Vulcan Close, Whitstable, Kent
Phase 1 (Plots 1 to 5)

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Drainage Verification Report

30 April 2024
Project Reference: 65203468
Document Reference: 66200272-SWE-XX-XX-T-C-0001-P01- Vulcan Drainage Verification
Revision: P01
Prepared For: Aspire Designer Homes

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Status / Revisions

Rev.	Date	Reason for issue	Prepared		Reviewed		Approved	
[1]	30.04.2024	Initial Issue	TC	30.04.2024	xx	xx.xx.2024	xx	xx.xx.2024

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Table of contents

Appendices

1 Drainage Verification Report

This report sets out the as built Surface Water drainage for Vulcan Close, Whitstable, Kent. It compares the design against the as built and confirms its suitability and fitness for purpose.

This report covers 'Phase 1' of the drainage installation which covers Plots 1 to 5 and the installation of the two pump stations and main carrier drainage.

2 Drainage Strategy and Design Information

The drainage strategy as submitted and approved at planning under Decision Notice 18/01280 dated 15 May 2019, and site generally under Reserved Maters approval CA/22/00779, is shown on the DHA drawing shown in in Appendix A.

The drainage strategy consists of traditional rainwater pipes for roof drainage with an impermeable surface for external paving drainage. Surface water attenuation crates and the pump station wet well provide surface water storage. The storm drainage drains to a surface water pumping station that discharges at an agreed flow rate to an adjacent public sewer.

Note that upstream of 'Phase 1' is a series of permeable paving and additional storage crates that form the wider drainage scheme (currently under construction). Plots 1 to 5 do not rely on any upstream storage and therefore can operate independently of Phase 2.

This report is therefore intended to deal with Phase 1 of the drainage only.

Condition 15 of the Decision Notice 18/01280 states:

> 15 The development hereby permitted shall not be occupied until a Verification Report pertaining to the surface water drainage system, carried out by a suitably qualified professional, has been submitted to and approved in writing by the Local Planning Authority demonstrating the suitable operation of the drainage system such that flood risk is appropriately managed, as approved by the Lead Local Flood Authority. The Report shall contain information and evidence (including photographs) of earthworks; details and locations of inlets, outlets and control structures; extent of planting; details of materials utilised in construction including subsoil, topsoil, aggregate and membrane liners; scale drawings; and topographical survey of 'as constructed' features.
>
> **REASON:** To ensure adequate drainage provision and to prevent pollution, in accordance with policies CC11, CC12, CC13 and QL12 of the Canterbury District Local Plan 2017, the National Planning Policy Framework.

A detailed surface water drainage design was completed by Sweco Consulting Engineers in August 2021. The design is shown on the following drawings, which are included in Appendix B.

Drainage Layout	65203468-SWE-ZZ-XX-DR-C-0002 Rev P12
Drained Areas	65203468-SWE-ZZ-XX-DR-C-0003 Rev P6
Drainage Details	65203468-SWE-ZZ-XX-DR-C-0005 Rev P2
Drainage Details	65203468-SWE-ZZ-XX-DR-C-0006 Rev P2
Drainage Details	65203468-SWE-ZZ-XX-DR-C-0007 Rev P2
Drainage Details	65203468-SWE-ZZ-XX-DR-C-0008 Rev P2
Pump Station Details	65203468-SWE-ZZ-XX-DR-C-0010 Rev P4

The Phase 1 development drains by gravity through traditional rainwater pipes for the roofs and impermeable paving for the external paving, attenuated by use of the pump station flow rate to agreed run off rates. Attenuation is provided by storage crates and pump station wet well.

Calculations are shown in Appendix C.

3 As Built Information

Site visits were undertaken during construction and regular contact maintained with the Site Team. Drainage RFI's were answered when raised.

The following information has been compiled during construction:

Appendix D contains an As-Built survey of the Phase 1 drainage.

Comments: The as built drawing shows the drainage was built in accordance with the design and within Construction tolerance. The storage crates are built to the correct size and volume. The pumping station wet well and pumps have been built and successfully commissioned.

Appendix E contains photos of the crate system during construction.

Comments: The photos show the correct crate size and specification being installed. The crates are correctly wrapped and jointed. All inlets / outlets are suitably wrapped and sealed. The high level overflows and vents are shown being installed.

All materials are in accordance with the design and the quantities / specifications are as expected.

Appendix F contains commissioning sheet and photos of the installation of the pump station.

Comments: The photos show the pump stations being installed in accordance with the design drawings and manufacturers recommendations. The pump stations are as specified and the manufacturer has confirmed that they have been installed to their satisfaction and successfully commissioned.

The pump stations are covered by a manufacturers supplied maintenance and service agreement.

Appendix G contains a copy of the as built CCTV survey.

Comments: The CCTV survey shows the drainage to have been built to standard and specification. Some construction material needs to be cleaned from the drainage network and is in line with what's expected on a current live and under construction site.

No construction defects were noted (comments on the CCTV report noting defects are on existing drainage runs built / maintained by others).

4 Works recommended

Sweco recommend the Phase 1 drainage is jetted clean prior to first occupation, and on completion of the Phase 2 (upstream) elements.

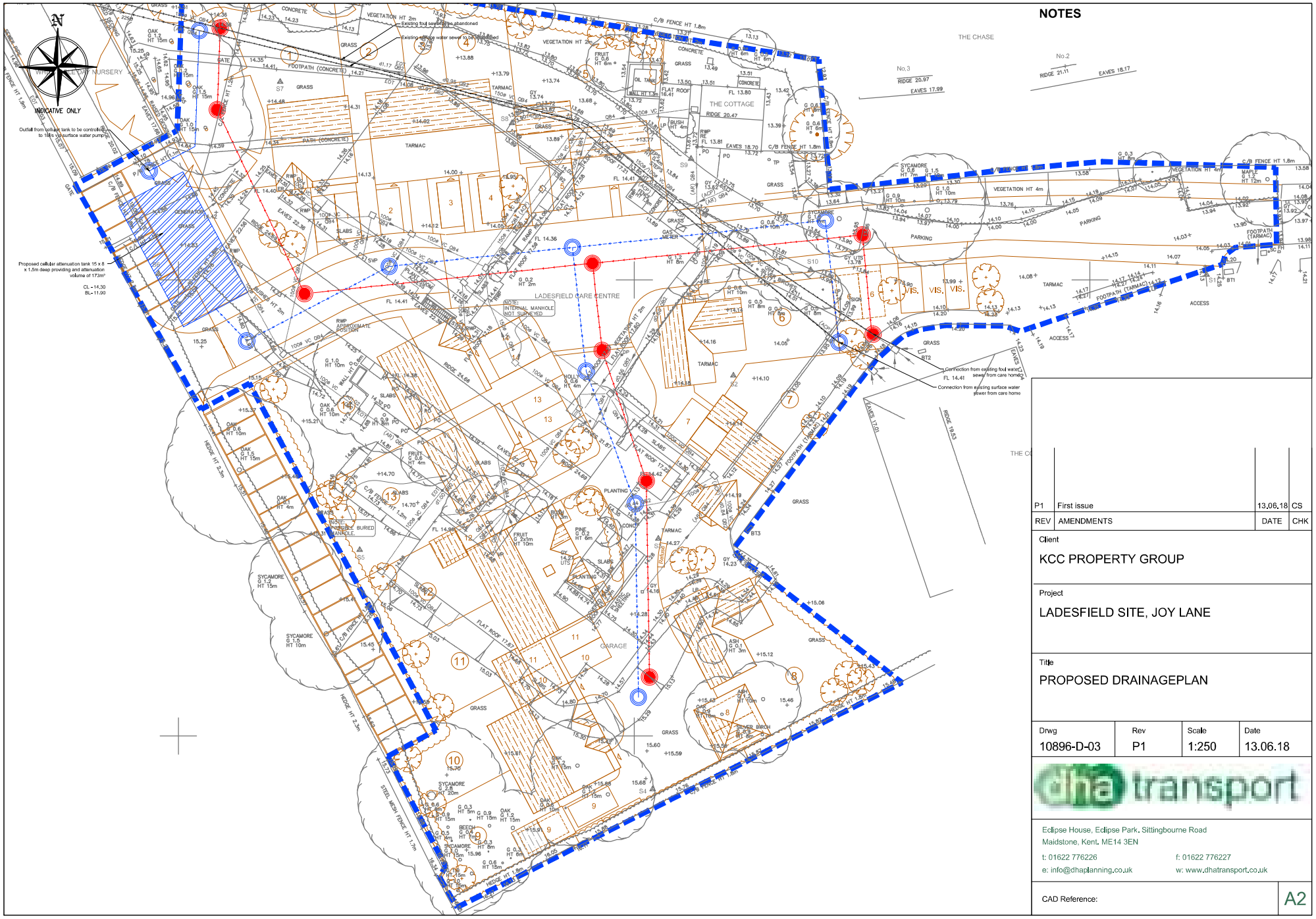
5 Summary

Visits to site and the record information provided show the drainage has been constructed in a safe, sound and competent manner, in line with the design presented to the Contractor and good building practice.

The drainage has been built in line and level to the design and within accepted construction tolerances.

There were no noted relaxations to design standards or construction issues noted.

Appendix A – Drainage Strategy



NOTES

REV	AMENDMENTS	DATE	CHK
P1	First issue	13.06.18	CS

Client

KCC PROPERTY GROUP

Project

LADESFIELD SITE, JOY LANE

Title

PROPOSED DRAINAGEPLAN

Drwg	Rev	Scale	Date
10896-D-03	P1	1:250	13.06.18

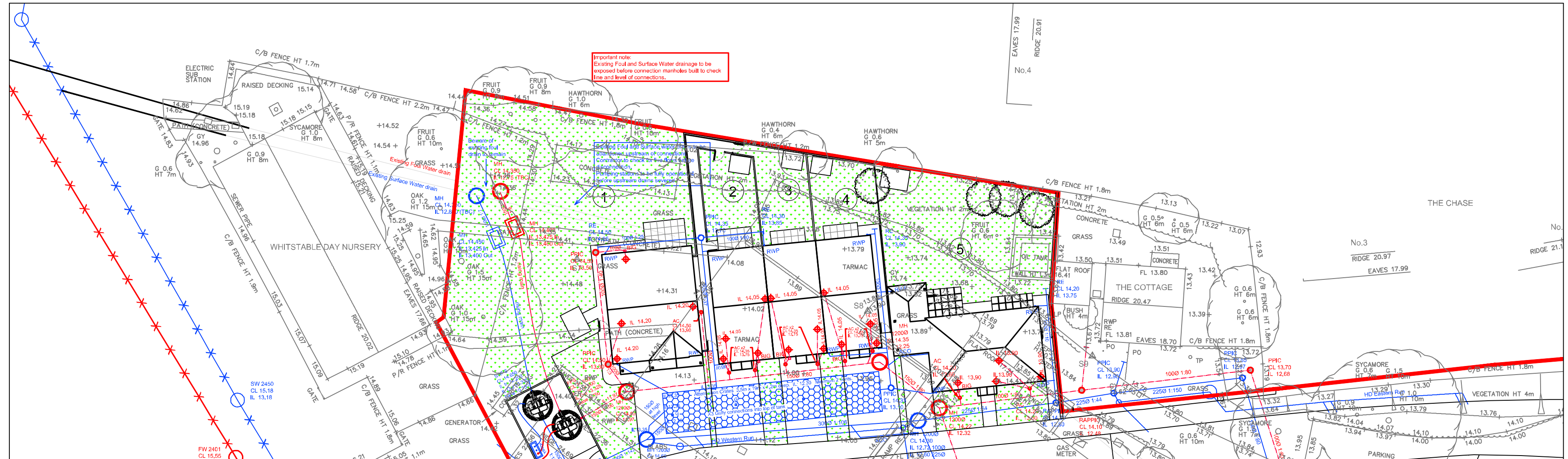
dha transport

Eclipse House, Eclipse Park, Sittingbourne Road
Maidstone, Kent. ME14 3EN

t: 01622 776226 f: 01622 776227
e: info@dhaplanning.co.uk w: www.dhatransport.co.uk

CAD Reference: A2

Appendix B – Design Drawings



1. All private drainage works shall be in accordance with 'The Building Regulations Approved Document H' and British Standard EN 752.

2. Prior to commencement of the works the Contractor shall liaise with all relevant authorities to obtain their requirements and to obtain approval for his method of working and where appropriate his intended choice of materials.

3. Refer to site survey for details of existing site conditions and bench marks.

4. Prior to commencement of the works the Contractor shall liaise with all relevant authorities to locate, protect and where necessary divert all existing services affected by the works.

5. All excavations shall be kept free of standing water.

6. The Contractor shall ensure the stability of all excavations is maintained at all times.

7. All works in or adjacent to the Public Highway shall be in accordance with the requirements of the Highway Authority. The Contractor shall obtain all necessary licences to carry out works within the Public Highway.

8. All works to new or existing Public Sewers shall be to the approval of the Water Authority and in accordance with 'Sewers for Adoption'-latest edition.

9. Any works within 9m of a watercourse shall be to the approval of the Environment Agency.

10. Prior to commencement of the works all drainage outfall points, whether existing sewer, drain or watercourse, shall be verified on site by the Contractor. If the outfall point is found to be higher or significantly lower than shown on the drawings then the Contract Administrator shall be notified immediately. (Significant redesign of drainage and levels may be necessary). Prior to commencement of construction on-site the Contractor shall install all off-site drainage connections, or satisfy himself that there are no obstructions or other reasons why, the drain connections can not be made.

11. All private chambers in block paved / paving slab areas to have recessed covers. All covers, whether recessed or not, are to be placed entirely within paved or landscaped areas.

12. All cover levels shown on this drawing are approximate. Exact levels of new covers and frames to be determined on site to match level and profile of finished surface.

13. The construction of all existing chambers, gullies etc. and their covers, gratings and frames to be improved, repaired or replaced as necessary to suit their location within the finished development.

14. All covers, gratings and frames to chambers, gullies, channels etc. shall be of the correct load class to suit their location.

Load Class A15 Pedestrian areas (not accessible by vehicles)
Load Class B125 Private drives.
Load Class C250 Lightly trafficked roads.
Load Class D400 Main Roads.

Gratings in pedestrian areas to be designed for pedestrian use.

15. All existing chambers, gullies channels, pipes and other drainage apparatus shall be protected from damage during the works. The Contractor shall take all necessary measures to ensure that no material enters the drains (other than that which they are designed to carry).

16. Refer to Site Investigation Report for existing ground conditions and any special requirements for buried concrete (special requirements for buried concrete shall include all pre-cast and in-situ concrete and mortars). Where appropriate refer to contamination reports for details of chemicals affecting choice of materials and other additional requirements.

17. All pre-cast and in-situ concrete and mortars used in the construction of foul drains and sewers shall be made from sulphate resisting cement.

18. Unless noted otherwise all pipework shall be 100mm diameter laid to a fall of 1 in 80 or steeper for surface water and 1 in 40 or steeper for foul water. Foul drains with one or more W.C. connected may be laid at 1 in 80 or steeper. Where appropriate road gully connections shall be 150mm dia at 1 in 150 or steeper.

19. Unless noted otherwise all pipework shall be constructed from 'super strength' vitrified clay to BS 65,BS EN 295 or uPVC to BS EN 1201 bedded and backfilled as per the manufacturers recommendations and the above listed publications.

20. The Contractors attention is drawn to Diagrams 7 and 8 of 'The Building Regulations Approved Document H' showing details of drains laid below and near to buildings. Where ground beams are used, their level shall be set to avoid clashing with drain connections.

21. Exact location of gullies to be determined on site to suit low points. The Contractor shall ensure that all finished surface are laid to falls that are sufficient for all surface water to drain without surface ponding.

22. For the exact location of soil pipes, stubstacks, W.C.'s and other drainage connections refer to the large scale architectural building plans.

23. Rainwater downpipes that do not connect directly to an access point, shall be fitted with a rodding access.

24. All drainage channels to be by ACO or GATIC or similar pre-approved system and to be of a type size and capacity suitable for their location.

25. Access fittings, inspection chambers and manholes shall be constructed to the dimensions shown in Tables 11 and 12 of 'The Building Regulations Approved Document H' and from the materials listed in Table 14. Access points, inspection chambers and manholes shall be constructed from products designed/rated for the location in which they are to be used. They shall be installed in accordance with the manufacturers/suppliers recommendations.

26. Prior to commencement of any works the existing drainage must be traced to ensure that no 'live' connections remain. Any such connections must be reported to the Contract Administrator, prior to diversion into the new drains.

27. Unless noted otherwise all drains and sewers to connect with soffits level. Chamber invert levels shown on this drawing are to outgoing pipe.

28. No surface water from private areas drains on to the public highway. Careful profiling of finished surfaces together with additional gullies/drainage channels may be utilized.

29. Unless noted otherwise invert levels shown at catchpits (silt traps) are the invert level of the outgoing pipework, as with other chambers, unless noted otherwise, all pipes shall be laid with soffits level.

30. Pumping Stations shall be installed strictly in accordance with the manufacturers instructions.

31. All catchpits are to be regularly cleaned out during the construction period (especially after heavy rainfall) to ensure no silt passes the traps to be deposited in the pumping stations. Before final hand over of the site, inlet to the pumps are to be plugged, all sw and fw pipework is to be jetted, catchpits cleaned, then plug to be removed and pumping stations inspected to ensure no silt has been deposited in them.

32. Invert levels shown are for guidance. Drainage to be laid in accordance with Notes 18 and 22 above and the drainage details. All private drainage to accord with Building Regulation requirements above all else. Any discrepancy to be reported to the Engineer prior to installation.

P:\6614\65203468_Vulcan_Close,_Whitstable\000\MLM\DWG\65203468-CAD\ 65203468-SWE-ZZ-XX-DR-C-0001-0004-Design bound_BP.dwg

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.
2. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BRITISH STANDARDS, EUROPEAN NORMS, CODES OF PRACTICE AND BUILDING PRACTICE.
3. ALL DIMENSIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING THE WORKS ON SITE. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. FOR CIVIL & STRUCTURAL HEALTH & SAFETY HAZARDS PLEASE REFER TO DESIGNERS RISK ASSESSMENTS.
5. IF YOU DO NOT UNDERSTAND FULLY ANY OF THE DETAILS SHOWN ON THIS DRAWING CONTACT THE ENGINEER FOR CLARIFICATION.

Drainage Key

100Ø 1:80	Proposed Surface Water drainage
	Proposed Surface Water chamber
	Proposed Rodding Eye
RWP	Proposed Rainwater Pipe
	Proposed Surface Water diffuser
100Ø 1:80	Proposed Foul Water drainage
	Proposed Foul Water chamber
IL xx.xx	Proposed Foul drain point
	Existing Public Surface Water Sewer
	Existing Public Foul Sewer
	Site Boundary
	Foul and Surface Water Pumping Stations

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P12	17.04.2023	Drainage updated to suit revised RWP and SVP positions. Diffuser positions rationalised	TC	TC	TC
P11	13.03.2023	Plots 1 to 5 moved West and layout and drainage updated to suit	TC	TC	TC
P10	21.11.2022	Foul invert and foul chamber base level amended	TC	TC	TC
P09	16.11.2022	SW pump station invert amended Foul vent position amended	TC	TC	TC
P08	16.11.2022	Pump station incoming inverts amended.	TC	TC	TC
P07	11.11.2022	Pumping station levels updated, vent pipe added	TC	TC	TC
P06	04.10.2022	Sub-base attenuation updated	BP	TC	TC
P05	02.08.2022	Drainage updated following amends to calculations and layout.	BP	TC	TC
P04	19.07.2022	Drainage and layout updated	TC	TC	TC
P03	06.07.2022	Drainage and layout updated	TC	TC	TC
P02	19.06.2022	Base plan updated to Clague dwg 30184A/100 Rev H (dated 21.02.2022) Drainage updated to suit.	TC	TC	TC
P01	18.08.2021	FIRST ISSUE	TC	TC	TC

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Client
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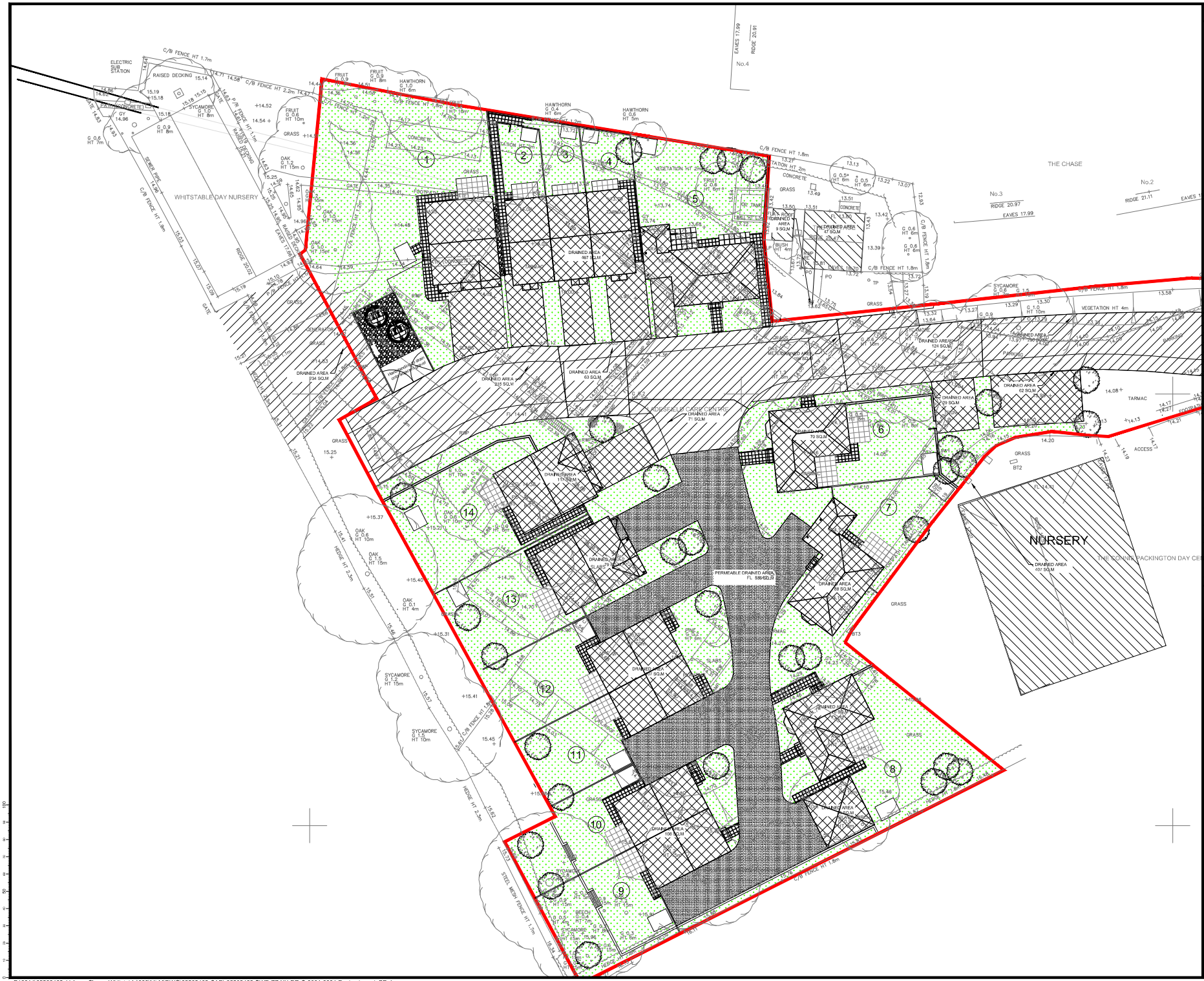
Project Title
Vulcan Close

Drawing Title
Drainage

Purpose Of Issue
PRELMINARY

Status	Status Description		
S0	INITIAL STATUS OR WIP		
Designed: TC	Drawn: TC	Checked: -	Approved: -
Sheet Size: A1	Scale: 1:200	SWECO Ref: -	Revision: P12

Drawing Number
65203468-SWE-ZZ-XX-DR-C-0002



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Contributing Areas Plan

- Permeable Road with sub base storage
- Impermeable House and driveway area
- Impermeable Roadway
- Impermeable Existing Roof area
- Permeable gravel area
- Permeable Grass / Landscaped Area
- Paving slab patio and paths etc draining to adjacent soft (permeable) areas.
- Site Boundary

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P06	17.04.2023	Housrtype blocks updated to Arcadian Architecture blockplans and areas revised to suit	TC	TC	TC
P05	13.03.2023	Plots 1 to 5 moved West and layout and drained areas updated to suit	TC	TC	TC
P04	02.08.2022	Areas updated to suit revised layout	BP	TC	TC
P03	19.07.2022	Areas updated to suit revised layout	TC	TC	TC
P02	06.07.2022	Updated areas to suit layout	TC	TC	TC
P01	19.06.2022	FIRST ISSUE	TC	TC	TC

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SWECO

Client
Aspire Designer Homes

Project Title
Vulcan Close

Drawing Title
Drained Areas

Purpose Of Issue
PRELMINARY

Status	Status Description		
S0	INITIAL STATUS OR WIP		
Designed	Drawn	Checked	Approved
TC	TC	-	-
Sheet Size	Scale	SWECO Ref	Revision
A1	1:200	-	P06

Drawing Number
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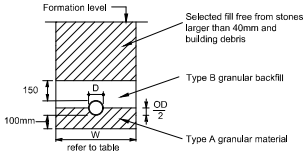
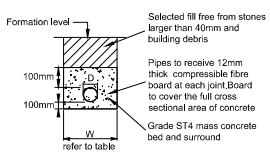


TYPE 1 (CLAY PIPE)
CLASS B

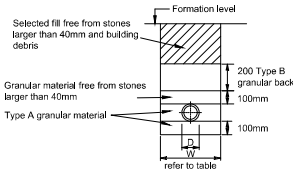
Location: Pedestrian areas up to 5.0m depth, Vehicle areas 0.6m - 5.0m



TYPE 2 (CLAY PIPES)
CLASS X

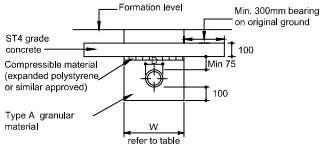
Location:
Vehicle areas - up to 0.6m

TYPICAL PIPE BEDDING DETAILS



TYPE 3 (UPVC PIPES)
CLASS S1

Location: Pedestrian areas, 0.6m - 7.0m Vehicle areas, 0.9m - 7.0m Under buildings



TYPE 4 (UPVC PIPES)

Location: Pedestrian areas up to 0.6m, private vehicle parking and areas subject to construction traffic up to 0.9m. When laid in landscape areas subject to no loading (incl. construction traffic) ST4 concrete can be omitted.

