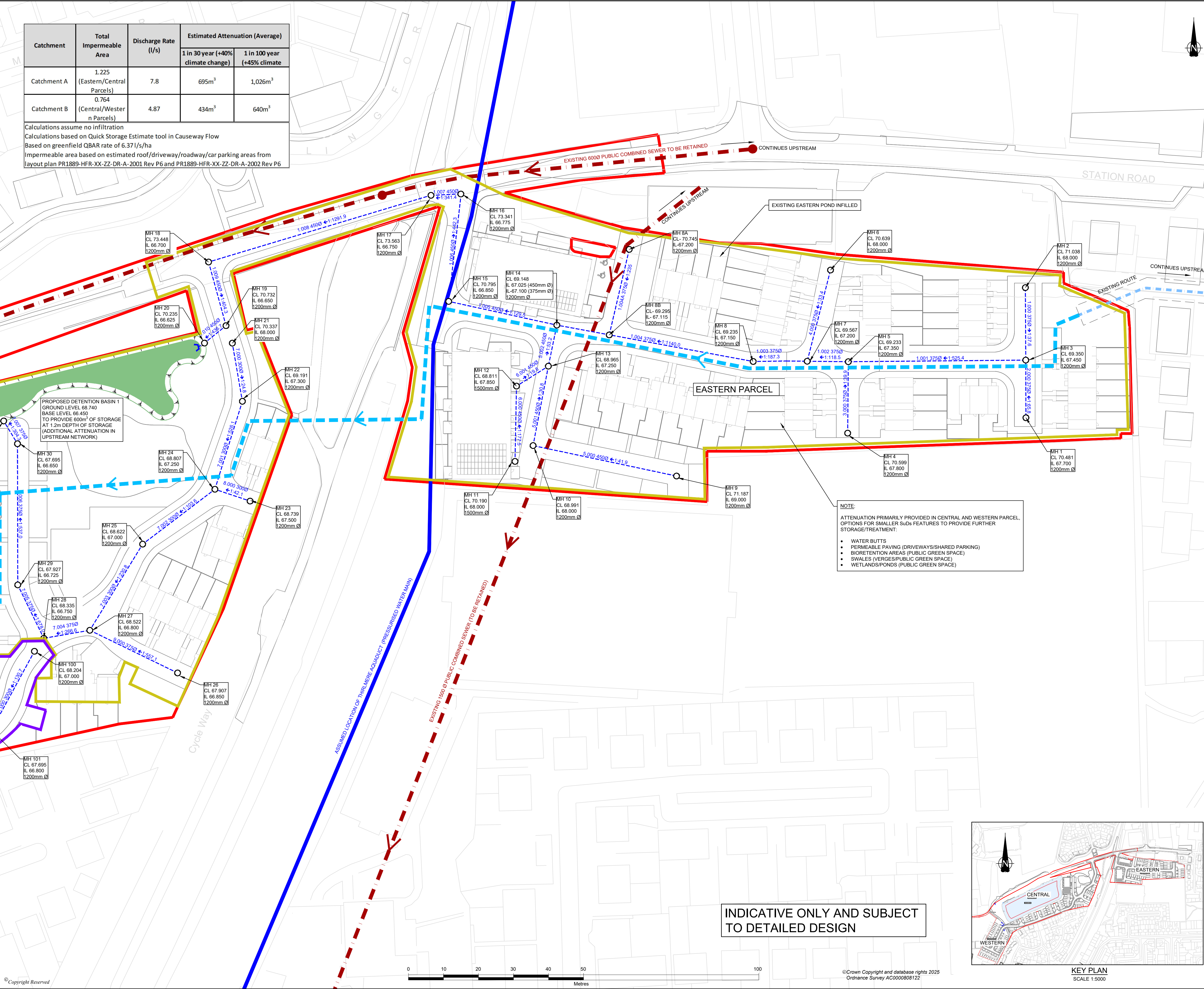




Catchment	Total Impermeable Area	Discharge Rate (l/s)	Estimated Attenuation (Average)	
			1 in 30 year (+40% climate change)	1 in 100 year (+45% climate)
Catchment A (Eastern/Central Parcels)	1.225	7.8	695m ³	1,026m ³
Catchment B (Central/Western Parcels)	0.764	4.87	434m ³	640m ³

Calculations assume no infiltration
Calculations based on Quick Storage Estimate tool in Causeway Flow
Based on greenfield QBAR rate of 6.37l/s/ha
Impermeable area based on estimated roof/driveway/roadway/car parking areas from layout plan PR1889-HFR-XX-ZZ-DR-A-2001 Rev P6 and PR1889-HFR-XX-ZZ-DR-A-2002 Rev P6

INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN

DO NOT SCALE FROM THIS DRAWING

NOTES

1. LAYOUT IS INDICATIVE AND SUBJECT TO DETAILED DESIGN.

2. TO BE READ IN CONJUNCTION WITH DRAWING REF: GM13736-105A, GM13736-107A, GM13736-108A, GM13726-109A, GM13736-110A AND GM13736-111A (JUNE 2025).

3. TO BE READ IN CONJUNCTION WITH FLOOD RISK ASSESSMENT (REF: GM13736-0001)

4. LAYOUT BASED ON DRAWING (REF: PR1889-HFR-XX-ZZ-DR-A-2000 'SITE LAYOUT')

5. GROUND LEVELS BASED ON TOPOGRAPHICAL SURVEY BY RJP (NOV 2018).

6. COVER LEVELS OF MANHOLE CHAMBERS BASED ON EXISTING TOPOGRAPHY AND SUBJECT TO CHANGE WHEN DETAILED DESIGN OF SITE LEVELS UNDERTAKEN.

7. SURFACE WATER NETWORK BASED ON FLOW MODEL REFS: PROPOSED SURFACE NETWORK SW EAST AND PROPOSED SURFACE WATER NETWORK SW WEST.

8. PUBLIC SEWER LOCATIONS BASED ON UNITED UTILITIES PUBLIC SEWER RECORDS (ISSUED FEBRUARY 2025).

9. PIPE DIAMETERS IN MILLIMETERS. COVER LEVELS/INVERT LEVELS IN METRES.

KEY

SITE BOUNDARY

EXISTING PRESSURISED WATER MAIN (THIRLMERE AQUADUCT)

EXISTING WATER COURSE

EXISTING PUBLIC COMBINED SEWER

EXISTING CULVERT INLET/OUTFALL

PROPOSED SURFACE WATER DRAINAGE NETWORK 'DIVERSION' (INDICATIVE)

EXISTING SURFACE WATER DRAINAGE NETWORK TO BE RETAINED (INDICATIVE)

PROPOSED SURFACE WATER DRAIN

PROPOSED SURFACE WATER MANHOLE

PROPOSED FLOW CONTROL CHAMBER

PROPOSED HEADWALL STRUCTURE

PROPOSED DETENTION BASIN

CATCHMENT A

CATCHMENT B

B	NEW LAYOUT ADDED	30-07-25	DR	BGG	EK
A	FIRST ISSUE	05-06-25	DR	BGG	EK

REVISION	DETAILS	DATE	DESIGN	CHECK	APPROV
CLIENT	NORTHERN GROUP				
PROJECT	LAND AT STATION ROAD				
DRAWING TITLE	INDICATIVE SURFACE WATER MANAGEMENT PLAN (EASTERN PARCEL)				
DRG No.	GM13736-106	REV	B	SUIT. CODE	
DRG SIZE	A1	SCALE	1:500	DATE	07/05/25
DRAWN BY	DR	CHECKED BY	BGG	APPROVED BY	EK

PART OF

SLR

