PATTERSON Building Group

SSD 8378 – Construction of Gledswood Hills Public School – Submission of Construction Soil & Water Management Sub-Plan in accordance with Condition B19

Please refer to the below ***SSD 8378 GHPS Condition Satisfaction Table*** in relation to the above condition requirements and location within the CDWMSP attached herewith this letter.

SSDA Ref.	Requirement Summary	Documentation Reference
B19	*The Applicant must prepare a Construction Soil and Water Management Sub-Plan (CSWMSP) and the plan must address, but not be limited to the following:*	**Appendix E5 – Construction Soil & Water Management Sub-Plan Rev 3 - 16/10/23**
	(a) be prepared by a suitably qualified expert, in consultation with Council;	• **PBG Consolidated Plan - Pg 1 – HSEQ Manager** • **Approved Stormwater Management Report – Revision D – WCE Appendix C** • **Camden Council Consultation – Appendix D** • **Appendix F - CVs**
	(b) be submitted to the approval of the Certifier prior to the commencement of construction;	**Appendix E – Certifier Submission**
	(c) describe all erosion and sediment controls to be implemented during construction.	**Erosion & Sediment Control Plans (Section 4 – Pg. 4-5)**
	(d) provide a plan of how all construction works will be managed in a wet-weather events (i.e. storage of equipment, stabilisation of the Site);	**Management of Site During Wet-Weather Events (Section 5 – Pg. 6) Appendix B – Site Management Plan**
	(e) detail all off-Site flows from the site; and	**PBG - Stormwater Management & Discharge (Section 2 – Pg. 4) WCE Appendix B – Stormwater Mgt (Section 2.4 - Pg. 19)**
	(f) describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to 1 in 5-year ARI.	**PBG - Management of Site During Wet- Weather Events (Section 5 – Pg.6) WCE Appendix B – Flood Risk (Section 4 - Pg. 7)**

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If you require clarification of any aspect of our submission, please do not hesitate to contact me.

Yours faithfully,

Chris Sposito
HSEQ Manager
Mobile: 0408 625 030
Email: chriss@pattersonbuild.com.au

Appendix E5 - Construction Soil & Water Management Sub-Plan

626 – Gledswood Hills Public School – Stage 2

Client:	SINSW
Project Address:	78 The Hermitage Way, Gledswood Hills NSW 2557
Prepared By:	Chris Sposito – HSEQ Manager
Revision & Date:	3 – 16/10/2023

TABLE OF CONTENTS

1 INTRODUCTION

This Construction Soil & Water Management Sub-Plan defines the Patterson Building Group (PBG) system & processes for the management of potential soil & water issues for the Gledswood Hills Public School – Stage 2 project and outlines how the requirements of the specification have been addressed.

In accordance with the SSD Approval Conditions for *SSD 8378 - New Gledswood Hills Public School*, Patterson Building Group herby confirms that this Construction Soil & Water Management Sub-Plan has been developed to assist PBG fully satisfy condition B14 section e & condition B19 (expanded upon below.

This Construction Soil & Water Management Sub-Plan has been developed by PBG's HSEQ Manager based on the 'Stormwater Management Report – Revision D dated 19 October 2017' prepared by Woolacotts Consulting Engineers (Appendix C) and in consultation with Camden Council (Appendix D).

1.1 B19 Condition Satisfaction Table

SSDA Ref.	Requirement Summary	Documentation Reference
B19	*The Applicant must prepare a Construction Soil and Water Management Sub-Plan (CSWMSP) and the plan must address, but not be limited to the following:*	**Appendix E5 – Construction Soil & Water Management Sub-Plan Rev 3- 16/10/23**
	(a) be prepared by a suitably qualified expert, in consultation with Council;	• **PBG Consolidated Plan - Pg 1 – HSEQ Manager** • **Approved Stormwater Management Report – Revision D – WCE Appendix B** • **Camden Council Consultation – Appendix D** • **Appendix F - CVs**
	(b) be submitted to the approval of the Certifier prior to the commencement of construction;	**Appendix E – Certifier Submission**
	(c) describe all erosion and sediment controls to be implemented during construction.	**Erosion & Sediment Control Plans (Section 4 – Pg. 4-5)**
	(d) provide a plan of how all construction works will be managed in a wet-weather events (i.e. storage of equipment, stabilisation of the Site);	**Management of Site During Wet-Weather Events (Section 5 – Pg. 6) Appendix B – Site Management Plan**
	(e) detail all off-Site flows from the site; and	**PBG - Stormwater Management & Discharge (Section 2 – Pg. 4) WCE Appendix B – Stormwater Mgt (Section 2.4 - Pg. 19)**
	(f) describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to 1 in 5-year ARI.	**PBG - Management of Site During Wet- Weather Events (Section 5 – Pg.6) WCE Appendix B – Flood Risk (Section 4 - Pg. 7)**

2 STORMWATER MANAGEMENT & DISCHARGE

The site is located near the top of a hill, well above nearby drainage channels. Council's flood map for the area does not identify the site as flood affected. While the map does note that the site is in an area subject to development and flood conditions may change, the location of the site is such that even with changes in the precinct, it will not become flood affected.

Upon site establishment PBG will monitor all drainage entry and discharge points. All drains are to be immediately controlled with fabric and/or silt fences to filter water entering and exiting the site. During construction works PBG will create one catchment area for heavy inclement weather, one being on the lower side of site.

3 CONTROLLING SEDIMENT LEAVING SITE

PBG site staff will heavily monitor the subcontractor's plant and machinery entering and leaving the construction site. When plant and machinery are leaving site with effected tyres, tracks and/or bodywork the following methods will be implemented;

- Cattle Grids and/or ballast installed to site exits.
- Water / hose available to thoroughly clean.
- Street sweeper/ cleaner available to clean any sediment taken onto the roadways.

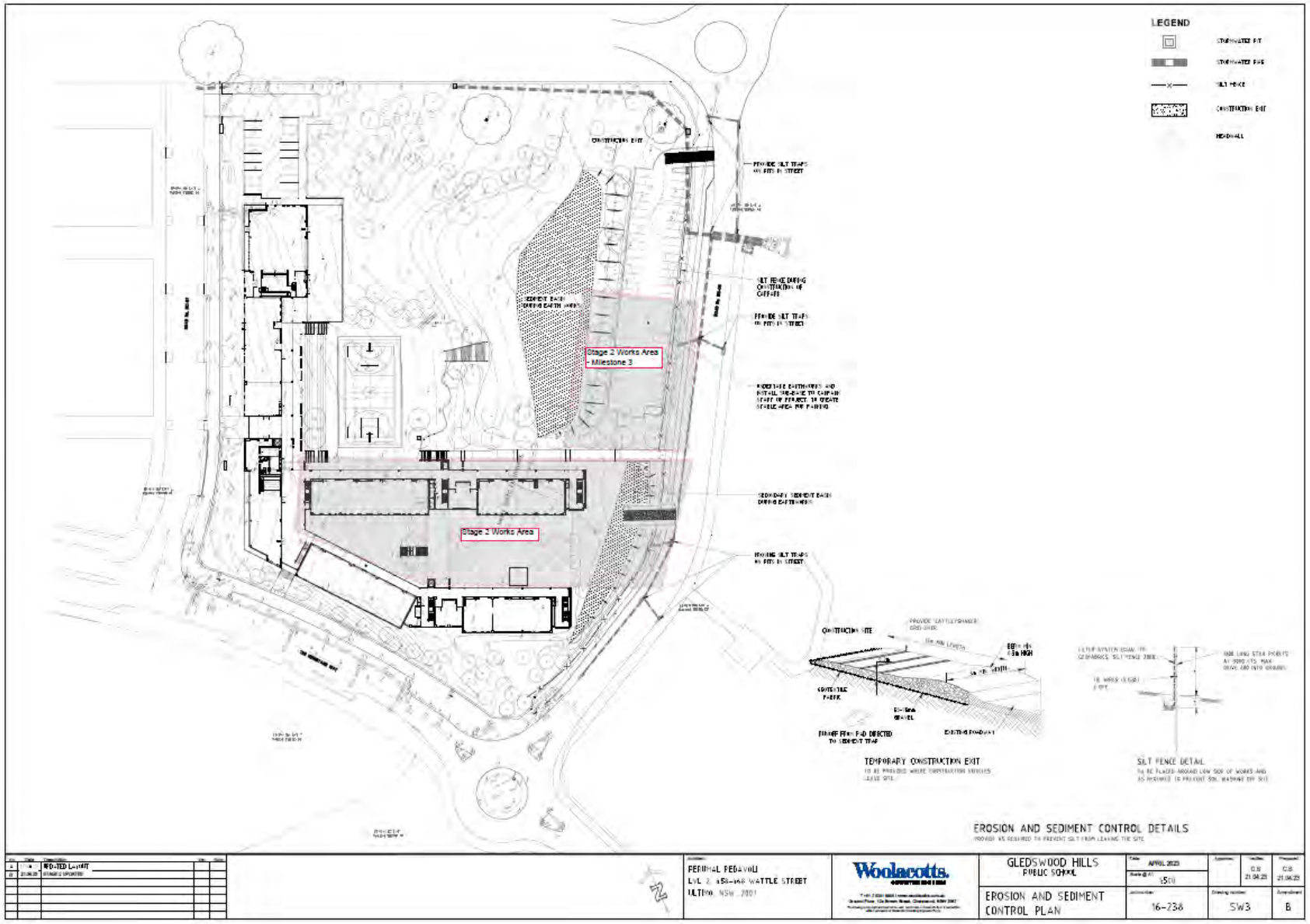
Furthermore, PBG will continually monitor the adequacy of installed silt controls such as silt fences, geofabric and eco logs etc.

4 EROSION & SEDIMENT CONTROL PLANS

PBG will comply with the Section 120 of the Protection of the Environment Operations Act 1997 during the construction works of this project. All no stage will water or construction waste be discharged into the stormwater system, with control measures to be implemented in accordance with in accordance with the 'Blue Book' - Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004) .

The existing stormwater drainage system will be protected prior to construction works commencing and will be monitored and maintained during the construction programme. Site inspections are conducted on a weekly basis at minimum, or daily if changes, or new works occur onsite. Inspections are also undertaken before rain events to ensure ERSED controls are in place, and after rain events to undertake maintenance if required. The ground levels to this project are very flat so there is low risk of erosion and sedimentation and downstream impacts, given the relatively flat ground erosion and sedimentation controls to be installed around the works poses a low risk for sedimentation pollution.

Please refer to the following page and **Appendix A** for detailed ERSED plan & details:


LEGEND
Stage 2 Works Area - Milestone 3
Stage 2 Works Area
TEMPORARY CONSTRUCTION EXIT
SILT FENCE DETAIL
EROSION AND SEDIMENT CONTROL DETAILS
GLEDSWOOD HILLS PUBLIC SCHOOL
EROSION AND SEDIMENT CONTROL PLAN
16-736
SW3
B

5 MANAGEMENT OF SITE DURING WET-WEATHER EVENTS

To mitigate approaching storms and the like, PBG will implement swale runs and water catchment areas to hold large portions of water and seal stockpiles utilising geofabric covering. The swale cuts will reduce the speed of the water and guide the water to the holding areas, eliminating the chances of travelling off site uncontrolled.

All drains and controls to be inspected before (if possible) and after rainfall to ensure controls are adequate Controls such as: hay bales, eco logs, silt socks to all water egress paths. In the instance that water does travel off site uncontrolled, PBG will have all drains covered with geofabric and silt socks placed in all active gutters to drop sediment out of the water.

All materials and equipment will be placed in appropriate locations such as hard stands and/or bitumen for stability purposes. Pending the amount of rainfall and impact to grounds, a Geotech may be required for inspection, the site manager will determine if this inspection Is required.

Please refer to **Appendix B – Site Management Plan** for designated storage & parking locations onsite.

Furthermore, from review of Council's Flood Risk Management Plan, it can be concluded the that the site is of a low risk to flooding (including potential to be affected by a 1 in 5-year Average Rainfall flood event) therefore the standard control measures defined within this plan are deemed sufficient.

Stormwater & Flood Flows

Within the site a network of pits and pipes will be provided to capture stormwater and drain to the connection points provided by the developer. Pipe systems throughout the site will be designed for a 1 in 20 year ARI storm event. Overland flow paths will be provided to cater for the 1 in 100 year storm event.

A precinct wide detention and water treatment basin is located to the east of the site. The basin has been designed as a detention basin for storms up to a 1 in 100 year ARI storm event and as a water quality basin for a 1 in 3 month ARI storm. The design of the basin includes the catchment area of the school.

Therefore, no additional treatment measures or detention are proposed for the school site, as the precinct wide basin meets Council's requirements for detention and treatment.

The site drainage system and the precinct wide basin also comply with the requirements of Guidelines for developments adjoining land managed by the Department of Planning and Environment and Council's relevant policies.

6 COMPLIANCE

Statutory Requirements:

Describe all erosion and sediment controls, describe how construction works will be managed within wet weather events, detail off site flows from site, describe measures that are to be implemented to manage large rainfall occurrences.

Limits & Performance Measures:

All erosion and sediment controls are to be visually managed daily and inspected within the monthly environmental inspection. All employees made aware of soil and water management requirements

Specific Performance Indicators:

The following to be managed for duration of construction works;

- On site visual inspections of erosion & sediment controls
- Maintain physical swales and catchment areas
- Maintain water catchment areas
- Available storage areas during wet weather

Measures Used to Comply with Statutory Requirements:

- Complete frequent environmental inspections
- Maintain sediment controls and environmental housekeeping Maintain records for any impacts encountered.

Monitoring & Reporting:

- Daily visual monitoring and monthly environmental inspections will be implemented to monitor environmental impacts. Maintained within site diary.
- Inspections conducted before and after rain downfall
- Management of effectiveness will be captured under the monthly environmental inspections and current site sediment controls. If impacts continue, PBG to conduct internal audit on methods to improve soil water management and implement all selected corrective measures

Managing & Reporting Incidents & Complaints:

- All incidents and/or non-compliances that may arise will be documented and the client will be notified immediately on the same business day. This will be documented within the site diary or under the environmental checklist.
- Complaints can be received on a site level from surrounding occupants If the issue is not of serious nature the construction team will close out this complaint appropriately If the complaint is of serious nature this will be elevated to the client immediately. This would be documented/responded to in fortnightly client meetings and/or monthly PCG reports.
- Failure to comply with statutory requirements would result in an immediate NCR and review possibility of terminating contract.

Periodic Review:

The Soil Water Management Sub-Plan will be reviewed on a 6 monthly basis to find any ways to improve the current performance This review will be documented within the site diary & PMP Review & Amendments section.

Areas to be reviewed include;

- Weekly & Monthly environmental inspections and audits,
- Site functioning and cleanliness,
- Prior impacts
- Prior incidents

Furthermore. PBG will review performance of soil and water management thus far via gathering and analysing:

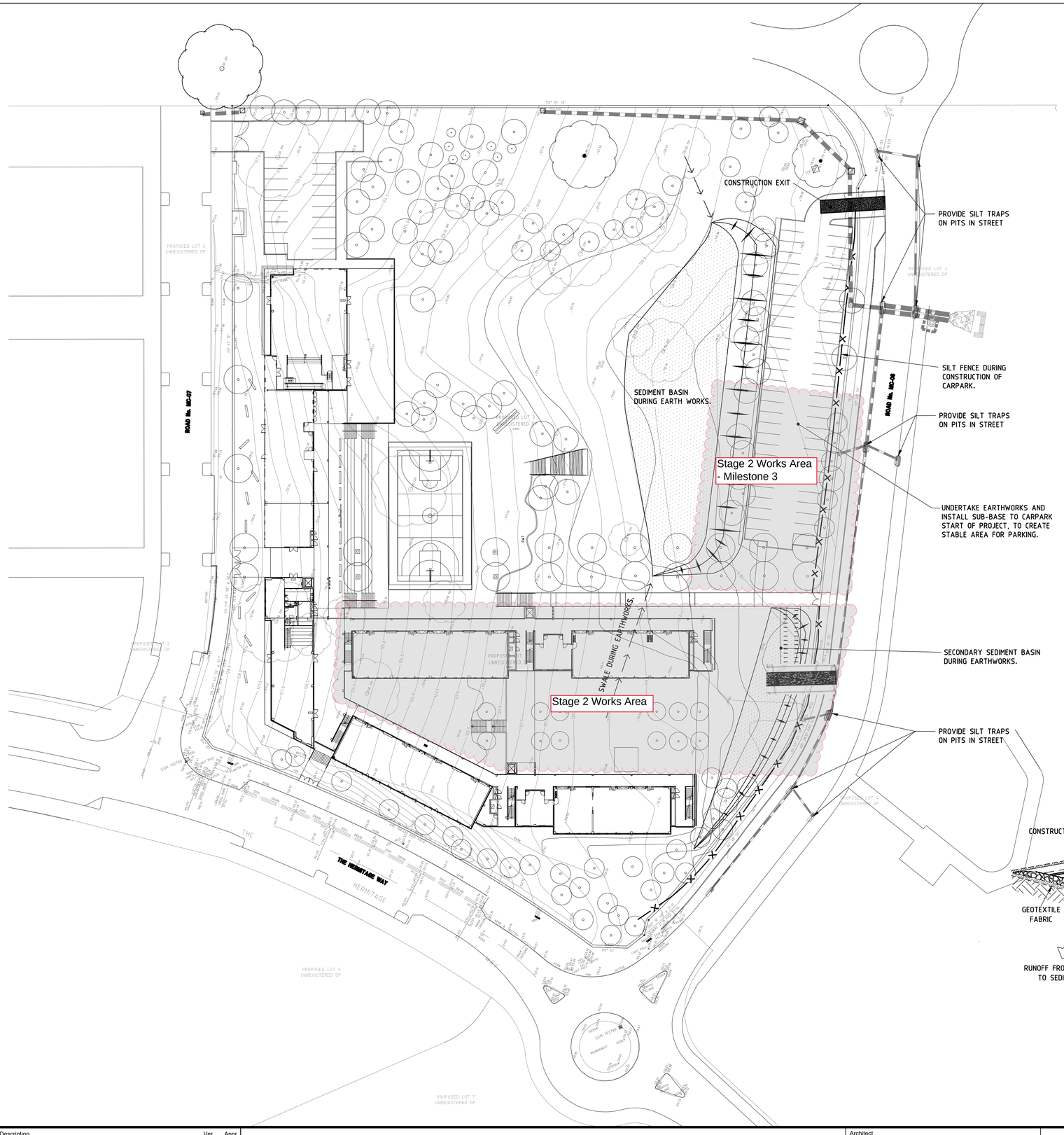
- Environmental inspections, environmental checklists and audits,
- Performance during inclement weather patterns.
- Affects post inclement weather patterns,
- Impacts to surrounding stakeholders and community.

7 AMENDMENTS

REVISION	DATE	SECTION	DESCRIPTION OF AMENDMENTS
2	21/04/23	All	Updates per SINSW Compliance feedback 21.04.23
		1.1	B19 Condition satisfaction table added.
"	"	5	Reference to OEH updated to Department of Planning and Environment
"	"	8.2	Appendix B – Site Management Plan added for B19d
"	"	8.6	Appendix F – CVs added for B19a
3	16/10/23	4/8.1	Appendix A – ERSED plan revision date corrected to date of CSWMSP Rev 2 Issue 21/04/23 per IEA1 Feedback (C38)

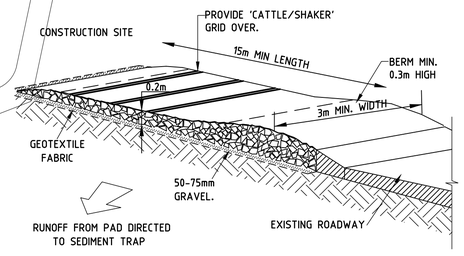
8 APPENDICIES

8.1 Appendix A - Project ERSED Plan



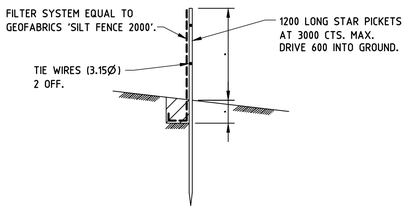
LEGEND

- STORMWATER PIT
- STORMWATER PIPE
- SILT FENCE
- CONSTRUCTION EXIT
- HEADWALL



TEMPORARY CONSTRUCTION EXIT

TO BE PROVIDED WHERE CONSTRUCTION VEHICLES LEAVE SITE.



SILT FENCE DETAIL

TO BE PLACED AROUND LOW SIDE OF WORKS AND AS REQUIRED TO PREVENT SOIL WASHING OFF SITE.

EROSION AND SEDIMENT CONTROL DETAILS

PROVIDE AS REQUIRED TO PREVENT SILT FROM LEAVING THE SITE.

