Jacob Gemma

From: Kelly Darren
Sent: 02 June 2020 11:54
To: Storer Richard

Cc: Forrest Jim; Venn Daniel **Subject:** Kempton Court CCTV Survey

Attachments: PJ00366135_Socotec UK Limited_51 Durvward Street_New Install (1).pdf; drainage sketch - mark

up.pdf

Richard,

See revised drainage survey for Kempton Court.

This can be sent to the residents now.

Regards

Darren

Project

Project Name: PJ00366135_Socotec UK Limited_51 Durvward Street_New

Install

Project Description: CCTV survey - New Installation

Project Number: PJ00366135
Project Status: Complete
Project Date: 20/03/2020

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| PJ00366135_Socotec UK Limited_51 Durvward Street_New Install | PJ00366135 | 20/03/2020 |

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Project Information

 Project Name
 Project Number
 Project Date

 PJ00366135_Socotec UK Limited_51 Durvward Street_New Install
 PJ00366135
 20/03/2020

Client

Company: Socotec UK Limited
Department: Socotec House

Street: Ashby Road, Bretby Business Park

Town or City: Burton-On-Trent
County: Staffordshire
Post Code: DE15 0YZ

Site

Company: Socotec UK Limited Street: 51 Durward Street

Town or City: London Post Code: E1 5BA

Email: socotec.com

Contractor

Company: Lanes Group Plc
Department: Branch Manager
Street: 16 Lamson Road

Town or City: Rainham
County: Essex
Post Code: RM13 9YY
Phone:

Email: londonops@lanesgroup.co.uk

| Lanes Group Plo |
|----------------------------|
| 16 Lamson Road, Rainhan |
| Tel. |
| londonops@lanesgroup.co.ul |
| londonops@lanesgroup.co.uk |

Project Information

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street_New Install | PJ00366135 | 20/03/2020 |

Project Notes

Client: Socotec UK Limited

Date: 17/03/2020

Job/Ref No: PJ00366135

Site Address: 51 Durward Street, London E1 5BA

Dear Sir / Madam,

As requested, we have recently carried out a drainage CCTV survey at the above site and our full and detailed findings are contained in the attached CCTV report which you can review at your leisure.

We have identified the need for further works for which a quotation will be sent via our sales team which highlights the areas of concern, the most appropriate remedial techniques and associated costings.

We would like to take this opportunity to thank you for using Lanes Group plc and I hope we can be of service to you again soon. Please visit our website for full details of all services we can provide, follow us on social media or even share details of your customer experience with us.

Yours Sincerely,

Lanes Group London

Tel:

londonops@lanesgroup.co.uk

Lanes Group Plc 16 Lamson Road, Rainham Tel. Iondonops@lanesgroup.co.uk

Scoring Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135 Socotec UK Limited 51 Durvward Street New Install | PJ00366135 | 20/03/2020 |

Structural Defects

Section PLR Grade Description

All inspected pipes are in an acceptable structural condition (< grade 3).

Service / Operational Condition

Section PLR Grade Description

All inspected pipes are in an acceptable service condition (< grade 3).

Abandoned Surveys

Section PLR Description

All inspections complete, none are abandoned.

Information

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

Lanes Group Plc 16 Lamson Road, Rainham Tel. londonops@lanesgroup.co.uk

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street_New Install | PJ00366135 | 20/03/2020 |

| Pipe Summary | | | | | | | | | | | |
|--------------|------|------------|---------------|-----------------|-------------------|--------|-----|------|----------------|--------|---------|
| No. | Туре | PLR | Upstream Node | Downstream Node | Road | Town | Use | Mat. | Profile | 1 | Length |
| 1 | SEC | LAT A.MH6X | LAT A.MH6 | MH6 | 51 Durward Street | London | S | VC | Circular 100mm | 1 119 | 0.56 m |
| 2 | SEC | GY01X | GY01 | DS | 51 Durward Street | London | S | VC | Circular 150mm | | 3.60 m |
| 3 | SEC | MH6X | MH6 | MH8 | 51 Durward Street | London | S | PVC | Circular 150mm | 1 1 | 14.60 m |
| 4 | SEC | ACO 01X | ACO 01 | DS | 51 Durward Street | London | S | PVC | Circular 100mm | | 1.97 m |
| 5 | SEC | GY02X | GY02 | DS | 51 Durward Street | London | S | PVC | Circular 100mm | | 2.46 m |
| | | | | | | - | | | То | tal: 2 | 23.19 m |

Pipe Levels

| No. | PLR | Upstream Node | Upstream C.L. | Upstream I.L. | Upstream I.D. | Downstream Node | Downstream C.L. | Downstream I.L. | Downstream I.D. |
|-----|------------|---------------|---------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| 1 | LAT A.MH6X | LAT A.MH6 | | | 1.650 m | MH6 | | | 1.750 m |
| 2 | GY01X | GY01 | | | 0.000 m | DS | | | 0.000 m |
| 3 | MH6X | MH6 | | | 1.750 m | MH8 | | | 2.100 m |
| 4 | ACO 01X | ACO 01 | | | 0.000 m | DS | | 1 | 0.000 m |
| 5 | GY02X | GY02 | | | 0.000 m | DS | | | 0.000 m |

| Pipe Summary by Profile | | | | | | |
|--|------|----------------------------|-----------|--|--|--|
| Profile | | Total Length | No. Pipes | | | |
| Circular 100mm Circular 100mm Circular 100mm | | 0.56 m 1.97 m 2.46 m | | | | |
| Circular 100mm | 9.7 | 4.99 m | 3 | | | |
| Circular 150mm Circular 150mm | | 3.60 m 14.60 m | | | | |
| Circular 150mm | - 0= | 18.20 m | 2 | | | |
| Total | - | 23.19 m | 5 | | | |

