CATCHMENT	CAUSE 1
RETURN PERIOD	50
AREA	7100 m²
% IMPERVIOUS	72%
MAP	402 mm
POINT PRECIPITATION	60.9 mm
Q (PEAK RUNOFF)	0.201 m³/s
VOLUME	384.8 m³

CONSTRUCTION & REHABILITATION ACTIVITIES FOR STORMWATER SYSTEM

1. EXISTING STORMWATER SYSTEM MUST BE CLEANED, REPAIRED & REINSTATED
2. REMOVE ALL DUST & CAKED MATERIAL FROM SURFACE & SUB-SURFACE DRAINAGE SYSTEMS
3. REPAIR EROSION RUNNELS & RE-SHAPE ALL HARD STANDING AREAS TO ENSURE DRAINAGE TOWARDS THE DETENTION POND
4. PIPES, CULVERTS, MANHOLES & CHANNELS NEED TO BE CLEANED REGULARLY AS SYSTEM IS BLOCKED & MANHOLES ARE SILTED UP
5. LENGTHS OF PIPES, NUMBER OF CULVERTS & MANHOLES CLEARLY SHOWN IN LONGITUDINAL SECTION FOR QUANTIFYING
6. FLOWS & VELOCITIES OF THE EXISTING SYSTEM AS SHOWN IN THE LONGITUDINAL SECTION
7. CLEAN OUT ALL EXISTING STORMWATER INFRASTRUCTURE INCLUDING EXISTING CLEANING SLABS & DRYING BEDS
8. RE-SHAPE ALL HARD STANDING AREAS TO ENSURE DRAINAGE AWAY FROM THE ROADS TOWARDS THE STORMWATER POND
9. LOW POINTS TO BE REPAIRED WITH A MINIMUM 150 mm G2 LAYER COMPACTED TO 95 % MOD-AASHTO

POND NO.	15
AREA	417 m²
VOLUME (NO FREEBOARD)	486 m³
VOLUME (0.3 m FREEBOARD)	361 m³
NEW VOLUME	400 m³

CONSTRUCTION & REHABILITATION ACTIVITIES FOR POND 15

1. INCREASE DEPTH OF POND BY AN ADDITIONAL 400 mm
2. MAINTAIN SIDE SLOPES AT 1:3
3. CLEAR & GRUB ALL VEGETATION
4. COMPACT TO 95 % MOD AASHTO
5. HYDROSEED AND VEGETATE ALL EXPOSED AREAS
6. REPAIR & REINSTATE ALL DOWN CHUTES
7. PLACE STONE PITCHING ENERGY DISSIPATORS AT OUTLET OF CULVERTS & DOWN CHUTES
8. DETENTION POND TO BE CLEANED & REINSTATED TO IT'S ORIGINAL CONDITION