No.	Date	Description	Ver.	Appr.
A	17.08.17	UPDATED LAYOUT		
B	21.04.23	STAGE 2 UPDATES		

Architect
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LVL 2, 458-468 WATTLE STREET
ULTIMO, NSW, 2007

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Ground Floor, 12a Brown Street, Chatswood, NSW 2067

GLEDSWOOD HILLS
PUBLIC SCHOOL

EROSION AND SEDIMENT CONTROL PLAN

Date	Approved	Verified	Prepared
APRIL 2023		C.S 21.04.23	C.S 21.04.23
Scale @ A1: 1:500			
Job number: 16-238	Drawing number: SW3		Amendment: B

8.2 Appendix B – Site Management Plan

LEGEND

- Site parking
- Timber A-Class Hoarding (Milestone 1)
- Site Fencing (Milestone 2 - Car-park)
- Site Entry Gates (vehicles)
- Pedestrian Entry Gate
- PBG Site Amenities (Office)
- Temporary Crossover
- Shared Access way (Milestone 3)
- Cranage and concrete pumping lifting zone
- Material Storage Zone
- Traffic Control
- Temporary DDA Access Pathway to Lift
- Traffic Control Office & Induction Room/Sign In
- Male / Female Site Amenities
- Subcontractor Lunch Rooms
- Perimeter Scaffold
- DDA Compliant Ramp for Schools use.
- First Aid Location
- Fire Extinguishers

GENERAL NOTES:

-ALL EXISTING & OVERALL DIMENSIONS ARE NOMINAL & SUBJECT TO VERIFICATION ON SITE. WHERE ANY DISCREPANCY OCCURS BETWEEN NEW WORK & EXISTING DIMENSIONS - EXISTING DIMENSIONS/WORK SHOULD TAKE PREFERENCE WHERE NECESSARY, OTHERWISE NOTIFY PATTERSON BUILDING GROUP PTY LTD (PBG).
-DO NOT SCALE OFF THE DRAWINGS UNLESS OTHERWISE STATED AND USE FIGURED DIMENSIONS IN PREFERENCE.
NO RESPONSIBILITY WILL BE ACCEPTED BY THIS COMPANY FOR ANY VARIATIONS IN DESIGN, BUILDERS METHOD OF CONSTRUCTION OR MATERIAL USED, DEVIATION FROM SPECIFICATION WITHOUT PERMISSION OR ACCEPTED WORK PRACTICES RESULTING IN INFERIOR CONSTRUCTION.
-LOCATE AND PROTECT ALL SERVICES PRIOR TO CONSTRUCTION.
-ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE BUILDING CODE OF AUSTRALIA, ALL LOCAL AND STATE GOVERNMENT ORDINANCES, RELEVANT AUSTRALIAN STANDARDS, LOCAL ELECTRICITY AND WATER AUTHORITIES REGULATIONS AND ALL OTHER RELEVANT AUTHORITIES CONCERNED.
-ALL STRUCTURAL WORK AND SITE DRAINAGE TO BE SUBJECT TO ENGINEER'S DETAILS OR CERTIFICATION WHERE REQUIRED BY COUNCIL. THIS SHALL INCLUDE R.C SLABS AND FOOTINGS, R.C AND STEEL BEAMS AND COLUMNS, WIND BRACING TO AS 1170 AND AS 4055, ANCHOR RODS OR BOLTS, TIE DOWNS, FIXING, ETC, DRIVEWAY SLABS AND DRAINAGE TO COUNCIL'S SATISFACTION.
-ALL TIMBERS TO BE IN ACCORDANCE WITH SAA TIMBER STRUCTURE CODE AS 1720 AND SAA TIMBER FRAMING CODE AS 1684.
-ALL WORK TO BE CARRIED OUT IN A PROFESSIONAL AND WORKMANSHIPLIKE MANNER ACCORDING TO THE PLANS AND SPECIFICATION.
-SELECTED TERMITE PROTECTION TO BE USED ON SITE IN ACCORDANCE WITH LOCAL COUNCIL'S REQUIREMENTS, B.C.A, AND ALL RELEVANT AUSTRALIAN STANDARDS.
-SMOKE DETECTORS TO COMPLY WITH REQUIREMENTS OF SPECIFICATION E.17 (NSW) FIRE AND SMOKE ALARMS SHALL COMPLY WITH AS 3786 AND BE CONNECTED TO THE MAIN POWER SUPPLY.

ISSUE	AMENDMENT	DATE	INT.
A	Revised fencing layout	16/03/23	
A	Tender	22/12/22	

STANDARD ABBREVIATIONS

D-00 DOOR NUMBER	BC BRIGHT CHROME	DIM DIMENSION	NTS NOT TO SCALE	TBC TO BE CONFIRMED
J-00 JOINERY NUMBER	CJ CONST. JOINT	FORM FORMWORK	SB STEEL BEAM	TME TO MATCH EXIST
W-00 WINDOW NUMBER	CLR CLEAR	FRL FIRE RESISTANCE LEVEL	SC STEEL COLUMN	TP TIMBER POST
AB ABOVE BENCH	CNTR CENTRE	FSL FINISHED SLAB RL	SI SITE INSTRUCTION	TYP TYPICAL
ADS ADJUSTABLE SHELF	COS CHECK ON SITE	HYD HYDRAULIC	STR STRUCTURAL	
AS AUSTRALIAN STANDARDS	DD DESIGN INTENT DWG	IP INGRESS PROTECTION CODE	TB TIMBER BEAM	
AV AUDIO VISUAL	DEMO DEMOLITION	MJ MITRE JOINT	TBA TO BE ADVISED	

0 1000 4000 10000 20000 40000

CLIENT: SCHOOL INFRASTRUCTURE NSW

ADDRESS: HERMITAGE WAY
GLEDSWOOD HILLS NSW

PROJECT: GLEDSWOOD HILLS
PUBLIC SCHOOL

DRAWING TITLE: PROPOSED SITE
MANAGEMENT PLAN
MILESTONE 1 & 2

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DRAWN	SCALE
JA	NTS @ AI
CHECKED	JOB NUMBER
RG	T2551
DATE	
16/03/23	
DRAWING NUMBER	ISSUE
PBG001	B

8.3 Appendix C – Gledswood Hills Public School Stormwater Management Report

Woolacotts.
CONSULTING ENGINEERS

Gledswood Hills Public School Stormwater Management Report

19 October 2017 | 16-238

Contents

Document control

Rev No	Date	Revision details	Approved	Verified	Prepared
A	10.8.2017	Approved Issue	CMW	KEC	CMW
B	17.8.2017	Drawings SW1-3 amended	CMW	KEC	CMW
C	10.10.2017	Plans updated to include additional parking	CMW	KEC	CMW
D	19.10.2017	Plans updated	CMW	KEC	CMW

1. Introduction

Gledswood Public School is a proposed new primary school, to be located on The Hermitage Way, Gledswood Hills. See Figure1 for the approximate location of the site. The school will be developed in stages and will eventually cater for 1,000 students in Kindergarten to Year 6.

The area in which it will be located is currently under development, with the construction of The Hermitage Way only completed in early 2017.

This report has been prepared to comment on stormwater management issues for the new school.

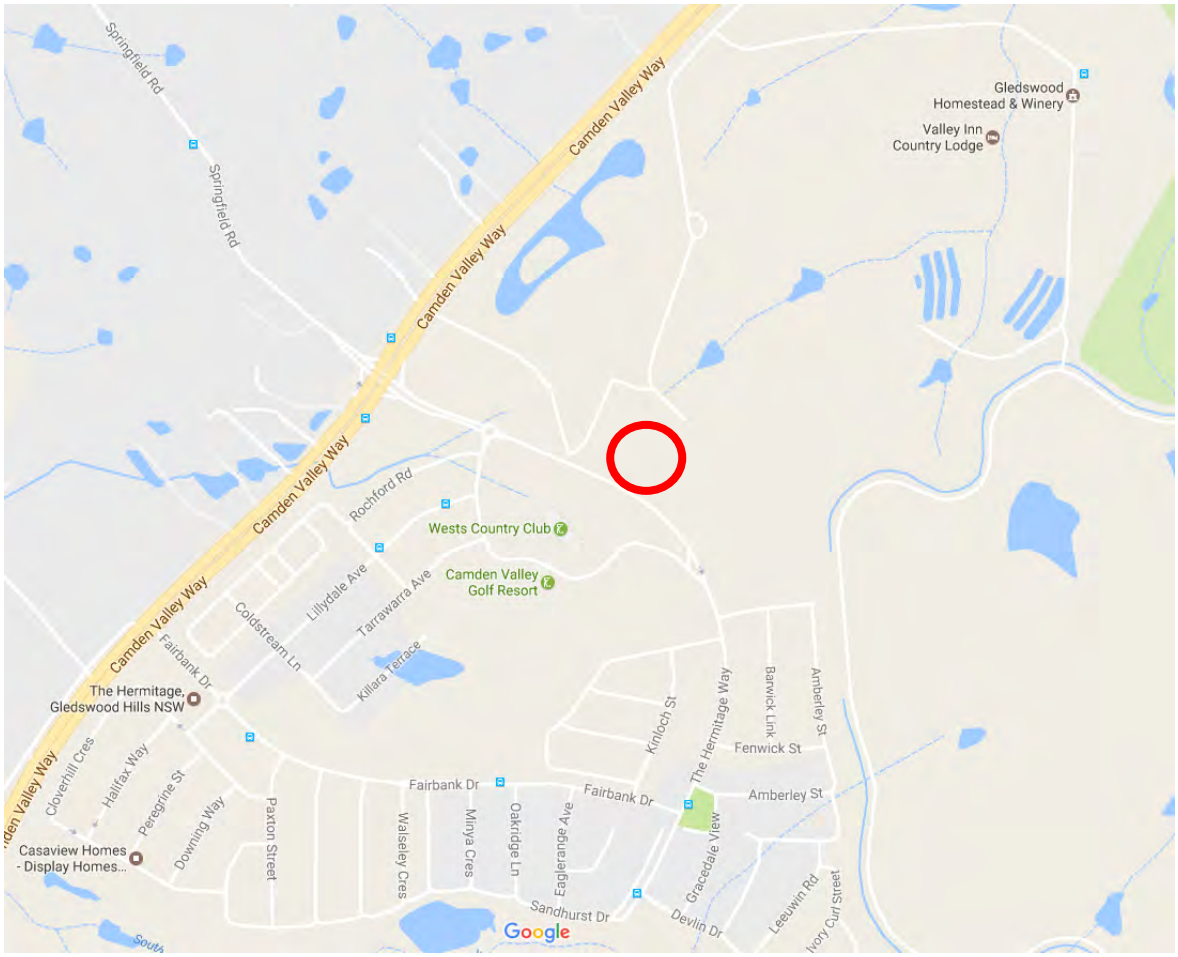


Figure 1 – Approximate Site Location

2. Existing site

The existing site is currently undeveloped. The Hermitage Way has recently been constructed along the south-western boundary of the site, and the roads to the east and west of the school site are yet to be constructed.

The site falls to the east. Currently there is no stormwater drainage system on site. As part of the development of the precinct, three stormwater pits will be constructed along the eastern boundary by the precinct developer. These pits and the downstream pipe network have been sized to convey the flow from the site and will connect to the precinct drainage system in new road MC06, to the east of the site. The designer has adopted that the site will be 40% impervious.

A trunk stormwater main will be located on the northern boundary. This will carry flow from the Entertainment Precinct, located to the west of the site. This connects to the street drainage system in new road MC06 and then to a precinct wide drainage system.

An existing precinct wide detention / water quality basin is located to the east of the site. The engineer responsible for the design of the precinct drainage system advised that the basin has been designed for the following requirements:

- To provide stormwater detention for storms up to a 1 in 100 year storm event
- To provide stormwater treatment for a 1 in 3 month storm event.

From design drawings for the catchment, the basin has been sized to cater for the entire catchment, including the school site. The design assumed that the school site is 40% impervious.

3. Proposed development

The works proposed for the site consist of new public school, which will eventually cater for 1,000 students from kindergarten to Year 6. As such, the works on the site will include”

- General learning areas
- A library
- A hall and COLA
- Administration areas
- Games courts
- Parking for 75 vehicles in two parking areas.
- Grass and landscaped areas

4. Stormwater management

Drainage

The site developer has provided three connection points to the main stormwater system for the site, located along new road MC06, located on the eastern side of the site. All drain to the detention basin for the development. The design engineer for the precinct system allowed for the site to be 40% impervious. (Refer to design catchment plan in Appendix A) As the impervious area of the school will not exceed 40%, the precinct stormwater drainage system has capacity to carry the stormwater flow from the site.

Within the site a network of pits and pipes will be provided to capture stormwater and drain to the connection points provided by the developer. Pipe systems throughout the site will be designed for a 1 in 20 year ARI storm event. Overland flow paths will be provided to cater for the 1 in 100 year storm event. For details of the proposed drainage system for the site, refer to Drawings SW1 and SW2 in Appendix A.

A precinct wide detention and water treatment basin is located to the east of the site. The basin has been designed as a detention basin for storms up to a 1 in 100 year ARI storm event and as a water quality basin for a 1 in 3 month ARI storm. The design of the basin includes the catchment area of the school. Therefore, no additional treatment measures or detention are proposed for the school site, as the precinct wide basin meets Council's requirements for detention and treatment.

The site drainage system and the precinct wide basin also comply with the requirements of *Guidelines for developments adjoining land managed by the Office of Environment and Heritage* and Council's relevant policies.

Erosion and sediment control

During construction, erosion and sediment control measures will be provided in accordance with the "Blue Book" (*Managing Urban Stormwater – Soils and Construction*) and *Guidelines for developments adjoining land managed by the Office of Environment and Heritage.* Measures will include silt fences on the low side of the site, sediment basins, silt traps at existing and new pits and construction exits for vehicles and will comply with guidelines detailed above. Refer to Drawing SW3 in Appendix B for a plan detailing the measures proposed.

5. Flood risk

The site is located near the top of a hill, well above nearby drainage channels. Council's flood map for the area does not identify the site as flood affected. While the map does note that the site is in an area subject to development and flood conditions may change, the location of the site is such that even with changes in the precinct, it will not become flood affected.

6. Integrated water management

The following measures will be provided on the site, to minimise water usage and to reduce energy consumption:

- A rainwater tank will collect runoff from roofs. The collected water will be used to flush toilets and to provide irrigation water for nearby landscaped areas.
- All tapware will be AAA rated, to minimise flows. As per Schools Standards, taps on basin will be timed, to minimise water loss from taps
- Typically, all basins will have cold water only, unless hot or tempered water is required under the Educational Facilities Standards and Guidelines (EFSG)
- All toilets will be dual flush.
- Within landscaped areas, the selected plants will have low water requirements.

7. Conclusion

Stormwater drainage from the site will connect to the precinct wide drainage system, as allowed in the design of the stormwater system for the precinct. This drains to a major stormwater basin, which has been designed by the engineer for the precinct to provide stormwater detention for a 1 in 100 AEP storm event and water quality improvement for a 1 in 3 month AEP event. This is in compliance with Council's requirements for the precinct and the requirements of *Guidelines for developments adjoining land managed by the Office of Environment and Heritage.*

The site is located close to the top of a hill and is not flood affected.

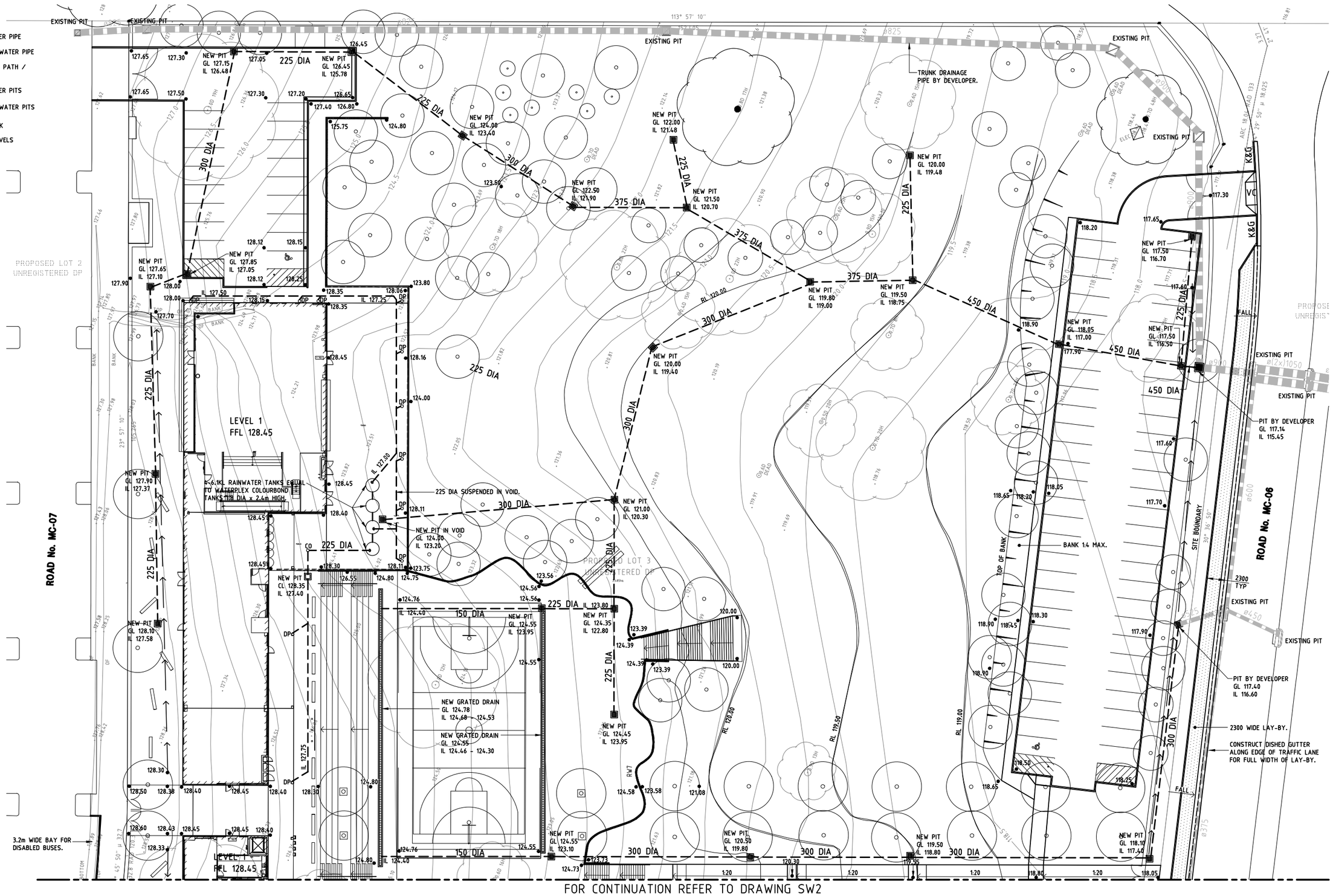
Erosion and sediment control measures will be provided in accordance with the "Blue Book" (*Managing Urban Stormwater – Soils and Construction*) and *Guidelines for developments adjoining land managed by the Office of Environment and Heritage*

Within the development, water saving measures will be provided. Water collected be the rainwater tanks will be used for toilet flushing and irrigation, all toilets will be dual flush and taps will be timed operation.

Appendix A
Drawings

LEGEND

- NEW STORMWATER PIPE
- EXISTING STORMWATER PIPE
- OVERLAND FLOW PATH / FORMED SWALE
- NEW STORMWATER PITS
- EXISTING STORMWATER PITS
- RWT — RAINWATER TANK
- 127.25 — DESIGN SPOT LEVELS
- CO — CLEAR OUT
- DP — DOWNPIPE



FOR CONTINUATION REFER TO DRAWING SW2

REFERENCE DRAWINGS:

FOR STANDARD NOTES REFER TO DRG. No. S1.

