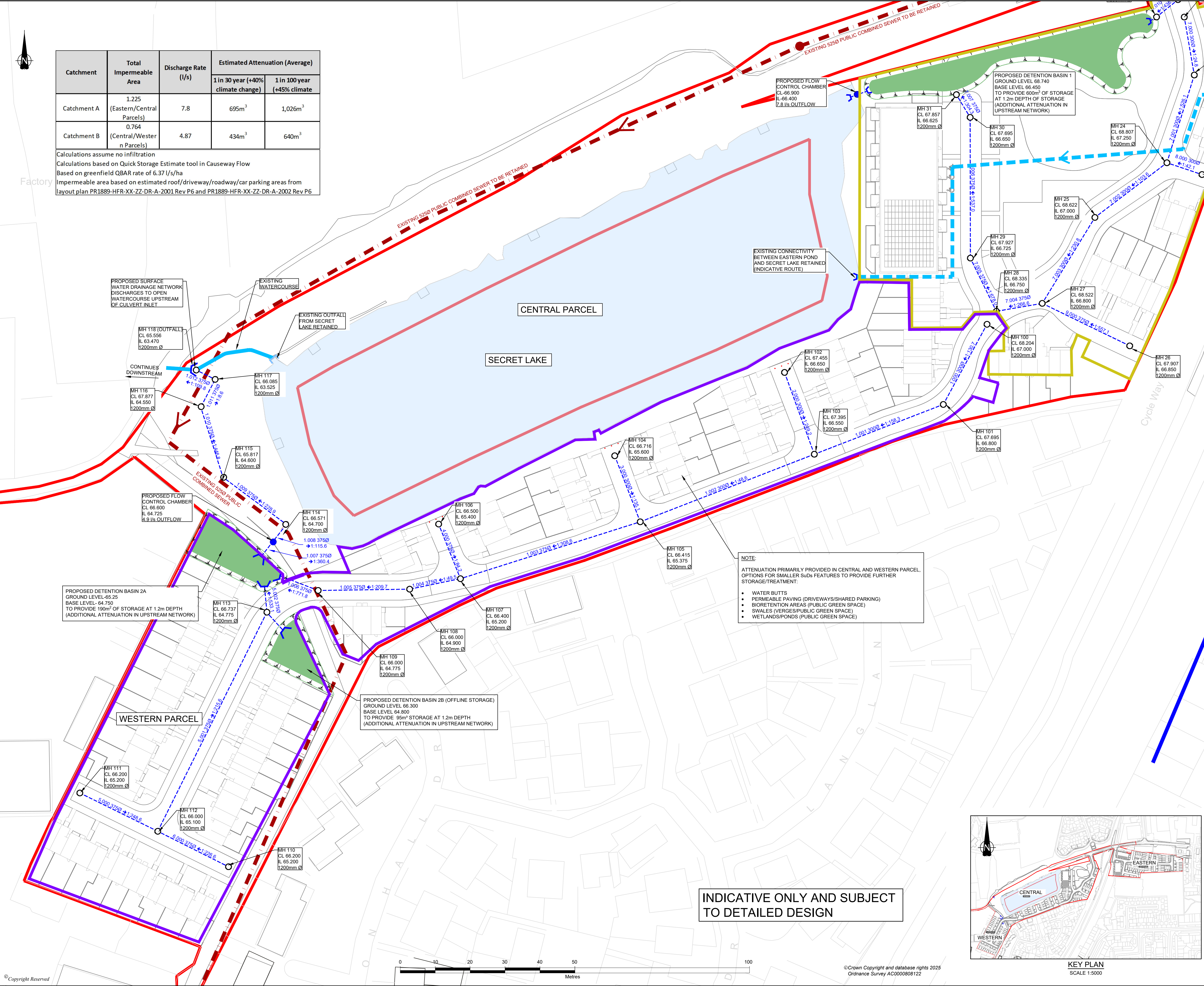




Catchment	Total Impermeable Area	Discharge Rate (l/s)	Estimated Attenuation (Average)	
			1 in 30 year (+40% climate change)	1 in 100 year (+45% climate)
Catchment A	1.225 (Eastern/Central Parcels)	7.8	695m ³	1,026m ³
Catchment B	0.764 (Central/Western Parcels)	4.87	434m ³	640m ³

Calculations assume no infiltration
Calculations based on Quick Storage Estimate tool in Causeway Flow
Based on greenfield QBAR rate of 6.37 l/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

