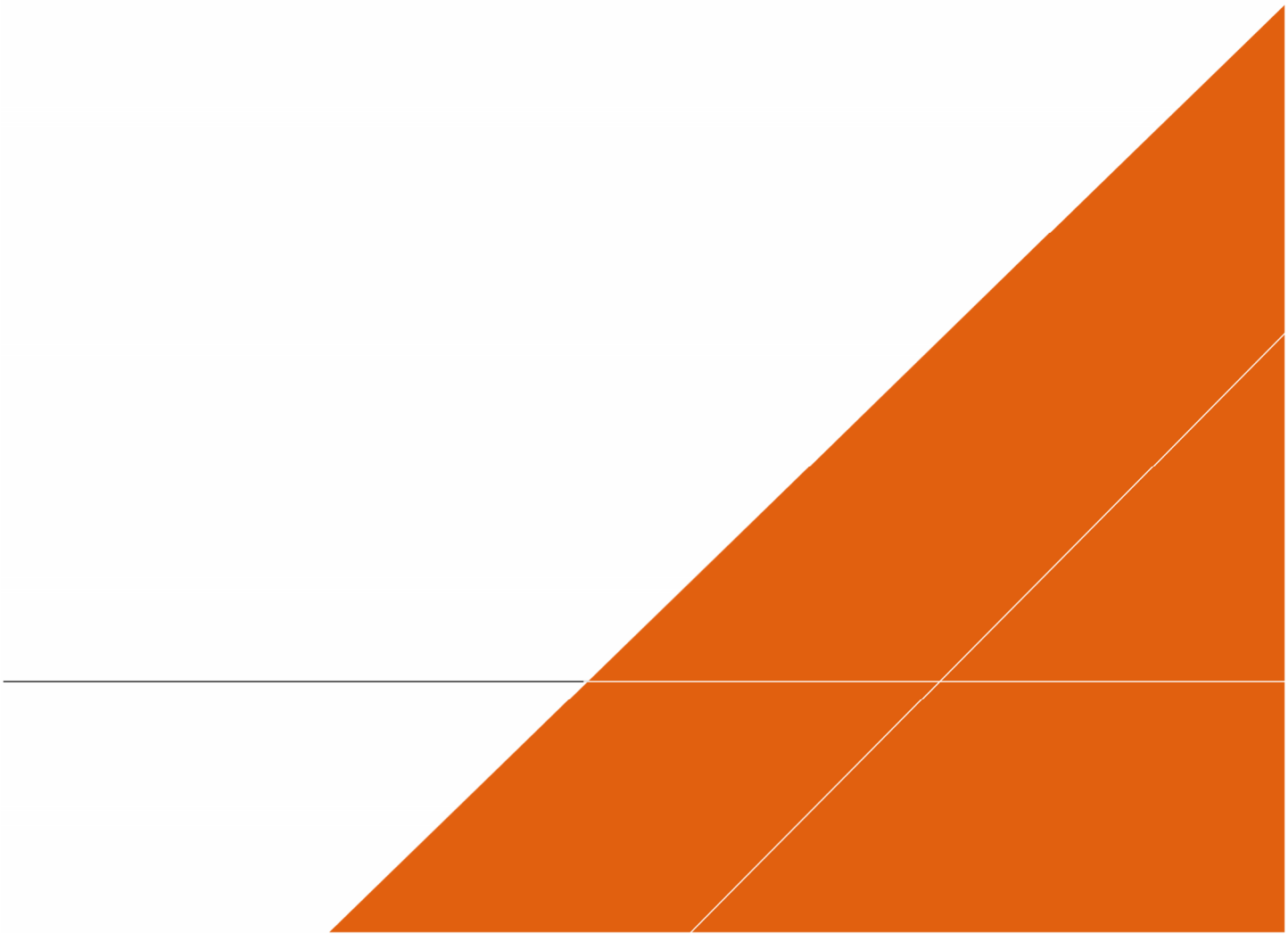
ARCADIS Design & Consultancy for natural and built assets

45-53 MACLEAY STREET, POTTS POINT, NSW

Stormwater Management Plan

11 MARCH 2025



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TIME & PLACE
POTTS POINT MID-RISE DEVELOPMENT

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REVISIONS

Revision	Date	Description	Prepared by	Approved by
1	21/02/2025	DRAFT Issue	JP	NB
2	11/03/2025	DRAFT Issue	JP	NB
3	11/03/2025	Concept SSDA	JP	NB

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1 INTRODUCTION

This Stormwater Management Plan has been prepared by Arcadis on behalf of Time and Place Ltd (the Applicant) to accompany a Concept State Significant Development Application (SSDA) for a mixed-use development at 45-53 Macleay Street, Potts Point (the site).

1.1 Site Description

The site is within the City of Sydney (CoS) Local Government Area (LGA). It has an area of approximately 1,289sqm and is legally described as SP 934. The site currently accommodates a 12-storey residential flat building comprising 80 studio apartments, and associated car parking (refer Figure 1).

The site is in Potts Point, which is well serviced by public amenities such as a supermarket, cafes, destination retail shops and a library. Further afield is the Sydney CBD and the Royal Botanic Gardens to the west, and Elizabeth Bay and Rushcutters Bay to the east.

The site is within convenient walking distance (750m) of Kings Cross Train Station which provides rail connections to Bondi Junction and South Sydney. It also benefits from access to local bus services along Macleay Street which run every 10 minutes on average throughout the day and connect the site with Potts Point, Central Station and Barangaroo.

Figure 1: Project Location (Nearmap)

The project seeks concept approval pursuant to section 4.22 of the EP&A Act for a 13-storey mixed-use shop-top housing development comprising three levels of basement car parking, ground floor retail and residential above.

The project will include 15% affordable housing for a 15-year period to utilise the height and floor space bonuses in the Housing SEPP. The proposal will comply with the maximum height and FSR controls for the site when utilising the bonuses provisioned for under the Housing SEPP for affordable housing provision, and the Sydney LEP 2012 for design excellence.

Descriptor	Project Details
Proposed Use	Shop Top Housing / Commercial Premises
Project Description	Construction of 13 storey mixed-use development comprising 3 levels of basement, ground floor retail and residential above.
Gross Floor Area	Maximum 5,529.8 sqm
Building Height	Maximum 50.05m (inclusive of 30% affordable housing bonus and 10% design excellence bonus)
Floor Space Ratio	Maximum 4.29:1 (inclusive of 30% affordable housing bonus and 10% design excellence bonus)
Vehicle access	Vehicle access to be provided off McDonald Street.

Table 1: Project Details

1.2 Previous Assessments

Information from Van der Meer's previous SWMP report previously submitted for SSDA will be of reference for the project area. Report includes stormwater quality and quantity control relevant to the site.

For flood related elements, refer to Arcadis' separate Flood Impact and Risk Assessment Report.

1.3 Design Basis

This management report utilizes information from the following information:

Document	Description
Van der Meer SWMP for Macleay Street Apartment (2021)	**Previous SWMP for the project area. Contains relevant information regarding the preliminary proposed drainage plan.**
NSW MUSIC Modelling guidelines (2015)	**Proper guidelines for MUSIC modelling**
City of Sydney Drainage Manual (2017)	**States relevant policies, guidelines. and requirements for stormwater design**
City of Sydney Development Control Plan (2012)	**Provides planning and design guidelines to observe control of environment plans**

Table 2: Design Basis Document

2 RESPONSE TO SEARS

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 07 February 2025 issued for the SSDA (SSD-79316759). Specifically, this report has been prepared to respond to the SEARS requirement issued below.

Item	Description of Requirement	Section Reference (this report)
Water Management	Detail the proposed concept drainage design and servicing infrastructure to be incorporated as part of the development (stormwater and wastewater) – Required Supporting Documentation = Concept drainage plans.	Appendix B

And the following request for Information (RFI) from government agencies

Item	Description of Requirement	Section Reference (this report)
Water usage	Description of all works/activities that may intercept, extract, use, divert or receive surface water and/or groundwater. This includes the description of any development, activities or structures that will intercept, interfere with or remove groundwater, both temporary and permanent.	Section 5 for surface water. For Groundwater (subsurface) a Hydrogeological Evaluation has been undertaken by JKGeotechnics in September 2023 (Ref:34303REpt)for a superseded architectural scheme. It is recommended that a similar investigation to be undertaken for the new proposed architectural

Item	Description of Requirement	Section Reference (this report)
		scheme during the detailed SSDA phase.
Water Balance	A detailed and consolidated site water balance	It is recommended that detailed water balance be undertaken during the future detailed concept SSDA phase
Water intake	Details of all water take for the life of the project and post closure where applicable. This is to include water taken directly and indirectly, and the relevant water source where water entitlements are required to account for the water take. If the water is to be taken from an alternative source confirmation should be provided by the supplier that the appropriate volumes can be obtained.	Not applicable. There is no proposed water intake from a natural dam or watercourse.
Water Access Licences	Details of Water Access Licences (WALs) held to account for any take of water where required, or demonstration that WALs can be obtained prior to take of water occurring. This should include an assessment of the current market depth where water entitlement is required to be purchased. Any exemptions or exclusions to requiring approvals or licenses under the Water Management Act 2000 should be detailed by the proponent.	Not Applicable. There is no proposed water intake from a natural dam or watercourse.
Groundwater conditions	A description of groundwater conditions that provides an understanding of groundwater level across the site under a range of wet and dry conditions.	A Geotechnical Investigation with Hydrogeological Evaluation has been undertaken by JKGeotechnics in September 2023 (Ref:34303RErpt)for a superseded architectural scheme. It is recommended that a similar investigation to be undertaken for the new proposed architectural scheme during the future detailed concept SSDA phase.

