



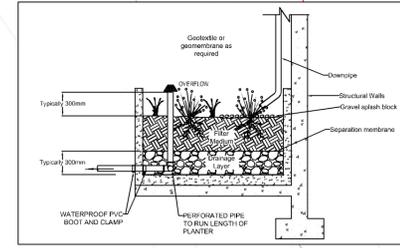
TYPICAL RILL CONNECTION BETWEEN RWPs



TYPICAL RILL CONNECTION WITHIN PEDESTRIAN CIRCULATION AREAS



POSSIBLE RAINGARDENS IN PLANTERS AT HIGHER LEVEL



- NOTES:**
- LEVELS TAKEN FROM TOPOGRAPHIC SURVEY DWG 13514_02_P_REV1 BY GREENHATCH GROUP.
 - BASEMENT PLAN TAKEN FROM DWG P_GA_B1 GENERAL ARRANGEMENT LEVEL B1 BY LLEWELYN DAVIES.
 - GROUND FLOOR PLAN TAKEN FROM DWG P_GA_00 GENERAL ARRANGEMENT LEVEL 00 BY LLEWELYN DAVIES.
 - RWP SHOWN INDICATIVELY AND EXACT LOCATIONS TO BE CONFIRMED BY PH CONSULTANTS

KEY PLAN

- SITE BOUNDARY
- COMBINED THAMES WATER SEWER
- RWP RAINWATER PIPE
- PROPOSED BELOW GROUND ATTENUATION STORAGE
- PROPOSED SURFACE WATER DRAIN
- PROPOSED LINEAR DRAINAGE CHANNEL
- PROPOSED DRAINAGE RILL
- AREAS WHERE 75mm STANDING WATER WILL BE OBSERVED IN THE 1 IN 100 YEAR +40% CC EVENT
- PROPOSED FOUL WATER DRAIN
- PROPOSED FOUL WATER MANHOLE

ISSUE/REVISION

NO	DATE	DESCRIPTION
3	20.12.2016	DRAINAGE UPDATE BASED ON TW AGREEMENT
2	15.12.2016	FW DRAINAGE ADDED
1	09.12.2016	DRAINAGE UPDATED TO SUIT NEW MASTERPLAN
0	30.09.2016	DRAFT FOR COMMENT
I/R	DATE	DESCRIPTION

PROJECT NUMBER

60516144

SHEET TITLE

MIDDLESEX HOSPITAL ANNEX
 CONCEPTUAL STORMWATER RUNOFF
 ATTENUATION STRATEGY

SHEET NUMBER

60516144-SKE-20-0000-C-001

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Drainage in this area under review by landscape architects.

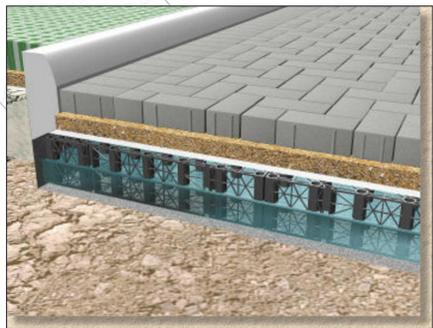
Shallow geocellular attenuation system covering an area of 370m². The geocellular units are 150mm deep. Attenuation volume available in this area is approx. 55m³.

New connection to existing sewer. Existing invert level to be confirmed by site survey. Pumping may be required depending on final arrangement.

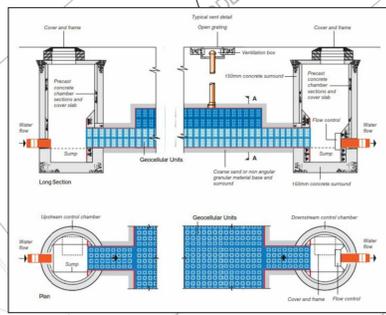
Geocellular attenuation system (25m²) 800mm deep (1000mm L x 500mm W) to be installed with 500mm cover (total depth 1.3m). Attenuation volume available in this area is approx. 20m³.

Geocellular attenuation system (30m²) 800mm deep (1000mm L x 500mm W) to be installed with 500mm cover (total depth 1.3m). Attenuation volume available in this area is approx. 24m³.

Geocellular attenuation system (54m²) 800mm deep (1000mm L x 500mm W) to be installed with 500mm cover (total depth 1.3m). Attenuation volume available in this area is approx. 43m³.



TYPICAL SHALLOW GEOCELLULAR ATTENUATION INSTALLATION UNDER PERMEABLE PAVING



TYPICAL ARRANGEMENT OF GEO-CELLULAR ATTENUATION TANKS

STORMWATER ATTENUATION VOLUME ESTIMATES

Design Storm Return Period	Total Allowable Discharge Rate, l/s	Storage Volume, m ³
1 in 30 year	21.5 (80% betterment against existing brownfield rate)	75
1 in 100 year	21.5	125
1 in 100 year +20% climate change	21.5	160
1 in 100 year +40% climate change	21.5	195