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Project Summary

Project Name
PJ00366135_Socotec UK Limited_51 Durvward Street_New Install Project Number PJ00366135 Project Date 20/03/2020

| Inspection Summary | | | | | | | | | | | |
|--------------------|--------------|---------------|-----------------|------|------------|------------|------------|-----|-----|--------------------------|---------|
| Pipe No. | Insp. No. | Upstream Node | Downstream Node | Dir. | Operator | Insp. Date | Insp. Time | Str | Ser | Final Observation | Length |
| 1 | 1 | LAT A.MH6 | MH6 | US | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REDUNDANT OR CAPPED | 0.56 m |
| 2 | 1 | GY01 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 3.60 m |
| 3 | 1 | MH6 | MH8 | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF | 14.60 m |
| 4 | 1 | ACO 01 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 1.97 m |
| 5 | 1 | GY02 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF, MH8 | 2.46 m |
| | | | - | | | | | | | Total: | 23.19 m |

| Inspection Summary by Profile | | | | | | |
|--|----------|----------------------------|-----------------|--|--|--|
| Profile | | Total Length | No. Inspections | | | |
| Circular 100mm Circular 100mm Circular 100mm | | 0.56 m 1.97 m 2.46 m | | | | |
| Circular 100mm | - : ; a. | 4.99 m | 3 | | | |
| Circular 150mm Circular 150mm | | 3.60 m 14.60 m | | | | |
| Circular 150mm | E. | 18.20 m | 2 | | | |
| Total | | 23.19 m | 5 | | | |

Lanes Group Plc 16 Lamson Road, Rainham Tel. londonops@lanesgroup.co.uk

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street_New Install | PJ00366135 | 20/03/2020 |

| Defe | ect S | ummary | | | | | | | | (| CTV | Oraina | ge Su | rvey O | bserv | ation C | ount | | | | | | | |
|-------|-------|---------------|-----------------|---------------------|-----------------------|---------------------|-----------------------|----------------------|-----------|--------|----------|-----------|-------|-------------------|---------------------|---------|-------|--------------|--------------|------|--------|-------------|-------|------------------|
| | | N | | General | | | - 1 | Structural Condition | | | | | | Service Condition | | | | | | | | | | |
| Sect. | Insp. | Upstream Node | Downstream Node | Insp. Length (m) | No. Grade 4/5 Obs. | Survey Abandoned | Camera Under Water | Cracks | Fractures | Broken | Deformed | Collapsed | Holes | Surface Damage | Displaced Joints | Open | Roots | Infiltration | Encrustation | Silt | Grease | Obstruction | Water | Line Deviates |
| 1 | 1 | LAT A.MH6 | MH6 | 0.6 | | | | | | | | | | | | | | | | | | | 1 | 2 |
| 2 | 1 | GY01 | DS | 3.6 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| 3 | 1 | MH6 | MH8 | 14.6 | | - | | | | | | | | | | | | | | | | | 1 | |
| 4 | 1 | ACO 01 | DS | 2.0 | - | , | 1 | | | | | | | | | | | | + | | | | 1 | 3 |
| 5 | 1 | GY02 | DS | 2.5 | | 1 1 | | | | | | | | | | | | | | 111 | 12 | 111 | 1 | 1 |
| | | 1 | Total: | 23.2 | 0.00 | 1 | | | | | | | | | | | | [I | | | | | 5 | 7 |

Section Inspection - 17/03/2020 - LAT A.MH6X

| Section 1 | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|-----------|-------------------|--------------|----------|---------------------------|-------------------------|-------------------------------|----------------|
| | 1 | 17/03/20 | 12:02 | PJ00366135 | No Rain Or Snow | Yes | LAT A,MH6X |
| | erator ayfield | Vehi PF65 | (C.1334) | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Upstream | Upstream Node: | LAT.A.MH6 | |
|---------------------|--|-----------------------|------------------|----------------------------------|-----------|--|
| Road: | 51 Durward Street | Inspected Length: | 0.56 m | Upstream Pipe Depth: | 1.650 m | |
| Location: | Property with buildings | Total Length: | 0.56 m | Downstream Node: | MH6 | |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 1.750 m | |
| Use: | Surface water | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cl | ayware) | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | spection Purpose: Investigation of known defects | | Lining Material: | No Lining | | |
| C | | | | | | |

Comments:

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|-------------------|--------------|------|---|----------|--|-------|
| ĵ | Depth: 1.7 MH6 | 5 m | | | | | |
| (| | 0.00 | MH | Start node type, manhole, reference number: MH6 | 00:00:00 | 200317_1 | |
| | | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:02 | 202C-Surv ey.jpg 200317_1 202D-Surv | |
| 1 (| | 0.02 | ĹĹ | Line deviates left | 00:00:07 | ey.jpg 200317_1 202E-Surv | |
| LA | T A.MH | 0.14 | ĻU | Line deviates up | 00:00:12 | ey.jpg 200317_1 202F-Surv | |
| | | 0.56 | OCF | Finish node type, other special chamber, reference number: LAT A: REDUNDANT OR CAPPED | 00:00:18 | ey.jpg 200317_1 202G-Surv | |
| I | Depth: 1.6 | 5 m | | | | ey.jpg | |

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|--|--|
| | S | tructural Defec | ts | | 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 | | |

Section Pictures - 17/03/2020 - LAT A.MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------------|------------------|----------------------|
| 1 | Upstream | LAT A.MH6X | PJ00366135 | PJ00366135 |



200317_1202C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH6



200317_1202D-Survey.jpg, 00:00:02, 0.00 m Water level, 0% % of the vertical dimension