Item	Description of Requirement	Section Reference (this report)
Water sensibility	Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, groundwater dependent ecosystems, and ground water levels; including measures proposed to reduce and mitigate these impacts.	For surface water quality assessment refer to Section 6. Riparian and water intake/access are not applicable to the site.
Water monitoring	Proposed surface and groundwater monitoring activities and methodologies.	A Geotechnical Investigation with groundwater monitoring has been undertaken by JKGeotechnics in September 2023 (Ref:34303RErpt)for a superseded architectural scheme. It is recommended that a similar investigation to be undertaken for the new proposed architectural scheme during the future detailed concept SSDA phase.
Guidelines for Controlled Activities	Identification and impact assessment of all works/activities located on waterfront land including an assessment against Guidelines for Controlled Activities on Waterfront Land (DPE 2022)	Not Applicable
Design Guidelines	Assessment of project against relevant policies and guidelines	Section 1.3
Water-related Infrastructure Requirements	• The proponent of the development should determine service demands following servicing investigations and demonstrate that satisfactory arrangements for drinking water, wastewater, and recycled water (where required) services have been made. • The proponent should consider taking measures to minimise or eliminate potential flooding, degradation of water quality, and avoid adverse impacts on any heritage items, and create pipeline easements where required.	• Section 5.3 • Section 5.3 • Not applicable • Section 5.3, Section 5.2, SWD pipes in the vicinity of the site are owned by council and no Sydney Water stormwater assets in the vicinity

Item	Description of Requirement	Section Reference (this report)
	• Strict requirements for the protection of Sydney Water's stormwater assets may apply to this site. The proponent should ensure that satisfactory steps/measures been taken to protect existing stormwater assets, such as avoiding building over and/or adjacent to stormwater assets and building bridges over stormwater assets.	
Water-related Infrastructure Requirements	• The proponent of the development should determine service demands following servicing investigations and demonstrate that satisfactory arrangements for drinking water, wastewater, and recycled water (where required) services have been made. • The proponent must obtain endorsement and/or approval from Sydney Water to ensure that the proposed development does not adversely impact on any existing water, wastewater or stormwater main, or other Sydney Water asset, including any easement or property. To do this, it is recommended that the proponent register a direct Feasibility enquiry with Sydney Water as soon as possible via an approved Water Servicing Coordinator (WSC) to ascertain servicing needs and to ensure the proposed development is considered in any potential planning that we might be undertaking. • The proponent should consider taking measures to minimise or eliminate potential flooding, degradation of water quality, and avoid adverse impacts on any heritage items, and create pipeline easements where required. • Strict requirements for the protection of Sydney Water's stormwater assets may apply to this site. The proponent should ensure that satisfactory steps/measures been taken to protect existing stormwater assets, such as avoiding building over and/or adjacent to stormwater assets and building bridges over stormwater assets.	• There are existing watermains DN200 CICL on Macleay Street and DN150 DICL on McDonald Lane. There is an existing sewer DN225VC on McDonald Lane and a vent shaft attached to the neighbouring property (9 McDonald Street). There are no recycled water assets in the vicinity. Service demand may be confirmed with Sydney Water through a feasibility application. • The proposed development has basement levels over 10m deep which may affect the Sydney Water sewer and watermain assets. A building plan approval (BOA application) application is recommended with high chance of it being OUT OF SCOPE due to the basement, nearby watermains and vent shaft.

Item	Description of Requirement	Section Reference (this report)
		• Refer to Arcadis' separate Flood Impact and Risk Assessment_FIRA for flood-related elements. No pipeline easement is being proposed. • DN300 concrete stormwater pipe along Macleay Street is owned by Council. There are no Sydney Water stormwater assets within the vicinity.
Integrated Water Cycle Management	• The proponent should outline any sustainability initiatives that will minimise/reduce the demand for drinking water, including any alternative water supply and end uses of drinking and non-drinking water that may be proposed, and demonstrate water sensitive urban design (principles are used), and any • Sydney Water Corporation ABN 49 776 225 038 1 Smith Street, Parramatta, NSW 2150 | PO Box 399, Parramatta, NSW 2124 Telephone 13 20 92 Media (24/7) 8849 5151 sydneywater.com.au water conservation measures that are likely to be proposed. This will allow water conservation measures that are likely to be proposed. • Sydney Water to determine the impact of the proposed development on our existing services and required system capacity to service the development. • It is recommended that the proponent engages directly with Sydney Water via the Feasibility process and discuss IWCM opportunities.	Service demand and Integrated Water Cycle Management may be confirmed with Sydney Water through a feasibility application during the future detailed concept SSDA phase.
Growth Information	• Sydney Water supports government-backed growth initiatives within our area of operations, striving to provide timely and cost-effective water and wastewater infrastructure without undue impacts. To offer robust servicing advice and investigate staged servicing possibilities, we require the proponent to provide anticipated ultimate and annual growth data for this development as outlined in the enclosed Growth Data Form.	Service demand may be confirmed with Sydney Water through a feasibility application during the future detailed concept SSDA phase .

Item	Description of Requirement	Section Reference (this report)
	• A Feasibility application will enable a comprehensive servicing review ensuring the proposed development is considered in any potential planning that we might be undertaking. Failure to provide this information may impede proper planning requirements for the proposed development and for the broader area. The completed growth form should be submitted by the proponent to Sydney Water as part of the Feasibility application via a Water Servicing Coordinator (WSC), citing this referral response and our reference number.	
Next Steps	• Further investigations may be required to determine the servicing requirements for this site. It is recommended that a Water Servicing Coordinator is engaged as soon as possible, and a Feasibility application is submitted with Sydney Water prior to the preparation of the EIS. • The proponent should complete and return the enclosed Growth Data Form as part of their Feasibility application submission. The Growth Data Form should be updated promptly with Sydney Water in case of changes or every six months. • The Department is advised to forward the enclosed Sydney Water Development Application Information Sheet (for proponent) to assist the proponent in progressing their development. This Info Sheet contains details on how to make further applications to Sydney Water and provides more information on Infrastructure Contributions.	

3 CATCHMENT ANALYSIS

The site will have a roof catchment divided into different outlets. Catchment A (orange) to drain into the northern water quality tank within the site. The site's Catchment B (southwest grey) will drain to a Stormfilter Pit. The Catchment C (southeast grey) will drain to a linear Hydrochannel for treatment before converging with flows from catchment A. All flows are to be discharged to the existing street pit and pipe network located outside. Refer to Appendix B for Stormwater Drainage Concept Plan for details.

Figure 2: Site Catchment Plan

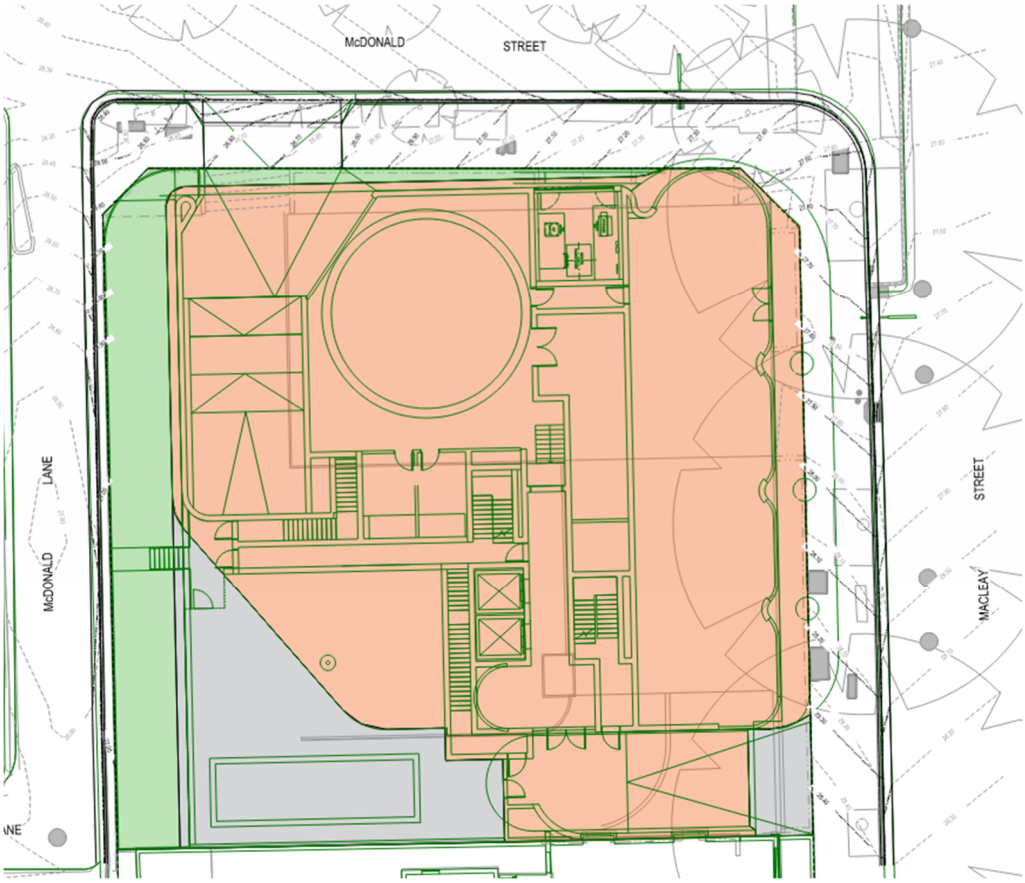


Figure 3: Catchment Areas

Catchment	Area (ha)
A	**0.0984**
B	**0.0153**
C	**0.0019**
D (external)	**0.0123**

4 STAKEHOLDER ENGAGEMENT

Arcadis have undertaken a stakeholder consultation with Sydney Water to evaluate the on-site detention (OSD) requirements for the site.

Arcadis was advised by Sydney Water that OSD system is not required for this site. Refer to Appendix C for email correspondence.

5 PROPOSED DRAINAGE STRATEGY

5.1 Design Objectives

The stormwater drainage design concept was developed generally in accordance with City of Sydney (CoS) and Sydney Water's design requirements including CoS' Drainage manual (2017), CoS Development Control Plan (2012), NSW MUSIC Modelling Guidelines (2015).

The stormwater drainage design concept is generally consistent with Van Der Meer's previously submitted 2021 stormwater concept system.

