ON ORIGINAL
0 5 10 15 20 25 30 40 50mm

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NO CHANGES OR WAIVER OF NATURE ARE TO BE MADE TO ANY DETAILS SHOWN ON THESE DRAWINGS OR SPECIFICATIONS NOR DRAWINGS UNLESS THE EXPRESS CONSENT HAS BEEN OBTAINED IN ADVANCE, IN WRITING, FROM DBFL

NOTES:
1. ALL DIMENSION AND LEVELS IN METERS, EXCEPT IF NOTED OTHERWISE.
2. ALL LEVELS TO MALIN HEAD DATUM
3. CONTRACTOR TO VERIFY ALL REFERENCE MERCATOR, LEVELS AND POSITIONS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION
4. REFER TO ARCHITECTS DRAWINGS FOR DETAILS OF PROPOSED AND EXISTING SITE SERVICES
5. REFER TO ARCHITECTS AND M&E ENGINEERS DRAWINGS FOR DETAILS OF ALL FOUL WATER PIPEWORK FROM BUILDINGS INTO INSPECTION CHAMBER INDICATED IN EACH BLOCK
6. DRAWINGS BE READ IN CONJUNCTION WITH ARCHITECTS AND ALL OTHER CONSULTANTS DRAWINGS AND DETAILS
7. EXISTING FOUL & SURFACE WATER DRAINS & CONNECTIONS & WATER SUPPLY TO BE PRESERVED & UTILISED WHERE POSSIBLE
8. ALL PUBLIC SEWER TO BE MINIMUM 225mm IN DIAMETER
9. DRAIN COVER AT MANHOLE LOCATION TO BE MINIMUM 150mm@ @ 1:100 U/N O
10. ALL MAIN SEWERS WITHIN LESS THAN 1.2m COVER UNDER ROADS ARE TO BE CONCRETE SURROUNDED AS DETAILED ON DRAWING TO BE APPROVED AND PROTECTED WITH CONCRETE IN ACCORDANCE WITH DBFL STANDARD DETAILS
11. ALL ROADS, FOOTPATHS AND PARKING AREAS TO BE BLOCK PAVED OR PAVING SLAB AREAS ARE TO HAVE RECESSED COVERS TO RECEIVE PAVINGS TO MATCH ADJACENT PAVING MATERIALS
12. CONTRACTOR TO DEVELOP AS BUILT DRAWINGS AS PART OF CONSTRUCTION WORKS TO LOCAL AUTHORITY REQUIREMENTS
13. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH TII SPECIFICATION FOR ROADWORKS
14. CONTRACTOR TO ENSURE ALL WORKS FOR DRAINAGE WORKS GREATER DUBLIN CODE OF PRACTICE FOR SAFETY WORKS
15. ALL COVERS IN PUBLIC AREAS TO BE IS EN 124 D400 UNLESS NOTED OTHERWISE & HOT LOCKED
16. CONTRACTOR TO ENSURE CE MARKING FOR ALL PRODUCTS COVERED BY THE EU CONSTRUCTION PRODUCTS REGULATION (NO 305/2011) AS PROPOSED FOR USE ON SITE TO BE APPROVED PRIOR TO ARRIVAL ON SITE.
17. ALL MATERIALS PROPOSED FOR USE ON SITE TO BE APPROVED PRIOR TO ARRIVAL ON SITE.

LEGEND:
- SITE BOUNDARY
- OFF-SITE WORKS EXTENTS
- PROPOSED BUILDING
- ROAD EDGE
- ROAD CENTRELINE

PROPOSED
- 225ø 1:150 — SURFACE WATER SEWER
- 150ø 1:100 — SURFACE WATER DRAIN
- S9 CL 102.00 IL 99.00 — SURFACE WATER CARRIER SEWER
- SURFACE WATER MANHOLE
- INSPECTION CHAMBER
- GULLY
- KERB GULLY
- LINEAR DRAIN
- PI — PETROL INTERCEPTOR
- SURFACE WATER ATTENUATION TANK
- SWALE
- PERMEABLE PAVING
- GREEN ROOF
- RAIN GARDEN
- BIORETENTION AREA

