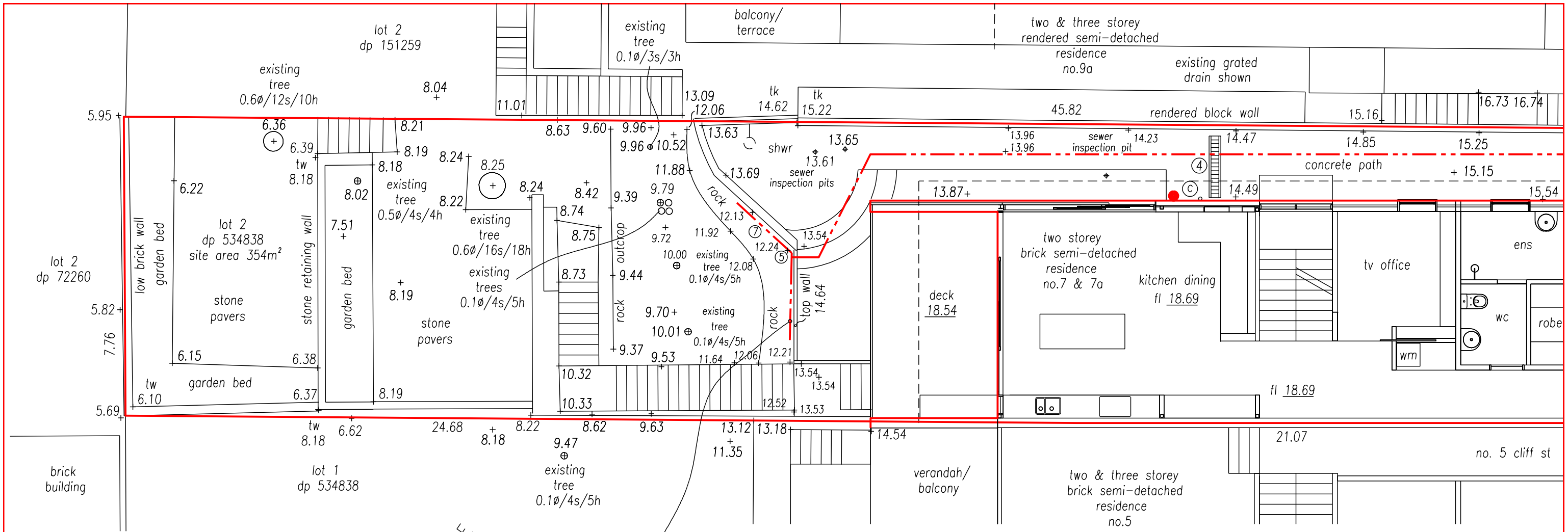
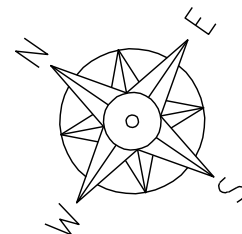




NOTES

- all work to be done to the satisfaction of Northern Beaches Council (Manly).
- legend:
 - tw top of wall
 - tk top of kerb
 - ⊙ down pipe
 - fw floor waste
 - gfl garage floor level
 - fl floor level
 - 56.89 existing level
 - 53.81 design level
 - gip grated inlet pit
 - bfl basement floor level
 - jp junction pit
 - ie upvc sewer grade inspection eye
 - dps - downpipe with spreader
 - D.E.B - dropped edge beam
 - rgd - round grated drain
 - eof - emergency over flow
 - ie - inspection eye
- all pipes to be min. 100mm dia unless noted otherwise (uno).
- all pipes to be grade upvc at min 1% uno.



existing outlet to be connected to a Ø100 pvc level spreader ⑦ attached to the base of the existing walls sitting on the exposed rock shelf.

site/level 2 floor plan

scale 1:100

continued on next sheet

BASIX Commitments

item	requirement
refer BASIX Certificate number	757401S dated 02 September 2016
rainwater tank size	n.a.
roof area	n.a.
rainwater tank connected to	n.a.