5.2 Stormwater Detention

As mentioned in Section 4, we assume that OSD system is not required subject to Sydney Water's confirmation.

5.3 Stormwater Legal Point of Discharge

Before You Dig Australia (BYDA) investigation was undertaken for the site.

The lot system shall drain to the existing SWD pit and pipe system located in the vicinity of the project area. Two existing pits exist in Macleay Street own by CoS Council which provide as a legal point of connection for the site as shown in the Stormwater Drainage Concept Plan in Appendix B.

6 STORMWATER QUALITY

The following section outlines the assessment undertaken in MUSIC and provides a summary of treatment measures required to achieve the water quality objectives outlined in City of Sydney Stormwater Drainage Manual.

The Model for Urban Stormwater Improvement Conceptualisation (MUSIC) has been used to assess the water quality impacts associated with the redevelopment of the Bonnyrigg Western and Eastern Catchments and the effect of proposed mitigation measures to reduce anticipated pollutant loads.

MUSIC v6 was adopted to model the water quality of existing and proposed urban development. This model was developed by the Cooperative Research Centre for Catchment Hydrology (CRCCH) and is a standard industry model for this purpose. MUSIC is suitable for simulating catchment areas of up to 100 km^2 and utilises a continuous simulation approach to model water quality.

By simulating the performance of stormwater management systems, MUSIC can be used to determine if these proposed changes to land use are capable of meeting specified water quality objectives (CRC, 2002). The primary water quality constituents modelled in MUSIC and of relevance to this report include Total Suspended Solids (TSS), Total Phosphorus (TP) and Total Nitrogen (TN).

Post development models of the catchments were developed to estimate the pollutant loads generated by the site as a result of the proposed masterplan.

To mitigate the increase in pollutant loads, a catchment model was developed incorporating treatment systems such as storm filters and hydrochannel.

6.1 Design Objectives

City of Sydney DCP state the following reduction targets for stormwater discharge. The guideline

Table 3 Stormwater Quality Improvement Targets

Pollutant	Reduction Targets
Gross Pollutants	85%
Total suspended solids (TSS)	65%
Total phosphorus (TP)	45%
Total nitrogen (TN)	90%

6.1.1 Catchment Properties

The following parameters were adopted in the site MUSIC model:

- The default MUSIC Event Mean Concentration (EMC) values have been adjusted to reflect the recommended values in NSW MUSIC Modelling Guidelines (2016)

6.1.2 Catchment Areas

Table 4 shows the summary of catchment areas in the site used for modelling.

Table 4 Catchment Summary

Catchment ID	Area (ha)	Area Type	Imperviousness
A	0.0984	Commercial	95%
B	0.0153	Commercial	95%
C	0.0019	Commercial	95%
D	0.0123	Sealed Road	8%

Catchment plan has been provided for MUSIC modelling in Appendix B. Catchment properties are included in the MUSIC-LINK reporting Appendix D

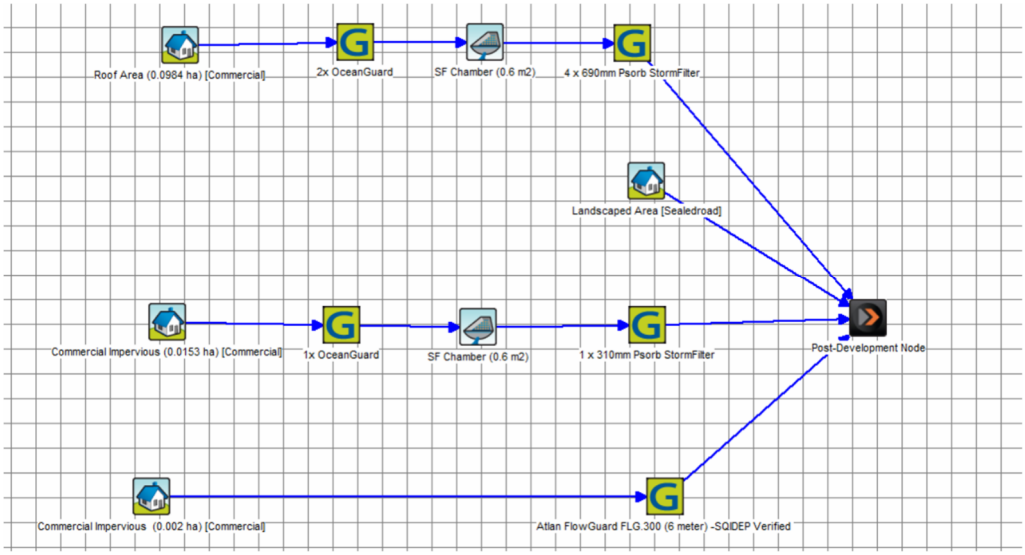
6.2 Proposed Water Quality Strategy

The water quality treatment devices listed below represent possible feasible options to reduce pollutant loads in line with Council's stormwater quality targets. Refer to **Error! Reference source not found.** for water quality catchment plan and indicative locations of each proposed treatment device for each sub-catchment.

Table 5 Proposed Water Quality Treatment – Western Catchment

Catchment	Proposed Water Quality Treatment
A	4 X 690 PSORB Stormfilters And 2 X Ocean Guard
B	1 X 310 PSORB Stormfilter And 1 X Ocean Guard
C	6.0 m Heel Safe Trench Grate with Atlan Flowguard Inside

Figure 4 MUSIC Model Layout



Refer to Appendix B for the proposed location of treatment nodes.

6.3 Modelling Results

MUSIC model results and treatment train effectiveness for the redeveloped scenario are summarised in Table 6. Model results indicate that the proposed treatment trains meet Council's treatment targets for both the eastern and western catchments.

Table 6 MUSIC Modelling Results

Model Output Parameters	Developed Scenario		Pollutant Reduction	Council Targets
	Source Load	Residual Load		
Total Suspended Solids (kg/yr)	234	33.8	85.6	85
Total Phosphorus (kg/yr)	0.379	0.102	73.2	65
Total Nitrogen (kg/yr)	2.83	1.06	62.6	45
Gross Pollutants	29.6	0.457	98.5	90

Stormwater treatment devices have been incorporated as detailed in Section 6.2 to meet Council's targets and minimise the impact on surrounding aquatic and ecological environments.

6.3.1 Limitations of the Model

- The impacts of unforeseen future environmental events i.e. climate change, extreme rainfall etc have not been considered however, should they occur, they may have significant impacts to the site and its stormwater treatment potential as well as modifying the findings and outcomes of this report.
- The findings and recommendations found within this report are the result of industry accepted methodologies used in water quality modelling. They represent a reasonable interpretation of the general conditions of the site of interest and should not be assumed to represent the exact state of the site.

6.4 Summary

The water quality treatment devices outlined in Section 6.2 represent possible feasible options to reduce pollutant loads in line with Council's stormwater quality targets.

APPENDIX A

Proposed Concept Masterplan

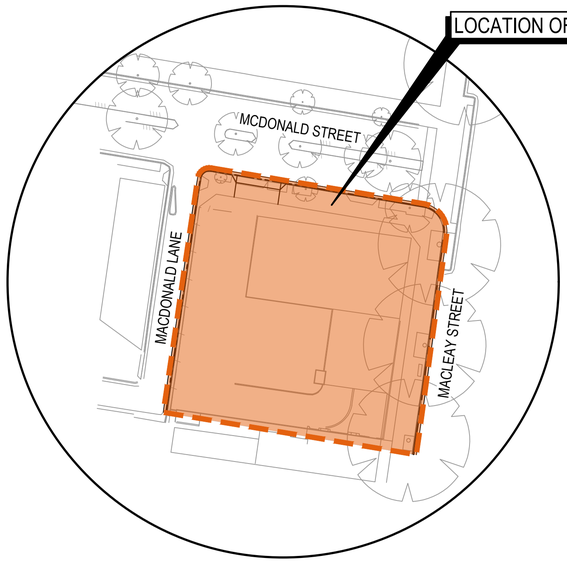
45-53 MACLEAY STREET, POTTS POINT

DEVELOPMENT APPLICATION - PRELIMINARY ONLY

CITY OF SYDNEY

DRAWING SCHEDULE

DRAWING NUMBER	DESCRIPTION
MST-AAP-CC-00-DRG-CI-0001	COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE
MST-AAP-CC-00-DRG-CI-0071	SITE PLAN
MST-AAP-CC-00-DRG-CI-0401	STORMWATER DRAINAGE PLAN
MST-AAP-CC-00-DRG-CI-0402	STORMWATER DRAINAGE DETAILS
MST-AAP-CC-00-DRG-CI-0421	MUSIC CATCHMENT PLANS
MST-AAP-CC-00-DRG-CI-0501	MACLEAY STREET PUBLIC DOMAIN PLAN
MST-AAP-CC-00-DRG-CI-0511	MCDONALD STREET PUBLIC DOMAIN PLAN
MST-AAP-CC-00-DRG-CI-0521	MCDONALD LANE PUBLIC DOMAIN PLAN



LOCALITY PLAN
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Surveyor

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Architect

SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client

TIME & PLACE

LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status

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Drawn	M. ALARCA	Original Size	A1
Designed	S. BUSAYONG	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project

MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title

COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE

Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289

Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30250517

Drawing No.: MST-AAP-CC-00-DRG-CI-0001

Issue: 01

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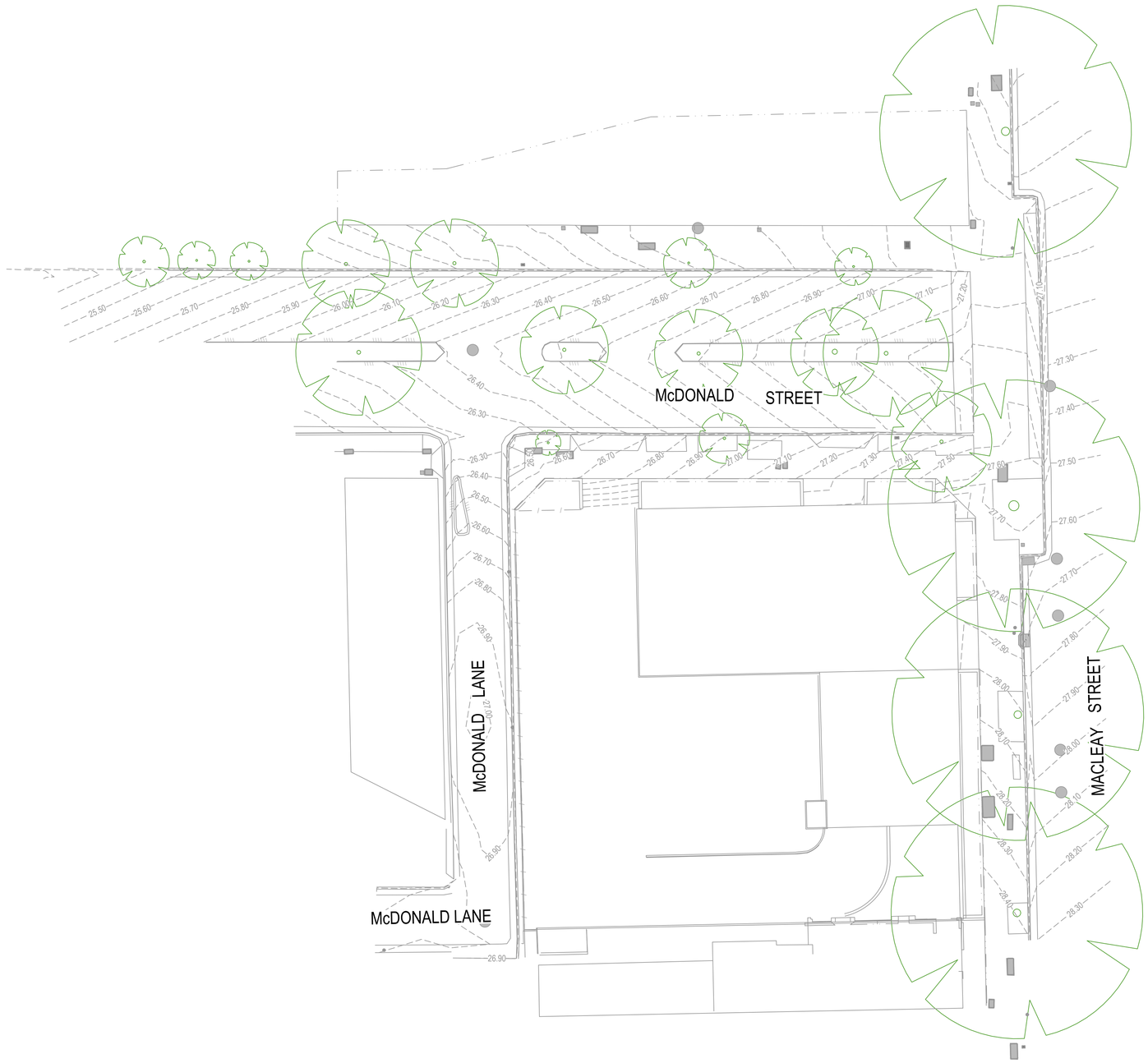
LEGEND

5.0 EXISTING SURFACE CONTOURS

EXISTING TREES



WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

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Surveyor

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Architect

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Client

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Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project

MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title

SITE PLAN

ARCADIS

Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289

Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number	30250517

Drawing No.	Issue
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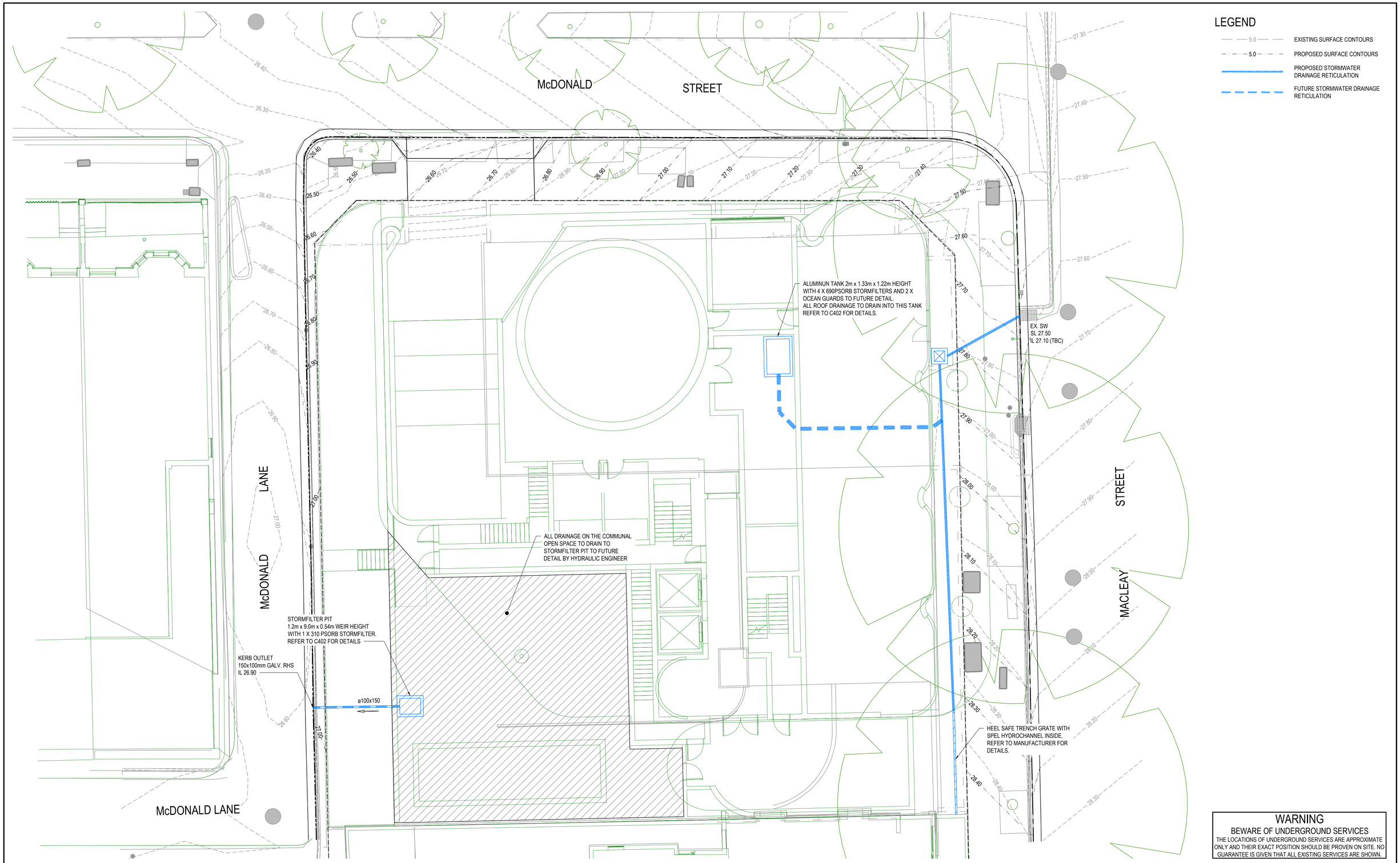

LEGEND

- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE CONTOURS
- PROPOSED STORMWATER DRAINAGE RETICULATION
- FUTURE STORMWATER DRAINAGE RETICULATION

WARNING
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Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

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Architect

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SYDNEY NSW 2000

Status

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Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project

MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title

STORMWATER DRAINAGE PLAN

ARCADIS
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ABN 76 104 485 289
Tel No: +61 2 8907 9000
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Project Number: 30250517

Drawing No.: MST-AAP-CC-00-DRG-CI-0401

Issue: 01

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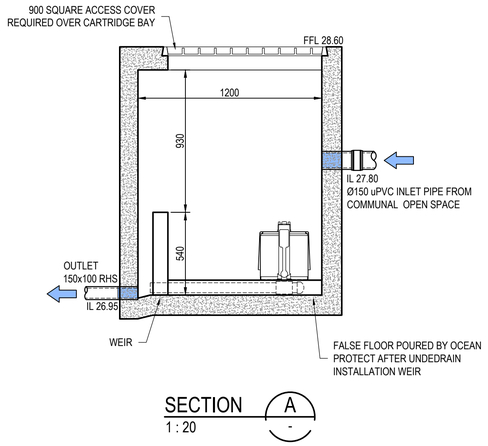
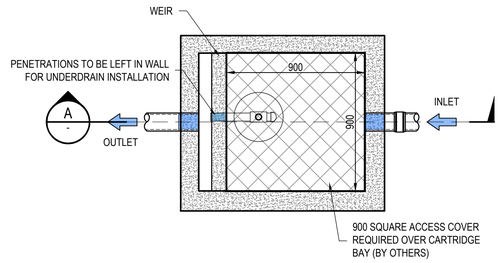
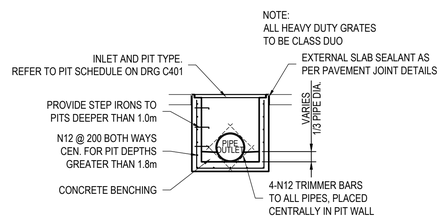


