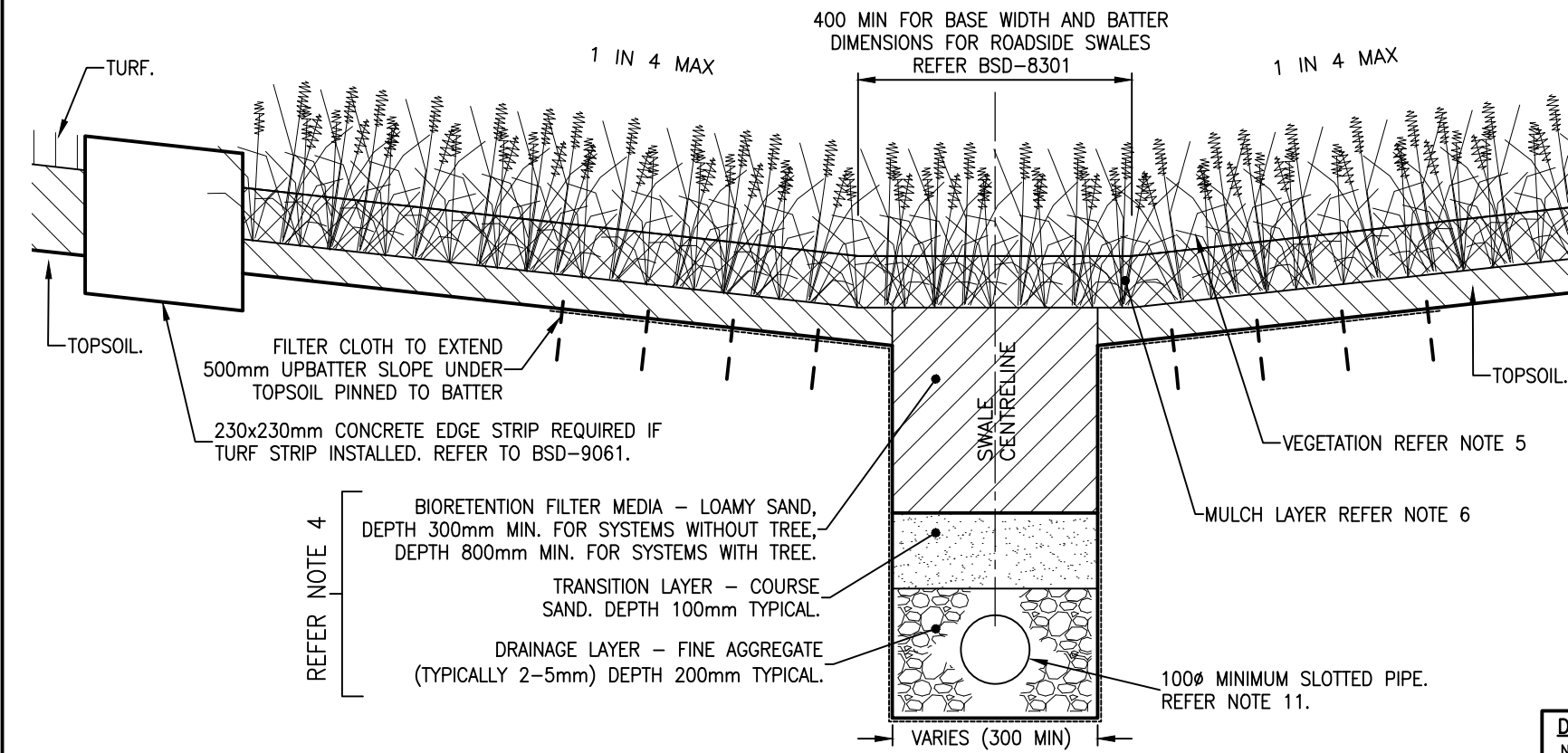


**BIORETENTION SWALE - UNDERDRAIN LONGITUDINAL SECTION**



**BIORETENTION SWALE - UNDERDRAIN SECTION**

**BIORETENTION SWALE NOTES:**

- BIORETENTION SWALE MAY BE USED IN THE CENTRE MEDIAN AND IN THE FOOTPATH AT PARK FRONTAGES. BIORETENTION SWALES SHALL NOT BE USED IN THE FOOTPATH AT RESIDENTIAL FRONTAGES.
- FOR BIORETENTION SWALE FIELD INLET DETAILS REFER TO BSD-8308, FOR VERGE SWALES AND MEDIAN SWALES REFER TO BSD-8308.
- THE DEPTH VELOCITY PRODUCT ( $d_s \cdot V_{avg}$ ) IN THE SWALE SHALL BE LIMITED IN ACCORDANCE WITH QUDM SECTION 7.4.2 GENERAL REQUIREMENTS FOR PEDESTRIAN SAFETY (TYPICALLY 0.6m<sup>2</sup>/s, OR 0.4m<sup>2</sup>/s IN HIGH RISK AREAS).
- BIORETENTION FILTER MEDIA, TRANSITION LAYER AND DRAINAGE LAYER IN ACCORDANCE WITH THE "GUIDELINES FOR SOIL MEDIA IN BIORETENTION SYSTEMS", FACILITY FOR ADVANCING WATER BIORETENTION (FAWB).
- VEGETATION: PLANT SPECIES, TO BE DETERMINED ON A PROJECT BY PROJECT BASIS. PLANT SPECIFICATION AND DENSITY SHALL BE IN ACCORDANCE WITH "BIORETENTION TECHNICAL DESIGN GUIDELINES" (WATER BY DESIGN) AND BRISBANE CITY COUNCIL'S INFRASTRUCTURE DESIGN PLANNING SCHEME POLICY. TREE SPECIES TO BE SELECTED AS PER THE CENTRES DETAIL DESIGN MANUAL AND ALSO CONSIDERING THEIR SUITABILITY FOR WET AND DRY CONDITIONS. VEGETATION TO BE INSTALLED ON 300mm MINIMUM TOPSOIL LAYER.
- MULCH: 50-75mm MULCH LAYER TO BE ORGANIC AND FRIABLE, SUCH AS SUGARCANE. USE JUTE MESH OR SIMILAR BIODEGRADABLE NETTING OVER. SIDES OF MESH TO BE BURIED IN 300mm TRENCH. EACH JOIN IS TO BE OVER LAPPED BY 100mm. 300mm BIODEGRADABLE PEGS ARE TO BE USED AND INSTALLED AT 500mm CENTRES OR AS PER MANUFACTURERS SPECIFICATION.
- FILTER CLOTH: NON-WOVEN GEOTEXTILE. FILTER CLOTH NOT TO BE PLACED BETWEEN ANY FILTER LAYERS. IMPERVIOUS LINER MAY BE REQUIRED ADJACENT TO ROADS AND MAY ALSO BE REQUIRED SUBJECT TO SOIL TESTING REQUIREMENTS IN ACCORDANCE WITH THE "BIORETENTION TECHNICAL DESIGN GUIDELINES" (WATER BY DESIGN).
