

11th May 2017

Our Ref: DR17/418A-3

Client: Victory Housing Trust
Cromer Road
North Walsham
Norfolk
NR28 0NB

Site: Proposed Development Site
Lancaster Close
Fakenham
Norfolk
NR21 8DJ

Report To: Oxbury & Co. Ltd.
St. Thomas House
14 Central Avenue
St. Andrews Business Park
Norwich
NR7 0HR

Contact: Joshua Bell -01603 707975

P Bowyer Associates Ltd
Mahoney Green, Green Lane West,
Rackheath, Norfolk, NR13 6JY

Tel: 01603 722325
Email: pbowyer@dyno.com

VAT No. 106 9770 56
Company Reg No. 1895836



By Appointment to
Her Majesty The Queen
Drainage Specialists
P. Bowyer Associates Ltd.
(Dyno-Rod East Anglia)

SUMMARY

As requested, we attended site on 4th May 2017.

The purpose of the visit was to undertake an investigation of any existing drainage within the proposed development area. Specifically, to confirm the following:

- The routes of the existing foul and surface water drains on and adjacent to the site and thence to the main sewers (where access allowed).
- A C.C.T.V survey to determine the size and condition of any existing pipework.
- Identify invert levels, chamber depths and pipework diameters.

On completion of the survey to supply a marked-up plan of the drainage with all requested information (please refer to the enclosed plan for full details.)

C.C.T.V Investigation

Observations on the structural condition of the pipework have been noted in accordance with the Water Research Council's (WRc) Manual of Sewer Classification, 5th Edition. All structural defects are noted, and their severity graded 1 – 5, with 5 being the most structurally compromised (as described below)

Pipework Condition Grade	Structural Condition
1 & 2	Structurally sound with no leakage evident. Slight cracks/defects permitted.
3	Cracks and/or fractures observed but pipe provides sufficient arching support. Some leakage may be evident
4 & 5	Structurally unsound with insufficient arching support. Total collapse/blockage likely in the future.

Foul Water

The C.C.T.V survey revealed that there is an adopted, 150mm diameter Anglian Water foul sewer that crosses the proposed development area.

A private lateral serving No.7 Lancaster Avenue discharges to Manhole 2107 located within the proposed development area. Manhole 2107 also serves No.48 and the upstream properties along Lancaster Avenue.

The pipework is serviceable but would benefit from high-pressure cleaning to remove general debris/sewage scale. Minor defects were noted. This cleaning/remedial work would fall under the responsibility of Anglian Water.

The C.C.T.V survey did not identify any 'blind' connections or hidden manholes. No additional drainage was located within the proposed development area.

Whilst it was not possible to lift Manhole 2018 we do not believe that any drainage connects/discharges to this manhole.

Cont.../

Surface Water

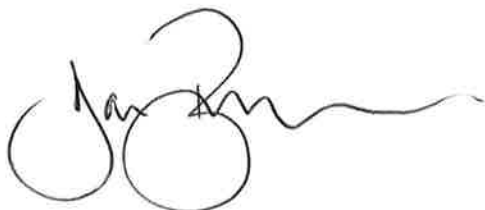
The survey noted that the rainwater pipes discharge to underground pipework without access or rodding-eyes. We suspect that the rainwater is dispersed via localised soakaways located close to the properties.

It was also noted that a Highway Surface Water Gully (SWG) discharges to a soakaway in the footpath verge

All work has been carried out in accordance with current Health and Safety Regulations and in line with our site-specific Method Statement and Risk Assessments.

We trust our findings meet with your approval and we look forward to being of continued service. Should there be any aspect that you wish to discuss further, or if you require additional information, please do not hesitate to contact this office.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Daniel Bowyer', with a long, sweeping horizontal line extending to the right.