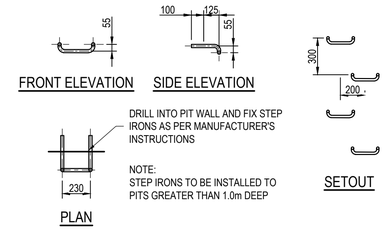
SECTION A
1 : 20



STORMFILTER PIT
SCALE: 1:20

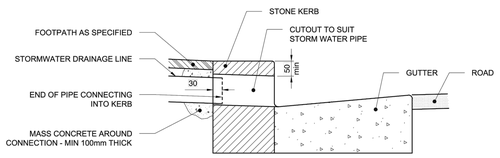


TYPICAL INLET PIT & JUNCTION PIT
SCALE: 1:25

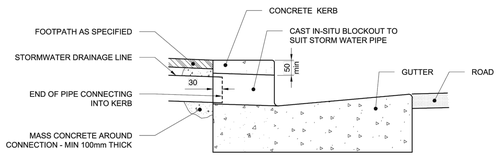


TYPICAL STEP IRON DETAIL
NTS

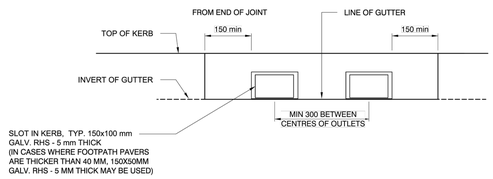
STONE KERB SECTION



CONCRETE KERB SECTION



ELEVATION

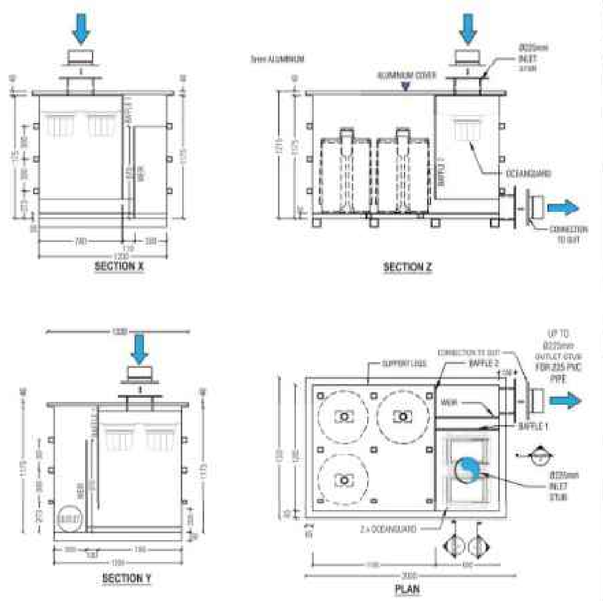


SCALE 1:10

NOTE: ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED

CITY OF SYDNEY	KERB & GUTTER KERB STORMWATER OUTLETS	Rev E Date 16.11.22 Approved S A	K&G Dwg No. 1.1.14

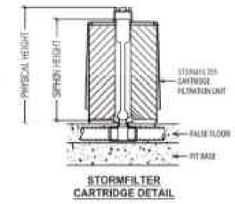
NOT FOR CONSTRUCTION



STORMFILTER DESIGN TABLE

- STORMFILTER TREATMENT CAPACITY VARIES BY NUMBER OF FILTER CARTRIDGES INSTALLED.
- THE STANDARD CONFIGURATION IS SHOWN. ACTUAL CONFIGURATION OF THE SPECIFIED STRUCTURE(S) PER CIVIL ENGINEER WILL BE SHOWN ON SUBMITTAL DRAWING(S).
- FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON ACTUATED, RADIAL FLOW, AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 178mm.

CARTRIDGE NAME / SIPHON HEIGHT (mm)	690	460	310
CARTRIDGE PHYSICAL HEIGHT (mm)	840	600	600
TYPICAL WEIR HEIGHT [H] (mm)	820	590	440
CARTRIDGE FLOW RATE FOR ZPG MEDIA (L/s)	1.6	1.1	0.7
CARTRIDGE FLOW RATE FOR PSORB MEDIA (L/s)	0.9	0.46	0.39



STORMFILTER
CARTRIDGE DETAIL

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID		
NUMBER OF CARTRIDGES REQD		3
SIPHON HEIGHT (310 / 460 / 690)		690
MEDIA TYPE (ZPG / PSORB)		PSORB
WATER QUALITY FLOW RATE (L/S)		
HYDRAULIC CAPACITY (L/S)		60

PIPE DATA:	I.L.	MATERIAL	DIAMETER
INLET PIPE #1			
INLET PIPE #2			
INLET PIPE #3			
OUTLET PIPE			

UNIT WEIGHT	210 kg
PRECAST LID WEIGHT	TBC

GENERAL NOTES

1. STRUCTURE SUPPLIED WITH FITTINGS SPECIFIED ON DRAWING.
2. IF THE PEAK FLOW RATE, AS DETERMINED BY THE SITE CIVIL ENGINEER, EXCEEDS THE PEAK HYDRAULIC CAPACITY OF THE SYSTEM, AN UPSTREAM BYPASS STRUCTURE IS REQUIRED.
3. ALL WATER QUALITY TREATMENT DEVICES REQUIRE PERIODIC MAINTENANCE. REFER TO OPERATION AND MAINTENANCE MANUAL FOR GUIDELINES AND ACCESS REQUIREMENTS.
4. SITE SPECIFIC SHOP DRAWING WILL BE PROVIDED ON PLACEMENT OF ORDER.
5. DRAWING NOT TO SCALE.

INSTALLATION NOTES

1. [illegible] STORMFILTER TANK.

OCEAN PROTECT
PHONE: 1300 854 733 www.oceanprotect.com.au

OCEAN PROTECT
ALUMINIUM GULLYPIT STORMFILTER
3 CARTRIDGE SYSTEM PLUS PIT INSERT
SPECIFICATION DRAWING

Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

Scales

0 0.5 1 1.5 2m
1 : 20

0 0.5 1 1.5 2 2.5m
1 : 25

100mm on Original

Surveyor
-

Architect
SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client
TIME & PLACE
LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures			
Drawn	M. ALARCA	Original Size	A1
Designed	J. PEÑA	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project
MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title
STORMWATER DRAINAGE
DETAILS

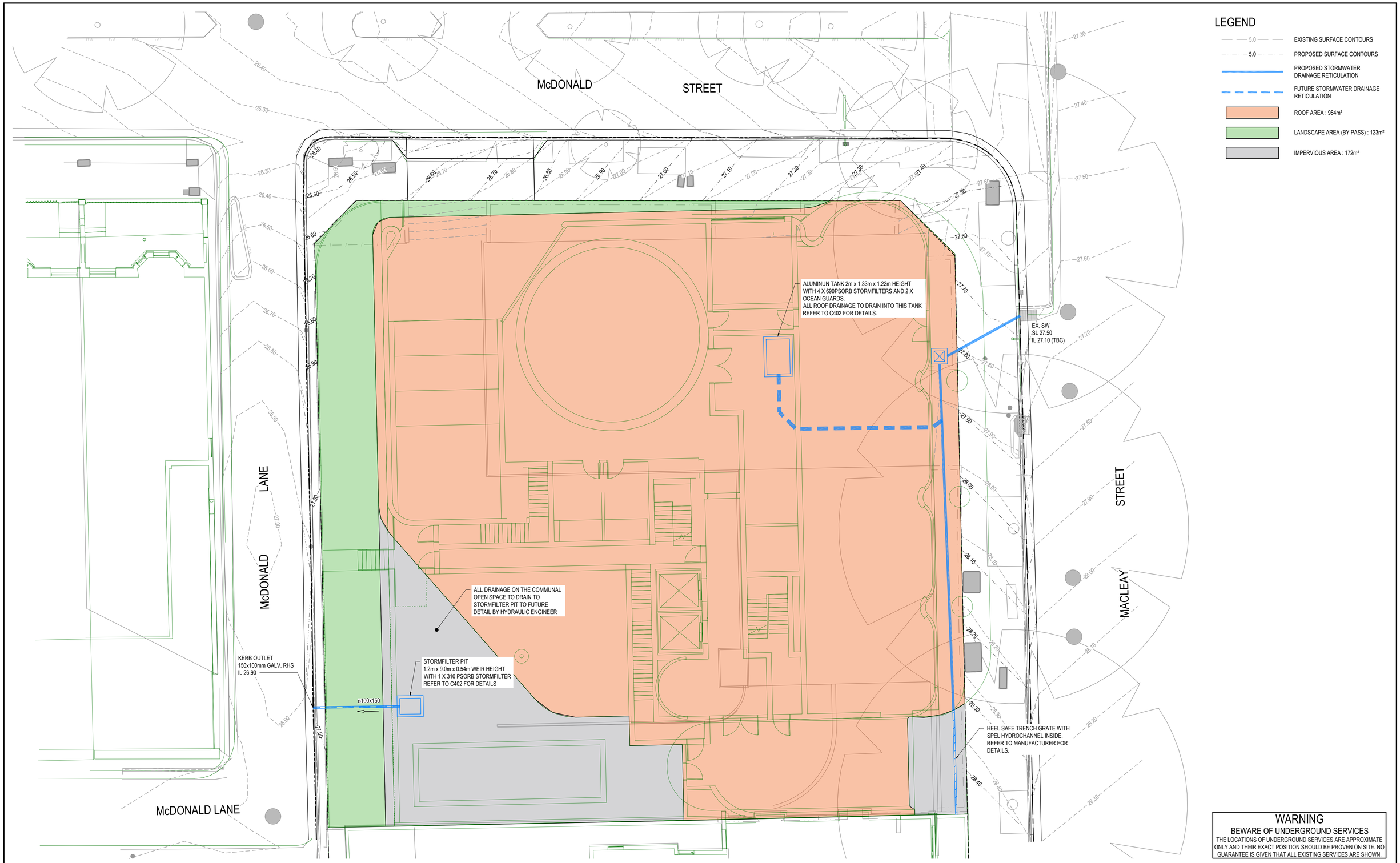
ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number 30250517

Drawing No. MST-AAP-CC-00-DRG-CI-0402

Issue 01

Date Plotted: 21 Feb 2025 - 12:43pm File Name: C:\Users\mamn0719\DC\ACCDocs\Arcadis ACC AU\AAU-30250517-45 To 53 Macleay Street\Project Files\10_WIP\10_Civil\STG_00\DRG\MST-AAP-CC-00-DRG-CI-0402-StromwaterDrainageDetails.dwg



LEGEND

- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE CONTOURS
- PROPOSED STORMWATER DRAINAGE RETICULATION
- FUTURE STORMWATER DRAINAGE RETICULATION
- ROOF AREA : 984m²
- LANDSCAPE AREA (BY PASS) : 123m²
- IMPERVIOUS AREA : 172m²

