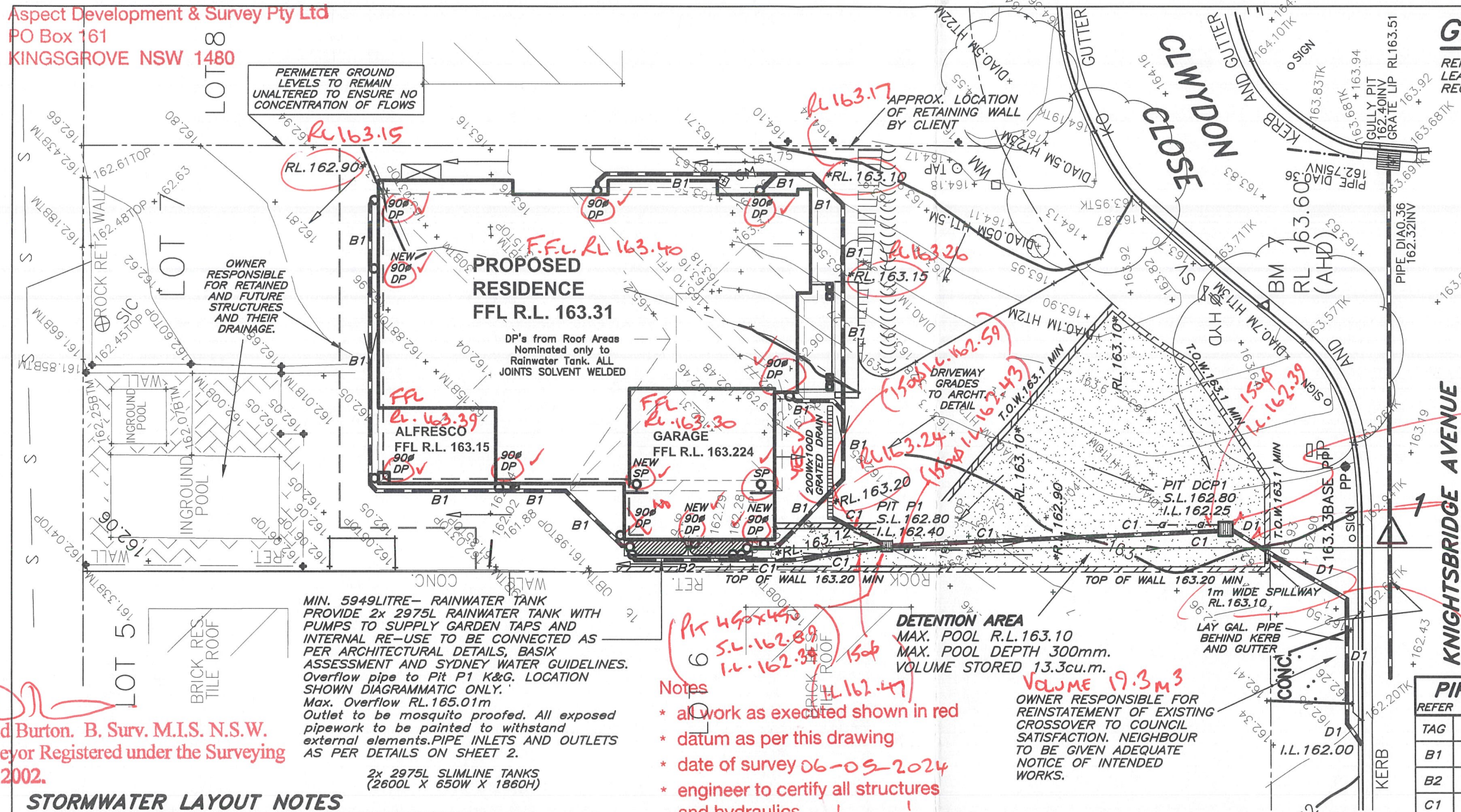


GROUND FLOOR LAYOUT

REFER TO SHEET 2 FOR RAINWATER TANK DETAILS.
LEAF GUTTER GUARDS OR SIMILAR SCREENING
RECOMMENDED TO ALL GUTTERS.