200317_1202E-Survey.jpg, 00:00:07, 0.02 m Line deviates left



200317_1202F-Survey.jpg, 00:00:12, 0.14 m Line deviates up

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Section Pictures - 17/03/2020 - LAT A.MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------------|------------------|----------------------|
| 1 | Upstream | LAT A.MH6X | PJ00366135 | PJ00366135 |



200317_1202G-Survey.jpg, 00:00:18, 0.56 m
Finish node type, other special chamber, reference number:
LAT A, REDUNDANT OR CAPPED

Section Inspection - 17/03/2020 - GY01X

| Section | Inspection 2 | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|--------|---------------------------|-------------------------|-------------------------------|----------------|
| 2 | | 17/03/20 | 12:06 | PJ00366135 | No Rain Or Snow | Yes | GY01X |
| | erator ayfield | Vehi PF65 | C133.5 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY01 |
|---------------------|-------------------------|-----------------------|------------------|------------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 3.60 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 3.60 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 150 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all clay | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Camananta | | | | | |

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo G | rade |
|--------|--------------------|--------------|------|--|----------|---|------|
| | Depth: 0.0 GY01 | 0 m | | | | | |
| | Q | 0.00 | GY | Start node type, gully, reference number: GY01 | 00:00:00 | 200317_1 205C-Surv | |
| | | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:03 | ey.jpg 200317_1 205D-Surv ey.jpg | |
| 1 | | | | | | | |
| | | 2.45 | LD | Line deviates down | 00:00:11 | 200317_1 205E-Surv ey.jpg | |
| | | 3.60 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:21 | 200317_1 205F-Surv ey.jpg | |
| | DS Depth: 0.0 | 0 m | | | | | |

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|--|--|
| | S | tructural Defec | ts | | 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 | | |

Tel. londonops@lanesgroup.co.uk

Section Pictures - 17/03/2020 - GY01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 2 | Downstream | GY01X | PJ00366135 | PJ00366135 |



200317_1205C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY01



200317_1205D-Survey.jpg, 00:00:03, 0.00 m Water level, 0% % of the vertical dimension



200317_1205E-Survey.jpg, 00:00:11, 2.45 m Line deviates down



200317_1205F-Survey.jpg, 00:00:21, 3:60 m Finish node type, other special chamber, reference number: DS, REACHED

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Section Inspection - 17/03/2020 - MH6X

| ecotion inspection invested innex | | | | | | | |
|-----------------------------------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|
| Section 3 | Inspection 3 | Date 17/03/20 | Time 12:33 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR MH6X |
| | erator ayfield | Vehi PF65 | 10,434 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH6 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 14.60 m | Upstream Pipe Depth: | 1.750 m |
| Location: | Property with buildings | Total Length: | 14.60 m | Downstream Node: | MH8 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.100 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 150 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

| Scale: | 1:127 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|---------|--|-----------------|---|-------|
| C | Depth: 1.79 MH6 | 5 m | | | | | |
| (| | 0.00 | МН | Start node type, manhole, reference number: MH6 | 00:00:00 | 200317_1 231C-Surv | |
| | | 0.04 | WL | Water level, 5% % of the vertical dimension | 00:00:02 | ey.jpg 200317_1 232A-Surv ey.jpg | |
| | 9 | 2.79 | NL | Junction, at 11 o'clock, diameter: 150 mm | 00:00:11 | 200317_1 232B-Surv ey.jpg | |
| • | 7 | 7.59 | JN | Junction, at 10 o'clock, diameter: 150 mm | 00:00:25 | 200317_1 232C-Surv ey.jpg | |
| (| | 14.60 | MHF | Finish node type, manhole, reference number: MH8 | 00:00:45 | 200317_1 233A-Surv ey.jpg | |
| | MH8 Depth: 2.10 | 0 m | | | | | |
| | | Construction | | | eous Features | | |
| | | Structural | Defects | Service & Opera | itional Observa | tions | |

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

0.0

0.0

0.0

Tel. londonops@lanesgroup.co.uk

Section Pictures - 17/03/2020 - MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 3 | Downstream | MH6X | PJ00366135 | PJ00366135 |



200317_1231C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH6



200317_1232A-Survey.jpg, 00:00:02, 0.04 m Water level, 5% % of the vertical dimension



200317_1232B-Survey.jpg, 00:00:11, 2.79 m Junction, at 11 o'clock, diameter: 150 mm



200317_1232C-Survey.jpg, 00:00:25, 7.59 m Junction, at 10 o'clock, diameter: 150 mm

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Section Pictures - 17/03/2020 - MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 3 | Downstream | MH6X | PJ00366135 | PJ00366135 |



200317_1233A-Survey.jpg, 00:00:45, 14.60 m Finish node type, manhole, reference number: MH8

MPEG

Photo

Grade

| Section Inspection - 17/03/2020 - A | ACO | 01X |
|-------------------------------------|-----|-----|
|-------------------------------------|-----|-----|

| Section | Inspection | Date 17/03/20 | Time 12:39 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR ACO 01X |
|---------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|
| | erator ayfield | Vehi PF65 | cle | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | ACO 01 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.97 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 1.97 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Comments: | None | | | | |

1:50

Position [m] Code Observation

Recommendations:

Scale:

| | and the property of the same o | | | | |
|---|--|-----|--|----------|---------------------------------|
| | Depth: 0.00 m ACO 01 | | | | |
| | 0.00 | RE | Start node type, rodding eye, reference number: ACO 01 | 00:00:00 | 200317_1 |
| | | | | | 237C-Surv ey.jpg |
| 1 | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:02 | 200317_1 237D-Surv ey.jpg |
| * | 0.00 | LD | Line deviates down | 00:00:04 | 200317_1 237E-Surv ey.jpg |
| | 0.25 | LR | Line deviates right | 00:00:14 | 200317_1 238A-Surv ey.jpg |
| | 0.25 | LD | Line deviates down | 00:00:16 | 200317_1 238B-Surv ey.jpg |
| | DS 1.90 | SC | Size changes, new size(s), 150 mm high | 00:00:28 | 200317_1 238C-Surv ey.jpg |
| | 1.97 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:33 | 200317_1 238D-Sury |
| | Depth: 0.00 m | | | | ey.jpg |

