



DRAINS model has been analysed and compared for existing both Minor and Major Storm events for drainage easement running through 19 Middle Ave and 14A Partridge Ave. Refer below summary of the results:

Flow Rate		Existing Scenario	Proposed Scenario
Minor	Overland Flow (m ³ /s)	1.90	0.64
	Pipe Flow (m ³ /s)	2.53	3.43
Major	Overland Flow (m ³ /s)	4.10	2.80
	Pipe Flow (m ³ /s)	2.53	3.50

From the above analysis, flows into pipes have been increased and overland flows have been decreased. This is because more direct flow entering into pipes. However, existing 900mm pipes running through the easement has the capacity to take additional flow from subject site.

Hence, proposed 74m drainage extension with 375mm dia RCP pipes under Middleton Ave will not have any adverse impact on existing drainage network or surrounding areas.

Hope the above clarifies the intent of the design. If further information required, please don't hesitate to contact with us.

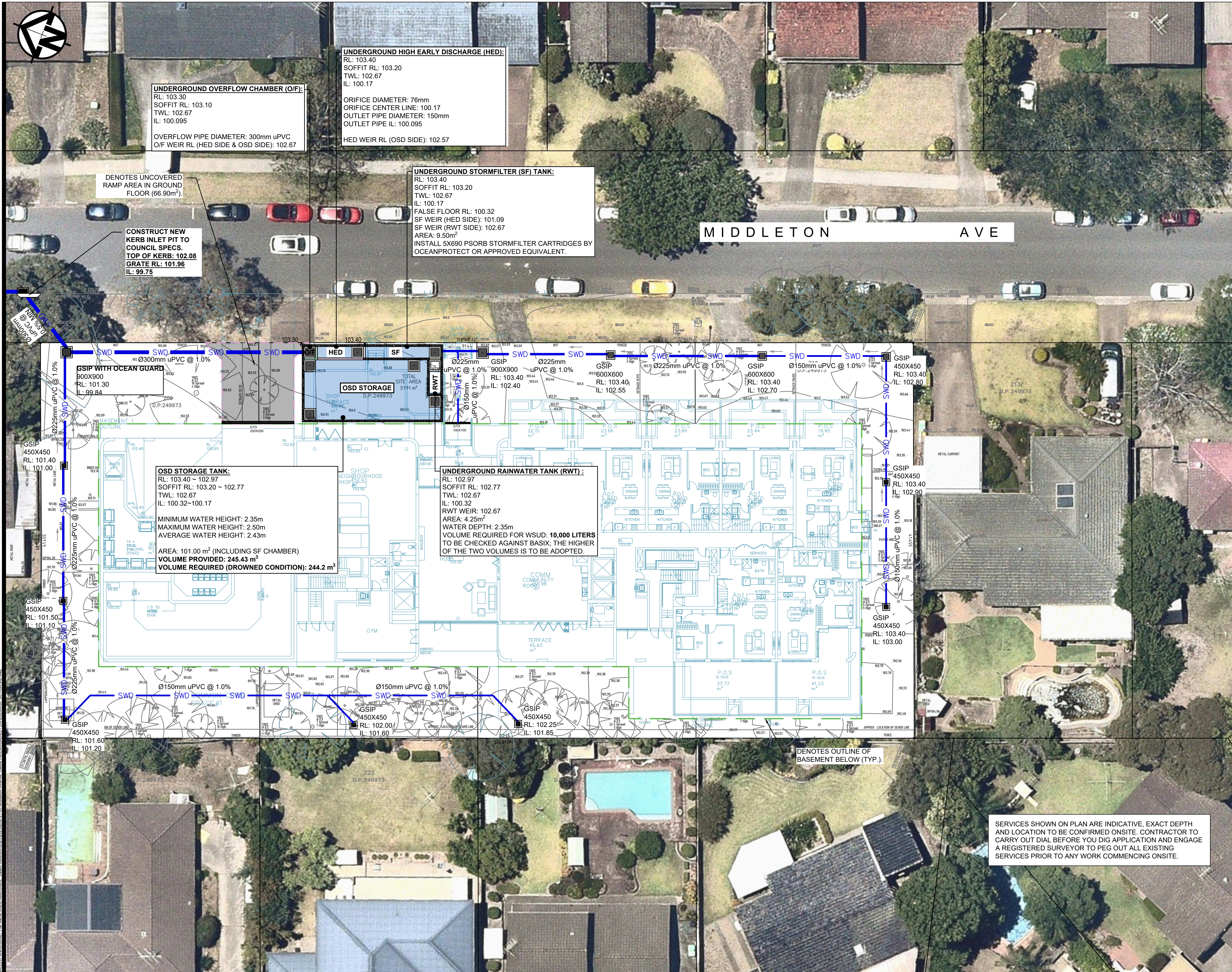
Yours faithfully,

For & on behalf of S&G Consultants Pty Ltd

A handwritten signature in blue ink, appearing to read 'Sam Haddad', with a stylized flourish at the end.

