

This drawing should not be scaled. Dimensions to be verified on site. Any discrepancies should be referred to the Engineer prior to work being put in hand.

GENERAL NOTES

WATER NOTES:

Watermain Pipework Material to be PE (Polyethylene) with PE 80 rating.
 uPVC pipes are not permitted in this scheme. Pipework to be SDR 17 Rating. The pipework shall conform to IS EN 12201: Part 1 and Part 2 and IS EN 12201-3.

Separation Distance between Watermain and any other service is to be as per Section 3.6 of Water Code of Practice. In this instance there will be a minimum clear horizontal distance of at 300mm between proposed watermain and other utilities running parallel to it.
 The plan attached comply with 'Irish Water' Codes of Practice for Water and Standard details. All site works shall comply and be completed to Irish Water codes of Practice and Standard Details.

This Drawing will be used as the final and approved 'Construction Drawing' for Watermain Installation.
 IW Standard Details and Codes of Practices can be downloaded and reviewed at: <https://www.water.ie/connection/developer-services/>

WASTEWATER NOTES:

uPVC Pipework Material to be Thermoplastic Structured Wall Pipes to comply with the provisions of IS EN 13476, with stiffness class of BKN/m². Refer to Section 3.13.2 of IW Wastewater Code of Practice.

The plan attached comply with 'Irish Water' Codes of Practice for Wastewater and Standard details. All site works shall comply and be completed to Irish Water codes of Practice and Standard Details.

IW Standard Details and Codes of Practices can be downloaded and reviewed at: <https://www.water.ie/connection/developer-services/>

- CATCHMENT AREA = 21,600m² (OUTLINED IN DASHED LINE)
- Sub-Catchment #1 Area = 11,045m²
 - Sub-Catchment #2 Area = 7,470m²
 - Sub-Catchment #3 Area = 3,085m²
- Refer to key plan to the left for details of each Sub-Catchment.

NOTE: REFER TO ENCLOSED DRAINAGE DESIGN REPORT FOR DETAILS.

CL 1	20.12.2023	ISSUED FOR PLANNING COMPLIANCE	ED	PK
Status	Date	Description	By	C/NK

Project: WAREHOUSE DEVELOPMENT AT KINGSWOOD RD, CITYWEST, D24
 Title: DRAINAGE & WATERMAIN LAYOUT

Client: ROCKFACE EVELOPMENTS LTD



Unit F3, Block F, Calmount Park
 Calmount Avenue, Dublin 12, D12 PX28
 E-mail: reception@kavanaghburke.ie
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Issue: PLANNING COMPLIANCE