DANIEL BOWYER
DIRECTOR

Encl. DVD



DYNO ROD

Client
 Victory Housing Trust,
 Proposed Site,
 Lancaster Avenue,
 Fakenham,
 Norfolk

NR21 8DJ
 May 2017
 Not to Scale

Independent licensed operator

P Bowyer Assocs. Ltd (Co.Reg: 1895836)
Mahoney Green, Rackheath
Norwich
NR13 6JY
Tel: 01603 722325
Fax: 01603 735628
e-mail: admin@bowyer-drains.com

DYNO-ROD

Drain services

Part of **British Gas**



Freephone: 0800 112 112

CCTV SURVEY REPORT

Date of Survey:	04/05/2017
Survey Conducted by:	
Log No.:	
Our Reference:	DR17/418A-3
Your Reference:	AD01-155

CLIENT DETAILS

Client Name:	Victory Housing Trust
Client Ref.:	AD01-155
Contact:	(Joshua Bell - Oxbury)
Position:	
Address:	Cromer Road, North Walsham, Norfolk NR28 0NB
Tel:	01603 707 900
Mobile:	07939 887 529
e-mail:	

SITE DETAILS

Site Contact:	
Position:	
Site Address:	Lancaster Avenue, Fakenham, Norfolk NR21 8DJ
Tel:	
Mobile:	
e-mail:	




Inspection report

Date: 04/05/2017	Job N°: DR17/418A-3	Weather: Dry	Operator: JV	section number: 1	PLR: 2002 X
Video Volume No.:	Flow Ctrl:	Temperature:	Year laid:	Cleaned: No	Strat. Drain:

Road: Lancaster Avenue	Div/Dist:	start MH: 2107
Place: Fakenham	Drain. Area:	end MH: 2002
Location:	Standard: BS EN 13508-2:2003	Total length: 24.18 m

Purpose: Other	Shape/Size: Circular 150
Type:	Material: Vitreous Clay Pipe length:
Use: Foul	Lining Type:

Comment:

1:200	position	code	observation	counter	photo	grade
Depth: 1.24						
	0.20	MH	Start node type, manhole, reference number: 2107	00:00:00		(Misc) 0
	2.39	CL	Crack Longitudinal at 01 o'clock	00:00:00	2_2a	(Struct) 2
	9.42	DEE	Attached deposits encrustation 15 % cross-sectional area loss	00:00:00		
	9.89	CL	Crack Longitudinal at 01 o'clock	00:00:00	4_4a	(Struct) 2
	14.75	CL	Crack Longitudinal at 12 o'clock	00:00:00	5_5a	(Struct) 2
	24.18	MHF	Finish node type, manhole, reference number: 2002	00:00:00		
Depth: NA						

Structural Defects	Constructional Features
Service Defects	Miscellaneous Features

Inspection photos

Place: Fakenham	Road: Lancaster Avenue	Date: 04/05/2017	section number: 1	PLR: 2002 X
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Photo: 2_2a, 00:00:00
2.39m, Crack Longitudinal at 01 o'clock



Photo: 4_4a, 00:00:00
9.89m, Crack Longitudinal at 01 o'clock



Photo: 5_5a, 00:00:00
14.75m, Crack Longitudinal at 12 o'clock

Inspection report

Date: 04/05/2017	Job N°: DR17/418A-3	Weather: Dry	Operator: JV	section number: 2	PLR: 2017 X
Video Volume No.:	Flow Ctrl:	Temperature:	Year laid:	Cleaned: No	Strat. Drain:

Road: Lancaster Avenue	Div/Dist:	start MH: 2107
Place: Fakenham	Drain. Area:	end MH: 2108
Location:	Standard: BS EN 13508-2:2003	Total length: 8 m

Purpose: Other	Shape/Size: Circular 150
Type:	Material: Vitreous Clay Pipe length:
Use: Foul	Lining Type:

Comment:

1:75	position	code	observation	counter	photo	grade
Depth: 1.24						
	2107	0.20	MH Start node type, manhole, reference number: 2107	00:00:00		(Misc) 0
		0.78	CC Crack Circumferential from 06 to 09 o'clock	00:00:00	8_2a	(Struct) 2
		5.02	CC Crack Circumferential from 01 to 04 o'clock	00:00:00	9_3a	(Struct) 2
		6.97	CC Crack Circumferential from 03 to 09 o'clock	00:00:00	10_4a	(Struct) 2
	2108	8.00	MHF Finish node type, manhole, reference number: 2108	00:00:00		
Depth: NA						

Structural Defects	Constructional Features
Service Defects	Miscellaneous Features

Inspection photos

Place: Fakenham	Road: Lancaster Avenue	Date: 04/05/2017	section number: 2	PLR: 2017 X
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Photo: 8_2a, 00:00:00
0.78m, Crack Circumferential from 06 to 09 o'clock