Sam Haddad
Director (Civil)
MIEAust CPEng NER

FOR CONTINUATION REFER TO S0-SW303



SERVICES ON THIS DRAWING
ARE SHOWN BELOW SLAB U.N.O

DESIGN NOTES & CALCULATIONS:

THE PROPOSED DEVELOPMENT IS LOCATED WITHIN THE HILLS LOCAL GOVERNMENT AREA (LGA).

- SITE AREA = 3791 m²

ON-SITE DETENTION SYSTEM (OSD):

AN OSD SYSTEM IS REQUIRED FOR THIS JOB AND IS DESIGNED ACCORDING TO COUNCIL O.S.D. CHECK SHEET (SHEET S01-SW402). THE OSD CATCHMENT PLAN IS SHOWN IN SHEET S01-SW401.

OSD REQUIREMENTS FOR AN AVERAGE SLOPE OF 4% (SHEET S01-SW402):

SSR = 396 m³/ha
PSD = 92 L/s/ha

REQUIRED OSD VOLUME (DROWNED ORIFICE): 244.20 m³
CONTROLLED DISCHARGE: 19.8 L/s

WATER SENSITIVE URBAN DESIGN (WSUD):

WSUD IS REQUIRED TO ACHIEVE THE FOLLOWING TARGETS:

- 85% REDUCTION IN TOTAL SUSPENDED SOLIDS (TSS)
- 65% REDUCTION IN TOTAL PHOSPHOROUS (TP)
- 45% REDUCTION IN TOTAL NITROGEN (TN)

A MUSIC MODEL WAS DEVELOPED (SHEET S01-SW502) AND IT CONSISTS OF THE FOLLOWING:

- RAINWATER TANK IS PROPOSED TO MEET BASIX REQUIREMENTS.
- OCEANGUARD BASKETS ARE PROPOSED TO COLLECT AND REMOVE LITTER (SHEET S01-SW502).
- STORMFILTER CHAMBER WITH CARTRIDGES IS PROPOSED TO REMOVE SUSPENDED MATERIALS.

THE MUSIC CATCHMENT PLAN IS SHOWN IN SHEET S01-SW501.

NOTES:

- ALL SERVICES INTERFERING WITH STORMWATER ASSETS TO BE PROTECTED OR RELOCATED.

Reference Coordination Drawing				
Discipline	Drawing Title and Number	Date	Rev.	
ARCH				
STRUCT				
MECH				
ELEC				
HYD				
FIRE				
LANDS				
CIVIL				
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CIVIL				
SURVEY				



Project No.	Set No. - Drg No.	Revision No.
20250030	S01-SW303	A

UNDERGROUND OVERFLOW
 RL: 103.30
 SOFFIT RL: 103.10
 TWL: 102.67
 IL: 100.095

OVERFLOW PIPE DIAMETER
 O/F WEIR RL (HED SIDE)

EXISTING STORMWATER
PIT (TYP.)

EXISTING STORMWATER
PIPE (TYP.).

**REFER TO OVERALL PLAN FOR NEW
COUNCIL PIPE EXTENSION DETAILS.
TO CONNECT TO THE EXISTING
STORMWATER INFRASTRUCTURE.**

CONSTRUCT NEW
KERB INLET PIT TO
COUNCIL SPECS.
TOP OF KERB: 102.08
GRATE RL: 101.96
IL: 99.75

EXISTING PIT
RL98.466

Ø375mm RCP (REINFORCED CONCRETE PIPE) @ 2.0%

Ø375mm RCP (REINFORCED CONCRETE PIPE) @ 2.0%

CONSTRUCT NEW
KERB INLET PIT TO
COUNCIL SPECS.
TOP OF KERB: 101.96
GRATE RL: 101.96
IL: 99.75

[illegible]

OSD STORAGE TANK:
 RL: 103.40 ~ 102.97
 SOFFIT RL: 103.20 ~ 103.00
 TWL: 102.67
 IL: 100.32~100.17

MINIMUM WATER HEIGHT
 MAXIMUM WATER HEIGHT
 AVERAGE WATER HEIGHT

AREA: 101.00 m² (INCLUDING ROOF)
 VOLUME PROVIDED: 2,100 m³
 VOLUME REQUIRED (DRAINAGE): 2,100 m³