No.	Date	Description	Ver.	Appr.
A	17.08.17	UPDATED LAYOUT		
B	06.10.17	LAYBACK, BANK & KERB & GUTTERS ADDED		

Architect
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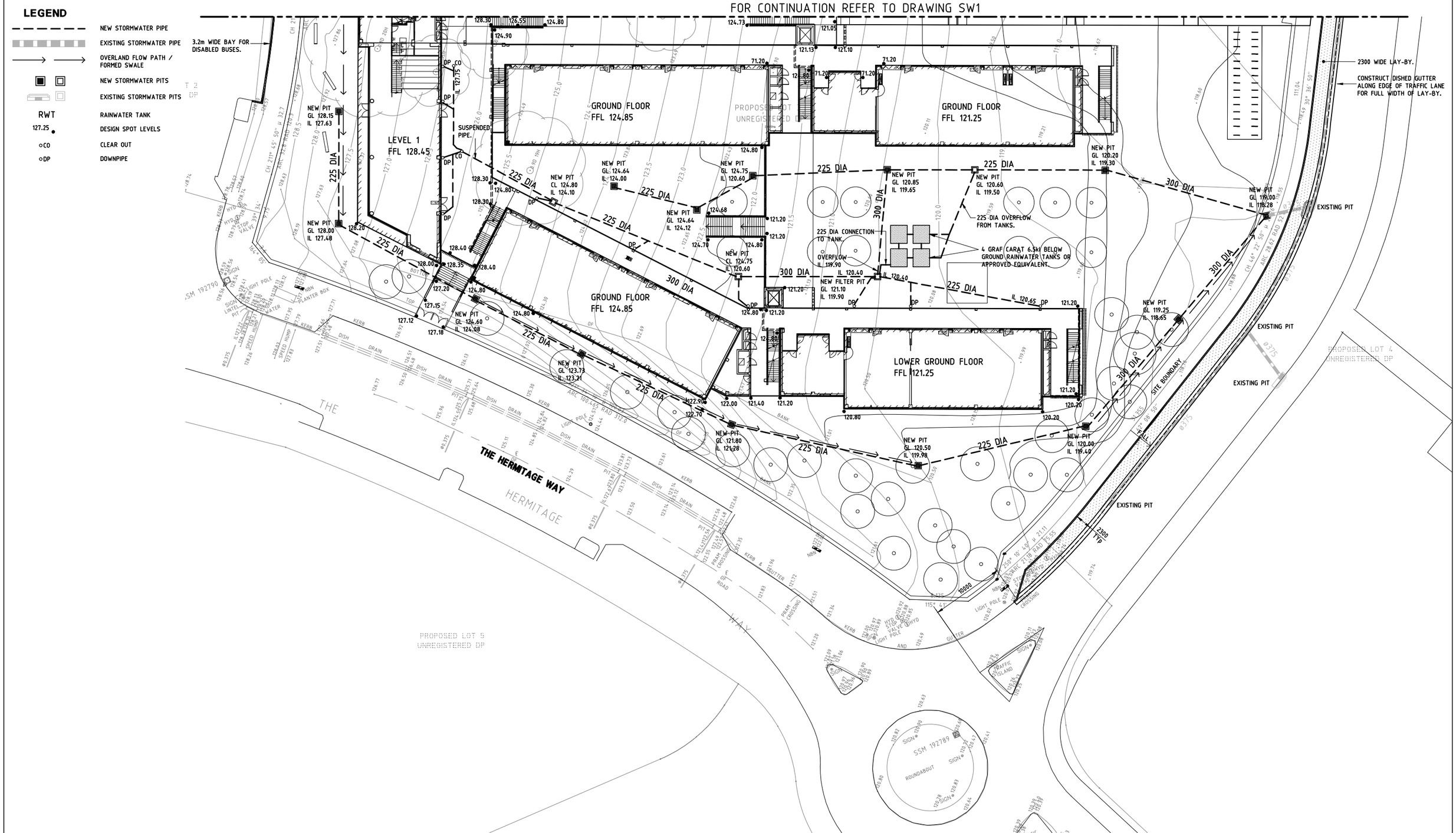
GLEDSWOOD HILLS PUBLIC SCHOOL	Date: JUNE 2017	Approved	Verified: J.L 09.08.17	Prepared: J.K 09.08.17
	Scale @ A1: 1:250			
STORMWATER MANAGEMENT PLAN - SHEET 1	Job number: 16-238	Drawing number: SW1		Amendment: C



No.	Date	Description	Ver.	Appr.
A	17.08.17	UPDATED LAYOUT		

Architect
PERUMAL PEDAVOLI
LVL 2, 458-468 WATTLE STREET
ULTIMO, NSW, 2007

Woolacotts. CONSULTING ENGINEERS
T +61 2 8241 9900 I www.woolacotts.com.au
Ground Floor, 12a Brown Street, Chatswood, NSW 2067

GLEDSWOOD HILLS
PUBLIC SCHOOL

STORMWATER MANAGEMENT PLAN - SHEET 2

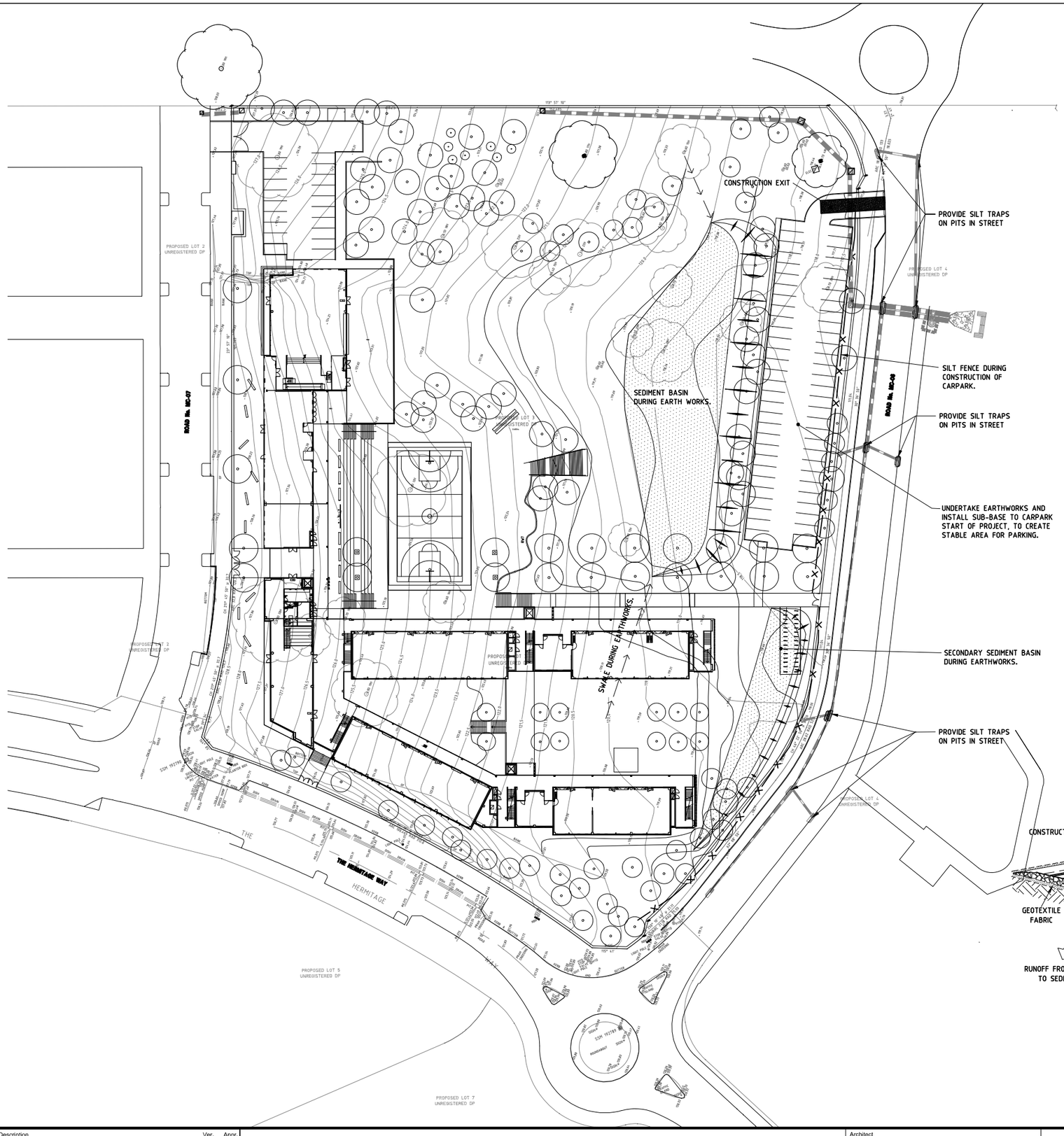
Date	Approved	Verified	Prepared
JUNE 2017		J.L 09.08.17	J.K 09.08.17

Scale @ A1: 1:250

Job number: 16-238

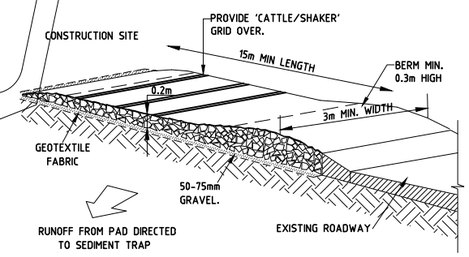
Drawing number: SW2

Amendment: B



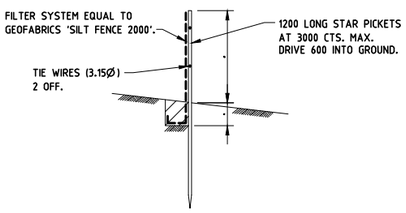
LEGEND

- STORMWATER PIT
- STORMWATER PIPE
- SILT FENCE
- CONSTRUCTION EXIT
- HEADWALL



TEMPORARY CONSTRUCTION EXIT

TO BE PROVIDED WHERE CONSTRUCTION VEHICLES LEAVE SITE.



SILT FENCE DETAIL

TO BE PLACED AROUND LOW SIDE OF WORKS AND AS REQUIRED TO PREVENT SOIL WASHING OFF SITE.

EROSION AND SEDIMENT CONTROL DETAILS

PROVIDE AS REQUIRED TO PREVENT SILT FROM LEAVING THE SITE.

No.	Date	Description	Ver.	Appr.
A	17.08.17	UPDATED LAYOUT		

Architect
PERUMAL PEDAVOLI
LVL 2, 458-468 WATTLE STREET
ULTIMO, NSW, 2007

Woolacotts. CONSULTING ENGINEERS
T +61 2 8241 9900 I www.woolacotts.com.au
Ground Floor, 12a Brown Street, Chatswood, NSW 2067

GLEDSWOOD HILLS PUBLIC SCHOOL	Date JUNE 2017	Approved	Verified J.L 09.08.07	Prepared J.K 09.08.17
	Scale @ A1 1:500			
EROSION AND SEDIMENT CONTROL PLAN	Job number 16-238	Drawing number SW3		Amendment B

REFER DRAWING TRHW-CI-300 FOR CONTINUATION

N.B. ROAD MC07 WILL BE CLOSED TO TRAFFIC UNTIL IT IS CONNECTED TO A THROUGH OR TURNING FACILITY

SWALE REFER TO DRAWING TRHW-CI-603 FOR DETAILS

SWALE REFER TO DRAWING TRHW-CI-603 FOR DETAILS

PROVIDE TEMPORARY 1:4 BATTER TO EXISTING

RAISED PLATFORM CROSSING 3 REFER TO DETAIL ON DRAWING TRHW-CI-605

INSTALL TEMPORARY PLANTER BOXES TO PROHIBIT USE OF RAISED THRESHOLD AS CROSSINGS (TYP).

THE HERMITAGE WAY (MC05)

MC07

MC06

PROVIDE CYCLE RAMP

PROVIDE CYCLE EXIT RAMP AND WIDEN PATH TO 2.5m

TEMPORARY CATCH DRAIN REFER TO DRAWING TRHW-CI-601 FOR DETAILS

N.B. ROAD MC06 WILL BE CLOSED TO TRAFFIC UNTIL IT IS CONNECTED TO A THROUGH ROAD OR TURNING FACILITY

DEMOLISH EXISTING HEADWALL CONNECT TO EXISTING PIPE

SWALE REFER TO DRAWING TRHW-CI-603 FOR DETAILS

CONSTRUCT 3.5m WIDE ACCESS PATH

CONSTRUCT 10m WIDE 10m LONG HEAVY DUTY REINFORCED CONCRETE WORK PLATFORM

ENERGY DISSIPATOR REFER TRHW-CI-603 FOR DETAILS

MB01

MB02

FILTER MEDIA AREA = 477 m²

ENERGY DISSIPATOR REFER TRHW-CI-603 FOR DETAILS

CONSTRUCT 4.0m WIDE 10m LONG HEAVY DUTY REINFORCED CONCRETE WORK PLATFORM

PROVIDE TEMPORARY 1:4 BATTER TO EXISTING

INSET

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environmental Planning and Assessment Act 1979
APPROVAL
27/06/2016
CONSTRUCTION CERTIFICATE
CC16.2015.1230.1

Issue	Description	Date
07	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
06	ISSUE FOR CONSTRUCTION CERTIFICATE	09/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

100mm on Original

0 5 10 20 30 40 50m

1 : 500

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	1:500	Current Issue Signatures	
Original Size	A1	Drawn J. VARGAS	
Height Datum	AHD	Designed M. PEREZ	
Grid	MGA	Checked A. KALAJZICH	
Filename:		Approved R. SMITH	

Project: THE HERMITAGE
HERMITAGE WAY

Title: SITEWORKS AND STORMWATER DRAINAGE PLAN SHEET 2

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-301 —AA007442CC—		06

Edit by: JVHN0894

Date Plotted: 10 Jun 2016 - 04:35PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-301-SiteworksAndStormwaterDrainagePlanSheet2.dwg V1

PROPOSED WORKS LEGEND

- PROPOSED CONTOUR
- EXISTING CONTOUR
- LIMIT OF WORKS
- RETAINING WALL
- STAGE BOUNDARY
- PROPOSED STORMWATER
- CATCHMENT BOUNDARY
- HEADWALL
- PRAM RAMP
- PROPOSED KERB INLET STORMWATER PIT
- PROPOSED INTERALLOTMENT STORMWATER PIT
- PROPOSED GROSS POLLUTANT TRAP

STAGE 25

FUTURE ENTERTAINMENT PRECINCT

THE HERMITAGE WAY

THE HERMITAGE WAY (MC05)

FUTURE STAGE 18

ROCHFORD ROAD

LONG

EXISTING CLUBHOUSE

FUTURE STAGE 19

STAGE 24

LILYDALE AVENUE

VIEW

TARRAWARA AVENUE

ROAD

ROAD 01

FUTURE STAGE 13

RYMILL CRESCENT

STAGE 12

STAGE 15

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environmental Planning and Assessment Act 1979
APPROVAL
20/06/2016
CONSTRUCTION CERTIFICATE
CC16/2015/1230/1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

100mm on Original

0 10 20 40 60 80 100m

1 : 1000

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	1:1000	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	

Filename:

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER CATCHMENT PLAN

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-305	—AA007442CC—	06

Edit by RCHN1199

Date Plotted: 10 Jun 2016 - 04:25PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-305-CatchmentPlan.dwg V1

HYDROLOGY - MINOR 10 YEAR STORM EVENT

Pit Name	Pit Type	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Catchment Flow Qc	Approach Flow Qa	Flooded Depth	Flooded Width	Flooded Vel.Dep	Max Pond Depth	Inlet Flow Qg	Bypass Flow Qb	Bypass Pit
(-)	(-)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(m)	(L/s)	(L/s)	(-)
1/13	1.8 m lintel	1P	6.00	136.04	0.85	0.0037	0.0031	0.0330	12.5	0.0010	0.0309	11.7	12.5	12.5	0.035	0.35	0.01		12.5		1/12
		1I	2.00	136.04	0.90	0.0332	0.0299			0.0299											
1/12	1.8 m lintel	1P	6.00	136.04	0.85	0.0041	0.0035	0.0371	14.0	0.0012	0.0347	13.1	14.0	14.0	0.028	1.34	0.02		14.0		1/11
		1I	2.00	136.04	0.90	0.0373	0.0336			0.0336											
1/11	1.8 m lintel	1P	6.00	136.04	0.85	0.0030	0.0025	0.0264	10.0	0.0008	0.0248	9.4	10.0	10.0	0.025	0.60	0.01		10.0		1/10
		1I	2.00	136.04	0.90	0.0266	0.0239			0.0239											
1/10	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0022	0.0018	0.0195	7.4	0.0006	0.0183	6.9	7.4	7.4	0.035	0.53	0.03		4.4	2.9	1/09
		1I	2.00	136.04	0.90	0.0196	0.0177			0.0177											
1/09	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0028	0.0024	0.0254	9.6	0.0008	0.0238	9.0	9.6	12.6	0.047	1.27	0.03		7.0	5.5	1/08
		1I	2.00	136.04	0.90	0.0256	0.0230			0.0230											
1/08	1.8 m lintel	1P	6.00	136.04	0.85	0.0032	0.0027	0.0285	10.8	0.0009	0.0267	10.1	10.8	16.3	0.058	1.06	0.05		16.3		1/07
		1I	2.00	136.04	0.90	0.0287	0.0258			0.0258											
1/07	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0019	0.0201	7.6	0.0006	0.0188	7.1	7.6	7.6	0.042	0.34	0.05		7.6		1/06
		1I	2.00	136.04	0.90	0.0202	0.0182			0.0182											
1/06	1.8 m lintel	1P	6.00	136.04	0.85	0.0017	0.0014	0.0148	5.6	0.0005	0.0139	5.3	5.6	5.6	0.025	0.45	0.02		5.6		1/05
		1I	2.00	136.04	0.90	0.0149	0.0134			0.0134											
1/05	1.8 m lintel	1P	6.00	136.04	0.85	0.0027	0.0022	0.0238	9.0	0.0007	0.0223	8.4	9.0	9.0	0.018	1.12	0.02		9.0		1/04
		1I	2.00	136.04	0.90	0.0239	0.0215			0.0215											
1/04	1.8 m lintel	1P	6.00	136.04	0.85	0.0026	0.0022	0.0229	8.7	0.0007	0.0215	8.1	8.7	8.7	0.018	1.15	0.02		8.7		1/03
		1I	2.00	136.04	0.90	0.0231	0.0208			0.0208											
1/03	1.8 m lintel	1P	6.00	136.04	0.85	0.0020	0.0017	0.0175	6.6	0.0006	0.0164	6.2	6.6	6.6	0.033	0.35	0.04		6.6		1/02
		1I	2.00	136.04	0.90	0.0176	0.0159			0.0159											
1/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0020	0.0017	0.0179	6.8	0.0006	0.0167	6.3	6.8	6.8	0.006	0.38	0.00		6.8		1/01
		1I	2.00	136.04	0.90	0.0180	0.0162			0.0162											
1/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0037	0.0031	0.0330	12.5	0.0010	0.0310	11.7	12.5	12.5	0.063	1.89	0.02		12.5		16/02
		1I	2.00	136.04	0.90	0.0332	0.0299			0.0299											
2/07	1.8 m lintel	1P	6.00	136.04	0.85	0.0044	0.0037	0.0394	14.9	0.0012	0.0369	13.9	14.9	21.8	0.055	0.46	0.03		21.4	0.4	2/06
		1I	2.00	136.04	0.90	0.0396	0.0356			0.0356											
2/06	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0018	0.0193	7.3	0.0006	0.0181	6.8	7.3	7.6	0.040	1.15	0.02		7.6		2/05
		1I	2.00	136.04	0.90	0.0194	0.0175			0.0175											
2/05	1.8 m lintel	1P	6.00	136.04	0.85	0.0021	0.0018	0.0191	7.2	0.0006	0.0179	6.8	7.2	7.2	0.040	1.11	0.02		7.2		2/03
		1I	2.00	136.04	0.90	0.0193	0.0173			0.0173											
2/04	Junction Pit 600x600																				-
2/03	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0018	0.0195	7.4	0.0006	0.0183	6.9	7.4	7.4	0.040	1.14	0.02		7.4		2/02
		1I	2.00	136.04	0.90	0.0197	0.0177			0.0177											
2/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0018	0.0193	7.3	0.0006	0.0181	6.8	7.3	7.3	0.040	1.11	0.02		7.3		2/01
		1I	2.00	136.04	0.90	0.0194	0.0175			0.0175											
2/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0018	0.0193	7.3	0.0006	0.0181	6.8	7.3	7.3	0.040	1.12	0.02		7.3		17/01
		1I	2.00	136.04	0.90	0.0194	0.0175			0.0175											
3/08	1.8 m lintel	1P	6.00	136.04	0.85	0.0082	0.0069	0.0734	27.7	0.0023	0.0688	26.0	27.7	35.2	0.081	0.96	0.05		30.6	4.6	3/07
		1I	2.00	136.04	0.90	0.0739	0.0665			0.0665											
3/07	1.8 m lintel	1P	6.00	136.04	0.85	0.0026	0.0022	0.0229	8.7	0.0007	0.0215	8.1	8.7	13.3	0.060	1.10	0.03		13.3		3/06
		1I	2.00	136.04	0.90	0.0231	0.0207			0.0207											
3/06	1.8 m lintel	1P	6.00	136.04	0.85	0.0017	0.0014	0.0153	5.8	0.0005	0.0143	5.4	5.8	5.8	0.037	0.43	0.03		5.8		3/05
		1I	2.00	136.04	0.90	0.0154	0.0138			0.0138											
3/05	1.8 m lintel	1P	6.00	136.04	0.85	0.0054	0.0046	0.0483	18.3	0.0015	0.0453	17.1	18.3	18.3	0.057	1.00	0.05		18.3		3/04
		1I	2.00	136.04	0.90	0.0486	0.0437			0.0437											
3/04	2.4 m lintel sag	1P	6.00	136.04	0.85	0.0050	0.0042	0.0449	17.0	0.0014	0.0421	15.9	17.0	17.0	0.029			0.088	17.0		3/03
		1I	2.00	136.04	0.90	0.0452	0.0407			0.0407											
3/03	2.4 m lintel sag	1P	6.00	136.04	0.85	0.0022	0.0019	0.0201	7.6	0.0006	0.0188	7.1	7.6	7.6	0.017			0.088	7.6		3/02
		1I	2.00	136.04	0.90	0.0202	0.0182			0.0182											
3/02	GPT													0.0					0.0		-
3/01	HW 1050																				-
4/06	1.8 m lintel	1P	6.00	136.04	0.85	0.0058	0.0049	0.0520	19.7	0.0016	0.0488	18.4	19.7	19.7	0.027	1.59	0.02		19.7		4/05
		1I	2.00	136.04	0.90	0.0524	0.0471			0.0471											
4/05	1.8 m lintel	1P	6.00	136.04	0.85	0.0043	0.0036	0.0383	14.5	0.0012	0.0359	13.6	14.5	14.5	0.028	1.02	0.03		14.5		4/04
		1I	2.00	136.04	0.90	0.0385	0.0347			0.0347											
4/04	1.8 m lintel	1P	6.00	136.04	0.85	0.0054	0.0046	0.0487	18.4	0.0015	0.0457	17.3	18.4	18.4	0.020	1.56	0.02		18.4		4/03
		1I	2.00	136.04	0.90	0.0490	0.0441			0.0441											
4/03	1.8 m lintel	1P	6.00	136.04	0.85	0.0043	0.0036	0.0382	14.4	0.0012	0.0358	13.5	14.4	14.4	0.042	0.48	0.06		14.4		EX4/02
		1I	2.00	136.04	0.90	0.0384	0.0346			0.0346											
4/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0012	0.0010	0.0111	4.2	0.0003	0.0104	3.9	4.2	4.2	0.027	0.27	0.03		4.2		EX4/01
		1I	2.00	136.04	0.90	0.0111	0.0100			0.0100											
4/01	HW 600																				-
5/01	Stub Connection													0.0					0.0		-
6/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0023	0.0020	0.0208	7.9	0.0007	0.0195	7.4	7.9	7.9	0.041	1.17	0.02		7.9		40/01
		1I	2.00	136.04	0.90	0.0209	0.0188			0.0188											
7/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0019	0.0016	0.0166	6.3	0.0005	0.0156	5.9	6.3	15.7	0.039	0.59	0.05		8.3	7.4	3/08
		1I	2.00	136.04	0.90	0.0167	0.0150			0.0150											
8/06	Dish Drain Inlet Sag	1P	6.00	136.04	0.85	0.0028	0.0024	0.0251	9.5	0.0008	0.0235	8.9	9.5	16.8	0.040			0.150	16.8		8/02
		1I	2.00	136.04	0.90	0.0253	0.0227			0.0227											
8/05	Junction Pit 900x900																				-
8/04	Junction Pit 900x900																				-
8/03	Junction Pit 900x900																				-
8/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0026	0.0022	0.0233	8.8	0.0007	0.0218	8.2	8.8	8.8					8.8		-