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

100mm on Original

Scales

0 1 2 4 6 8 10m

1 : 100

Surveyor

-

Architect

SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client

TIME & PLACE

LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures			
Drawn	M. ALARCA	Original Size	A1
Designed	J. PEÑA	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project

MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title

MUSIC CATCHMENT PLANS

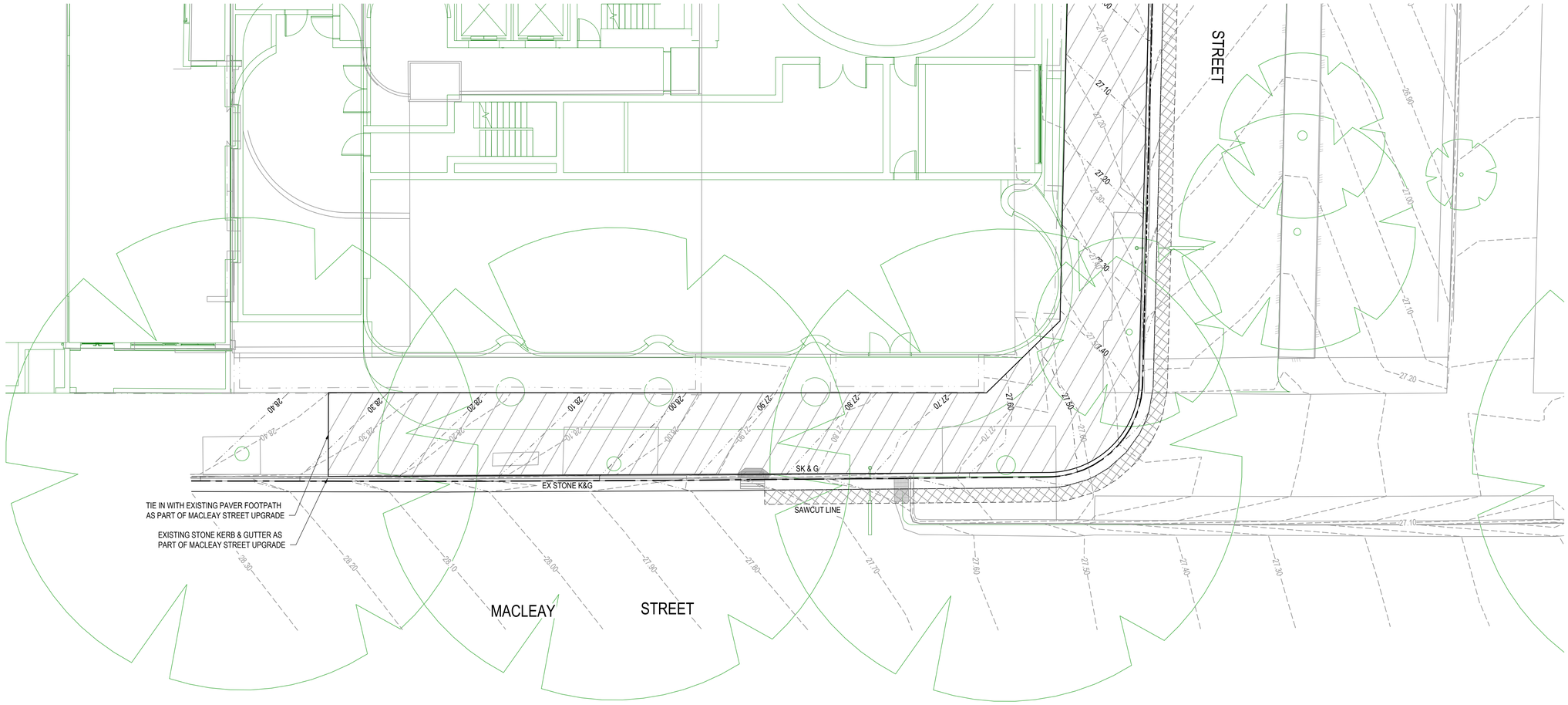
ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30250517

Drawing No.: MST-AAP-CC-00-DRG-CI-0421

Issue: 01

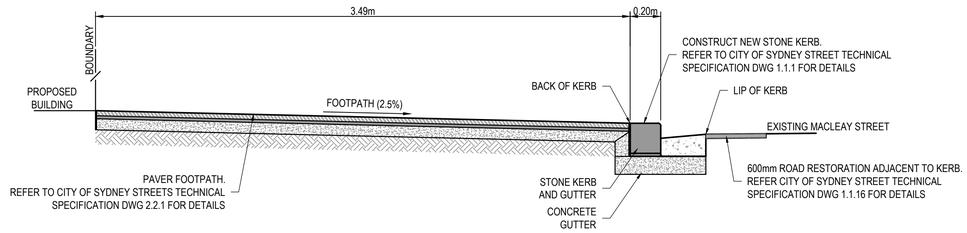
Date Plotted: 21 Feb 2025 - 01:01pm File Name: C:\Users\mamn0719\DC\ACCDocs\Arcadis ACC AU\AAU-30250517-45 To 53 Macleay Street\Project Files\10_WIP\10_Civil\STG_00\DRG\MST-AAP-CC-00-DRG-CI-0421-StormwaterCatchmentPlan.dwg



LEGEND

- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE CONTOURS
- K & G — CONCRETE KERB AND CONCRETE GUTTER AS PER CITY OF SYDNEY SPECIFICATION
- SK & G — STONE KERB AND CONCRETE GUTTER AS PER CITY OF SYDNEY SPECIFICATION
- VEHICULAR CROSSING AS PER CITY OF SYDNEY SPECIFICATION
- FOOTPATH PAVEMENT AS PER CITY OF SYDNEY SPECIFICATION
- MIN. 600mm WIDTH ROAD RESTORATION AS PER CITY OF SYDNEY SPECIFICATION
- LANDSCAPE AREA AS PER LANDSCAPE ARCHITECT DETAILS

PLAN
SCALE: 1:100



MACLEAY STREET
TYPICAL SECTION
SCALE: 1:20

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

Scales
0 1 2 4 6 8 10m
1 : 100
0 0.5 1 1.5 2m
1 : 20

Surveyor
-

Architect
SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client
TIME & PLACE
LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures			
Drawn	M. ALARCA	Original Size	A1
Designed	S. BUSAYONG	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project
MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title
MACLEAY STREET
PUBLIC DOMAIN
PLAN

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

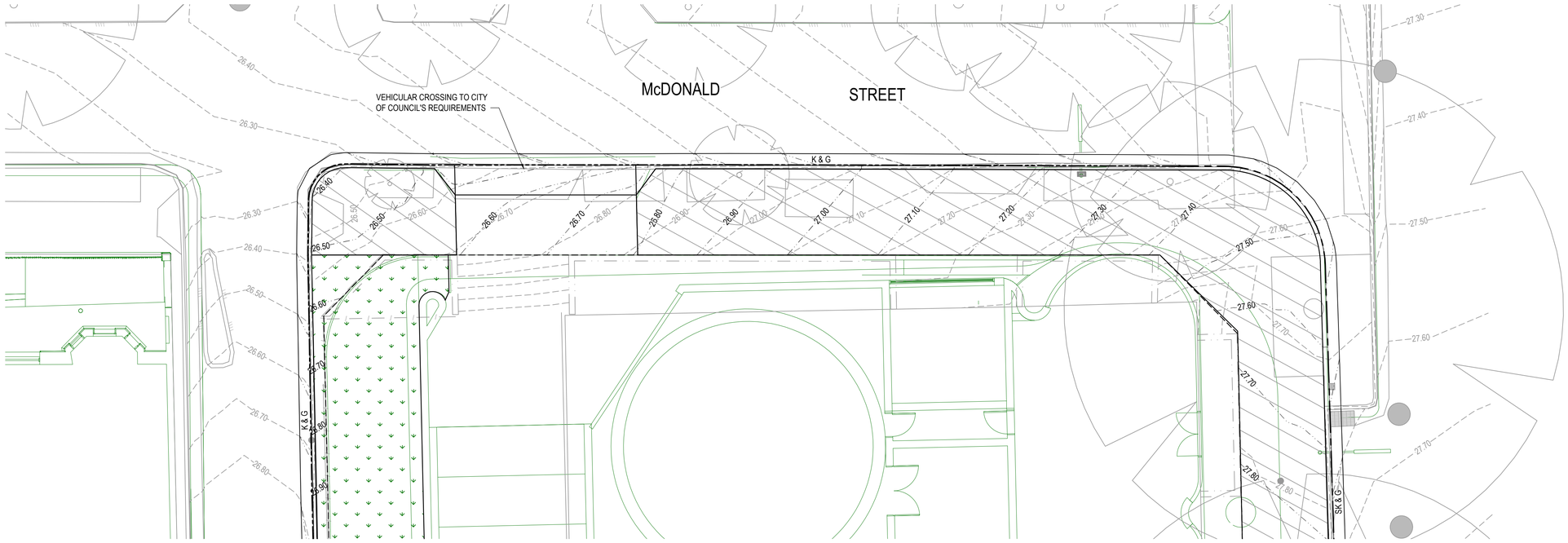
Project Number: 30250517

Drawing No.: MST-AAP-CC-00-DRG-CI-0501

Issue: 01

100mm on Original

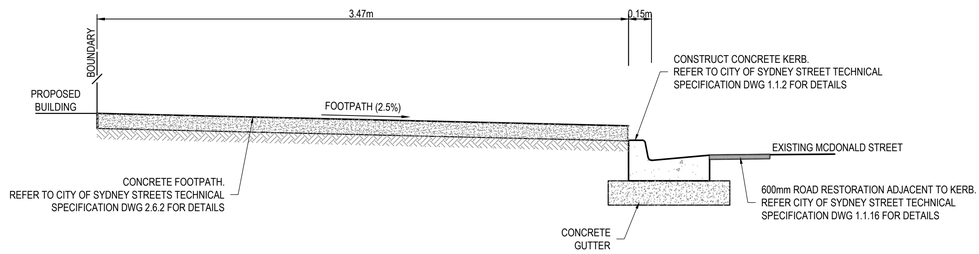
Date Plotted: 21 Feb 2025 - 12:53pm File Name: C:\Users\mamn0719\DC\ACCDocs\Arcadis ACC AU\AAU-30250517-45 To 53 Macleay Street\Project Files\10_WIP\10_Civil\STG_00\DRG\MST-AAP-CC-00-DRG-CI-0501-MacleayStreetPublicDomainPlan.dwg