PROPOSED FOR TAKING IN CHARGE
- 225ø 1:150 — SURFACE WATER SEWER
- 150ø 1:100 — SURFACE WATER DRAIN
- S9 CL 100.00 IL 99.00 — SURFACE WATER CARRIER SEWER
- SURFACE WATER MANHOLE
- INSPECTION CHAMBER
- KERB GULLY
- TREE PIT
- SURFACE WATER ATTENUATION TANK
- SWALE

EXISTING
- 225ø 1:150 — EXISTING SURFACE WATER SEWER
- EXISTING SURFACE WATER MANHOLE
- EX MH CL 99.00 IL 96.00

APPLICANT OWNERSHIP BOUNDARY
EXTERNAL WORKS BOUNDARY (PLANNING APPLICATION)
RFI ADDITIONAL EXTERNAL WORKS BOUNDARY

ORDNANCE SURVEY IRELAND LICENCE No EN 0017922
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rev	date	description	by	chkd
P03	08/08/22	ISSUED FOR FURTHER INFORMATION	RTM	SWC
P02	07/04/22	ISSUED FOR FURTHER INFORMATION	RTM	SWC
P01	04/04/22	ISSUED FOR PLANNING	K&JE	RTM

client approval: A - Approved; B - Approved with comments; C - Do not use
suitability: S2 - INFORMATION — issued purpose: RFI RESPONSE

DBFL Consulting Engineers
Civil, Structural & Transportation Engineers
www.dbfl.ie
DUBLIN OFFICE: Ground Floor, Unit 2 Donaghmede Centre, Donaghmede, Dublin 13
CORK OFFICE: 16 South Mall, Cork, T12 CT91
PHONE: +353 21 2328520
Directors: Niall Barry, Ronan Daly, Jim Glavin, Padraig Fleming, Tom Phelan, Joe Walsh, Kevin Hunt, Mark Duggan, Colin Buckley

project ref.

WAREHOUSING / LOGISTICS & OFFICES
AT CALMOUNT ROAD, BALLYMOUNT

drawing title

SURFACE WATER LAYOUT

client

BLACKWIN LIMITED

designed by	author	scale	sheet size
RTM	K&JE	1:500	A0
drawing no.		revision	
210175-DBFL-SW-SP-DR-C-1300		P03	

MAIN PLAN:

INSET A:

FOR CONTINUATION OF SURFACE WATER REFER ACROSS TO MAIN PLAN

PROPOSED CONNECTION INTO EXISTING SURFACE WATER MANHOLE IN BALLYMOUNT ROAD LOWER TO BE AGREED WITH SDCC EXACT LOCATION TO BE CONFIRMED ON SITE PRIOR TO CONSTRUCTION

EX MH CL 96.01 IL 94.41

EX MH CL 98.00 IL 95.19

EX MH

EX 300ø

EX 225ø

225ø 1:150

FOR CONTINUATION OF SURFACE WATER REFER ACROSS TO INSET A

CUMULATIVE SURFACE WATER DISCHARGE FROM SITE TO BE LESS THAN TO 2.0ø/ha LIMIT AS AGREED WITH SDCC
DISCHARGE LIMIT FOR SITE AREA OF 7.11 ha - 14.2 l/s

BALLYMOUNT ROAD UPPER

BALLYMOUNT

UNIT 1: FFL 64.40
UNIT 2: FFL 62.50
UNIT 3: FFL 61.00
UNIT 4: FFL 61.00
UNIT 5A: FFL 61.75
UNIT 5B: FFL 63.00
UNIT 5C: FFL 62.50
UNIT 6: FFL 64.50
CAFE: FFL 65.50

PLANTED SWALE 1 UNIT 1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 98.2m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 4.38m³
TREATMENT VOLUME = 0.67m³
INTERCEPTION VOLUME = 0.32m³

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 2.0 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT

PLANTED SWALE 2 UNIT 3
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 4.38m³
TREATMENT VOLUME = 0.67m³
INTERCEPTION VOLUME = 0.32m³

PLANTED SWALE 3 UNIT 6
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 28.2m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 4.23m³
TREATMENT VOLUME = 0.64m³
INTERCEPTION VOLUME = 0.48m³

