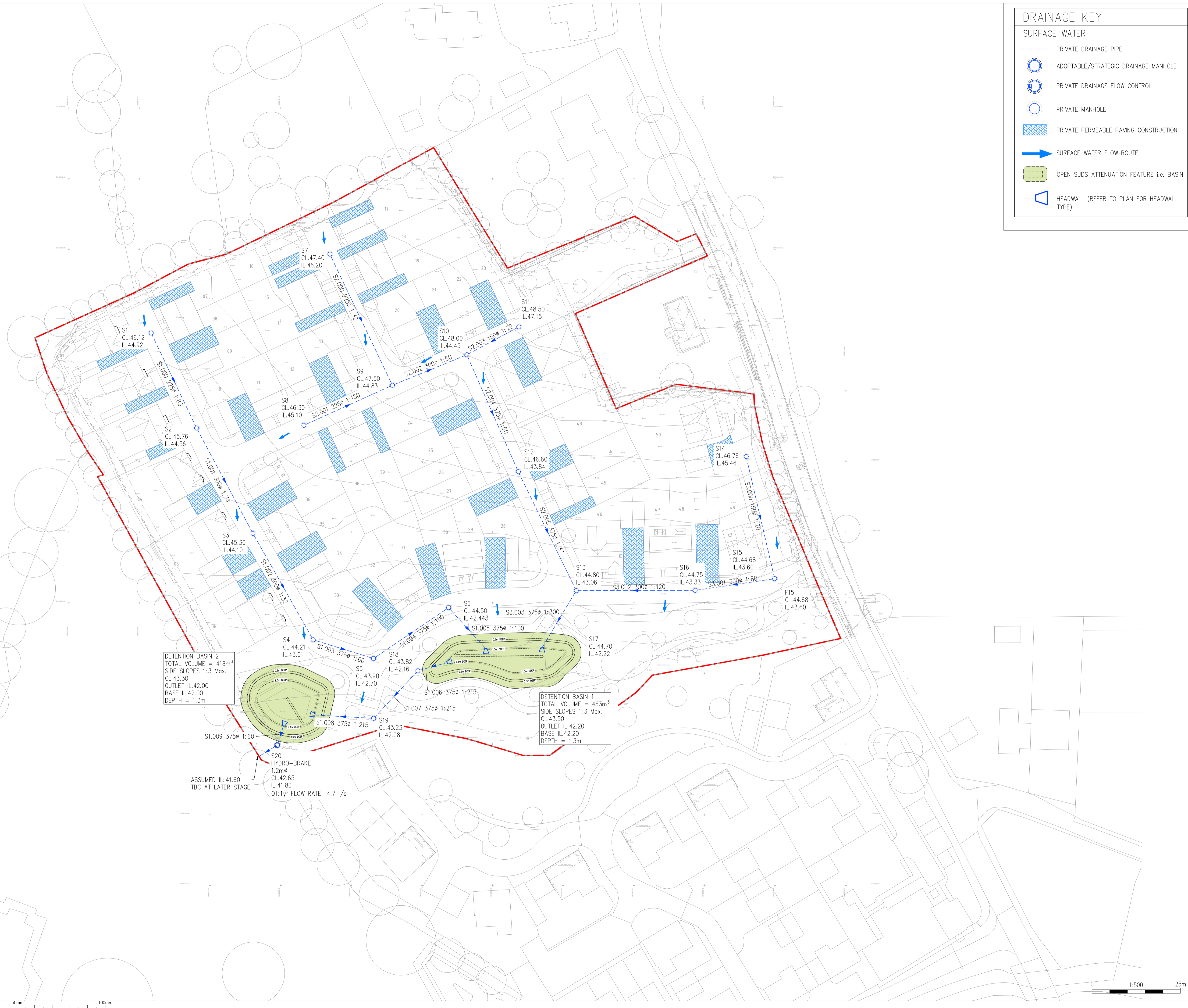


DRAINAGE KEY

SURFACE WATER

- PRIVATE DRAINAGE PIPE
- ADOPTABLE/STRATEGIC DRAINAGE MANHOLE
- PRIVATE DRAINAGE FLOW CONTROL
- PRIVATE MANHOLE
- PRIVATE PERMEABLE PAVING CONSTRUCTION
- SURFACE WATER FLOW ROUTE
- OPEN SUDS ATTENUATION FEATURE i.e. BASIN
- HEADWALL (REFER TO PLAN FOR HEADWALL TYPE)

