Winten Property Group

Mixed Use Commercial/Retail Tower

177-199 Pacific Highway

Stormwater Concept Plan and Report

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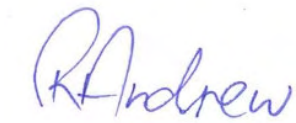
177-199 Pacific Highway

Stormwater Concept Plan and Report

Author	Richard Andrew	
Checker	Ryan Smith	
Approver	John McDermott	
Report No	DN03230	
Date	17th May 2010	

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CONTENTS

1 INTRODUCTION

Hyder Consulting has been commissioned by Winten Property Group to prepare a concept stormwater management plan and report to meet the requirements of the NSW Department of Planning Director General Requirements (DGR's) for a Planning Application for the site located at 177-199 Pacific Highway, North Sydney. The existing site is shown in Figure 1.

This report describes the existing and proposed stormwater management measures for the site.

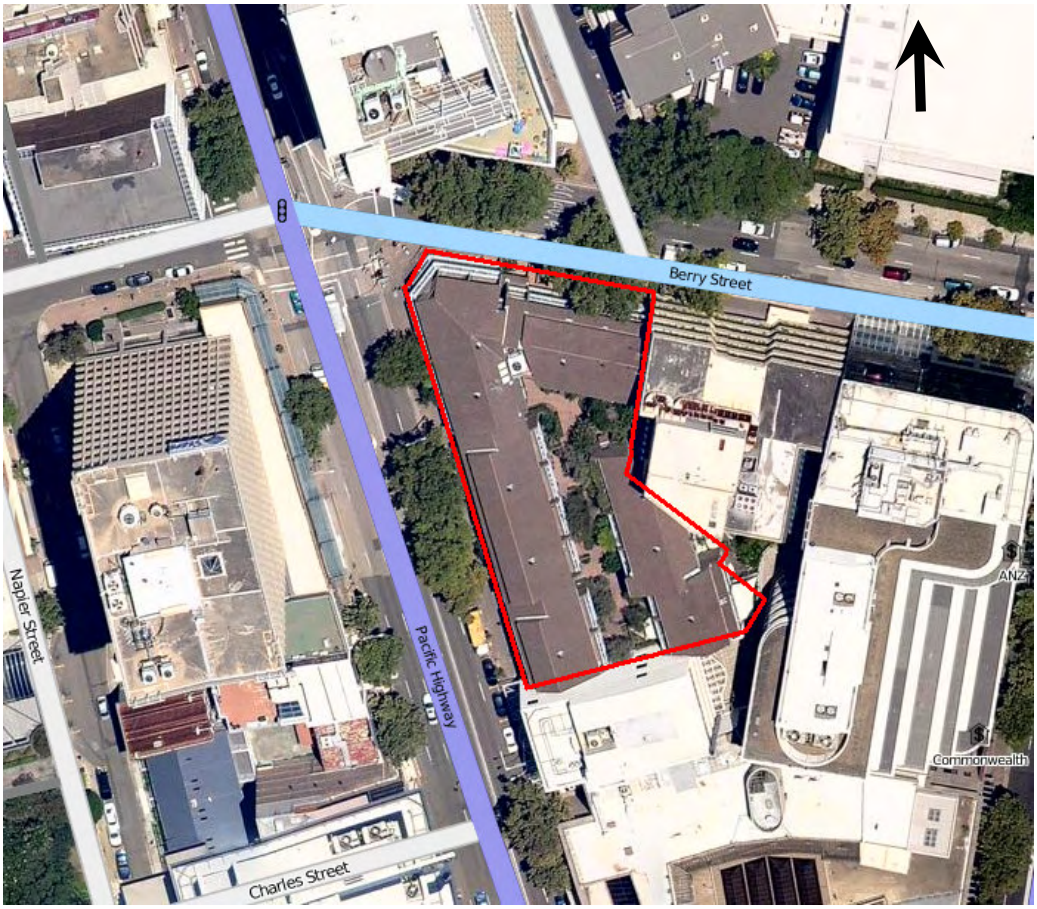

Figure 1: Existing Site Location (*"Courtesy of 'NearMap' www.nearmap.com")*

2 SITE DESCRIPTION

The proposed development is located in North Sydney and is within the local government area of North Sydney Council. The development site is described as Lot 1 SP17198 at 177-199 Pacific Highway, North Sydney.