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEER'S, ARCHITECT'S AND SPECIALIST'S DRAWINGS AND THE SPECIFICATION.

2. DO NOT SCALE FROM THIS DRAWING MANUALLY OR ELECTRONICALLY. WRITTEN PERMISSION MUST BE OBTAINED FROM MLM PRIOR TO SCALING ELECTRONICALLY OR USING THIS ELECTRONIC FILE.

3. TYPE A TO BE 10MM SINGLE SIZED AGGREGATE TO BS EN 1610 ANNEX B TABLE B15 FOR 100Ø PIPES AND 14MM FOR 150Ø

4. TYPE B TO BE UNIFORM READILY COMPACTABLE MATERIAL FREE FROM ANY TREE ROOTS, VEGETATION MATTER, BUILDING DEBRIS, FROZEN SOIL, CLAY LUMPS RETAINED ON A 100MM SIEVE OR STONES RETAINED ON A 40MM SIEVE.

5. MINIMUM TRENCH WIDTHS FOR VARIOUS SIZE PIPES;

D	100	150	225	300	375
W	450	600	700	800	1100

6. WHERE A FOUNDATION PASSES CLOSE TO A SEWER OR DRAIN TRENCH OR TRIAL PIT THE FOUNDATION DEPTH IS TO BE SUCH THAT ITS UNDERSIDE IS BELOW A LINE PROJECTED UP AT 45° FROM THE NEAREST BOTTOM CORNER OF THE DRAIN TRENCH, SEWER TRENCH OR TRIAL PIT OR CONCRETE BACKFILLTO TRENCHES USED AS DETAILED

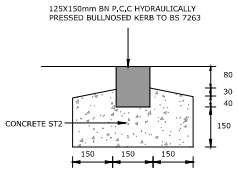
7. ANY SOFT SPOT FOUND IN TRENCH LINE TO BE REPORTED TO SITE STAFF PRIOR TO PLACING OF PIPE BEDDING.

8. JOINT FILLER TO CONCRETE PIPE SURROUND SHALL CONSIST OF BITUMEN IMPREGNATED INSULATING BOARD TO BS 1142 PART 3. THICKNESS OF BOARD 12MM.

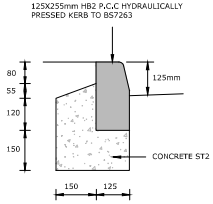
9. ALL PIPEWORK SHALL BE CONSTRUCTED FROM 'SUPER STRENGTH' VITRIFIED CLAY TO BS 65,BS EN 295 OR UPVC TO BS EN 1401

10. MANHOLE COVERS IN PRIVATE AREAS ACCESSIBLE TO MOTOR VEHICLES TO BE CLASS B125 AND IN PRIVATE AREAS INACCESSIBLE TO MOTOR VEHICLES TO BE CLASS A15.

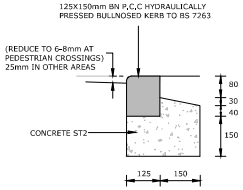
11. PRECAST CONCRETE PIPES AND CHAMBERS TO BE TO BS 5911.



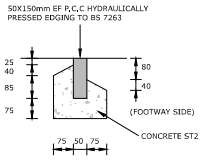
CHANNEL BLOCK DETAIL



FULL HEIGHT KERB DETAIL



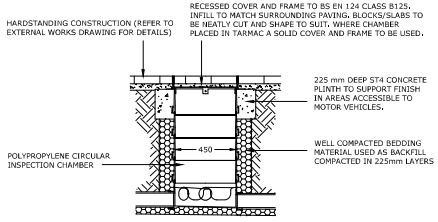
KERB DETAIL (BN) (BN25)



EDGING DETAIL

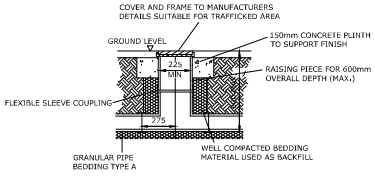
NOTE:

Dropped kerbs at paths etc to be formed by angling BN25 kerb to a 6-8mm upstand. End of kerbs to be chamfered to suit to form clean gap free joints. Colour matched mortar to be used at joints if necessary.



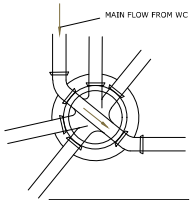
(LOCATED WITHIN HARD PAVED/SURFACED AREAS FOR DEPTH TO INVERT NOT GREATER THAN 1200mm)

POLYPROPYLENE INSPECTION CHAMBER
(SCALE 1:20)

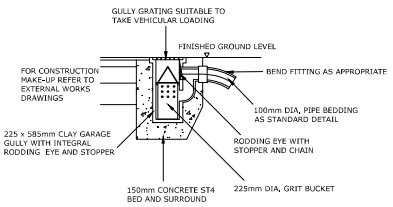


ACCESS CHAMBER
(SCALE 1:20)

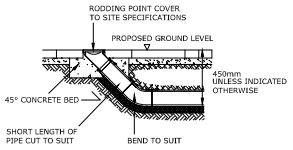
FOR COVERS SITED IN DRIVEWAYS, PAVED AREAS AND LANDSCAPED AREAS WHICH MAY BE OVERRUN BY MAINTENANCE VEHICLES.



IF A DRAIN IS ROUTED THROUGH 90° DIRECTION USE 2 No. 45 ° BENDS

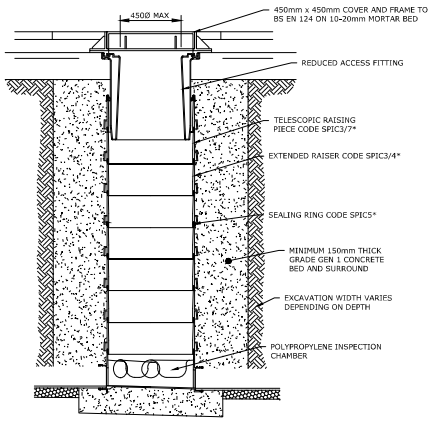


TRAPPED YARD GULLY TO DRIVES, FOOTPATHS & BINSTORE
(SCALE 1:20)



(CONCRETE COLLAR MAY BE OMITTED IF RODDING EYE IN AREA NOT SUBJECT TO VEHICULAR LOADING, MAXIMUM DEPTH TO INVERT 600mm.)

RODDING EYE DETAIL
(SCALE 1:20)



REDUCED ACCESS INSPECTION CHAMBER (RAPPIC)
(SITED IN HARD LANDSCAPED AREAS)
(SCALE 1:20)

NOTES

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6. BURIED CONCRETE SULPHATE CLASS AS PER SITE INVESTIGATION REPORT.

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P02	02.08.2022	Kerb detail amended to suit design	TC	TC	TC
P01	06.07.2022	FIRST ISSUE	TC	TC	TC

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Project Title
Vulcan Close

Drawing Title
Construction Details
Sheet 1

Purpose Of Issue
PRELMINARY

Status	Status Description		
S0	INITIAL STATUS OR WIP		
Designed	Drawn	Checked	Approved
TC	TC	-	-
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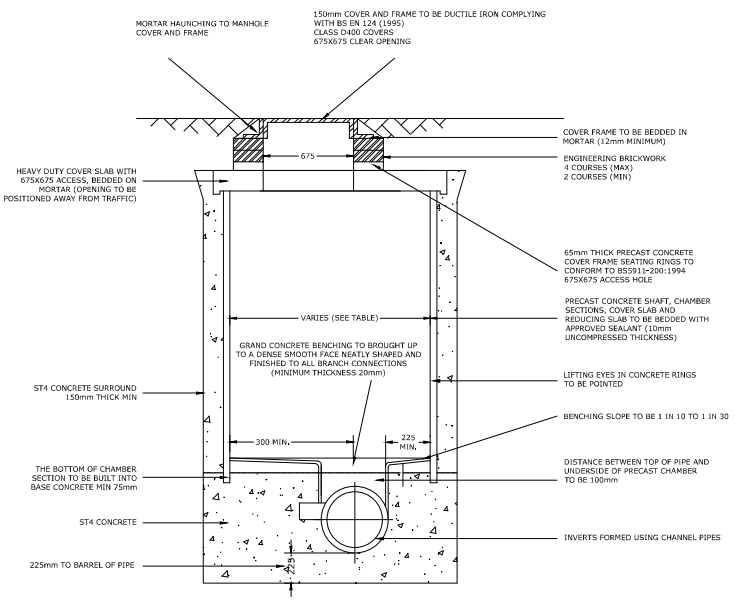
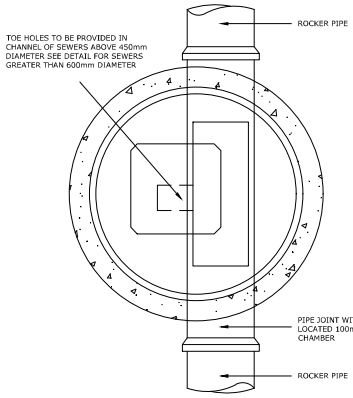
A1	N/A	-	P02

Drawing Number
65203468-SWE-ZZ-00-DR-C-0005

MANHOLE ACCESS TO COMPLY WITH BS EN 752-3 NATIONAL ANNEX NB





ADOPTED MANHOLE AFW
(SCALE 1:20)

NOMINAL DIAMETER OF LARGEST PIPE IN MH (mm)	MINIMUM NOMINAL INTERNAL DIMENSION OF MANHOLE (mm)
LESS THAN 375mm	1200
375-450	1350
500 - 700	1500
750 - 900	1800
>900	PIPE DIAMETER + 900

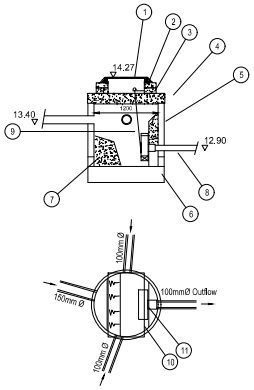
1. CHAMBER DIAMETERS QUOTED ARE THE MINIMUM, IF TWO OR MORE PIPES ENTER THE MANHOLE THE CHAMBER DIAMETER MUST BE SUFFICIENT TO ACCOMMODATE ADEQUATE BENCHING. ALL INCOMING PIPES TO BE BUILT WITH SOFFITS LEVEL.

ALL PIPES ENTERING OR LEAVING MANHOLES SHALL HAVE A FLEXIBLE JOINT WITHIN 600mm OF THE INSIDE FACE OF THE MANHOLE, THE NEXT PIPE SHOULD BE A SHORT "ROCKER PIPE" WITH LENGTH AS TABLE BELOW.

ROCKER PIPE LENGTHS

SEWER DIAMETER (mm)	EFFECTIVE LENGTH (mm)
150 TO 600	600
675 TO 750	1000
825 AND OVER	1250

HYDRO TO ADVISE ON MANHOLE BASE INVERT



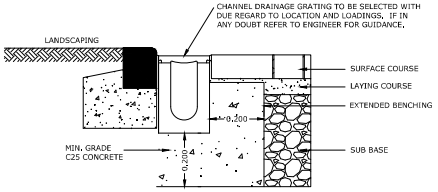
TYPICAL HYDROBRAKE DETAIL. REFER TO DRAINAGE DRAWING FOR HYDROBRAKE FLOW PARAMETERS AND HYDRO INTERNATIONAL DETAILS FOR INSTALLATION

1. Cover and frame shall be Stanton Plc "Briton" Type H2DN or equivalent. Frame shall have a minimum clear opening of 1200 x 675mm, bedded on a minimum of 12mm of mortar Designation (i) to Clause 2404 of the Specification.
2. Class M1 mortar haunch.
3. Precast concrete cover frame seating rings (min 1, max 3) 1200 x 675mm clear opening.
4. Precast concrete heavy duty cover slab with 1220 x 675mm access, as manufactured by ARC pipes, or equivalent approved.
5. Precast concrete chamber sections to comply with BS 5911:Pt200:1989. All units shall be bedded on Mortar Designation (i) to Clause 2404 of the Specification, alternatively a proprietary bitumen or resin mastic sealant may be used.
6. 300mm thick Mix ST4 concrete foundation and benching to Clause 2602 of the Specification.
7. Benching to suit intake pipes.
8. Pipes built into chamber walls and rocker pipes to Clause 507.15 of the Specification.
9. Pivoting by-pass door operated by steel rope. Eye bracket for operating rope is attached to concrete seating rings by approved fixings.
10. Approximate position of cover slab opening (central to cover slab).
11. Type Smh Hydrobrake as supplied by Hydro International

NOTE Items 9 and 11 are to be provided by Hydro International (Tel 01275 878371). Contractor is to allow in his rates for the purchase, delivery, and full installation to manufacturers instructions.

General Notes.

1. Manholes to be constructed generally in accordance with standard details except where indicated. Bespoke Hydrobrake chambers can be used with the advance agreement of the Engineer.
2. HydroBrakes to be installed before any significant live development flows.
3. Due regard and reference to be made to Hydro Internationals installation details. If in doubt ask the Engineer for guidance prior to work taking place.
4. This drawing is to be read in conjunction with all relevant Engineers details and drawings and the Hydro International quotations / requirements supplied for this development.

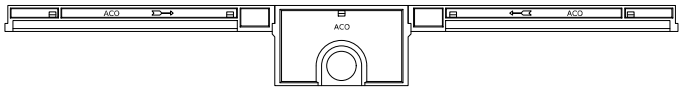


FOR ALTERNATIVE PAVEMENT SITUATIONS REFER TO ENGINEER FOR FURTHER ADVICE.

BED & HAUNCH DIMENSIONS:

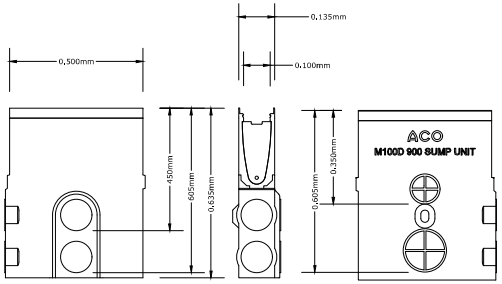
LOAD CLASS	A	B	C	D/E/F
DIM x (mm)	100	125	150	200

ACO M100D DRAIN INSTALLATION DETAIL
SCALE 1:10



SUMP TO BE USED AT EACH ACO CONNECTION POINT. ADVICE AND DESIGN TO BE SOUGHT FROM ACO ON USE OF SUITABLE CHANNEL SECTION AND PRODUCT IN EACH CASE.

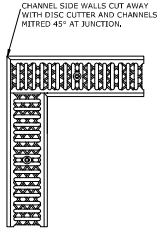
ACO DRAIN M100D
SCALE 1:10



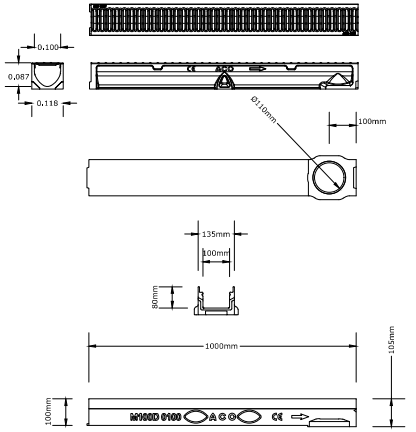
SUMP

ACO DRAIN M100D
SCALE 1:10

CHANNEL SIDE WALLS CUT AWAY WITH DISC CUTTER AND CHANNELS MITRED 45° AT JUNCTION.



EXAMPLE OF PRINCIPLES TO BE FOLLOWED FOR A 90° MITRE CUT CHANNEL WITH BUTTED GRATING (LOAD CLASS A TO C)



SHALLOW CHANNEL

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Rev	Date	Amendment Details	Dr'n	Chk'	App'
P02	02.08.2022	Hydrobrake detail added	TC	TC	TC
P01	06.07.2022	FIRST ISSUE	TC	TC	TC

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Sheet Size	Scale	SWECO Ref	Revision
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Drawing Number
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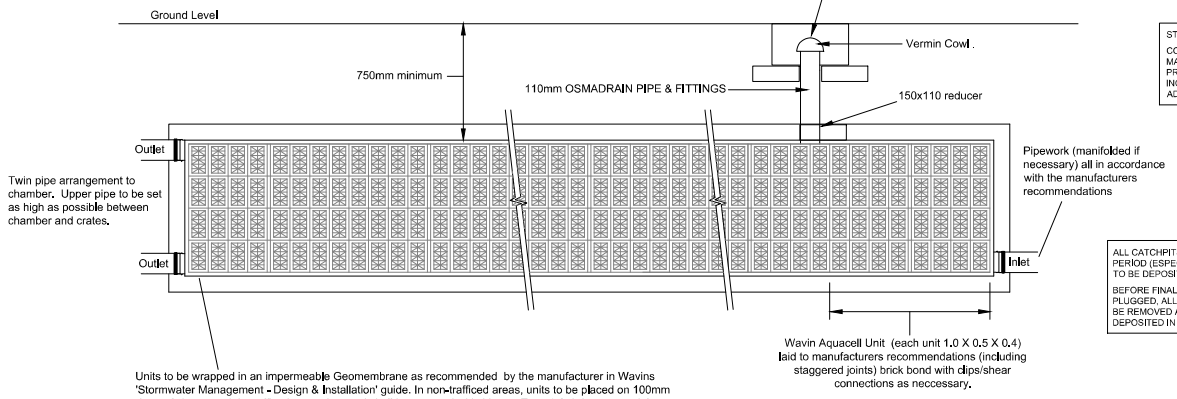
Aquacells to have Type 1 or Type 2 sub-base backfill to the sides and over over the cells. Material to be compacted in accordance with table 6/1 or 8/1 of the Specification for Highway Works and taking into account maximum roller weights as advised by Wavin.

Construction plant **NOT** to traffic near or over Aquacell locations unless specifically authorised by the Engineer.

Air vent with Grade D400 surface box by Saint Gobain or similar approved. MINIMUM TWO VENTS TO BE INSTALLED



STORAGE CRATE DETAILS FOR GUIDANCE ONLY.

CONTRACTOR TO OBTAIN HIS CHOSEN CRATE MANUFACTURERS APPROVAL FOR SUITABILITY OF PROPOSED CRATES AT EACH STORAGE LOCATION. INCLUDING CONFIRMATION OF STRUCTURAL ADEQUACY.

ALL CATCHPITS ARE TO BE REGULARLY CLEANED OUT DURING THE CONSTRUCTION PERIOD (ESPECIALLY AFTER HEAVY RAINFALL) TO ENSURE NO SILT PASSES THE TRAPS TO BE DEPOSITED IN THE AQUACELL STORAGE/ATTENUATION/SOAKAWAY TANKS.

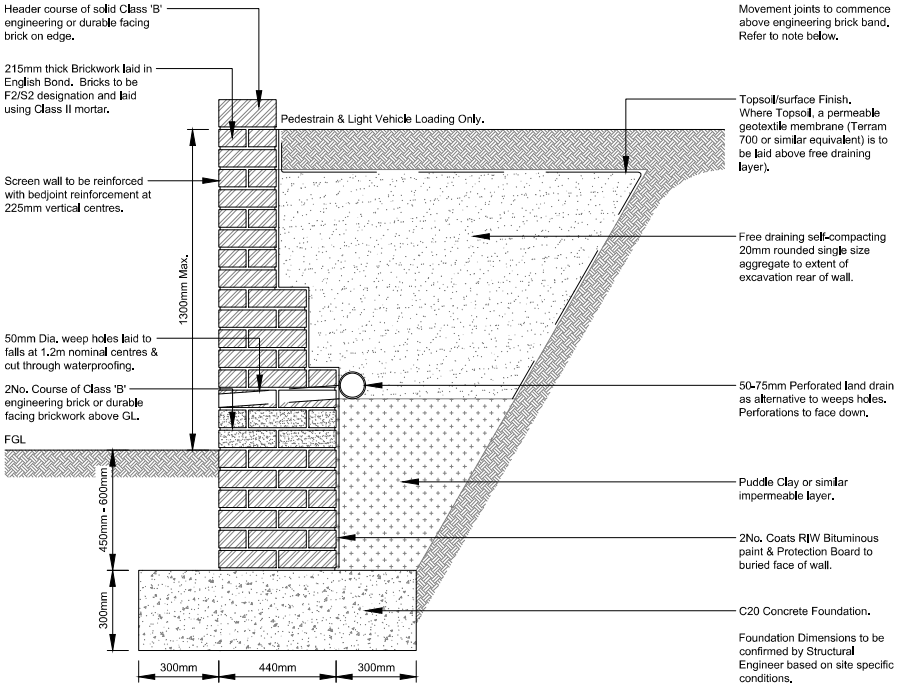
BEFORE FINAL HAND OVER OF THE SITE, INLET TO THE AQUACELL TANKS IS TO BE PLUGGED, ALL SW PIPEWORK IS TO BE JETTED, CATCHPITS CLEANED, THEN PLUG TO BE REMOVED AND AQUACELL TANKS INSPECTED TO ENSURE NO SILT HAS BEEN DEPOSITED IN THEM.

