

ONSITE DETENTION REPORT  
(DRAINS ANALYSIS)

Site area	- 520.8m2
Existing impervious area	- 200 m2
	note 0m2 modeled
Proposed impervious area	- 374 m2
Area modeled to OSD	- 445 m2
Detention Volume modeled	- 8000l
Existing Site Discharge	
5yr ARI Storm	- <b>23 l/s</b>
100yr ARI Storm	- 37 l/s
Post Development Site Discharge	
5yr ARI Storm	- 20 l/s TOTAL (17 l/s via OSD, 3 l/s uncontrolled)
100yr ARI Storm	- <b>23 l/s</b> TOTAL (18 l/s via OSD, 5 l/s uncontrolled)

Noting - Compliance to Northern Beaches Council Water Management for Development Policy Section 5.5 Stormwater Disposal From Low level Properties (and Section 5.5.1.2.4 Level Spreader / Appendix 4) by restricting Post Development 1% AEP flows to 'Greenfields' 5% AEP event runoff ( ~ 40% reduction from actual predevelopment conditions).

SITE STORMWATER  
MANAGEMENT PLAN

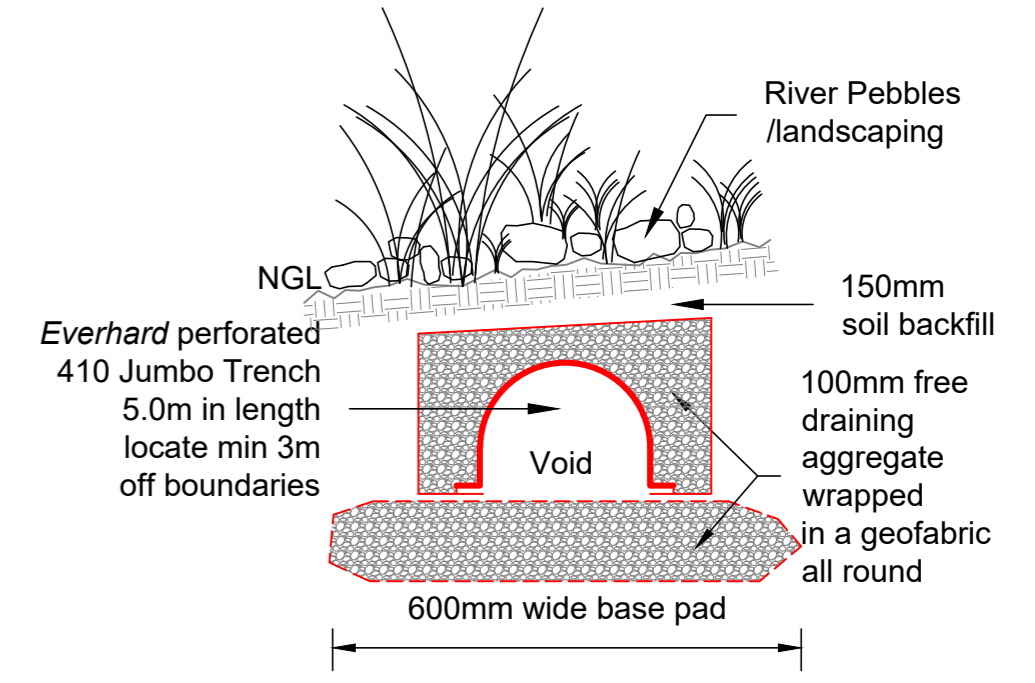
~ 1:100

All works to be of a conventional nature as per NCC / BCA and AS3500.3 requirements. Compliance to Northern Beaches Council Water Management for Development Policy Section 5.5 Stormwater Disposal From Low level Properties (and Section 5.5.1.2.4 Level Spreader / Appendix 4) using a 8000l OSD system with all roof areas and total of area of 445m2 to be connected to the OSD system.