PLANTED SWALE 4.2
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 34.8m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.32m³
TREATMENT VOLUME = 0.34m³
INTERCEPTION VOLUME = 0.45m³

PLANTED SWALE 4.1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 98.2m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 14.73m³
TREATMENT VOLUME = 2.21m³
INTERCEPTION VOLUME = 0.45m³

SURFACE WATER ATTENUATION UNIT 4: STORMTECH MC3500
STONE BELOW DEPTH: 0.225m
STONE ABOVE DEPTH: 0.30m
VOLUME REQUIRED: 451m³ (1 IN 100 YEAR - 20% CC)
VOLUME PROVIDED: 453m³
SYSTEM L: 57.02m×4CO
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 58.42m

PLANTED SWALE 2 UNIT 4
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 27.1m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.00m³
TREATMENT VOLUME = 9.4m³
INTERCEPTION VOLUME = 1.92m³

SURFACE WATER ATTENUATION UNIT 3: STORMTECH MC3500
STONE BELOW DEPTH: 0.225m
STONE ABOVE DEPTH: 0.355m
VOLUME REQUIRED: 501m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 572m³
SYSTEM L: 58.54m×4CO
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 59.38m

PLANTED SWALE 2 UNIT 5
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 30.7m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.00m³
TREATMENT VOLUME = 9.4m³
INTERCEPTION VOLUME = 1.92m³

SURFACE WATER ATTENUATION UNIT 2: STORMTECH MC3500
STONE BELOW DEPTH: 0.225m
STONE ABOVE DEPTH: 0.30m
VOLUME REQUIRED: 655m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 715m³
SYSTEM L: 58.54m×4 2D
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 60.16m

PLANTED SWALE 2 UNIT 2
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 168m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 13.14m³
TREATMENT VOLUME = 1.97m³
INTERCEPTION VOLUME = 0.49m³

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 1.70 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT

ROAD TO FALL AWAY FROM ESS SUBSTATION

PLANTED SWALE 2 UNIT 1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 30.7m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.00m³
TREATMENT VOLUME = 9.4m³
INTERCEPTION VOLUME = 1.92m³

SURFACE WATER ATTENUATION UNIT 1: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 327m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 327m³
SYSTEM L: 43.54m×5CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.60m

PLANTED SWALE 3 UNIT 1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 40.4m
LONGITUDINAL GRADIENT = 1:60
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.42m³
TREATMENT VOLUME = 1.45m³
INTERCEPTION VOLUME = 0.29m³

SOAKAWAY AREA - UNIT 2
TOTAL AVAILABLE AREA = 27m²
STORAGE VOLUME = 8.91m³

SURFACE WATER BIORETENTION AREA - UNIT 2
TOTAL IMPERMEABLE AREA TREATED - 370m²
FILTER BED DEPTH = 1.5m
TREATMENT VOLUME = 4.4m³
INTERCEPTION VOLUME = 1.1m³

SURFACE WATER ATTENUATION UNIT 5: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 208m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 208m³
SYSTEM L: 59.85m×4CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 60.73m

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 2.0 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT

INTENSIVE GREEN ROOF - UNIT 6
TOTAL GREEN ROOF AREA = 1300m²
FILTER BED DEPTH = 0.500m
TREATMENT VOLUME PROV'd = 57.6m³
INTERCEPTION VOLUME PROV'd = 1.54m³

PLANTED ROAD SWALE 3 UNIT 6
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 33.1m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.32m³
TREATMENT VOLUME = 0.34m³
INTERCEPTION VOLUME = 0.64m³

SURFACE WATER ATTENUATION UNIT 6: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 417.5 m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 431.8m³
SYSTEM L: 60.78m×4CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.42m

SOAKAWAY AREA - UNIT 6-2
TOTAL AVAILABLE AREA = 58m²
STORAGE VOLUME = 17.4m³

PLANTED SWALE 1 UNIT 6
SIZE = 2.5m WIDE x 1:4 SIDE SLOPES
LENGTH = 42.5m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 1.0m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 5.31m³
TREATMENT VOLUME = 11.63m³
INTERCEPTION VOLUME = 0.70m³

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 2.0 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT

