



**GENERAL NOTES:**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL OTHER RELATED DRAWINGS ISSUED BY THE ENGINEER.
2. DO NOT SCALE FROM THIS DRAWING. WORK FROM FIGURED DIMENSIONS ONLY.
3. ALL DIMENSIONS SHOWN ON THIS DRAWING ARE IN METRES UNLESS OTHERWISE STATED.
4. ALL DIMENSIONS, LEVELS AND SURVEY GRID CO-ORDINATES ARE TO BE CHECKED ON SITE AND THE ENGINEER NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES PRIOR TO THE COMMENCEMENT OF THE WORKS.
5. NO DEVIATION FROM THE DETAILS SHOWN ON THIS DRAWING IS PERMITTED WITHOUT PRIOR PERMISSION FROM THE ENGINEER AND ALL SETTING OUT SHALL BE AGREED ON SITE WITH THE ENGINEER PRIOR TO THE COMMENCEMENT OF THE WORKS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY APPROVALS FROM THE LOCAL AUTHORITY PRIOR TO COMMENCING WORKS ON THE HIGHWAY I.E. ROAD CLOSURE NOTICES.
7. UNLESS STATED OTHERWISE, ALL EXCAVATED MATERIAL SHALL BE DISPOSED OF AT AN APPROVED TIP OFF-SITE.
8. THE PUBLIC HIGHWAY AND WORKS WILL BE KEPT CLEAN AND FREE OF DEBRIS BY USE OF WHEEL WASHING FACILITIES AND ROAD SWEEPERS TO THE COUNCIL'S SATISFACTION.
9. DRAINAGE DESIGN SUBJECT TO INPUT FROM ARBOCULTURIST. THE CURRENT DESIGN ASSUMES THERE ARE NO ISSUES WITH EXISTING TREES/TREE ROOT PROTECTION AREAS.
10. DRAWING BASED ON PLOWMAN TOPOGRAPHICAL SURVEY / ARCHITECT'S SITE PLAN.
11. STORM DRAINAGE TO BE 100mm DIA AT 1:80 GRADIENT UNO.
12. FOUL DRAINAGE TO BE 100mm DIA AT 1:40 UNO. ALL FOUL INSPECTION CHAMBERS TO BE 450mm DIA MN INVERT LEVEL 0.75m.
13. ALL GULLIES AND ACO DRAINS ARE TO BE TRAPPED TO BS 5911:1982, IN NO EVENT SHALL OPEN GULLIES BE USED FOR THIS SCHEME.
14. BYPASS SEPARATOR TO TREAT CAR PARK RUNOFF AS SHOWN. ONLY CLEAN UNCONTAMINATED WATER SHALL DRAIN TO THE SURFACE WATER SYSTEM.
15. GEOLOGICAL SUB-STRATA THINER FORMATION COMPRISING OF SILT AND CLAY TO THICK CLAY. THEREFORE INFILTRATION NOT SUITABLE FOR THIS SCHEME. IT IS PROPOSED THAT ALL SURFACE WATER RUNOFF IS TO BE CONNECTION TO THE EXISTING SOUTHERN WATER STORM SEWER AS SHOWN.

**DRAINAGE DESIGN PHILOSOPHY**

ALL STORM WATER RUNOFF FROM THE REDEVELOPMENT YARD AREA IS DESIGNED TO DISCHARGE INTO THE OFFSITE SEWER AS INDICATED ON THE PLAN AT A RESTRICTED RATE OF 4 l/s PER Ha, therefore 0.632 Ha = 2.50 l/s AT S15.

STORM WATER IS TO BE STORED WITHIN THE BELOW GROUND NON-INFILTRATION ATTENUATION BOX CULVERT FOR RETURN PERIODS UP TO THE 100 YEAR RETURN PERIOD INCLUDING 20% FOR CLIMATE CHANGE. THIS VOLUME EQUATES TOTALS APPROXIMATELY 160m<sup>3</sup>, WHICH IS PROVIDED AS UNDERGROUND STORAGE.

THE SURFACE WATER DRAINAGE HAS BEEN MODELLED FOR THE 100 YEAR RETURN PERIOD PLUS 40% FOR CLIMATE CHANGE, WHICH GENERATES 28m<sup>3</sup> OF FLOODING. THE FLOODING IS RESTRICTED TO AREAS OF CAR PARKING WHICH CAN BE CONTAINED ON SITE WITHOUT INCREASING RISK TO ANY ADJACENT LAND.

BOTH STORM AND FOUL WATER CONNECTIONS INTO THE EXISTING SOUTHERN WATER SEWER IS SUBJECT TO ADEQUATE CAPACITY WITHIN THE EXISTING NETWORK. OFFSITE / SECTION 98 WORKS UNKNOWN - TBC.