INFILTATION CHANNEL NO.	1
WIDTH	2 m
LENGTH	145 m
DEPTH	2 m

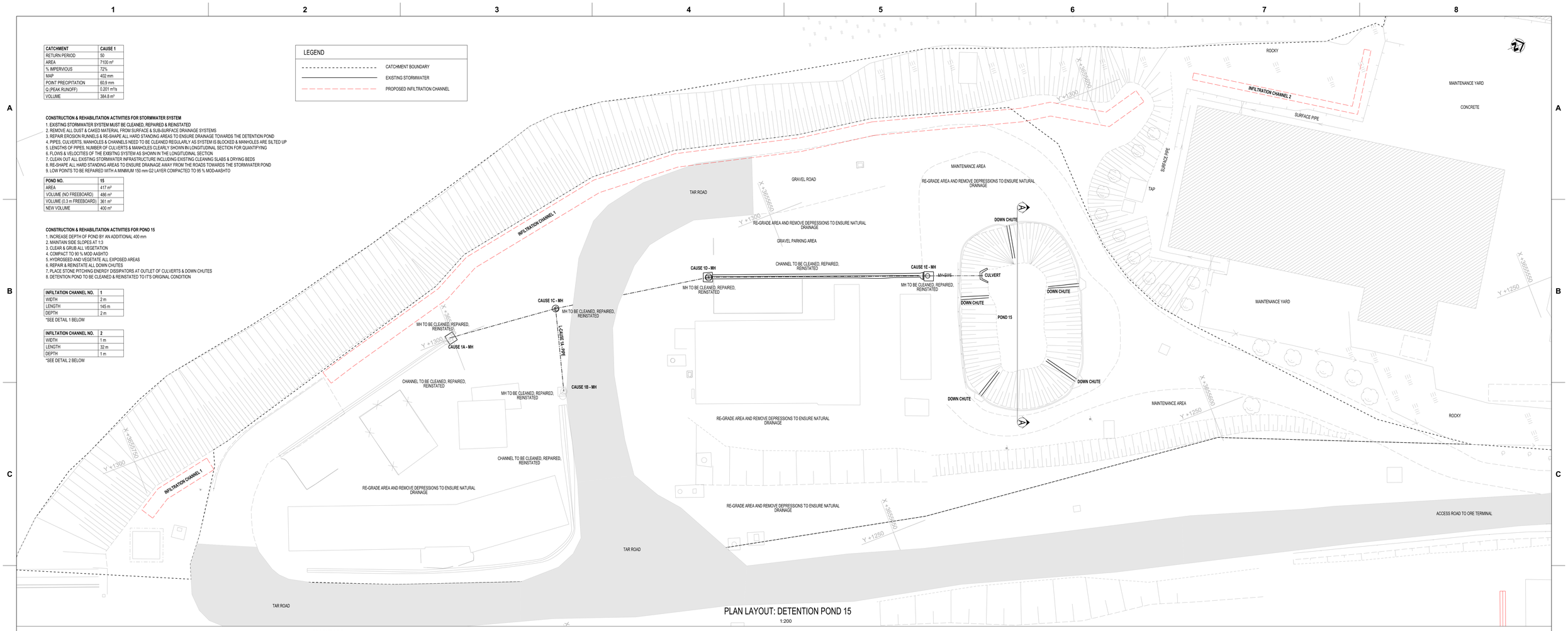
*SEE DETAIL 1 BELOW

INFILTATION CHANNEL NO.	2
WIDTH	1 m
LENGTH	32 m
DEPTH	1 m

*SEE DETAIL 2 BELOW

LEGEND

- CATCHMENT BOUNDARY
- EXISTING STORMWATER
- PROPOSED INFILTRATION CHANNEL

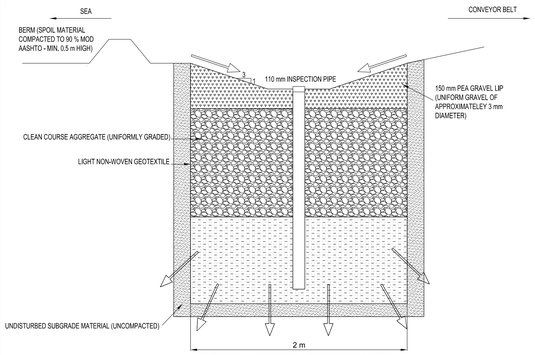


PLAN LAYOUT: DETENTION POND 15

1:200

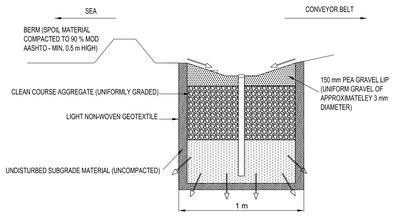
INFILTRATION CHANNEL NOTES

1. INSPECTION PIPE MUST BE LOCATED AT THE CENTRE OF THE CHANNEL
2. IT MUST HAVE A SCREW LID TO PREVENT WATER FROM FLOWING IN FROM THE TOP
3. THE MINIMUM INFILTRATION RATE OF THE UNDISTURBED SUBSOIL IS 12mm/h
4. THE BOTTOM OF THE CHANNEL MUST BE AT LEAST 600mm AWAR FROM THE WATER TABLE OR BEDROCK LAYER CONDITION
5. THE COARSE FILL MATERIAL MUST BE CAPPED WITH A GEOTEXTILE LAYER & COVERED WITH A LAYER OF TOPSOIL
6. THE TOP LAYERS OF THE TRENCH SHOULD BE PERIODICALLY CLEANED TO PREVENT UNDESIRABLE SEDIMENT BUILD UP
7. INFILTRATION CHANNEL TO MEET ALL DESIGN, CONSTRUCTION & MAINTENANCE GUIDLINES SET OUT IN THE SOUTH AFRICAN GUIDELINES FOR SUSTAINABLE DRAINAGE SYSTEMS