PLAN
SCALE: 1:100

LEGEND

- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE CONTOURS
- K & G — CONCRETE KERB AND CONCRETE GUTTER AS PER CITY OF SYDNEY SPECIFICATION
- SK & G — STONE KERB AND CONCRETE GUTTER AS PER CITY OF SYDNEY SPECIFICATION
- VEHICULAR CROSSING AS PER CITY OF SYDNEY SPECIFICATION
- FOOTPATH PAVEMENT AS PER CITY OF SYDNEY SPECIFICATION
- MIN. 600mm WIDTH ROAD RESTORATION AS PER CITY OF SYDNEY SPECIFICATION
- LANDSCAPE AREA AS PER LANDSCAPE ARCHITECT DETAILS



MCDONALD STREET
TYPICAL SECTION
SCALE: 1:20

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

Scales
0 1 2 4 6 8 10m
1 : 100
0 0.5 1 1.5 2m
1 : 20

Surveyor
-

Architect
SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client
TIME & PLACE
LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures			
Drawn	M. ALARCA	Original Size	A1
Designed	S. BUSAYONG	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project
MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title
MCDONALD STREET
PUBLIC DOMAIN
PLAN

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30250517

Drawing No.: MST-AAP-CC-00-DRG-CI-0511

Issue: 01

100mm on Original

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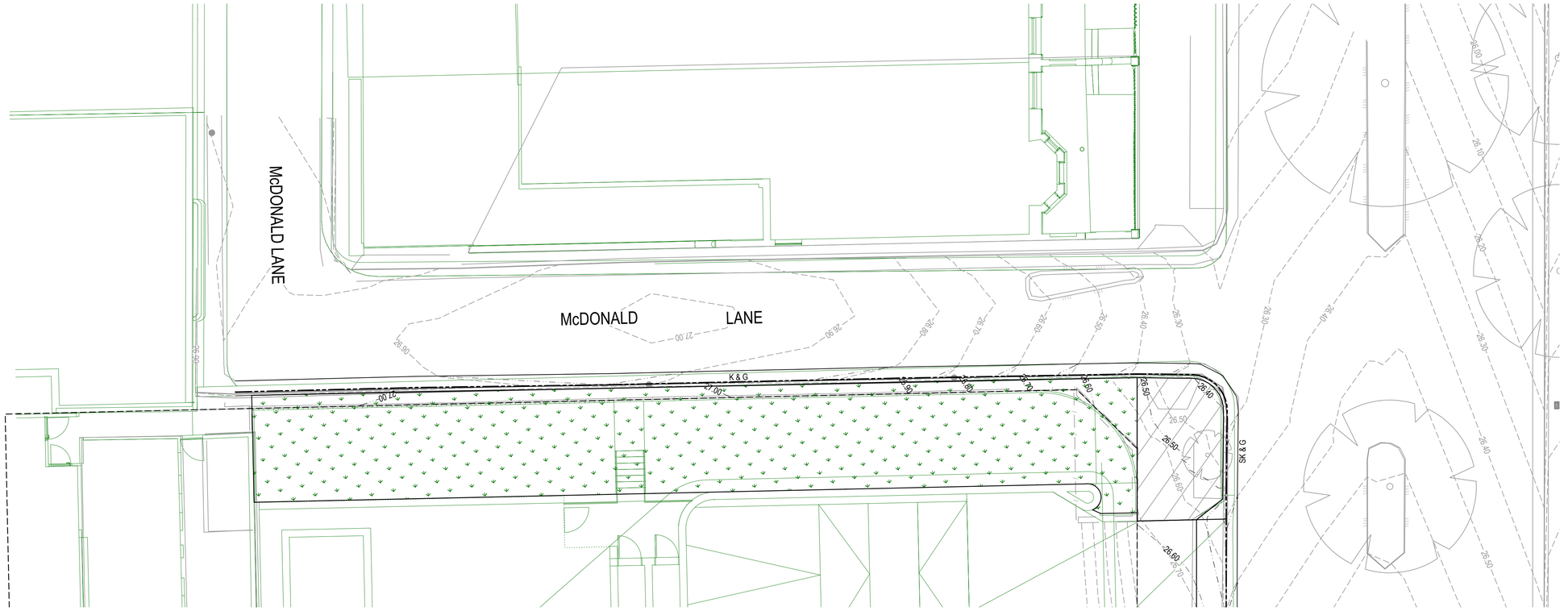
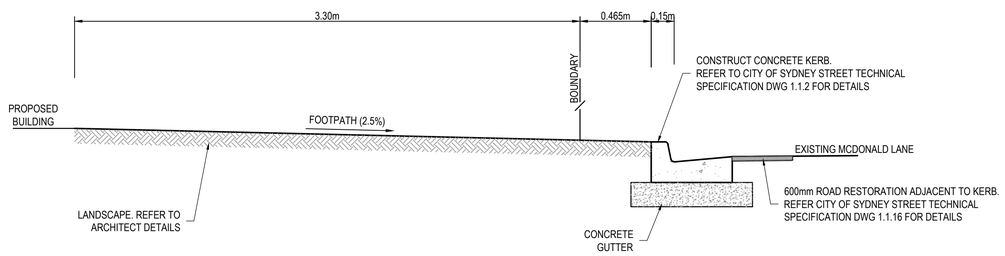
LEGEND

- 5.0 — EXISTING SURFACE CONTOURS
- 5.0 — PROPOSED SURFACE CONTOURS
- K & G — CONCRETE KERB AND CONCRETE GUTTER AS PER CITY OF SYDNEY SPECIFICATION
- SK & G — STONE KERB AND CONCRETE GUTTER AS PER CITY OF SYDNEY SPECIFICATION
- VEHICULAR CROSSING AS PER CITY OF SYDNEY SPECIFICATION
- FOOTPATH PAVEMENT AS PER CITY OF SYDNEY SPECIFICATION
- MIN. 600mm WIDTH ROAD RESTORATION AS PER CITY OF SYDNEY SPECIFICATION
- LANDSCAPE AREA AS PER LANDSCAPE ARCHITECT DETAILS



PLAN
SCALE: 1:100



MACLEAY STREET
TYPICAL SECTION
SCALE: 1:20

WARNING
BEWARE OF UNDERGROUND SERVICES
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Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

Scales

0 1 2 4 6 8 10m
1 : 100
0 0.5 1 1.5 2m
1 : 20

100mm on Original

Surveyor
-

Architect
SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client
TIME & PLACE
LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures			
Drawn	M. ALARCA	Original Size	A1
Designed	S. BUSAYONG	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project
MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title
MCDONALD LANE
PUBLIC DOMAIN
PLAN

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30250517

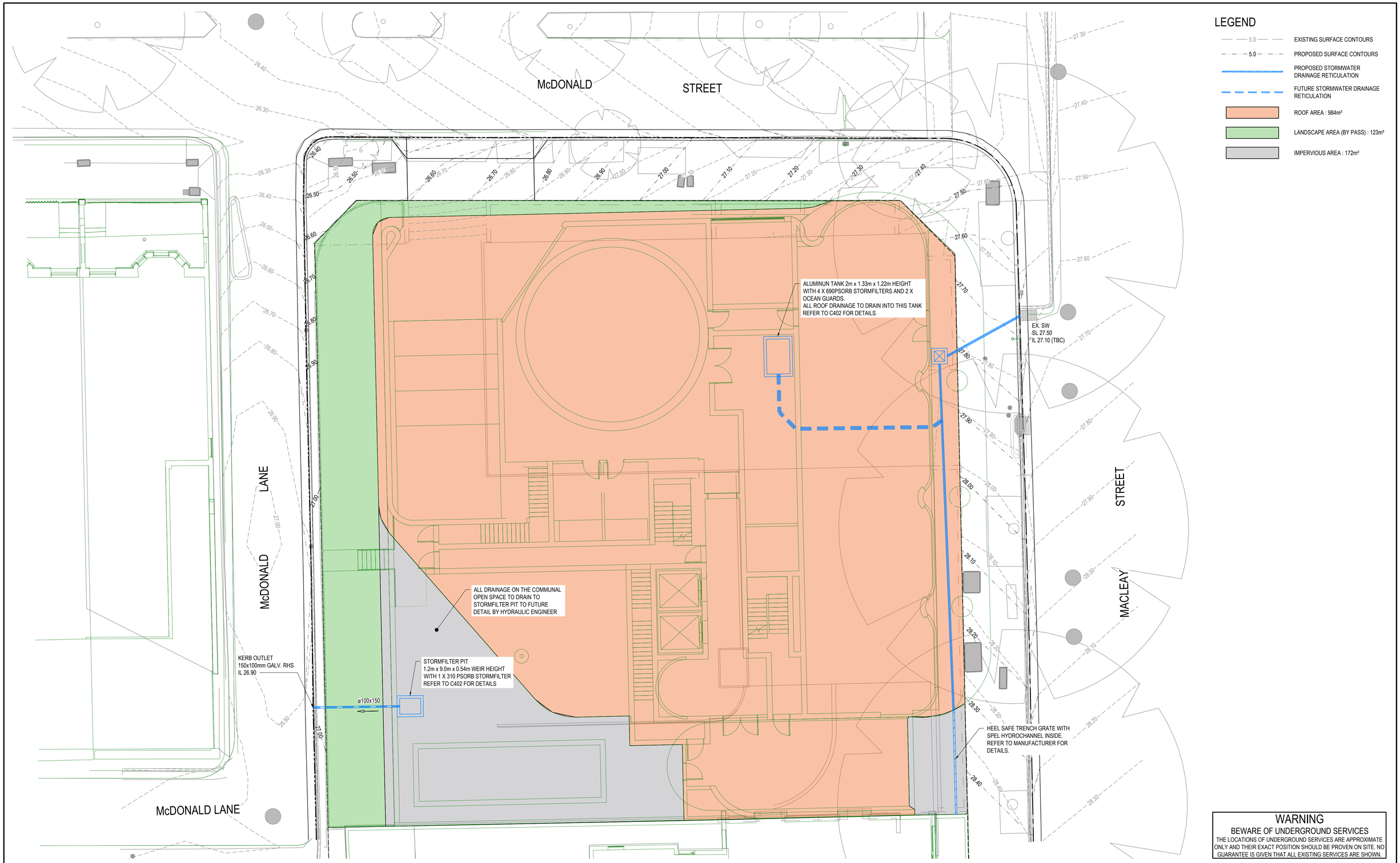
Drawing No.: MST-AAP-CC-00-DRG-CI-0521

Issue: 01

Date Plotted: 21 Feb 2025 - 12:55pm File Name: C:\Users\mamn0719\DC\ACCDocs\Arcadis ACC AU\AAU-30250517-45 To 53 Macleay Street\Project Files\10_WIP\10_Civil\STG_00\DRG\MST-AAP-CC-00-DRG-CI-0521-McdonaldLanePublicDomainPlan.dwg