SHEET 1

STORMWATER ENGINEERS PTY LTD

stormwater + civil engineers

email: aztecengineers@gmail.com

tel 0433 00 1985

PROJECT :
proposed alterations & additions at
7 cliff street, manly

DRAWING No.
040924

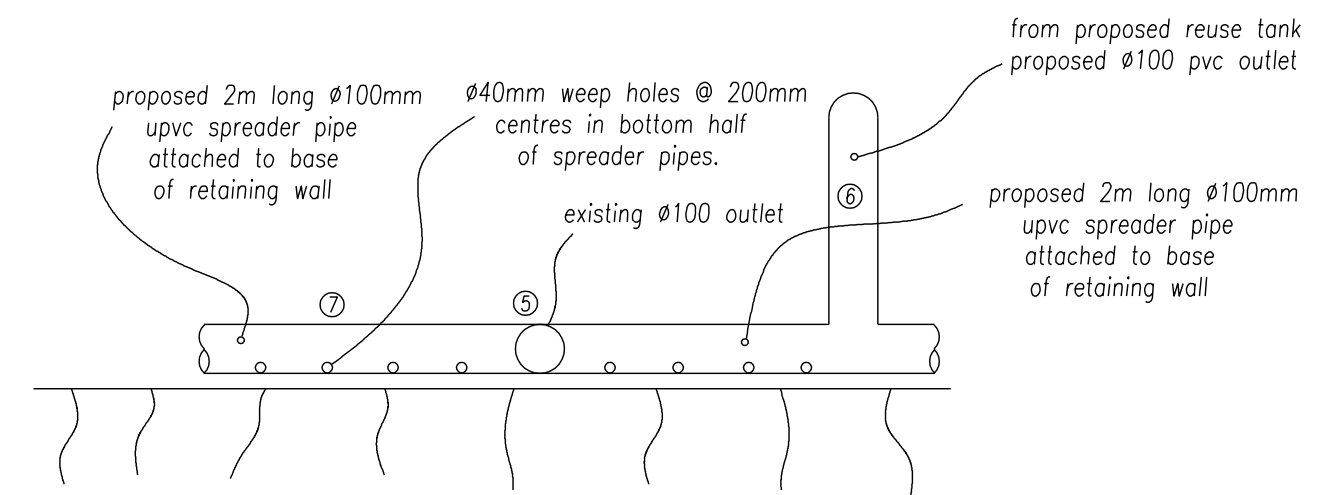
**stormwater drainage
& rainwater reuse**

development application issue

L. Savage
Leon Savage
B.E. Civil, MIE Aust.

p\stormwater drawings\040924 7 cliff

nov 2024	development application issue	B
sep 2024	development application issue	A



SW boundary

NE boundary

14.51

reuse tank

open

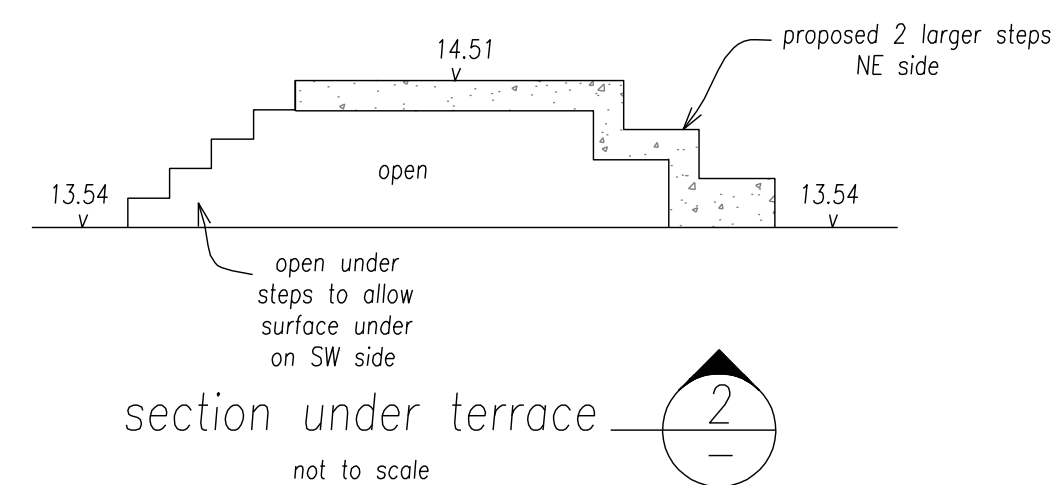
13.54

open area allows access to undercroft of house

section under terrace

not to scale

3



scale 1:100

continued on next sheet

SHEET 2 | STORMWATER ENGINEERS PTY LTD

email: aztecengineers@gmail.com
tel 0433 00 1985

development application issue

Leon Savage
B.E. Civil, MIE Aust.