Units to be wrapped in an impermeable Geomembrane as recommended by the manufacturer in Wavins 'Stormwater Management - Design & Installation' guide. In non-trafficed areas, units to be placed on 100mm deep of sharp sand, in trafficed areas the sand shall be replaced with 225mm Type 1 Sub-base material. All works shall be in accordance with manufacturers recommendations. Wavin (01249 766600) Aquacell units to be used unless specific agreement given by Client for alternative approved product.

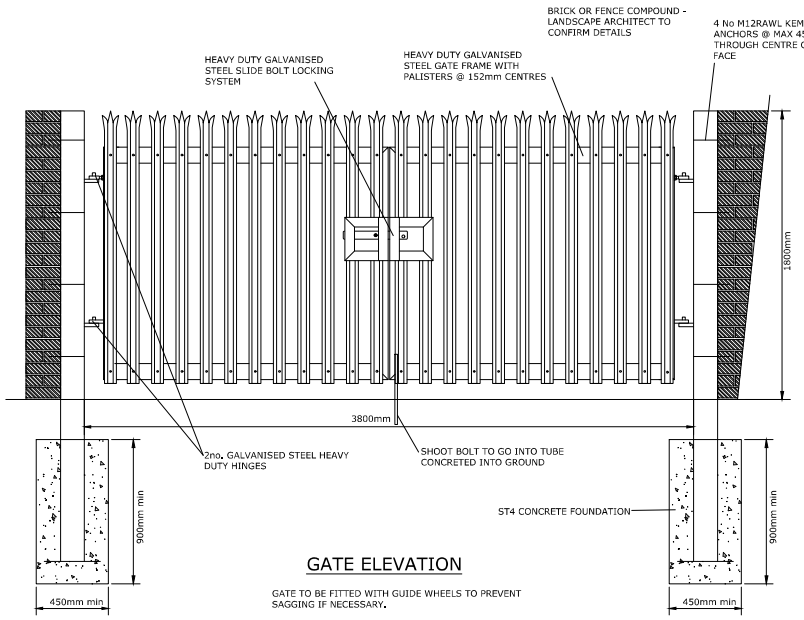
(FOR TRAFFICKED AREAS - WITH STORAGE WRAPPING)
Pipework shown indicatively only. See Drainage Layouts for locations and levels of pipework.

SIMILAR APPROVED CRATE SYSTEMS MAY BE USED IN PLACE OF AQUACELL

AQUACELL SURFACE WATER STORAGE DETAILS



RETAINING WALL TYPE C2
(1300mm max. retained height - Pedestrian & Light Vehicle Loading Only).



GATE ELEVATION

GATE TO BE FITTED WITH GUIDE WHEELS TO PREVENT SAGGING IF NECESSARY.

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Rev	Date	Amendment Details	Dr'n	Chk'	App'
P02	02.08.2022	Pump compound wall detail removed and gate detail amended. Crate detail added.	TC	TC	TC
P01	29.06.2022	FIRST ISSUE	TC	TC	TC

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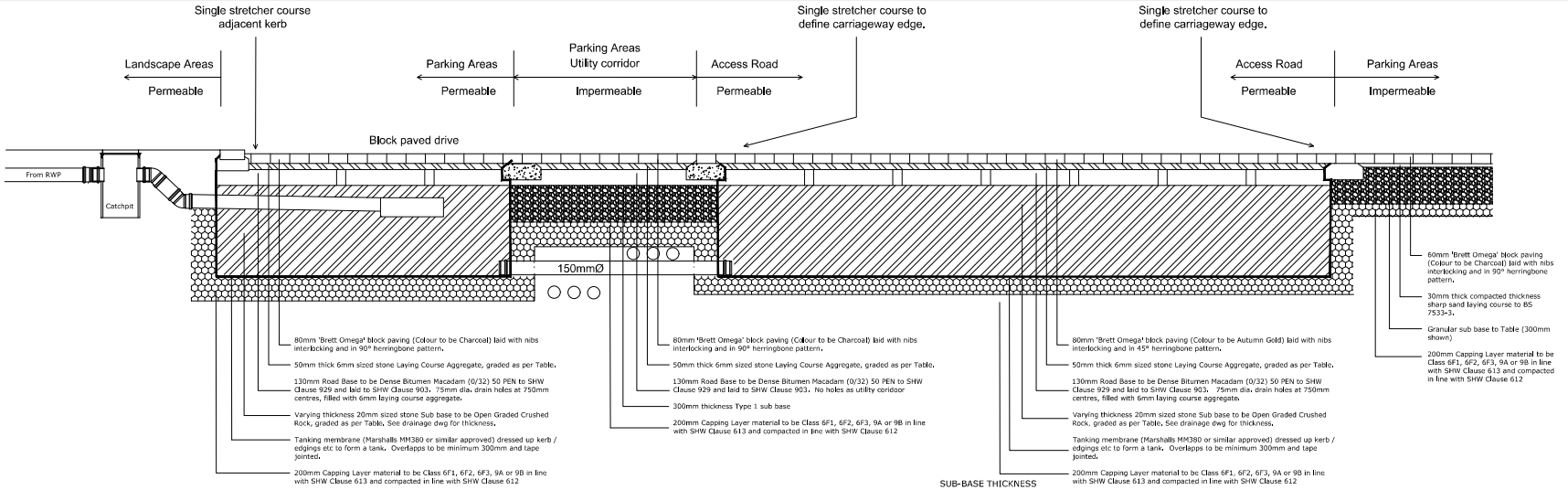
A1	N/A	-	P02

Drawing Number
65203468-SWE-ZZ-00-DR-C-0007

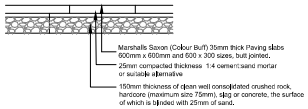


PERMEABLE BLOCK PAVED ROAD CONSTRUCTION
EMERGENCY & SERVICE VEHICLE USE (Cat 5)

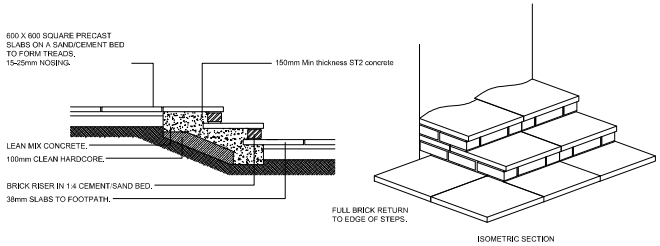
SUB-BASE THICKNESS

CBR VALUE	MINIMUM SUB-BASE THICKNESS
LESS THAN 2%	SEEK ENGINEERS ADVICE
2%-3%	325
3%-5%*	300
5%-7%	160
7%-20%	160

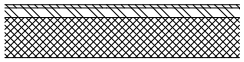
* 4% CBR ASSUMED SUBJECT TO ONSITE TESTING



Patio Paving Slab

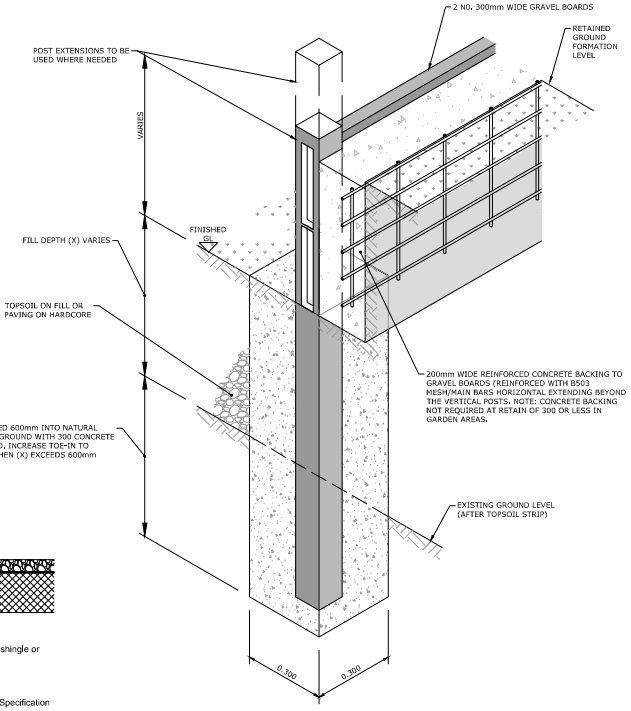


PATIO STEPS



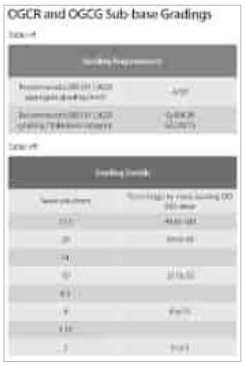
Surface course	20mm thick DBM (100/150 pen) with crushed rock aggregate to BS 4987 (group 3 mix). Colour to be black. 0/6mm size to clause 7.5
Binder course	60mm thick DBM (100/150 pen) with crushed rock aggregate to BS 4987 (group 2 mix). 0/20mm size to clause 6.5
Sub-base	250mm thick Type 1 Granular Material to DoT Specification Clause 803. 4% assumed in this design - see CBR table for varying CBR results and the affect on the pavement design.

DBM DRIVEWAY CONSTRUCTION



GRAVEL BOARDS 600mm MAX RETENTION

Laying Course Aggregate

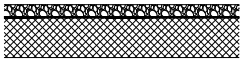


OGCR and OGCG Physical Properties

Table IX

Properties	Category to BS EN 13242 or BS 12620
Grading	4/20 (preferred) or 4/40, Gc 85-15, GTc 20/17.5
Fines Content	f4
Shape	FI_{35}
Resistance to Fragmentation	LA_{40}
Internal Angle of Friction	40°
Durability: Water absorption to BS EN 1097-6:2000+A1:2005, Clause 7 – for WA>2% - Magnesium sulphate soundness.	$WA_{24}2$ MS_{18}
Resistance to wear	$M_{DE}20$
Acid Soluble sulphate content: -aggregates other than air cooled blast furnace slag and -air cooled blast furnace slag	$AS_{0.2}$ $AS_{0.1}$
Total Sulphur: -aggregates other than air cooled blast furnace slag and -air cooled blast furnace slag	≤1% by mass ≤2% by mass
Volume stability of blast furnace and steel slags: air cooled blast furnace slag -steel slag	Free from dicalcium silicate and iron disintegration in accordance with BS EN 13242:2002+A1:2007, 6.4.2.2. V_c
Leaching of contaminants	Blast furnace slag and other recycled materials should meet the requirements of the Environment Agency "Waste Acceptance Criteria" A) for inert waste when tested in accordance with BS EN 12457-3

A) Guidance on waste acceptance criteria for inert waste is given in the Environment Agency's Guidance for waste destined for disposal in landfills



Surface course	60mm thick of 20mm nominal size stone. Pea shingle or similar. To be consistent size and colour.
Membrane	Permeable 'anti-weed' containment membrane
Sub-base	250mm thick Type 1 Granular Material to DoT Specification Clause 803.

GRAVEL CONSTRUCTION

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P01	06.07.2022	FIRST ISSUE	TC	TC	TC

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Drawing Number
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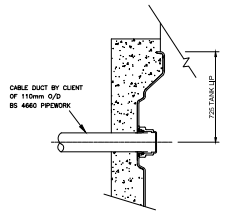
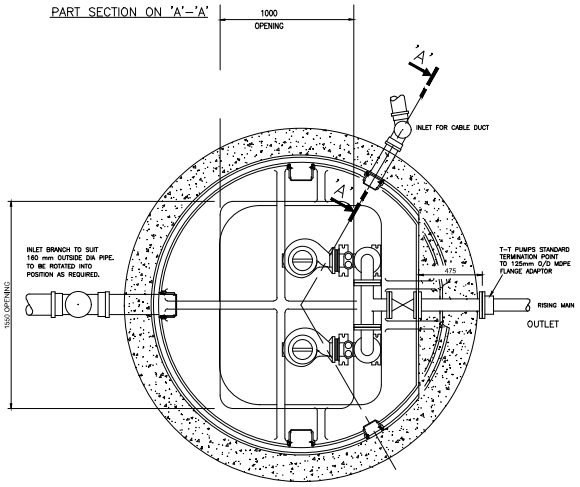
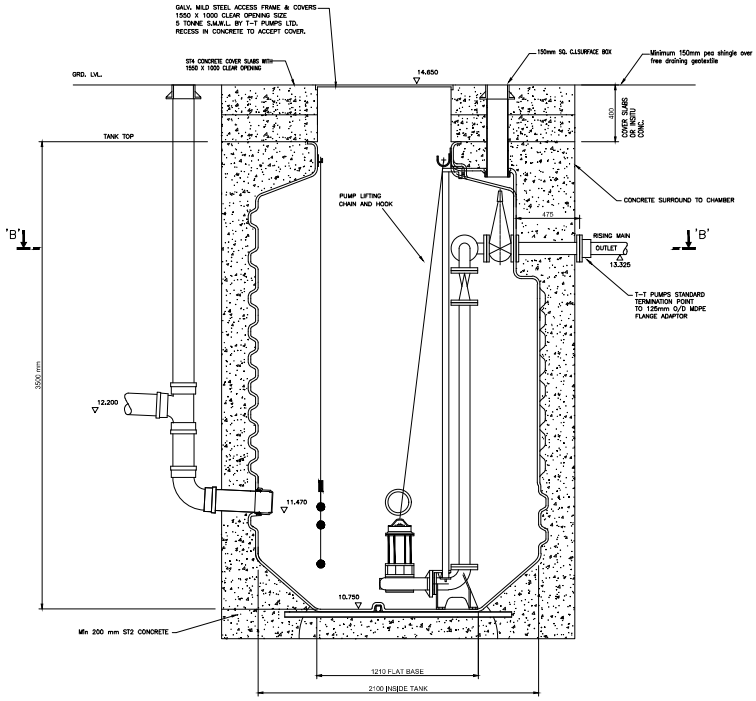


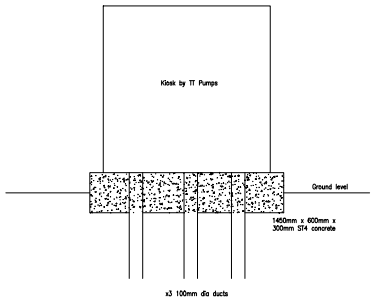


SECTIONAL PLAN VIEW 'B'–'B'

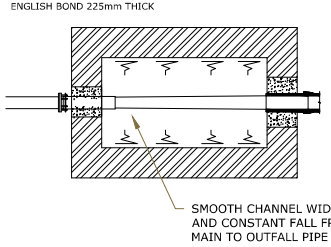


SECTIONAL ELEVATION ON OUTLET CENTRE LINE

SURFACE WATER PUMPING STATION

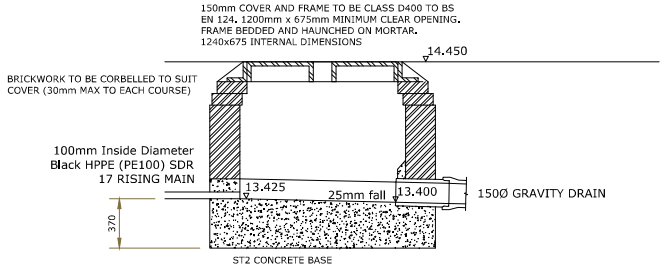


Kiosk base detail. See TT pumps control kiosk drawing for further details.



PLAN ON SURFACE WATER RISING MAIN OUTFALL CHAMBER

NTS



SURFACE WATER RISING MAIN OUTFALL CHAMBER SECTION

NTS

NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS, ARCHITECTS AND SPECIALISTS DRAWINGS AND THE SPECIFICATION.
2. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT BRITISH STANDARDS, EUROPEAN NORMS, CODES OF PRACTICE AND BUILDING PRACTICE.
3. ALL DIMENSIONS ARE TO BE CHECKED BY THE CONTRACTOR PRIOR TO STARTING THE WORKS ON SITE, ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER IMMEDIATELY.
4. FOR CIVIL & STRUCTURAL HEALTH & SAFETY HAZARDS PLEASE REFER TO DESIGNERS RISK ASSESSMENTS.
5. IF YOU DO NOT UNDERSTAND FULLY ANY OF THE DETAILS SHOWN ON THIS DRAWING CONTACT THE ENGINEER FOR CLARIFICATION.
6. BURIED CONCRETE SULPHATE CLASS AS PER SITE INVESTIGATION REPORT.

Rev	Date	Amendment Details	Dr'n	Chk'	App'
P04	16.11.2022	Backdrop reinstated Inlet moved and cable duct shown	TC	TC	TC
P03	16.11.2022	Chamber inlet invert amended Backdrop removed	TC	TC	TC
P02	11.11.2022	Chamber updated to revised cover detail. Kiosk detail added. Detail redrawn to reflect deeper chamber	TC	TC	TC
P01	06.07.2022	FIRST ISSUE	TC	TC	TC

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SWECO

Client
Aspire Designer Homes

Project Title
Vulcan Close

Drawing Title
Construction Details
Sheet 6

Purpose Of Issue
PRELIMINARY

Status	Status Description
S0	INITIAL STATUS OR WIP

Designed	Drawn	Checked	Approved
TC	TC	-	-

Sheet Size	Scale	SWECO Ref	Revision
A1	N/A	-	P04

Drawing Number
65203468-SWE-ZZ-00-DR-C-0010

Appendix C – Design Calculations

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S1.000	46.790	0.240	195.0	0.114	3.00	0.0	0.600	o	150	Pipe/Conduit	
S2.000	3.106	0.053	58.6	0.004	3.00	0.0	0.600	o	100	Pipe/Conduit	
S3.000	12.280	0.210	58.5	0.013	3.00	0.0	0.600	o	100	Pipe/Conduit	
S1.001	16.446	0.175	94.0	0.000	0.00	0.0	0.600	o	100	Pipe/Conduit	
S4.000	8.474	0.080	105.9	0.041	3.00	0.0	0.600	o	150	Pipe/Conduit	
S4.001	11.109	0.140	79.4	0.009	0.00	0.0	0.600	o	150	Pipe/Conduit	
S4.002	11.337	0.075	151.2	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S5.000	8.012	0.040	200.3	0.042	3.00	0.0	0.600	o	150	Pipe/Conduit	
S5.001	0.904	0.090	10.0	0.020	0.00	0.0	0.600	o	150	Pipe/Conduit	
S4.003	4.433	0.100	44.3	0.006	0.00	0.0	0.600	o	225	Pipe/Conduit	
S4.004	12.842	0.200	64.2	0.006	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.002	23.803	0.225	105.8	0.045	0.00	0.0	0.600	o	300	Pipe/Conduit	
S6.000	19.568	0.160	122.3	0.036	3.00	0.0	0.600	o	225	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S1.000	0.00	4.09	13.140	0.114	0.0	0.0	0.0	0.72	12.7	0.0
S2.000	0.00	3.05	13.550	0.004	0.0	0.0	0.0	1.01	7.9	0.0
S3.000	0.00	3.20	13.700	0.013	0.0	0.0	0.0	1.01	7.9	0.0
S1.001	0.00	4.43	12.900	0.131	0.0	0.0	0.0	0.79	6.2	0.0
S4.000	0.00	3.14	13.270	0.041	0.0	0.0	0.0	0.98	17.2	0.0
S4.001	0.00	3.31	13.190	0.050	0.0	0.0	0.0	1.13	20.0	0.0
S4.002	0.00	3.49	12.975	0.050	0.0	0.0	0.0	1.06	42.2	0.0
S5.000	0.00	3.19	13.210	0.042	0.0	0.0	0.0	0.71	12.5	0.0
S5.001	0.00	3.19	13.170	0.062	0.0	0.0	0.0	3.20	56.6	0.0
S4.003	0.00	3.52	12.900	0.118	0.0	0.0	0.0	1.97	78.3	0.0
S4.004	0.00	3.66	12.800	0.124	0.0	0.0	0.0	1.63	65.0	0.0
S1.002	0.00	4.69	12.525	0.300	0.0	0.0	0.0	1.53	108.0	0.0
S6.000	0.00	3.28	13.170	0.036	0.0	0.0	0.0	1.18	47.0	0.0

STORM SEWER DESIGN by the Modified Rational Method

Network Design Table for Storm

PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design
S6.001	2.990	0.300	10.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.003	7.114	0.050	142.3	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S7.000	7.144	0.095	75.2	0.024	3.00	0.0	0.600	o	150	Pipe/Conduit	
S7.001	2.035	0.204	10.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit	
S1.004	6.797	0.050	135.9	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit	
S1.005	2.919	0.020	146.0	0.000	0.00	0.0	0.600	o	150	Pipe/Conduit	

Network Results Table

PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)
S6.001	0.00	3.29	13.010	0.036	0.0	0.0	0.0	4.17	165.8	0.0
S1.003	0.00	4.78	12.300	0.336	0.0	0.0	0.0	1.32	93.0	0.0
S7.000	0.00	3.10	12.960	0.024	0.0	0.0	0.0	1.16	20.5	0.0
S7.001	0.00	3.11	12.790	0.024	0.0	0.0	0.0	4.17	165.7	0.0
S1.004	0.00	4.87	12.250	0.360	0.0	0.0	0.0	1.35	95.2	0.0
S1.005	0.00	4.93	12.200	0.360	0.0	0.0	0.0	0.83	14.7	0.0

Area Summary for Storm

Pipe Number	PIMP Type	PIMP Name	PIMP (%)	Gross Area (ha)	Imp. Area (ha)	Pipe Total (ha)
1.000	-	-	100	0.114	0.114	0.114
2.000	-	-	100	0.004	0.004	0.004
3.000	-	-	100	0.013	0.013	0.013
1.001	-	-	100	0.000	0.000	0.000
4.000	-	-	100	0.041	0.041	0.041
4.001	-	-	100	0.009	0.009	0.009
4.002	-	-	100	0.000	0.000	0.000
5.000	-	-	100	0.042	0.042	0.042
5.001	-	-	100	0.020	0.020	0.020
4.003	-	-	100	0.006	0.006	0.006
4.004	-	-	100	0.006	0.006	0.006
1.002	-	-	100	0.045	0.045	0.045
6.000	-	-	100	0.036	0.036	0.036
6.001	-	-	100	0.000	0.000	0.000
1.003	-	-	100	0.000	0.000	0.000
7.000	-	-	100	0.024	0.024	0.024
7.001	-	-	100	0.000	0.000	0.000
1.004	-	-	100	0.000	0.000	0.000
1.005	-	-	100	0.000	0.000	0.000
				Total	Total	Total
				0.360	0.360	0.360

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
S1.005	S	14.550	12.180	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH	Site Location		D2 (1km)	0.000
Return Period (years)	100	C (1km)	0.000	D3 (1km)	0.000
FEH Rainfall Version	1999	D1 (1km)	0.000	E (1km)	0.000

Synthetic Rainfall Details

F (1km)	0.000	Winter Storms	Yes	Cv (Winter)	0.840
Summer Storms	Yes	Cv (Summer)	0.750	Storm Duration (mins)	30