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| THE WEST OF | S | tructural Defec | ts | | 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 |

Section Pictures - 17/03/2020 - ACO 01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|---------|------------------|----------------------|
| 4 | Downstream | ACO 01X | PJ00366135 | PJ00366135 |



200317_1237C-Survey.jpg, 00:00:00, 0.00 m Start node type, rodding eye, reference number: ACO 01



200317_1237D-Survey.jpg, 00:00:02, 0.00 m Water level, 0% % of the vertical dimension



200317_1237E-Survey.jpg, 00:00:04, 0.00 m Line deviates down



200317_1238A-Survey.jpg, 00:00:14, 0.25 m Line deviates right

Section Pictures - 17/03/2020 - ACO 01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|---------|------------------|----------------------|
| 4 | Downstream | ACO 01X | PJ00366135 | PJ00366135 |



200317_1238B-Survey.jpg, 00:00:16, 0.25 m Line deviates down



200317_1238C-Survey.jpg, 00:00:28, 1.90 m Size changes, new size(s), 150 mm high



200317_1238D-Survey.jpg, 00:00:33, 1.97 m
Finish node type, other special chamber, reference number:
DS, REACHED

Section Inspection - 17/03/2020 - GY02X

| Section 5 | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|-----------|-------------------|--------------|----------|---------------------------|-------------------------|-------------------------------|----------------|
| | 5 | 17/03/20 | 12:46 | PJ00366135 | No Rain Or Snow | Yes | GY02X |
| | erator ayfield | Vehi PF65 | (C.1334) | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY02 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 2.46 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 2.46 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Comments: | 3 | | | | |

Recommendations:

Depth: 0.00 m

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|--|----------|---|-------|
| | Oepth: 0.0 GY02 | 0 m | | | | | |
| (| | 0.00 | GY | Start node type, gully, reference number: GY02 | 00:00:00 | 200317_1 245A-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | ey.jpg 200317_1 245B-Surv ey.jpg | |
| 1 | | 0.31 | LD | Line deviates down | 00:00:18 | 200317_1 245C-Surv ey.jpg | |
| | | 1.96 | SC | Size changes, new size(s), 150 mm high | 00:00:35 | 200317_1 245D-Surv ey.jpg | |
| (| | 2.46 | MHF | Finish node type, manhole, reference number: DS: MH8 | 00:00:46 | 200317_1 246A-Surv | |
| (| DS | | | | | ey.jpg | |

| Construction Features | | | | | Miscellaneous Features | | | | |
|-----------------------|----------|----------|-----------|------------------------------------|------------------------|----------|----------|-----------|-----------|
| Structural Defects | | | | Service & Operational Observations | | | | GR STORY | |
| 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 |

Section Pictures - 17/03/2020 - GY02X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | GY02X | PJ00366135 | PJ00366135 |



200317_1245A-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY02



200317_1245B-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200317_1245C-Survey.jpg, 00:00:18, 0.31 m Line deviates down



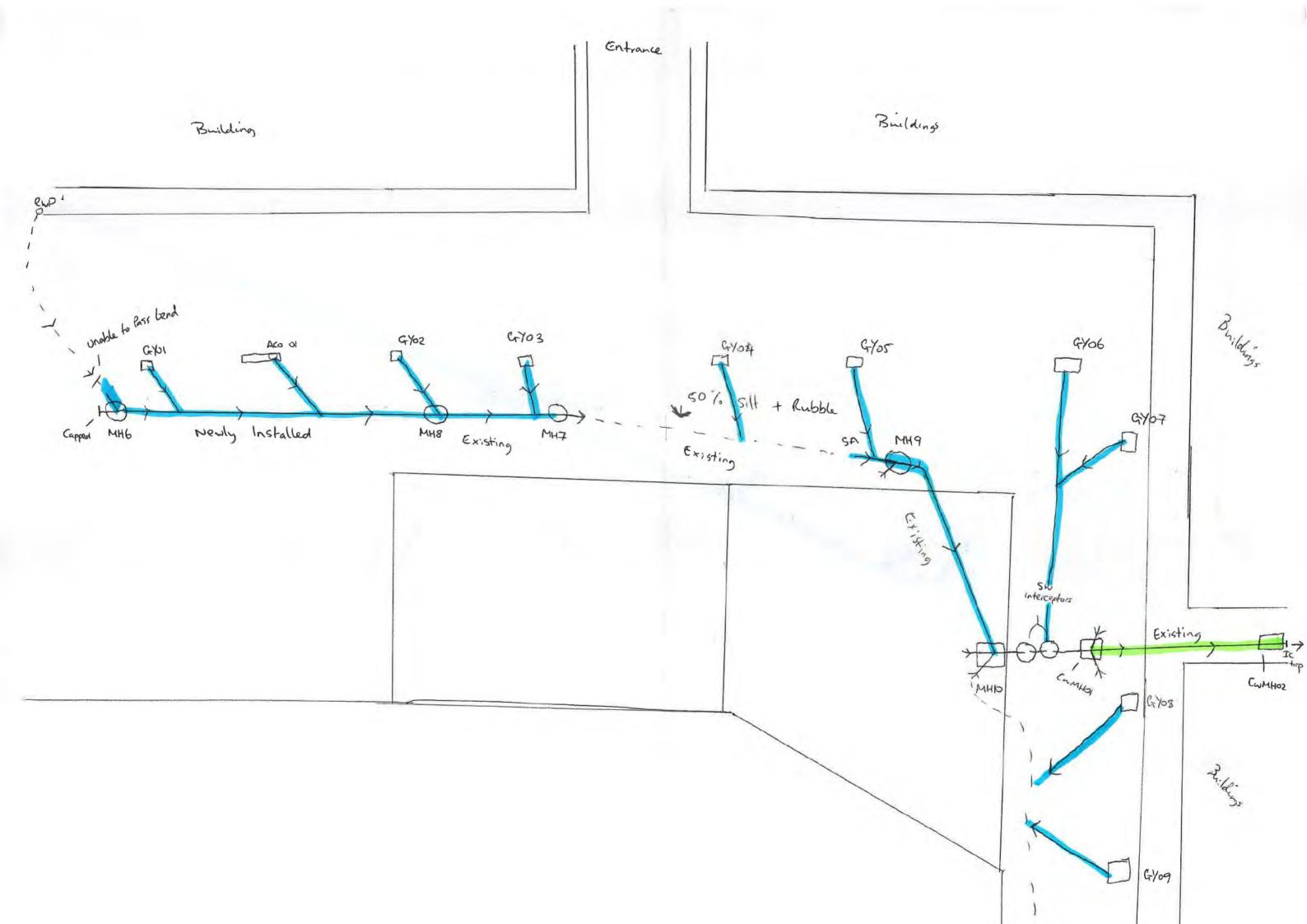
200317_1245D-Survey.jpg, 00:00:35, 1.96 m Size changes, new size(s), 150 mm high