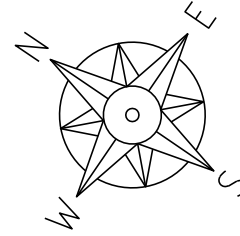
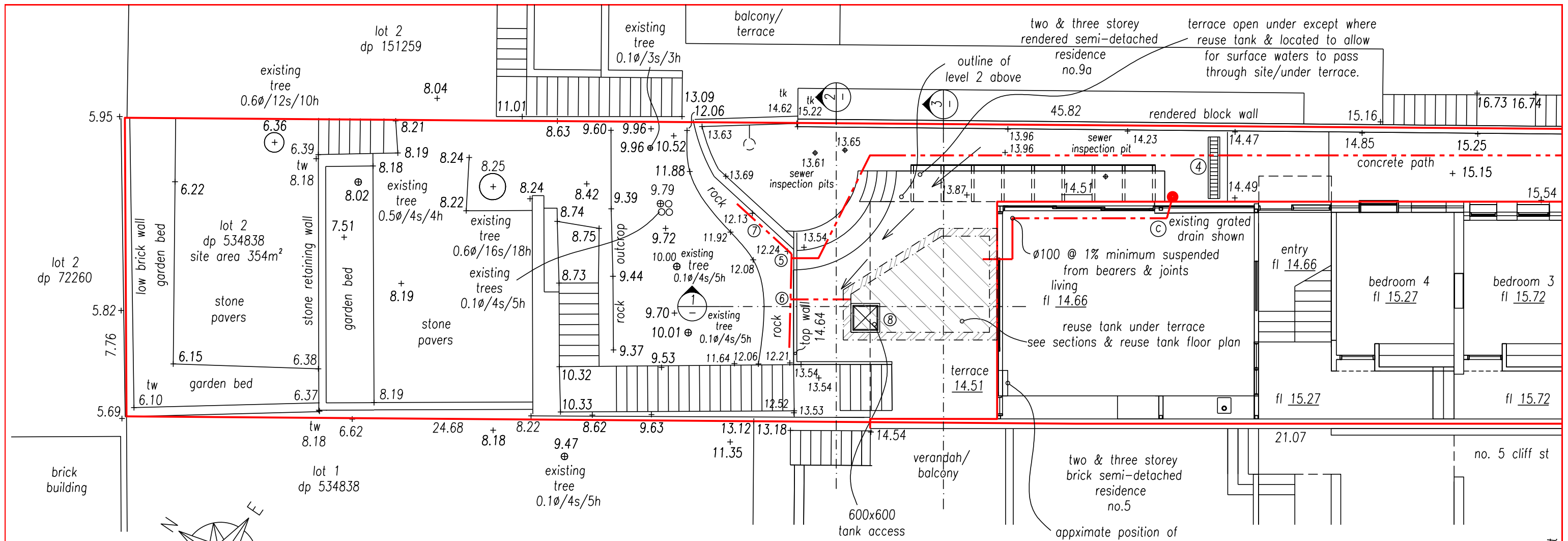
p\stormwater drawings\040924 7 cliff

nov 2024	development application issue	B
sep 2024	development application issue	A

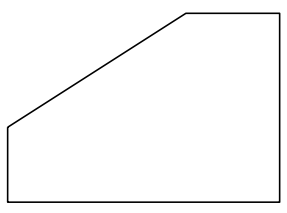
PROJECT :
proposed alterations & additions at
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stormwater drainage
& rainwater reuse