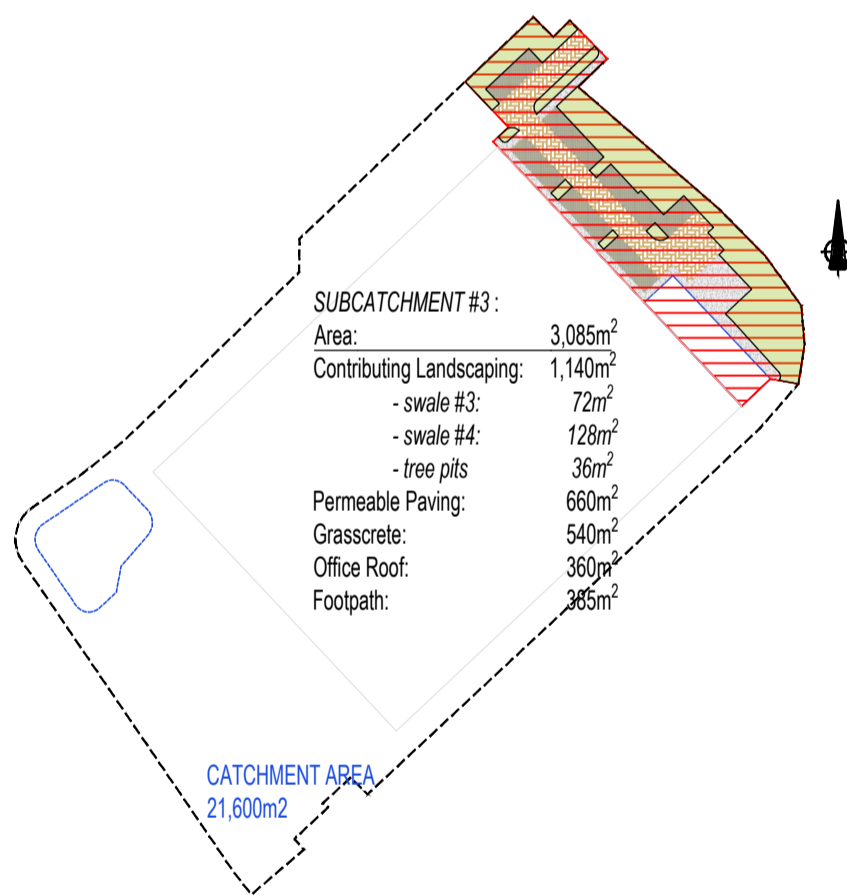
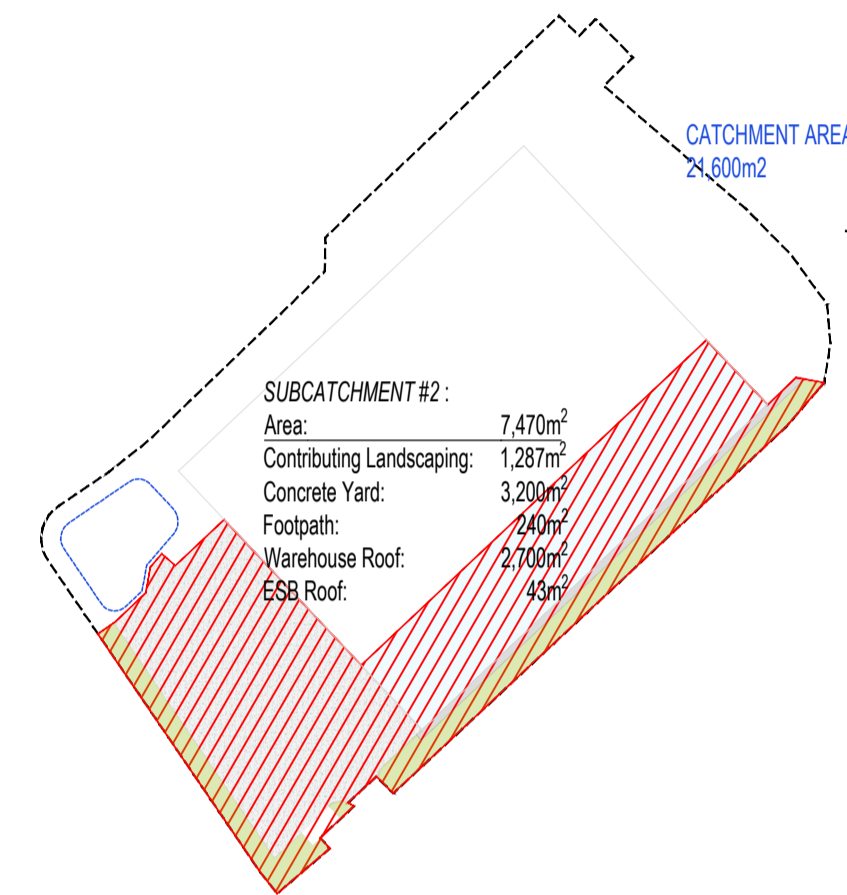
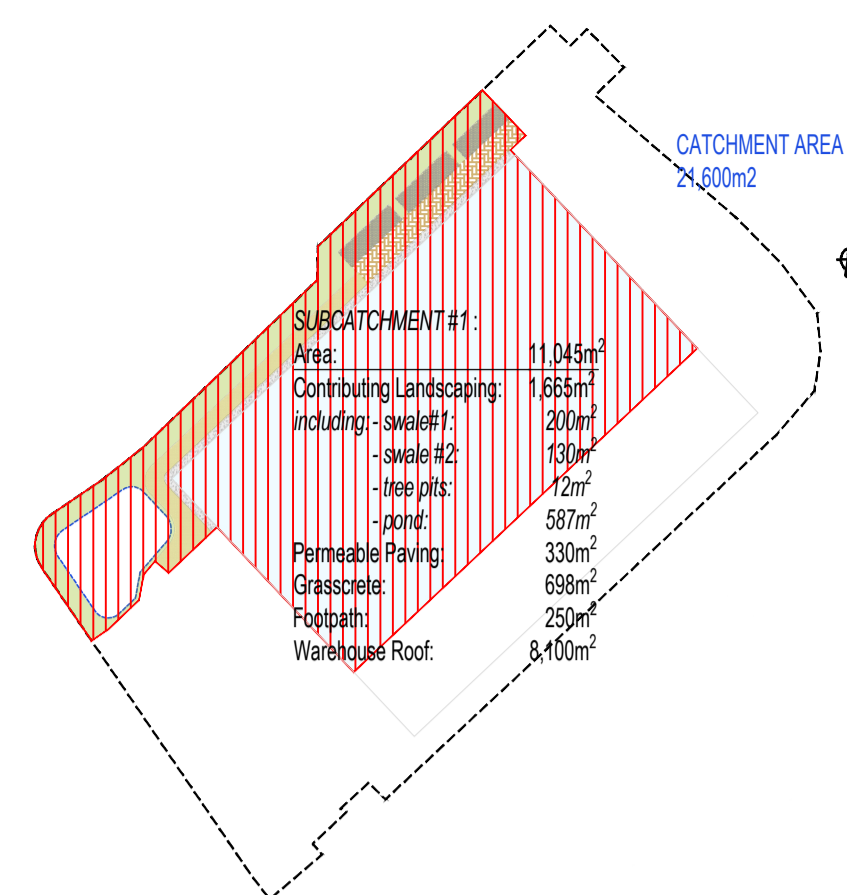
Designed By	ED	Checked By	PK	KB Ref.	D1736
Drawn By	ED	Date	December 2023.	Scales @ A1	1:500