Section Pictures - 17/03/2020 - GY02X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | GY02X | PJ00366135 | PJ00366135 |



200317_1246A-Survey.jpg, 00:00:46, 2.46 m Finish node type, manhole, reference number: DS, MH8





Revision:



Reason for Issue:

C512 Whitechapel Station Main Works and Fit Out

CCTV Survey - Kempton Court - New Drainage

CRL Document Number: C512-BBM-A-RGN-D061_WS106-50253

Contract MDL reference C09.009

Checked by:

Approved by:

1. Contractor Document Submittal History:

Prepared by:

Date:

| 1.0 | 01-05-20 | C. Gilmou | ır | A. Smithson | J. Gaffney | For Inform | nation | |
|-----------|---|-----------|---------------------|-------------|------------|----------------------------------|-----------------|--------|
| | | | | | | | | |
| 2a. Stake | holder Review Re | quired? Y | ES 🗌 | NO 🗌 | | | | |
| Stakehold | ler submission required: | LU | RfL LO Other: | Purp | | For no objection For information | | |
| | ent has been reviewed nich is acceptable for tra | | | | | and acceptance an | d has reached (| Code 1 |
| Sign: | | Role: | | Name: | | Date: | | |

_ Name:

2b. Review by Stakeholder (if required):

| Stakeholder Organisation | Job Title | Name | Signature | Date | Acceptance |
|-----------------------------|-----------|------|-----------|------|------------|
| | | | | | |
| | | | | | |
| | | | | | |

3. Acceptance by Crossrail:

| Crossrail | | Crossrail Review and Acceptance Decal This decal is to be used for submitted documents requiring acceptance by Crossrail. | | | | | | | |
|----------------------|----------------|--|------------|-------------------------|--|--|--|--|--|
| | Code 1. | Accepted. Work May Proceed | | Reviewed / Accepted by: | | | | | |
| | Code 2. | Not Accepted. Revise and resubmit. Work may proceed subject to incorporation of changes indicated | Name: | | | | | | |
| | Code 3. | Not Accepted. Revise and resubmit. Work may not proceed | Position: | | | | | | |
| | Code 4. | Received for information only. Receipt is confirmed | Date: | | | | | | |
| obligations and does | not constitute | lieve the designer/supplier from full compliance with their contractual Crossrail approval of design, details, calculations, analyses, test selected by the designer/supplier. | Signature: | | | | | | |

Contractor Document Submittal History:



CCTV Survey - Kempton Court - New Drainage



| Date: | Prepared by: | Checked by: | Approved by: | Reason for Issue: |
|----------|--------------|-------------|--------------|-------------------|
| 01/05/20 | C. Gilmour | A. Smithson | J. Gaffney | For Information |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |



CCTV Survey - Kempton Court - New Drainage



Contents

| 1. | Introduction |
|-----|------------------------|
| 2. | CCTV survey |
| Ap | pendix 1 – Site Plan |
| Ani | pendix 2 – CCTV report |



Construction Records - Kempton Court - CCTV survey



1. Introduction

This report is issued as part of C512-BBM-A-ITP-D061_WS106-50227, inspection number 5.9, showing conditions of the existing drainage within BBMV construction site boundaries in Kempton Court private car park on the completion.

2. CCTV survey

CCTV survey has been carried out by Lanes Drains LTD on 17-03-2020. Refer to *Appendix 1 – Site Plan* for location and extent of the survey.

At the time of the survey, the section of the surface water drainage located under former RC crane base has been already replaced by BBMV, including road gully no. RG2. Refer to Appendix 2 – CCTV report for details.

It is to be noted that the survey attached includes sections outside of the Kempton Court Package of works. Where appropriate, this has been highlighted in red-text at the top of the page, with items of note highlighted.

Section 1 to 5 are within BBMV scope of works for the Kempton Court Package.

Sections 6 to 16 are not relevant for this submission and outside the BBMV area of work.