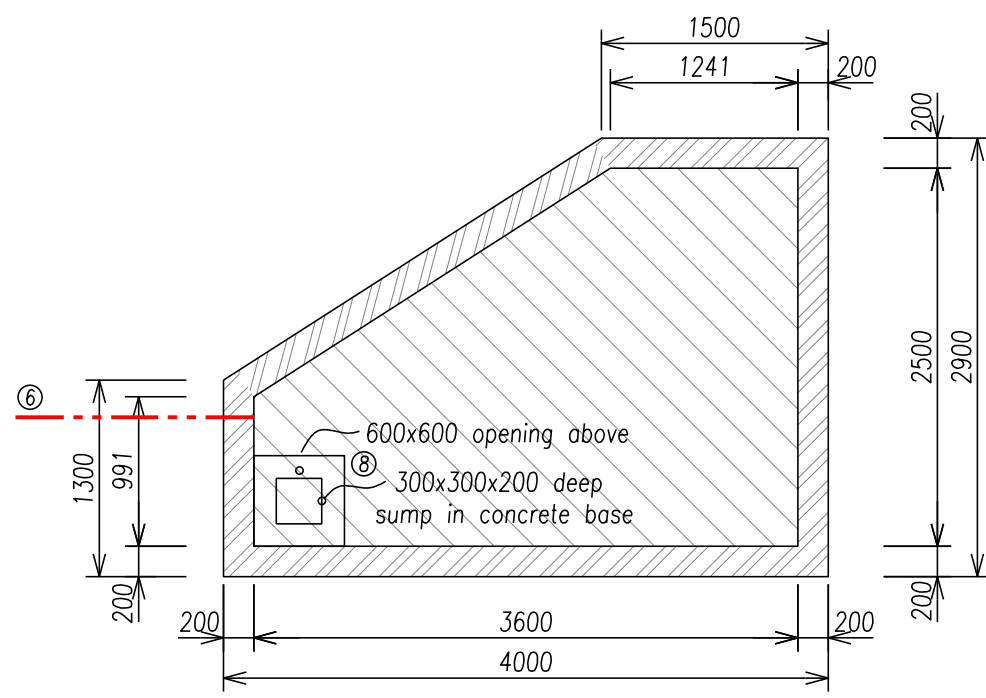


site/level 1 floor plan



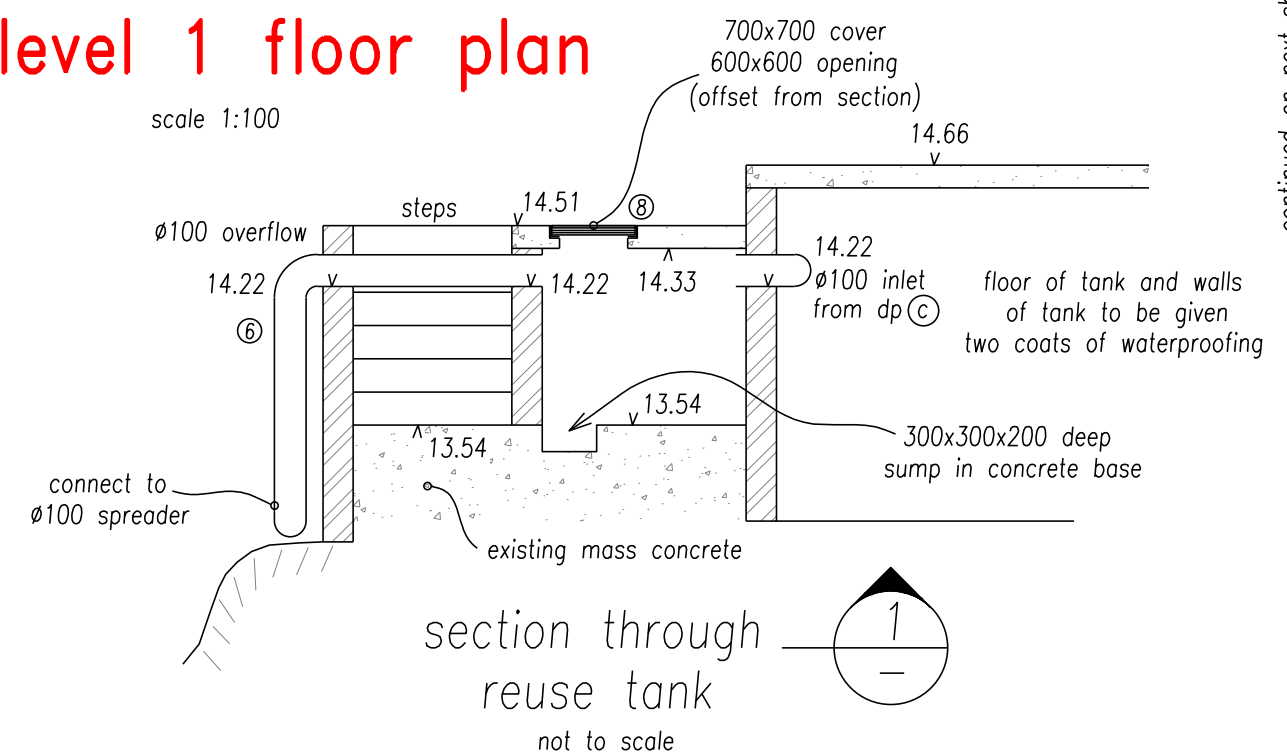
tank floor area 7.2sqm
volume to invert of overflow 5.4KL
 $7.2 \times (14.22 - 13.54) = 7.2 \times 0.68 = 4900 \text{ litres}$