APPENDIX B

Stormwater Drainage Concept Plan (Water Quality and Stormwater Detention Strategy Catchment Plan)



LEGEND

- EXISTING SURFACE CONTOURS
- PROPOSED SURFACE CONTOURS
- PROPOSED STORMWATER DRAINAGE RETICULATION
- FUTURE STORMWATER DRAINAGE RETICULATION
- ROOF AREA : 984m²
- LANDSCAPE AREA (BY PASS) : 123m²
- IMPERVIOUS AREA : 172m²

WARNING
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Issue	Description	DR	CH	VE	Date
01	FOR INFORMATION	MA	NB	NB	21.02.25

100mm on Original

Scales

0 1 2 4 6 8 10m

1 : 100

Surveyor

-

Architect

SJB ARCHITECTS
LEVEL 2, 490 CROWN STREET, SURRY HILLS NSW 2010

Client

TIME & PLACE

LEVEL 38, 264 GEORGE STREET
SYDNEY NSW 2000

Status

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

Original Issue Signatures			
Drawn	M. ALARCA	Original Size	A1
Designed	J. PEÑA	Height Datum	AHD
Project Manager	N. BIASON	Grid	
Verified	N. BIASON		

Project

MACLEAY STREET
45-53 MACLEAY STREET
POTTS POINT NSW 2011

Title

MUSIC CATCHMENT PLANS

ARCADIS
Arcadis Australia Pacific Pty Limited
Level 16, 580 George Street
SYDNEY NSW 2000
ABN 76 104 485 289
Tel No: +61 2 8907 9000
www.arcadis.com/au

Project Number: 30250517

Drawing No.: MST-AAP-CC-00-DRG-CI-0421

Issue: 01

Date Plotted: 21 Feb 2025 - 01:01pm File Name: C:\Users\mamn0719\DC\ACCDocs\Arcadis ACC AU\AAU-30250517-45 To 53 Macleay Street\Project Files\10_WIP\10_Civil\STG_00\DRG\MST-AAP-CC-00-DRG-CI-0421-StormwaterCatchmentPlan.dwg

APPENDIX C

Sydney Water email Correspondence

Biason, Nemesio Jr

From: Stormwater <Stormwater@sydneywater.com.au>
Sent: Monday, 24 February 2025 9:20 AM
To: Gong, Stella
Cc: Biason, Nemesio Jr
Subject: RE: [External] 45-53 Macleay Street, Potts Point NSW 2011 - Stormwater Requirement Check

Stella,

On-Site Detention is not required for any development at this location.

Please note that Council as a flood plain management authority, may impose On-Site Detention.

Best Regards

Jeya Jeyadevan
Senior Capability Assessor
Water and Environment Services
Sydney Water, Level 13, 1 Smith Street, Parramatta NSW 2150

Sydney WATER

Phone: 8849 6118
Mobile: 0409 318 827
jeya.jeyadevan@sydneywater.com.au

From: Gong, Stella <Xin.Gong@arcadis.com>
Sent: Thursday, 13 February 2025 10:02 AM
To: Stormwater <Stormwater@sydneywater.com.au>
Cc: Biason, Nemesio Jr <Nemesio.BiasonJr@arcadis.com>
Subject: [External] 45-53 Macleay Street, Potts Point NSW 2011 - Stormwater Requirement Check

CAUTION: This email originated from outside the organisation. Do not click links or open attachments unless you recognise the sender and know the content is safe.

Hi,

We are currently taking over the project from van der Meer for the proposed redevelopment at 45-53 Macleay Street, Potts Point and wanted to check if the OSD and stormwater requirements are still the same or have changed from 2021.

The site is still 100% impervious and the site area is 1275m^2.

Kind regards

Stella Gong (she/her)

Graduate Engineer | Urban Development & Regeneration NSW

Arcadis Australia Pacific

Level 16, 580 George Street, Sydney NSW | 2000 | Australia

T. +61 (0) 414 949 830 E.Xin.Gong@arcadis.com
www.arcadis.com

APPENDIX D

MUSIC-link Report

MUSIC-*link* Report

Project Details		Company Details	
Project:	Macleay - QA	**Company:**	Arcadis
Report Export Date:	20/02/2025	**Contact:**	
Catchment Name:	Macleay - QA	**Address:**	Level 16/580 George St, Sydney NSW 2000, Australia
Catchment Area:	0.127ha	**Phone:**	
Impervious Area*:	86.50%	**Email:**	
Rainfall Station:	66062 SYDNEY		
Modelling Time-step:	6 Minutes		
Modelling Period:	1/01/1982 - 31/12/1986 11:54:00 pm		
Mean Annual Rainfall:	1278mm		
Evapotranspiration:	1265mm		
MUSIC Version:	6.3.0		
MUSIC-link data Version:	6.35		
Study Area:	City of Sydney Sandy Loam Soil		
Scenario:	City of Sydney Development		

* takes into account area from all source nodes that link to the chosen reporting node, excluding Import Data Nodes

Treatment Train Effectiveness		Treatment Nodes		Source Nodes	
Node: Post-Development Node	**Reduction**	**Node Type**	**Number**	**Node Type**	**Number**
Flow	-0.0263%	Sedimentation Basin Node	2	Urban Source Node	4
TSS	85.4%	Generic Node	5		
TP	73%				
TN	62.7%				
GP	98.5%				

Comments

Based on previous proposed setup

Passing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Post	Post-Development Node	% Load Reduction	None	None	-0.02
Post	Post-Development Node	GP % Load Reduction	90	None	98.5
Post	Post-Development Node	TN % Load Reduction	45	None	62.7
Post	Post-Development Node	TP % Load Reduction	65	None	73
Post	Post-Development Node	TSS % Load Reduction	85	None	85.4
Sedimentation	SF Chamber (0.6 m2)	% Reuse Demand Met	None	None	0
Sedimentation	SF Chamber (0.6 m2)	% Reuse Demand Met	None	None	0
Sedimentation	SF Chamber (0.6 m2)	Exfiltration Rate (mm/hr)	0	0	0
Sedimentation	SF Chamber (0.6 m2)	Exfiltration Rate (mm/hr)	0	0	0
Sedimentation	SF Chamber (0.6 m2)	Extended detention depth (m)	0.25	1	0.77
Sedimentation	SF Chamber (0.6 m2)	Extended detention depth (m)	0.25	1	0.39
Sedimentation	SF Chamber (0.6 m2)	High Flow Bypass Out (ML/yr)	None	None	0
Sedimentation	SF Chamber (0.6 m2)	High Flow Bypass Out (ML/yr)	None	None	0
Urban	Commercial Impervious (0.002 ha)	Area Impervious (ha)	None	None	0.001
Urban	Commercial Impervious (0.002 ha)	Area Pervious (ha)	None	None	0.000
Urban	Commercial Impervious (0.002 ha)	Total Area (ha)	None	None	0.002
Urban	Commercial Impervious (0.0153 ha)	Area Impervious (ha)	None	None	0.014
Urban	Commercial Impervious (0.0153 ha)	Area Pervious (ha)	None	None	0.000
Urban	Commercial Impervious (0.0153 ha)	Total Area (ha)	None	None	0.015
Urban	Landscaped Area	Area Impervious (ha)	None	None	0.000
Urban	Landscaped Area	Area Pervious (ha)	None	None	0.011
Urban	Landscaped Area	Total Area (ha)	None	None	0.012
Urban	Roof Area (0.0984 ha)	Area Impervious (ha)	None	None	0.092
Urban	Roof Area (0.0984 ha)	Area Pervious (ha)	None	None	0.005
Urban	Roof Area (0.0984 ha)	Total Area (ha)	None	None	0.098

Only certain parameters are reported when they pass validation

Failing Parameters

Node Type	Node Name	Parameter	Min	Max	Actual
Sedimentation	SF Chamber (0.6 m2)	Notional Detention Time (hrs)	8	12	3.92
Sedimentation	SF Chamber (0.6 m2)	Notional Detention Time (hrs)	8	12	4.96
Sedimentation	SF Chamber (0.6 m2)	Total Nitrogen - k (m/yr)	500	500	0
Sedimentation	SF Chamber (0.6 m2)	Total Nitrogen - k (m/yr)	500	500	0
Sedimentation	SF Chamber (0.6 m2)	Total Phosphorus - k (m/yr)	6000	6000	0
Sedimentation	SF Chamber (0.6 m2)	Total Phosphorus - k (m/yr)	6000	6000	0
Sedimentation	SF Chamber (0.6 m2)	Total Suspended Solids - k (m/yr)	8000	8000	0
Sedimentation	SF Chamber (0.6 m2)	Total Suspended Solids - k (m/yr)	8000	8000	0

Only certain parameters are reported when they pass validation