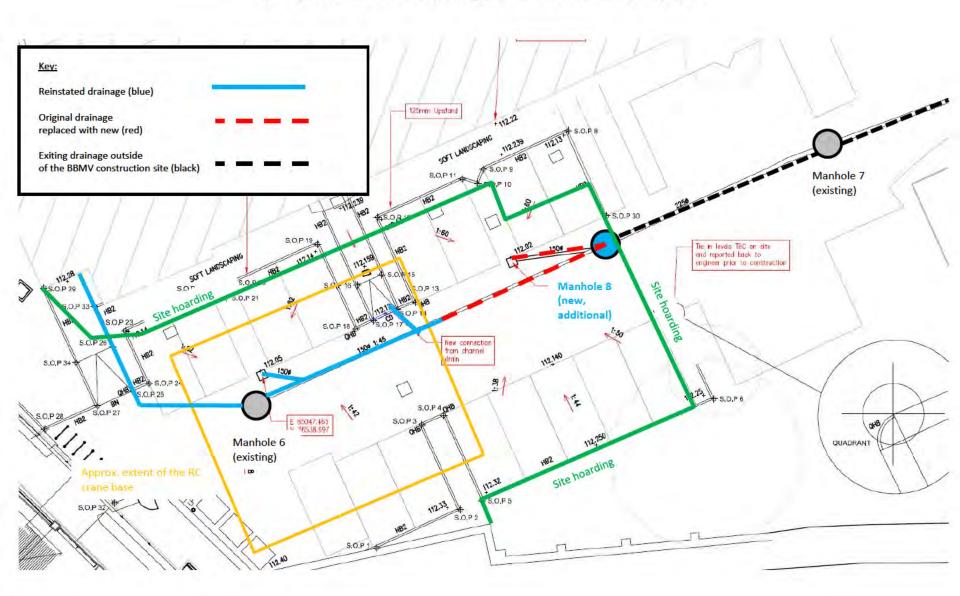


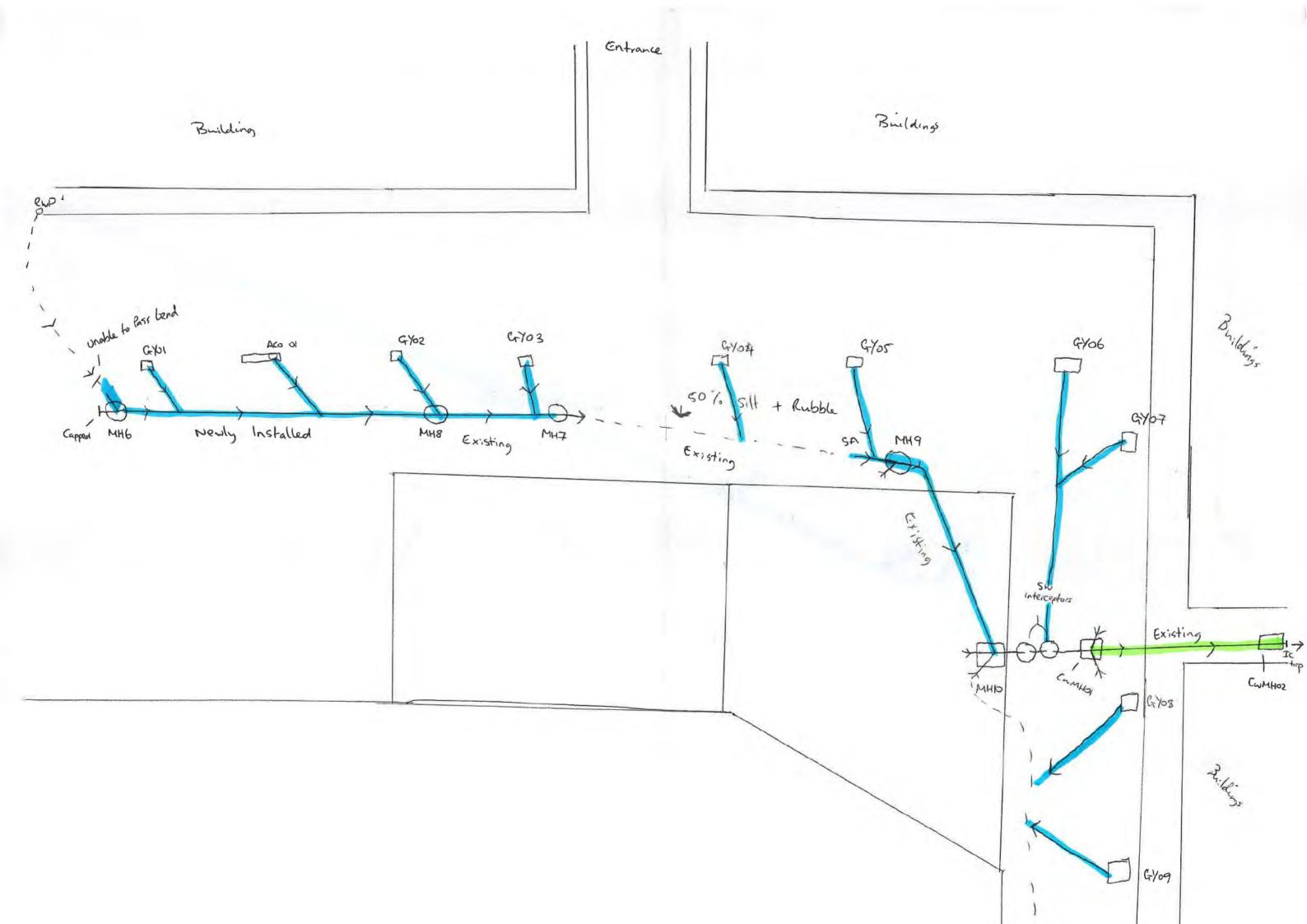
CCTV survey - Kempton Court - New Drainage