WHSA HAZARD IDENTIFICATION:
TRENCHING—ALL PERSONS TO FOLLOW THEIR
APPROVED SWMS IN RELATION TO BARRICADING
DEEP TRENCHES AND WEARING APPROPRIATE
CLOTHING. ANY PERSON WORKING INSIDE A
TRENCH MUST BE SUPERVISED BY ANOTHER
PERSON.
DIAL BEFORE YOU DIG 1100 MUST BE
CHECKED BEFORE ANY TRENCHING COMMENCES
ON SITE. ANY WORKS NEAR IDENTIFIED
SERVICES TO BE CARRIED OUT IN ACCORDANCE
WITH THE TRADES SWMS.
INSTALLATION OF DOWNPIPES AND GUTTERING
TO BE CARRIED OUT IN ACCORDANCE WITH
INSTALLERS APPROVED SWMS.



MIN. 5949LITRE—RAINWATER TANK
PROVIDE 2x 2975L RAINWATER TANK WITH
PUMPS TO SUPPLY GARDEN TAPS AND
INTERNAL RE-USE TO BE CONNECTED AS
PER ARCHITECTURAL DETAILS, BASIX
ASSESSMENT AND SYDNEY WATER GUIDELINES.
Overflow pipe to Pit P1 K&G. LOCATION
SHOWN DIAGRAMMATIC ONLY.
Max. Overflow RL.165.01m
Outlet to be mosquito proofed. All exposed
pipework to be painted to withstand
external elements. PIPE INLETS AND OUTLETS
AS PER DETAILS ON SHEET 2.

2x 2975L SLIMLINE TANKS
(2600L X 650W X 1860H)

DETENTION AREA
MAX. POOL R.L.163.10
MAX. POOL DEPTH 300mm.
VOLUME STORED 13.3cu.m.

VOLUME 19.3m³
OWNER RESPONSIBLE FOR
REINSTATEMENT OF EXISTING
CROSSOVER TO COUNCIL
SATISFACTION. NEIGHBOUR
TO BE GIVEN ADEQUATE
NOTICE OF INTENDED
WORKS.

Notes
* all work as executed shown in red
* datum as per this drawing
* date of survey 06-05-2024
* engineer to certify all structures
and hydraulics