Note: there is no BASIX requirement for rainwater reuse for this site. The proposed rainwater reuse system is to moderate and minimise partial roof runoff to level spreader.
Note: On Site Detention is not required, there is no increase in impervious areas and the proposal is alterations and additions within the existing footprint.
Note: approximately 68% of the roof runoff is directed to the kerb and gutter at the front of the site.



floor plan tank
scale 1:50

Leon Savage
Leon Savage
B.E. Civil, MIE Aust.



SHEET 3 STORMWATER ENGINEERS PTY LTD

stormwater + civil engineers
email: aztecengineers@gmail.com
tel 0433 00 1985

development application issue

p:\stormwater drawings\040924 7 cliff

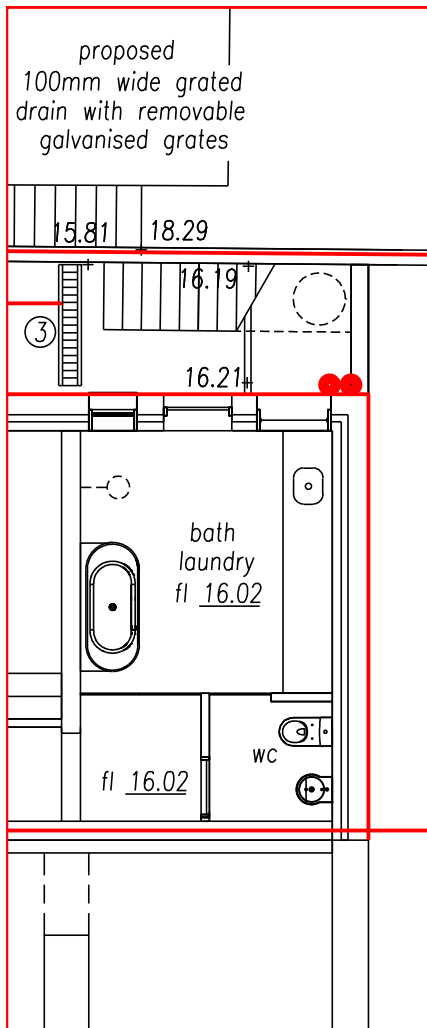
nov 2024	development application issue	B
sep 2024	development application issue	A

PROJECT :
proposed alterations & additions at
7 cliff street, manly

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040924

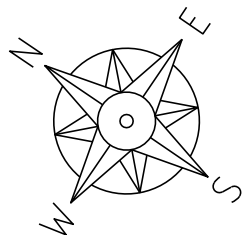
**stormwater drainage
& rainwater reuse**