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
27/06/2016
CONSTRUCTION CERTIFICATE
CC 16.2015.1230.1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
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01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	

Filename:

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 1

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-320-AA007442	CC	06

Edit by: JVHN0894

Date Plotted: 10 Jun 2016 - 04:26PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-320-StormwaterDrainageCalculationSheet1.dwg

HYDROLOGY - MINOR 10 YEAR STORM EVENT

Pit Name	Pit Type	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Catchment Flow Qc	Approach Flow Qa	Flooded Depth	Flooded Width	Flooded Vel.Dep	Max Pond Depth	Inlet Flow Qg	Bypass Flow Qb	Bypass Pit
(-)	(-)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(m)	(L/s)	(L/s)	(-)
		11	2.00	136.04	0.90	0.0234	0.0211			0.0211											
8/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0011	0.0009	0.0098	3.7	0.0003	0.0092	3.5	3.7	3.7					3.7		-
		11	2.00	136.04	0.90	0.0099	0.0089			0.0089											
9/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0030	0.0025	0.0267	10.1	0.0008	0.0250	9.5	10.1	19.1	0.045	1.15	0.05		9.6	9.5	7/01
		11	2.00	136.04	0.90	0.0269	0.0242			0.0242											
10/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0036	0.0030	0.0320	12.1	0.0010	0.0300	11.3	12.1	12.8	0.049	0.89	0.04		12.8		3/03
		11	2.00	136.04	0.90	0.0322	0.0290			0.0290											
11/07	1.8 m lintel	1P	6.00	136.04	0.85	0.0008	0.0007	0.0074	2.8	0.0002	0.0069	2.6	2.8	2.8	0.050	0.52	0.01		2.8		11/06
		11	2.00	136.04	0.90	0.0074	0.0067			0.0067											
11/06	1.8 m lintel	1P	6.00	136.04	0.85	0.0033	0.0028	0.0297	11.2	0.0009	0.0279	10.5	11.2	11.2	0.035	1.46	0.01		11.2		11/05
		11	2.00	136.04	0.90	0.0299	0.0269			0.0269											
11/05	1.8 m lintel	1P	6.00	136.04	0.85	0.0044	0.0037	0.0391	14.8	0.0012	0.0367	13.9	14.8	14.8	0.029	1.29	0.03		14.8		11/04
		11	2.00	136.04	0.90	0.0394	0.0354			0.0354											
11/04	1.8 m lintel	1P	6.00	136.04	0.85	0.0047	0.0039	0.0416	15.7	0.0013	0.0390	14.7	15.7	15.7	0.028	1.31	0.03		15.7		11/03
		11	2.00	136.04	0.90	0.0419	0.0377			0.0377											
11/03	1.8 m lintel	1P	6.00	136.04	0.85	0.0048	0.0040	0.0425	16.1	0.0013	0.0398	15.1	16.1	16.1	0.027	1.29	0.03		16.1		11/02
		11	2.00	136.04	0.90	0.0428	0.0385			0.0385											
11/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0050	0.0042	0.0445	16.8	0.0014	0.0417	15.8	16.8	16.8	0.028	1.15	0.03		16.8		11/01
		11	2.00	136.04	0.90	0.0448	0.0403			0.0403											
11/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0034	0.0029	0.0303	11.4	0.0010	0.0284	10.7	11.4	11.4	0.049	0.55	0.06		11.4		18/03
		11	2.00	136.04	0.90	0.0305	0.0274			0.0274											
12/01	Grated Drain	1P	6.00	136.04	0.85	0.0046	0.0039	0.0411	15.5	0.0013	0.0385	14.6	15.5	15.5	0.030	0.95	0.13		15.5		25/01
		11	2.00	136.04	0.90	0.0414	0.0372			0.0372											
13/06	1.8 m lintel	1P	6.00	136.04	0.85	0.0016	0.0014	0.0144	5.4	0.0005	0.0135	5.1	5.4	5.4	0.039	0.59	0.02		5.4		13/04
		11	2.00	136.04	0.90	0.0144	0.0130			0.0130											
13/05	Junction Pit 600x600																				-
13/04	1.8 m lintel	1P	6.00	136.04	0.85	0.0033	0.0028	0.0297	11.2	0.0009	0.0278	10.5	11.2	11.2	0.052	1.29	0.02		11.2		13/03
		11	2.00	136.04	0.90	0.0299	0.0269			0.0269											
13/03	1.8 m lintel	1P	6.00	136.04	0.85	0.0024	0.0020	0.0214	8.1	0.0007	0.0201	7.6	8.1	8.1	0.047	0.99	0.02		8.1		13/02
		11	2.00	136.04	0.90	0.0216	0.0194			0.0194											
13/02	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0017	0.0014	0.0149	5.6	0.0005	0.0140	5.3	5.6	7.0	0.016	0.74	0.02		4.8	2.2	-
		11	2.00	136.04	0.90	0.0150	0.0135			0.0135											
13/01	HW 525																				-
14/01	Interallotment Pit 600x600	1P	6.00	136.04	0.85	0.0354	0.0299	0.3167	119.7	0.0150	0.3017	114.0	119.7	119.7	0.114	2.37	0.07		119.7		22/01
		11	3.00	136.04	0.90	0.3186	0.2868			0.2868											
15/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0026	0.0022	0.0229	8.7	0.0007	0.0215	8.1	8.7	8.7	0.029	1.55	0.01		8.7		30/01
		11	2.00	136.04	0.90	0.0231	0.0208			0.0208											
16/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0038	0.0032	0.0339	12.8	0.0011	0.0318	12.0	12.8	12.8	0.029	0.89	0.01		12.8		23/02
		11	2.00	136.04	0.90	0.0341	0.0307			0.0307											
16/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0014	0.0011	0.0121	4.6	0.0004	0.0114	4.3	4.6	4.6	0.043	0.59	0.02		4.6		CP/03
		11	2.00	136.04	0.90	0.0122	0.0110			0.0110											
17/01	Dish Drain Inlet Sag	1P	6.00	136.04	0.85	0.0027	0.0023	0.0243	9.2	0.0008	0.0228	8.6	9.2	18.1	0.042			0.150	18.1		8/06
		11	2.00	136.04	0.90	0.0245	0.0220			0.0220											
18/03	2.4 m lintel sag	1P	6.00	136.04	0.85	0.0077	0.0065	0.0688	26.0	0.0022	0.0645	24.4	26.0	26.0	0.039			0.150	26.0		18/02
		11	2.00	136.04	0.90	0.0693	0.0623			0.0623											
18/02	2.4 m lintel	1P	6.00	136.04	0.85	0.0014	0.0012	0.0124	4.7	0.0004	0.0116	4.4	4.7	4.7	0.023	0.58	0.02		4.7		18/01
		11	2.00	136.04	0.90	0.0124	0.0112			0.0112											
18/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0029	0.0025	0.0264	10.0	0.0008	0.0247	9.3	10.0	10.0	0.037	0.38	0.05		10.0		4/02
		11	2.00	136.04	0.90	0.0265	0.0239			0.0239											
19/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0017	0.0014	0.0148	5.6	0.0005	0.0138	5.2	5.6	5.6	0.039	0.59	0.02		4.2	1.4	13/02
		11	2.00	136.04	0.90	0.0149	0.0134			0.0134											
20/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0010	0.0008	0.0089	3.4	0.0003	0.0083	3.1	3.4	3.4	0.033	0.50	0.01		3.4		34/01
		11	2.00	136.04	0.90	0.0089	0.0080			0.0080											
22/01	Interallotment Pit 600x600	1P	6.00	136.04	0.85	0.0201	0.0170	0.1801	68.1	0.0085	0.1716	64.9	68.1	68.1	0.085	2.02	0.05		68.1		13/02
		11	3.00	136.04	0.90	0.1812	0.1631			0.1631											
23/02	2.4 m lintel sag	1P	6.00	136.04	0.85	0.0021	0.0017	0.0184	7.0	0.0006	0.0172	6.5	7.0	23.2	0.036			0.150	23.2		23/01
		11	2.00	136.04	0.90	0.0185	0.0167			0.0167											
23/01	2.4 m lintel sag	1P	6.00	136.04	0.85	0.0064	0.0054	0.0570	21.5	0.0018	0.0534	20.2	21.5	37.7	0.050			0.150	37.7		-
		11	2.00	136.04	0.90	0.0573	0.0516			0.0516											
24/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0058	0.0049	0.0523	19.8	0.0016	0.0490	18.5	19.8	19.8	0.032	0.30	0.03		19.8		28/01
		11	2.00	136.04	0.90	0.0526	0.0474			0.0474											
25/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0045	0.0038	0.0404	15.3	0.0013	0.0378	14.3	15.3	15.3	0.047	1.02	0.04		15.3		25/01
		11	2.00	136.04	0.90	0.0406	0.0366			0.0366											
25/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0018	0.0016	0.0164	6.2	0.0005	0.0154	5.8	6.2	6.2	0.021	0.62	0.02		6.2		4/06
		11	2.00	136.04	0.90	0.0165	0.0149			0.0149											
26/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0019	0.0016	0.0166	6.3	0.0005	0.0156	5.9	6.3	6.3					6.3		1/07
		11	2.00	136.04	0.90	0.0167	0.0151			0.0151											
27/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0054	0.0046	0.0486	18.4	0.0023	0.0463	17.5	18.4	18.4	0.045	1.08	0.05		9.4	9.0	9/01
		11	3.00	136.04	0.90	0.0489	0.0440			0.0440											
28/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0029	0.0025	0.0261	9.9	0.0008	0.0244	9.2	9.9	9.9	0.025	1.44	0.01		9.9		43/01
		11	2.00	136.04	0.90	0.0262	0.0236			0.0236											
29/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0021	0.0018	0.0189	7.1	0.0006	0.0177	6.7	7.1	7.1	0.029	0.95	0.02		7.1		31/01
		11	2.00	136.04	0.90	0.0190	0.0171			0.0171											
30/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0024	0.0020	0.0215	8.1	0.0007	0.0201	7.6	8.1	8.1	0.041	1.19	0.02		8.1		6/01
		11	2.00	136.04	0.90	0.0216	0.0194			0.0194											

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
27/06/2016
CONSTRUCTION CERTIFICATE
CC 16 2015 1220 1

Issue	Description	Date
07	ISSUE FOR CONSTRUCTION CERTIFICATE	15/06/16
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 2

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Level 5, 141 Walker St
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Drawing No.	Project No.	Issue
TRHW-CI-321-AA007442CC		07

Edit by RCMH1199

Date Plotted: 14 Jun 2016 - 04:04PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-321-StormwaterDrainageCalculationSheet2.dwg V1

HYDROLOGY - MINOR 10 YEAR STORM EVENT

Pit	Pit	Catch	Time	Intensity	Runoff	Area	Full	Full	Full	Partial	Partial	Partial	Catchment	Approach	Flooded	Flooded	Flooded	Max Pond	Inlet	Bypass	Bypass
Name	Type	ID	Tc	I	C	A	CA	Sum CA	Qc=CIA	CA	Sum CA	Qc=CIA	Flow Qc	Flow Qa	Depth	Width	Vel.Dep	Depth	Flow Qg	Flow Qb	Pit
(-)	(-)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(m)	(L/s)	(L/s)	(-)
31/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0034	0.0029	0.0302	11.4	0.0010	0.0283	10.7	11.4	11.4	0.026	1.20	0.02		11.4		25/02
		1I	2.00	136.04	0.90	0.0304	0.0273			0.0273											
32/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0024	0.0020	0.0210	7.9	0.0007	0.0197	7.4	7.9	7.9	0.041	1.17	0.02		7.9		8/06
		1I	2.00	136.04	0.90	0.0212	0.0190			0.0190											
34/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0018	0.0194	7.3	0.0006	0.0181	6.9	7.3	7.3	0.046	0.90	0.02		7.3		42/01
		1I	2.00	136.04	0.90	0.0195	0.0175			0.0175											
35/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0021	0.0017	0.0185	7.0	0.0006	0.0173	6.5	7.0	14.8	0.048	1.13	0.04		7.9	6.9	2/07
		1I	2.00	136.04	0.90	0.0186	0.0167			0.0167											
36/02	1.8 m lintel	1P	6.00	136.04	0.85	0.0011	0.0009	0.0099	3.7	0.0003	0.0092	3.5	3.7	3.7	0.016	1.09	0.01		3.7		36/01
		1I	2.00	136.04	0.90	0.0099	0.0089			0.0089											
36/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0021	0.0018	0.0192	7.2	0.0006	0.0180	6.8	7.2	7.2	0.034	0.53	0.03		7.2		18/02
		1I	2.00	136.04	0.90	0.0193	0.0174			0.0174											
37/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0010	0.0009	0.0092	3.5	0.0003	0.0087	3.3	3.5	3.5	0.030	0.61	0.01		3.5		15/01
		1I	2.00	136.04	0.90	0.0093	0.0084			0.0084											
38/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0021	0.0018	0.0186	7.0	0.0006	0.0174	6.6	7.0	7.0	0.034	0.52	0.03		7.0		18/03
		1I	2.00	136.04	0.90	0.0187	0.0169			0.0169											
39/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0010	0.0009	0.0094	3.5	0.0003	0.0088	3.3	3.5	3.5	0.016	0.93	0.01		3.5		38/01
		1I	2.00	136.04	0.90	0.0094	0.0085			0.0085											
40/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0024	0.0020	0.0213	8.1	0.0007	0.0200	7.6	8.1	8.1	0.041	1.19	0.02		8.1		32/01
		1I	2.00	136.04	0.90	0.0215	0.0193			0.0193											
41/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0070	0.0059	0.0627	23.7	0.0020	0.0587	22.2	23.7	23.7	0.071	1.56	0.04		22.9	0.7	10/01
		1I	2.00	136.04	0.90	0.0630	0.0567			0.0567											
42/01	1.8 m lintel	1P	6.00	136.04	0.85	0.0022	0.0018	0.0194	7.3	0.0006	0.0182	6.9	7.3	7.3	0.046	0.90	0.02		7.3		19/01
		1I	2.00	136.04	0.90	0.0195	0.0176			0.0176											
43/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0025	0.0021	0.0225	8.5	0.0007	0.0211	8.0	8.5	8.5	0.038	0.56	0.03		5.4	3.1	44/01
		1I	2.00	136.04	0.90	0.0227	0.0204			0.0204											
44/01	Dish Drain Inlet	1P	6.00	136.04	0.85	0.0039	0.0033	0.0352	13.3	0.0011	0.0330	12.5	13.3	16.4	0.051	1.67	0.03		8.6	7.8	35/01
		1I	2.00	136.04	0.90	0.0354	0.0318			0.0318											
CP/04	Raised Grate Inlet 2400x2100	1P	10.00	111.11	0.57	1.4494	0.8331	1.7027	525.5	0.5832	1.4528	518.0	525.5	525.5	0.150			0.150	525.5		23/02
		1I	7.00	128.36	0.90	0.9663	0.8696			0.8696											
CP/03	1.8 m lintel	1P	6.00	136.04	0.85	0.0005	0.0004	0.0045	1.7	0.0001	0.0042	1.6	1.7	1.7	0.032	0.37	0.01		1.7		23/01
		1I	2.00	136.04	0.90	0.0045	0.0041			0.0041											
CP/02	GPT													0.0					0.0		-
CP/01	HW 1050																				-
Z1/01	Interallotment Pit 900x900	1P	6.00	136.04	0.85	0.1977	0.1672	1.7682	668.2	0.1393	1.7404	657.7	668.2	668.2	0.263	4.16	0.26		668.2		Z2/01
		1I	5.00	136.04	0.90	1.7789	1.6011			1.6011											
Z2/01	Interallotment Pit 900x900	1P	6.00	136.04	0.85	0.1170	0.0990	1.0470	395.7	0.0825	1.0306	389.4	395.7	395.7	0.206	3.47	0.18		395.7		17/01
		1I	5.00	136.04	0.90	1.0534	0.9481			0.9481											
Z3/01	Interallotment Pit 900x900	1P	7.00	128.36	0.57	0.3093	0.1778	0.3633	129.6	0.1524	0.3379	127.7	129.6	129.6	0.119	2.43	0.08		129.6		Z4/01
		1I	6.00	136.04	0.90	0.2062	0.1856			0.1856											
Z4/01	Interallotment Pit 900x900	1P	7.00	128.36	0.57	0.4615	0.2653	0.5422	193.3	0.2274	0.5043	190.6	193.3	193.3	0.145	2.74	0.10		193.3		Z5/01
		1I	6.00	136.04	0.90	0.3077	0.2769			0.2769											
Z5/01	Interallotment Pit 600x600	1P	7.00	128.36	0.57	0.6982	0.4013	0.8202	292.5	0.3440	0.7629	288.3	292.5	292.5	0.178	3.14	0.14		292.5		3/04
		1I	6.00	136.04	0.90	0.4655	0.4189			0.4189											
Z6/02	Interallotment Pit 900x900	1P	6.00	136.04	0.85	0.0710	0.0601	0.6353	240.1	0.0501	0.6253	236.3	240.1	240.1	0.162	2.94	0.12		240.1		12/01
		1I	5.00	136.04	0.90	0.6392	0.5753			0.5753											
Z6/01	Junction Pit 600x600																				-

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environmental Planning and Assessment Act 1979
APPROVAL
CC/0602/16
CONSTRUCTION CERTIFICATE
CC 10 2015 1230 1

Issue	Description	Date
07	ISSUE FOR CONSTRUCTION CERTIFICATE	15/06/16
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 3

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
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Drawing No.	Project No.	Issue
TRHW-CI-322	—AA007442CC—	07