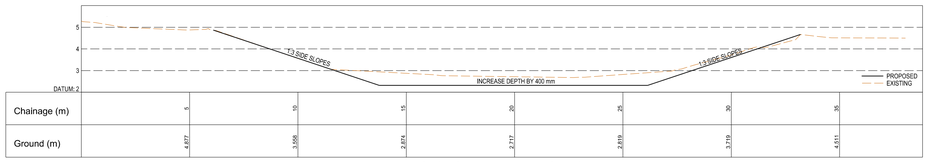
DETAIL 1: INFILTRATION CHANNEL 1

SCALE: NTS



DETAIL 2 INFILTRATION CHANNEL 2

SCALE: NTS



Chainage (m)	5	10	15	20	25	30	35
Ground (m)	4.677	3.958	2.874	2.717	2.819	3.719	4.511

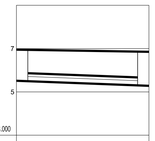
SECTION A-A: DETENTION POND 15

Horizontal Scale 1:1000
Vertical Scale 1:1000

Horizontal Scale 1:200
Vertical Scale 1:100
Datum 2.000

Chainage	0.000	16.127	39.042	70.429	78.283
Ground Level	6.820	6.850	4.886	4.730	2.870
Manhole Name	CAUSE 1A	CAUSE 1C	CAUSE 1D	CAUSE 1E	CAUSE 1F
Inlet / Outlet	5.370	5.317 / 4.850	3.340 / 3.340	2.941 / 2.700	2.670
Hydraulic Elevation	5.757	5.412	3.645	3.091	3.091
Length	16.127 m	22.916 m	31.387 m	8.853 m	
Link Type / Link Size	100D Concrete 300 mm	100D Concrete 375 mm	100D Concrete 450 mm	100D Concrete 525 mm	
Slope	1.569 %	7.026 %	0.953 %	0.678 %	
Flow / Capacity	0.026 m³/s / 0.119 m³/s	0.049 m³/s / 0.445 m³/s	0.093 m³/s / 0.270 m³/s	0.147 m³/s / 0.335 m³/s	
Velocity	1.366 m/s	2.732 m/s	1.576 m/s	1.561 m/s	

Manhole CAUSE 1A to CAUSE 1F



Horizontal Scale 1:200
Vertical Scale 1:100
Datum 3.000

Chainage	0.000	17.294
Ground Level	6.905	6.850
Manhole Name	CAUSE 1B	CAUSE 1C
Inlet / Outlet	5.500	5.317
Hydraulic Elevation	5.730	5.412
Length	12.234 m	
Link Type / Link Size	100D Concrete 300 mm	
Slope	1.905 %	
Flow / Capacity	0.022 m³/s / 0.131 m³/s	
Velocity	1.400 m/s	

Manhole CAUSE 1B to CAUSE 1C

DRAWING NO.	REFERENCE

REFERENCE DRAWINGS

NOTES

1. DO NOT SCALE DRAWING - ONLY DIMENSIONS SHOWN TO BE USED.

2. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS, DIMENSIONS AND LEVELS ON THE SITE AND NOTIFY THE NEC SUPERVISOR OF ANY VARIATIONS BEFORE CONSTRUCTION.

REVISIONS

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
0A	ISSUED FOR TENDER	DJ	CN	MM	13-12-2017

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OPERATING DIVISIONS			
TITLE	NAME	SIGN	DATE
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TITLE	NAME	SIGN	DATE
DRAWN	DJ		13 12 17
CHECKED	CN		13 12 17
DESIGNED	DJ		13 12 17
CHECKED	CN		13 12 17
.	.		. . .
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PR.ENG. / PR.TECH./PR. ARCH			
NAME	M.MALAPANE		DATE
SIGNATURE			13 12 17
REG. NUMBER	20150383		
SCALE	AS SHOWN		A0

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TRANSNET

SALDANHA STORMWATER MANAGEMENT

CAUSEWAY AREA
PLAN LAYOUT & LONGITUDINAL SECTION
CATCHMENT AREA 1

PROJECT NUMBER	OD	FBS	DIS	TYPE	DRAWING NO.	SHEET	REV	ID
1 2 2 6 5 5 1	2	0 0 1	C L	A	0 0 0 6	0 2	0 A	DJ