- #### DRAINAGE STRATEGY NOTES
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELATED ENGINEERS, ARCHITECTS & SUB-CONTRACTORS DRAWINGS. IN THE CASE OF DISCREPANCIES BETWEEN DRAWINGS REFER TO SPD STUDIO FOR CLARIFICATION.
 2. TOPOGRAPHICAL SURVEY UNDERTAKEN BY SURVEY SOLUTIONS, DRAWING REF. 50803PLS-01_02 DATED JULY 2023.
 3. THIS DRAWING IS BASED ON THE PROPOSED SITE PLAN PRODUCED BY SPD STUDIO LTD, DRAWING REF. SPD306_300_01 DATED JULY 2023.
 4. RAIN WATER PIPE & SOIL AND VENT PIPE LOCATIONS ARE TO BE CONFIRMED AT THE DETAILED DESIGN STAGE.
 5. ALL INVERT AND COVER LEVELS ARE TO BE CONFIRMED AT THE DETAILED DESIGN STAGE.
 6. PROPOSED SURFACE AND FOUL WATER DRAINAGE CONNECTIONS TO THE EXISTING WATER COURSE IS SUBJECT TO APPROVAL BY THE LEAD LOCAL FLOOD AUTHORITY.
 7. THIS LAYOUT INDICATES THE MAIN ADOPTABLE DRAINAGE RUNS FOR THE DEVELOPMENT. PRIVATE, BELOW GROUND DRAINAGE IS TO BE CONSIDERED AT DETAILED DESIGN STAGE.
 8. EXACT POSITION, TYPE AND NUMBER OF ABOVE GROUND DRAINAGE POINTS TO BE CONFIRMED BY ARCHITECT DURING THE DETAILED DESIGN STAGE. THEREFORE ALLOWANCE SHOULD BE MADE FOR INDIVIDUAL DRAINAGE CONNECTIONS ACCORDINGLY.
 9. EXTERNAL LEVELS AT LEVEL THRESHOLDS TO BE DESIGNED TO HAVE SUFFICIENT FALL AWAY FROM STRUCTURE TO OMIT THE NEED FOR THRESHOLD DRAINS.
 10. FOOTWAYS AND PATIO AREAS TO BE LAID TO FALL TO SOFT LANDSCAPED AREAS. LANDSCAPED AREAS TO BE NO HIGHER THAN ADJACENT HARD STANDING AREAS.
 11. FINISHED FLOOR LEVELS TO BE TYPICALLY 150mm ABOVE EXISTING SITE LEVELS.
- DRAINAGE STRATEGY DESIGN CRITERIA:
1. PRELIMINARY SURFACE WATER ATTENUATION SIMULATIONS HAVE IDENTIFIED A POTENTIAL STORAGE REQUIREMENT OF 677-868m³ TO ACCOMMODATE A 1:100 YEAR RAINFALL EVENT (INCLUDING AN ADDITIONAL 45% FOR ANY POTENTIAL CLIMATE CHANGE IMPACT) BASED ON THE FOLLOWING DESIGN PARAMETERS:
 M5-60mm = 20,000mm
 RATIO, R = 0.400
 IMPERMEABLE AREA = 1.01 HECTARES
 1:100yr (+45%) DISCHARGE RATE = 4.7 l/s
 2. THE SURFACE WATER DETAILS ILLUSTRATED ON THIS PLAN ARE SUBJECT TO HYDRAULIC MODELING DURING THE DETAILED DESIGN STAGE TO ESTABLISH THE PEAK WATER LEVEL ASSOCIATED WITH A 1:100 YEAR RAINFALL EVENT (INCLUDING CLIMATE CHANGE).
 3. EXISTING WATERCOURSE COVER AND INVERT LEVEL TO BE CONFIRMED AT A LATER STAGE.



DETENTION BASIN 2
 TOTAL VOLUME = 418m³
 SIDE SLOPES 1:3 Max.
 CL 43.30
 OUTLET IL 42.00
 BASE IL 42.00
 DEPTH = 1.3m

DETENTION BASIN 1
 TOTAL VOLUME = 463m³
 SIDE SLOPES 1:3 Max.
 CL 43.50
 OUTLET IL 42.20
 BASE IL 42.20
 DEPTH = 1.3m

ASSUMED IL: 41.60
 TBC AT LATER STAGE

HYDRO-BRAKE
 1.2mø
 CL 42.65
 IL 41.80
 Q1:1yr FLOW RATE: 4.7 l/s

NOT FOR CONSTRUCTION

REV	DESCRIPTION	DRAWN	CHECKED	DATE
P02	UPDATED TO SUIT CLIENT COMMENTS			04.08.23
P01	FIRST ISSUE			20.07.23

SPDSTUDIO
 SUSTAINABLE . PLANNING . DESIGN

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CLIENT
STOCKPLACE INVESTMENTS LTD

PROJECT TITLE
LAND AT CHELMSFORD ROAD, HARTFORD END, FELSTED

DRAWING TITLE
DRAINAGE STRATEGY LAYOUT

SCALE 1:500 @ A1	DRAWING STATUS PLANNING
DRAWN BY GW	CHECKED BY EJS
APPROVED BY DL	DATE JULY 2023
DRAWING NO. SPD306-E-100	REV P02