The existing site is currently occupied by commercial buildings with basement car parking. The site has frontages to the Pacific Highway and Berry Street, with entry to the basement car park from Berry St.

The total site area for the proposed development is approximately 2,418m^2.

3 DATA BASE

The following form the data base for this assessment and report:

1 Site inspection by Hyder Consulting 23/4/10.

2 Site Survey prepared by Craig & Rhodes, DWG. File 35709T1(03) Dated 09/12/09.

3 Architectural concept plans prepared by Bates Smart Pty Ltd Architects

4 Stormwater drainage layout plan provided by North Sydney Council.

5 Stormwater asset information from Sydney Water's HYDRA database.

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4 COUNCIL REQUIREMENTS

Any stormwater design is to be undertaken to conform to the requirements of North Sydney Council's Development Control Plan Section 15 – Stormwater Drainage.

The concept developed for the purposes of this report, conforms to Council's requirements and will be further developed in consultation with Council's representative officers.

5 STORMWATER MANAGEMENT

5.1 EXISTING SITE DRAINAGE CONDITIONS

5.1.1 EXTERNAL CATCHMENTS AND DRAINAGE

Flows generated by a 4.67 ha external catchment are currently conveyed through the subject site by a Sydney Water owned and maintained stormwater drainage pipe which has been incorporated within the basement structure of the existing building. External overland flows are directed around the site via Berry St and the Pacific Highway.

Sydney Water's HYDRA system which is a database of all Sydney Water assets, specifies that the pipe within this reach was built in 1897 and from discussions it is understood to be of a brick construction. The HYDRA system indicates that immediately downstream of the site, within 112 - 122 Miller Street, the original pipe was upgraded to a 900mm diameter mild steel cement lined (MSCL) pipe through that development in 1992. Output from the HYDRA system is contained in Appendix A.

Inspections of the basement of the site shows that the pipe has been concrete encased through part of the subject property (refer Photo 3.0) and is accessible via removable concrete slabs (refer Photo 1).

It should be noted that the North Sydney Council drainage data base refers to the pipe within this reach, as being 900mm diameter (refer Appendix A) however we believe that this is in error.

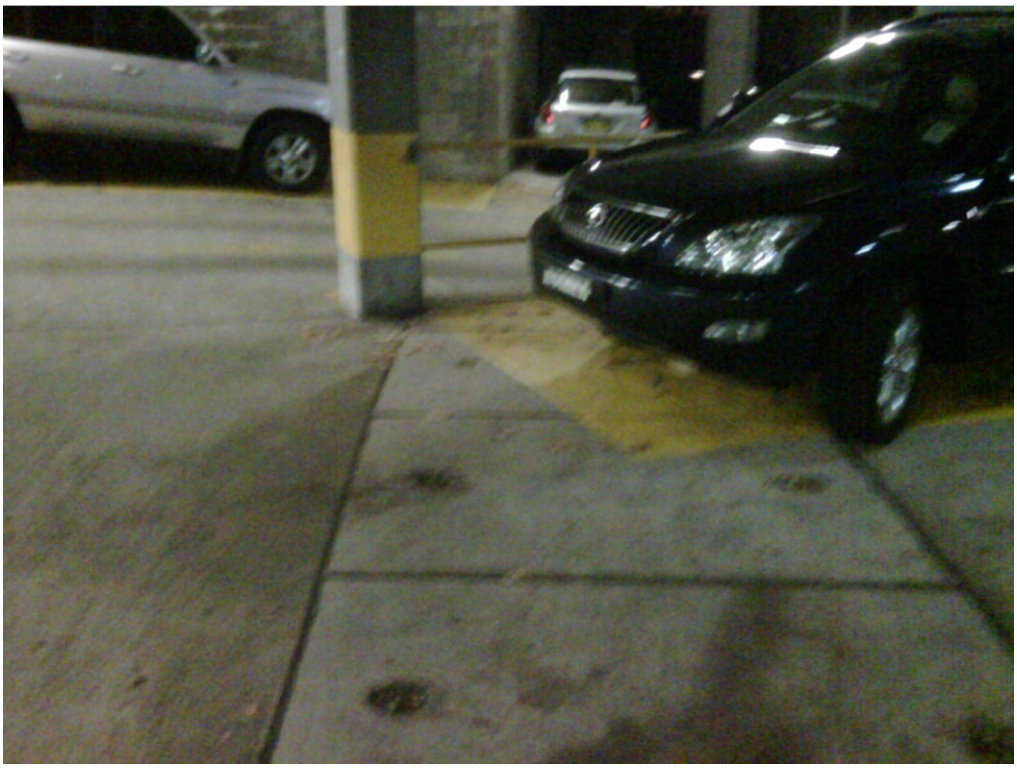

Photo 1.0 – 750mm stormwater pipe located underneath existing basement structure, concrete access covers evident in photo.