Appendix 1 – Site Plan

Kempton Court drainage reinstatement sketch







CCTV survey - Kempton Court - New Drainage



Appendix 2 - CCTV report





Project

Project Name: PJ00366135_Socotec UK Limited_51 Durvward Street

Project Description: CCTV survey **Project Number:** PJ00366135

Project Status: Complete
Project Date: 20/03/2020



Lanes Group Plc 16 Lamson Road, Rainham Tel. Iondonops@lanesgroup.co.uk

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| ProjectSummary | P-6 |
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| Section: 2; GY01 > DS (GY01X) | 4 |
| Section: 3; MH6 > MH8 (MH6X) | 6 |
| Section: 4; ACO01 > DS (ACO01X) | 9 |
| Section: 5; GY02 > DS (GY02X) | 12 |
| Section: 6; MH8 > MH7 (MH8X) | 15 |
| Section: 7; MH7 > MH9 (MH7X) | 19 |
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| Section: 9; CWMH01 > CWMH02 (CWMH01X) | 25 |
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| Section: 15; GY09 > DS (GY09X) | 43 |
| Section: 16; GY07 > DS (GY07X) | 46 |



Lanes Group Plc

16 Lamson Road, Rainham

Tel. londonops@lanesgroup.co.uk

Project Information

 Project Name
 Project Number
 Project Date

 PJ00366135_Socotec UK Limited_51 Durward Street
 PJ00366135
 20/03/2020

Client

Company: Socotec UK Limited
Department: Socotec House

Street: Ashby Road, Bretby Business Park

Town or City: Burton-On-Trent
County: Staffordshire
Post Code: DE15 0YZ

Site

Company: Socotec UK Limited Street: 51 Durward Street

Town or City: London Post Code: E1 5BA

Email: socotec.com

Contractor

Company: Lanes Group Plc
Department: Branch Manager
Street: 16 Lamson Road

Town or City: Rainham
County: Essex
Post Code: RM13 9YY
Phone:

Email: londonops@lanesgroup.co.uk



Lanes Group Plc

16 Lamson Road, Rainham

londonops@lanesgroup.co.uk

Project Information

 Project Name
 Project Number
 Project Date

 PJ00366135_Socotec UK Limited_51 Durvward Street
 PJ00366135
 20/03/2020

Project Notes

Client: Socotec UK Limited

Date: 17/03/2020

Job/Ref No: PJ00366135

Site Address: 51 Durward Street, London E1 5BA

Dear Sir / Madam,

As requested, we have recently carried out a drainage CCTV survey at the above site and our full and detailed findings are contained in the attached CCTV report which you can review at your leisure.

We have identified the need for further works for which a quotation will be sent via our sales team which highlights the areas of concern, the most appropriate remedial techniques and associated costings.

We would like to take this opportunity to thank you for using Lanes Group plc and I hope we can be of service to you again soon. Please visit our website for full details of all services we can provide, follow us on social media or even share details of your customer experience with us.

Yours Sincerely,

Lanes Group London

Tel:

londonops@lanesgroup.co.uk



Scoring Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

Structural Defects

- Grade 3: Best practice suggests consideration should be given to repairs in the medium term.
- Grade 4: Best practice suggests consideration should be given to repairs to avoid a potential collapse.
- Grade 5: Best practice suggests that this pipe is at risk of collapse at any time. Urgent consideration should be given to repairs to avoid total failure.

| Section | PLR | Grade | Description |
|---------|------|-------|--------------------------------|
| 6 | MH8X | 5 | Deformed drain or sewer, 40% % |
| 8 | MH9X | 5 | Deformed drain or sewer, 20% % |

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 |
|---------|-------|-------|---|
| 7 | MH7X | 4 | Settled deposits, fine, 40% % cross-sectional area loss |
| 8 | MH9X | 3 | Multiple defects |
| 13 | GY06X | 3 | Settled deposits, fine, 10% % cross-sectional area loss |
| 14 | GY08X | 3 | Settled deposits, fine, 10% % cross-sectional area loss |
| 16 | GY07X | 3 | Settled deposits, fine, 10% % cross-sectional area loss |

Abandoned Surveys

| Section | PLR | Description |
|---------|------|------------------|
| 7 | MH7X | Survey abandoned |