Online Controls for Storm

Hydro-Brake® Optimum Manhole: SSW10, DS/PN: S1.001, Volume (m³): 2.5

Unit Reference	MD-SHE-0046-1000-1100-1000
Design Head (m)	1.100
Design Flow (l/s)	1.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	46
Invert Level (m)	12.900
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.100	1.0
Flush-Flo™	0.200	0.8
Kick-Flo®	0.408	0.6
Mean Flow over Head Range	-	0.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.7	1.200	1.0	3.000	1.6	7.000	2.3
0.200	0.8	1.400	1.1	3.500	1.7	7.500	2.4
0.300	0.8	1.600	1.2	4.000	1.8	8.000	2.5
0.400	0.7	1.800	1.2	4.500	1.9	8.500	2.5
0.500	0.7	2.000	1.3	5.000	2.0	9.000	2.6
0.600	0.8	2.200	1.4	5.500	2.1	9.500	2.7
0.800	0.9	2.400	1.4	6.000	2.2		
1.000	1.0	2.600	1.5	6.500	2.2		

Pump Manhole: SSWPS, DS/PN: S1.005, Volume (m³): 3.1

Invert Level (m) 12.200

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.001	18.0000	5.000	18.0000

Storage Structures for Storm

Porous Car Park Manhole: SSW9, DS/PN: S1.000

Infiltration Coefficient Base (m/hr)	0.00000	Width (m)	22.6
Membrane Percolation (mm/hr)	1000	Length (m)	25.0
Max Percolation (l/s)	156.9	Slope (1:X)	500.0
Safety Factor	2.0	Depression Storage (mm)	5
Porosity	0.30	Evaporation (mm/day)	3
Invert Level (m)	13.400	Cap Volume Depth (m)	0.650

Cellular Storage Manhole: SSW7, DS/PN: S1.003

Invert Level (m)	12.300	Safety Factor	2.0
Infiltration Coefficient Base (m/hr)	0.00000	Porosity	0.95
Infiltration Coefficient Side (m/hr)	0.00000		

Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	66.5	0.0	1.201	0.0	0.0
1.200	66.5	0.0			

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 608500 165050 TR 08500 65050
Data Type	Catchment
Cv (Summer)	0.750
Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	450.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	OFF
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 40, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S1.000	SSW9	360 Winter	2	+0%	2/60 Summer			
S2.000	SPPIC	60 Summer	2	+0%	30/120 Summer			
S3.000	SPPIC	60 Summer	2	+0%	100/120 Winter	100/960 Winter		
S1.001	SSW10	60 Summer	2	+0%	2/60 Summer			
S4.000	SSW1	60 Summer	2	+0%	100/60 Summer			
S4.001	SSW2	60 Summer	2	+0%	100/60 Summer			
S4.002	SSW3	60 Summer	2	+0%	100/60 Summer			
S5.000	SHD1	60 Summer	2	+0%	30/60 Summer			
S5.001	SHD2	60 Summer	2	+0%	100/60 Summer			
S4.003	SSW4	60 Summer	2	+0%	100/60 Summer			
S4.004	SSW5	60 Summer	2	+0%	100/60 Summer			
S1.002	SSW6	60 Summer	2	+0%	30/60 Winter			
S6.000	SHD3	60 Summer	2	+0%				
S6.001	SHD4	60 Summer	2	+0%				
S1.003	SSW7	60 Summer	2	+0%	30/60 Summer			

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
S1.000	SSW9	13.504	0.214	0.000	0.11		217	1.3	SURCHARGED
S2.000	SPPIC	13.566	-0.084	0.000	0.06			0.4	OK
S3.000	SPPIC	13.728	-0.072	0.000	0.17			1.3	OK
S1.001	SSW10	13.525	0.525	0.000	0.13			0.8	SURCHARGED
S4.000	SSW1	13.323	-0.097	0.000	0.27			4.0	OK
S4.001	SSW2	13.243	-0.097	0.000	0.27			4.8	OK
S4.002	SSW3	13.029	-0.171	0.000	0.13			4.8	OK
S5.000	SHD1	13.274	-0.086	0.000	0.38			4.1	OK
S5.001	SHD2	13.227	-0.093	0.000	0.31			5.8	OK
S4.003	SSW4	12.976	-0.149	0.000	0.25			11.1	OK
S4.004	SSW5	12.869	-0.156	0.000	0.21			11.7	OK
S1.002	SSW6	12.607	-0.218	0.000	0.17			16.2	OK
S6.000	SHD3	13.213	-0.182	0.000	0.08			3.5	OK
S6.001	SHD4	13.041	-0.194	0.000	0.05			3.5	OK
S1.003	SSW7	12.402	-0.198	0.000	0.25		21	15.4	OK

PN	US/MH Name	Level Exceeded
S1.000	SSW9	
S2.000	SPPIC	
S3.000	SPPIC	1
S1.001	SSW10	
S4.000	SSW1	
S4.001	SSW2	
S4.002	SSW3	
S5.000	SHD1	
S5.001	SHD2	
S4.003	SSW4	
S4.004	SSW5	
S1.002	SSW6	
S6.000	SHD3	
S6.001	SHD4	
S1.003	SSW7	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S7.000	SSW11	60 Summer	2	+0%	100/60 Winter				12.996
S7.001	SSW12	60 Summer	2	+0%	100/60 Summer				12.818
S1.004	SSW8	60 Summer	2	+0%	30/60 Summer				12.356
S1.005	SSWPS	60 Summer	2	+0%	30/60 Summer				12.201

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S7.000	SSW11	-0.114	0.000	0.13			2.4	OK	
S7.001	SSW12	-0.197	0.000	0.04			2.4	OK	
S1.004	SSW8	-0.194	0.000	0.27			16.9	OK	
S1.005	SSWPS	-0.149	0.000	1.58			16.8	OK	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 608500 165050 TR 08500 65050
Data Type	Catchment
Cv (Summer)	0.750
Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	450.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	OFF
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 40, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S1.000	SSW9	720 Winter	30	+40%	2/60 Summer			
S2.000	SPPIC	720 Winter	30	+40%	30/120 Summer			
S3.000	SPPIC	720 Winter	30	+40%	100/120 Winter	100/960 Winter		
S1.001	SSW10	720 Winter	30	+40%	2/60 Summer			
S4.000	SSW1	60 Summer	30	+40%	100/60 Summer			
S4.001	SSW2	60 Summer	30	+40%	100/60 Summer			
S4.002	SSW3	60 Summer	30	+40%	100/60 Summer			
S5.000	SHD1	60 Summer	30	+40%	30/60 Summer			
S5.001	SHD2	60 Summer	30	+40%	100/60 Summer			
S4.003	SSW4	60 Summer	30	+40%	100/60 Summer			
S4.004	SSW5	60 Summer	30	+40%	100/60 Summer			
S1.002	SSW6	60 Winter	30	+40%	30/60 Winter			
S6.000	SHD3	60 Summer	30	+40%				
S6.001	SHD4	60 Summer	30	+40%				
S1.003	SSW7	60 Winter	30	+40%	30/60 Summer			

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
S1.000	SSW9	13.799	0.509	0.000	0.07		659	0.9	SURCHARGED
S2.000	SPPIC	13.792	0.142	0.000	0.03			0.2	SURCHARGED
S3.000	SPPIC	13.793	-0.007	0.000	0.08			0.6	OK
S1.001	SSW10	13.792	0.792	0.000	0.15			0.9	SURCHARGED
S4.000	SSW1	13.377	-0.043	0.000	0.85			12.9	OK
S4.001	SSW2	13.298	-0.042	0.000	0.87			15.6	OK
S4.002	SSW3	13.085	-0.115	0.000	0.44			15.6	OK
S5.000	SHD1	13.375	0.015	0.000	1.22			13.2	SURCHARGED
S5.001	SHD2	13.319	-0.001	0.000	1.00			18.8	OK
S4.003	SSW4	13.055	-0.070	0.000	0.81			36.2	OK
S4.004	SSW5	12.937	-0.088	0.000	0.68			38.0	OK
S1.002	SSW6	12.864	0.039	0.000	0.43			41.2	SURCHARGED
S6.000	SHD3	13.249	-0.146	0.000	0.27			11.3	OK
S6.001	SHD4	13.067	-0.168	0.000	0.15			11.3	OK
S1.003	SSW7	12.837	0.237	0.000	0.32		31	19.6	SURCHARGED

PN	US/MH Name	Level Exceeded
S1.000	SSW9	
S2.000	SPPIC	
S3.000	SPPIC	1
S1.001	SSW10	
S4.000	SSW1	
S4.001	SSW2	
S4.002	SSW3	
S5.000	SHD1	
S5.001	SHD2	
S4.003	SSW4	
S4.004	SSW5	
S1.002	SSW6	
S6.000	SHD3	
S6.001	SHD4	
S1.003	SSW7	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S7.000	SSW11	60 Summer	30	+40%	100/60 Winter				13.028
S7.001	SSW12	60 Summer	30	+40%	100/60 Summer				12.841
S1.004	SSW8	60 Winter	30	+40%	30/60 Summer				12.834
S1.005	SSWPS	60 Winter	30	+40%	30/60 Summer				12.829

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S7.000	SSW11	-0.082	0.000	0.43			7.5	OK	
S7.001	SSW12	-0.174	0.000	0.12			7.5	OK	
S1.004	SSW8	0.284	0.000	0.36			21.9	SURCHARGED	
S1.005	SSWPS	0.479	0.000	1.69			18.0	SURCHARGED	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coeffiecient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	2
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 608500 165050 TR 08500 65050
Data Type	Catchment
Cv (Summer)	0.750
Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	450.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	OFF
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 40, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S1.000	SSW9	960 Winter	100	+45%	2/60 Summer			
S2.000	SPPIC	960 Winter	100	+45%	30/120 Summer			
S3.000	SPPIC	960 Winter	100	+45%	100/120 Winter	100/960 Winter		
S1.001	SSW10	960 Winter	100	+45%	2/60 Summer			
S4.000	SSW1	60 Summer	100	+45%	100/60 Summer			
S4.001	SSW2	60 Summer	100	+45%	100/60 Summer			
S4.002	SSW3	60 Winter	100	+45%	100/60 Summer			
S5.000	SHD1	60 Summer	100	+45%	30/60 Summer			
S5.001	SHD2	60 Summer	100	+45%	100/60 Summer			
S4.003	SSW4	60 Winter	100	+45%	100/60 Summer			
S4.004	SSW5	60 Winter	100	+45%	100/60 Summer			
S1.002	SSW6	60 Winter	100	+45%	30/60 Winter			
S6.000	SHD3	60 Summer	100	+45%				
S6.001	SHD4	60 Winter	100	+45%				
S1.003	SSW7	60 Winter	100	+45%	30/60 Summer			

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
S1.000	SSW9	14.279	0.989	0.000	0.09			1.1	FLOOD RISK
S2.000	SPPIC	14.270	0.620	0.000	0.03			0.2	FLOOD RISK
S3.000	SPPIC	14.270	0.470	0.040	0.09			0.7	FLOOD
S1.001	SSW10	14.270	1.270	0.000	0.18			1.1	FLOOD RISK
S4.000	SSW1	13.488	0.068	0.000	1.12			17.0	SURCHARGED
S4.001	SSW2	13.383	0.043	0.000	1.15			20.7	SURCHARGED
S4.002	SSW3	13.311	0.111	0.000	0.46			16.4	SURCHARGED
S5.000	SHD1	13.495	0.135	0.000	1.59			17.2	SURCHARGED
S5.001	SHD2	13.390	0.070	0.000	1.35			25.4	SURCHARGED
S4.003	SSW4	13.295	0.170	0.000	0.86			38.3	SURCHARGED
S4.004	SSW5	13.228	0.203	0.000	0.71			39.6	SURCHARGED
S1.002	SSW6	13.184	0.359	0.000	0.53			51.1	SURCHARGED
S6.000	SHD3	13.263	-0.132	0.000	0.36			15.3	OK
S6.001	SHD4	13.143	-0.092	0.000	0.15			11.8	OK
S1.003	SSW7	13.141	0.541	0.000	0.33		43	20.2	SURCHARGED

PN	US/MH Name	Level Exceeded
S1.000	SSW9	
S2.000	SPPIC	
S3.000	SPPIC	1
S1.001	SSW10	
S4.000	SSW1	
S4.001	SSW2	
S4.002	SSW3	
S5.000	SHD1	
S5.001	SHD2	
S4.003	SSW4	
S4.004	SSW5	
S1.002	SSW6	
S6.000	SHD3	
S6.001	SHD4	
S1.003	SSW7	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S7.000	SSW11	60 Winter	100	+45%	100/60 Winter				13.146
S7.001	SSW12	60 Winter	100	+45%	100/60 Summer				13.137
S1.004	SSW8	60 Winter	100	+45%	30/60 Summer				13.136
S1.005	SSWPS	60 Winter	100	+45%	30/60 Summer				13.128

PN	US/MH Name	Surcharged Depth (m)	Flooded Volume (m^3)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S7.000	SSW11	0.036	0.000	0.45			7.9	SURCHARGED	
S7.001	SSW12	0.122	0.000	0.12			7.9	SURCHARGED	
S1.004	SSW8	0.586	0.000	0.37			22.4	SURCHARGED	
S1.005	SSWPS	0.778	0.000	1.69			18.0	SURCHARGED	

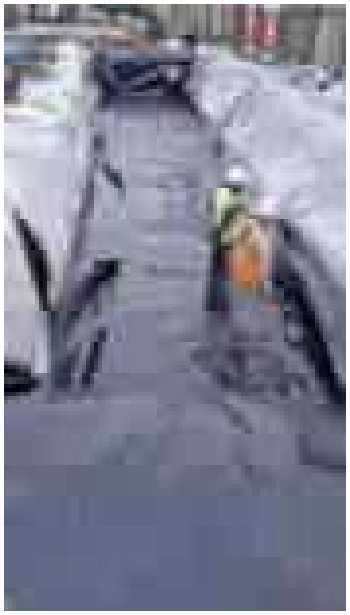
Appendix D – As Built drawings

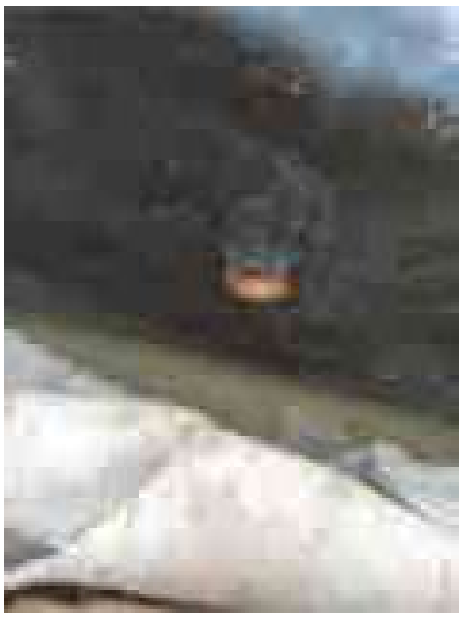

Wooden Fence
Wooden Fence
Palisade Fence
1
2
3
4
5
THE COTTAGE
Footpath
6
7
8
9
10
11
12
13
14
Metal Mesh Fence
Metal Mesh Fence
Wooden Fence
Wooden Fence
Hoarding

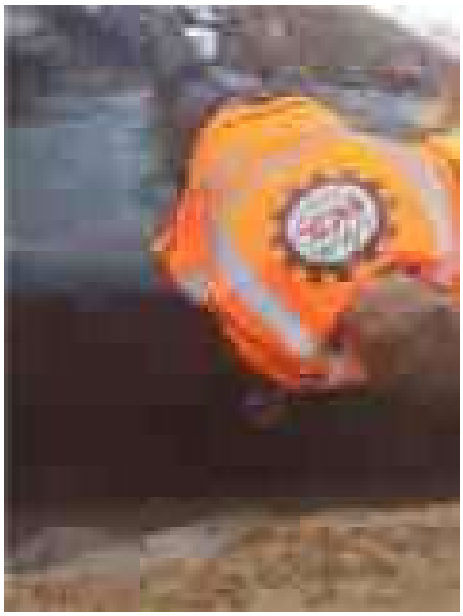
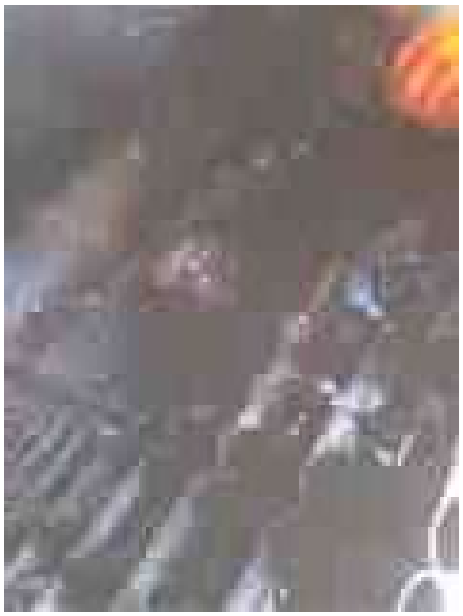
Appendix E – As Built Crate Photos










Appendix F – Pumping Station Commissioning sheet and photos

T-T Projects Engineer's Report

K11788 SW / ASPIRE DESIGNER HOMES /
Commissioning / Planned / Projects 2

Complete

Score	29 / 29 (100%)	Flagged items	1	Actions	0

Project Ref	K11788 SW
Client	ASPIRE DESIGNER HOMES
Site Contact	Chris
Telephone	07778 119466
Site Attended By	Projects 2
Visit Type	Commissioning
Planned or Unexpected Return Visit?	Planned
Location	Vulcan Close Whitstable Kent CT5 4LZ United Kingdom (51.34919858045128, 1.0178081164183812)
What3Words (app) Exact location Details	///twigs.burden.grunt

Flagged items	1 flagged
Gas Readings	
Confined Space Entry Required?	Yes

Report	21 / 21 (100%)

Site Health and Safety

Induction Completed	Yes
Permits Recieved	N/A
Report Type	K Job Installation and Commissioning

Critical Electrical Supply Characteristics

2 / 2 (100%)

Electrical Supply	3ph N + E
Electrical Supply Direct from Distribution Network Operator	No

No to above would infer supply from another building, Distribution Board or generator source etc. - Enter Details

Distribution board fed from TNC-S supply within kiosk

Project Details

Liquid	Storm Water
Temporary Lifting for Install Purposes	T-T Equipment
Style	Jupiter
Pump Connection	Duckfoot Autocoupling
Condition of Construction	No Issues
Is Site Ready in Accordance with Received Checklist?	Yes

Test Meters Used

2 / 2 (100%)

Test Meters Used 1

1 / 1 (100%)

Test Meter Description	T-243 MEGGER MFT1721-BS MULTIFUNCTION TESTER

Test Meters Used 2

1 / 1 (100%)

Test Meter Description	T-262 CLAMPMETER AMPROBE AMP-220

Visual Inspection

Harness	Pass
Tripod	Pass
PPE (Hard Hat / Steel Toe Cap Boots Etc)	Pass

Key Components

17 / 17 (100%)

1. Power Connected to the Panel **• Check correct voltage (230V / 400V)**	Yes
2. Drilled Panel and Installed Glands	Yes
3. Guide Rail System Installed	Yes
4. Lifting Chains Put Onto Pumps	Yes
5. Pump Rotation Check	Pass
6. Lowered Pumps into Chamber	Yes
7. Float Switch Assembly Made **• Chain Cut to Correct Length** **• Floats Installed in Chamber**	Yes
8. Junction Boxes Installed	N/A
9. Cables Pulled Through Duct into Junction Boxes/Control Panel	Yes
10. Terminated Cables in Junction Box(es)/Control Panel	Yes
11. Valve Opened	Yes
12. Pumps Run Check	Pass
13. Check Running Current With Both Pumps in Auto	Pass
14. Float Sequence Checked	Pass
15. Overloads Set Up	Yes
16. Stop Level Checked	Pass
17. Ducts Foamed	Yes

Photo

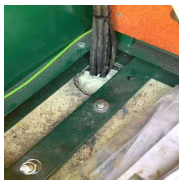


Photo 1

18. Check Telemetry for Signal and Function	No Faults
Telemetry Unit Telephone No:	N.a
Dial Out No 1: **(Main number programmed at commissioning stage to be recorded - any additional numbers available in telemetry manual)**	N.a

Screenshot of Completed Test

Photo 2

19. Station Left	Switched On in Auto

Pumps / Motors / Other Equipment	3 / 3 (100%)

Pumps / Motors

2 / 2 (100%)

No of Pumps / Motors Checked	2

Pump / Motor

1 / 1 (100%)

Pump / Motor 1	1 / 1 (100%)
Pump / Motor	1
Starting Method	DOL
Serial No	300030693
Pump / Motor Type	DGG 300/4/100
Full Load Current (A)	5.2
Winding Resistance (Ω)	6.36 x3
Insulation Resistance (MΩ) Please Note: Insulation Resistance MUST be greater than 1 MΩ to meet electrical safety standards	>999 x3
Capacitors (µf)	N.a
Starting Amps (A)	14.4
Running Amps (A)	5.57
Hours Run	N.a
Impeller Rotation/Direction Physically checked	Yes

Photo 3

Pump / Motor Removed?	No

Pump / Motor

1 / 1 (100%)

Pump / Motor	2
Starting Method	DOL

Serial No	300030694
Pump / Motor Type	DGG 300/4/100
Full Load Current (A)	5.2
Winding Resistance (Ω)	6.35 x3
Insulation Resistance (MΩ) **Please Note: Insulation Resistance MUST be greater than 1 MΩ to meet electrical safety standards**	>999 x3
Capacitors (µf)	N.a
Starting Amps (A)	13.95
Running Amps (A)	5.56
Hours Run	N.a
Impeller Rotation/Direction Physically checked	Yes

Photo 4

Pump / Motor Removed?	No

Equipment Status

Equipment Present?	Yes
Supply Type	400V 3Ph-N 50Hz
Pump Power Rating (kW)	2.2
Control Voltage	24V AC

Other Relevant Equipment

1 / 1 (100%)

Ultrasonic Present and settings not changed from TT Test Parameters - these are as per US parameter sheet TT-214 issued by TTC Design	N/A
Other Relevant Equipment?	N/A

End of Report 2 / 2 (100%)

Engineers Report and Details of Additional Work

2 / 2 (100%)

Engineer's Notes and Recommendations

Arrived onsite and received induction from site manager Gary
Arrived at pumping station and site electrician was powering up panel. This wasn't complete until 10:00
Pumps and parts brought over to work area
Kiosk bolted and to plinth and sealed
Gate valve spindle fitted
Chains fitted to pumps
Pump rotation checked
Floats made up on chain
Panel drilled and glands fitted
Pumps lowered into position
Cables pulled through duct and terminated into panel
Upon testing floats we found that the high level float was faulty
TT office contacted and new float sent out for next day delivery

2nd day
Electrical testing carried out on pumps
Waited for float delivery until 9:45
Once arrived faulty float removed from wet well and new float installed on chain, pulled through duct and terminated into panel
Floats tested
Chris, the site contact, asked us to remove the audible alarm as it would be a nuisance to neighbouring properties. Mute relay removed and left in panel.
Seer unit end to end test completed with Ethan from TTC.
Station pumped down to stop level, note: inlet pipe not yet fully made through, plastic cap needs cutting off.
duct sealed
Panel left switched on and in auto

Supply to panel is only on a 6A type C, MCB, panel runs but occasionally tripped on start up when pumps run in auto, client made aware