STORMWATER LAYOUT NOTES

—PITS UP TO 600 DEEP TO BE 450 x 450 U.N.O., PITS UP TO 900 DEEP TO BE 600 x 600 U.N.O., PITS UP TO 1200 DEEP TO BE 900 x 600 U.N.O., PITS EXCEEDING 1200 DEEP TO BE 900 SQ. U.N.O. PITS TO BE PRECAST CONCRETE OR RENDERED BRICK WITH CONCRETE HEAVY DUTY GRATES. U.N.O. LIGHT DUTY PITS AND GRATES MAY BE USED ONLY IN LIGHT/FOOT TRAFFICABLE AREAS. U.N.O. ALL PITS TO BE BENCH TO DISCHARGE PIPES U.N.O. GAL. STEP IRONS TO ALL PITS EXCEEDING 900 DEPTH.
—COVER AND SUMP GRATES SHALL COMPLY WITH AS2733 & AS4198.
—DOWNPIPES TO BE 90 DIA IF CHARGED AND 100 x 50 BOX IF GRAVITY. U.N.O. DP'S SHALL BE INSTALLED IN ACCORDANCE WITH AS3500.3.2.4.11 & AS4198. ROOF AREA PER DOWNPIPE WITH A NOMINATED GUTTER SIZE TO BE DETERMINED USING MANUFACTURERS SPECIFICATIONS WITH OVERFLOW PROVISIONS BY INSTALLERS.
—PIPES TO HAVE 1% MIN.GRADE U.N.O. BY PIT INVERTS. PIPES TO BE V.C. CLASS 'X' OR U.P.V.C. CLASS STORMWATER PIPE TO AS1254,1260,1273,1477,2179.2 AND WHERE EXPOSED TO DIRECT SUNLIGHT TO HAVE ADEQUATE PROTECTION TO U.V. RADIATION IN ACCORDANCE WITH AS2032. SEWER GRADE/GAL. PIPES AND KERB ADAPTORS TO BE USED WHERE COUNCIL POLICY OR CONSENT REQUIRE SUCH.
—GUTTER OUTLETS SHALL BE FITTED VERTICALLY TO THE SOLE OF THE EAVE GUTTERS. RAINHEADS TO HAVE AN OVERFLOW DUCT OR WEIR 50mm BELOW THEIR CREST.
—PROVIDE OVERFLOW SPITTERS TO ALL COVERED BALCONIES/ TERRACES. NOT TO BE DIRECTED ON TO ROOF SURFACES
—SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS2439.1 CLASS 100 TO BE USED ONLY IN SINGLE DWELLINGS.
—RISING MAINS (PRESSURE PIPE) TO BE IN ACCORDANCE WITH AS3500.1:2.
—ALL PIPE JOINTS, VALVES TO BE IN ACCORDANCE WITH AS3500.3.2.2.7 & AS3500.3.2
—EXPANSION JOINTS SHALL COMPLY WITH AS3500.3.2:TABLE 4.1 PVC JOINTS AND ACCESSORIES TO COMPLY WITH AS2179.2 & AS4198.

—ALL TRENCHES TO BE IN ACCORDANCE WITH AS3500.3.2:7.2.8-14. EMBEDMENT MATERIAL AND TRENCH FILL TO ALL PIPES & SUBSOIL DRAINS TO BE IN ACCORDANCE WITH AS3500.3.2:7, ALL WORKS TO BE IN ACCORDANCE WITH AS1254, 1741, 2032, 2733, 2865, 3996, 1260, 1477, 2179.1 & 2,2566, 6367, 8301, ARR97 & BCA.
—IT IS THE BUILDER'S RESPONSIBILITY TO CONFIRM THAT LEVELS AND SURVEYS ARE IN ACCORDANCE WITH LEVELS ON SITE & ARE APPROVED BY COUNCIL & ARCHITECT BEFORE COMMENCING WORK.
—NO SEWER VENTS, GULLY PITS OR SIMILAR TO BE LOCATED BELOW THE MAXIMUM WATER SURFACE LEVEL IN DETENTION BASINS. ALL BASIN WALLS TO BE WATERTIGHT & STRUCTURALLY DESIGNED BY A STRUCTURAL ENGINEER.
—ALL FENCES WHICH MAY DIVERT FLOW FROM PROPOSED DIRECTION TO BE RAISED 100mm.
—BUILDER TO ENSURE ALL DRAINAGE AREAS INCLUDING EXPOSED BALCONIES TO HAVE OVERFLOW MECHANISM IN PLACE IN THE EVENT OF BLOCKAGE WITH ADEQUATE OVERFLOW SECTION THROUGH PLANTERS, PARAPETS ETC.
—ALL EXTERIOR FINISHED GROUND LEVELS TO BE SLOPING AWAY FROM PERIMETER WALLS IN ALL CASES.
—ALL HEADROOM CLEARANCES TO BE COORDINATED BETWEEN BUILDER & ARCHITECT. NOTIFY ENGINEER FOR APPROVAL IF ANY CHANGES OCCUR.
—ALL GULLY POSITIONS ARE DIAGRAMMATIC ONLY— BUILDER SHOULD CONSULT ARCHITECTURALS FOR DIMENSIONS TO LOCATE STORMWATER ELEMENTS U.N.O.
—FIRE RATING TO ARCHITECT'S SPECIFICATION.
—ALL FINISHED FLOOR LEVELS ARE NOMINATED BY ARCHITECT.
—ALL SITE SAFETY MEASURES AND WORK METHOD STATEMENTS PREPARED BY BUILDER/SUB-CONTRACTORS ARE TO BE IMPLEMENTED DURING CONSTRUCTION. NO WORK IS TO COMMENCE UNTIL ALL WORKERS CARRY OUT SITE INDUCTION, PREPARED AND CARRIED OUT BY BUILDER. ANY HAZARD IDENTIFICATION TO BE REPORTED IMMEDIATELY TO SITE SUPERVISOR TO CARRY OUT NECESSARY PROCEDURES TO ELIMINATE HAZARD, PRIOR TO PROCEEDING WITH WORK. STRUCTURAL AND GEOTECHNICAL ADVICE SHOULD BE SOUGHT IN ALL CASES.
—CONFINED SPACES SIGNAGE TO BE INSTALLED IN ACCESSIBLE UNDERGROUND TANKS TO WORK COVER SPECIFICATIONS. ALL PITS EXCEEDING 600mm DEPTH TO HAVE 'U' BOLTS INSTALLED TO GRATES.
—MAINTENANCE DEVICES REQ'D BY AUTHORITIES ARE NOT TO BE ASSUMED SHOWN ON DRAWINGS.
—EARTH MOUNDING SHOWN AS TEMPORARY MEASURE UNTIL LANDSCAPING COMPLETED TO DIRECT FLOWS AS SHOWN.