Noting neighbours approached but not agreeable to the establishment of a drainage easement to Cumberland Ave / Councils system.

OSD disposal to be to a dispersion / level spreader system in rear of site, located in a manner to mimic predevelopment conditions.

Trunk lines / pipes shown above to all be 150 dia uPVC.



LEVEL SPREADER  
DISPERSION  
TRENCH DETAIL

NTS

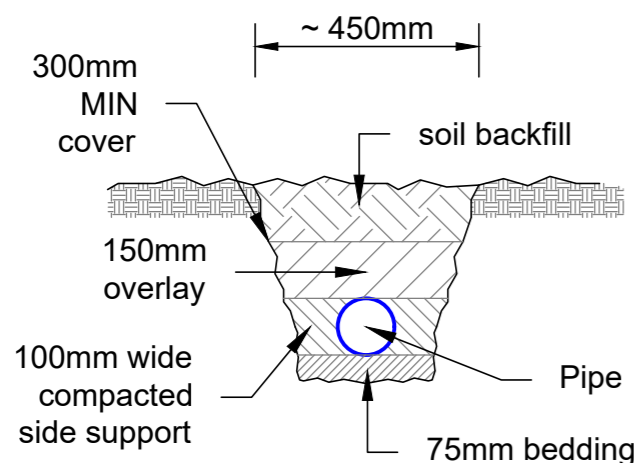
5.0m IN LENGTH TO BE LAID PARALLEL AND ALONG THE NATURAL CONTOUR OF THE SITE MIN 3M OFF BOUNDARIES

IN ACCORDANCE WITH A GEOTECHNICAL CONSULTANTS ADVICE

ISSUE:			Barrenjoey Consulting Engineers pty Ltd Stormwater Structural Civil	PROJECT:	PROPOSED NEW RESIDENCE 23 LANCASTER CRS COLLARROY for ~ TEDA FNQ pty Ltd	DRAWING :	STORMWATER MANAGEMENT PLAN	Job No : <b>220405</b>	Drawing No : <b>SW1<sub>DA</sub></b>
30. 06. 2022	PreLim	Issued for comment						Document Certification	
01. 07. 2022	DA	Issued for DA submission						Barrenjoey Consulting Engineers pty Ltd	
								per Lucas Molloy	
								MIEA CPEng NER Director	