Edit by RCM1199

HYDROLOGY - MAJOR 100 YEAR STORM EVENT

Pit Name	Pit Type	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Catchment Flow Qc	Approach Flow Qa	Flooded Depth	Flooded Width	Flooded Vel.Dep	Max Pond Depth	Inlet Flow Qg	Bypass Flow Qb	Bypass Pit
(-)	(-)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(m)	(L/s)	(L/s)	(-)
1/13	1.8 m lintel	1P	6.00	204.98	1.00	0.0037	0.0037	0.0336	19.1	0.0012	0.0311	17.7	19.1	19.1	0.042	2.07	0.02		15.3	3.8	1/12
		1I	2.00	204.98	0.90	0.0332	0.0299			0.0299											
1/12	1.8 m lintel	1P	6.00	204.98	1.00	0.0041	0.0041	0.0377	21.5	0.0014	0.0350	19.9	21.5	25.3	0.034	1.74	0.03		19.4	5.9	1/11
		1I	2.00	204.98	0.90	0.0373	0.0336			0.0336											
1/11	1.8 m lintel	1P	6.00	204.98	1.00	0.0030	0.0030	0.0269	15.3	0.0010	0.0249	14.2	15.3	21.2	0.033	1.99	0.02		16.8	4.4	1/10
		1I	2.00	204.98	0.90	0.0266	0.0239			0.0239											
1/10	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0022	0.0022	0.0198	11.3	0.0007	0.0184	10.5	11.3	15.7	0.050	1.59	0.03		6.6	9.1	1/09
		1I	2.00	204.98	0.90	0.0196	0.0177			0.0177											
1/09	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0028	0.0028	0.0259	14.7	0.0009	0.0240	13.7	14.7	23.8	0.055	2.14	0.04		9.2	14.6	1/08
		1I	2.00	204.98	0.90	0.0256	0.0230			0.0230											
1/08	1.8 m lintel	1P	6.00	204.98	1.00	0.0032	0.0032	0.0290	16.5	0.0011	0.0269	15.3	16.5	31.1	0.067	1.49	0.07		22.9	8.3	1/07
		1I	2.00	204.98	0.90	0.0287	0.0258			0.0258											
1/07	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0204	11.6	0.0007	0.0189	10.8	11.6	21.9	0.060	1.09	0.07		17.2	4.7	1/06
		1I	2.00	204.98	0.90	0.0202	0.0182			0.0182											
1/06	1.8 m lintel	1P	6.00	204.98	1.00	0.0017	0.0017	0.0151	8.6	0.0006	0.0140	8.0	8.6	13.3	0.033	0.55	0.04		10.6	2.7	1/05
		1I	2.00	204.98	0.90	0.0149	0.0134			0.0134											
1/05	1.8 m lintel	1P	6.00	204.98	1.00	0.0027	0.0027	0.0242	13.8	0.0009	0.0224	12.8	13.8	16.4	0.023	1.41	0.02		13.1	3.3	1/04
		1I	2.00	204.98	0.90	0.0239	0.0215			0.0215											
1/04	1.8 m lintel	1P	6.00	204.98	1.00	0.0026	0.0026	0.0233	13.3	0.0009	0.0216	12.3	13.3	16.6	0.023	1.46	0.02		13.3	3.3	1/03
		1I	2.00	204.98	0.90	0.0231	0.0208			0.0208											
1/03	1.8 m lintel	1P	6.00	204.98	1.00	0.0020	0.0020	0.0178	10.1	0.0007	0.0165	9.4	10.1	13.5	0.043	0.48	0.06		10.8	2.7	1/02
		1I	2.00	204.98	0.90	0.0176	0.0159			0.0159											
1/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0020	0.0020	0.0182	10.4	0.0007	0.0169	9.6	10.4	13.0	0.009	3.70	0.00		10.4	2.6	1/01
		1I	2.00	204.98	0.90	0.0180	0.0162			0.0162											
1/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0037	0.0037	0.0336	19.1	0.0012	0.0312	17.7	19.1	21.7	0.073	2.45	0.03		17.1	4.6	16/02
		1I	2.00	204.98	0.90	0.0332	0.0299			0.0299											
2/07	1.8 m lintel	1P	6.00	204.98	1.00	0.0044	0.0044	0.0400	22.8	0.0015	0.0371	21.1	22.8	41.8	0.068	2.56	0.04		26.8	15.0	2/06
		1I	2.00	204.98	0.90	0.0396	0.0356			0.0356											
2/06	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0196	11.2	0.0007	0.0182	10.4	11.2	26.2	0.059	2.10	0.03		20.0	6.2	2/05
		1I	2.00	204.98	0.90	0.0194	0.0175			0.0175											
2/05	1.8 m lintel	1P	6.00	204.98	1.00	0.0021	0.0021	0.0195	11.1	0.0007	0.0181	10.3	11.1	17.3	0.052	1.74	0.03		13.9	3.5	2/03
		1I	2.00	204.98	0.90	0.0193	0.0173			0.0173											
2/04	Junction Pit 600x600																				-
2/03	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0199	11.3	0.0007	0.0184	10.5	11.3	14.8	0.050	1.63	0.02		11.8	3.0	2/02
		1I	2.00	204.98	0.90	0.0197	0.0177			0.0177											
2/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0196	11.2	0.0007	0.0182	10.4	11.2	14.1	0.049	1.58	0.02		11.3	2.8	2/01
		1I	2.00	204.98	0.90	0.0194	0.0175			0.0175											
2/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0196	11.2	0.0007	0.0182	10.4	11.2	14.0	0.049	1.58	0.02		11.2	2.8	17/01
		1I	2.00	204.98	0.90	0.0194	0.0175			0.0175											
3/08	1.8 m lintel	1P	6.00	204.98	1.00	0.0082	0.0082	0.0747	42.5	0.0027	0.0692	39.4	42.5	61.9	0.095	2.31	0.07		31.6	30.2	3/07
		1I	2.00	204.98	0.90	0.0739	0.0665			0.0665											
3/07	1.8 m lintel	1P	6.00	204.98	1.00	0.0026	0.0026	0.0233	13.3	0.0009	0.0216	12.3	13.3	43.5	0.085	1.92	0.06		27.2	16.3	3/06
		1I	2.00	204.98	0.90	0.0231	0.0207			0.0207											
3/06	1.8 m lintel	1P	6.00	204.98	1.00	0.0017	0.0017	0.0155	8.9	0.0006	0.0144	8.2	8.9	25.1	0.063	1.28	0.05		19.3	5.8	3/05
		1I	2.00	204.98	0.90	0.0154	0.0138			0.0138											
3/05	1.8 m lintel	1P	6.00	204.98	1.00	0.0054	0.0054	0.0491	28.0	0.0018	0.0455	25.9	28.0	33.8	0.068	1.38	0.07		23.9	9.9	3/04
		1I	2.00	204.98	0.90	0.0486	0.0437			0.0437											
3/04	2.4 m lintel sag	1P	6.00	204.98	1.00	0.0050	0.0050	0.0457	26.0	0.0017	0.0424	24.1	26.0	60.0	0.088			0.088	45.1	14.9	3/03
		1I	2.00	204.98	0.90	0.0452	0.0407			0.0407											
3/03	2.4 m lintel sag	1P	6.00	204.98	1.00	0.0022	0.0022	0.0204	11.6	0.0007	0.0189	10.8	11.6	34.0	0.074			0.088	34.0		3/02
		1I	2.00	204.98	0.90	0.0202	0.0182			0.0182											
3/02	GPT													0.0					0.0		-
3/01	HW 1050																				-
4/06	1.8 m lintel	1P	6.00	204.98	1.00	0.0058	0.0058	0.0529	30.1	0.0019	0.0491	27.9	30.1	33.4	0.033	1.94	0.03		23.8	9.6	4/05
		1I	2.00	204.98	0.90	0.0524	0.0471			0.0471											
4/05	1.8 m lintel	1P	6.00	204.98	1.00	0.0043	0.0043	0.0389	22.2	0.0014	0.0361	20.5	22.2	31.8	0.037	1.37	0.05		23.1	8.7	4/04
		1I	2.00	204.98	0.90	0.0385	0.0347			0.0347											
4/04	1.8 m lintel	1P	6.00	204.98	1.00	0.0054	0.0054	0.0496	28.2	0.0018	0.0459	26.2	28.2	36.9	0.027	1.71	0.03		-178.9	215.8	4/03
		1I	2.00	204.98	0.90	0.0490	0.0441			0.0441											
4/03	1.8 m lintel	1P	6.00	204.98	1.00	0.0043	0.0043	0.0389	22.1	0.0014	0.0360	20.5	22.1	237.9	0.103	2.41	0.25		49.6	188.3	EX4/02
		1I	2.00	204.98	0.90	0.0384	0.0346			0.0346											
4/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0012	0.0012	0.0113	6.4	0.0004	0.0104	5.9	6.4	9.8	0.037	0.38	0.05		-25.0	34.9	EX4/01
		1I	2.00	204.98	0.90	0.0111	0.0100			0.0100											
4/01	HW 600																				-
5/01	Stub Connection													0.0					0.0		-
6/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0023	0.0023	0.0212	12.1	0.0008	0.0196	11.2	12.1	15.1	0.050	1.64	0.02		12.1	3.0	40/01
		1I	2.00	204.98	0.90	0.0209	0.0188			0.0188											
7/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0019	0.0019	0.0169	9.6	0.0006	0.0157	8.9	9.6	30.7	0.052	1.85	0.06		11.4	19.3	3/08
		1I	2.00	204.98	0.90	0.0167	0.0150			0.0150											
8/06	Dish Drain Inlet Sag	1P	6.00	204.98	1.00	0.0028	0.0028	0.0255	14.5	0.0009	0.0237	13.5	14.5	443.2	0.150			0.150	109.2	333.9	8/02
		1I	2.00	204.98	0.90	0.0253	0.0227			0.0227											
8/05	Junction Pit 900x900																				-
8/04	Junction Pit 900x900																				-
8/03	Junction Pit 900x900																				-
8/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0026	0.0026	0.0237	13.5	0.0009	0.0220	12.5	13.5	347.4					-38.9	386.3	-

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
29/WIQ016
CONSTRUCTION CERTIFICATE
CC 18.2016.1230.1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 4

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Drawing No.	Project No.	Issue
TRHW-CI-323	AA007442CC	06

Edit by: JVHN0894

HYDROLOGY - MAJOR 100 YEAR STORM EVENT

Pit Name	Pit Type	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Catchment Flow Qc	Approach Flow Qa	Flooded Depth	Flooded Width	Flooded Vel.Dep	Max Pond Depth	Inlet Flow Qg	Bypass Flow Qb	Bypass Pit
(-)	(-)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(m)	(L/s)	(L/s)	(-)
		11	2.00	204.98	0.90	0.0234	0.0211			0.0211											
8/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0011	0.0011	0.0100	5.7	0.0004	0.0093	5.3	5.7	5.7					5.7		-
		11	2.00	204.98	0.90	0.0099	0.0089			0.0089											
9/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0030	0.0030	0.0272	15.5	0.0010	0.0252	14.3	15.5	33.0	0.053	1.92	0.06		11.9	21.1	7/01
		11	2.00	204.98	0.90	0.0269	0.0242			0.0242											
10/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0036	0.0036	0.0326	18.5	0.0012	0.0302	17.2	18.5	29.9	0.064	1.44	0.06		22.3	7.6	3/03
		11	2.00	204.98	0.90	0.0322	0.0290			0.0290											
11/07	1.8 m lintel	1P	6.00	204.98	1.00	0.0008	0.0008	0.0075	4.3	0.0003	0.0070	4.0	4.3	4.3	0.061	0.70	0.01		3.4	0.9	11/06
		11	2.00	204.98	0.90	0.0074	0.0067			0.0067											
11/06	1.8 m lintel	1P	6.00	204.98	1.00	0.0033	0.0033	0.0303	17.2	0.0011	0.0280	16.0	17.2	18.1	0.042	2.50	0.02		14.5	3.6	11/05
		11	2.00	204.98	0.90	0.0299	0.0269			0.0269											
11/05	1.8 m lintel	1P	6.00	204.98	1.00	0.0044	0.0044	0.0398	22.7	0.0015	0.0369	21.0	22.7	26.3	0.034	1.72	0.04		20.0	6.3	11/04
		11	2.00	204.98	0.90	0.0394	0.0354			0.0354											
11/04	1.8 m lintel	1P	6.00	204.98	1.00	0.0047	0.0047	0.0424	24.1	0.0016	0.0393	22.3	24.1	30.4	0.035	1.79	0.04		22.6	7.8	11/03
		11	2.00	204.98	0.90	0.0419	0.0377			0.0377											
11/03	1.8 m lintel	1P	6.00	204.98	1.00	0.0048	0.0048	0.0432	24.6	0.0016	0.0401	22.8	24.6	32.5	0.034	1.68	0.04		23.4	9.1	11/02
		11	2.00	204.98	0.90	0.0428	0.0385			0.0385											
11/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0050	0.0050	0.0453	25.8	0.0017	0.0420	23.9	25.8	34.9	0.036	1.53	0.05		24.3	10.5	11/01
		11	2.00	204.98	0.90	0.0448	0.0403			0.0403											
11/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0034	0.0034	0.0308	17.5	0.0011	0.0285	16.3	17.5	28.0	0.064	1.04	0.08		21.1	6.9	18/03
		11	2.00	204.98	0.90	0.0305	0.0274			0.0274											
12/01	Grated Drain	1P	6.00	204.98	1.00	0.0046	0.0046	0.0418	23.8	0.0015	0.0388	22.1	23.8	98.6	0.063	0.60	0.38		98.6		25/01
		11	2.00	204.98	0.90	0.0414	0.0372			0.0372											
13/06	1.8 m lintel	1P	6.00	204.98	1.00	0.0016	0.0016	0.0146	8.3	0.0005	0.0135	7.7	8.3	8.3	0.048	1.01	0.02		6.7	1.7	13/04
		11	2.00	204.98	0.90	0.0144	0.0130			0.0130											
13/05	Junction Pit 600x600																				-
13/04	1.8 m lintel	1P	6.00	204.98	1.00	0.0033	0.0033	0.0302	17.2	0.0011	0.0280	15.9	17.2	18.9	0.061	1.73	0.03		15.1	3.8	13/03
		11	2.00	204.98	0.90	0.0299	0.0269			0.0269											
13/03	1.8 m lintel	1P	6.00	204.98	1.00	0.0024	0.0024	0.0218	12.4	0.0008	0.0202	11.5	12.4	16.2	0.059	1.57	0.03		13.0	3.2	13/02
		11	2.00	204.98	0.90	0.0216	0.0194			0.0194											
13/02	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0017	0.0017	0.0152	8.6	0.0006	0.0141	8.0	8.6	17.8	0.024	0.92	0.03		8.1	9.7	-
		11	2.00	204.98	0.90	0.0150	0.0135			0.0135											
13/01	HW 525																				-
14/01	Interallotment Pit 600x600	1P	6.00	204.98	1.00	0.0354	0.0354	0.3222	183.4	0.0177	0.3045	173.4	183.4	183.4	0.142	2.70	0.10		183.4		22/01
		11	3.00	204.98	0.90	0.3186	0.2868			0.2868											
15/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0026	0.0026	0.0233	13.3	0.0009	0.0216	12.3	13.3	14.4	0.035	1.87	0.02		11.5	2.9	30/01
		11	2.00	204.98	0.90	0.0231	0.0208			0.0208											
16/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0038	0.0038	0.0345	19.6	0.0013	0.0320	18.2	19.6	24.3	0.034	5.59	0.02		18.7	5.5	23/02
		11	2.00	204.98	0.90	0.0341	0.0307			0.0307											
16/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0014	0.0014	0.0123	7.0	0.0005	0.0114	6.5	7.0	7.0	0.050	0.86	0.02		5.6	1.4	CP/03
		11	2.00	204.98	0.90	0.0122	0.0110			0.0110											
17/01	Dish Drain Inlet Sag	1P	6.00	204.98	1.00	0.0027	0.0027	0.0247	14.1	0.0009	0.0229	13.0	14.1	523.6	0.150			0.150	109.2	414.3	8/06
		11	2.00	204.98	0.90	0.0245	0.0220			0.0220											
18/03	2.4 m lintel sag	1P	6.00	204.98	1.00	0.0077	0.0077	0.0700	39.9	0.0026	0.0649	37.0	39.9	49.1	0.093			0.150	49.1		18/02
		11	2.00	204.98	0.90	0.0693	0.0623			0.0623											
18/02	2.4 m lintel	1P	6.00	204.98	1.00	0.0014	0.0014	0.0126	7.2	0.0005	0.0117	6.6	7.2	9.6	0.031	0.79	0.02		7.7	1.9	18/01
		11	2.00	204.98	0.90	0.0124	0.0112			0.0112											
18/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0029	0.0029	0.0268	15.3	0.0010	0.0249	14.2	15.3	17.2	0.046	0.49	0.07		13.8	3.4	4/02
		11	2.00	204.98	0.90	0.0265	0.0239			0.0239											
19/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0017	0.0017	0.0150	8.6	0.0006	0.0139	7.9	8.6	11.3	0.053	1.89	0.02		5.4	5.9	13/02
		11	2.00	204.98	0.90	0.0149	0.0134			0.0134											
20/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0010	0.0010	0.0090	5.1	0.0003	0.0084	4.8	5.1	5.1	0.038	0.58	0.02		4.1	1.0	34/01
		11	2.00	204.98	0.90	0.0089	0.0080			0.0080											
22/01	Interallotment Pit 600x600	1P	6.00	204.98	1.00	0.0201	0.0201	0.1833	104.3	0.0101	0.1732	98.6	104.3	104.3	0.106	2.27	0.06		104.3		13/02
		11	3.00	204.98	0.90	0.1812	0.1631			0.1631											
23/02	2.4 m lintel sag	1P	6.00	204.98	1.00	0.0021	0.0021	0.0187	10.7	0.0007	0.0173	9.9	10.7	41.1	0.083			0.150	41.1		23/01
		11	2.00	204.98	0.90	0.0185	0.0167			0.0167											
23/01	2.4 m lintel sag	1P	6.00	204.98	1.00	0.0064	0.0064	0.0580	33.0	0.0021	0.0537	30.6	33.0	58.6	0.101			0.150	58.6		-
		11	2.00	204.98	0.90	0.0573	0.0516			0.0516											
24/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0058	0.0058	0.0532	30.3	0.0019	0.0493	28.1	30.3	30.3	0.037	1.77	0.04		22.5	7.8	28/01
		11	2.00	204.98	0.90	0.0526	0.0474			0.0474											
25/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0045	0.0045	0.0411	23.4	0.0015	0.0381	21.7	23.4	27.3	0.057	1.53	0.05		20.7	6.6	25/01
		11	2.00	204.98	0.90	0.0406	0.0366			0.0366											
25/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0018	0.0018	0.0167	9.5	0.0006	0.0155	8.8	9.5	16.2	0.030	0.73	0.04		12.9	3.2	4/06
		11	2.00	204.98	0.90	0.0165	0.0149			0.0149											
26/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0019	0.0019	0.0169	9.6	0.0006	0.0157	8.9	9.6	9.6					7.7	1.9	1/07
		11	2.00	204.98	0.90	0.0167	0.0151			0.0151											
27/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0054	0.0054	0.0495	28.2	0.0027	0.0468	26.6	28.2	28.2	0.051	1.72	0.06		10.6	17.6	9/01
		11	3.00	204.98	0.90	0.0489	0.0440			0.0440											
28/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0029	0.0029	0.0265	15.1	0.0010	0.0246	14.0	15.1	22.9	0.035	2.05	0.02		17.8	5.0	43/01
		11	2.00	204.98	0.90	0.0262	0.0236			0.0236											
29/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0021	0.0021	0.0192	10.9	0.0007	0.0178	10.1	10.9	10.9	0.033	1.13	0.03		8.8	2.2	31/01
		11	2.00	204.98	0.90	0.0190	0.0171			0.0171											
30/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0024	0.0024	0.0216	12.4	0.0008	0.0202	11.5	12.4	15.3	0.050	1.65	0.02		12.2	3.1	6/01
		11	2.00	204.98	0.90	0.0216	0.0194			0.0194											

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
2/06/2016
CONSTRUCTION CERTIFICATE
CC 16.2015.1220.1

Issue	Description	Date
07	ISSUE FOR CONSTRUCTION CERTIFICATE	15/06/16
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 5

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
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Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-324	—AA007442CC—	07

Edit by RCMH1199

Date Plotted: 14 Jun 2016 - 04:04PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-324-StormwaterDrainageCalculationSheet5.dwg V1

HYDROLOGY - MAJOR 100 YEAR STORM EVENT

Pit Name	Pit Type	Catch ID	Time Tc	Intensity I	Runoff C	Area A	Full CA	Full Sum CA	Full Qc=CIA	Partial CA	Partial Sum CA	Partial Qc=CIA	Catchment Flow Qc	Approach Flow Qa	Flooded Depth	Flooded Width	Flooded Vel.Dep	Max Pond Depth	Inlet Flow Qg	Bypass Flow Qb	Bypass Pit
(-)	(-)	(-)	(min)	(mm/hr)	(-)	(ha)	(ha)	(ha)	(L/s)	(ha)	(ha)	(L/s)	(L/s)	(L/s)	(m)	(m)	(sq.m/s)	(m)	(L/s)	(L/s)	(-)
31/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0034	0.0034	0.0307	17.5	0.0011	0.0284	16.2	17.5	19.7	0.031	1.51	0.03		15.7	3.9	25/02
		1I	2.00	204.98	0.90	0.0304	0.0273			0.0273											
32/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0024	0.0024	0.0214	12.2	0.0008	0.0198	11.3	12.2	15.3	0.050	1.64	0.02		12.2	3.1	8/06
		1I	2.00	204.98	0.90	0.0212	0.0190			0.0190											
34/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0197	11.2	0.0007	0.0182	10.4	11.2	12.2	0.054	1.33	0.03		9.8	2.4	42/01
		1I	2.00	204.98	0.90	0.0195	0.0175			0.0175											
35/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0021	0.0021	0.0188	10.7	0.0007	0.0174	9.9	10.7	30.3	0.059	1.88	0.05		11.3	19.0	2/07
		1I	2.00	204.98	0.90	0.0186	0.0167			0.0167											
36/02	1.8 m lintel	1P	6.00	204.98	1.00	0.0011	0.0011	0.0100	5.7	0.0004	0.0093	5.3	5.7	5.7	0.019	1.28	0.01		4.6	1.1	36/01
		1I	2.00	204.98	0.90	0.0099	0.0089			0.0089											
36/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0021	0.0021	0.0195	11.1	0.0007	0.0181	10.3	11.1	12.3	0.043	0.83	0.04		9.8	2.5	18/02
		1I	2.00	204.98	0.90	0.0193	0.0174			0.0174											
37/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0010	0.0010	0.0094	5.3	0.0003	0.0087	5.0	5.3	5.3	0.036	0.91	0.01		4.3	1.1	15/01
		1I	2.00	204.98	0.90	0.0093	0.0084			0.0084											
38/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0021	0.0021	0.0189	10.8	0.0007	0.0175	10.0	10.8	11.9	0.042	0.76	0.04		9.5	2.4	18/03
		1I	2.00	204.98	0.90	0.0187	0.0169			0.0169											
39/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0010	0.0010	0.0095	5.4	0.0003	0.0088	5.0	5.4	5.4	0.019	1.10	0.01		4.3	1.1	38/01
		1I	2.00	204.98	0.90	0.0094	0.0085			0.0085											
40/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0024	0.0024	0.0217	12.4	0.0008	0.0201	11.5	12.4	15.4	0.050	1.65	0.02		12.3	3.1	32/01
		1I	2.00	204.98	0.90	0.0215	0.0193			0.0193											
41/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0070	0.0070	0.0637	36.3	0.0023	0.0591	33.6	36.3	36.3	0.081	1.88	0.05		24.9	11.4	10/01
		1I	2.00	204.98	0.90	0.0630	0.0567			0.0567											
42/01	1.8 m lintel	1P	6.00	204.98	1.00	0.0022	0.0022	0.0197	11.2	0.0007	0.0183	10.4	11.2	13.7	0.056	1.43	0.03		11.0	2.7	19/01
		1I	2.00	204.98	0.90	0.0195	0.0176			0.0176											
43/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0025	0.0025	0.0229	13.1	0.0008	0.0212	12.1	13.1	18.1	0.052	1.81	0.04		7.4	10.7	44/01
		1I	2.00	204.98	0.90	0.0227	0.0204			0.0204											
44/01	Dish Drain Inlet	1P	6.00	204.98	1.00	0.0039	0.0039	0.0358	20.4	0.0013	0.0332	18.9	20.4	31.1	0.059	2.51	0.04		11.5	19.6	35/01
		1I	2.00	204.98	0.90	0.0354	0.0318			0.0318											
CP/04	Raised Grate Inlet 2400x2100	1P	10.00	167.31	0.69	1.4494	0.9998	1.8694	868.8	0.6999	1.5695	843.0	868.8	868.8	0.150			0.150	868.8		23/02
		1I	7.00	193.37	0.90	0.9663	0.8696			0.8696											
CP/03	1.8 m lintel	1P	6.00	204.98	1.00	0.0005	0.0005	0.0046	2.6	0.0002	0.0042	2.4	2.6	4.0	0.046	0.64	0.01		3.2	0.8	23/01
		1I	2.00	204.98	0.90	0.0045	0.0041			0.0041											
CP/02	GPT													0.0					0.0		-
CP/01	HW 1050																				-
Z1/01	Interallotment Pit 900x900	1P	6.00	204.98	1.00	0.1977	0.1977	1.7987	1024.2	0.1647	1.7658	1005.4	1024.2	1024.2	0.259	4.11	0.25		650.0	374.2	Z2/01
		1I	5.00	204.98	0.90	1.7789	1.6011			1.6011											
Z2/01	Interallotment Pit 900x900	1P	6.00	204.98	1.00	0.1170	0.1170	1.0651	606.5	0.0975	1.0456	595.3	606.5	980.6	0.228	3.74	0.21		487.6	493.0	17/01
		1I	5.00	204.98	0.90	1.0534	0.9481			0.9481											
Z3/01	Interallotment Pit 900x900	1P	7.00	193.37	0.69	0.3093	0.2133	0.3989	214.3	0.1829	0.3684	209.8	214.3	214.3	0.153	2.84	0.11		167.9	46.4	Z4/01
		1I	6.00	204.98	0.90	0.2062	0.1856			0.1856											
Z4/01	Interallotment Pit 900x900	1P	7.00	193.37	0.69	0.4615	0.3184	0.5953	319.8	0.2729	0.5498	313.1	319.8	366.2	0.198	3.38	0.17		347.4	18.8	Z5/01
		1I	6.00	204.98	0.90	0.3077	0.2769			0.2769											
Z5/01	Interallotment Pit 600x600	1P	7.00	193.37	0.69	0.6982	0.4816	0.9005	483.7	0.4128	0.8317	473.6	483.7	502.5	0.23	3.76	0.21		478.4	24.1	3/04
		1I	6.00	204.98	0.90	0.4655	0.4189			0.4189											
Z6/02	Interallotment Pit 900x900	1P	6.00	204.98	1.00	0.0710	0.0710	0.6463	368.0	0.0592	0.6345	361.3	368.0	368.0	0.199	3.39	0.17		293.2	74.8	12/01
		1I	5.00	204.98	0.90	0.6392	0.5753			0.5753											
Z6/01	Junction Pit 600x600																				-