PIPE SCHEDULE		
REFER TO NOTES FOR PIPE CLASS		
TAG	PIPE DIA.	MIN.GRADE
B1	100	CHARGED
B2	100	2%
C1	150	1%
D1	150x100 GAL. PIPE	1%

LEGEND	
R.L. 0.00	NEW REDUCED LEVEL (NEW FINISHED GROUND LEVEL)
+00.00	EXISTING LEVEL
S.L. 0.00	SURFACE LEVEL
I.L. 0.00	INVERT LEVEL
T.O.W.	TOP OF WALL LEVEL
G.F.L. 0.00	GARAGE FLOOR LEVEL
F.F.L. 0.00	FINISHED FLOOR LEVEL
A,B,C etc.	SEE PIPE SCHEDULE
L1	PIPE LABEL
PIT P1	SURFACE INLET PIT
PIT OP1	OVERLAND FLOW PIT
—d—d—	90mm. AG. LINE
⊙DP	DOWNPIPE—SIZE
REFER TO NOTES FOR DP SIZE	
⊙GP	GULLY PIT
⊙GP	GARDEN GULLY PIT
⊙O/F	OVERFLOW—200x100
⊙RW	RAIN WATER HEAD
⊙SP	DP WITH SPREADER
⊙BG	BALCONY GULLY PIT
⊙CE	CLEANING EYE
—>—	GROUND FALL
)))	100 HIGH EARTH MOUNDING

ALL OTHER SURFACE WATERS TO BE STRICTLY CONNECTED TO A SEPARATE SYSTEM BY OWNER IN ACCORDANCE WITH AS 3500.3:2003 AND BCA PART 3.1.2.3.

RAINWATER TANKS WITH PUMPS TO SUPPLY GARDEN TAPS AND INTERNAL RE-USE AS PER BASIX ASSESSMENT



REVISIONS	
A	CC— OUTLET CHANGED PER COUNCIL ADVICE

ISSUE	PRINTS	ISSUED TO	DATE
1	EMAIL	BUILDER/CLIENT	9-9-16
2	EMAIL	BUILDER/CLIENT	1-3-17

SCALE(A3) 1:200,100 u.n.o.
SCALE BAR — 1m INTERVALS
DATE JUNE 2016
DRAWN M.I.
DESIGNED M.I.
APPROVED



IBRAHIM STORMWATER CONSULTANTS
CONSULTING CIVIL ENGINEERS

P.O. BOX 400 CHERRYBROOK NSW 2126
TELEPHONE: (02) 9980 5515 FAX: (02) 9980 6114
www.stormwater.net.au email: mail@stormwater.net.au

