

PRELIMINARY

DUE TO DEPTH OF THE OFF SITE
FOUL SEWER THE POSSIBILITY OF
CLASHES WITH EXISTING SERVICES MAY
OCCUR.
REFA WOULD ADVISE THE CLIENT TO
EMPLOY A SUITABLY EXPERIENCED
COMPANY TO UNDERTAKE A TRIAL
HOLE SURVEY AT THE POINT WHERE
PROPOSED SEWER IS BELOW EXISTING
ROAD AND FOOTPATH TO ASCERTAIN
THE EXISTENCE AND PROXIMITY OF
ANY SERVICES AND ADVISE REFA OF
ANY POTENTIAL CLASHES TO ASCERTAIN
IF DESIGN CHANGES CAN BE MADE.
REFA WILL NOT BE HELD RESPONSIBLE
FOR ANY ABORTIVE WORKS IF THIS
PROCEDURE IS NOT FOLLOWED
90.000

ALL EXISTING SERVICES TO BE LOCATED
AT COMMENCEMENT IN ACCORDANCE WITH
UNDERLAINERS REQUIREMENTS
AND PROTECTED ACCORDINGLY DURING
THE WORKS

INTERPOLATED INVERT
LEVEL ON EXISTING
225mm Foul Sewer
AT CONNECTION POINT
= 87.210
150mm CONNECTION
INVERT LEVEL = 87.285m
TO BE CHECKED AND CONFIRMED
BY CONTRACTOR BEFORE ANY
ON SITE SEWERS ARE LAID

CONCRETE BED AND SURROUND
WITH FLEXIBLE JOINTS AS
SPECIFIED 150mm THICK
AS SHOWN

ALL STORAGE MANHOLES ON THE TANK
SEWER WILL NEED TO BE CONCRETE
SURROUNDED AS THEY ARE WATER
RETAINING

ALL PIPES TO HAVE CLASS "S" BED
AND SURROUND UNLESS SHOWN OTHERWISE
ALL CONCRETE PIPES TO BE CLASS 120
ALL CLAY PIPES TO BE EXTRA STRENGTH VITRIFIED CLAY
ALL UPVC PIPES TO COMPLY WITH BS 4860:2000 & BS EN 1401-1
STRUCTURED WALL UPVC PIPES TO COMPLY WITH WS 4-35-01
MAX. PIPE LENGTH TO BE 3.0m

HYDROBRAKE DETAILS	
MH. No.	S6
TYPE	MDS
DESIGN HEAD (m)	1.35
MAX. FLOW (litres/sec)	27.5
DIAMETER (mm)	201

CONTRACTOR TO BE AWARE OF AND TAKE
APPROPRIATE ACTION TO ENSURE DE-STABILISATION
OF ANY EXISTING STRUCTURES, TREES, EMBANKMENTS
OR OTHER FEATURES DOES NOT OCCUR AS A RESULT OF
ANY EXCAVATIONS WORKS UNDERTAKEN IN ACCORDANCE
WITH THE DESIGNS SHOWN ON THIS DRAWING.
IF CONTRACTOR IS UNSURE ABOUT ANY ASPECT
OF THE ABOVE HE SHOULD SEEK ADVICE BEFORE
COMMENCING EXCAVATION WORK.

IF THE CLIENT OR CONTRACTOR
IDENTIFIES ANY DISCREPANCIES
BETWEEN THE DRAWINGS PRODUCED
BY REFA FOR THIS PROJECT THEN
THEY SHOULD CONTACT REFA
IMMEDIATELY AND BEFORE ANY WORKS
COMMENCE OR PROCEED
IF IN DOUBT ASK !!

DO NOT SCALE from this drawing

All dimensions must be verified on the site before setting out :
commencing work, with any discrepancies reported to REFA

GENERAL

- All adoptable sewers and associated works are to comply fully with "Sewers for Adoption" 7th Edition, dated August 2012, and Underlaiders Supplemental Guide
- All highway works to be to adoptable standards and to comply fully with the Local Authority specification.
- All private drainage works are to comply fully with part H of the Building Regulations
- All existing invert levels to be checked by the Contractor at the start of works and any discrepancies notified to REFA. All levels are based on topographical survey information provided by others.
- All materials to bear the relevant B.S. Kitemark and comply fully with the specifications. All concrete & concrete products must use Sulphate resistant cement (unless the site investigation report proves that sulphate attack from soils and groundwater will not occur)
- All opening notices etc. as required under highways acts etc. are to be obtained prior to commencement of works. All works are to be inspected by L.A., NHBC or Relevant Water Authority as applicable.