continued on next sheet

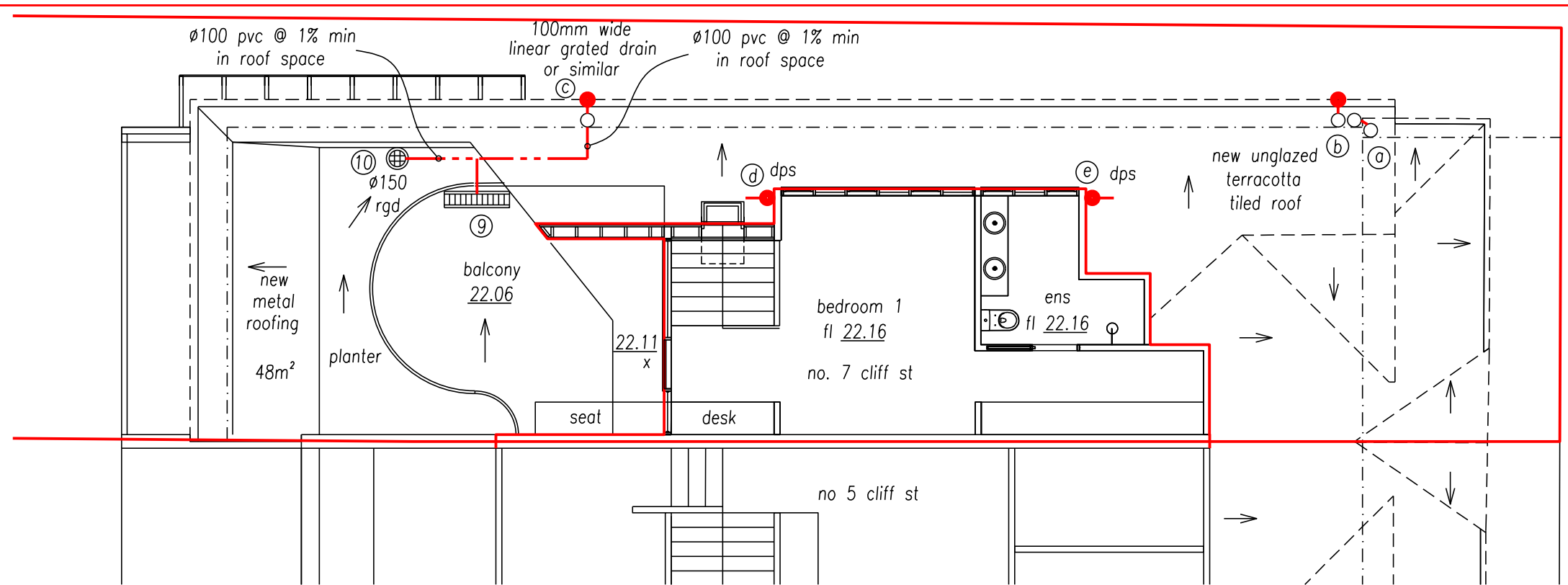


site/level 1 floor plan

scale 1:100

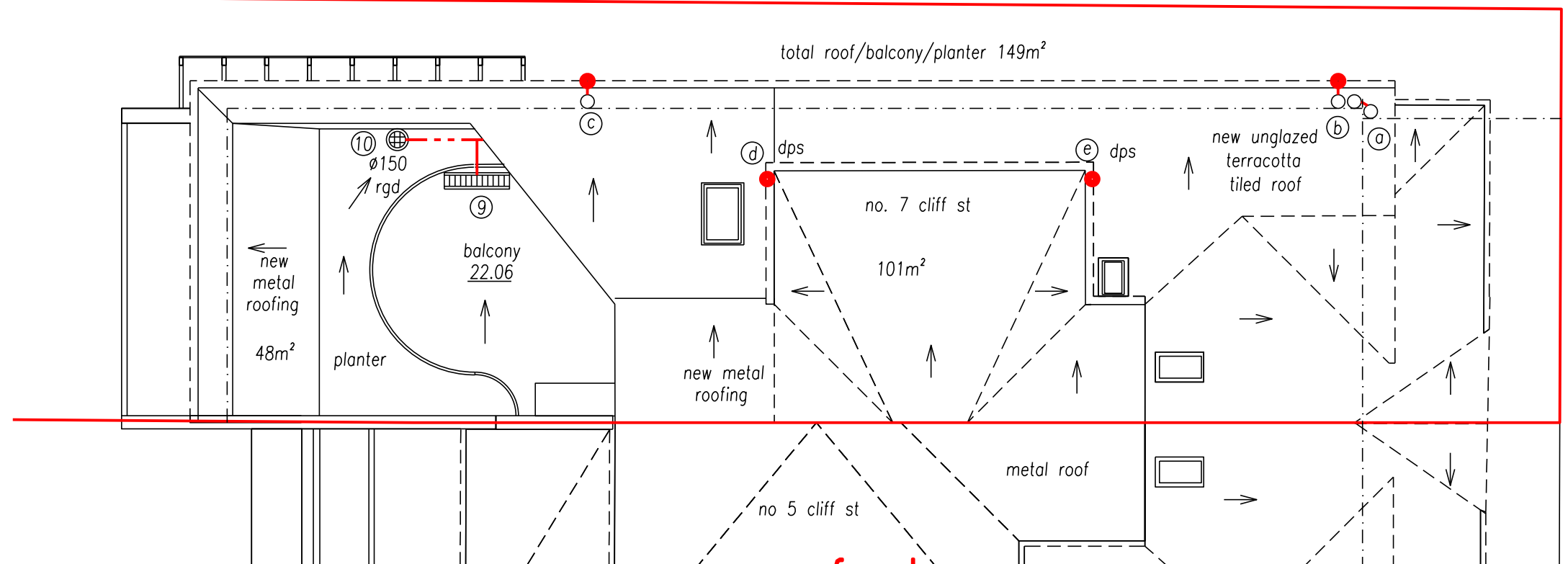


continued on next sheet



level 3 floor plan

scale 1:100



roof plan

scale 1:100

SHEET 4 STORMWATER ENGINEERS PTY LTD

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email: aztecengineers@gmail.com
tel 0433 00 1985

Leon Savage
Leon Savage
B.E. Civil, MIE Aust.

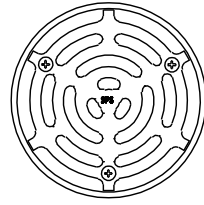
