

BIO RETENTION INSTALLATION STANDARD NOTES:

CONSTRUCTION OF THE BIO-RETENTION BASIN IS TO FOLLOW STANDARDS AND PROCEDURES OUTLINED IN BIO-RETENTION TECHNICAL DESIGN GUIDELINE (WATER BY DESIGN) AND WSUD CONSTRUCTION AND ESTABLISHMENT GUIDELINES - SWALES, BIORETENTION SYSTEMS AND WETLANDS (WATER BY DESIGN). THE PLACEMENT OF DRAINAGE, TRANSITION AND FILTER MEDIA LAYERS MUST BE UNDERTAKEN CAREFULLY TO ENSURE CORRECT DEPTH, SLOPE AND COMPACTION.

DEPTH: FILTER MEDIA SHOULD BE INSTALLED AND COMPACTED IN TWO LIFTS FOR DEPTHS OVER 500mm.

SLOPE: THE TOP SURFACE OF THE DRAINAGE LAYER, TRANSITION LAYER AND FILTER MEDIA LAYER SHOULD BE FLAT. A SPREADER BAR SHOULD LEVEL THE SURFACE OF EACH LAYER.

COMPACTION: THE FILTER MEDIA MUST BE LIGHTLY COMPACTED DURING INSTALLATION TO PREVENT THE MIGRATION OF FINE PARTICLES. THIS CAN BE ACHIEVED WITH A SINGLE PASS OF A LIGHT ROLLER SUCH AS A DRUM LAWN ROLLER. A VIBRATING PLATE CAN ALSO BE USED TO COMPACT SMALL BIO RETENTION SYSTEMS OR FOOTTRACK ROBOTS CAN BE USED FOR LARGE SYSTEMS. ENSURE ONLY ONE COMPACTING PASS IS MADE OVER THE MEDIA FOR LIGHT COMPACTION.

BIO-RETENTION/DETENTION BASINS CONSTRUCTION SEQUENCE AND NOTES:

1. ESTABLISH SEDIMENT AND EROSION CONTROL MEASURES IN CATCHMENT, INCLUDING SILT FENCES, SEEDING OF ALLOTMENTS, & FULL WIDTH VERGE TURFING.
2. SURVEY BASIN LOCATION.
3. EXCAVATE SURROUNDING LANDFORM TO DESIGN SUBSOIL LEVEL (ACHIEVING SURROUNDING LEVEL AT THIS STAGE REDUCES THE NEED FOR EARTHWORKS ADJACENT TO THE BASIN AFTER THEY HAVE BEEN CONSTRUCTED)
4. EXCAVATE BASIN TO DESIGN DEPTH ENSURING BASE OF POD HAS MINIMUM 0.5% GRADE TOWARDS PIT. ENSURE BASE OF BASIN IS FREE FROM DEBRIS.

- SUPERINTENDENT INSPECTION AND SIGN OFF REQUIRED BEFORE PROCEEDING.
5. LINE SYSTEM WITH GEOFABRIC, AND EXTEND GEOFABRIC A MINIMUM OF 500 MM BEYOND TOP OF EXCAVATION. THESE ARE THE FLAPS REFERRED TO IN ITEM 13 BELOW.
 6. SUBSOIL DRAINAGE TO BE INSTALLED.
 7. NOTE THAT CORRECT FUNCTIONING OF THE DRAINAGE PIPES IS CRITICAL TO THE PERFORMANCE OF THE BIORETENTION SYSTEM. DIG TRENCHES IN DRAINAGE LAYER AND PLACE DRAINAGE PIPES. ENSURE PIPES ARE LAID AT MIN 0.5% SLOPE WITH NO LOCALIZED DEPRESSIONS VERIFIED USING LEVEL OR STRING LINE. ALL JOINTS AND JUNCTIONS IN PIPES TO BE SEALED. CONNECT CLEAN OUT POINTS ENSURING TOP OF CLEAN OUT POINTS ARE NOT LESS THAN 50mm BELOW OVERFLOW PIT CREST. CLEAN OUT POINTS ARE CONSTRUCTED STRICTLY IN ACCORDANCE WITH IPWEA STD DRG DS47/3.

- SUPERINTENDENT INSPECTION AND SIGN OFF REQUIRED BEFORE PROCEEDING.
8. COVER DRAINAGE PIPES WITH DRAINAGE MATERIAL, ENSURING DESIGN COVER.

SUPERINTENDENT INSPECTION AND SIGN OFF REQUIRED BEFORE PROCEEDING

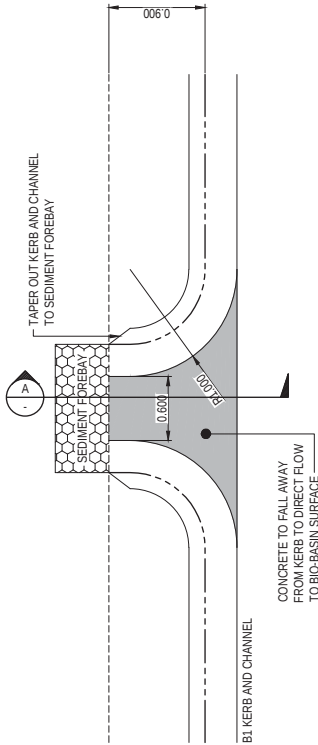
9. PLACE FILTER MEDIA (USING ONLY PRESCRIBED MATERIAL) TO DESIGN LEVEL (REFER DRAWINGS). SPREAD MATERIAL USING EXCAVATOR BUCKET OR HAND TOOLS TO OBTAIN LIGHT AND EVEN COMPACTION OF FILTER MEDIA. DO NOT DRIVE OVER FILTER MEDIA WITH ANY VEHICLE AS EXCESSIVE COMPACTION CAN IMPED DRAINAGE THROUGH THE FILTER MEDIA. FILTER MEDIA SURFACE MUST BE LEVEL (HORIZONTAL) AND FREE FROM LOCAL DEPRESSIONS AND SET AT THE DESIGN LEVELS NOMINATED IN THE PROJECT DRAWINGS. AS SOON AS FILTER MEDIA IS PLACED IT MUST BE IMMEDIATELY COVERED WITH GEOFABRIC AND 25mm SANDY TOPSOIL AND TURE WHICH MUST REMAIN IN PLACE AT ALL TIMES THIS PROTECTIVE COVER IS ONLY TO BE REMOVED BY LANDSCAPERS IMMEDIATELY PRIOR TO PLANTING.
10. FLUSH DRAINAGE PIPES TO REMOVE ANY INITIAL INGRESS OF MATERIAL AND TO ENSURE ADEQUATE DRAINAGE.

