



TOTAL SITE AREA = 1.54ha
 SITE Q_{max}: 8.1 l/s (Q1) SOIL TYPE 4
 TOTAL SITE IMPERMEABLE RUNOFF = 1.429ha
 5mm INTERCEPTION
 3,650m² GREEN ROOFS & 2,780m² BIO RETENTION / PLANTER ON PODIUM (6,430m² @ 5mm) = 32.0m³
 510m² OGCR BELOW PERMEABLE PAVING (300mm Dp. @ 30% VOIDS) = 46m³
 ATTENUATION
 6,442m² CELLULAR STORAGE SUB BASE (150mm Dp. @ 95% VOIDS) = 918m³
 6,089m² OGCR ABOVE CELLULAR STORAGE SUB BASE (150mm Dp. @ 30% VOIDS) = 317m³
 510m² OGCR BELOW PERMEABLE PAVING (300mm Dp. @ 30% VOIDS) = 46m³
 170m FILTER DRAINS (600mm² @ 30% VOIDS) = 18m³
 TREATMENT
 3,650m² GREEN ROOFS & 2,780m² BIO RETENTION / PLANTER ON PODIUM (200mm + 150mm Dp. @ 30% VOIDS) = 219m³ + 125.1m³ = 344m³
 510m² OGCR BELOW PERMEABLE PAVING (300mm Dp. @ 30% VOIDS) = 46m³
 710m² RAINGARDEN / SHALLOW DEPRESSION STORAGE @ 50mm = 35.5m³
 170m FILTER DRAINS (600mm² @ 30% VOIDS) = 18m³

TOTAL STORAGE PROVIDED (EXCLUDING INTERCEPTION & TREATMENT STORAGE) & VERIFIED BY MODEL = 1,299m³
 NOTE: PRELIMINARY DESIGN - SUBJECT TO DETAIL DESIGN FOR CONSTRUCTION, FINAL COORDINATION WITH LANDSCAPE ARCHITECT, ARBORIST AND M&E.

LANDSCAPE LAYOUT SHOWN INDUCTIVELY. FOR CLARITY FOR FULL DETAILS OF LANDSCAPING PROVISIONS, REFER TO LANDSCAPE ARCHITECT DESIGN DRAWINGS.

GREEN ROOF OUTLET FLOW CONTROL RESTRICTED TO 1.0l/s (41mm ORIFICE) WITH OVERFLOWS AT TOP OF SEDUM. DOWNPIPE LOCATED TO BE CONFIRMED BY ARCHITECT

ROOF DRAINAGE DOWNPIPES ADJACENT PLANTERS TO DISCHARGE AT PLANTER SURFACE LEVEL TO INFILTRATE AS PER DETAIL

PROPOSED GREEN ROOFS WITH 200mm MIN. Dp STORAGE @ 32% POROSITY

PROPOSED LIFT SHAFTS OVERRUN TO DISCHARGE VIA DOWNPIPES ONTO GREEN ROOF SURFACE

ALL OTHER FLOW CONTROLS @ 3.0l/s UNLESS OTHERWISE NOTED

ALL BLUE ROOF FLOW CONTROLS @ 1.0l/s PER OUTFALL UNLESS OTHERWISE NOTED

SURFACE WATER TO FLOW TO OGCR DRAINAGE PATHS VIA CELLULAR STORAGE DISTRIBUTION BOX WRAPPED IN GEOTEXTILE AS SHOWN ON DETAIL DRG. NO. 0510

BASEMENT EXTENT (DASHED-GREY)

DOWNPIPE TO DISCHARGE TO PERMEABLE PAVING SUB BASE VIA GEOCELLULAR BOX / PERMAVOID OR EQUAL WRAPPED IN GEOTEXTILE TO FORM DIFFUSER

FOOTPATHS FOR TAKING IN CHARGE AREAS TO DRAIN TO KERB & PUBLIC ROAD GULLIES & SW NETWORK

INDICATES PROPOSED SLOT DRAIN TO DELINEATE THE SITE AND PREVENT RUN OFF TO PROPOSED TAKING IN CHARGE AREA REFER TO DETAIL DRG. NO. 0510 FOR SLOT DRAIN CONNECTION TO FILTER DRAIN

CHAMBER OUTLET PIPE FITTED WITH FILTER & FLOW DIFFUSER TO DISTRIBUTE RUNOFF INTO SUDS COMPONENTS

ALL BRANCH PIPES TO BE 150mm uPVC AT 1:150 UNLESS OTHERWISE NOTED

INDICATES FLOW PATHS THROUGH OPEN GRADED CRUSHED ROCK (OGCR) BELOW PAVERS / LANDSCAPING AND ABOVE PODIUM. TYPICALLY 150mm DEPTH STONE LAYER WITH 40% POROSITY. WIDTH REQUIRED TO BE CONFIRMED WITH HYDRAULIC DESIGN CALCULATIONS