nov 2024	development application issue	B
sep 2024	development application issue	A

PROJECT :
proposed alterations & additions at
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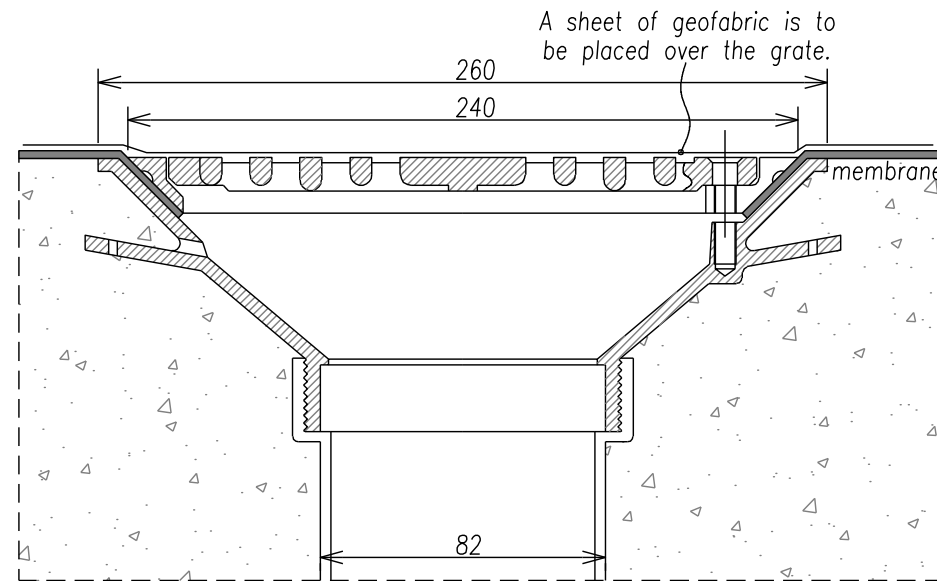
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**stormwater drainage
& rainwater reuse**

development application issue



plan view of grate
not to scale



'sps' surface drainage inlet
not to scale
note : refer to manufacturer's specifications and
installation guide.