The 750mm brick pipe enters the subject property from Berry St on the northern boundary, passes underneath the basement car park structure and exits the site along the eastern boundary (refer dwg DABS003 in Appendix B).

Downstream of the subject site the 750mm pipe enters a manhole located in 112-122 Miller Street. Downstream of this manhole , flows are conveyed via a 900mm MSCL pipe that has been incorporated within the building basement structure of 116 Miller St prior to discharge to a kerb inlet pit located in Miller St (refer Photo 2.0).

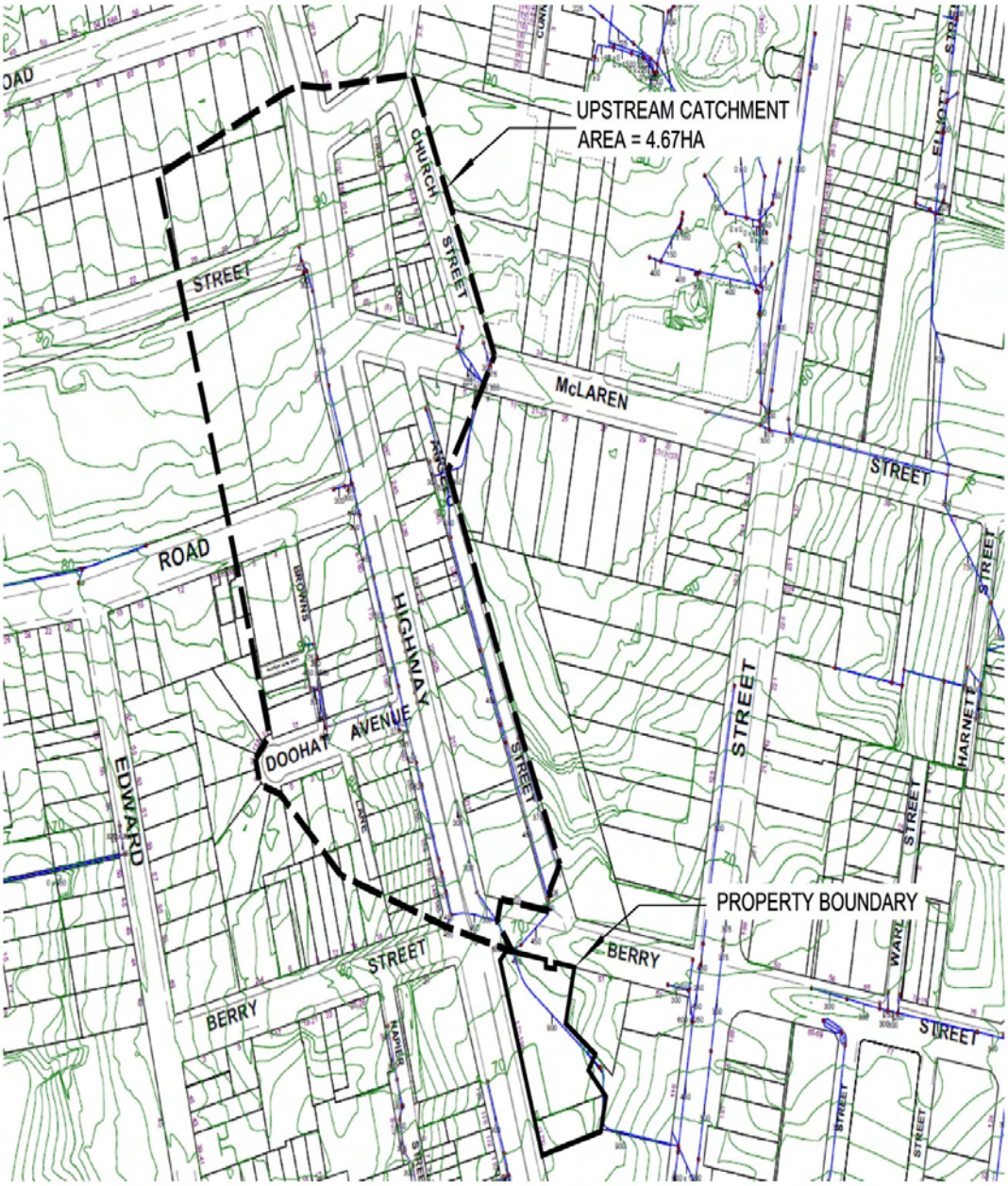

Figure 2.0 – Contributing external catchment

(Source: North Sydney Council Drainage Data Base)

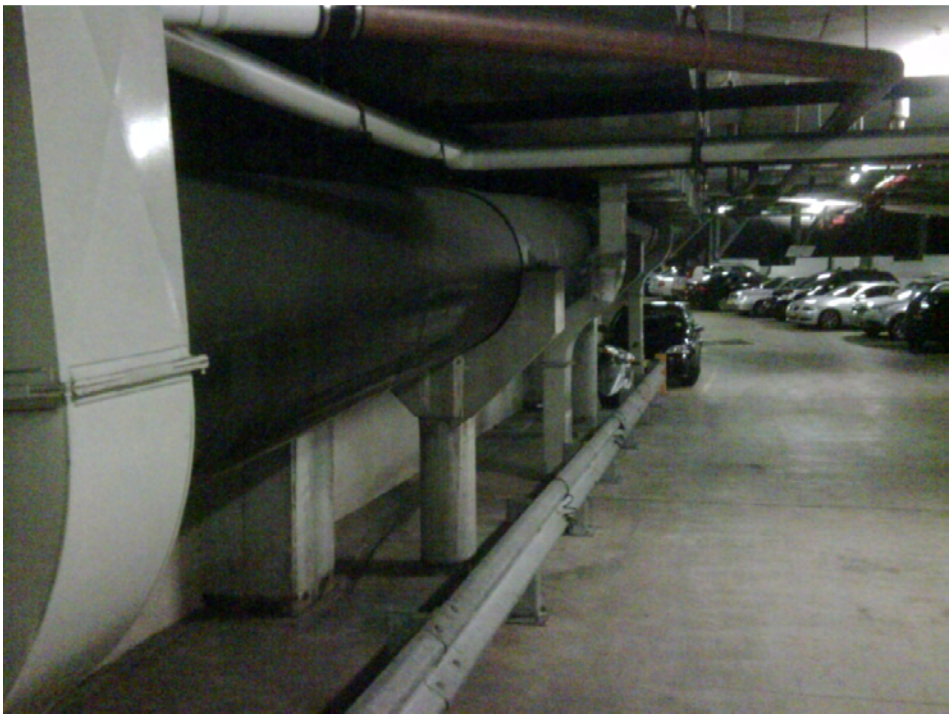

Photo 2.0 – 900mm MSCL stormwater drainage pipe located within the basement structure of 112 - 122 Miller Street.

5.1.2 EXISTING INTERNAL DRAINAGE SYSTEM

Stormwater drainage within the existing site consists of roof and courtyard drainage systems. All stormwater generated within the site is conveyed by the internal drainage system, discharging directly into the 750mm brick pipe via a 300mm diameter uPVC stormwater pipe (refer Photo 3.0).

Photo 3.0 – Discharge point of internal site drainage system into 750mm concrete encased brick pipe

5.2 PROPOSED STORMWATER CONCEPT PLAN

It is proposed to develop the site to incorporate a multi storey retail/commercial building with 3 levels of basement car parking (refer architectural drawings included in Appendix A).

The existing 750mm brick pipe is proposed to be diverted to facilitate the construction of basement car parking for the proposed development (refer to drawing DABS001 in Appendix B). Design for this diversion will be further developed in consultation with Sydney Water and will involve resolution of the following issues:

1. Modelling of the proposed diversion to demonstrate the design of the proposed works have no significant impacts on upstream or downstream properties.

2. Agreement on requirements for easements and asset ownership/maintenance requirements.

The site internal drainage system is proposed to be connected directly into the diverted stormwater pipe to maintain the existing discharge conditions.

The proposed development will not increase the imperviousness of the site. Therefore, it is not anticipated that stormwater discharge will increase from present conditions. As a result, onsite detention will not be required for the development.