PROJECT
PROPOSED RESIDENCE
AT 1 CLWYDON CLOSE
BELROSE
FOR MR & MRS BOYD

THIS DRAWING
STORMWATER
LAYOUT SH.1
BUILDER
EDEN BRAE HOMES

JOB NUMBER
E7063-20155
SHEET No. 1 of 2
REVISION 4

TRI 100Dia. Overflow pipes to Pit P1.
Outlet to be mosquito proofed. All
exposed pipework to be painted to
withstand external elements. (Location
shown generic only)

Max. overflow
Max. Overflow
RL. 165.01

RL. 164.01

IL. 162.60

2x 2975L SLIMLINE TANKS
(2600L X 650W X 1860H)

PAD RL. 163.15

2 x 2975L Dual Rainwater
tank/s, to manufacturer's and
Sydney Water's specifications.

Mosquito proof strainer
or cover - regular
cleaning/maintenance
by owner essential

Internal submersible
or external pumps
to supply garden
taps and internal
re-use per Basix
assessment.
Location as per
architecturals.

Leaf Gutter Guard or
Downpipe Guard
recommended.

Charged pipes
shown

INLET LEVEL
OF CHARGED
LINES TO BE
A MINIMUM AS
SHOWN
BELOW ALL
CONNECTED
GUTTERS.

First flush water
diverter or
equivalent at
tank as req'd
by L.G.A. F/F

I.O. - Cleaning
eye to all
charged
pipelines for
maintenance of
charged system.

TYPICAL ALTERNATIVE
INLET SYSTEM SHOWN
DIAGRAMMATICALLY ONLY

Aspect Development & Survey Pty Ltd
PO Box 161
KINGSGROVE NSW 1480

Notes

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- * engineer to certify all structures and hydraulics

THIS IS AN
**ON-SITE STORMWATER
DETENTION SYSTEM**
REQUIRED BY YOUR LOCAL COUNCIL

IT IS AN OFFENSE TO REDUCE THE
VOLUME OR TO INTERFERE WITH THE
ORIFICE PLATE THAT CONTROLS THE
OUTFLOW
THE BASE OF THE OUTLET CONTROL
PIT AND DEBRIS SCREEN MUST BE
CLEANED OF DEBRIS AND SEDIMENT
ON A REGULAR BASIS BY THE OWNER.

THIS PLATE MUST NOT BE REMOVED

Signage to be provided
adjacent tanks Size: 110 mm
x 80mm

RAINWATER TANK

TANK DETAILS SHOWN ARE A SUGGESTED CONFIGURATION ONLY. ANY MODIFICATIONS TO TANK VOLUME OR INLET AND OUTLET LEVELS MUST BE APPROVED BY ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION. TANK SHAPE, & DEVICES SHOWN ARE DIAGRAMMATIC ONLY. MINIMUM OF 450 CLEARANCE (UNLESS L.G.A. REQUIRES LARGER SETBACK) TO SIDE BOUNDARIES MUST BE MAINTAINED. CLIENT IS RESPONSIBLE TO ENSURE COMPLIANCE WITH THIS IN THE INSTALLED STATE.

Charged stormwater lines from Roof Areas ONLY to rainwater tank.

All joints to be solvent welded. All exposed pipework to be painted to withstand external elements.

First flush water diverter at tank to comply with Sydney Water and council DCP's. An approved switch system similar to 'Rainbank' to be used via mains. Pumps to manuf. specs.