SPS Truflo 80, 100 & 150mm RWO with Flat Grate & Membrane Clamp

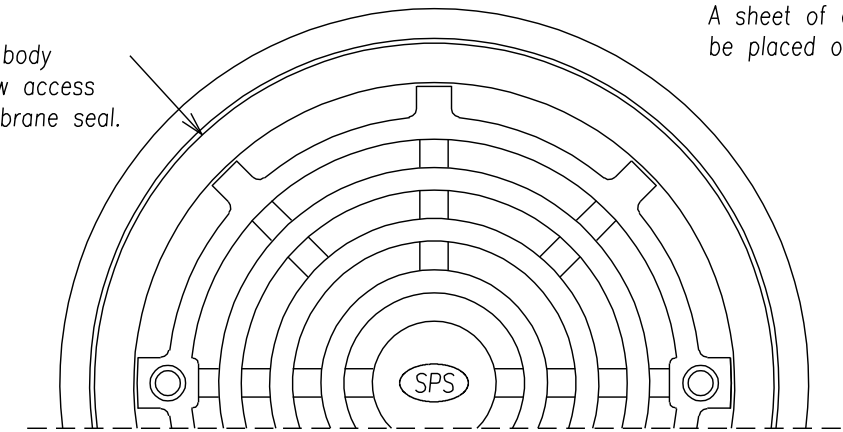
Specification code:

TIA100F2 (CI body, aluminium flat grate & membrane ring)
TIB100F2 (CI body, bronze flat grate & membrane ring)
TBA100F2 (all-bronze assembly)
- for 80mm outlet, use "100/80" instead of "100"
- for 150mm outlet, use "150" instead of "100"

Suggested application:

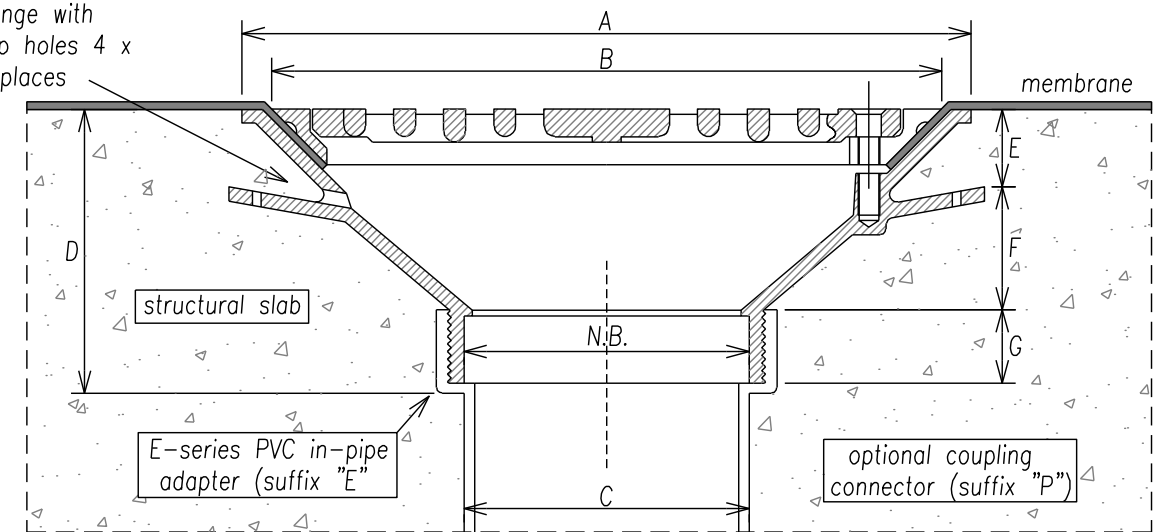
Membraned floors or
roofs with no further topping,
eg planter boxes, plant
rooms, roof decks.
in this instance, proposed to
work in shallow garden.
A sheet of geofabric is to
be placed over the grate.

Membrane ring fastens to body
independently of grate to allow access
to sump without breaking membrane seal.



Load Class A - AS 3996-2006

integral puddle
flange with
weep holes 4 x
places



Dimensions (mm)

N.B	A	B	C	D	E	F	G
80	260	240	82	106	28	45	25
100	260	240	103	106	28	45	25
150	260	240	151	86	28	37	25

* For flow rate data please refer to appendix.

Speciality Plumbing Supplies Pty Ltd not to scale

Tel: (02) 9417 1900 Fax. (02) 9417 0108 E-mail: info@spsdrains.com.au

1.03

SHEET 5

STORMWATER ENGINEERS PTY LTD

stormwater + civil engineers

email: aztecengineers@gmail.com

tel 0433 00 1985

development application issue

L. Savage
Leon Savage
B.E. Civil, MIE Aust.

p\stormwater drawings\040924 7 cliff

nov 2024	development application issue	B
sep 2024	development application issue	A

PROJECT :
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**stormwater drainage
& rainwater reuse**