6 EROSION AND SEDIMENT CONTROL

Erosion and sediment control measures will need to be implemented to minimise the risk of sediment mobilisation and transport during the construction period.

Erosion and sediment control measures will be designed and implemented in accordance with the 'Blue Book' (Soils and Construction – Volume 1, 4th Edition;) produced by Landcom to minimise the risk to the environment through the generation and transportation of sediments during the construction phase.

Upon completion of the works, the site will be covered largely by roof area which will minimise the risk of sediment mobilisation during the operational phase.

Appendix A

Data Base

- ***Survey Plans***
- ***Architectural Drawings***
- ***Plan of Council Drainage Infrastructure (provided by North Sydney Council).***
- ***Sydney Water HYDRA data***

Appendix B

Hyder Consulting Drawings

- ***Drawing No. DABS001 – Title Sheet and Notes***
- ***Drawing No. DABS002 – Existing Drainage Design***
- ***Drawing No. DABS003 – Proposed Stormwater Concept Plan***

No warranty is given that the information shown is complete or accurate.

Stormwater Channel

==========

Status	Existing
Owner	Sydney Water
Stormwater Type	Unknown
Main Channel Name	CAREENING COVE
Main Channel Number	25
Other Name	
Other Number	
Form	Not Applicable
Width (mm)	
Height (mm)	
Pipe Size (mm)	750
Pipe Type	P
Encasing Pipe Size (mm)	
Encasing Pipe Type	
Environment	Unknown
External Protection	
Date Constructed	1897-01-01
Date Relined	
Relining Material	None
Relining Method	None
Combined?	No
Cross Section Type	Pipe
Channel Covered?	Unknown
Height Of Cover Above Coping(mm)	
Tidal?	No
Upstream Invert Level (mm)	0
Downstream Invert Level (mm)	0
Horizontal Length (m)	61.970153
Date Gazetted	
Date Disused	
Plan Number	G.C.175
File Number	
Heritage Number	
General Information	
US Node	ZC
DS Node	ZA4
System Area	SW_025
System Area Manual?	
Service Provider	NORTH COAST
Service Provider Manual?	
Link to Asset Number	Join (record)
Parent Asset No.	
Capture Method	GPG - Digitised
Source Document Accuracy	Digitised/Sewer Reference Sheet - Paper > 1:1000

No warranty is given that the information shown is complete or accurate.

Stormwater Channel

Status	Existing
Owner	Sydney Water
Stormwater Type	Unknown
Main Channel Name	CAREENING COVE DEVIATION
Main Channel Number	25
Other Name	
Other Number	
Form	Not Applicable
Width (mm)	
Height (mm)	
Pipe Size (mm)	900
Pipe Type	MSCL
Encasing Pipe Size (mm)	
Encasing Pipe Type	
Environment	Unknown
External Protection	
Date Constructed	1992-09-21
Date Relined	
Relining Material	None
Relining Method	None
Combined?	No
Cross Section Type	Pipe
Channel Covered?	Unknown
Height Of Cover Above Coping(mm)	
Tidal?	No
Upstream Invert Level (mm)	0
Downstream Invert Level (mm)	0
Horizontal Length (m)	30.405763
Date Gazetted	1992-09-21
Date Disused	
Plan Number	WN 500507
File Number	
Heritage Number	
General Information	
US Node	ZA4
DS Node	ZA3
System Area	SW_025
System Area Manual?	
Service Provider	NORTH COAST
Service Provider Manual?	
Link to Asset Number	Join (record)
Parent Asset No.	
Capture Method	GPG - Digitised
Source Document Accuracy	Invalid at conversion

Ryan Smith

From: James Moore [James.Moore@northsydney.nsw.gov.au]
Sent: 11 May 2010 2:33 PM
To: Ryan Smith
Subject: Re: Photos of the pipe within 116 Miller St basement car park
Attachments: North Sydney Council Drainage - CBD.pdf

Ryan,

Thank you for the Photos.

Please find attached North Sydney Councils Drainage system with Contours and Diameters shown.

If you require any further information, please feel free to call me.