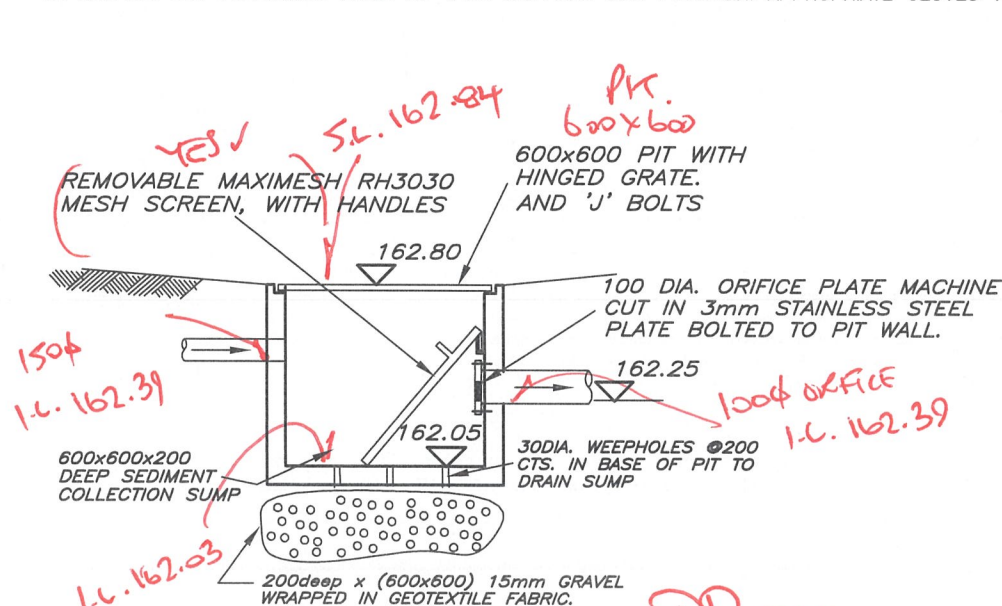
Rain Tank to be installed and maintained to manufacturers specifications and to comply with all Sydney Water Guidelines.

Client to be responsible for maintenance system of charged pipelines. Debris accumulation significantly affects systems performance. Maintenance program essential.

Structural details for tank base by manufacturer or others.

WHSA HAZARD IDENTIFICATION:

INSTALLATION OF RAINTANKS: PLUMBER/SITE SUPERVISOR TO ASSESS ACCESS SUITABILITY PRIOR OR POST SLAB CONSTRUCTION. INSTALLATION OF TANKS TO BE CARRIED OUT FOLLOWING SWMS OF TANK SUPPLIER AND PLUMBER. APPROPRIATE GLOVES TO BE WORN AT ALL TIMES WHILE HANDLING TANKS.

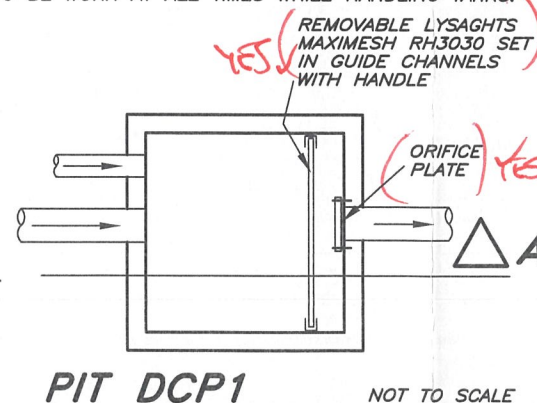


PIT DCP1 - SECTION A

NOT TO SCALE

BUILDER/CLIENT TO ENSURE THAT ALL SAFETY MEASURES ARE TAKEN DURING CONSTRUCTION, INCLUDING BUT NOT LIMITED TO, SAFETY FENCING, SIGNAGE, OBTAINING STRUCTURAL AND GEOTECHNICAL ADVICE WHERE EXCAVATIONS ARE NEAR STRUCTURES OR SERVICES, SAFETY MEASURES RECOMMENDED BY PRODUCT SUPPLIERS ETC.