Panel and Kiosk seer labels required


Photo 5


Photo 6

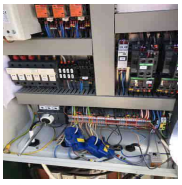


Photo 7


Photo 8


Photo 9


Photo 10


Photo 11


Photo 12


Photo 13


Photo 14


Photo 15

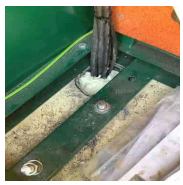


Photo 16


Photo 17

Parts Required to Complete

Kiosk and panel seer labels

Parts Missing from Parts List

N.a

Parts Left on Site - (Responsibility & Protection of parts by the Client) Yes

Brief Description

T key, lifting keys

Photos


Photo 18


Photo 19


Photo 20


Photo 21

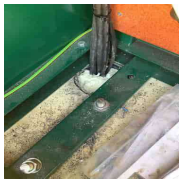


Photo 22


Photo 23

Kiosk Keys Handed to (State Name) Already on site

T-T Site Supervisor

2 / 2 (100%)

Name and Signature

Sam COXON
10.08.2023 14:43 BST

Accompanying Engineer 2 / 2 (100%)

Accompanying Engineer 1 1 / 1 (100%)

Name	Christian Spencer

Accompanying Engineer 2 1 / 1 (100%)

Name	Dan Royles
Report Signed Off as	Revisit Required

Customer Present?	Yes

Customer Name and Signature

Gary collins
10.08.2023 14:23 BST

Exiting Site - HouseKeeping

1 / 1 (100%)

All TT Packaging/Rubbish/Waste removed from site

Yes

On site skip used

Photo 24

All surrounding area's left free of obstacles, clean & Tidy (Unless Stated on previous issues within report)

☑

Area clean

Photo 25

Product removed from site to be returned / disposed of at TT works for appropriate repair/ disposed of in applicable waste stream

No

Site Attendance Record

Day

Day 1

Date and Time On-Site	09.08.2023 07:30 BST
Date and Time Off-Site	09.08.2023 16:00 BST

Day 2

Date and Time On-Site	10.08.2023 09:00 BST
Date and Time Off-Site	10.08.2023 14:30 BST

Gas Readings	1 flagged, 2 / 2 (100%)
Confined Space Entry Required?	Yes

Gas Monitor Readings

2 / 2 (100%)

Gas Monitor Description	GM-034 TETRA 3 W277976/00-1

Gas Monitor Reading

1 / 1 (100%)

Gas Monitor Reading 1	1 / 1 (100%)
Time Taken	10.08.2023 10:15 BST
O2 / H2S / CH4 / CO / LEL	20.8,0,0,0
Above Reading Acceptable?	Yes

Media summary

Photo 1

Photo 2

Photo 3

Photo 4

Photo 5

Photo 6

Photo 7

Photo 8

Photo 9

Photo 10

Photo 11

Photo 12

Photo 13

Photo 14

Photo 15

Photo 16

Photo 17

Photo 18

Photo 19

Photo 20

Photo 21

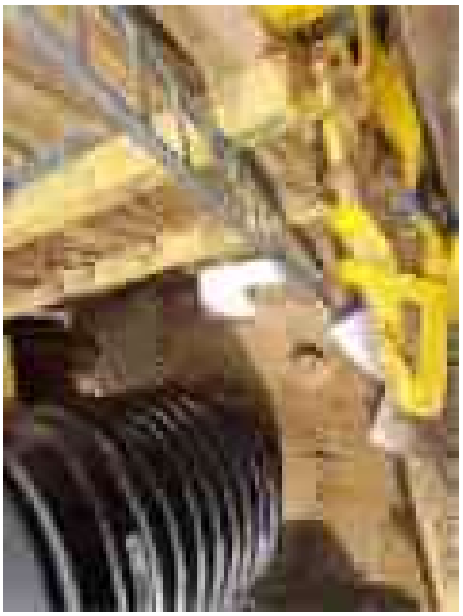
Photo 22

Photo 23

Photo 24

Photo 25



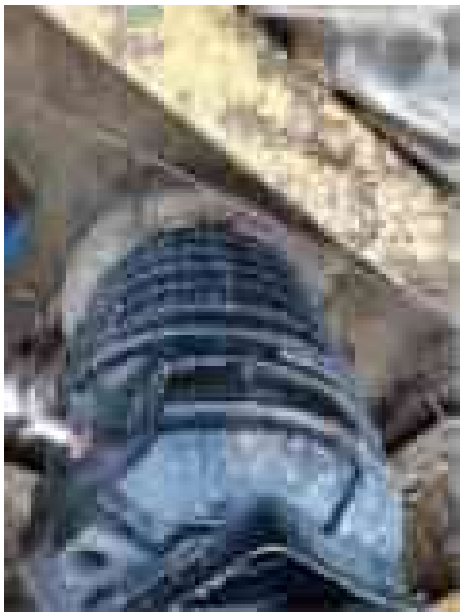



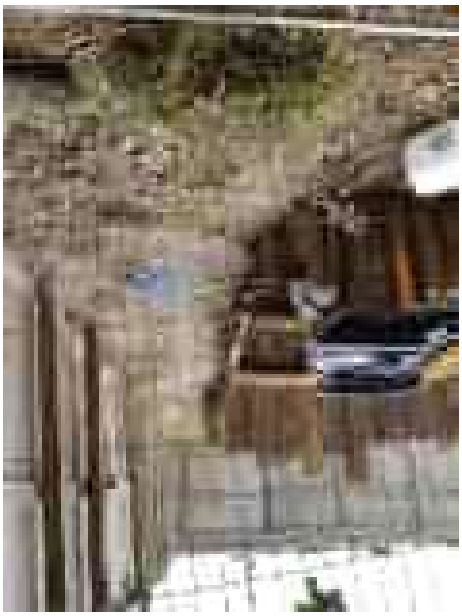
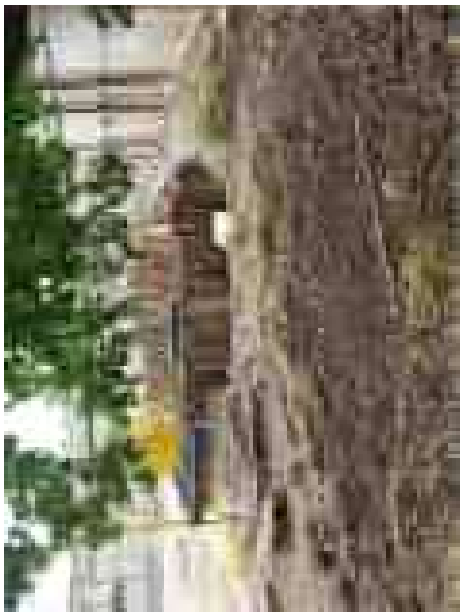










Appendix G – CCTV Survey

Project ref: TV240428

27th April 2024

CLIENT: ASPIRE DESIGNER HOMES

SITE: Vulcan Close

Whitstable

CT5 4LZ

CCTV Survey Report

Sewer Inspection, Cleaning and Repair

www.insewer.co.uk

Tel : 01634 861 768

WEB PROJECT

OPEN THIS SECTION

Embedded video links within report for online viewing

InSewer Surveys
16A Revenge Road, Chatham
Tel. 01634 861 768
liam@insewer.co.uk

Project Information

Project Name	Project Number	Project Date
TV240428		27/04/2024

Client

Company: Aspire Designer Homes
Contact: Chris Wills

Site

Street: Vulcan Close
Town or City: Whitstable
Post Code: CT5 4LZ

Contractor

Company: InSewer Surveys
Contact: Liam Sellar
Street: 16A Revenge Road
Town or City: Chatham
County: Kent
Post Code: ME5 8UD
Phone: 01634 861 768
Fax: 01634 201 376
Mobile: 07802 660 752
Email: liam@insewer.co.uk

InSewer Surveys
16A Revenge Road, Chatham
Tel. 01634 861 768
liam@insewer.co.uk

Table of Contents

Project Name	Project Number	Project Date
TV240428		27/04/2024

InSewer Surveys
16A Revenge Road, Chatham
Tel. 01634 861 768
liam@insewer.co.uk

Table of Contents

Project Name	Project Number	Project Date
TV240428		27/04/2024

InSewer Surveys
16A Revenge Road, Chatham
Tel. 01634 861 768
liam@insewer.co.uk

Scoring Summary

Project Name	Project Number	Project Date
TV240428		27/04/2024

Structural Defects

Section	PLR	Grade	Description
All inspected pipes are in an acceptable structural condition (< grade 3).			

Service / Operational Condition

Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.

Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.

Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
5	ExSWMH1X	3	Joint displaced, medium
11	RE1X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss
13	FW5X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss
15	SW6X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish
18	SW8X	3	Settled deposits, hard or compacted, 10% cross-sectional area loss
19	FW8X	4	Settled deposits, hard or compacted, 50% cross-sectional area loss
21	SW7X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss
22	SW10X	3	Settled deposits, hard or compacted, 10% cross-sectional area loss
23	SW9X	3	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish
24	RE3X	3	Settled deposits, fine, 5% cross-sectional area loss
28	FW10X	3	Multiple defects
35	SW16X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish
36	SW17X	3	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish
38	SW18X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish
42	GULLY 3X	3	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish
43	GULLY 4X	4	Settled deposits, hard or compacted, 20% cross-sectional area loss, finish
44	GULLY 5X	3	Multiple defects

Abandoned Surveys

Section	PLR	Description
32	SW15-CX	Survey abandoned
44	GULLY 5X	Survey abandoned

Information

These scoring summaries are based on the SRM grading from the WRc.

Site Photos

www.insewer.co.uk
Tel : 01634 861 768

FW1

LOCATION OF FW1

FW2. UNABLE TO LOCATE / LIFT AT TIME OF SURVEY

LOCATION OF FW2

FW3

LOCATION OF FW3

FW4

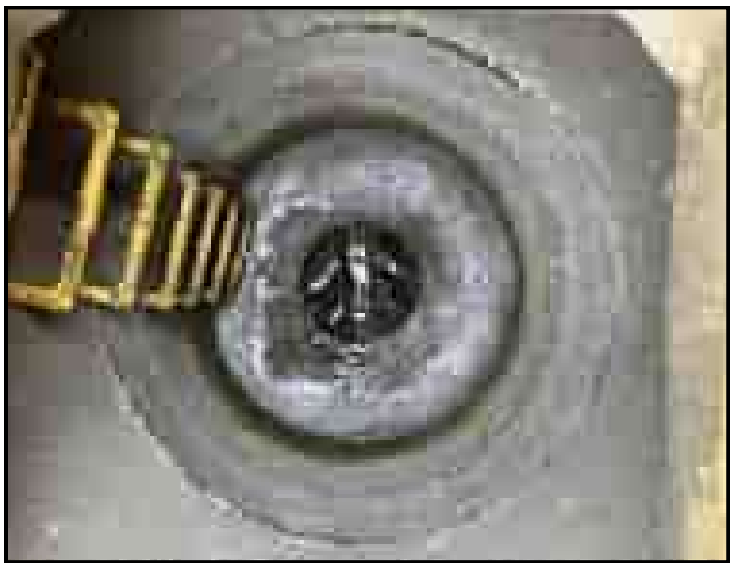
LOCATION OF FW4

FW5

LOCATION OF FW5

FW6

LOCATION OF FW6



FW7

LOCATION OF FW7

FW8

LOCATION OF FW8

FW9

LOCATION OF FW9

FW10

LOCATION OF FW10

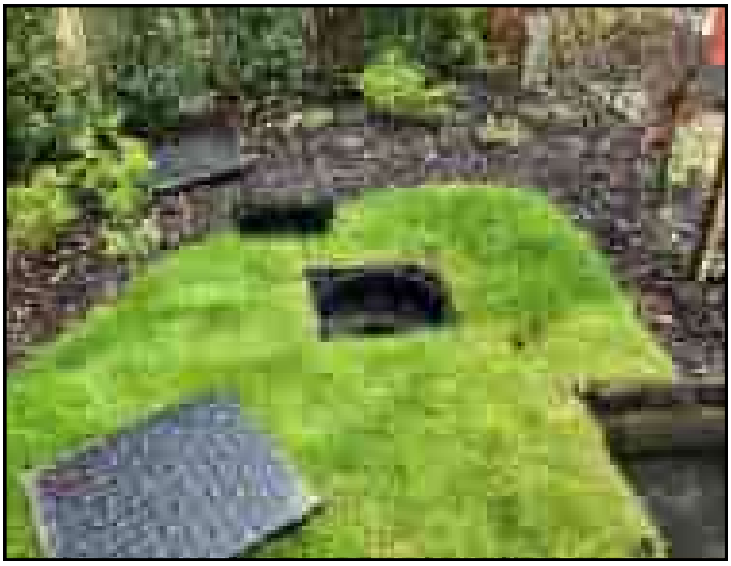
SW1

LOCATION OF SW1

SW2. UNABLE TO LOCATE / LIFT AT TIME OF SURVEY

LOCATION OF SW2

SW3



LOCATION OF SW3

SW4

LOCATION OF SW4

SW5

LOCATION OF SW5

SW6

LOCATION OF SW6

SW7

LOCATION OF SW7

SW8

LOCATION OF SW8

SW9

LOCATION OF SW9

SW10

LOCATION OF SW10

SW11

LOCATION OF SW11

SW12

LOCATION OF SW12

SW13

LOCATION OF SW13

SW14

LOCATION OF SW14

SW15

LOCATION OF SW15

SW16

LOCATION OF SW16

SW17

LOCATION OF SW17

SW18

LOCATION OF SW18

P.S.1.
PUMP STATION

LOCATION OF P.S.1

P.S.2.
PUMP STATION

LOCATION OF P.S.2

RE1 - RODDING EYE

LOCATION OF RE1

RE2 - RODDING EYE

LOCATION OF RE2

RE3 - RODDING EYE

LOCATION OF RE3

GULLY 1

LOCATION OF GULLY 1
(LEFT OF PHOTO)

GULLY 2

LOCATION OF GULLY 2
(RIGHT OF PHOTO)

GULLY 3

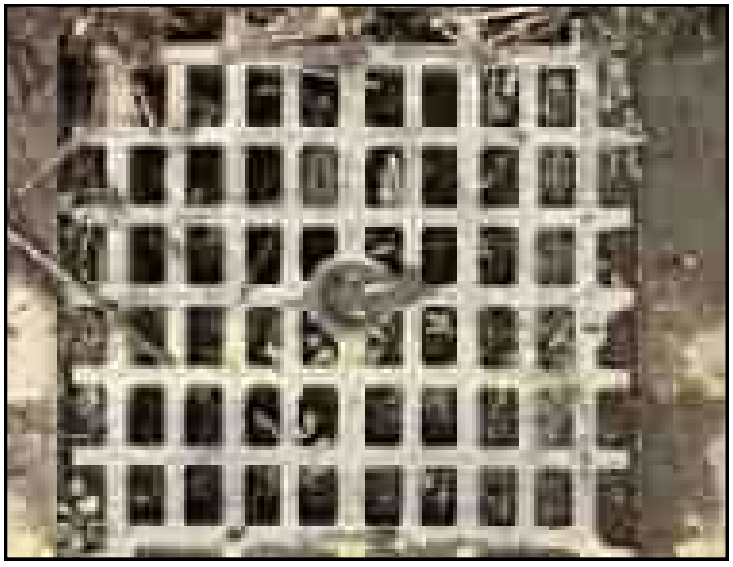
LOCATION OF GULLY 3

GULLY 4

LOCATION OF GULLY 4

GULLY 5

LOCATION OF GULLY 5



GULLY 6.
DEBRIS FILLED

LOCATION OF GULLY 6

Site Plan

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Report

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Section Inspection - 27/04/2024 - FW2X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
1	1	27/04/24	8:23	TV240428	Rain	No	FW2X

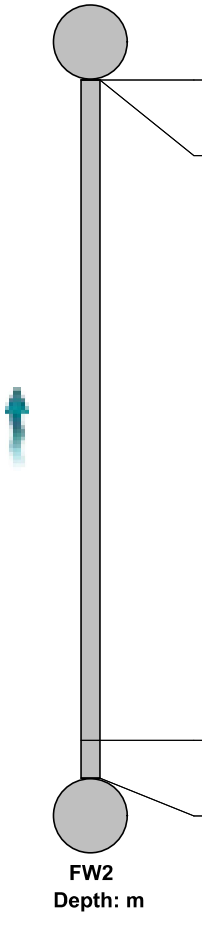
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	FW2
Road:	Vulcan Close	**Inspected Length:**	4.62 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.62 m	**Downstream Node:**	FW1
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.890 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW1	
0.00	WL	Water level, 0% of the vertical dimension	
4.37	LL	Line deviates left	
4.62	ICF	Finish node, inspection chamber, reference: FW2: Unable to locate / lift at time of survey	


ICF - 4.62

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
1	Upstream	FW2X	TV240428	

1, 00:00:47, 4.62 m
Finish node, inspection chamber, reference: FW2, Unable to locate / lift at time of survey

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Section Inspection - 27/04/2024 - ExFWMH1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
2	1	27/04/24	8:24	TV240428	Rain	No	EXFWMH1X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

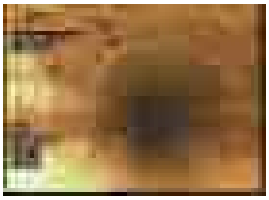
Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	EXFWMH1
Road:	Vulcan Close	**Inspected Length:**	4.63 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.63 m	**Downstream Node:**	FW2
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

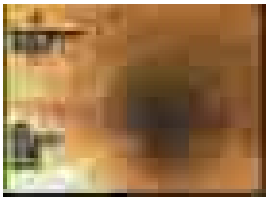
Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

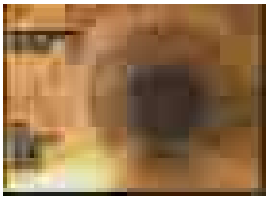
Comments:
Recommendations: -

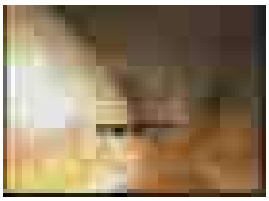
Scale: 1:50

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW2: Unable to locate / lift at time of survey	
0.00	WL	Water level, 0% of the vertical dimension	
0.26	MCVC	Pipe material changes to vitrified clay at this point	
2.71	CC	Crack, circumferential from 09 o'clock to 02 o'clock	2 / 2
3.68	CC	Crack, circumferential from 09 o'clock to 12 o'clock	2 / 2
4.13	CC	Crack, circumferential from 07 o'clock to 11 o'clock	2 / 2
4.63	MHF	Finish node, manhole, reference: ExFWMH1: Unable to locate / lift - no access	


CC - 2.71


CC - 3.68


CC - 4.13


MHF - 4.63

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
3	10.0	6.5	30.0	2.0	3	1.0	0.6	3.0	2.0

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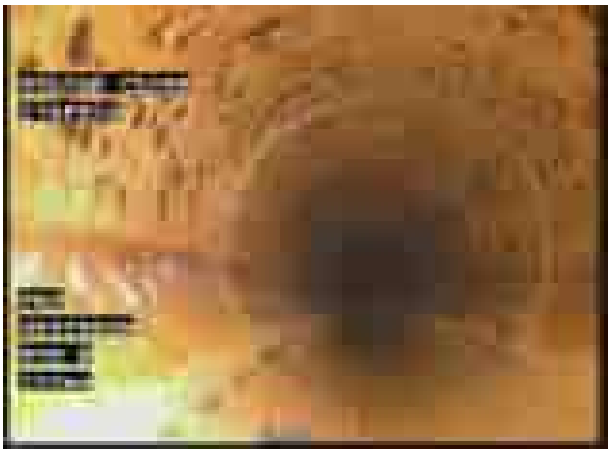
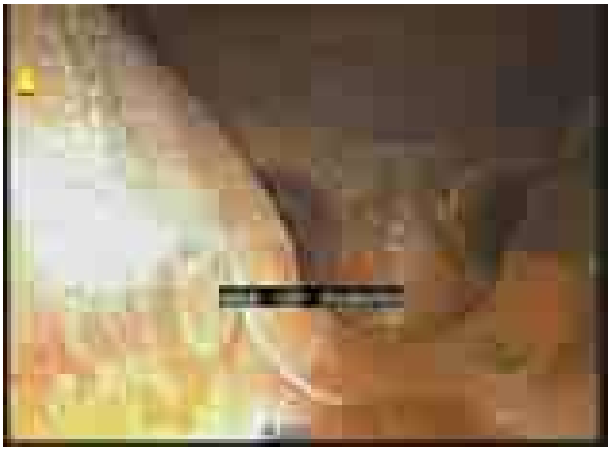
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
2	Upstream	EXFWMH1X	TV240428	

1, 00:00:33, 2.71 m
Crack, circumferential from 09 o'clock to 02 o'clock



2, 00:00:52, 3.68 m
Crack, circumferential from 09 o'clock to 12 o'clock

3, 00:01:09, 4.13 m
Crack, circumferential from 07 o'clock to 11 o'clock



4, 00:01:29, 4.63 m
Finish node, manhole, reference: ExFWMH1, Unable to locate / lift - no access

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Section Inspection - 27/04/2024 - FW1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
3	1	27/04/24	8:27	TV240428	Rain	No	FW1X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW1
Road:	Vulcan Close	**Inspected Length:**	12.11 m	**Upstream Pipe Depth:**	0.890 m
Location:		**Total Length:**	12.11 m	**Downstream Node:**	FW3
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.800 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:105

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW1	
0.00	WL	Water level, 5% of the vertical dimension	
11.62	LL	Line deviates left	
12.11	ICF	Finish node, inspection chamber, reference: FW3	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW2X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
4	1	27/04/24	8:30	TV240428	Rain	No	SW2X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW2
Road:	Vulcan Close	**Inspected Length:**	6.96 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	6.96 m	**Downstream Node:**	SW1
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.650 m

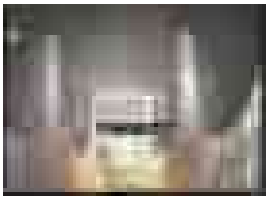
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:61

Depth: 0.65 m
SW1

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW1	
0.00	WL	Water level, 10% of the vertical dimension	
6.43	SC	Pipe size changes, new size(s), 100mm high	
6.96	ICF	Finish node, inspection chamber, reference: SW2: Unable to locate / lift at time of survey	


ICF - 6.96

SW2
Depth: m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
4	Upstream	SW2X	TV240428	

1, 00:00:44, 6.96 m
Finish node, inspection chamber, reference: SW2, Unable to locate / lift at time of survey

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Section Inspection - 27/04/2024 - ExSWMH1X

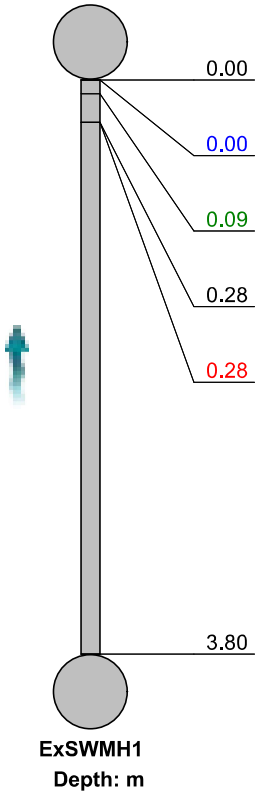
Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
5	1	27/04/24	8:32	TV240428	Rain	No	EXSWMH1X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	EXSWMH1
Road:	Vulcan Close	**Inspected Length:**	3.80 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.80 m	**Downstream Node:**	SW2
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