Project	Originator	Volume	Level	Type	Role	Number	Revision
D1736-KB-ZZ-ZZ-DR-C-0003							CL1

- #### PROPOSED SUDS DEVICES THROUGHOUT DEVELOPMENT:
- PERMEABLE PAVING (TO THE ACCESS ROAD TO THE CAR PARKING);
 - GRASSCRETE PAVING (TO THE CAR PARKING SPACES AND FIRE TENDER ACCESS);
 - GREEN WALLS (TO EACH SIDE OF BUILDING);
 - TREE PITS (AT THE CAR PARKING AREA AS PER LANDSCAPING DRAWINGS);
 - SWALES (LINED UP BEHIND CAR PARKING SPACES);
 - DETENTION BASIN / POND;
 - UNDERGROUND 'STORMTECH' ATTENUATION TANK;
 - FLOW CONTROL DEVICES (TO THE OUTLETS OF ALL STORAGE SYSTEMS);
 - SILT TRAP & PETROL INTERCEPTOR (TO THE INLET OF TO UNDERGROUND ATTENUATION SYSTEM).
- FOR DETAILS AND CROSS SECTIONS OF EACH ABOVE LISTED SUDS DEVICE REFER TO DRAWING REF. D1736-KB-ZZ-DR-C-0004, CL 1 - SUDS & DRAINAGE DETAILS.