C.D.M. REGULATIONS 2007

In line with the above regulations we are obliged to inform the Client of the risks that may be encountered in the construction of these works. All design work has been carried out with Health and Safety aspects given full consideration. Wherever possible risks have been eliminated from the design, however due to the very nature of this type of work it is not possible to remove all the risks from the design. We would also respectfully remind the Client of his obligations to take all reasonable steps in ensuring that only competent Contractors who have a valid safety policy are employed. They should also provide satisfactory responses at tender stage as to the manner in which they will deal with the elements of risk involved in this type of work and in particular those highlighted by REFA below:-

- Support / treatment for ALL excavation work.
 - Guarding to edges of excavations to prevent people, materials and vehicles falling into excavation.
 - Guarding of excavations outside working hours to prevent unauthorised access.
 - Undermining to adjacent roads or structures.
 - Confined space operations.
 - Dealing with existing services.
 - Traffic management on existing highways.
 - Procedure to be followed in event of accident or emergency.
 - Method of working where contaminated ground is present on site.
 - Confirmation will be required that all operatives are adequately trained, copies of relevant training certificates to be supplied.
- The above list is by no means exhaustive but it does highlight operations that present a risk to contractors and the general public. For clarification on any item please contact REFA.

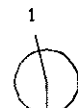
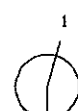
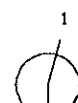
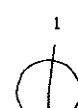
ROAD1

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SW OUTFALL

GROUND LEVEL	89.625	89.266	88.206
STORMWATER DETAILS	Pipe 1005 Dia. 150 UPVC 1 in 162 17.779	Pipe 1005 Dia. 150 UPVC 1 in 162 17.779	Pipe 1005 Dia. 150 UPVC 1 in 162 17.779

Manhole Number	Cover Level	Pipe				Manhole Size	Types		
Coordinates	Depth To Surface	Connections	Code	Inverts	Dans Inv-suff		Manhole	Cover	
S1	91.000 1.550		1	1.000	89.300	150	1500	1	D400
E= 367222.516 N= 435959.882		0	1.000	89.300	150				
S2	90.690 2.170		1	1.000	88.989	150	2400	S1ND_01_015	D400
E= 367318.636 N= 435810.861		0	1.001	87.620	900				
S3	90.360 1.920		1	1.001	87.540	900	2400	S1ND_01_015	D400
E= 367317.878 N= 435830.487		0	1.002	87.540	900				
S4	90.135 1.758		1	1.002	87.477	900	2400	S1ND_01_015	D400
E= 367318.787 N= 435846.146		0	1.003	87.477	900				
S5	89.812 1.516		1	1.003	87.396	900	2400	S1ND_01_015	D400
E= 367317.115 N= 435866.194		0	1.004	87.396	900				
S6 CONTROL	89.426 1.853		1	1.004	87.348	900	2400	H8	D400
E= 367313.091 N= 435876.727		0	1.005	87.348	225				
OUTFALL			1	1.005	87.300	225			
E= 367305.181 N= 435877.577									

Manhole Number	Cover Level	Pipe				Manhole Size	Types		
Coordinates	Depth To Soffit	Connections	Code	Inverts	Bans Inv-soff		Manhole	Cover	
F1	90.933								
E= 367323.058 N= 435999.698	1.850		0	1.000	88.933	150	1200	1	D400
F2	90.676		1	1.000	88.676	150			
E= 367319.642 N= 435612.985	1.850		0	1.001	88.676	150	1500	1	D400
F3	90.448		1	1.001	88.448	150			
E= 367319.197 N= 435827.199	1.850		0	1.002	88.448	150	1200	1	D400
F4	90.146		1	1.002	88.145	150			
E= 367321.295 N= 435644.230	1.850		0	1.003	88.145	150	1200	1	D400
F5	89.818		1	1.003	87.818	150			
E= 367310.183 N= 435664.834	1.850		0	1.004	87.818	150	1200	1	D400
F6	89.296		1	1.004	87.528	150			
E= 367313.254 N= 435881.096	1.618		0	1.005	87.528	150	1200	1	D400
F7	88.403		1	1.005	87.285	150			
E= 367306.570 N= 435693.877	0.968						1500	4	D400

F7- CD-ORDINATES ART APPROXIMATE ONLY

PLEASE NOTE THAT THIS DRAWING IS ISSUED FOR INFORMATION/TENDER
PURPOSES ONLY UNTIL TECHNICAL APPROVAL HAS BEEN GRANTED.
ANY WORK UNDERTAKEN PRIOR TO TECHNICAL APPROVAL BEING GRANTED IS AT THE CLIENTS RISK.

320130229P

rev Revision details

Drawing Stage	Drawing Status
Issued	Information
Approval	As Built

Client
**McDERMOTT
HOMES**

Job title
**LONGSIGHT ROAD
COPSTER GREEN**

Drawing title
**LONG SECTIONS
& MH SCHEDULES**

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CONSULTING ENGINEERS
CIVIL • STRUCTURAL
GEOTECHNICAL • ENVIRONMENTAL

Date 22.1.13 Scale 1/500H & 1/100V Draw CMH
DRAWING No 13007/01/2 Rev

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