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environmental Planning and Assessment Act 1979
APPROVAL
27/06/2016
CONSTRUCTION CERTIFICATE
CC 16.2015.1230.1

Issue	Description	Date
07	ISSUE FOR CONSTRUCTION CERTIFICATE	15/06/16
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 6

ARCADIS
76 104 485 289
Level 5, 141 Walker St
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Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-325	AA007442CC	07

Edit by RCM1199

HYDRAULICS - MINOR 10 YEAR STORM EVENT

Pipe ID	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Capacity Flow Qcap	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Pit Ku	Colebrook k Roughness	F'board US
(-)	(m)	(mm)	(sq.m)	(%)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m/s)	(m/s)	(m/s)	(m/s)	(-)	(mm)	(m)
1/13 to 1/12	20.89	375	0.110	1.00	6.00	136.04	0.0330	12.5	6.00	136.04	0.0330	12.5	12.5		12.5	216.4	0.11	1.09	0.74	1.96	4.50	0.6	0.71
1/12 to 1/11	17.64	375	0.110	1.62	6.32	133.43	0.1224	45.4	6.00	136.04	0.1221	46.1	46.1		46.1	275.9	0.42	1.88	1.07	2.50	2.00	0.6	0.74
1/11 to 1/10	14.11	375	0.110	3.43	6.48	132.21	0.1749	64.2	6.00	136.04	0.1742	65.8	65.8		65.8	403.3	0.60	2.73	1.20	3.65	1.25	0.6	0.66
1/10 to 1/09	19.92	375	0.110	2.56	6.56	131.55	0.2170	79.3	6.00	136.04	0.2159	81.6	81.6	-6.1	75.5	347.7	0.68	2.54	1.26	3.15	0.80	0.6	0.76
1/09 to 1/08	20.80	375	0.110	3.28	6.69	130.57	0.2776	100.7	6.00	136.04	0.2760	104.3	104.3	-13.4	90.9	394.4	0.82	2.93	1.34	3.57	0.90	0.6	0.67
1/08 to 1/07	16.99	375	0.110	5.29	6.81	129.70	0.3246	116.9	6.00	136.04	0.3224	121.8	121.8	-6.9	114.9	501.8	1.04	3.72	1.47	4.54	1.00	0.6	0.62
1/07 to 1/06	13.78	375	0.110	6.44	6.89	129.15	0.3613	129.6	6.00	136.04	0.3587	135.6	135.6	-6.9	128.7	554.0	1.16	4.12	1.55	5.02	0.70	0.6	0.73
1/06 to 1/05	21.38	375	0.110	8.06	6.94	128.75	0.3762	134.5	6.00	136.04	0.3732	141.0	141.0	-6.9	134.2	620.1	1.21	4.53	1.57	5.61	0.50	0.6	0.70
1/05 to 1/04	20.92	375	0.110	8.12	7.02	128.20	0.4486	159.7	6.00	136.04	0.4451	168.2	168.2	-15.9	152.3	622.4	1.38	4.70	1.68	5.64	0.70	0.6	0.66
1/04 to 1/03	17.19	375	0.110	7.89	7.10	127.68	0.4982	176.7	6.00	136.04	0.4941	186.7	186.7	-16.4	170.4	613.4	1.54	4.79	1.78	5.55	0.70	0.6	0.65
1/03 to 1/02	17.64	375	0.110	5.83	7.16	127.26	0.5323	188.2	6.00	136.04	0.5277	199.4	199.4	-14.3	185.1	527.1	1.68	4.37	1.87	4.77	1.70	0.6	0.52
1/02 to 1/01	23.57	375	0.110	1.83	7.22	126.80	0.5502	193.8	6.00	136.04	0.5451	206.0	206.0	-14.3	191.6	294.1	1.74	2.83	1.91	2.66	0.50	0.6	0.66
1/01 to 16/02	25.89	375	0.110	1.03	7.36	125.86	0.5832	203.9	6.00	136.04	0.5769	218.0	218.0	-14.3	203.7	219.5	1.84	2.24	1.99	1.99	0.80	0.6	0.46
2/07 to 2/06	21.40	375	0.110	1.00	6.16	134.71	0.0486	18.2	6.00	136.04	0.0486	18.4	18.4	6.5	24.9	216.4	0.23	1.32	0.89	1.96	2.50	0.6	0.74
2/06 to 2/05	21.00	375	0.110	1.00	6.43	132.57	0.0908	33.4	6.00	136.04	0.0906	34.2	34.2	6.9	41.1	216.4	0.37	1.52	1.03	1.96	1.45	0.6	0.62
2/05 to 2/04	17.33	375	0.110	1.00	6.66	130.82	0.1315	47.8	6.00	136.04	0.1308	49.4	49.4	6.9	56.3	216.4	0.51	1.66	1.14	1.96	1.30	0.6	0.43
2/04 to 2/03	3.67	825	0.535	1.00	6.83	129.54	1.8997	683.6	6.00	136.04	1.8978	717.1	717.1	6.9	724.0	1707.8	1.35	3.07	2.07	3.19	1.17	0.6	0.28
2/03 to 2/02	21.00	825	0.535	1.00	6.85	129.40	1.9400	697.3	6.00	136.04	1.9375	732.2	732.2	6.9	739.1	1707.8	1.38	3.09	2.09	3.19	2.00	0.6	0.36
2/02 to 2/01	21.00	825	0.535	1.00	6.97	128.59	1.9807	707.5	6.00	136.04	1.9746	746.2	746.2	6.9	753.1	1707.8	1.41	3.10	2.10	3.19	0.50	0.6	0.39
2/01 to 17/01	18.62	825	0.535	1.00	7.08	127.79	2.0210	717.4	6.00	136.04	2.0113	760.1	760.1	6.9	767.0	1707.8	1.43	3.11	2.12	3.19	0.50	0.6	0.27
3/08 to 3/07	30.25	375	0.110	1.22	6.00	136.04	0.0734	27.7	6.00	136.04	0.0734	27.7	27.7	2.9	30.6	239.4	0.28	1.51	0.95	2.17	4.50	0.6	0.67
3/07 to 3/06	19.79	375	0.110	1.14	6.33	133.33	0.1590	58.9	6.00	136.04	0.1585	59.9	59.9	6.7	66.6	230.9	0.60	1.82	1.20	2.09	1.70	0.6	0.72
3/06 to 3/05	63.04	375	0.110	2.93	7.03	128.16	0.5376	191.4	6.03	135.80	0.5114	192.9	192.9	6.7	199.6	372.6	1.81	3.43	1.97	3.37	1.70	0.6	0.43
3/05 to 3/04	32.12	600	0.283	1.24	7.33	126.06	1.1602	406.2	6.82	129.64	1.1394	410.3	410.3	7.4	417.7	828.5	1.48	2.94	1.96	2.93	2.00	0.6	0.54
3/04 to 3/03	7.16	900	0.636	1.00	7.52	124.85	2.0253	702.4	7.02	128.19	2.0059	714.2	714.2	7.4	721.7	2143.9	1.13	3.06	1.99	3.37	1.25	0.6	0.56
3/03 to 3/02	4.65	1050	0.866	1.00	7.87	122.62	5.1947	1769.3	6.07	135.49	4.9851	1876.2	1876.2	30.6	1906.8	3206.4	2.20	3.85	2.74	3.70	1.00	0.6	1.24
3/02 to 3/01	3.83	1050	0.866	1.66	7.89	122.49	5.1947	1767.5	6.09	135.32	4.9851	1873.9	1873.9	30.6	1904.5	4147.4	2.20	4.68	2.74	4.79	0.20	0.6	1.07
4/06 to 4/05	17.02	375	0.110	5.43	6.00	136.04	0.0520	19.7	6.00	136.04	0.0520	19.7	19.7		19.7	508.6	0.18	2.28	0.83	4.60	4.50	0.6	0.79
4/05 to 4/04	21.39	375	0.110	7.90	6.12	135.01	0.0903	33.9	6.00	136.04	0.0902	34.1	34.1		34.1	613.7	0.31	3.06	0.98	5.56	1.60	0.6	0.71
4/04 to 4/03	21.02	375	0.110	7.39	6.24	134.07	0.1390	51.8	6.00	136.04	0.1388	52.4	169.4		169.4	593.6	1.53	4.67	1.78	5.37	2.00	0.6	0.86
4/03 to 4/02	14.18	375	0.110	6.44	6.32	133.47	0.1773	65.7	6.00	136.04	0.1768	66.8	183.8		183.8	553.8	1.66	4.53	1.86	5.01	0.85	0.6	0.55
4/02 to 4/01	13.43	600	0.283	1.00	7.40	125.65	1.3705	478.4	6.00	136.04	1.3613	514.4	631.4		631.4	745.0	2.23	2.93	2.45	2.63	1.85	0.6	0.40
5/01 to 4/04	14.22	450	0.159	1.00									117.0		117.0	349.2	0.74	1.99	1.37	2.20	0.50	0.6	2.76
6/01 to 2/03	7.20	375	0.110	1.00	6.00	136.04	0.0208	7.9	6.00	136.04	0.0208	7.9	7.9		7.9	216.4	0.07	0.95	0.65	1.96	4.50	0.6	0.36
7/01 to 1/03	9.11	375	0.110	2.85	6.00	136.04	0.0166	6.3	6.00	136.04	0.0166	6.3	6.3	2.0	8.3	367.6	0.08	1.40	0.66	3.33	4.50	0.6	0.67
8/06 to 8/05	9.35	825	0.535	1.00	7.21	126.87	3.1174	1098.6	6.00	136.04	3.1025	1172.4	1172.4	23.1	1195.6	1707.8	2.24	3.44	2.61	3.19	0.50	0.6	0.68
8/05 to 8/04	70.09	825	0.535	6.48	7.26	126.56	3.1174	1095.9	6.00	136.04	3.1003	1171.6	1171.6	23.1	1194.7	4371.0	2.23	7.03	2.61	8.18	0.50	0.6	1.14
8/04 to 8/03	79.61	825	0.535	6.85	7.43	125.45	3.1174	1086.3	6.00	136.04	3.0921	1168.5	1168.5	23.1	1191.6	4495.2	2.23	7.18	2.60	8.41	0.50	0.6	0.54
8/03 to 8/02	6.71	825	0.535	6.98	7.61	124.24	3.1174	1075.9	6.00	136.04	3.0831	1165.1	1165.1	23.1	1188.2	4538.3	2.22	7.22	2.60	8.49	0.50	0.6	0.72
8/02 to 8/01	7.10	900	0.636	1.00	7.63	124.14	3.1407	1083.0	6.00	136.04	3.1056	1173.6	1173.6	23.1	1196.7	2143.9	1.88	3.46	2.44	3.37	0.50	0.6	0.28
8/01 to 3/03	42.93	1050	0.866	1.00	7.66	123.92	3.1493	1084.1	6.00	136.04	3.1124	1176.1	1176.1	23.1	1199.3	3206.4	1.39	3.45	2.25	3.70	2.50	0.6	0.39
9/01 to 1/04	10.19	375	0.110	1.02	6.00	136.04	0.0267	10.1	6.00	136.04	0.0267	10.1	10.1	-0.4	9.6	219.1	0.09	1.02	0.69	1.98	4.50	0.6	0.65
10/01 to 3/05	7.47	450	0.159	1.00	6.00	136.04	0.0320	12.1	6.00	136.04	0.0320	12.1	12.1	0.7	12.8	349.2	0.08	1.07	0.72	2.20	4.50	0.6	0.60
11/07 to 11/06	22.20	375	0.110	1.00	6.00	136.04	0.0074	2.8	6.00	136.04	0.0074	2.8	2.8		2.8	216.4	0.03	0.70	0.50	1.96	4.50	0.6	0.71
11/06 to 11/05	20.98	375	0.110	1.00	6.53	131.80	0.0560	20.5	6.00	136.04	0.0559	21.1	21.1		21.1	216.4	0.19	1.26	0.85	1.96	2.00	0.6	0.84
11/05 to 11/04	20.98	375	0.110	1.88	6.81	129.73	0.1253	45.2	6.00	136.04	0.1249	47.2	47.2		47.2	298.2	0.43	2.00	1.08	2.70	1.80	0.6	0.80
11/04 to 11/03	21.00	375	0.110	3.60	6.98	128.48	0.1670	59.6	6.00	136.04	0.1662	62.8	62.8		62.8	413.3	0.57	2.74	1.18	3.74	1.10	0.6	0.72
11/03 to 11/02	21.23	450	0.159	2.63	7.11	127.58	0.9428	334.1	6.00	136.04	0.9393	354.9	354.9		354.9	568.7	2.23	3.76	2.35	3.58	2.00	0.6	0.73
11/02 to 11/01	14.75	450	0.159	6.22	7.21	126.93	0.9873	348.1	6.00	136.04	0.9824	371.2	371.2		371.2	878.1	2.33	5.30	2.44	5.52	0.50	0.6	0.57
11/01 to 18/01	40.51	450	0.159	8.40	7.25	126.61	1.0176	357.9	6.00	136.04	1.0119	382.4	382.4		382.4	1020.6	2.40	5.98	2.49	6.42	0.50	0.6	0.55
12/01 to 25/01	13.42	450	0.159	8.54	6.08	135.41	0.6765	254.4	6.00	136.04	0.6757	255.3	255.3		255.3	1029.5	1.61	5.42	1.90	6.47	0.50	0.6	0.74

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environmental Planning and Assessment Act 1979
APPROVAL
27/09/2016
CONSTRUCTION CERTIFICATE
CC 16/2015/1220/1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales: N.T.S.
Original Size: A1
Height Datum: AHD
Grid: MGA
Filename:

Current Issue Signatures
Drawn: J. VARGAS
Designed: A. MALABUYOC
Checked: A. KALAJZICH
Approved: R. SMITH

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 7

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Drawing No. TRHW-CI-326 — Project No. AA007442CC — Issue 06

Edit by: JVHA0894

Date Plotted: 10 Jun 2016 - 04:27PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-326-StormwaterDrainageCalculationSheet7.dwg V1

HYDRAULICS - MINOR 10 YEAR STORM EVENT

Pipe ID	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Capacity Flow Qcap	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Pit Ku	Colebrook k Roughness	F'board US
(-)	(m)	(mm)	(sq.m)	(%)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m/s)	(m/s)	(m/s)	(m/s)	(-)	(mm)	(m)
13/06 to 13/05	16.50	375	0.110	1.00	6.14	134.88	0.0232	8.7	6.00	136.04	0.0232	8.8	8.8		8.8	216.4	0.08	0.98	0.67	1.96	2.50	0.6	0.74
13/05 to 13/04	4.50	375	0.110	1.00	6.42	132.65	0.3399	125.3	6.00	136.04	0.3396	128.3	128.3		128.3	216.4	1.16	2.04	1.54	1.96	1.46	0.6	0.68
13/04 to 13/03	21.00	375	0.110	1.00	6.46	132.36	0.3890	143.0	6.00	136.04	0.3884	146.8	146.8		146.8	216.4	1.33	2.10	1.64	1.96	2.00	0.6	0.76
13/03 to 13/02	16.93	375	0.110	6.40	6.63	131.09	0.4298	156.5	6.00	136.04	0.4282	161.8	161.8		161.8	552.2	1.47	4.37	1.73	5.00	0.70	0.6	0.88
13/02 to 13/01	6.60	450	0.159	1.00	6.69	130.61	0.6397	232.1	6.00	136.04	0.6375	240.9	240.9	-2.2	238.7	350.5	1.50	2.35	1.83	2.20	0.39	0.6	1.77
14/01 to 13/05	9.55	375	0.110	6.93	6.00	136.04	0.3167	119.7	6.00	136.04	0.3167	119.7	119.7		119.7	574.5	1.08	4.15	1.50	5.20	4.50	0.6	0.69
15/01 to 2/06	7.20	375	0.110	1.00	6.00	136.04	0.0229	8.7	6.00	136.04	0.0229	8.7	8.7		8.7	216.4	0.08	0.98	0.67	1.96	4.50	0.6	0.62
16/02 to 16/01	11.54	450	0.159	1.00	7.56	124.60	0.6171	213.6	6.00	136.04	0.6090	230.1	230.1	-14.3	215.8	349.2	1.36	2.30	1.74	2.20	1.50	0.6	0.38
16/01 to CP/03	4.99	450	0.159	1.00	7.64	124.06	0.6293	216.9	6.00	136.04	0.6203	234.4	234.4	-14.3	220.1	349.2	1.38	2.31	1.76	2.20	2.50	0.6	0.48
17/01 to 8/06	7.02	825	0.535	1.00	7.18	127.10	3.0923	1091.8	6.00	136.04	3.0791	1163.6	1163.6	15.8	1179.4	1707.8	2.21	3.43	2.59	3.19	1.90	0.6	0.21
18/03 to 18/02	11.21	375	0.110	1.00	6.00	136.04	0.0688	26.0	6.00	136.04	0.0688	26.0	26.0		26.0	216.4	0.24	1.34	0.90	1.96	4.50	0.6	0.63
18/02 to 18/01	15.84	375	0.110	6.42	6.50	132.06	0.1382	50.7	6.00	136.04	0.1379	52.1	52.1		52.1	553.0	0.47	3.21	1.11	5.01	1.75	0.6	0.68
18/01 to 4/02	11.55	450	0.159	9.22	7.37	125.85	1.1822	413.3	6.00	136.04	1.1742	443.7	443.7		443.7	1069.6	2.79	6.43	2.84	6.72	0.80	0.6	0.38
19/01 to 13/02	6.08	375	0.110	20.33	6.00	136.04	0.0148	5.6	6.00	136.04	0.0148	5.6	5.6	-1.4	4.2	986.6	0.04	2.30	0.55	8.93	4.50	0.6	0.65
20/01 to 13/06	6.20	375	0.110	1.00	6.00	136.04	0.0089	3.4	6.00	136.04	0.0089	3.4	3.4		3.4	216.4	0.03	0.74	0.52	1.96	4.50	0.6	0.66
22/01 to 13/02	8.53	375	0.110	14.94	6.00	136.04	0.1801	68.1	6.00	136.04	0.1801	68.1	68.1		68.1	845.4	0.62	4.69	1.21	7.65	4.50	0.6	0.49
23/02 to 23/01	10.30	600	0.283	1.00	6.57	131.54	0.1043	38.1	6.00	136.04	0.1036	39.1	222.1	-16.2	205.9	742.4	0.73	2.26	1.50	2.63	2.50	0.6	1.40
23/01 to CP/03	7.50	600	0.283	1.00	6.64	130.97	0.1613	58.7	6.00	136.04	0.1604	60.6	243.6		243.6	742.4	0.86	2.36	1.59	2.63	2.50	0.6	1.49
24/01 to 1/12	12.55	375	0.110	1.00	6.00	136.04	0.0523	19.8	6.00	136.04	0.0523	19.8	19.8		19.8	216.4	0.18	1.24	0.84	1.96	4.50	0.6	0.65
25/02 to 25/01	14.59	375	0.110	3.79	6.00	136.04	0.0404	15.3	6.00	136.04	0.0404	15.3	15.3		15.3	424.0	0.14	1.86	0.78	3.84	4.50	0.6	0.69
25/01 to 11/03	13.66	450	0.159	1.00	6.13	134.96	0.7333	274.9	6.00	136.04	0.7320	276.6	276.6		276.6	349.2	1.74	2.42	1.98	2.20	1.75	0.6	0.56
26/01 to 1/07	9.69	375	0.110	1.00	6.00	136.04	0.0166	6.3	6.00	136.04	0.0166	6.3	6.3		6.3	216.4	0.06	0.89	0.61	1.96	4.50	0.6	0.63
27/01 to 1/05	10.66	375	0.110	2.48	6.00	136.04	0.0486	18.4	6.00	136.04	0.0486	18.4	18.4	-9.0	9.4	342.7	0.08	1.38	0.68	3.10	4.50	0.6	0.66
28/01 to 1/11	13.17	375	0.110	1.00	6.00	136.04	0.0261	9.9	6.00	136.04	0.0261	9.9	9.9		9.9	216.4	0.09	1.01	0.69	1.96	4.50	0.6	0.65
29/01 to 11/06	12.79	375	0.110	1.00	6.00	136.04	0.0189	7.1	6.00	136.04	0.0189	7.1	7.1		7.1	216.4	0.06	0.92	0.63	1.96	4.50	0.6	0.66
30/01 to 2/05	7.20	375	0.110	1.00	6.00	136.04	0.0215	8.1	6.00	136.04	0.0215	8.1	8.1		8.1	216.4	0.07	0.96	0.66	1.96	4.50	0.6	0.42
31/01 to 11/05	13.33	375	0.110	1.00	6.00	136.04	0.0302	11.4	6.00	136.04	0.0302	11.4	11.4		11.4	216.4	0.10	1.06	0.72	1.96	4.50	0.6	0.66
32/01 to 2/01	7.20	375	0.110	1.00	6.00	136.04	0.0210	7.9	6.00	136.04	0.0210	7.9	7.9		7.9	216.4	0.07	0.95	0.65	1.96	4.50	0.6	0.27
34/01 to 13/04	6.20	375	0.110	1.00	6.00	136.04	0.0194	7.3	6.00	136.04	0.0194	7.3	7.3		7.3	216.4	0.07	0.93	0.64	1.96	4.50	0.6	0.66
35/01 to 1/08	16.98	375	0.110	2.69	6.00	136.04	0.0185	7.0	6.00	136.04	0.0185	7.0	7.0	0.9	7.9	356.6	0.07	1.36	0.65	3.23	4.50	0.6	0.68
36/02 to 36/01	21.00	375	0.110	4.13	6.14	134.90	0.0192	7.2	6.00	136.04	0.0192	7.3	7.3		7.3	443.2	0.07	1.54	0.64	4.01	2.50	0.6	0.74
36/01 to 18/02	13.60	375	0.110	2.27	6.37	133.08	0.0570	21.1	6.00	136.04	0.0569	21.5	21.5		21.5	327.8	0.19	1.71	0.86	2.97	1.95	0.6	0.73
37/01 to 2/07	7.20	375	0.110	1.00	6.00	136.04	0.0092	3.5	6.00	136.04	0.0092	3.5	3.5		3.5	216.4	0.03	0.74	0.53	1.96	4.50	0.6	0.65
38/01 to 36/01	6.20	375	0.110	1.00	6.00	136.04	0.0186	7.0	6.00	136.04	0.0186	7.0	7.0		7.0	216.4	0.06	0.92	0.63	1.96	4.50	0.6	0.66
39/01 to 36/02	6.20	375	0.110	1.00	6.00	136.04	0.0094	3.5	6.00	136.04	0.0094	3.5	3.5		3.5	216.4	0.03	0.75	0.53	1.96	4.50	0.6	0.66
40/01 to 2/02	7.20	375	0.110	1.00	6.00	136.04	0.0213	8.1	6.00	136.04	0.0213	8.1	8.1		8.1	216.4	0.07	0.96	0.66	1.96	4.50	0.6	0.39
41/01 to 3/07	7.37	375	0.110	1.00	6.00	136.04	0.0627	23.7	6.00	136.04	0.0627	23.7	23.7	-0.7	22.9	216.4	0.21	1.29	0.87	1.96	4.50	0.6	0.63
42/01 to 13/03	6.20	375	0.110	1.00	6.00	136.04	0.0194	7.3	6.00	136.04	0.0194	7.3	7.3		7.3	216.4	0.07	0.93	0.64	1.96	4.50	0.6	0.66
43/01 to 1/10	12.80	375	0.110	1.00	6.00	136.04	0.0225	8.5	6.00	136.04	0.0225	8.5	8.5	-3.1	5.4	216.4	0.05	0.85	0.59	1.96	4.50	0.6	0.65
44/01 to 1/09	12.40	375	0.110	1.00	6.00	136.04	0.0352	13.3	6.00	136.04	0.0352	13.3	13.3	-4.7	8.6	216.4	0.08	0.97	0.67	1.96	4.50	0.6	0.65
CP/04 to CP/03	30.43	900	0.636	2.00	10.00	111.11	1.7027	525.5	7.00	128.36	1.4528	518.0	525.5		525.5	3039.4	0.73	3.52	1.72	4.78	4.50	0.6	0.74
CP/03 to CP/02	77.06	1050	0.866	2.00	10.14	110.44	2.4978	766.2	7.14	127.35	2.2469	794.9	977.9	-76.4	901.5	4544.9	1.04	4.15	2.03	5.25	2.00	0.6	1.62
CP/02 to CP/01	2.62	1050	0.866	2.93	10.45	109.03	2.4978	756.5	7.45	125.27	2.2469	781.8	964.8	-76.4	888.5	5524.8	1.03	4.76	2.02	6.38	0.21	0.6	0.66
Z1/01 to 2/04	9.17	825	0.535	3.22	6.00	136.04	1.7682	668.2	6.00	136.04	1.7682	668.2	668.2		668.2	3074.6	1.25	4.66	2.01	5.75	4.50	0.6	0.21
Z2/01 to 17/01	8.11	600	0.283	5.09	6.00	136.04	1.0470	395.7	6.00	136.04	1.0470	395.7	395.7		395.7	1685.6	1.40	4.92	1.91	5.96	4.50	0.6	0.24
Z3/01 to 3/06	6.78	375	0.110	5.84	7.00	128.36	0.3633	129.6	6.00	136.04	0.3379	127.7	129.6		129.6	527.2	1.17	3.98	1.55	4.77	4.50	0.6	0.36
Z4/01 to 3/05	6.67	525	0.216	5.85	7.00	128.36	0.5422	193.3	6.00	136.04	0.5043	190.6	193.3		193.3	1274.2	0.89	4.32	1.54	5.89	4.50	0.6	0.49
Z5/01 to 3/04	7.51	525	0.216	6.83	7.00	128.36	0.8202	292.5	6.00	136.04	0.7629	288.3	292.5		292.5	1377.0	1.35	5.11	1.81	6.36	4.50	0.6	0.26
Z6/02 to Z6/01	7.79	450	0.159	10.60	6.00	136.04	0.6353	240.1	6.00	136.04	0.6353	240.1	240.1		240.1	1147.4	1.51	5.77	1.84	7.21	4.50	0.6	0.26
Z6/01 to 12/01	7.62	450	0.159	1.00	6.02	135.85	0.6353	239.8	6.00	136.04	0.6351	240.0	240.0		240.0	349.2	1.51	2.36	1.83	2.20	0.50	0.6	2.05