OPEN JOINT/PERMEABLE PAVING OR INLET LOCATIONS OGCR BELOW TO TO BE CONFIRMED AND AGREED WITH LANDSCAPE ARCHITECT

LINEAR DRAIN - SLOT DRAIN OR SIMILAR TO DELINEATE SITE BOUNDARY & PREVENT RUN OFF FROM PRIVATE SURFACES TO PUBLIC

EXISTING 300mm SURFACE WATER CONNECTION TO BE REUSED

TAKEN IN CHARGE AREA TO DRAIN TO ROAD & TREE PITS OUTSIDE OF SITE

DEVELOPMENT SURFACE WATER OUTFALL CHAMBER (FLOW CONTROL) HYDRO - BRAKE

FLOW CONTROL WITH HYDROBRAKE CHAMBER LIMITED TO 8.1/s

PROPOSED CELLULAR STORAGE LOCATION

PROPOSED OVERFLOW TO RAINGARDENS DURING EXCEEDANCE EVENTS WITH A STORAGE DESIGN DEPTH +0.150m WITH 150mm FREEBOARD

PROPOSED SWALE OUTFALL DETAIL WITH CONTROLLED DISCHARGE

CONTROLFLOW 600 SERIES LEVEL INVERT OR EQUAL APPROVED FLOW CONTROL CHAMBER WITH ORIFICE LIMITED AS NOTED

PROPOSED 600x600mm FILTER DRAIN BELOW RAINGARDEN / SHALLOW DEPRESSION STORAGE

CHAMBER OUTLET PIPE FITTED WITH FILTER & FLOW DIFFUSER TO DISTRIBUTE RUNOFF INTO SUDS COMPONENTS

PROPOSED SHALLOW 150mm DEPRESSION STORAGE INTEGRATED INTO LANDSCAPING FOR EXCEEDANCE EVENTS

PROPOSED 300 Dp. SWALE LOCATION WITH 150 Dp. STORAGE DESIGN DEPTH +0.150m WITH 150mm FREEBOARD. ROUTE INDICATIVE

PIPE BURIED UNDER CARPARK LEVELS

TAKEN IN CHARGE AREA TO DRAIN TO ROAD & TREE PITS OUTSIDE OF SITE

PLANNING DRAWING.
 NOT FOR CONSTRUCTION.
 ALL LEVELS GIVEN ARE RELATIVE TO ORDNANCE DATUM.
 THIS DRAWING HAS BEEN ISSUED FOR INFORMATION PURPOSES ONLY AND MUST NOT BE USED FOR CONSTRUCTION UNDER ANY CIRCUMSTANCES



- GR - GREEN ROOF
- BR - BLUE ROOF / BIO RETENTION
- DP - DOWN PIPE
- BP - BRANCH PIPE CONNECTION
- FD - 300Ø FILTER DRAIN
- AJ - 350Ø ARMSTRONG JUNCTION < 600mm
- IC - 450Ø INSPECTION CHAMBER 600 - 1200mm
- MH - 1200Ø MANHOLE: 1200 - 1500mm
- HC - 1200Ø HYDROBRAKE CHAMBER
- FC - 500Ø FLOW CONTROL CHAMBER

FOR THE SUB CATCHMENT AREA OVERVIEW, REFER TO DRG. SFC-OCSC-XX-XX-DR-C-0508

REFER TO ENGINEERS SERVICE REPORT FOR PIPE DESIGN CALCULATION AND DRAINAGE LONGSECTIONS

REFER TO DRG. SFC-OCSC-XX-XX-DR-C-0510 FOR SUDS DRAINAGE DETAILS AND DRG. SFC-OCSC-XX-XX-DR-C-0515 FOR TYPICAL DRAINAGE DETAILS

- NOTES:
1. ALL PIPES TO BE SIZED AND LAID AS NOTED.
 2. ALL POP-UP LOCATIONS AND SIZES TO BE CONFIRMED WITH ARCHITECTS & M&E DRAWINGS.
 3. ALL FOUL AND SURFACE WATER PIPES >150mmØ TO BE CONCRETE OR SIMILAR APPROVED.
 4. ALL INTERNAL DRAINAGE IN ACCORDANCE TO THE BUILDING REGULATIONS PART H.
 5. ALL 100mmØ SURFACE PIPES TO BE uPVC LAID @ 1:100 GRADIENT UNLESS OTHERWISE NOTED.
 6. ALL 150mmØ FOUL PIPES TO BE uPVC LAID @ 1:100 GRADIENT UNLESS OTHERWISE NOTED.
 7. NON RETURN VALVES TO BE TIDEFLEX IN LINE CHECK VALVE OR SIMILAR APPROVED AT PIPE OUTLETS.
 8. ALL CHAMBER COVERS TO BE D400 RATED.
 9. ALL FOUL CHAMBERS TO HAVE DOUBLE-SEALED COVERS.
 10. SADDLE CONNECTIONS TO BE PROVIDED AT ALL BRANCH CONNECTIONS TO MAIN DRAINAGE NETWORKS, UNLESS AT MANHOLE.
 11. ALL NOTED PIPE DIAMETERS ARE INTERNAL.

Rev No.	Date	Revision Note	Drn by	Chkd by
P01	14.06.19	SUITABLE FOR INFORMATION	JB	AH
P08	04.11.2019	SUITABLE FOR INFORMATION	SVM	PR
C02	19.11.2019	STAGE COMPLETE - PLANNING	MK	PR



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Client: Sandyford GP Limited
 Project: Sandyford Central
 Title: Proposed Drainage Layout - Surface Water
 Code | Originator | Zone | Level | Type | Role | Number | Status | Revision
 SFC - OCSC - 00 - 01 - DR - C - 0500 | A1 | C02
 Date: 21.02.19 Scale: 1:350 @ A1 Drn by:JB Chkd by:AH Aprvd by:MOR

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 • THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER ARCHITECTURAL AND ENGINEERING DRAWINGS AND ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS.
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