SURFACE WATER ATTENUATION CAFE UNIT
SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 417.5 m³ (1 IN 100 YEAR - 20% CC)
VOLUME PROVIDED: 517m³
SYSTEM L: 83.85m×5QD
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 64.74m

SURFACE WATER BIORETENTION AREA - CAFE
TOTAL IMPERMEABLE AREA TREATED - 225m²
FILTER BED DEPTH = 0.75m
TREATMENT VOLUME PROV'd = 26.6m³
INTERCEPTION VOLUME PROV'd = 0.7m³

INTENSIVE GREEN ROOF - CAFE
TOTAL GREEN ROOF AREA = 375m²
FILTER BED DEPTH = 0.500m
TREATMENT VOLUME PROV'd = 37.5m³
INTERCEPTION VOLUME PROV'd = 1.0m³

SOAKAWAY AREA - CAFE
TOTAL AVAILABLE AREA = 151m²
STORAGE VOLUME = 47.1m³

PLANTED SWALE 1 CAFE
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 40.4m
LONGITUDINAL GRADIENT = 1:60
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.42m³
TREATMENT VOLUME = 1.45m³
INTERCEPTION VOLUME = 0.29m³

PLANTED SWALE 2 CAFE
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 15.2m
LONGITUDINAL GRADIENT = 1:60
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 1.82m³
TREATMENT VOLUME = 5.31m³
INTERCEPTION VOLUME = 0.29m³

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 0.5 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT MINIMUM ORIFICE SIZE OF 50mm TO BE ADOPTED FOR MAINTENANCE

PLANTED SWALE 4 UNIT 6
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 30.7m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.00m³
TREATMENT VOLUME = 9.4m³
INTERCEPTION VOLUME = 1.92m³

SURFACE WATER ATTENUATION UNIT 7: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 327m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 327m³
SYSTEM L: 43.54m×5CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.60m

PLANTED SWALE 5 UNIT 1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 30.7m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 9.10m³
TREATMENT VOLUME = 48.63m³
INTERCEPTION VOLUME = 0.48m³

SURFACE WATER BIORETENTION AREA - UNIT 1
TOTAL IMPERMEABLE AREA TREATED - 300m²
FILTER BED DEPTH = 1.5m
TREATMENT VOLUME = 3.6m³
INTERCEPTION VOLUME = 0.9m³

SOAKAWAY AREA - UNIT 1
TOTAL AVAILABLE AREA = 25m²
STORAGE VOLUME = 10.5m³

PLANTED SWALE 6 UNIT 6
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 33.1m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.32m³
TREATMENT VOLUME = 0.34m³
INTERCEPTION VOLUME = 0.64m³

PLANTED ROAD SWALE 4 UNIT 6
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 33.1m
LONGITUDINAL GRADIENT 1:60
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.42m³
TREATMENT VOLUME = 12.82m³
INTERCEPTION VOLUME = 0.38m³

PLANTED SWALE 3 UNIT 6
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 57.1m
LONGITUDINAL GRADIENT 1:57
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 1.15m³
TREATMENT VOLUME = 5.30m³
INTERCEPTION VOLUME = 0.28m³

RAINGARDEN UNIT 5 - AREA 1
DRAINED AREA = 474.1m²
FILTER BED DEPTH = 0.65m
AREA REQUIRED = 15.91m²
AREA PROVIDED = 153.91m²
TREATMENT VOLUME PROV'd = 6.7m³
INTERCEPTION VOLUME PROV'd = 1.1m³

RAINGARDEN UNIT 5 - AREA 2
DRAINED AREA = 106m²
FILTER BED DEPTH = 0.65m
AREA REQUIRED = 3.57m²
AREA PROVIDED = 38.7m²
TREATMENT VOLUME PROV'd = 1.3m³
INTERCEPTION VOLUME PROV'd = 0.7m³

RAINGARDEN UNIT 5 - AREA 3
DRAINED AREA = 418m²
FILTER BED DEPTH = 0.65m
AREA REQUIRED = 14.1m²
AREA PROVIDED = 38.7m²
TREATMENT VOLUME PROV'd = 5.0m³
INTERCEPTION VOLUME PROV'd = 1.3m³