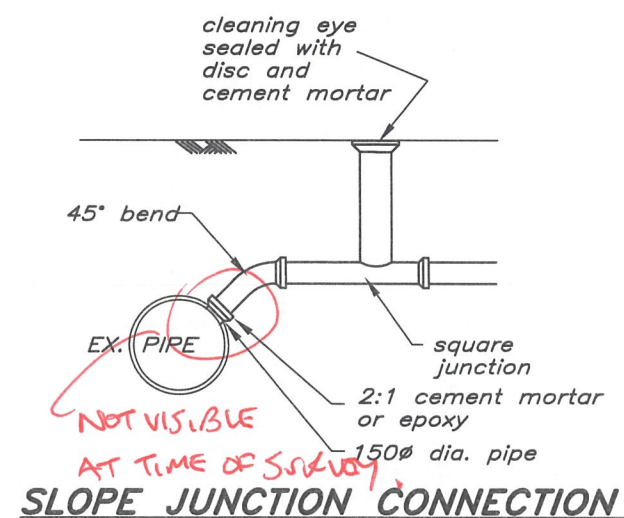
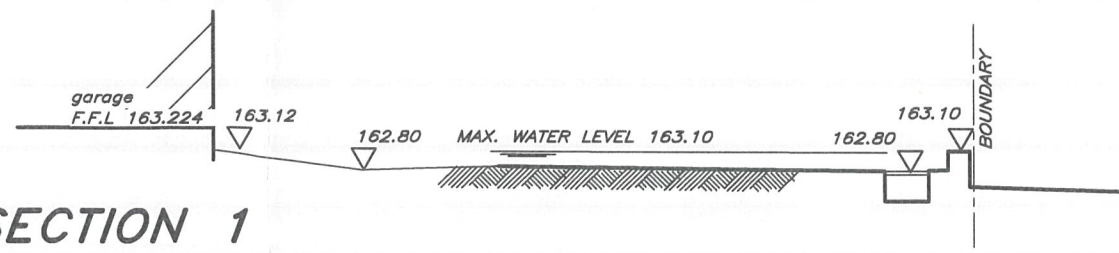
David Burton. B. Surv. M.I.S. N.S.W.
Surveyor Registered under the Surveying
Act. 2002.



PIT DCP1

WHSA
ALL NEARBY SERVICES TO BE LOCATED PRIOR EXCAVATIONS.
ALL PIPES TO BE CUT FLUSH WITH PIT WALLS AND SPARGED.
PITS EXCEEDING 600mm IN DEPTH TO HAVE LOCK DOWN MECHANISM.
SAFETY GEAR TO BE WORN AT ALL TIMES. INCLUDING FOOTWEAR, CLOTHING AND GLOVES AS PER SWMS.

SECTION 1



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REVISIONS	
A	CC- OUTLET CHANGED PER COUNCIL ADVICE

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2	EMAIL	BUILDER/CLIENT	1-3-17

SCALE(A3) 1:200, 100 u.n.o.
SCALE BAR - 1m INTERVALS
DATE JUNE 2016
DRAWN M.I.
DESIGNED M.I.
APPROVED



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PROJECT
**PROPOSED RESIDENCE
AT 1 CLWYDON CLOSE
BELROSE
FOR MR & MRS BOYD**

