLAN APPROVAL)**

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### **4.1 EX (EXISTING) 660 X 990 OVIFORM SEWER**

Based on Sydney Water's records it appears that the existing development is currently partially built over this sewer and will require an Out-Of-Scope Building Plan Approval. Sydney Water's existing Building Plan Approval Guidelines state the sewer is required to be made maintenance free. Any manholes or maintenance shafts would not be allowed within the building footprint and Sydney Water would be provided with 24/7 access.

The Assessment requires amongst other documentation a Specialist Engineering Assessment prepared by a Chartered Professional Engineer to be submitted to Sydney Water which will be required to include the following as a minimum:

- CCTV survey and report detailing the existing sewer condition
- an appraisal of the existing condition of the pipe assets
- details of the proposed works
- location, depth and as-constructed details of all Sydney Water assets in the vicinity of the works,
- an appraisal of the impact of the proposed permanent and temporary works on the sewer asset using site investigation, engineering modelling or analysis methods as necessary
- details of any temporary or permanent protection works required to safeguard the sewer from damage, i.e. re-lining of the sewer if required, clearances from the sewer to the new structural members
- construction methodology and sequence
- details of heavy construction equipment to be used in the construction
- geotechnical engineering assessment or existing situation and proposed works

The Out-of-Scope assessment process once submitted to Sydney Water takes a minimum of 10-14 weeks.

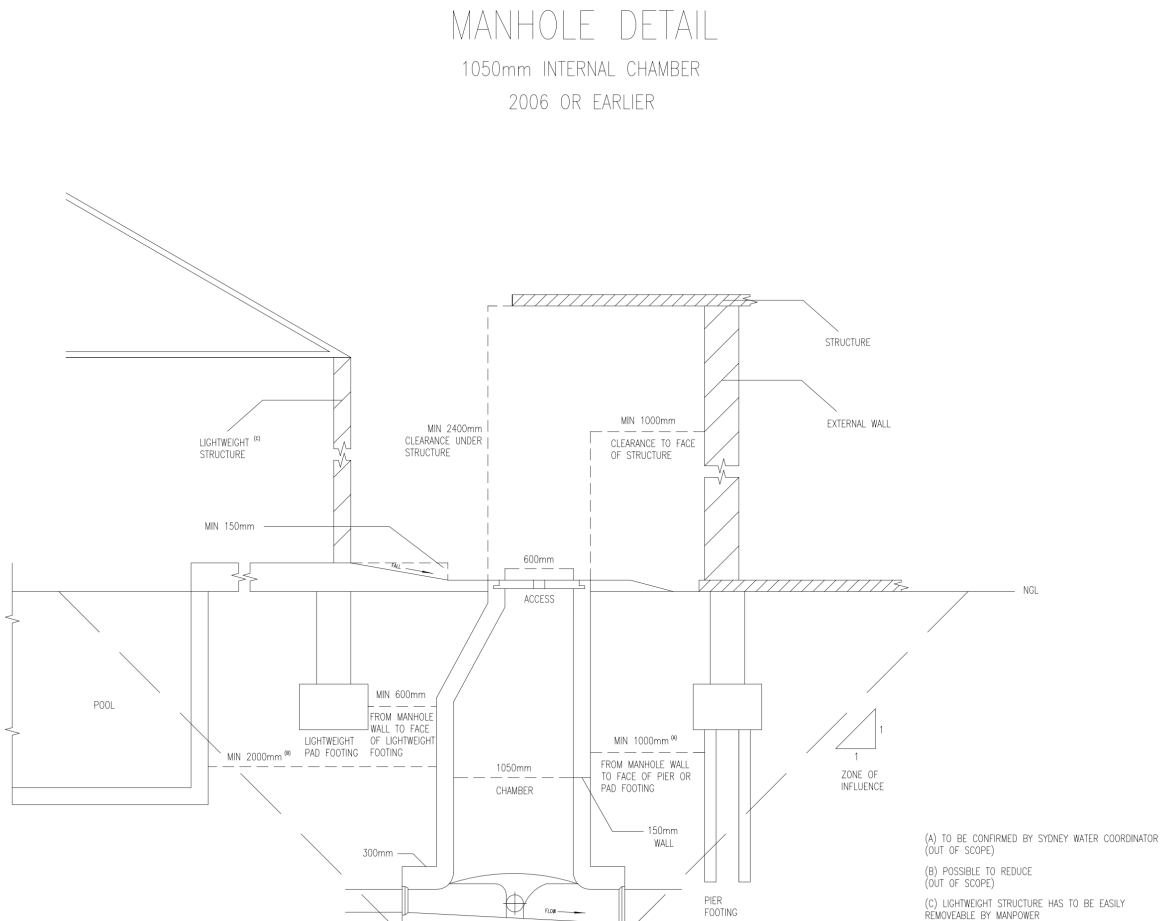
The new building would need to comply with the Sydney Water's Guidelines the minimum clearances from the edge of the sewer asset to the edge of the structural element are as detailed below:

- minimum 600mm from the face of the asset to the face of pad footing,
- minimum 900mm from face of the asset to the face of piles

Based on Sydney Water's records the 660X990 Brick sewer is built within an existing easement. During the Out-of-Scope investigation discussion would be raised with Sydney Water on how the 660X990 Brick sewer can exist in conjunction with the proposed development in accordance with Building Plan Approval codes and guidelines.



In regards to BPA we would be required to detail the access that Sydney Water would have around the manhole structures that exist on the sewer asset's that traverse the development area. To be compliant with Sydney Water requirements the clearance around the manholes would be a minimum of 1m clearance from the edge of the cover to the closest building line. Please see **Figure 1** below to detail these compliant measurements:

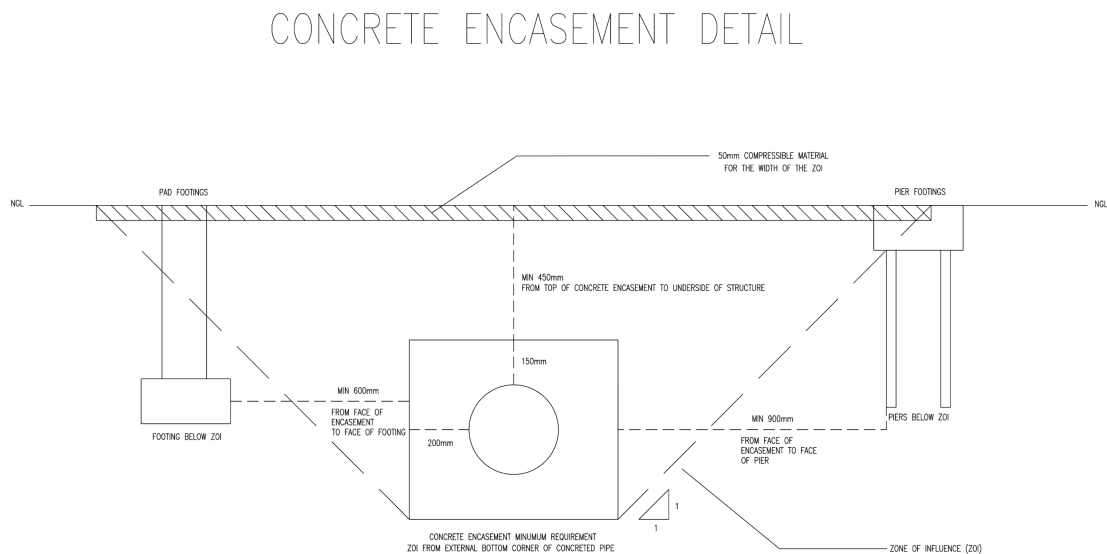


*Figure 1 MANHOLE 1050MM*



## 4.2 EX DN225 SEWER

Based on Sydney Water's records there are existing DN225 sewer's that traverse the development site. To build over these sewers with a new structure the asset would be required to be concrete encased. There is required to be a minimum of 450mm from the top of the encasement to the underside of the proposed structure. There are also the prescribed minimum horizontal clearances, as previously mentioned that would need to be adhered to; 600mm from face of sewer to face of pad footing or 900mm from face of sewer to pile face. Please see the **Figure 2** below:

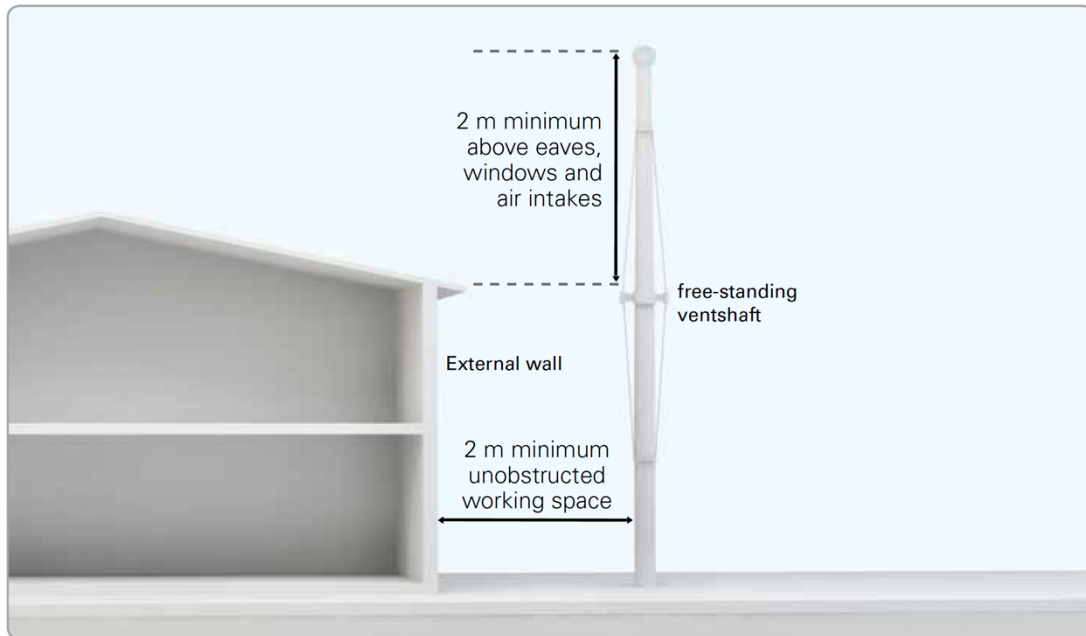


*Figure 2 CONCRETE ENCASEMENT DETAIL*



### 4.3 VENT SHAFT

Based on Sydney Water records there is a vent shaft (type-educt) that exists on the site. Sydney Water requires clearances when building close to any vent shaft. The below **Figure 3** states the clearances required between a building and vent shaft.



*Figure 3 VENT SHAFT CLEARANCES*



#### 4.4 STORMWATER CULVERT- 3048X1524 BRICKWALL/CONCRETE BASE

Based on Sydney Water's records the existing Sydney Water stormwater culvert is within an easement and according to available records it is partially built over by existing infrastructure currently on site.

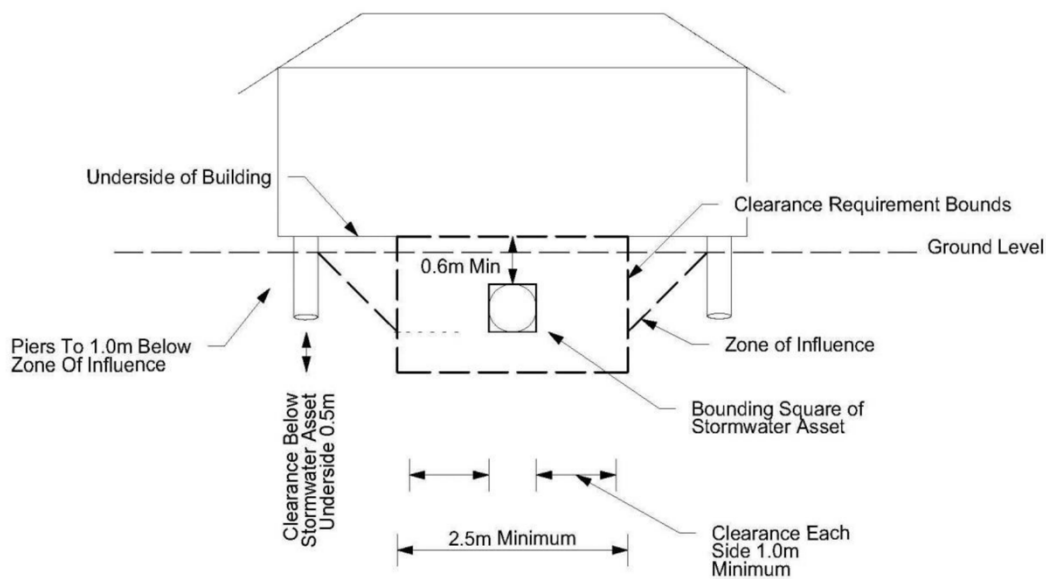
Sydney Water states when building over stormwater assets 3 conditions must be met:

- the proposed structure will be outside any easement or land owned by Sydney Water
- an existing building is located over the asset
- building over the asset is the only feasible solution for reasonable development of the property

Sydney Water requires clearances between stormwater assets and other structures so that the asset can be inspected, maintained and rebuilt when required. Sydney Water's standard clearance requirements for building over stormwater assets are as follows:

- 1 metre from the outside edges of the asset to the adjacent structure
- 0.6 metres from the outside edge of the asset to the overlying structure

The **Figure 4** below shows the clearance requirements for building over a Sydney Water stormwater asset.