CANBERRA COUNCIL
Approved by the Council of Canberra under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
27/09/2016
CONSTRUCTION CERTIFICATE
DC18.2015.1299/1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	

Filename:

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 8

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-327_AA007442CC_		06

Edit by: JVHN0894

Date Plotted: 10 Jun 2016 - 04:27PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-327-StormwaterDrainageCalculationSheet8.dwg V1

HYDRAULICS - MAJOR 100 YEAR STORM EVENT

Pipe ID	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Capacity Flow Qcap	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Pit Ku	Colebrook k Roughness	F'board US
(-)	(m)	(mm)	(sq.m)	(%)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m/s)	(m/s)	(m/s)	(m/s)	(-)	(mm)	(m)
1/13 to 1/12	20.890	375.000	0.110	1.000	6.000	204.980	0.034	19.100	6.000	204.980	0.034	19.100	19.100	-3.800	15.300	216.400	0.140	1.150	0.780	1.960	4.500	0.600	0.710
1/12 to 1/11	17.640	375.000	0.110	1.560	8.510	178.910	0.125	61.900	6.000	204.980	0.122	69.500	69.500	-13.700	55.800	271.000	0.500	1.950	1.140	2.450	2.000	0.600	0.740
1/11 to 1/10	14.110	375.000	0.110	3.360	9.100	174.100	0.178	86.100	6.000	204.980	0.173	98.700	98.700	-9.500	89.300	399.100	0.810	2.940	1.330	3.610	1.250	0.600	0.650
1/10 to 1/09	19.920	375.000	0.110	2.510	9.390	171.830	0.221	105.300	6.000	204.980	0.214	121.800	121.800	-19.800	102.000	344.300	0.920	2.730	1.400	3.120	0.800	0.600	0.750
1/09 to 1/08	20.800	375.000	0.110	3.250	9.750	169.140	0.282	132.700	6.000	204.980	0.273	155.300	155.300	-34.200	121.100	392.400	1.100	3.150	1.500	3.550	0.900	0.600	0.650
1/08 to 1/07	16.990	375.000	0.110	5.260	10.060	166.860	0.330	153.000	6.060	204.190	0.318	180.600	180.600	-27.300	153.300	500.400	1.390	4.010	1.680	4.530	1.000	0.600	0.580
1/07 to 1/06	13.780	375.000	0.110	6.370	10.270	165.430	0.368	168.900	6.070	204.110	0.351	199.000	199.000	-23.700	175.300	550.900	1.590	4.450	1.810	4.990	0.700	0.600	0.690
1/06 to 1/05	21.380	375.000	0.110	8.060	10.410	164.440	0.383	174.800	6.210	202.330	0.366	205.700	205.700	-21.700	184.000	620.100	1.670	4.920	1.870	5.610	0.500	0.600	0.660
1/05 to 1/04	20.920	375.000	0.110	8.120	10.630	163.010	0.456	206.600	6.430	199.770	0.438	243.300	243.300	-39.900	203.400	622.400	1.840	5.070	1.990	5.640	0.700	0.600	0.610
1/04 to 1/03	17.190	375.000	0.110	7.890	10.810	161.770	0.507	227.700	6.620	197.590	0.488	268.100	268.100	-43.400	224.600	613.400	2.030	5.140	2.140	5.550	0.700	0.600	0.590
1/03 to 1/02	17.640	375.000	0.110	5.830	10.960	160.860	0.542	242.000	6.760	196.010	0.523	284.700	284.700	-41.100	243.600	527.100	2.210	4.680	2.290	4.770	1.700	0.600	0.340
1/02 to 1/01	23.570	375.000	0.110	1.830	11.090	160.010	0.560	248.800	6.890	194.540	0.541	292.400	292.400	-41.000	251.400	294.100	2.280	2.970	2.350	2.660	0.500	0.600	0.340
1/01 to 16/02	25.890	450.000	0.159	1.280	11.260	158.930	0.593	261.900	7.060	192.700	0.575	307.600	307.600	-43.000	264.600	395.600	1.660	2.650	1.930	2.490	0.800	0.600	0.320
2/07 to 2/06	21.400	375.000	0.110	1.000	9.100	174.090	0.049	23.900	6.000	204.980	0.049	27.800	27.800	3.000	30.800	216.400	0.280	1.410	0.950	1.960	2.500	0.600	0.750
2/06 to 2/05	21.000	375.000	0.110	1.000	10.380	164.680	0.092	42.300	6.380	200.380	0.091	50.500	50.500	9.900	60.400	216.400	0.550	1.690	1.170	1.960	1.450	0.600	0.560
2/05 to 2/04	17.330	375.000	0.110	1.000	11.020	160.470	0.134	59.600	6.000	204.980	0.126	71.600	71.600	12.500	84.100	216.400	0.760	1.840	1.300	1.960	1.300	0.600	0.390
2/04 to 2/03	3.670	825.000	0.535	1.000	11.390	158.110	1.932	848.700	6.000	204.980	1.918	1092.000	1092.000	-361.700	730.300	1707.800	1.370	3.080	2.080	3.190	1.080	0.600	0.270
2/03 to 2/02	21.000	825.000	0.535	1.000	11.440	157.840	1.974	865.300	6.000	204.980	1.957	1114.100	1114.100	-361.100	753.000	1707.800	1.410	3.100	2.100	3.190	2.000	0.600	0.350
2/02 to 2/01	21.000	825.000	0.535	1.000	11.690	156.350	2.015	875.000	6.000	204.980	1.988	1131.700	1131.700	-361.000	770.700	1707.800	1.440	3.120	2.120	3.190	0.500	0.600	0.390
2/01 to 17/01	18.620	825.000	0.535	1.000	11.930	154.930	2.056	884.700	6.000	204.980	2.018	1149.100	1149.100	-361.000	788.100	1707.800	1.470	3.130	2.140	3.190	0.500	0.600	0.270
3/08 to 3/07	30.250	375.000	0.110	1.220	6.000	204.980	0.075	42.500	6.000	204.980	0.075	42.500	42.500	-10.900	31.600	239.400	0.290	1.520	0.960	2.170	4.500	0.600	0.670
3/07 to 3/06	19.790	375.000	0.110	1.110	7.760	185.720	0.162	83.400	6.000	204.980	0.159	90.400	90.400	-8.300	82.100	227.900	0.740	1.900	1.290	2.060	1.700	0.600	0.500
3/06 to 3/05	63.040	375.000	0.110	2.930	8.200	181.630	0.576	290.700	7.070	192.580	0.575	307.400	307.400	-44.300	263.100	372.400	2.380	3.640	2.440	3.370	1.700	0.600	0.230
3/05 to 3/04	32.120	600.000	0.283	3.050	8.640	177.800	1.253	618.900	7.070	192.640	1.237	661.900	661.900	-16.900	645.000	1303.100	2.280	4.600	2.490	4.610	2.000	0.600	0.250
3/04 to 3/03	7.100	900.000	0.636	6.320	8.880	175.850	2.199	1074.400	7.060	192.770	2.164	1158.700	1158.700	-3.100	1155.600	5417.500	1.820	6.860	2.400	8.520	1.250	0.600	0.600
3/03 to 3/02	4.710	1050.000	0.866	1.000	13.690	145.570	5.425	2193.500	7.420	188.990	5.356	2811.600	2811.600	-323.000	2488.600	3206.400	2.870	4.060	3.180	3.700	1.000	0.600	0.830
3/02 to 3/01	3.830	1050.000	0.866	1.000	13.720	145.430	5.425	2191.500	7.450	188.720	5.356	2807.500	2807.500	-323.000	2484.500	3217.700	2.870	4.060	3.180	3.720	0.200	0.600	0.960
4/06 to 4/05	17.020	450.000	0.159	5.430	7.430	188.910	0.799	419.200	6.000	204.980	0.793	451.700	451.700	-5.700	446.000	820.100	2.800	5.260	2.850	5.160	0.500	0.600	0.570
4/05 to 4/04	21.390	450.000	0.159	7.850	7.530	187.910	0.838	437.300	6.000	204.980	0.831	473.000	473.000	-4.700	468.300	986.600	2.940	6.120	2.980	6.200	1.600	0.600	0.020
4/04 to 4/03	21.020	450.000	0.159	7.700	7.650	186.730	0.887	460.300	6.000	204.980	0.878	500.200	719.200	-211.900	507.300	977.000	3.190	6.200	3.220	6.140	2.000	0.600	0.000
4/03 to 4/02	14.180	450.000	0.159	6.440	7.760	185.680	0.926	477.700	6.000	204.980	0.916	521.300	740.300	-184.400	555.900	892.900	3.500	5.900	3.510	5.610	0.850	0.600	0.090
4/02 to 4/01	13.430	600.000	0.283	1.000	22.280	114.970	1.394	445.200	6.000	204.980	1.316	749.200	968.200	-223.200	745.000	745.000	2.630	2.630	2.630	2.630	1.850	0.600	0.210
5/01 to 4/04	14.220	450.000	0.159	1.000									219.000		219.000	349.200	1.380	2.310	1.750	2.200	0.500	0.600	1.830
6/01 to 2/03	7.200	375.000	0.110	1.000	6.000	204.980	0.021	12.100	6.000	204.980	0.021	12.100	12.100		12.100	216.400	0.110	1.070	0.730	1.960	4.500	0.600	0.350
7/01 to 1/03	9.110	375.000	0.110	2.850	6.000	204.980	0.017	9.600	6.000	204.980	0.017	9.600	9.600	1.800	11.400	367.600	0.100	1.540	0.720	3.330	4.500	0.600	0.630
8/06 to 8/05	9.350	825.000	0.535	4.300	12.190	153.470	3.171	1351.900	6.000	204.980	3.121	1777.200	1777.200	-289.900	1487.300	3558.000	2.780	6.370	2.990	6.660	0.500	0.600	0.890
8/05 to 8/04	70.090	825.000	0.535	4.300	12.240	153.160	3.171	1349.100	6.000	204.980	3.118	1775.300	1775.300	-289.900	1485.400	3558.000	2.780	6.370	2.990	6.660	0.500	0.600	2.570
8/04 to 8/03	79.610	825.000	0.535	4.300	12.660	150.850	3.171	1328.800	6.390	200.170	3.116	1732.900	1732.900	-289.900	1442.900	3558.000	2.700	6.330	2.930	6.660	0.500	0.600	2.930
8/03 to 8/02	6.710	825.000	0.535	4.300	13.150	148.270	3.171	1306.000	6.890	194.610	3.116	1684.700	1684.700	-289.900	1394.700	3558.000	2.610	6.270	2.870	6.660	0.500	0.600	0.390
8/02 to 8/01	7.250	900.000	0.636	1.000	13.200	148.050	3.195	1313.900	6.930	194.140	3.140	1693.400	1693.400	-342.400	1351.100	2143.900	2.120	3.550	2.590	3.370	0.500	0.600	0.000
8/01 to 3/03	41.090	1050.000	0.866	1.000	13.250	147.760	3.205	1315.400	6.990	193.530	3.150	1693.500	1693.500	-342.400	1351.100	3206.400	1.560	3.550	2.350	3.700	2.500	0.600	0.210
9/01 to 1/04	10.190	375.000	0.110	1.020	6.000	204.980	0.027	15.500	6.000	204.980	0.027	15.500	15.500	-3.500	11.900	219.100	0.110	1.080	0.730	1.980	4.500	0.600	0.650
10/01 to 3/05	7.470	450.000	0.159	1.000	6.000	204.980	0.033	18.500	6.000	204.980	0.033	18.500	18.500	3.800	22.300	349.200	0.140	1.260	0.840	2.200	4.500	0.600	0.320
11/07 to 11/06	22.200	375.000	0.110	1.000	6.000	204.980	0.008	4.300	6.000	204.980	0.008	4.300	4.300	-0.900	3.400	216.400	0.030	0.740	0.520	1.960	4.500	0.600	0.710
11/06 to 11/05	20.980	375.000	0.110	1.000	17.920	128.160	0.057	20.300	6.000	204.980	0.049	27.600	27.600	-5.800	21.800	216.400	0.200	1.280	0.860	1.960	2.000	0.600	0.850
11/05 to 11/04	20.980	375.000	0.110	1.790	19.690	122.350	0.128	43.300	6.460	199.410	0.117	64.900	64.900	-10.200	54.700	290.500	0.500	2.040	1.130	2.630	1.800	0.600	0.810
11/04 to 11/03	21.000	375.000	0.110	3.600	20.390	120.220	0.170	56.700	7.160	191.640	0.160	85.000	85.000	-11.800	73.200	413.300	0.660	2.860	1.240	3.740	1.100	0.600	0.710
11/03 to 11/02	21.230	375.000	0.110	4.900	20.920	118.680	0.213	70.300	6.530	198.610	0.191	105.200	105.200	-13.000	92.200	482.800	0.830	3.410	1.350	4.370	2.000	0.600	0.690
11/02 to 11/01	14.750	375.000	0.110	6.220	21.340	117.490	0.258	84.300	6.000	204.980	0.226	128.500	128.500	-14.400	114.000	544.500	1.030	3.940	1.470	4.930	0.500	0.600	0.680
11/01 to 18/01	40.510	375.000	0.110	8.400	21.580	116.830	0.289	93.800	6.000	204.980	0.255	145.400	145.400	-10.800	134.600	633.000	1.220	4.600	1.580	5.730	0.500	0.600	0.660
12/01 to 25/01	13.420	450.000	0.159	8.540	6.140	203.240	0.688	388.500	6.000	204.980	0.687	390.900	390.900		390.900	1029.500	2.460	6.050	2.540	6.470	0.500	0.600	0.650

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
27/09/2016
CONSTRUCTION CERTIFICATE
CC-16.2015.1.291.1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 9

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-328	AA007442CC	06

Edit by: JVHN08914

Date Plotted: 10 Jun 2016 - 04:27PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-328-StormwaterDrainageCalculationSheet9.dwg V1