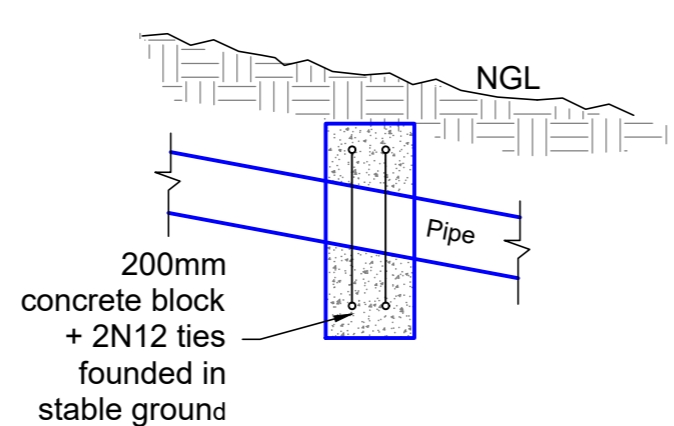
## STORMWATER NOTES

1. All roof collection components (ie gutters / DPs etc) are to be located / sized by the Developments contracting Plumber for a **5% AEP** event capacity.
2. Trunk lines shown on plan to be 150mm dia uPVC, uno.
3. All pipes to be uPVC to AS 1254:2002.
4. All pipes to be laid at the grade required to match pit invert levels.
5. All pipes to be installed and laid in accordance with AS 3500.3:2003.
6. All roof guttering / down pipes / valley gutters / box gutters etc are to be sized and installed in accordance with AS 3500.3:2003.
7. All pits are to be proprietary uv resistant polypropylene or similar unless noted (approved by the Engineer) and are to include a min 50mm sediment trap in the base and a maximesh screen laid at 45° across the pit to protect the outlet pipe.
8. All pits greater than 600mm in depth are to be proprietary precast concrete (approved by the Engineer).
9. All pits greater than 1000mm in depth are to have adequate access requirements in accordance with OH&S/Workcover requirements (ie; minimum dimensions 900x900mm with step irons).
10. All works are to be inspected and certified by the Principle Certifying Authority prior to backfilling.
11. All works requiring certification by the Engineer will require a works as executed survey prepared by a registered Surveyor detailing all levels etc as on the Engineering plans.
12. The system is to be flushed and cleaned of all sediment and debris annually.
13. The system will require regular cleaning and maintenance to ensure its ability to function is maintained.
14. To ensure the system's ability to function is maintained it is to be inspected and certified as operating effectively by a licensed plumber every 5 years, and a engineer every 20yrs.
15. All existing predevelopment catchment area run-off conditions exiting the site are to be maintained with no run-off flows being diverted from the predevelopment condition.
16. Flows from upstream properties entering the site are to be monitored during construction and diverted about the OSD system / residence etc as required.