*Figure 4 STORMWATER ASSET CLEARANCES*

The ZOI (zone of influence) is the area above and beside an asset where loads will have an impact on the stormwater asset. **Figure 5** shows the ZOI based on Sydney Water's clearance requirements. The gradient of the ZOI begins at the minimum horizontal clearance from the stormwater asset and extends upwards to the ground surface at an angle of 45 degrees (regardless of soil conditions).

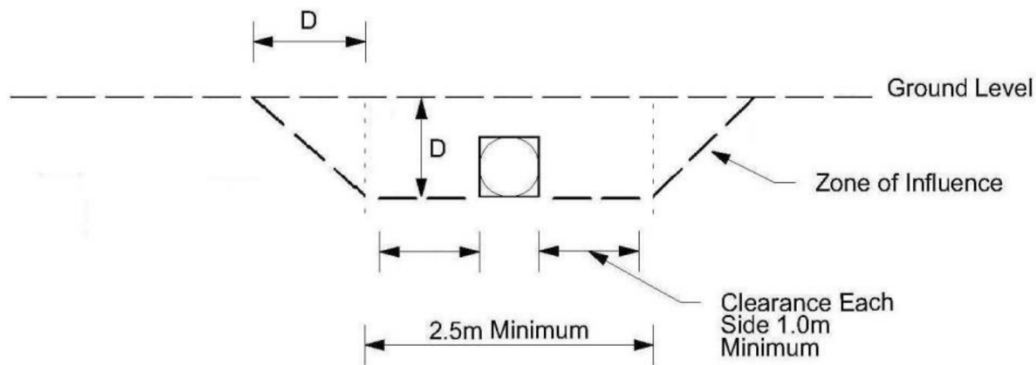


Figure 5 ZONE OF INFLUENCE CLEARANCES

Sydney Water's clearance requirements for building adjacent to stormwater assets are:

- 1 metre from the outside edges of the asset to the adjacent structure
- No structure above the asset

The below **Figure 6** shows the clearance requirements when building adjacent to Sydney Water stormwater assets.

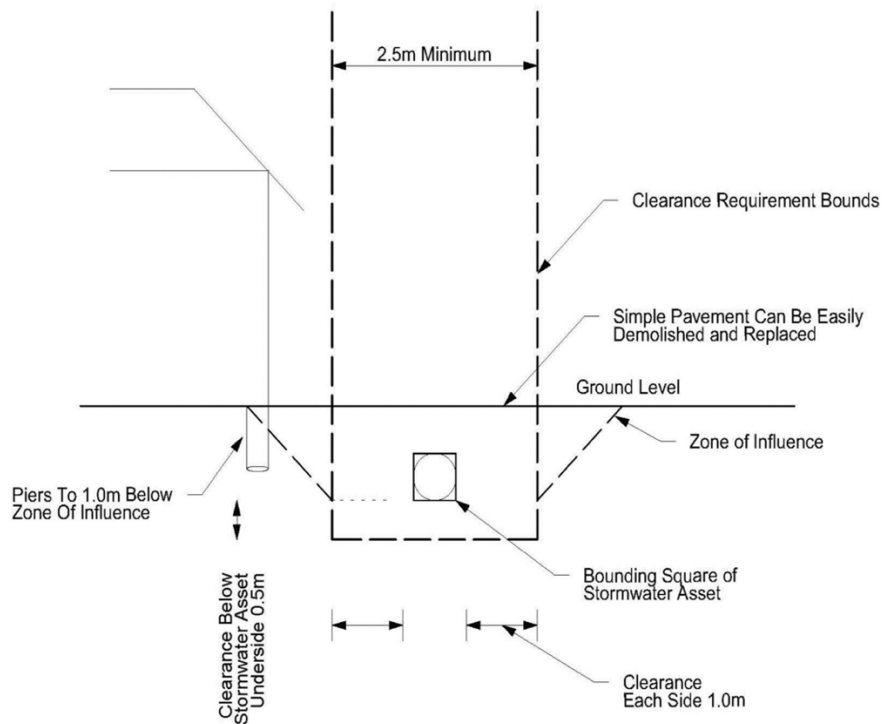


Figure 6 STORMWATER ADJACENT CLEARANCES



## **5.0 CONCLUSION**

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### **5.1 SEWER, POTABLE WATER AND STORMWATER MAINS**

According to Sydney Water records there is an existing 660x990 oviform concrete sewer that is located within an easement and a 3048 x 1524 stormwater culvert asset that is located within an easement.