STORAGE VOLUME REQUIRED / PROVIDED:

SUBCATCHMENT C#1:	
• POND:	781.20 m ³ / 800.0 m ³
• PAVING SUB BASE STORAGE (Area A):	29.70 m ³
• SWALE STORAGE (#1 & #2) AVAILABLE:	52.50 m ³
OVERALL C#1 STORAGE PROPOSED:	863.40 m ³ / 882.20 m ³
SUBCATCHMENT C#2:	
• UNDERGROUND ATT. SYSTEM:	686 m ³ / 690 m ³
SUBCATCHMENT C#3:	
• PAVING SUB BASE STORAGE (Area A1):	86.40 m ³
• PAVING SUB BASE STORAGE (Area A2):	16.20 m ³
• SWALE STORAGE (#3 & #4) AVAILABLE:	43.00 m ³
OVERALL C#3 STORAGE PROPOSED:	145.60 m ³
PROPOSED STORAGE FOR OVERALL DEVELOPMENT:	
REQUIRED:	863.40 + 686.00 + 145.60 = 1695.0 m ³
PROVIDED:	882.20 + 690.00 + 145.60 = 1717.80 m ³



SUBCATCHMENT #1 DETENTION BASIN / POND:

MIN. REQUIRED VOLUME:	781.2 m ³
VOLUME PROVIDED:	800 m ³
BOTTOM AREA:	201 m ²
TOP AREA:	587 m ²
BANK SLOPE:	1V:3H
BED LEVEL:	+95.50
HIGH WATER LEVEL:	+97.90
• 1Y Storm, 20%CC:	+96.68
• 2Y Storm, 20%CC:	+97.03
• 10Y Storm, 20%CC:	+97.33
• 30Y Storm, 20%CC:	+97.54
• 100Y Storm, 20%CC:	+97.69

SUBCATCHMENT #2 UNDERGROUND ATTENUATION SYSTEM:

Min. required storage capacity:	686m ³
PROVIDED STORAGE VOLUME:	690m ³
PROPOSED STORAGE AREA:	830m ²
• StormTech SC-740 chambers:	200m ²
• Stone Above/Below (mm):	360/280
• Overall SC-740 system Height:	1.40m
• Interception Storage Height:	200mm
• BASE OF TANK:	+95.80
• HIGH WATER LEVEL:	+97.20
• 1Y Storm, 20%CC:	+96.41
• 2Y Storm, 20%CC:	+96.51
• 10Y Storm, 20%CC:	+96.72
• 30Y Storm, 20%CC:	+96.93
• 100Y Storm, 20%CC:	+97.26
• min. ground level above system:	+97.80
• min. ground level below system:	+97.30
• Catchment's F.F.L.:	+98.50

DISCHARGE FROM SITE INTO OPEN DRAINAGE CHANNEL TO GREENFIELD RUNOFF RATE - Q_{max}
 C#1 = 2.18 l/s
 C#2 = 2.18 l/s (incorporating C#3 = 0.90 l/s)
 → Therefore:
 Σ Q_{max} (C#1, C#2, C#3) ≤ Q_{max}
 2.28 l/s + 2.18 l/s ≤ 4.46 l/s

- #### LEGEND
- DENOTES PROPOSED CONCRETE FOOTPATH
 - DENOTES LANDSCAPING FOR DETAILS REFER TO LANDSCAPE ARCHITECT DRAWINGS AND SPECIFICATIONS
 - DENOTES PERMEABLE PAVING FOR DETAILS REFER TO LANDSCAPE ARCHITECT DRAWINGS AND SPECIFICATIONS
 - DENOTES GRASSCRETE TO FIRE TENDER ROAD & PARKING SPACES. FOR DETAILS REFER TO LANDSCAPE ARCHITECT DRAWINGS AND SPECIFICATIONS
 - DENOTES CONCRETE TO PROPOSED YARD

- #### LEGEND:
- EXISTING SURFACE WATER DRAINAGE
 - PROPOSED SURFACE WATER DRAINAGE
 - PROPOSED SURFACE WATER DISCHARGE PIPE
 - EXISTING FOUL SEWER
 - PROPOSED FOUL SEWER
 - EXISTING LOCAL AUTHORITY WATERMAIN
 - PROPOSED 100mm HDPE WATER MAIN
 - PROPOSED WATER METER, FIRE HYDRANT, SLUICE VALVE & BOUNDARY BOX
 - DENOTES PROPOSED LEVELS