- GENERAL DESIGN: BIORETENTION SYSTEM TO BE DESIGNED IN ACCORDANCE WITH "BIORETENTION TECHNICAL DESIGN GUIDELINES" (WATER BY DESIGN).
- GENERAL CONSTRUCTION: BIORETENTION SYSTEM TO BE CONSTRUCTED IN ACCORDANCE WITH WATER BY DESIGN'S "CONSTRUCTION AND ESTABLISHMENT GUIDELINES: SWALES, BIORETENTION SYSTEMS AND WETLANDS".
- EROSION CONTROL AND PUBLIC SAFETY RISKS NEED TO BE CONSIDERED AND MANAGED. VEGETATED BATTERS SHOULD BE NO STEEPER THAN 1V : 4H IF USED IN THE STREETScape.
- UNDERDRAIN: SLOTTED RIGID PIPE (UPVC, HDPE, OR SIMILAR TO AS 2439.1) OR APPROVED EQUIVALENT, 0.5% MINIMUM GRADE. 2-3mm SLOTS, DIAMETER TYPICALLY 100 TO 150mm. PIPE JOINS SHALL BE SEALED INTO PITS USING GROUTS OR OTHER APPROVED WATERTIGHT SEAL. 50mm MIN DRAINAGE LAYER (FINE AGGREGATE) COVER OVER SLOTTED PIPE.
- STREET FURNITURE AND LAYOUT TO BE DETERMINED ON A PROJECT BY PROJECT BASIS.

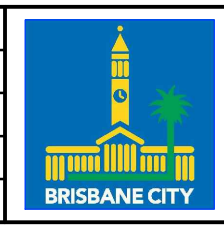
**DESIGN REVIEWED & CERTIFIED FOR ISSUE**  
 NAME: MARK R. GIBSON RPEQ: 6722  
 SIGNATURE: SIGNATURE ON ORIGINAL DATE: 03/04/14

VERIFY LOCATION OF SERVICES PRIOR TO EXCAVATION.

ISSUE	AMENDMENT	DRAWN DATE	CHK'D DATE	APPR'D DATE
B	AMMENDED BATTER NOTES	Feb '15	Feb '15	Feb '15
A	ORIGINAL ISSUE	Apr '14	Apr '14	Apr '14

DESIGN AUTHORISED FOR PUBLICATION  
 INGA CONDRIK SIGNATURE ON ORIGINAL  
 DATED 14/04/14  
 ASSET ENGINEERING MANAGER  
 STRATEGIC ASSET MANAGEMENT  
 DESIGN APPROVED  
 PETER KURAS SIGNATURE ON ORIGINAL  
 DATED APRIL '14  
 PRINCIPAL PROGRAM OFFICER  
 NATURAL ENVIRONMENT WATER & SUSTAINABILITY

DESIGN	CPO - P&D	DATE	Apr '14
DRAWN	CPO - P&D	DATE	Apr '14
CHECKED	M. GIBSON	DATE	Apr '14
DRAWING FILENAME	BSD-8307.dwg		
ASSOCIATED PLANS			



**BRISBANE CITY COUNCIL STANDARD DRAWING**

**BIORETENTION SWALE - UNDERDRAIN DETAILS**

SCALE: NOT TO SCALE  
 DWG No. **BSD-8307**  
 ORIGINAL SIZE: A3 REVISION: B