The feasibility application submitted with the case number 185737 has advised the necessary conditions in terms of adjustments, connections and requirements that must be achieved in order to receive a S73.

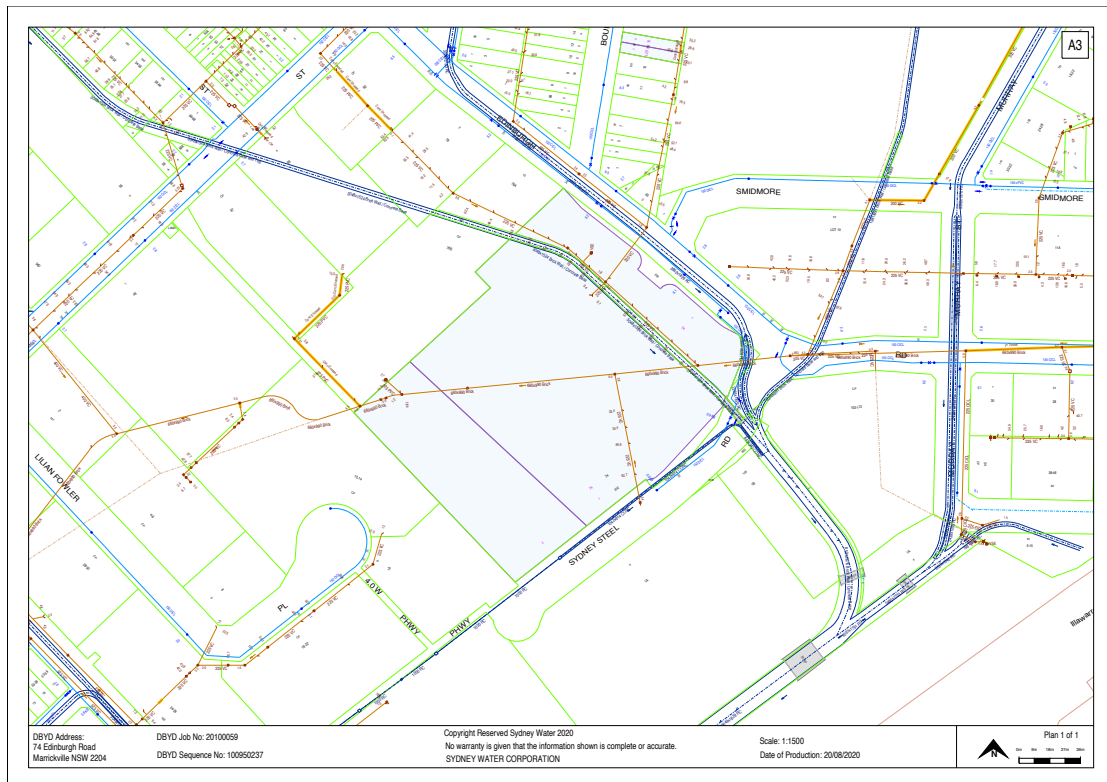
After a DA has been issued a new S73 application will need to be lodged to Sydney Water. It is anticipated that the BPA will be an out-of-scope application. All invert levels and Sydney Water infrastructure need to be confirmed prior to all works undertaken. Please note MGP has not been to site.

On the 25<sup>th</sup> September a meeting between Woolworths Group, MGP Building Infrastructure & Services and Sydney Water took place. Sydney Water have advised they do not support building over their stormwater assets however they indicated in the meeting that support could be provided for the relocation of the stormwater culvert. Woolworths Group have suggested deviating the stormwater culvert asset that currently runs through the proposed development. Stormwater culvert diversion plans have been submitted to Sydney Water on the 14<sup>th</sup> October 2020 for review and comment. We are currently in discussion with Sydney Water to provide a in-principal stormwater deviation concept plan.



## 6.0 APPENDIX

### 6.1 APPENDIX A - SYDNEY WATER





## 6.2 APPENDIX B – SSD (SEWER SERVICE DIAGRAM)

