

The width of the displayed area is 500m and the centre of the map is located at OS coordinates 507750,184750

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

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DETECTION SURVEY REPORT

CONNECTIVITY SURVEY  
All drainage connectivity was carried out in accordance with PAS 128:2014 (Publicly Available Specification from BS). Quality levels are determined by the detection methodology. Please refer to PAS 128:2014 Quality Level Guide for details.

CCTV SURVEY

All drainage was filmed with pipe sizes and invert levels recorded. Wherever possible the chamber size has been recorded and positioned on the drawing. Where a saddle connection is present the position has been achieved by CCTV change unless stated as an assumed connection (AC). Drains / sewers between manholes are assumed to be straight. If the drain / sewer has been CCTV surveyed, saddle connections and line deviations are indicative and not positioned via Ground Penetrating Radar (GPR) or Electromagnetic Locator (EML). Internal Manholes / Inspection covers are positioned inductively from CCTV Change. All sub surface drainage positions should be cross checked in critical areas by EML, GPR survey or hand dig trial holes.  
Attempts have been made to carry out CCTV surveys of all sewers across the entire drainage system at FREEZELAND WAY. As pre-clearing via high pressure water jetting has not taken place, surveys may have been abandoned due to a build up of silt and debris and any other obstructions. In other cases, structural defects within the system may prevent completion of CCTV surveys between assets.

Information regarding the drainage system has been added to the drawing. For all information regarding the CCTV survey, please refer to INSSEWER TV198003 CCTV Report.

184900 N

184850 N

184800 N

184750 N

507700 E

507800 E

507850 E

507900 E

507950 E

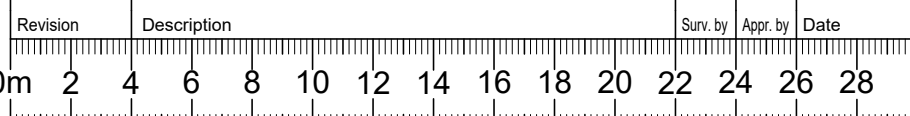
- Notes:
1. DRAINAGE INFORMATION ADDED TO TOPOGRAPHICAL SURVEY PRODUCED BY (LASER SURVEYS) JOB No. (G803), DATE (10/04/2015). NO SITE VERIFICATION CARRIED OUT BY MK SURVEYS UNLESS SPECIFIC TO DRAINAGE.
  2. DRAINAGE INFORMATION HAS BEEN DETERMINED WITHOUT MAN ENTRY INTO CHAMBERS AND WHISTLE EVERY EFFORT HAS BEEN MADE TO CORRECTLY IDENTIFY THIS INFORMATION. IT SHOULD ALWAYS BE CHECKED IN AREAS THAT ARE CRITICAL TO THE FUTURE PROPOSAL.
  3. ALL SEWERS ARE PRESUMED TO BE STRAIGHT BETWEEN CHAMBERS. WITH ROUTES / CONNECTIVITY OBTAINED USING ACOUSTIC METHODS ONLY. THESE ARE TO BE CONSIDERED ASSUMED AND SHOULD BE INVESTIGATED FURTHER IN CRITICAL AREAS. KINKS AND DEVIATIONS ARE INDICATIVE AND UNLESS SPECIFIED HAVE NOT BEEN ACCURATELY POSITIONED VIA ELECTROMAGNETIC LOCATOR (EML), GROUND PENETRATING RADAR (GPR). ALL SUB SURFACE DRAINAGE POSITIONS SHOULD BE CROSS CHECKED IN CRITICAL AREAS BY EML OR GPR SURVEY OR HAND DIG TRIAL HOLES.
  4. CONNECTIONS FROM RAIN WATER PIPES, GULLIES, KERB OUTLETS, SOIL PIPES ETC SHOULD BE TREATED AS ASSUMED ONLY UNLESS PROVEN WITH A CCTV SURVEY.
  5. SURVEY TO BE READ IN CONJUNCTION WITH INSSEWER TV198003 CCTV REPORT.

ABBREVIATIONS		DRAINAGE KEY	
(AC)	ASSUMED CONNECTION POINT	MH	MANHOLE
(AG)	ASSUMED CONNECTION	NVP	NO PIPES VISIBLE
(AR)	ASSUMED ROUTE	OL	OUTLET
BS	BACKDROP LEVEL	OU	OUTFALL
BK	BRICK	PF	PITCH FIBRE
BL	BASE LEVEL	PP	POLYPROPYLENE
CL	CAST IRON	POW	PIPE ON WALL
CL	COVER LEVEL	PT	P-TRAP
CL	CONCRETE	PTG	PIPE TO GROUND
CU	CULVERT	PTG	PIPE TO SURFACE
CS	CATCHMENT	PVC	POLY(VINYL CHLORIDE)
CUL	CROWN LEVEL	PVC-U	ULTRA RIB (PVC)
CW	COMBINED WATER	RE	RODING EYE
DCH	DRAINAGE CHANNEL	RHS	RISING MAIN
DW	DUCTILE IRON	RWP	RAIN WATER PIPE
FD	FILTER DRAIN	SOP	SOFT OF BISCUT
FW	FULL WATER	SP	SOIL VENT PIPE
GY	GULLY	SW	SURFACE WATER
IC	INVERT DEPTH	SW	TRADE EFFLUENT WATER
IL	INVERT LEVEL	UTL	UNABLE TO LOCATE
INT	INTERCEPTOR	UTS	UNABLE TO SURVEY
IN	INLET	UTS	UTRIFIED CLAY
KO	KERB OUTLET	VP	VENT PIPE
LH	LAMP HOLE	WL	WATER LEVEL

LEGEND	
COMBINED SEWER	P-TRAP
FULL WATER DRAIN	BACK-DROP (EXTERNAL)
SURFACE WATER SEWER	BACK-DROP (INTERNAL)
TRADE EFFLUENT SEWER	SURVEY ABANDONED
UNIDENTIFIED SEWER	UNABLE TO CCTV SURVEY
REINFORCED CONCRETE	ELECTRONICALLY DERIVED DEPTH
MANHOLE	DRAINAGE INFORMATION IS SHOWN IN BLACK

PAS 128:2014 Quality Level Guide		
Quality Level	Description	Accuracy
Q100	A utility is expected to exist but cannot be detected. (N/A), (N), (H)	Unlimited
Q200	Horizontal location only using one geophysical technique. No depth information. (N2)	±500mm Horizontal
Q300	Horizontal and vertical location only using one geophysical technique. (N2)	±500mm or ±1.40% of depth whichever is greater
Q400	Horizontal and vertical location only using two geophysical techniques. (N2)	±250mm or ±1.15% of depth whichever is greater
Q500	Service verified in an open excavation, inside an inspection chamber, (over pit, or at the point the service enters a vault the ground)	±50mm Horizontal ±50mm Vertical



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FreezeLand Way  
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Drainage and CCTV Survey

Scale	Sheet Size	Sheet Number	Date
1:250	A0	1	August 2019
Project Number	Rev	Surveyed By	Approval By
27365	-	JH	CP / NS