Photo: 9_3a, 00:00:00
5.02m, Crack Circumferential from 01 to 04 o'clock



Photo: 10_4a, 00:00:00
6.97m, Crack Circumferential from 03 to 09 o'clock

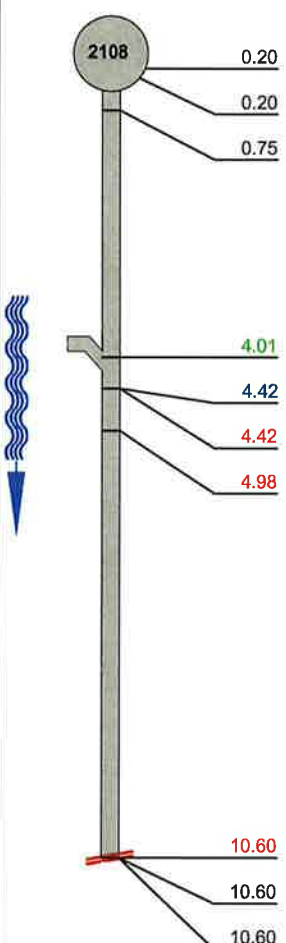
Inspection report

Date: 04/05/2017	Job N°: DR17/418A-3	Weather: Dry	Operator: JV	section number: 3	PLR: 2018 X
Video Volume No.:	Flow Ctrl:	Temperature:	Year laid:	Cleaned: No	Strat. Drain:

Road: Lancaster Avenue	Div/Dist:	start MH: 2108
Place: Fakenham	Drain. Area:	end MH: 2109
Location:	Standard: BS EN 13508-2:2003	Total length: 10.6 m

Purpose: Other	Shape/Size: Circular 150
Type:	Material: Vitreous Clay Pipe length:
Use: Foul	Lining: Lining Type:

Comment:

1:100	position	code	observation	counter	photo	grade
Depth: NA						
	0.20	MH	Start node type, manhole, reference number: 2108	00:00:00		(Misc) 0
	0.20	LD	Line of drain/sewer deviates down	00:00:00		
	0.75	REM	General remark - LINE LEVELS OUT	00:00:00		
	4.01	JN	Junction at 03 o'clock dia 100 mm	00:00:00		(Constr) 0
	4.42	RF	Roots fine	00:00:00		(Serv) 1
	4.42	CC	Crack Circumferential from 08 to 04 o'clock	00:00:00	17_6a	(Struct) 2
	4.98	CC	Crack Circumferential from 12 to 12 o'clock	00:00:00	18_7a	(Struct) 2
	10.60	CC	Crack Circumferential from 02 to 04 o'clock	00:00:00	19_8a	(Struct) 2
	10.60	SA	Survey abandoned, BEYOND SURVEY REQUIREMENTS	00:00:00		(Misc) 0
	10.60	REM	FINAL TOTAL METERAGE UNKNOWN	00:00:00		

Structural Defects

Constructional Features

Service Defects

Miscellaneous Features

Inspection photos

Place: Fakenham	Road: Lancaster Avenue	Date: 04/05/2017	section number: 3	PLR: 2018 X
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Photo: 17_6a, 00:00:00
 4.42m, Crack Circumferential from 08 to 04 o'clock



Photo: 18_7a, 00:00:00
 4.98m, Crack Circumferential from 12 to 12 o'clock



Photo: 19_8a, 00:00:00
 10.6m, Crack Circumferential from 02 to 04 o'clock

Inspection report

Date: 04/05/2017	Job N°: DR17/418A-3	Weather: Dry	Operator: JV	section number: 4	PLR: LINE A X
Video Volume No.:	Flow Ctrl:	Temperature:	Year laid:	Cleaned: No	Strat. Drain:

Road: Lancaster Avenue	Div/Dist:	start MH: 2107
Place: Fakenham	Drain. Area:	end MH: LINE A
Location:	Standard: BS EN 13508-2:2003	Total length: 31.38 m

Purpose: Other	Shape/Size: Circular 100
Type:	Material: Vitreous Clay Pipe length:
Use: Foul	Lining: Lining Type:

Comment:

1:250	position	code	observation	counter	photo	grade
Depth: 1.24						
2107	0.20	MH	Start node type, manhole, reference number: 2107	00:00:00		(Misc) 0
	31.38	MHF	Finish node type, manhole, reference number: LINE A	00:00:00		
Depth: NA						

Structural Defects	Constructional Features
Service Defects	Miscellaneous Features