THIS DRAWING
**STORMWATER
DETAILS SH.1**
BUILDER
EDEN BRAE HOMES

JOB NUMBER
E7063-20155
SHEET No. **2 of 2**
REVISION **A**

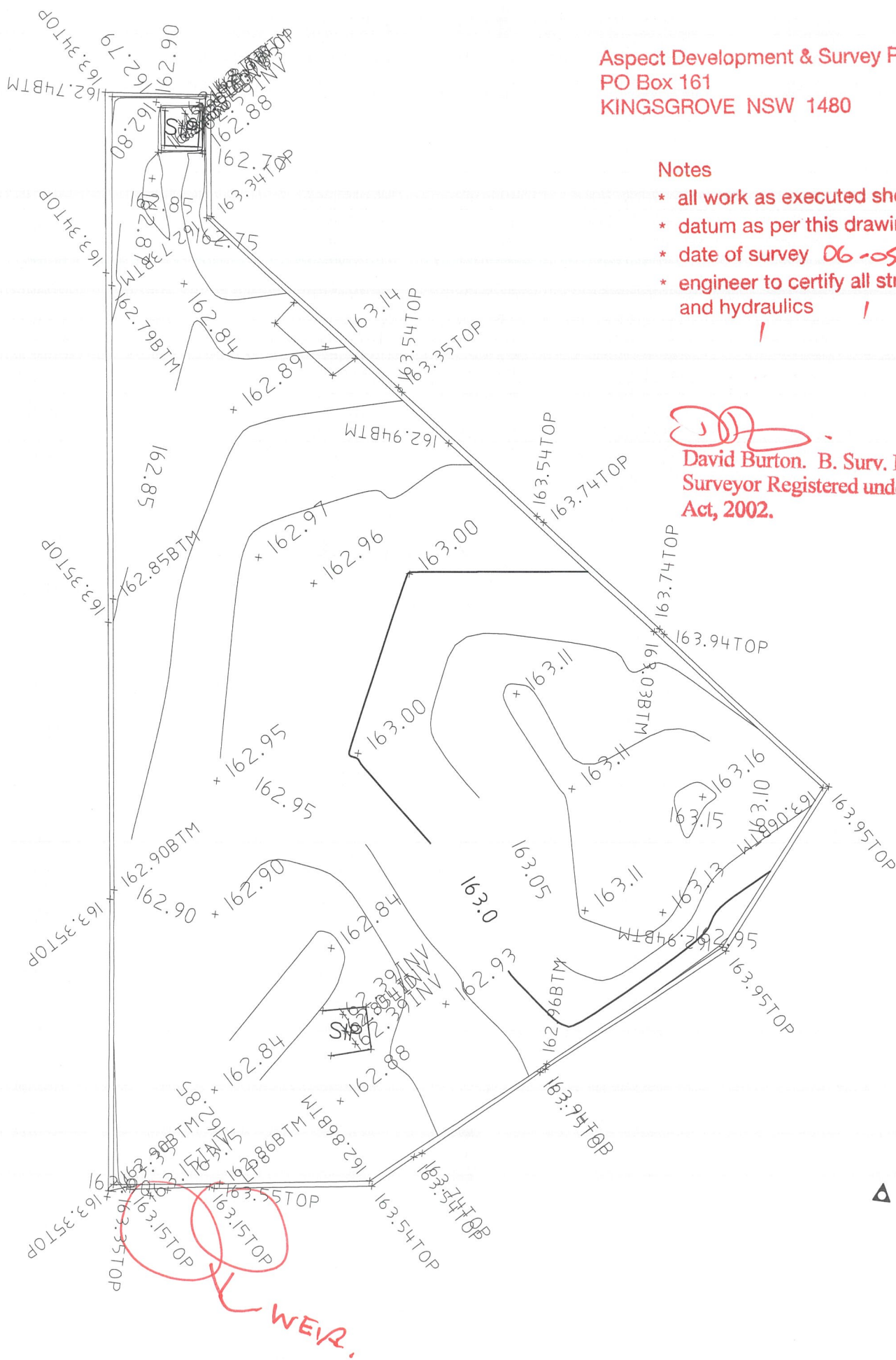
Aspect Development & Survey Pty Ltd
PO Box 161
KINGSGROVE NSW 1480

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Act, 2002.



▲ 7
BM 7
RL 163.60
(AHD)

Volume to RL163.15.txt

```
*****
**
** Plane To TIN Volume Report -- Mon May 13 17:30:57 2024
**
** From Elevation <163.150> to TIN <392067.tin>
**
** Prismoidal Volume
**
*****
**
** Total Cut = 19.314 Cubic Meters
** Total Fill = 0.001 Cubic Meters
** Area = 96.460 Sq Meters
** Balance = 19.313 Cubic Meters
**
*****
```

VOLUME

19.3 m³

Aspect Development & Survey Pty Ltd
PO Box 161
KINGSGROVE NSW 1480

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