HYDRAULICS - MAJOR 100 YEAR STORM EVENT

Pipe ID	Pipe Length	Pipe Size	Full Pipe Area Af	Pipe Grade	Full-area Tct	Full-area I	Full-area Sum CA	Full-area Qc=CIA	Part-area Tct	Part-area I	Part-area Sum CA	Part-area Qc=CIA	Peak Flow Qrat	Net Bypass Flow Qb	Pipe Flow Q	Capacity Flow Qcap	Full Pipe Vel Vf=Q/Af	Norm Depth Vel Vn=Q/An	Crit Depth Vel Vc=Q/Ac	Capacity Vel Vcap=Qcap/Af	US Pit Ku	Colebrook k Roughness	F'board US
(-)	(m)	(mm)	(sq.m)	(%)	(min)	(mm/hr)	(ha)	(L/s)	(min)	(mm/hr)	(ha)	(L/s)	(L/s)	(L/s)	(L/s)	(L/s)	(m/s)	(m/s)	(m/s)	(m/s)	(-)	(mm)	(m)
13/06 to 13/05	16.500	375.000	0.110	1.000	8.770	176.730	0.024	11.600	6.000	204.980	0.023	13.200	13.200	-2.700	10.500	216.400	0.100	1.030	0.700	1.960	2.500	0.600	0.440
13/05 to 13/04	4.500	375.000	0.110	1.000	11.660	156.500	0.346	150.300	6.000	204.980	0.337	191.800	191.800	-2.700	189.100	216.400	1.710	2.190	1.900	1.960	1.240	0.600	0.260
13/04 to 13/03	21.000	375.000	0.110	1.000	11.710	156.240	0.396	171.700	6.000	204.980	0.386	219.700	219.700	-6.200	213.500	216.400	1.930	2.210	2.060	1.960	2.000	0.600	0.450
13/03 to 13/02	16.930	450.000	0.159	1.000	11.890	155.180	0.437	188.500	6.000	204.980	0.425	242.000	242.000	-6.000	236.000	349.200	1.480	2.350	1.820	2.200	0.700	0.600	0.830
13/02 to 13/01	2.940	525.000	0.216	1.000	12.080	154.080	0.651	278.500	6.000	204.980	0.635	361.800	361.800	-9.700	352.100	525.100	1.630	2.580	1.980	2.430	0.410	0.600	0.820
14/01 to 13/05	9.550	375.000	0.110	6.930	6.000	204.980	0.322	183.400	6.000	204.980	0.322	183.400	183.400		183.400	574.500	1.660	4.650	1.860	5.200	4.500	0.600	0.290
15/01 to 2/06	7.200	375.000	0.110	1.000	6.000	204.980	0.023	13.300	6.000	204.980	0.023	13.300	13.300	-1.800	11.500	216.400	0.100	1.060	0.720	1.960	4.500	0.600	0.550
16/02 to 16/01	11.540	450.000	0.159	1.000	11.520	157.350	0.628	274.400	7.320	190.010	0.609	321.500	321.500	-43.900	277.600	349.200	1.750	2.420	1.990	2.200	1.500	0.600	0.140
16/01 to CP/03	4.990	450.000	0.159	1.000	11.630	156.690	0.640	278.600	7.430	188.900	0.622	326.100	326.100	-45.300	280.800	349.200	1.770	2.430	2.000	2.200	2.500	0.600	0.360
17/01 to 8/06	7.020	825.000	0.535	3.270	12.140	153.730	3.146	1343.200	6.000	204.980	3.098	1764.100	1764.100	-384.600	1379.500	3101.800	2.580	5.640	2.840	5.800	1.900	0.600	0.220
18/03 to 18/02	11.210	375.000	0.110	1.000	6.000	204.980	0.070	39.900	6.000	204.980	0.070	39.900	39.900	9.300	49.100	216.400	0.440	1.600	1.090	1.960	4.500	0.600	0.590
18/02 to 18/01	15.840	375.000	0.110	6.360	14.200	143.160	0.141	55.900	6.000	204.980	0.121	69.100	69.100	5.000	74.100	550.300	0.670	3.530	1.250	4.980	1.750	0.600	0.670
18/01 to 4/02	11.550	450.000	0.159	9.220	22.140	115.340	0.457	146.300	6.220	202.260	0.401	225.200	225.200	-7.400	217.800	1069.600	1.370	5.340	1.750	6.720	0.800	0.600	0.620
19/01 to 13/02	6.080	375.000	0.110	1.000	6.000	204.980	0.015	8.600	6.000	204.980	0.015	8.600	8.600	-3.100	5.400	216.400	0.050	0.850	0.590	1.960	4.500	0.600	0.650
20/01 to 13/06	6.200	375.000	0.110	1.000	6.000	204.980	0.009	5.100	6.000	204.980	0.009	5.100	5.100	-1.000	4.100	216.400	0.040	0.780	0.550	1.960	4.500	0.600	0.440
22/01 to 13/02	8.530	375.000	0.110	1.000	6.000	204.980	0.183	104.300	6.000	204.980	0.183	104.300	104.300		104.300	216.400	0.940	1.940	1.410	1.960	4.500	0.600	0.370
23/02 to 23/01	10.300	600.000	0.283	1.000	6.990	193.470	0.106	57.000	6.000	204.980	0.105	59.500	415.500	-19.300	396.200	742.400	1.400	2.670	1.910	2.630	2.500	0.600	0.970
23/01 to CP/03	7.500	600.000	0.283	1.000	7.110	192.180	0.164	87.600	6.000	204.980	0.162	92.400	448.400	6.300	454.800	742.400	1.610	2.750	2.040	2.630	2.500	0.600	1.250
24/01 to 1/12	12.550	375.000	0.110	1.000	6.000	204.980	0.053	30.300	6.000	204.980	0.053	30.300	30.300	-7.800	22.500	216.400	0.200	1.290	0.870	1.960	4.500	0.600	0.650
25/02 to 25/01	14.590	375.000	0.110	3.790	6.000	204.980	0.041	23.400	6.000	204.980	0.041	23.400	23.400	-2.700	20.700	424.000	0.190	2.030	0.850	3.840	4.500	0.600	0.680
25/01 to 4/06	21.350	450.000	0.159	2.290	7.300	190.260	0.746	394.200	6.000	204.980	0.742	422.600	422.600	0.700	423.300	530.600	2.660	3.680	2.720	3.340	1.750	0.600	0.640
26/01 to 1/07	9.690	375.000	0.110	1.000	6.000	204.980	0.017	9.600	6.000	204.980	0.017	9.600	9.600	-1.900	7.700	216.400	0.070	0.940	0.650	1.960	4.500	0.600	0.630
27/01 to 1/05	10.660	375.000	0.110	2.480	6.000	204.980	0.050	28.200	6.000	204.980	0.050	28.200	28.200	-17.600	10.600	342.700	0.100	1.440	0.710	3.100	4.500	0.600	0.660
28/01 to 1/11	13.170	375.000	0.110	1.000	6.000	204.980	0.027	15.100	6.000	204.980	0.027	15.100	15.100	2.700	17.800	216.400	0.160	1.200	0.810	1.960	4.500	0.600	0.650
29/01 to 11/06	12.790	375.000	0.110	1.000	6.000	204.980	0.019	10.900	6.000	204.980	0.019	10.900	10.900	-2.200	8.800	216.400	0.080	0.980	0.670	1.960	4.500	0.600	0.660
30/01 to 2/05	7.200	375.000	0.110	1.000	6.000	204.980	0.022	12.400	6.000	204.980	0.022	12.400	12.400	-0.200	12.200	216.400	0.110	1.080	0.730	1.960	4.500	0.600	0.380
31/01 to 11/05	13.330	375.000	0.110	1.000	6.000	204.980	0.031	17.500	6.000	204.980	0.031	17.500	17.500	-1.700	15.700	216.400	0.140	1.160	0.780	1.960	4.500	0.600	0.660
32/01 to 2/01	7.200	375.000	0.110	1.000	6.000	204.980	0.021	12.200	6.000	204.980	0.021	12.200	12.200		12.200	216.400	0.110	1.080	0.730	1.960	4.500	0.600	0.270
34/01 to 13/04	6.200	375.000	0.110	1.000	6.000	204.980	0.020	11.200	6.000	204.980	0.020	11.200	11.200	-1.400	9.800	216.400	0.090	1.010	0.690	1.960	4.500	0.600	0.450
35/01 to 1/08	16.980	375.000	0.110	2.690	6.000	204.980	0.019	10.700	6.000	204.980	0.019	10.700	10.700	0.600	11.300	356.600	0.100	1.510	0.720	3.230	4.500	0.600	0.680
36/02 to 36/01	21.000	375.000	0.110	3.860	8.630	177.940	0.020	9.700	6.000	204.980	0.019	10.900	10.900	-2.200	8.700	428.100	0.080	1.580	0.670	3.880	2.500	0.600	0.740
36/01 to 18/02	13.600	375.000	0.110	2.200	13.100	148.560	0.058	23.900	9.100	174.100	0.057	27.600	27.600	-4.800	22.800	322.400	0.210	1.720	0.870	2.920	1.950	0.600	0.740
37/01 to 2/07	7.200	375.000	0.110	1.000	6.000	204.980	0.009	5.300	6.000	204.980	0.009	5.300	5.300	-1.100	4.300	216.400	0.040	0.790	0.550	1.960	4.500	0.600	0.650
38/01 to 36/01	6.200	375.000	0.110	1.000	6.000	204.980	0.019	10.800	6.000	204.980	0.019	10.800	10.800	-1.300	9.500	216.400	0.090	1.000	0.680	1.960	4.500	0.600	0.650
39/01 to 36/02	6.200	375.000	0.110	1.000	6.000	204.980	0.010	5.400	6.000	204.980	0.010	5.400	5.400	-1.100	4.300	216.400	0.040	0.790	0.560	1.960	4.500	0.600	0.650
40/01 to 2/02	7.200	375.000	0.110	1.000	6.000	204.980	0.022	12.400	6.000	204.980	0.022	12.400	12.400	-0.100	12.300	216.400	0.110	1.080	0.730	1.960	4.500	0.600	0.380
41/01 to 3/07	7.370	375.000	0.110	1.000	6.000	204.980	0.064	36.300	6.000	204.980	0.064	36.300	36.300	-11.400	24.900	216.400	0.230	1.320	0.890	1.960	4.500	0.600	0.510
42/01 to 13/03	6.200	375.000	0.110	1.000	6.000	204.980	0.020	11.200	6.000	204.980	0.020	11.200	11.200	-0.300	11.000	216.400	0.100	1.050	0.710	1.960	4.500	0.600	0.650
43/01 to 1/10	12.800	375.000	0.110	1.000	6.000	204.980	0.023	13.100	6.000	204.980	0.023	13.100	13.100	-5.700	7.400	216.400	0.070	0.930	0.640	1.960	4.500	0.600	0.650
44/01 to 1/09	12.400	375.000	0.110	1.000	6.000	204.980	0.036	20.400	6.000	204.980	0.036	20.400	20.400	-8.900	11.500	216.400	0.100	1.060	0.720	1.960	4.500	0.600	0.650
CP/04 to CP/03	30.430	900.000	0.636	2.000	10.000	167.310	1.869	868.800	7.000	193.370	1.570	843.000	868.800	-637.000	231.800	3039.400	0.360	2.900	1.400	4.780	4.500	0.600	0.830
CP/03 to CP/02	77.060	1050.000	0.866	2.000	11.680	156.410	2.678	1163.600	8.390	179.960	2.369	1184.300	1540.300	-675.400	864.900	4544.900	1.000	4.100	2.010	5.250	2.000	0.600	1.620
CP/02 to CP/01	2.620	1050.000	0.866	2.930	12.960	149.250	2.678	1110.300	12.680	150.770	2.678	1121.500	1477.500	-675.400	802.100	5524.800	0.930	4.630	1.960	6.380	0.210	0.600	0.660
Z1/01 to 2/04	9.170	825.000	0.535	3.220	6.000	204.980	1.799	1024.200	6.000	204.980	1.799	1024.200	1024.200	-374.200	650.000	3074.600	1.220	4.620	1.990	5.750	4.500	0.600	0.220
Z2/01 to 17/01	8.110	600.000	0.283	5.090	6.000	204.980	1.065	606.500	6.000	204.980	1.065	606.500	606.500	-118.800	487.600	1685.600	1.720	5.200	2.110	5.960	4.500	0.600	0.010
Z3/01 to 3/06	6.780	375.000	0.110	5.850	7.000	193.370	0.399	214.300	6.000	204.980	0.368	209.800	214.300	-46.400	167.900	527.900	1.520	4.270	1.770	4.780	4.500	0.600	0.040
Z4/01 to 3/05	6.670	525.000	0.216	5.960	7.000	193.370	0.595	319.800	6.000	204.980	0.550	313.100	319.800	27.600	347.400	1285.900	1.600	5.090	1.970	5.940	4.500	0.600	0.010
Z5/01 to 3/04	7.510	525.000	0.216	10.000	7.000	193.370	0.900	483.700	6.000	204.980	0.832	473.600	483.700	-5.300	478.400	1668.000	2.210	6.700	2.380	7.710	4.500	0.600	0.000
Z6/02 to Z6/01	7.790	450.000	0.159	10.600	6.000	204.980	0.646	368.000	6.000	204.980	0.646	368.000	368.000	-74.800	293.200	1147.400	1.840	6.090	2.060	7.210	4.500	0.600	0.000
Z6/01 to 12/01	7.620	450.000	0.159	1.000	6.070	204.100	0.646	366.400	6.000	204.980	0.646	367.500	367.500	-74.800	292.700	349.200	1.840	2.440	2.050	2.200	0.500	0.600	2.030

CAMDEN COUNCIL
Approved by the Council of Camden under the provisions of the Environment Planning and Assessment Act 1979
APPROVAL
2/06/2016
CONSTRUCTION CERTIFICATE
CC 16 2016 1230 1

Issue	Description	Date
06	ISSUE FOR CONSTRUCTION CERTIFICATE	13/06/16
05	ISSUE FOR CONSTRUCTION CERTIFICATE	02/06/16
04	ISSUE FOR CONSTRUCTION CERTIFICATE	23/05/16
03	ISSUE FOR CONSTRUCTION CERTIFICATE	11/04/16
02	ISSUE FOR CONSTRUCTION CERTIFICATE	07/04/16
01	ISSUE FOR CONSTRUCTION CERTIFICATE	26/02/16

10mm on Original

Client: SEKISUI HOUSE

Status: CONSTRUCTION CERTIFICATE
NOT TO BE USED FOR CONSTRUCTION

Scales	N.T.S.	Current Issue Signatures	
		Drawn J. VARGAS	
Original Size	A1	Designed A. MALABUYOC	
Height Datum	AHD	Checked A. KALAJZICH	
Grid	MGA	Approved R. SMITH	
Filename:			

Project: THE HERMITAGE
HERMITAGE WAY

Title: STORMWATER DRAINAGE CALCULATION SHEET 10

ARCADIS
76 104 485 289
Level 5, 141 Walker St
North Sydney NSW 2060
Australia
Tel: +61 (0)2 8907 9000
Fax: +61 (0)2 8907 9001

Drawing No.	Project No.	Issue
TRHW-CI-329	AA007442CC	06

Edit by: JWH0894

Date Plotted: 10 Jun 2016 - 04:27PM File Name: K:\MP000909-The_Hermitage_BBS\E-OurDrawings\C-Civil\D-Final\B-CC\TURNER ROAD\Hermitage Way\TRHW-CI-329-StormwaterDrainageCalculationSheet10.dwg V1

8.4 Appendix D – Council Consultation

Education
School Infrastructure

Post Approval Consultation Record

Identified Party to Consult:	**Camden Council**
Consultation type:	**Email Correspondence**
When is consultation required?	**Prior to Construction Commencement**
Why	**SSD 8378 Condition - B19: The Applicant must prepare a Construction Soil and Water Management Plan (CSWMSP) and the plan must address, but not be limited to the following:** **(a) be prepared by a suitably qualified expert, in consultation with Council;** **(b) be submitted to the approval of the Certifier prior to the commencement of construction;** **(c) describe all erosion and sediment controls to be implemented during construction;** **(d) provide a plan of how all construction works will be managed in a wet-weather events (i.e.** **storage of equipment, stabilisation of the Site);** **(e) detail all off-Site flows from the Site; and** **(f) describe the measures that must be implemented to manage stormwater and flood flows** **for small and large sized events,**
When was consultation scheduled/held	**Initial plan submission to council mailbox on 30/03/2023, with follow up email for feedback/acknowledgement of plans submission by relevant council officer on 17/04/2023**
When was consultation held	**30/03/2023, 17/04/2023**
Identify persons and positions who were involved	**Relevant Officer from the Environmental or Development Planning Team - TBC**
Provide the details of the consultation	**Initial revision of the Construction Soil and Water Management Plan (CSWMSP) developed by PBG issued to Camden Council on 30/03/23 for review and feedback by the relevant council officer.** **Follow up email sent on 17/04/23 to Camden Council to see if any feedback will be provided.**
What specific matters were discussed?	**Nil – Awaiting feedback.**
What matters were resolved?	**Nil**
What matters are unresolved?	**Nil**
Any remaining points of disagreement?	**N/A**
How will SINSW address matters not resolved?	**N/A**

From: Council Mailbox
To: Chris Sposito
Subject: Camden Council Automatic Response
Date: Monday, 17 April 2023 3:10:31 PM

Thank you for contacting Camden Council.

Council has received your email and the appropriate officer will be in contact.

70 Central Avenue, Oran Park, 2570
(02) 4654 7777
www.camden.nsw.gov.au
PO Box 183, Camden NSW 2570
mail@camden.nsw.gov.au

From:	Chris Sposito
To:	mail@camden.nsw.gov.au
Cc:	Kurt Lanner; Tim Baldwin; Alex Warner
Subject:	RE: Gledswood Public School Stage 2 - CEMP, CSWMSP & CTPMSP Consultation
Date:	Monday, 17 April 2023 3:07:00 PM
Attachments:	image001.png image002.png image003.png image004.png TLTMP-219117 REV B Gledswood Hills Public School.pdf TLTGS-219072 REV B Gledswood Hills Public School Site Access Stage 1.pdf TLTGS-219094 REV B Gledswood Hills Public School Site Access Stage 2.pdf PBG001 - Site Management Plan.pdf

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Good Afternoon,

Just following up on the below submission of documents and if there is any feedback from council for incorporation into our environmental management plans?

I have also attached the recently completed Construction Traffic and Pedestrian Management Plan (CTPMSP) for review and comment as necessary in accordance with *SSD-8378 - New Gledswood Hills Public School* conditions.

Thank you for your assistance.

Regards,

Chris Sposito
HSEQ Manager
Mobile: 0408 625 030

PATTERSON
Building Group

Sydney
Suite 2, Level 5
189 O'Riordan Street
Mascot NSW 2020
PO Box 1136 Mascot NSW 1460
t 02 9662 6522 f 02 9662 6533

Wollongong
10 Belmore Street
Wollongong NSW 2500
PO Box 82 Fairy Meadow NSW 2519
t 02 4283 3044 f 02 4283 5122

Newcastle
Suite 3
161 Lambton Road
Broadmeadow NSW 2292
t 02 8197 6039

www.pattersonbuild.com.au

From: Council Mailbox
To: Chris Sposito
Subject: Camden Council Automatic Response
Date: Thursday, 30 March 2023 7:17:17 PM

Thank you for contacting Camden Council.

Council has received your email and the appropriate officer will be in contact.

70 Central Avenue, Oran Park, 2570
(02) 4654 7777
www.camden.nsw.gov.au
PO Box 183, Camden NSW 2570
mail@camden.nsw.gov.au

From: Chris Sposito
Sent: Thursday, March 30, 2023 7:14 PM
To: 'mail@camden.nsw.gov.au' <mail@camden.nsw.gov.au>
Cc: Kurt Lanner <kurtl@pattersonbuild.com.au>; Tim Baldwin <timb@pattersonbuild.com.au>; Alex Warner <alexw@pattersonbuild.com.au>
Subject: Gledswood Public School Stage 2 - CEMP & Consultation

Good Evening,

Patterson Building Group have been recently appointed as the head contractor for construction of Gledswood Public School Stage 2.

We have commenced preparing the respective management plans required under the and in accordance with the SSD compliance conditions require consultation for the Construction Environmental Management Plan (CEMP) & Construction Soil and Water Management Plan (CSWMSP)

Could you please forward on the attached to the relevant representative within council for review and comments as necessary?

Thank you for your assistance.

Regards,

Chris Sposito
HSEQ Manager
Mobile: 0408 625 030

PATTERSON
Building Group

Sydney
Suite 2, Level 5
189 O'Riordan Street
Mascot NSW 2020
PO Box 1136 Mascot NSW 1460
t 02 9662 6522 f 02 9662 6533

Wollongong
10 Belmore Street
Wollongong NSW 2500
PO Box 82 Fairy Meadow NSW 2519
t 02 4283 3044 f 02 4283 5122

Newcastle
Suite 3
161 Lambton Road
Broadmeadow NSW 2292
t 02 8197 6039

www.pattersonbuild.com.au

8.5 Appendix E – Certifier Submission

Nick Aitchison GROUP DLA	Re: CC1 - Submission No.1 RESPONSE TO RFI	14/04/2023 GROUPDLA-RTRFI-000010
Kenny Lim TSA MANAGEMENT	Re: CC1 - Submission No.1 RESPONSE TO RFI	1:47 PM TSA-RTRFI-000003
Kenny Lim TSA MANAGEMENT	Fwd: CC1 - Submission No.1 RESPONSE TO RFI	1:51 PM TSA-RTRFI-000004
Nick Aitchison GROUP DLA	Re: CC1 - Submission No.1 RESPONSE TO RFI	3:38 PM GROUPDLA-RTRFI-000013
Kurt Lanner PATTERSON BUILDING GROUP PTY LIMITED	Re: CC1 - Submission No.1 RESPONSE TO RFI	4:00 PM PBG1-RTRFI-000012
Nick Aitchison GROUP DLA	Re: CC1 - Submission No.1 RESPONSE TO RFI	4:37 PM GROUPDLA-RTRFI-000014

Gledswood Hills Public School - Stage 2
Hermitage Way,
Gledswood Hills
NSW Australia

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Response to RFI	PBG1-RTRFI-000006	PBG1-GCOR-000030

CC1 - Submission No.1 (3-4-23)

From	Mr Kurt Lanner - Patterson Building Group Pty Limited
To	Mr Nick Aitchison - Group DLA
Cc (7)	Mr Chris Sposito - Patterson Building Group Pty Limited (+6 more...)
Sent	Monday, 3 April 2023 10:28:48 PM AEST (GMT +10:00)
Status	N/A

FILE ATTACHMENTS (11)

File Name
3. Long service levy.zip
8. Structural design certification.zip
B14.B15. Construction environment management plan (CEMP).zip
B16. Construction traffic pedestrian management sub-plan.zip
B18. Construction & Demolition waste management.zip

File Name
B19. Construcion soil & water management.zip
B24. Construction & Demolition waste management.zip
B37. Sydney water compliance.zip
B5. Protection of public infrastructure.zip
B6. Unexpected contamination proceedure.zip
CC1 Checklist - Rev B (Submission 1 - Updated comments).pdf

MESSAGE

Hi Nick,

Please find attached (CC1 - Submission No.1).
There are a few items yet to satisfy, however as we are aiming for a CC before Good Friday, I have decided to issue you what we have to commence review. The remainder will come on Wednesday.

I have made comment on the outstanding items in the PDF checklist.

Please contact me if you have any queries,

Regards,

Kurt Lanner

Project Manager

Direct Line: 02 8960 7670

Mobile: 0423 939 580

8.6 Appendix F – CVs