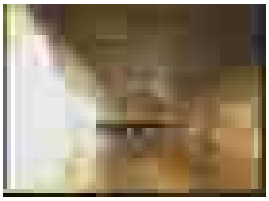
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -



Scale: 1:50	Position [m]	Code	Observation	Grade
	0.00	IC	Start node, inspection chamber, reference: SW2: Unable to locate / lift at time of survey	
	0.00	WL	Water level, 10% of the vertical dimension	
	0.09	LL	Line deviates left	
	0.28	MCVC	Pipe material changes to vitrified clay at this point	
	0.28	JDM	Joint displaced, medium	1 / 3
	3.80	MHF	Finish node, manhole, reference: ExSWMH1: Unable to locate / lift - no access	


JDM - 0.28


MHF - 3.80

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
1	1.0	0.3	1.0	1.0	1	2.0	0.5	2.0	3.0

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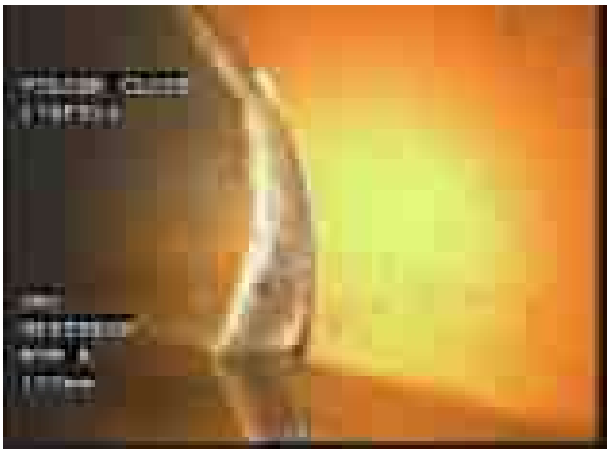
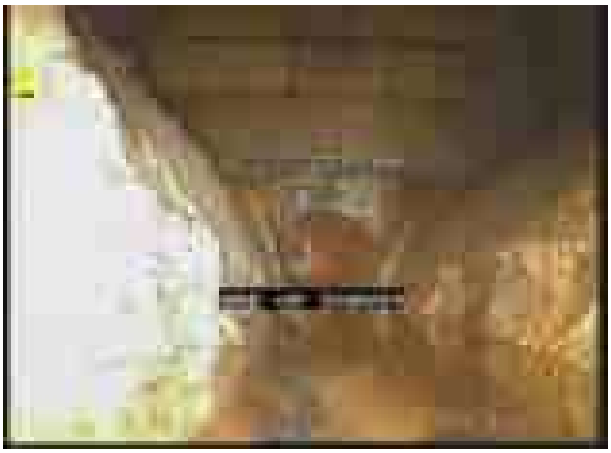
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
5	Upstream	EXSWMH1X	TV240428	



1, 00:00:20, 0.28 m
Joint displaced, medium



2, 00:01:00, 3.80 m
Finish node, manhole, reference: ExSWMH1, Unable to locate / lift - no access

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Section Inspection - 27/04/2024 - SW1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
6	1	27/04/24	8:35	TV240428	No Rain Or Snow	No	SW1X

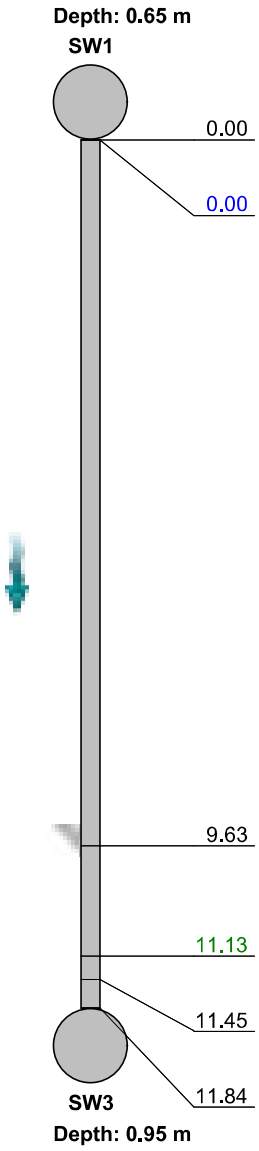
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW1
Road:	Vulcan Close	**Inspected Length:**	11.84 m	**Upstream Pipe Depth:**	0.650 m
Location:		**Total Length:**	11.84 m	**Downstream Node:**	SW3
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.950 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:103



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW1	
0.00	WL	Water level, 5% of the vertical dimension	
9.63	JN	Junction at 02 o'clock, 150mm dia	
11.13	LL	Line deviates left	
11.45	SC	Pipe size changes, new size(s), 225mm high	
11.84	MHF	Finish node, manhole, reference: SW3	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - FW3X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
7	1	27/04/24	9:06	TV240428	No Rain Or Snow	No	FW3X

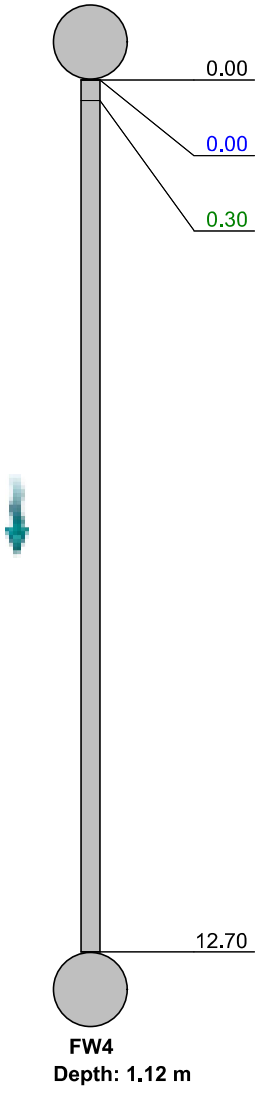
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW3
Road:	Vulcan Close	**Inspected Length:**	12.70 m	**Upstream Pipe Depth:**	0.800 m
Location:		**Total Length:**	12.70 m	**Downstream Node:**	FW4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.120 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:110



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW3	
0.00	WL	Water level, 5% of the vertical dimension	
0.30	LL	Line deviates left	
12.70	ICF	Finish node, inspection chamber, reference: FW4	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW3X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
8	1	27/04/24	9:09	TV240428	No Rain Or Snow	No	SW3X

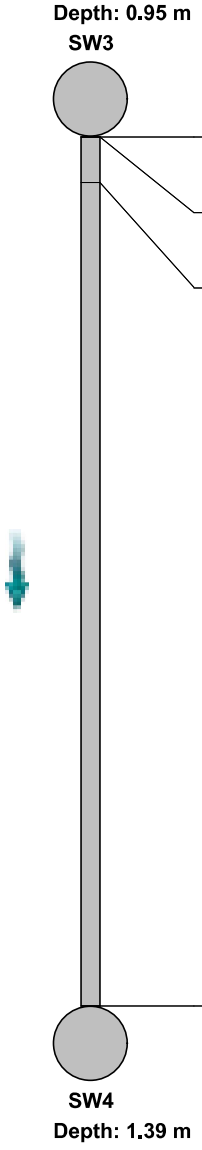
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW3
Road:	Vulcan Close	**Inspected Length:**	9.43 m	**Upstream Pipe Depth:**	0.950 m
Location:		**Total Length:**	9.43 m	**Downstream Node:**	SW4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.390 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:82



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW3	
0.00	WL	Water level, 5% of the vertical dimension	
0.50	LL	Line deviates left	
9.43	ICF	Finish node, inspection chamber, reference: SW4	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - FW4X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
9	1	27/04/24	9:23	TV240428	No Rain Or Snow	No	FW4X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW4
Road:	Vulcan Close	**Inspected Length:**	12.31 m	**Upstream Pipe Depth:**	1.120 m
Location:		**Total Length:**	12.31 m	**Downstream Node:**	FW5
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.920 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:107

Position [m]	Code	Observation	Grade
		Depth: 1.12 m	
		FW4	
0.00	IC	Start node, inspection chamber, reference: FW4	
0.00	WL	Water level, 5% of the vertical dimension	
4.09	JN	Junction at 12 o'clock, 100mm dia	
6.99	JN	Junction at 12 o'clock, 100mm dia	
10.68	JN	Junction at 02 o'clock, 100mm dia	
12.31	MHF	Finish node, manhole, reference: FW5	
		FW5	
		Depth: 1.92 m	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW4X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
10	1	27/04/24	9:29	TV240428	No Rain Or Snow	No	SW4X

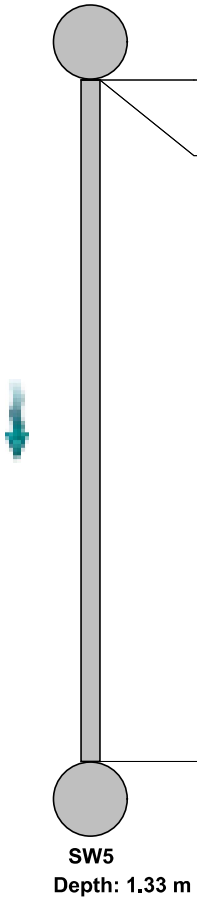
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW4
Road:	Vulcan Close	**Inspected Length:**	4.51 m	**Upstream Pipe Depth:**	1.390 m
Location:		**Total Length:**	4.51 m	**Downstream Node:**	SW5
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.330 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW4	
0.00	WL	Water level, 5% of the vertical dimension	
4.51	ICF	Finish node, inspection chamber, reference: SW5	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - RE1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
11	1	27/04/24	9:38	TV240428	No Rain Or Snow	No	RE1X

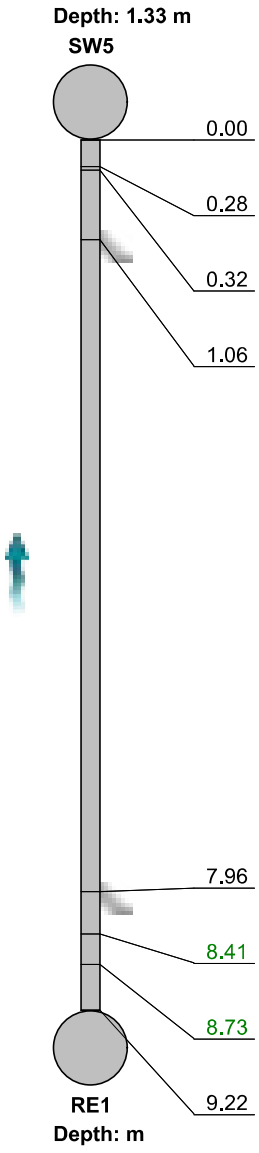
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	RE1
Road:	Vulcan Close	**Inspected Length:**	9.22 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	9.22 m	**Downstream Node:**	SW5
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.330 m

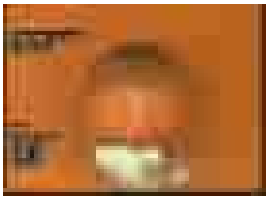
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:80



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW5	
0.28	SC	Pipe size changes, new size(s), 150mm high	
0.32	SC	Pipe size changes, new size(s), 100mm high	
1.06	JN	Junction at 11 o'clock, 100mm dia	
7.96	JN	Junction at 09 o'clock, 100mm dia	
8.41	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss	3
8.73	LU	Line deviates up	
9.22	REF	Finish node, rodding eye, reference: RE1	


DEC - 8.41

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.2	2.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
11	Upstream	RE1X	TV240428	

1, 00:01:11, 8.41 m
Settled deposits, hard or compacted, 5% cross-sectional area loss

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Section Inspection - 27/04/2024 - SW5X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
12	1	27/04/24	9:41	TV240428	No Rain Or Snow	No	SW5X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW5
Road:	Vulcan Close	**Inspected Length:**	11.12 m	**Upstream Pipe Depth:**	1.330 m
Location:		**Total Length:**	11.12 m	**Downstream Node:**	SW6
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.960 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:97

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW5	
0.00	WL	Water level, 5% of the vertical dimension	
6.90	WL	Water level, 10% of the vertical dimension	
9.99	WL	Water level, 5% of the vertical dimension	
10.56	SC	Pipe size changes, new size(s), 300mm high	
11.12	MHF	Finish node, manhole, reference: SW6	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - FW5X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
13	1	27/04/24	10:00	TV240428	No Rain Or Snow	No	FW5X

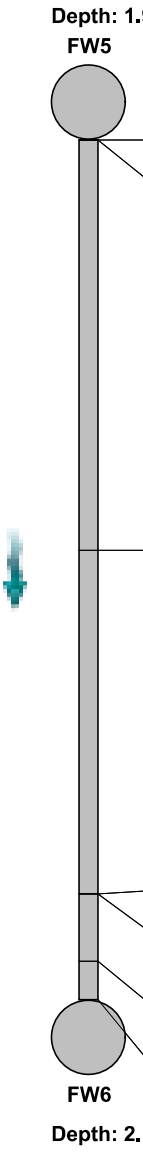
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW5
Road:	Vulcan Close	**Inspected Length:**	6.26 m	**Upstream Pipe Depth:**	1.920 m
Location:		**Total Length:**	6.26 m	**Downstream Node:**	FW6
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.180 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:55



Position [m]	Code	Observation	Grade
0.00	MH	Start node, manhole, reference: FW5	
0.00	WL	Water level, 10% of the vertical dimension	
2.99	WL	Water level, 20% of the vertical dimension	
5.49	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss	3
5.49	WL	Water level, 10% of the vertical dimension	
5.98	LL	Line deviates left	
6.26	ICF	Finish node, inspection chamber, reference: FW6	


DEC - 5.49

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.3	2.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
13	Downstream	FW5X	TV240428	

1, 00:00:44, 5.49 m
Settled deposits, hard or compacted, 5% cross-sectional area loss

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Section Inspection - 27/04/2024 - SW6-AX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
14	1	27/04/24	10:06	TV240428	No Rain Or Snow	No	SW6-AX

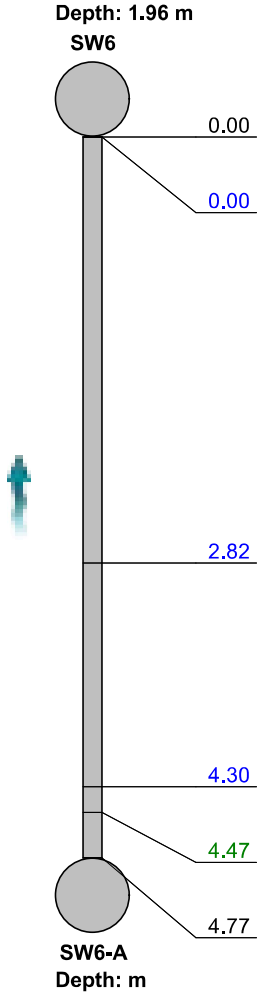
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW6-A
Road:	Vulcan Close	**Inspected Length:**	4.77 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.77 m	**Downstream Node:**	SW6
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.960 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW6	
0.00	WL	Water level, 0% of the vertical dimension	
2.82	WL	Water level, 10% of the vertical dimension	
4.30	WL	Water level, 0% of the vertical dimension	
4.47	LD	Line deviates down	
4.77	OFF	Finish node, outfall, reference: SW6-A: Vent pipe from attenuation tank	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW6X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
15	1	27/04/24	10:07	TV240428	No Rain Or Snow	No	SW6X

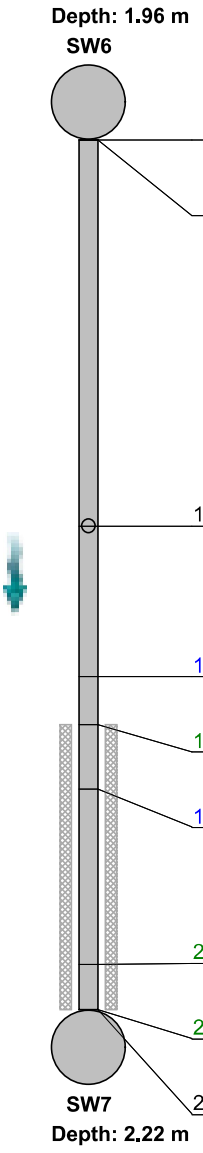
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW6
Road:	Vulcan Close	**Inspected Length:**	23.73 m	**Upstream Pipe Depth:**	1.960 m
Location:		**Total Length:**	23.73 m	**Downstream Node:**	SW7
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.220 m

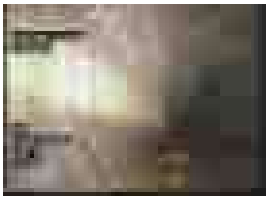
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	300 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:206



Position [m]		Code	Observation	Grade
0.00		IC	Start node, inspection chamber, reference: SW6	
0.00		WL	Water level, 5% of the vertical dimension	
10.53		JN	Junction at 12 o'clock, 150mm dia	
14.64		WL	Water level, 10% of the vertical dimension	
15.95	S01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, start	
17.71		WL	Water level, 5% of the vertical dimension	
22.48		LL	Line deviates left	
23.73	F01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish	3
23.73		MHF	Finish node, manhole, reference: SW7	


DEC - 15.95

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.7	16.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
15	Downstream	SW6X	TV240428	

1, 00:01:17, 15.95 m
Settled deposits, hard or compacted, 5% cross-sectional area loss, start

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Section Inspection - 27/04/2024 - FW6X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
16	1	27/04/24	10:18	TV240428	No Rain Or Snow	No	FW6X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW6
Road:	Vulcan Close	**Inspected Length:**	21.71 m	**Upstream Pipe Depth:**	2.180 m
Location:		**Total Length:**	21.71 m	**Downstream Node:**	FW7
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.620 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:188

Depth: 2.18 m
FW6

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW6	
0.00	WL	Water level, 5% of the vertical dimension	
0.50	LL	Line deviates left	
0.88	JN	Junction at 02 o'clock, 100mm dia	
2.90	JN	Junction at 01 o'clock, 100mm dia	
5.88	JN	Junction at 02 o'clock, 100mm dia	
8.84	JN	Junction at 02 o'clock, 100mm dia	
11.24	JN	Junction at 02 o'clock, 100mm dia	
13.40	JN	Junction at 01 o'clock, 100mm dia	
15.48	JN	Junction at 02 o'clock, 100mm dia	
21.25	LL	Line deviates left	
21.71	ICF	Finish node, inspection chamber, reference: FW7	

FW7
Depth: 2.62 m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - RE2X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
17	1	27/04/24	10:27	TV240428	No Rain Or Snow	No	RE2X

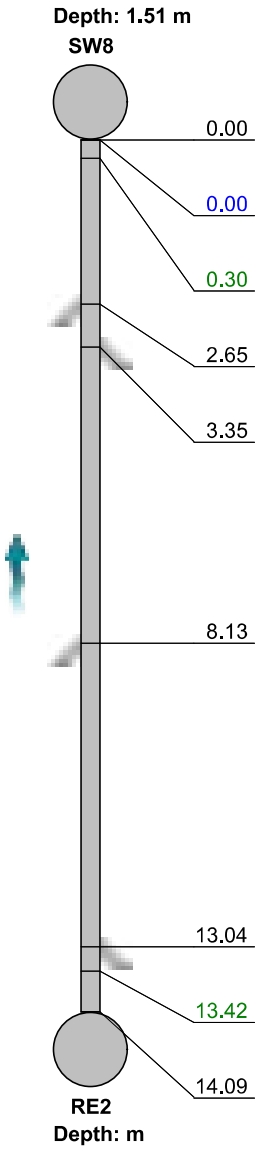
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	RE2
Road:	Vulcan Close	**Inspected Length:**	14.09 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	14.09 m	**Downstream Node:**	SW8
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.510 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:122 **Position [m]** **Code** **Observation** **Grade**



Position [m]	Code	Observation
0.00	IC	Start node, inspection chamber, reference: SW8
0.00	WL	Water level, 0% of the vertical dimension
0.30	LL	Line deviates left
2.65	JN	Junction at 03 o'clock, 100mm dia
3.35	JN	Junction at 10 o'clock, 100mm dia
8.13	JN	Junction at 03 o'clock, 100mm dia
13.04	JN	Junction at 09 o'clock, 100mm dia
13.42	LU	Line deviates up
14.09	REF	Finish node, rodding eye, reference: RE2

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW8X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
18	1	27/04/24	10:30	TV240428	No Rain Or Snow	No	SW8X

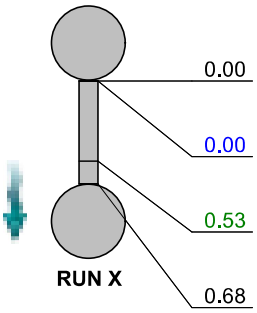
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW8
Road:	Vulcan Close	**Inspected Length:**	0.68 m	**Upstream Pipe Depth:**	1.510 m
Location:		**Total Length:**	0.68 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

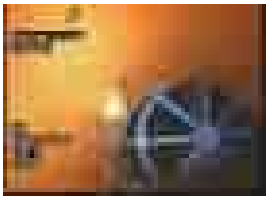
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

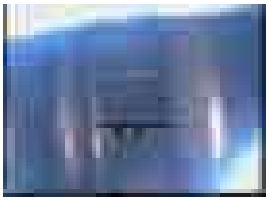
Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW8	
0.00	WL	Water level, 10% of the vertical dimension	
0.53	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss	3
0.68	OFF	Finish node, outfall, reference: RUN X: At attenuation tank	


DEC - 0.53


OFF - 0.68

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	2.9	2.0	4.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
18	Downstream	SW8X	TV240428	

1, 00:00:14, 0.53 m
Settled deposits, hard or compacted, 10% cross-sectional area loss

2, 00:00:29, 0.68 m
Finish node, outfall, reference: RUN X, At attenuation tank

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Section Inspection - 27/04/2024 - FW8X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
19	1	27/04/24	10:37	TV240428	No Rain Or Snow	No	FW8X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW8
Road:	Vulcan Close	**Inspected Length:**	3.90 m	**Upstream Pipe Depth:**	0.760 m
Location:		**Total Length:**	3.90 m	**Downstream Node:**	FW7
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.620 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

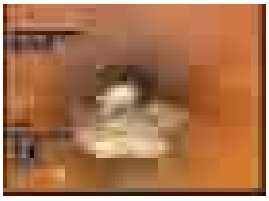
Comments:
Recommendations: -

Scale: 1:50

Depth: 0.76 m
FW8

FW7
Depth: 2.62 m

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW8	
0.00	WL	Water level, 0% of the vertical dimension	
0.30	LD	Line deviates down	
0.30	LR	Line deviates right	
0.72	LL	Line deviates left	
1.67	LR	Line deviates right	
3.43	DEC	Settled deposits, hard or compacted, 50% cross-sectional area loss	4
3.90	MHF	Finish node, manhole, reference: FW7	



DEC - 3.43

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	8.0	2.1	8.0	4.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
19	Downstream	FW8X	TV240428	

1, 00:00:33, 3.43 m
Settled deposits, hard or compacted, 50% cross-sectional area loss