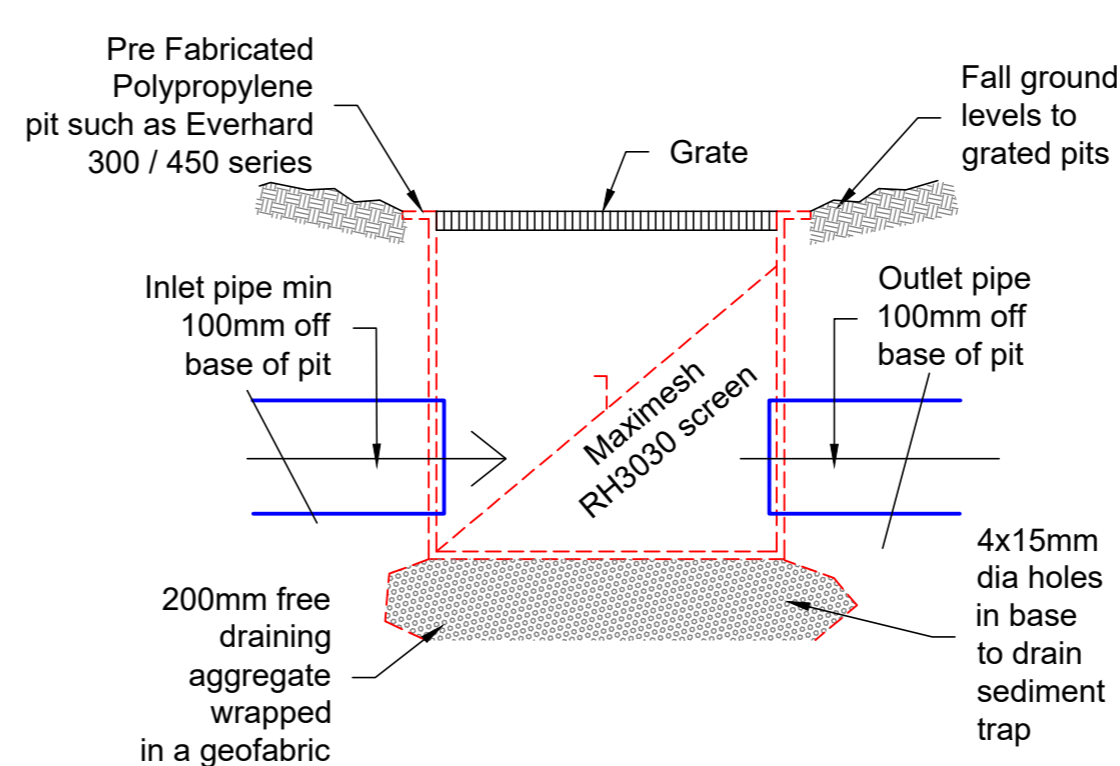
### TYPICAL PIPE & TRENCH DETAIL

~ NTS



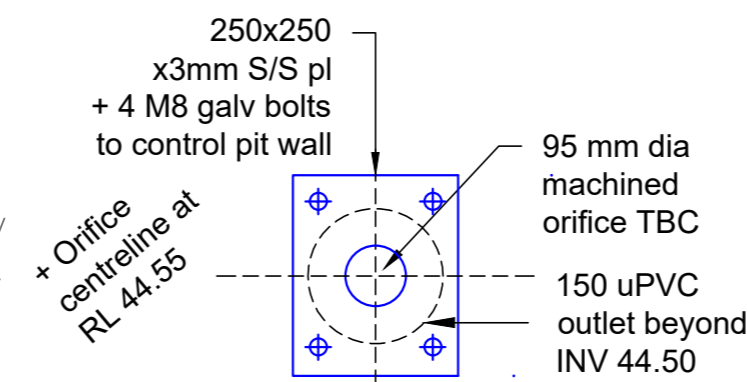
### ANCHOR BLOCK DETAIL

TO BE INSTALLED AT 6m CTS  
IF PIPE SLOPE > 1V TO 5H



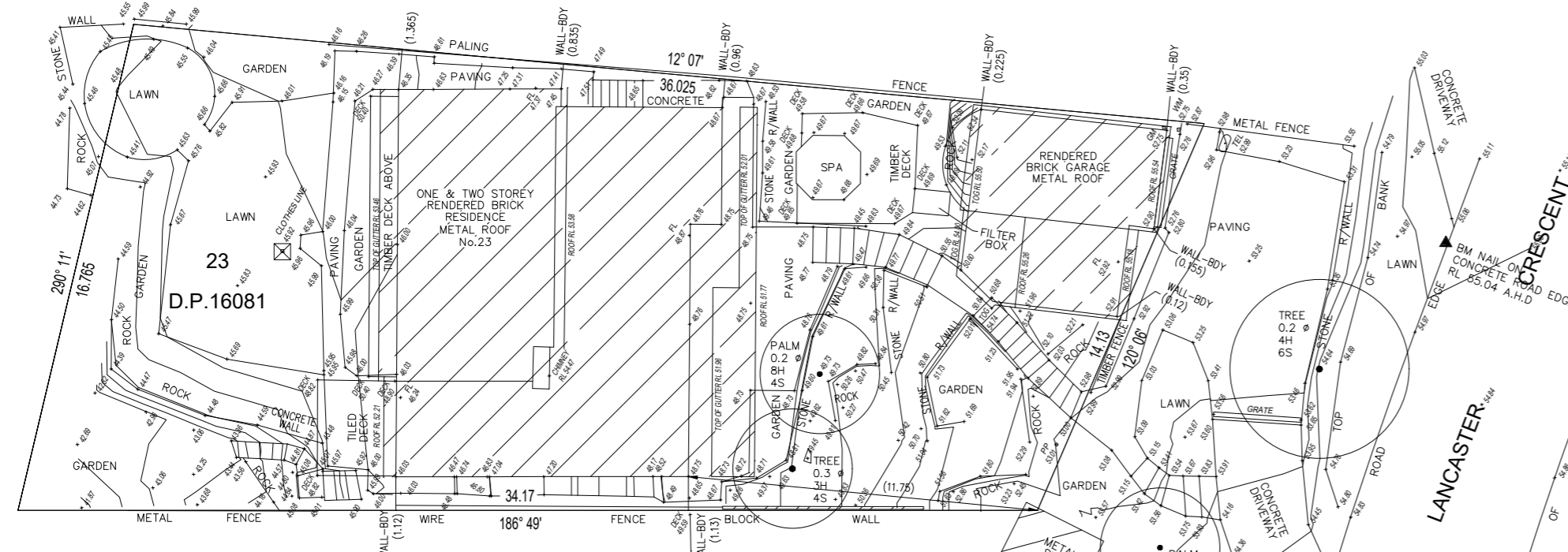
### TYPICAL PIT DETAIL

NTS



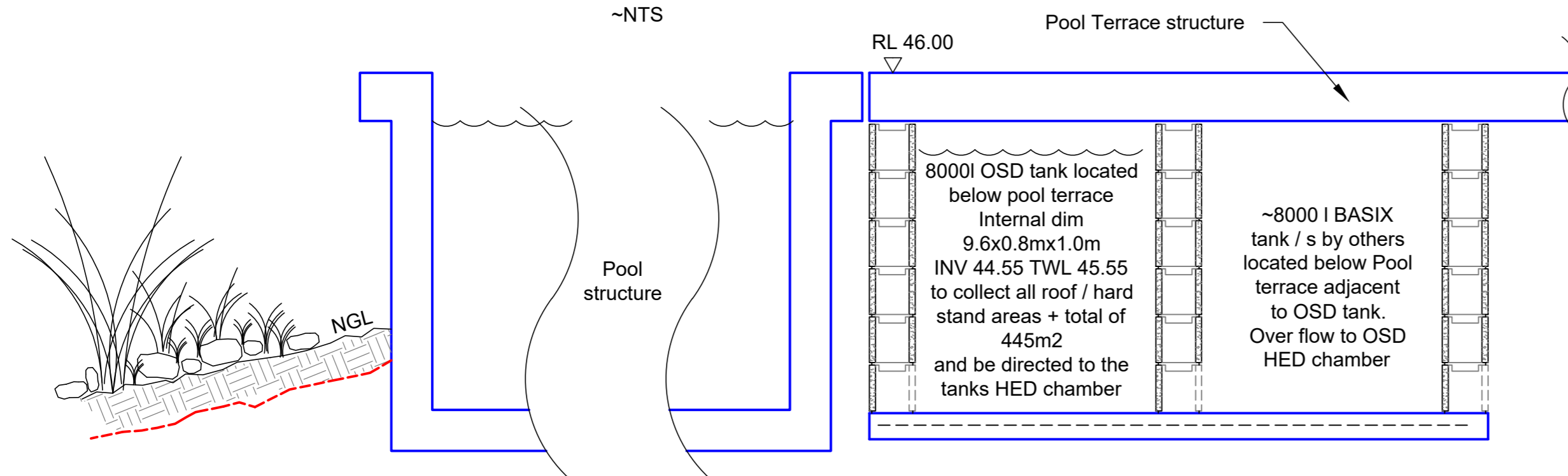
### ORFICE PL DETAIL

~ 1:20



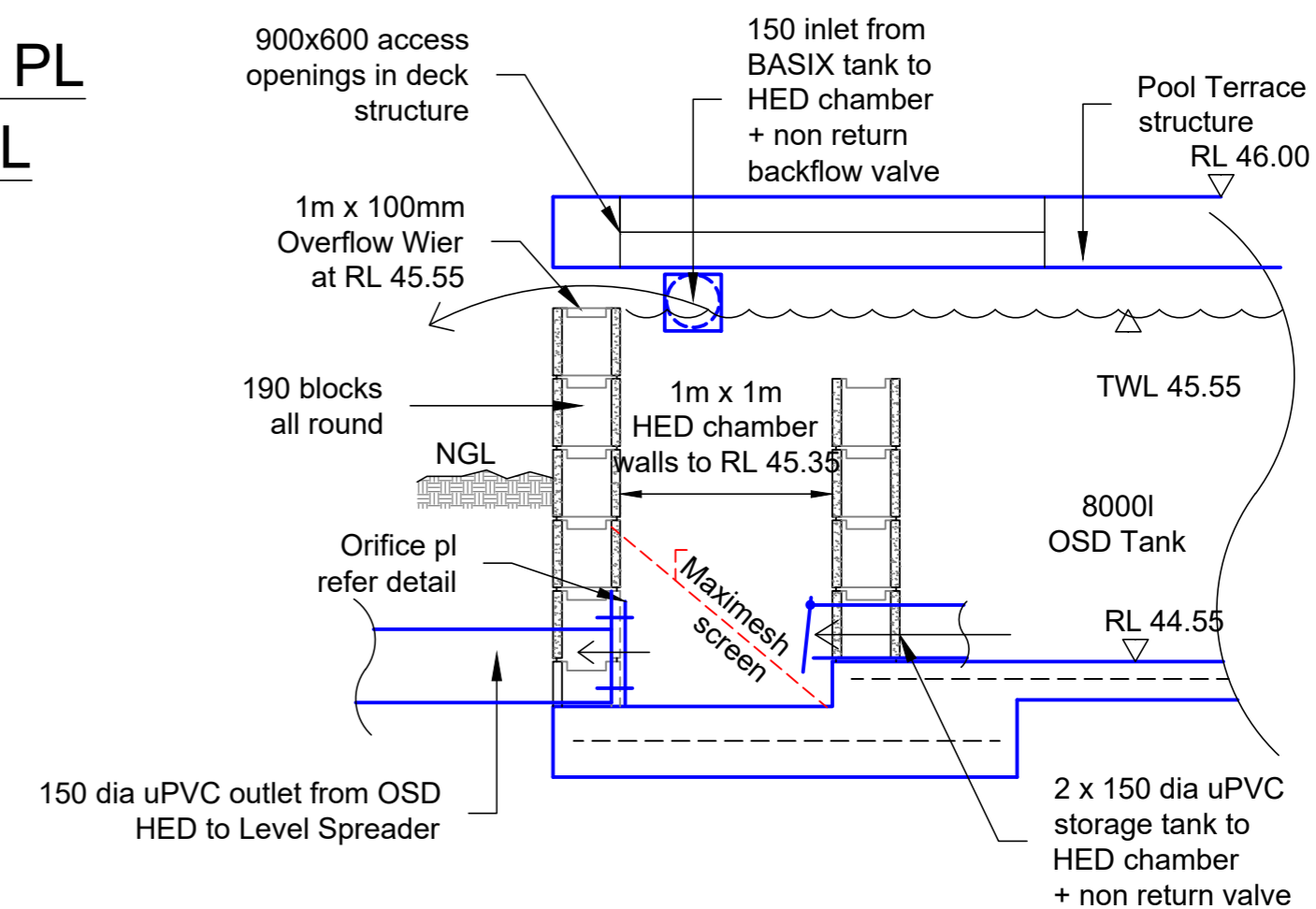
### EXISTING SITE SURVEY

~NTS



### OSD / BASIX TANK CROSS SECTION

~ 1:20



### OSD CONTROL ORFICE PL DETAIL

~ 1:20

ISSUE:		
30. 06. 2022	PreLim	Issued for comment
01. 07. 2022	PreLim	Issued for DA submission

Barrenjoey Consulting Engineers Pty Ltd  
Stormwater Structural Civil  
PO Box 672  
Avalon NSW 2107  
M: 0418 620 330  
E: lucasbce@bigpond.com  
ABN: 13124694917  
ACN: 124694917

PROJECT:  
PROPOSED  
NEW RESIDENCE  
23 LANCASTER CRS  
COLLAROY  
for ~ TEDA FNQ pty ltd

DRAWING :  
STORMWATER  
MANAGEMENT  
DETAILING

Job No :  
**220405**  
Drawing No :  
**SW2<sub>DA</sub>**  
Document Certification  
Barrenjoey Consulting Engineers Pty Ltd  
per Lucas Molloy  
MIEA CPEng NER Director

A2

July '22