INTENSIVE GREEN ROOF - UNIT 4
TOTAL GREEN ROOF AREA = 206m²
FILTER BED DEPTH = 0.5m
TREATMENT VOLUME PROV'd = 40.2m³
INTERCEPTION VOLUME PROV'd = 1.1m³

SOAKAWAY AREA - UNIT 4
TOTAL AVAILABLE AREA = 64m²
STORAGE VOLUME = 19.2m³

INTENSIVE GREEN ROOF - UNIT 5
CUMULATIVE UNIT 5 ROOF AREA = 1908m²
TOTAL GREEN ROOF AREA REQUIRED = 955m²
GREEN ROOF PERCENTAGE = 50%
FILTER BED DEPTH = 0.5m
TOTAL TREATMENT VOLUME PROV'd = 726.2m³
TOTAL INTERCEPTION VOLUME PROV'd = 2.3m³

REFER TO LANDSCAPE ARCHITECT'S DETAILS FOR GREEN ROOF BUILD UP

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 10.0 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT MINIMUM ORIFICE SIZE OF 50mm TO BE IMPLEMENTED

SURFACE WATER ATTENUATION UNIT 2: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 501m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 572m³
SYSTEM L: 60.78m×4CO
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 59.38m

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 1.70 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT

SURFACE WATER BIORETENTION AREA - UNIT 2
TOTAL IMPERMEABLE AREA TREATED - 450m²
FILTER BED DEPTH = 1.35m
TREATMENT VOLUME = 5.5m³
INTERCEPTION VOLUME = 1.4m³

SOAKAWAY AREA - UNIT 4
TOTAL AVAILABLE AREA = 64m²
STORAGE VOLUME = 19.2m³

INTENSIVE GREEN ROOF - UNIT 6
TOTAL GREEN ROOF AREA = 1300m²
FILTER BED DEPTH = 0.500m
TREATMENT VOLUME PROV'd = 57.6m³
INTERCEPTION VOLUME PROV'd = 1.54m³

SURFACE WATER ATTENUATION UNIT 6: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 417.5 m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 431.8m³
SYSTEM L: 60.78m×4CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.42m

SURFACE WATER ATTENUATION UNIT 5: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 208m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 208m³
SYSTEM L: 59.85m×4CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 60.73m

SURFACE WATER ATTENUATION UNIT 4: STORMTECH MC3500
STONE BELOW DEPTH: 0.225m
STONE ABOVE DEPTH: 0.30m
VOLUME REQUIRED: 451m³ (1 IN 100 YEAR - 20% CC)
VOLUME PROVIDED: 453m³
SYSTEM L: 57.02m×4CO
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 58.42m

SURFACE WATER ATTENUATION UNIT 3: STORMTECH MC3500
STONE BELOW DEPTH: 0.225m
STONE ABOVE DEPTH: 0.355m
VOLUME REQUIRED: 501m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 572m³
SYSTEM L: 58.54m×4CO
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 59.38m

PLANTED SWALE 1 UNIT 3
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 27.1m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.00m³
TREATMENT VOLUME = 9.4m³
INTERCEPTION VOLUME = 1.92m³

PLANTED SWALE 4 UNIT 3
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 47.5m
LONGITUDINAL GRADIENT 1:48
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.93m³
TREATMENT VOLUME = 4.40m³
INTERCEPTION VOLUME = 0.64m³

SOAKAWAY AREA - UNIT 3
TOTAL AVAILABLE AREA = 27m²
STORAGE VOLUME = 8.91m³

SURFACE WATER ATTENUATION UNIT 1: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 327m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 327m³
SYSTEM L: 43.54m×5CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.60m

PLANTED SWALE 2 UNIT 1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 20.7m
LONGITUDINAL GRADIENT 1:48
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 1.46m³
TREATMENT VOLUME = 10.97m³
INTERCEPTION VOLUME = 0.24m³

VORTEX FLOW CONTROL DEVICE CHAMBER FLOW LIMITED TO 1.5 l/s @ 1.67m HEAD HYDROBREAK OR APPROVED EQUIVALENT

SURFACE WATER BIORETENTION AREA - UNIT 2
TOTAL IMPERMEABLE AREA TREATED - 370m²
FILTER BED DEPTH = 1.5m
TREATMENT VOLUME = 4.4m³
INTERCEPTION VOLUME = 1.1m³