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Section Inspection - 27/04/2024 - FW7X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
20	1	27/04/24	10:41	TV240428	No Rain Or Snow	No	FW7X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW7
Road:	Vulcan Close	**Inspected Length:**	4.51 m	**Upstream Pipe Depth:**	2.620 m
Location:		**Total Length:**	4.51 m	**Downstream Node:**	P.S.1
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: FW7	
0.00	WL	Water level, 5% of the vertical dimension	
1.03	LL	Line deviates left	
4.51	REM	General remark: Assumed dipper pipe to pump station	
4.51	OCF	Finish node, other special chamber, reference: P.S.1: Pump station	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW7X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
21	1	27/04/24	11:02	TV240428	No Rain Or Snow	No	SW7X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW7
Road:	Vulcan Close	**Inspected Length:**	5.96 m	**Upstream Pipe Depth:**	2.220 m
Location:		**Total Length:**	5.96 m	**Downstream Node:**	SW9
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.380 m

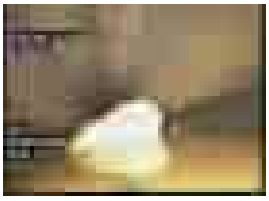
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	300 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:52

Depth: 2.22 m
SW7

Position [m]	Code	Observation	Grade
0.00	MH	Start node, manhole, reference: SW7	
0.00	WL	Water level, 5% of the vertical dimension	
4.08	WL	Water level, 10% of the vertical dimension	
4.08	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss	3
5.47	WL	Water level, 5% of the vertical dimension	
5.96	MHF	Finish node, manhole, reference: SW9	


DEC - 4.08

SW9
Depth: 2.38 m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.3	2.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
21	Downstream	SW7X	TV240428	

1, 00:00:23, 4.08 m
Settled deposits, hard or compacted, 5% cross-sectional area loss

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Section Inspection - 27/04/2024 - SW10X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
22	1	27/04/24	11:08	TV240428	No Rain Or Snow	No	SW10X

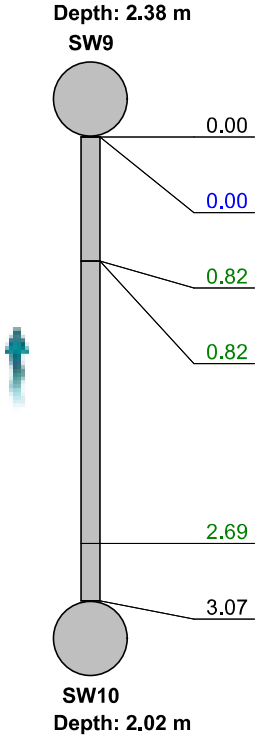
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW10
Road:	Vulcan Close	**Inspected Length:**	3.07 m	**Upstream Pipe Depth:**	2.020 m
Location:		**Total Length:**	3.07 m	**Downstream Node:**	SW9
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.380 m

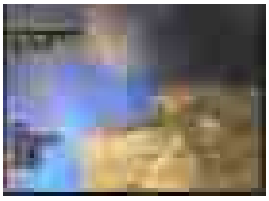
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	MH	Start node, manhole, reference: SW9	
0.00	WL	Water level, 0% of the vertical dimension	
0.82	LL	Line deviates left	
0.82	LU	Line deviates up	
2.69	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss	3
3.07	MHF	Finish node, manhole, reference: SW10	


DEC - 2.69

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.7	2.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
22	Upstream	SW10X	TV240428	

1, 00:00:29, 2.69 m
Settled deposits, hard or compacted, 10% cross-sectional area loss

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Section Inspection - 27/04/2024 - SW9X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
23	1	27/04/24	11:12	TV240428	No Rain Or Snow	No	SW9X

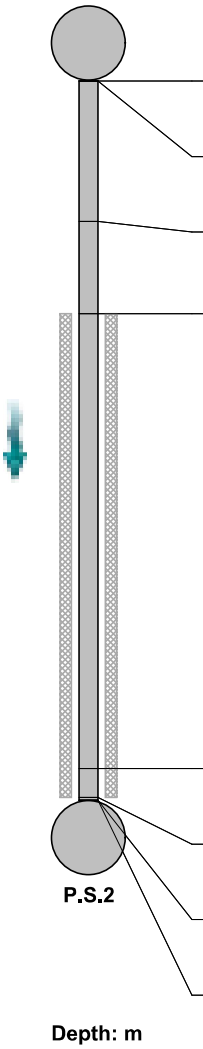
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW9
Road:	Vulcan Close	**Inspected Length:**	4.76 m	**Upstream Pipe Depth:**	2.380 m
Location:		**Total Length:**	4.76 m	**Downstream Node:**	P.S.2
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

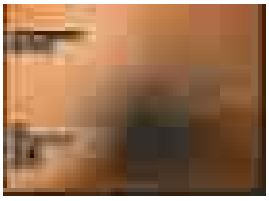
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]		Code	Observation	Grade
0.00		MH	Start node, manhole, reference: SW9	
0.00		WL	Water level, 5% of the vertical dimension	
0.93		LR	Line deviates right	
1.54	S01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, start	
4.55		LR	Line deviates right	
4.74	F01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish	3
4.76		REM	General remark: Assumed dipper pipe to pump station	
4.76		OCF	Finish node, other special chamber, reference: P.S.2: Pump station	


DEC - 1.54

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	1.7	8.0	3.0

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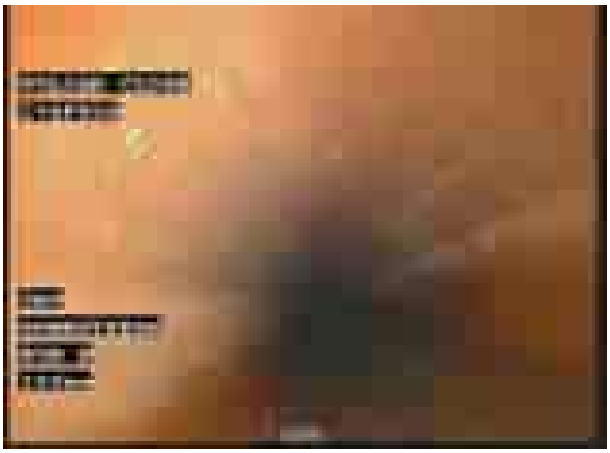
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
23	Downstream	SW9X	TV240428	



1, 00:00:21, 1.54 m
Settled deposits, hard or compacted, 10% cross-sectional area loss, start

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Section Inspection - 27/04/2024 - RE3X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
24	1	27/04/24	11:22	TV240428	No Rain Or Snow	No	RE3X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	RE3
Road:	Vulcan Close	**Inspected Length:**	7.90 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	7.90 m	**Downstream Node:**	SW11
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.600 m

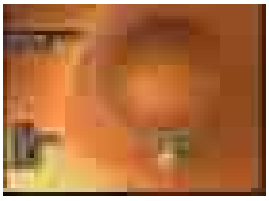
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:69

Depth: 0.60 m
SW11

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW11	
0.00	WL	Water level, 5% of the vertical dimension	
0.30	LL	Line deviates left	
7.14	JN	Junction at 11 o'clock, 100mm dia	
7.14	DES	Settled deposits, fine, 5% cross-sectional area loss	3
7.29	LU	Line deviates up	
7.90	REF	Finish node, rodding eye, reference: RE3	


DES - 7.14

RE3
Depth: m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.3	2.0	3.0

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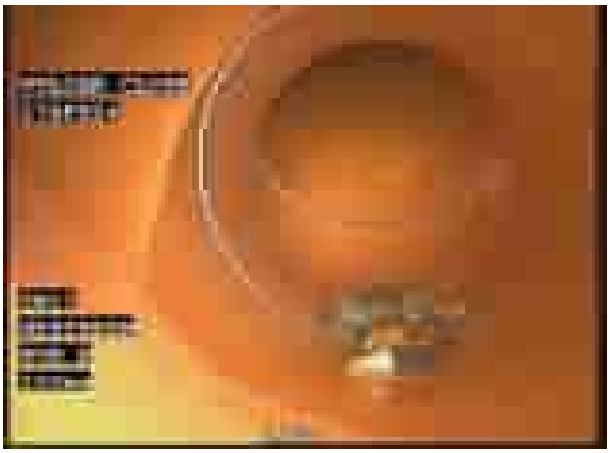
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
24	Upstream	RE3X	TV240428	



1, 00:00:37, 7.14 m
Settled deposits, fine, 5% cross-sectional area loss

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Section Inspection - 27/04/2024 - SW11-BX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
25	1	27/04/24	11:23	TV240428	No Rain Or Snow	No	SW11-BX

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW11-B
Road:	Vulcan Close	**Inspected Length:**	6.68 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	6.68 m	**Downstream Node:**	SW11
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:58

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW11	
0.00	WL	Water level, 5% of the vertical dimension	
0.30	LR	Line deviates right	
5.24	LR	Line deviates right	
6.23	LL	Line deviates left	
6.68	GYF	Finish node, gully, reference: SW11-B: At gully	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW11X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
26	1	27/04/24	11:28	TV240428	No Rain Or Snow	No	SW11X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW11
Road:	Vulcan Close	**Inspected Length:**	12.28 m	**Upstream Pipe Depth:**	0.600 m
Location:		**Total Length:**	12.28 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:107

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW11	
0.00	WL	Water level, 5% of the vertical dimension	
0.30	LR	Line deviates right	
0.70	JN	Junction at 09 o'clock, 100mm dia	
9.43	JN	Junction at 02 o'clock, 100mm dia	
10.53	JN	Junction at 09 o'clock, 100mm dia	
10.85	LD	Line deviates down	
12.28	OFF	Finish node, outfall, reference: RUN X: At attenuation tank	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - FW9X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
27	1	27/04/24	11:35	TV240428	No Rain Or Snow	No	FW9X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW9
Road:	Vulcan Close	**Inspected Length:**	3.19 m	**Upstream Pipe Depth:**	1.040 m
Location:		**Total Length:**	3.19 m	**Downstream Node:**	FW10
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.460 m

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50

Position [m]	Code	Observation	Grade
		Depth: 1.04 m	
		FW9	
0.00	MH	Start node, manhole, reference: FW9	
0.00	WL	Water level, 5% of the vertical dimension	
3.10	LL	Line deviates left	
3.19	MHF	Finish node, manhole, reference: FW10	
		FW10	
		Depth: 1.46 m	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - FW10X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
28	1	27/04/24	11:38	TV240428	No Rain Or Snow	No	FW10X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

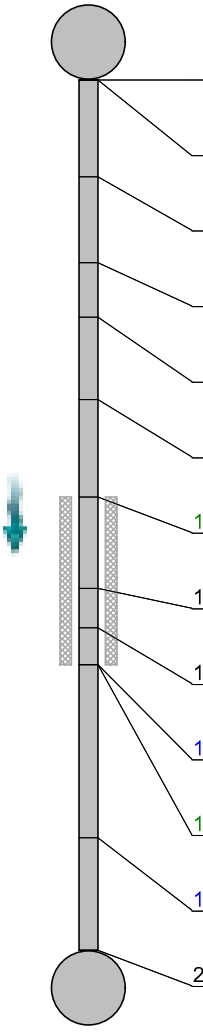
Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	FW10
Road:	Vulcan Close	**Inspected Length:**	22.93 m	**Upstream Pipe Depth:**	1.460 m
Location:		**Total Length:**	22.93 m	**Downstream Node:**	EXFWMH2
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Foul	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

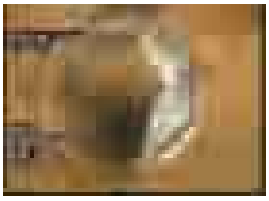
Scale: 1:199

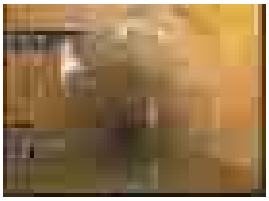
Depth: 1.46 m
FW10

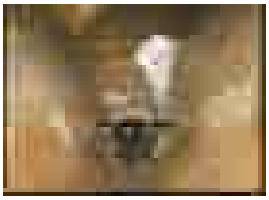


ExFWMH2
Depth: m

Position [m]		Code	Observation	Grade
0.00		MH	Start node, manhole, reference: FW10	
0.00		WL	Water level, 5% of the vertical dimension	
2.55		RMJ	Roots, mass at joint, 10% cross-sectional area loss	3
4.82		WL	Water level, 10% of the vertical dimension	
6.26		WL	Water level, 20% of the vertical dimension	
8.42		WL	Water level, 10% of the vertical dimension	
10.99	S01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, start	
13.41		MCPVC	Pipe material changes to polyvinyl chloride at this point	
14.44		MCVC	Pipe material changes to vitrified clay at this point	
15.41		WL	Water level, 5% of the vertical dimension	
15.41	F01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish	3
19.96		WL	Water level, 10% of the vertical dimension	
22.93		MHF	Finish node, manhole, reference: ExFWMH2: Did not locate / lift	


RMJ - 2.55


DEC - 10.99


MHF - 22.93

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	2	4.0	0.6	14.0	3.0

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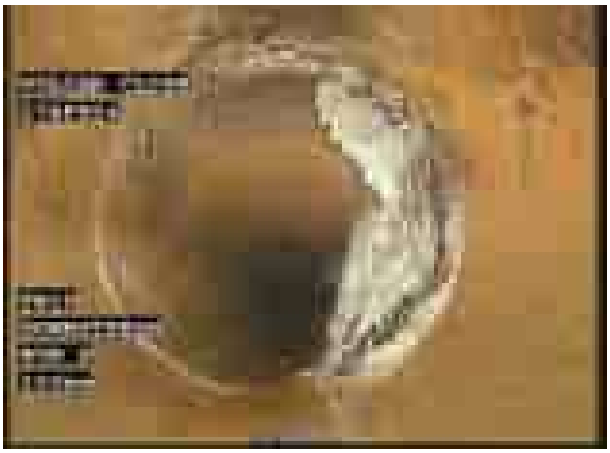
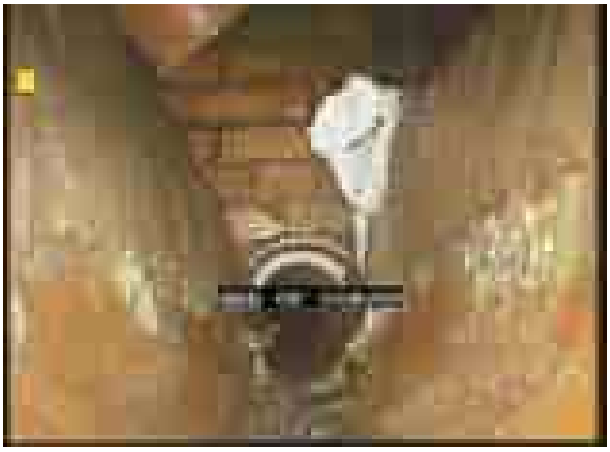
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
28	Downstream	FW10X	TV240428	



1, 00:00:16, 2.55 m
Roots, mass at joint, 10% cross-sectional area loss

2, 00:01:02, 10.99 m
Settled deposits, hard or compacted, 10% cross-sectional area loss, start



3, 00:02:38, 22.93 m
Finish node, manhole, reference: ExFWMH2, Did not locate / lift

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Section Inspection - 27/04/2024 - SW12X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
29	1	27/04/24	11:43	TV240428	No Rain Or Snow	No	SW12X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW12
Road:	Vulcan Close	**Inspected Length:**	3.04 m	**Upstream Pipe Depth:**	1.050 m
Location:		**Total Length:**	3.04 m	**Downstream Node:**	SW13
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.390 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50

Position [m]	Code	Observation	Grade
0.00	MH	Start node, manhole, reference: SW12	
0.00	WL	Water level, 5% of the vertical dimension	
3.04	MHF	Finish node, manhole, reference: SW13	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW14-AX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
30	1	27/04/24	12:16	TV240428	No Rain Or Snow	No	SW14-AX

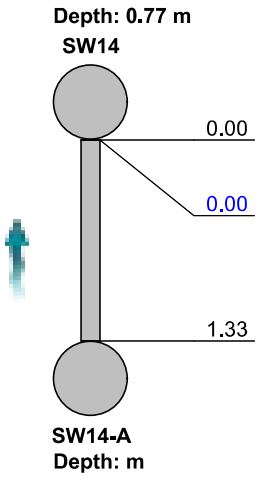
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW14-A
Road:	Vulcan Close	**Inspected Length:**	1.33 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	1.33 m	**Downstream Node:**	SW14
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.770 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Vitrified clay
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	MH	Start node, manhole, reference: SW14	
0.00	WL	Water level, 0% of the vertical dimension	
1.33	OFF	Finish node, outfall, reference: SW14-A: At capped / redundant end	


OFF - 1.33

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
30	Upstream	SW14-AX	TV240428	

1, 00:00:22, 1.33 m
Finish node, outfall, reference: SW14-A, At capped / redundant end

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Section Inspection - 27/04/2024 - SW14X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
31	1	27/04/24	12:19	TV240428	No Rain Or Snow	No	SW14X

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW14
Road:	Vulcan Close	**Inspected Length:**	7.24 m	**Upstream Pipe Depth:**	0.770 m
Location:		**Total Length:**	7.24 m	**Downstream Node:**	SW15
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.840 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:63	Position [m]	Code	Observation	Grade
Depth: 0.77 m SW14				
	0.00	MH	Start node, manhole, reference: SW14	
	0.00	WL	Water level, 5% of the vertical dimension	
	7.24	ICF	Finish node, inspection chamber, reference: SW15	
SW15 Depth: 0.84 m				

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW15-CX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
32	1	27/04/24	12:26	TV240428	No Rain Or Snow	No	SW15-CX

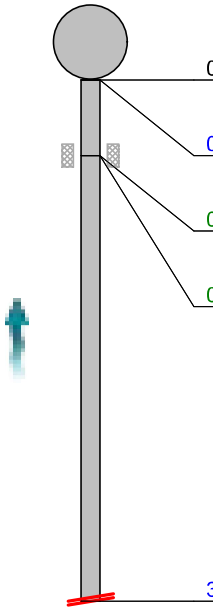
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW15-C
Road:	Vulcan Close	**Inspected Length:**	3.45 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.45 m	**Downstream Node:**	SW15
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	0.840 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]		Code	Observation	Grade
0.00		IC	Start node, inspection chamber, reference: SW15	
0.00		WL	Water level, 5% of the vertical dimension	
0.50	S03	DEC	Settled deposits, hard or compacted, 25% cross-sectional area loss, start	4
0.50		LL	Line deviates left	
3.45		SA	Survey abandoned: Loss of vision	


DEC - 0.50


SA - 3.45

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	0.0	0.7	5.0	2.0

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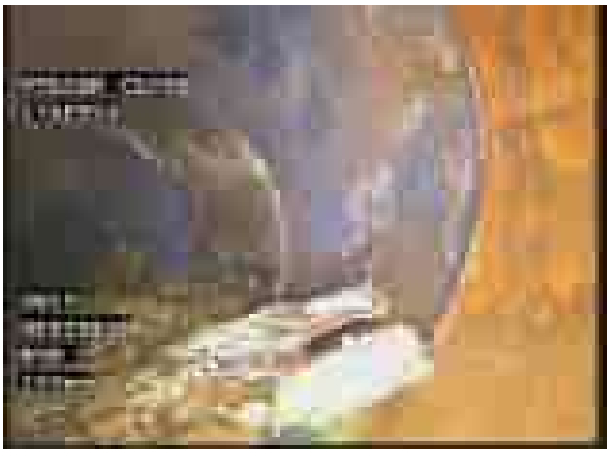
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
32	Upstream	SW15-CX	TV240428	



1, 00:00:04, 0.50 m
Settled deposits, hard or compacted, 25% cross-sectional area loss, start

2, 00:00:32, 3.45 m
Survey abandoned, Loss of vision

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Section Inspection - 27/04/2024 - SW15X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
33	1	27/04/24	12:24	TV240428	No Rain Or Snow	No	SW15X

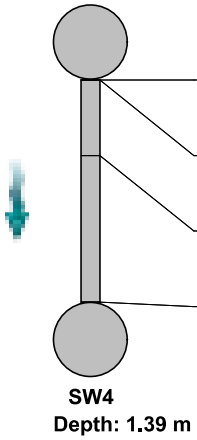
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW15
Road:	Vulcan Close	**Inspected Length:**	1.47 m	**Upstream Pipe Depth:**	0.840 m
Location:		**Total Length:**	1.47 m	**Downstream Node:**	SW4
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.390 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW15	
0.00	WL	Water level, 5% of the vertical dimension	
0.50	LR	Line deviates right	
1.47	ICF	Finish node, inspection chamber, reference: SW4	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW16-AX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
34	1	27/04/24	12:31	TV240428	No Rain Or Snow	No	SW16-AX

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

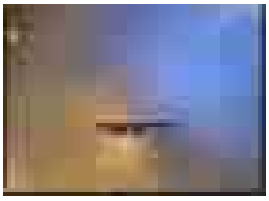
Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW16-A
Road:	Vulcan Close	**Inspected Length:**	9.15 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	9.15 m	**Downstream Node:**	SW16
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.140 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:80

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW16	
0.00	WL	Water level, 10% of the vertical dimension	
9.15	GYF	Finish node, gully, reference: SW16-A: At assumed gully - debris filled	


GYF - 9.15

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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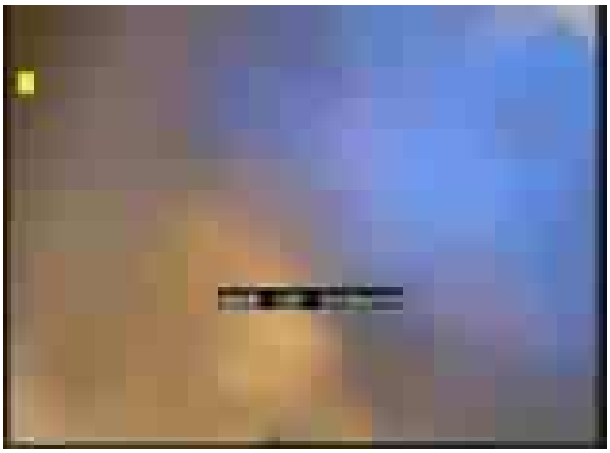
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
34	Upstream	SW16-AX	TV240428	



1, 00:01:04, 9.15 m
Finish node, gully, reference: SW16-A, At assumed gully - debris filled

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Section Inspection - 27/04/2024 - SW16X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
35	1	27/04/24	12:35	TV240428	No Rain Or Snow	No	SW16X

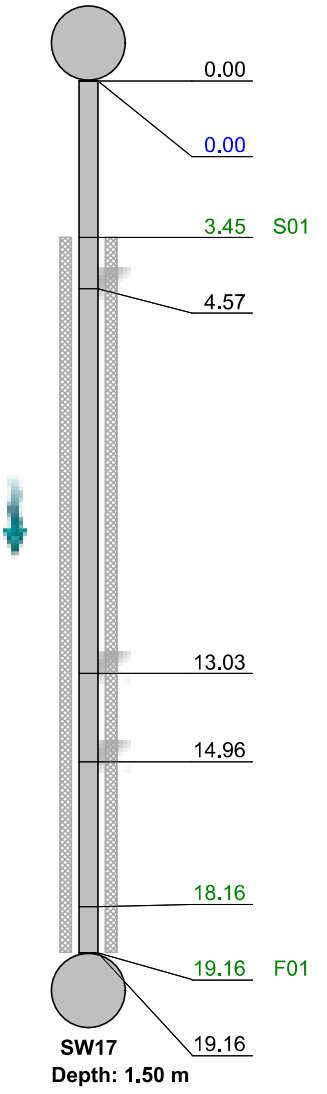
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW16
Road:	Vulcan Close	**Inspected Length:**	19.16 m	**Upstream Pipe Depth:**	1.140 m
Location:		**Total Length:**	19.16 m	**Downstream Node:**	SW17
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.500 m