BOTH STORM AND FOUL WATER CONNECTIONS SUBJECT TO SOUTHERN WATER SECTION 106 APPROVAL.

ALL DRAIN POINTS FROM BUILDINGS SHOWN INDICATIVELY AND SHOULD BE CONFIRMED AND CO-ORDINATED BY THE ARCHITECT. LOCATIONS ARE NOT INTENDED FOR CONSTRUCTION PURPOSES. REFER TO ARCHITECTS PLANS FOR DETAILED SETTING OUT LOCATIONS.

**KEY**

- EXISTING PUBLIC SURFACE WATER PIPE
- EXISTING PUBLIC FOUL WATER PIPE
- SWMH (S104) ADOPTABLE SURFACE WATER MANHOLE (S104)
- SWIC (S104) ADOPTABLE SURFACE WATER INSPECTION CHAMBER TYPE 2 UNO (S104)
- SWMH (IC REF NO.) PRIVATE SURFACE WATER MANHOLE REF NO. AND DIAMETER
- SWIC (IC REF NO.) PRIVATE SURFACE WATER INSPECTION CHAMBER TYPE 2 (UNO) AND IC REF NO.
- HW.G SURFACE WATER ROAD GULLY
- G SURFACE WATER YARD GULLY
- RODDING EYE (0.45m DEEP MIN) UNO
- POLYSTYRENE CELLULAR STORAGE (OR SIMILAR APPROVED) DESIGN SUBJECT TO MANUFACTURER APPROVAL
- MARSHALLS PERMEABLE PAVING (OR SIMILAR APPROVED) WITH 0.50m TYPE 3 VOIDED SUB-BASE MIN. WITH PERFORATED PIPE LAD IN TRENCH
- FWMH (S104) ADOPTABLE FOUL WATER MANHOLE 12000 UNO
- FWIC (S104) ADOPTABLE FOUL WATER INSPECTION CHAMBER TYPE 2 (UNO) AND IC REF NO. (S104)
- FWMH (IC REF NO.) PRIVATE FOUL WATER MANHOLE 12000 UNO
- FWIC (IC REF NO.) PRIVATE FOUL WATER INSPECTION CHAMBER TYPE 2 (UNO) AND IC REF NO.

**NOTE:**  
FOR MANHOLE / INSPECTION CHAMBER TYPES, REFER TO KSA DRAINAGE DETAILS SHEETS S20-623.  
FOR MANHOLE SETTING OUT CO-ORDINATES, REFER TO BOTH LATEST KSA CAD PLAN / STORM WATER MANHOLE SCHEDULE.  
FINAL COVER LEVELS TO BE ADJUSTED ON SITE WHERE REQUIRED.  
ALL GULLIES TO BE LOCATED AT LOW POINTS.

**NOTES:**  
CONTRACTOR TO CCTV AND CONFIRM LOCATION, INVERTS, COVERS, AND CONDITION OF EXISTING PRIOR TO COMMENCEMENT OF WORKS ON SITE. ALL INFORMATION TO BE FED BACK TO ENGINEER.  
CONTRACTOR TO ALLOW FOR NEW CONNECTION INTO EXISTING FOUL AND STORM MANHOLES AS SHOWN.  
CONTRACTOR TO CONFIRM LOCATION OF ALL EXISTING SERVICES WITHIN THE EXISTING HIGHWAY PRIOR TO COMMENCEMENT OF WORKS ON SITE. ALL INFORMATION TO BE FED BACK TO ENGINEER.

P7	REVISED TO SUIT LATEST SITE LEVELS AND ATTENUATION TANK SIZE UPDATED	MC	ED	21.03.18
P6	SURFACE WATER OUTFALL REVISED TO SUIT INFORMATION FROM SOUTHERN WATER	MC	ED	13.02.18
P5	REVISED SURFACE WATER OUTFALL	KN	ED	23.01.17
P4	SW OUTFALL REVISED AND SOAKAWAY ADDED.	MC	ED	19.01.17
P3	ISSUED FOR APPROVAL	GW	-	27.08.17
P2	ISSUED FOR APPROVAL	GW	-	20.09.17
P1	ISSUED FOR APPROVAL	GW	-	22.05.17
Rev:	Description:	Drw:	Chk:	Date:

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Client: RED KEY CONCEPTS  
Architect: KENT DESIGN STUDIO  
Project: PROPOSED DOCTORS SURGERY AND HOUSING COURT HILL ROAD, LITTLE BOURNE, CANTERBURY  
Drawing Title: PROPOSED BELOW GROUND DRAINAGE LAYOUT

Drawn: GW	Chkd/Asst: ME	Date: MAY'17	Sheet Size: A1	Scale: 1:250	
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