SOAKAWAY AREA - UNIT 2
TOTAL AVAILABLE AREA = 27m²
STORAGE VOLUME = 8.91m³

SURFACE WATER ATTENUATION UNIT 1: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 327m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 327m³
SYSTEM L: 43.54m×5CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.60m

PLANTED SWALE 5 UNIT 1
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 30.7m
LONGITUDINAL GRADIENT 1:66
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 9.10m³
TREATMENT VOLUME = 48.63m³
INTERCEPTION VOLUME = 0.48m³

SURFACE WATER BIORETENTION AREA - UNIT 1
TOTAL IMPERMEABLE AREA TREATED - 300m²
FILTER BED DEPTH = 1.5m
TREATMENT VOLUME = 3.6m³
INTERCEPTION VOLUME = 0.9m³

SOAKAWAY AREA - UNIT 1
TOTAL AVAILABLE AREA = 25m²
STORAGE VOLUME = 10.5m³

SURFACE WATER ATTENUATION UNIT 6: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 417.5 m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 431.8m³
SYSTEM L: 60.78m×4CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.42m

SOAKAWAY AREA - UNIT 6-1
TOTAL AVAILABLE AREA = 58m²
STORAGE VOLUME = 17.4m³

SURFACE WATER BIORETENTION AREA - CAFE
TOTAL IMPERMEABLE AREA TREATED - 225m²
FILTER BED DEPTH = 0.75m
TREATMENT VOLUME PROV'd = 26.6m³
INTERCEPTION VOLUME PROV'd = 0.7m³

SOAKAWAY AREA - CAFE
TOTAL AVAILABLE AREA = 151m²
STORAGE VOLUME = 47.1m³

INTENSIVE GREEN ROOF - CAFE
TOTAL GREEN ROOF AREA = 375m²
FILTER BED DEPTH = 0.500m
TREATMENT VOLUME PROV'd = 37.5m³
INTERCEPTION VOLUME PROV'd = 1.0m³

SURFACE WATER ATTENUATION UNIT 7: STORMTECH SC740
STONE BELOW DEPTH: 0.152m
STONE ABOVE DEPTH: 0.152m
VOLUME REQUIRED: 327m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 327m³
SYSTEM L: 43.54m×5CO
DEPTH OF SYSTEM: 1.01m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 62.60m

PLANTED SWALE 1 UNIT 7
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 40.4m
LONGITUDINAL GRADIENT = 1:60
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 2.42m³
TREATMENT VOLUME = 1.45m³
INTERCEPTION VOLUME = 0.29m³

SURFACE WATER BIORETENTION AREA - UNIT 7
TOTAL IMPERMEABLE AREA TREATED - 300m²
FILTER BED DEPTH = 1.5m
TREATMENT VOLUME = 3.6m³
INTERCEPTION VOLUME = 0.9m³

SOAKAWAY AREA - UNIT 7
TOTAL AVAILABLE AREA = 25m²
STORAGE VOLUME = 10.5m³

SURFACE WATER ATTENUATION UNIT 2: STORMTECH MC3500
STONE BELOW DEPTH: 0.225m
STONE ABOVE DEPTH: 0.30m
VOLUME REQUIRED: 655m³ (1 IN 100 YEAR - 20%CC)
VOLUME PROVIDED: 715m³
SYSTEM L: 58.54m×4 2D
DEPTH OF SYSTEM: 1.67m
TOP WATER LEVEL: 1:100 YEAR AEP EVENT: 60.16m

PLANTED SWALE 5 UNIT 2
SIZE = 2.0m WIDE x 1:4 SIDE SLOPES
LENGTH = 168m
LONGITUDINAL GRADIENT 1:100
BOTTOM WIDTH = 0.5m
MAX WATER DEPTH = 0.15m
STORAGE VOLUME = 13.14m³
TREATMENT VOLUME = 1.97m³
INTERCEPTION VOLUME = 0.49m³

CATCHPIT MH