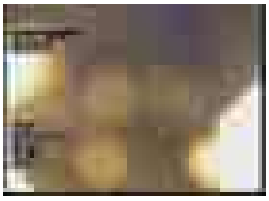
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:166



Position [m]		Code	Observation	Grade
0.00		IC	Start node, inspection chamber, reference: SW16	
0.00		WL	Water level, 5% of the vertical dimension	
3.45	S01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, start	
4.57		JN	Junction at 10 o'clock, 150mm dia	
13.03		JN	Junction at 09 o'clock, 150mm dia	
14.96		JN	Junction at 09 o'clock, 150mm dia	
18.16		LL	Line deviates left	
19.16	F01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish	3
19.16		ICF	Finish node, inspection chamber, reference: SW17	


DEC - 3.45

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	1.7	32.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
35	Downstream	SW16X	TV240428	

1, 00:00:20, 3.45 m
Settled deposits, hard or compacted, 5% cross-sectional area loss, start

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Section Inspection - 27/04/2024 - SW17X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
36	1	27/04/24	12:42	TV240428	No Rain Or Snow	No	SW17X

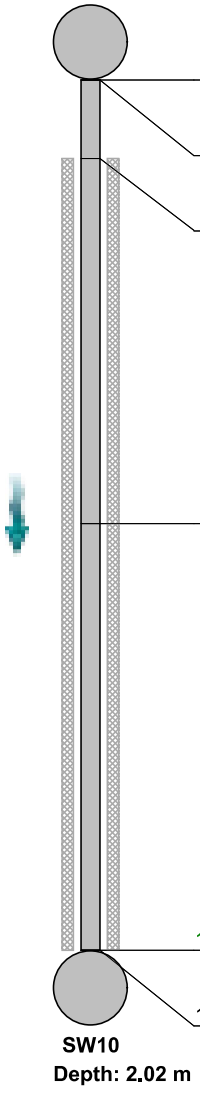
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	SW17
Road:	Vulcan Close	**Inspected Length:**	10.72 m	**Upstream Pipe Depth:**	1.500 m
Location:		**Total Length:**	10.72 m	**Downstream Node:**	SW10
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.020 m

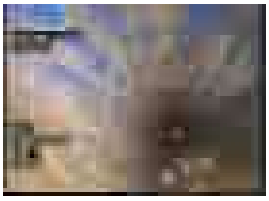
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

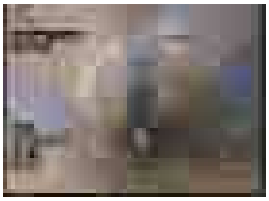
Comments:
Recommendations: -

Scale: 1:93



Position [m]		Code	Observation	Grade
0.00		IC	Start node, inspection chamber, reference: SW17	
0.00		WL	Water level, 5% of the vertical dimension	
0.97	S01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, start	
5.46	C01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, change	
10.72	F01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish	3
10.72		MHF	Finish node, manhole, reference: SW10	


DEC - 0.97


DEC - 5.46

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	1.9	20.0	3.0

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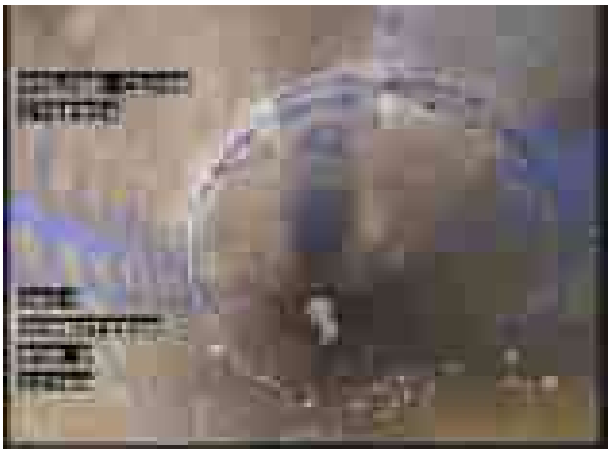
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
36	Downstream	SW17X	TV240428	

1, 00:00:11, 0.97 m
Settled deposits, hard or compacted, 5% cross-sectional area loss, start



2, 00:00:34, 5.46 m
Settled deposits, hard or compacted, 10% cross-sectional area loss, change

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Section Inspection - 27/04/2024 - SW10-BX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
37	1	27/04/24	12:51	TV240428	No Rain Or Snow	No	SW10-BX

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW10-B
Road:	Vulcan Close	**Inspected Length:**	12.43 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	12.43 m	**Downstream Node:**	SW10
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.020 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:108

Position [m]	Code	Observation	Grade
		Depth: 2.02 m	
		SW10	
0.00	MH	Start node, manhole, reference: SW10	
0.00	WL	Water level, 5% of the vertical dimension	
9.43	LL	Line deviates left	
12.43	GYF	Finish node, gully, reference: SW10-B: Assumed at gully	
		SW10-B	
		Depth: m	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - SW18X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
38	1	27/04/24	12:54	TV240428	No Rain Or Snow	No	SW18X

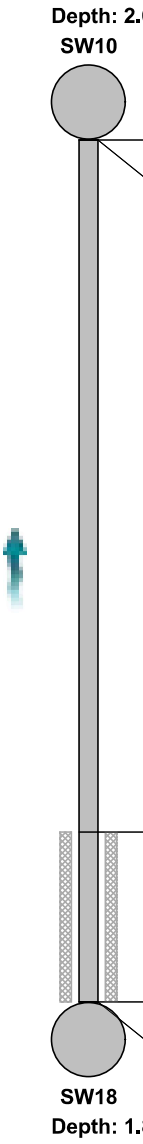
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW18
Road:	Vulcan Close	**Inspected Length:**	6.85 m	**Upstream Pipe Depth:**	1.860 m
Location:		**Total Length:**	6.85 m	**Downstream Node:**	SW10
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	2.020 m

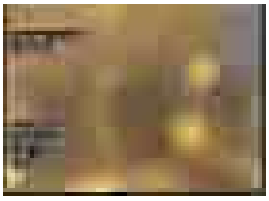
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:60



Position [m]		Code	Observation	Grade
0.00		MH	Start node, manhole, reference: SW10	
0.00		WL	Water level, 5% of the vertical dimension	
5.50	S01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, start	
6.85	F01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish	3
6.85		ICF	Finish node, inspection chamber, reference: SW18	


DEC - 5.50

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.6	4.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
38	Upstream	SW18X	TV240428	

1, 00:00:30, 5.50 m
Settled deposits, hard or compacted, 5% cross-sectional area loss, start

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Section Inspection - 27/04/2024 - SW18-AX

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
39	1	27/04/24	13:06	TV240428	No Rain Or Snow	No	SW18-AX

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Upstream	**Upstream Node:**	SW18-A
Road:	Vulcan Close	**Inspected Length:**	8.98 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	8.98 m	**Downstream Node:**	SW18
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	1.860 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:78

Position [m]	Code	Observation	Grade
0.00	IC	Start node, inspection chamber, reference: SW18	
0.00	WL	Water level, 5% of the vertical dimension	
1.03	LR	Line deviates right	
1.62	JN	Junction at 09 o'clock, 150mm dia	
7.84	LU	Line deviates up	
8.98	GYF	Finish node, gully, reference: SW18-A: At gully (debris filled)	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - GULLY 1X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
40	1	27/04/24	13:18	TV240428	No Rain Or Snow	No	GULLY 1X

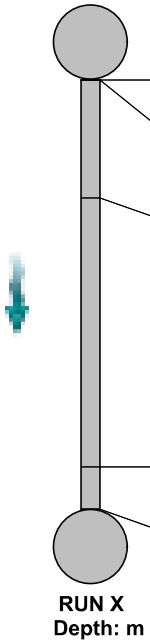
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	GULLY 1
Road:	Vulcan Close	**Inspected Length:**	2.84 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	2.84 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	GY	Start node, gully, reference: GULLY 1	
0.00	WL	Water level, 5% of the vertical dimension	
0.78	LR	Line deviates right	
2.56	LL	Line deviates left	
2.84	BRF	Finish node, major connection without manhole, reference: RUN X: At saddle connection	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - GULLY 2X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
41	1	27/04/24	13:20	TV240428	No Rain Or Snow	No	GULLY 2X

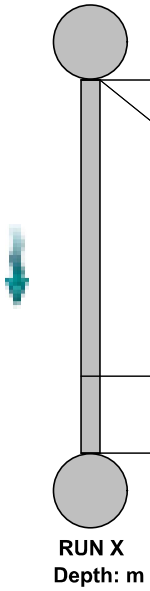
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	GULLY 2
Road:	Vulcan Close	**Inspected Length:**	2.47 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	2.47 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]	Code	Observation	Grade
0.00	GY	Start node, gully, reference: GULLY 2	
0.00	WL	Water level, 5% of the vertical dimension	
1.96	LL	Line deviates left	
2.47	BRF	Finish node, major connection without manhole, reference: RUN X: At saddle connection	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Inspection - 27/04/2024 - GULLY 3X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
42	1	27/04/24	13:26	TV240428	No Rain Or Snow	No	GULLY 3X

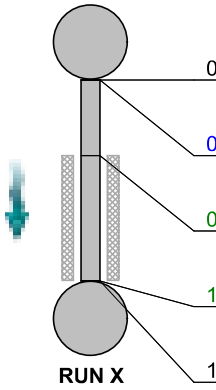
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	GULLY 3
Road:	Vulcan Close	**Inspected Length:**	1.33 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	1.33 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]		Code	Observation	Grade
0.00		GY	Start node, gully, reference: GULLY 3	
0.00		WL	Water level, 5% of the vertical dimension	
0.50	S01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, start	
1.33	F01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish	3
1.33		BRF	Finish node, major connection without manhole, reference: RUN X: At saddle connection	


DEC - 0.50

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	1.5	2.0	3.0

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Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
42	Downstream	GULLY 3X	TV240428	

1, 00:00:05, 0.50 m
Settled deposits, hard or compacted, 10% cross-sectional area loss, start

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Section Inspection - 27/04/2024 - GULLY 4X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
43	1	27/04/24	13:27	TV240428	No Rain Or Snow	No	GULLY 4X

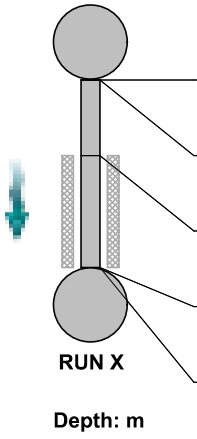
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	GULLY 4
Road:	Vulcan Close	**Inspected Length:**	1.24 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	1.24 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

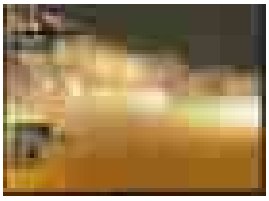
Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations: -

Scale: 1:50



Position [m]		Code	Observation	Grade
0.00		GY	Start node, gully, reference: GULLY 4	
0.00		WL	Water level, 10% of the vertical dimension	
0.50	S01	DEC	Settled deposits, hard or compacted, 20% cross-sectional area loss, start	
1.24	F01	DEC	Settled deposits, hard or compacted, 20% cross-sectional area loss, finish	4
1.24		BRF	Finish node, major connection without manhole, reference: RUN X: At saddle connection	


DEC - 0.50

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	5.0	4.0	5.0	4.0

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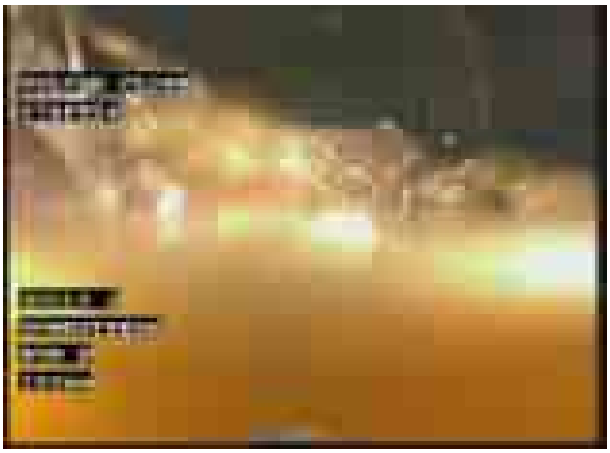
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
43	Downstream	GULLY 4X	TV240428	



1, 00:00:05, 0.50 m
Settled deposits, hard or compacted, 20% cross-sectional area loss, start

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Section Inspection - 27/04/2024 - GULLY 5X

Item No.	Insp. No.	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
44	1	27/04/24	13:30	TV240428	No Rain Or Snow	No	GULLY 5X

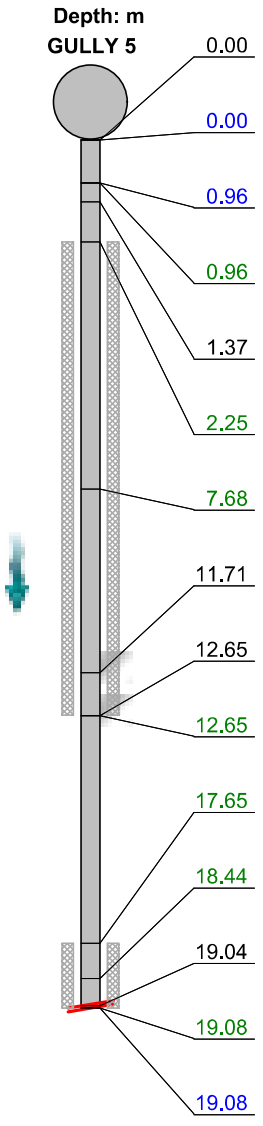
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
InSewer MO	-	Not Specified	Not Specified	-	-

Town or Village:	Whitstable	**Inspection Direction:**	Downstream	**Upstream Node:**	GULLY 5
Road:	Vulcan Close	**Inspected Length:**	19.08 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	19.08 m	**Downstream Node:**	RUN X
Surface Type:		**Joint Length:**		**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Flow Control:	-	**Material:**	Polyvinyl chloride
Year Constructed:	Not Specified	**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

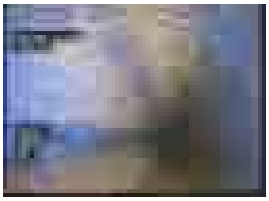
Comments:
Recommendations: -

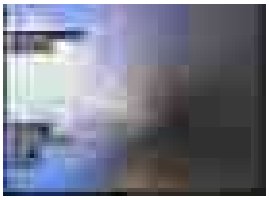
Scale: 1:166



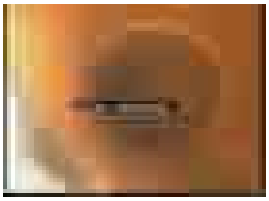
Position [m]		Code	Observation	Grade
0.00		GY	Start node, gully, reference: GULLY 5	
0.00		WL	Water level, 10% of the vertical dimension	
0.96		REM	General remark: saddle connection	
0.96		LL	Line deviates left	
1.37		SC	Pipe size changes, new size(s), 225mm high	
2.25	S01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, start	
7.68	C01	DEC	Settled deposits, hard or compacted, 20% cross-sectional area loss, change	
11.71		JN	Junction at 09 o'clock, 150mm dia	
12.65		JN	Junction at 09 o'clock, 150mm dia	
12.65	F01	DEC	Settled deposits, hard or compacted, 20% cross-sectional area loss, finish	3
17.65	S02	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, start	
18.44		LR	Line deviates right	
19.04		SC	Pipe size changes, new size(s), 150mm high	
19.08	F02	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish	3
19.08		SA	Survey abandoned: Unable to continue	


REM - 0.96


DEC - 2.25


DEC - 7.68


DEC - 17.65


SA - 19.08

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	2	2.0	1.4	26.0	3.0

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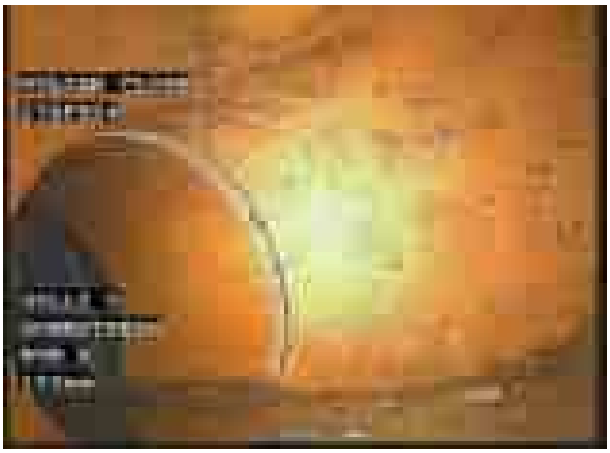
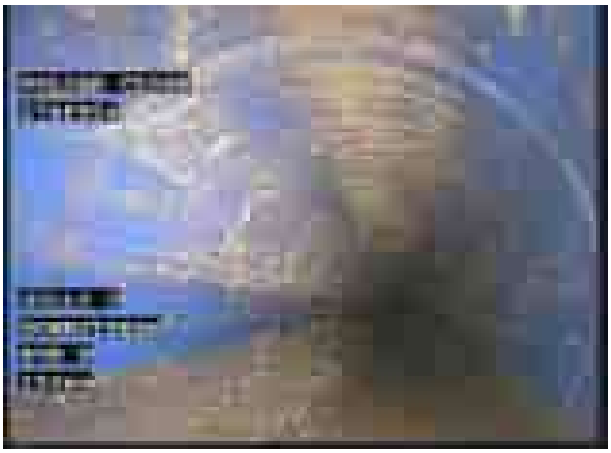
Tel. 01634 861 768
liam@insewer.co.uk

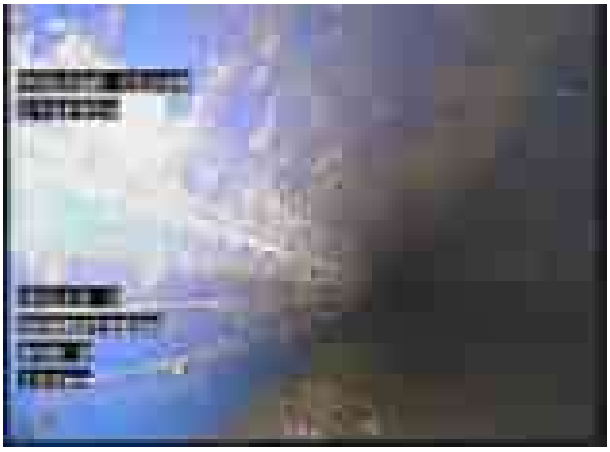
Item No.	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
44	Downstream	GULLY 5X	TV240428	



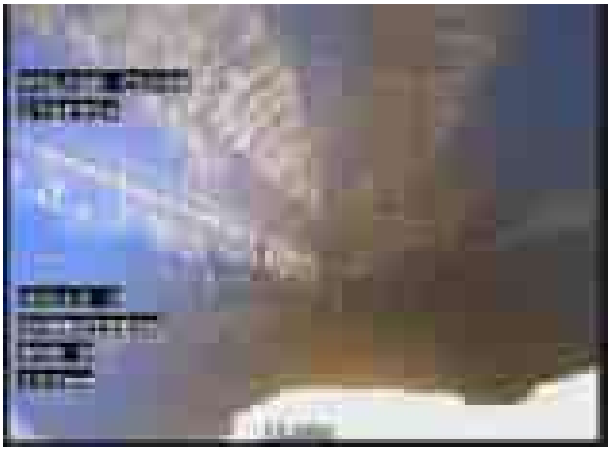
1, 00:00:12, 0.96 m
General remark, saddle connection



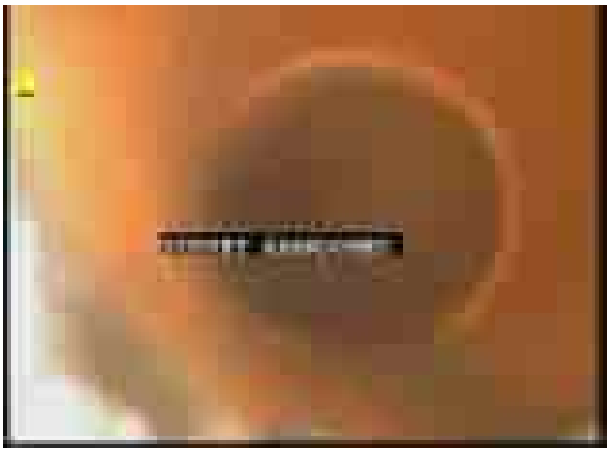
2, 00:00:25, 2.25 m
Settled deposits, hard or compacted, 10% cross-sectional area loss, start



3, 00:01:05, 7.68 m
Settled deposits, hard or compacted, 20% cross-sectional area loss, change



4, 00:01:57, 17.65 m
Settled deposits, hard or compacted, 10% cross-sectional area loss, start



5, 00:03:12, 19.08 m
Survey abandoned, Unable to continue

Recommendations

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Section number	Upstream manhole	Flow direction	Downstream manhole	Recommendations
1	FW2	Upstream	FW1	
2	ExFWMH1	Upstream	FW2	Repair defect(s) by lining
3	FW1	Downstream	FW3	
4	SW2	Upstream	SW1	
5	ExSWMH1	Upstream	SW2	Repair defect(s) by lining
6	SW1	Downstream	SW3	
7	FW3	Downstream	FW4	
8	SW3	Downstream	SW4	
9	FW4	Downstream	FW5	
10	SW4	Downstream	SW5	
11	RE1	Upstream	SW5	Clean by van pack jetting unit and resurvey
12	SW5	Downstream	SW6	
13	FW5	Downstream	FW6	Clean by van pack jetting unit and resurvey
14	SW6-A	Upstream	SW6	
15	SW6	Downstream	SW7	
16	FW6	Downstream	FW7	
17	RE2	Upstream	SW8	
18	SW8	Downstream	RUN X	
19	FW8	Downstream	FW7	Clean by van pack jetting unit and resurvey
20	FW7	Downstream	P.S.1	
21	SW7	Downstream	SW9	Clean by HGV JetVac unit and resurvey
22	SW10	Upstream	SW9	Clean by HGV JetVac unit and resurvey
23	SW9	Downstream	P.S.2	Clean by HGV JetVac unit and resurvey
24	RE3	Upstream	SW11	
25	SW11-B	Upstream	SW11	
26	SW11	Downstream	RUN X	
27	FW9	Downstream	FW10	
28	FW10	Downstream	ExFWMH2	Clean by van pack jetting unit and resurvey (may require further remedials)
29	SW12	Downstream	SW13	
30	SW14-A	Upstream	SW14	
31	SW14	Downstream	SW15	
32	SW15-C	Upstream	SW15	Clean by van pack jetting unit and resurvey
33	SW15	Downstream	SW4	
34	SW16-A	Upstream	SW16	Clean by HGV JetVac unit and resurvey
35	SW16	Downstream	SW17	Clean by HGV JetVac unit and resurvey
36	SW17	Downstream	SW10	Clean by HGV JetVac unit and resurvey
37	SW10-B	Upstream	SW10	
38	SW18	Upstream	SW10	Clean by HGV JetVac unit and resurvey
39	SW18-A	Upstream	SW18	
40	GULLY 1	Downstream	RUN X	
41	GULLY 2	Downstream	RUN X	

42	GULLY 3	Downstream	RUN X	Clean by HGV JetVac unit and resurvey
43	GULLY 4	Downstream	RUN X	Clean by HGV JetVac unit and resurvey
44	GULLY 5	Downstream	RUN X	Clean by HGV JetVac unit and resurvey
FURTHER NOTES				Clean all gullys by HGV JetVac unit and resurvey

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