FINAL SUPERINTENDENT INSPECTION AND SIGN OFF

NOTE THAT BETWEEN STEPS 3 - 10 ABOVE THE BASINS WILL BE SUSCEPTIBLE TO STORM DAMAGE. THEREFORE ONCE COMMENCED PODS MUST BE COMPLETED AS SOON AS POSSIBLE TO MINIMISE THE RISK OF STORM DAMAGE.

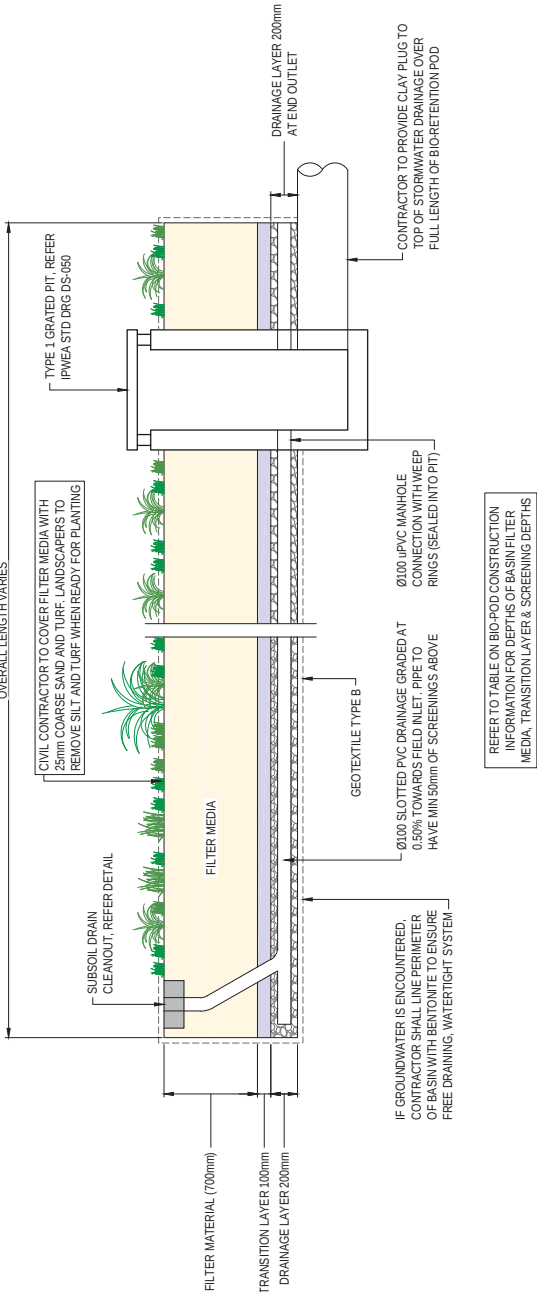
INSPECTION IS REQUIRED IF RAINFALL EVENT OCCURS BETWEEN CONSTRUCTION STEPS 3 - 10 ABOVE.

KERB TURNOUT DETAIL
1:25 @ A1 | 1:50 @ A3



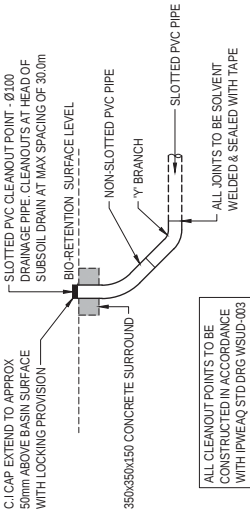

PLANS AND DOCUMENTS
referred to in the **PDA**
DEVELOPMENT APPROVAL
Approval no: DEV2019/1090
Date: 6th February 2020

TYPICAL BIO-RETENTION BASIN
WITH FIELD INLET PIT
1:20 @ A1 | 1:40 @ A3



SECTION A-A
SCALE (A1): 1:25
SCALE (A3): 1:50

CLEANOUT POINT DETAIL
1:20 @ A1 | 1:40 @ A3



ALL CLEANOUT POINTS TO BE CONSTRUCTED IN ACCORDANCE WITH IPWEAQ STD DRG WSUD-003

FILED BY DATE 22/11/20 USER NICK WILKINS

REVISION	NO.	DATE	DESCRIPTION	BY	CHKD	APPD
A	1	22/11/20				
B	2					
C	3					
D	4					
E	5					
F	6					
G	7					

STATUS	DATE	SCALE	CURT	DATE
DRAFT				
NOT FOR CONSTRUCTION				
APPROVED				
BY:				
DATE:				


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SUN CENTRAL
K1, K2, L1 & L2 TEMPORARY
CARPARK


BIO RETENTION
NOTES AND DETAILS