DO NOT SCALE FROM THIS DRAWING

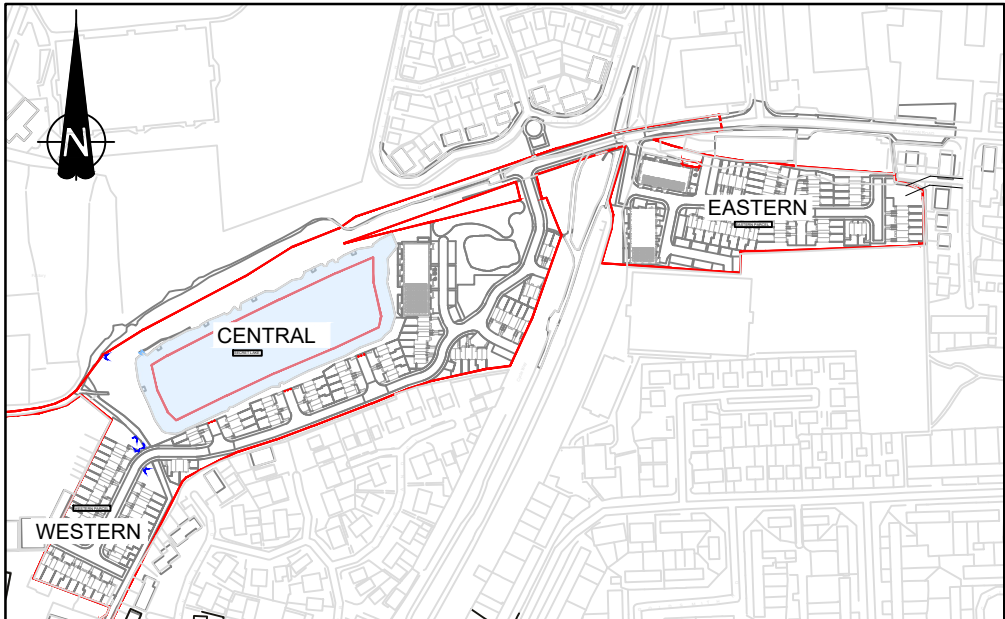
- NOTES
- LAYOUT IS INDICATIVE AND SUBJECT TO DETAILED DESIGN.
 - TO BE READ IN CONJUNCTION WITH DRAWING REF: GM13736-106A, GM13736-107A, GM13736-108A, GM13726-109A, GM13736-110A AND GM13736-111A (JUNE 2025).
 - TO BE READ IN CONJUNCTION WITH FLOOD RISK ASSESSMENT (REF: GM13736-0001)
 - LAYOUT BASED ON DRAWING (REF: PR1889-HFR-XX-ZZ-DR-A-2000 'SITE LAYOUT')
 - GROUND LEVELS BASED ON TOPOGRAPHICAL SURVEY BY RJP (NOV 2018).
 - COVER LEVELS OF MANHOLE CHAMBERS BASED ON EXISTING TOPOGRAPHY AND SUBJECT TO CHANGE WHEN DETAILED DESIGN OF SITE LEVELS UNDERTAKEN.
 - SURFACE WATER NETWORK BASED ON FLOW MODEL REFS: PROPOSED SURFACE NETWORK SW EAST AND PROPOSED SURFACE WATER NETWORK SW WEST.
 - PUBLIC SEWER LOCATIONS BASED ON UNITED UTILITIES PUBLIC SEWER RECORDS (ISSUED FEBRUARY 2025).
 - 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

NOTE:
ATTENUATION PRIMARILY PROVIDED IN CENTRAL AND WESTERN PARCEL. OPTIONS FOR SMALLER SuDs FEATURES TO PROVIDE FURTHER STORAGE/TREATMENT:

- WATER BUTTS
- PERMEABLE PAVING (DRIVEWAYS/SHARED PARKING)
- BIORETENTION AREAS (PUBLIC GREEN SPACE)
- SWALES (VERGES/PUBLIC GREEN SPACE)
- WETLANDS/PONDS (PUBLIC GREEN SPACE)

INDICATIVE ONLY AND SUBJECT TO DETAILED DESIGN



KEY PLAN
SCALE 1:5000

B	NEW LAYOUT ADDED	30-07-25	DR	BGG	EK
A	FIRST ISSUE	04-06-25	BS	BGG	EK
REVISION	DETAILS	DATE	ISSUED	CHANGED	APPROVED
CLIENT	NORTHERN GROUP				
PROJECT	LAND AT STATION ROAD				
DRAWING TITLE	INDICATIVE SURFACE WATER MANAGEMENT PLAN (CENTRAL AND WESTERN PARCELS)				
DRG No.	GM13736-105	REV	B	SUIT. CODE	
DRG SIZE	A1	SCALE	1:500	DATE	07/05/24
DRAWN BY	DR	CHECKED BY	BGG	APPROVED BY	EK
 PART OF SLR					