Kind Regards,

Jim Moore

Senior Design Engineer
North Sydney Council
Tel: +61 2 9936 8281
Fax: +61 2 9936 8177
Address: PO Box 12, North Sydney 2059

>>> "Ryan Smith" <Ryan.Smith@hyderconsulting.com> 11/05/10 1:54 PM >>>

Ryan Smith
Principal Engineer

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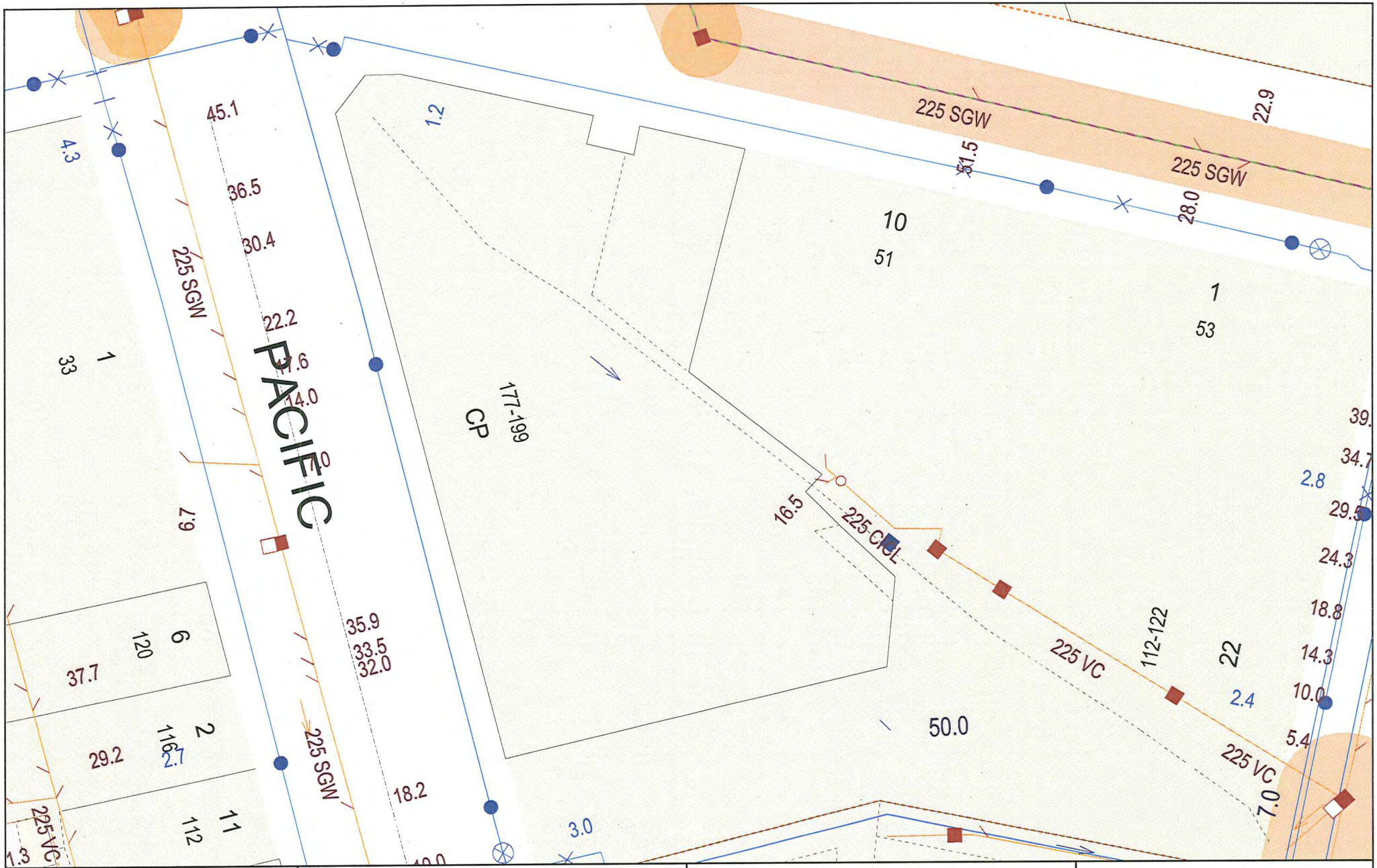
SCALE 1:1000

CONTOURS SHOW AT 1M INTERVALS

NORTH SYDNEY COUNCIL DRAINGE SYSTEM



Map:7 Grid:F6 Edition:Sydney UBD Edition 41

0m 4m 8m 12m 16m 20m

Scale 1:500

Page