Information

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



Project Pictures

Project Name
PJ00366135_Socotec UK Limited_51 Durvward Street

Project Number PJ00366135

Project Date 20/03/2020



200317_1203A-Survey



200317_1206A-Survey



200317_1207A-Survey



200317_1234A-Survey



200317_1236A-Survey



200317_1240A-Survey



Project Pictures

Project Name
PJ00366135_Socotec UK Limited_51 Durvward Street

Project Number PJ00366135

Project Date 20/03/2020



200317_1339A-Survey



200317_1447A-Survey



200317_1501A-Survey

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Pipe | Sun | nmary | | | | | | | | | |
|------|------|------------|---------------|-----------------|-------------------|--------|-----|------|----------------|----------|------|
| No. | Туре | PLR | Upstream Node | Downstream Node | Road | Town | Use | Mat. | Profile | Ler | ngth |
| 1 | SEC | LAT A.MH6X | LAT A.MH6 | MH6 | 51 Durward Street | London | S | VC | Circular 100mm | 0.5 | 66 m |
| 2 | SEC | GY01X | GY01 | DS | 51 Durward Street | London | S | VC | Circular 150mm | 3.6 | 60 m |
| 3 | SEC | MH6X | MH6 | MH8 | 51 Durward Street | London | S | PVC | Circular 150mm | 14.6 | 60 m |
| 4 | SEC | ACO 01X | ACO 01 | DS | 51 Durward Street | London | S | PVC | Circular 100mm | 1.9 | 97 m |
| 5 | SEC | GY02X | GY02 | DS | 51 Durward Street | London | S | PVC | Circular 100mm | 2.4 | 16 m |
| 6 | SEC | MH8X | MH8 | MH7 | 51 Durward Street | London | S | PVC | Circular 150mm | 11.1 | 19 m |
| 7 | SEC | MH7X | MH7 | MH9 | 51 Durward Street | London | S | VC | Circular 225mm | 1.1 | 13 m |
| 8 | SEC | MH9X | MH9 | MH10 | 51 Durward Street | London | S | VC | Circular 300mm | 13.6 | 69 m |
| 9 | SEC | CWMH01X | CWMH01 | CWMH02 | 51 Durward Street | London | С | VC | Circular 350mm | 13.5 | 56 m |
| 10 | SEC | GY03X | GY03 | DS | 51 Durward Street | London | S | PP | Circular 100mm | 1.6 | 88 m |
| 11 | SEC | GY04X | GY04 | DS | 51 Durward Street | London | S | PP | Circular 100mm | 5.7 | 75 m |
| 12 | SEC | GY05X | GY05 | DS | 51 Durward Street | London | S | PP | Circular 100mm | 4.9 | 90 m |
| 13 | SEC | GY06X | GY06 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 14.2 | 29 m |
| 14 | SEC | GY08X | GY08 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 1.8 | 33 m |
| 15 | SEC | GY09X | GY09 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 3.4 | 19 m |
| 16 | SEC | GY07X | GY07 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 3.8 | 37 m |
| | | | | | | | | | Tot | al: 98.5 | 57 m |

Pipe Levels

| No. | PLR | Upstream Node | Upstream C.L. | Upstream I.L. | Upstream I.D. | Downstream Node | Downstream C.L. | Downstream I.L. | Downstream I.D. |
|-----|------------|---------------|---------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| 1 | LAT A.MH6X | LAT A.MH6 | | | 1.650 m | MH6 | | | 1.750 m |
| 2 | GY01X | GY01 | | | 0.000 m | DS | | | 0.000 m |
| 3 | MH6X | MH6 | | | 1.750 m | MH8 | | | 2.100 m |
| 4 | ACO 01X | ACO 01 | | | 0.000 m | DS | | 1 | 0.000 m |
| 5 | GY02X | GY02 | | | 0.000 m | DS | | | 0.000 m |
| 6 | MH8X | MH8 | | | 2.100 m | MH7 | | | 2.330 m |
| 7 | MH7X | MH7 | | | 2.330 m | MH9 | | | 2.920 m |

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| No. | PLR | Upstream Node | Upstream C.L. | Upstream I.L. | Upstream I.D. | Downstream Node | Downstream C.L. | Downstream I.L. | Downstream I.D. |
|-----|---------|---------------|---------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| 8 | MH9X | MH9 | | | 2.920 m | MH10 | | | 0.000 m |
| 9 | CWMH01X | CWMH01 | | | 3.310 m | CWMH02 | | | 0.000 m |
| 10 | GY03X | GY03 | | | 0.000 m | DS | | | 0.000 m |
| 11 | GY04X | GY04 | | | 0.000 m | DS | | | 0.000 m |
| 12 | GY05X | GY05 | | | 0.000 m | DS | | | 0.000 m |
| 13 | GY06X | GY06 | | 1 | 0.000 m | DS | | | 0.000 m |
| 14 | GY08X | GY08 | | | 0.000 m | DS | | | 0.000 m |
| 15 | GY09X | GY09 | | | 0.000 m | DS | | | 0.000 m |
| 16 | GY07X | GY07 | | | 0.000 m | DS | | | 0.000 m |

Pipe Summary by Profile

| Profile | | Total Length | No. Pipes | |
|----------------|----|--------------|-----------|--|
| Circular 100mm | | 0.56 m | | |
| Circular 100mm | | 1.97 m | | |
| Circular 100mm | | 2.46 m | | |
| Circular 100mm | | 1.68 m | | |
| Circular 100mm | | 5.75 m | | |
| Circular 100mm | | 4.90 m | | |
| Circular 100mm | | 14 29 m | | |
| Circular 100mm | | 1.83 m | | |
| Circular 100mm | | 3.49 m | | |
| Circular 100mm | | 3.87 m | | |
| Circular 100mm | | 40.80 m | 10 | |
| Circular 150mm | | 3.60 m | | |
| Circular 150mm | | 14 60 m | | |
| Circular 150mm | | 11.19 m | | |
| Circular 150mm | 16 | 29.39 m | 3 | |
| Circular 225mm | | 1.13 m | | |
| Circular 225mm | = | 1.13 m | 1 | |
| Circular 300mm | | 13 69 m | | |
| Circular 300mm | = | 13.69 m | 1 | |
| Circular 350mm | | 13 56 m | | |
| Circular 350mm | - | 13.56 m | 1 | |

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Profile | | Total Length | No. Pipes | |
|---------|---|--------------|-----------|--|
| Total | - | 98.57 m | 16 | |

Inspection Summary

| Pipe No. | Insp. No. | Upstream Node | Downstream Node | Dir. | Operator | Insp. Date | Insp. Time | Str | Ser | Final Observation | Length |
|-------------|--------------|---------------|-----------------|------|------------|------------|------------|-----|-----|--------------------------|---------|
| 1 | 1 | LAT A.MH6 | MH6 | US | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REDUNDANT OR CAPPED | 0.56 m |
| 2 | 1 | GY01 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 3.60 m |
| 3 | 1 | MH6 | MH8 | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF | 14.60 m |
| 4 | 1 | ACO 01 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 1.97 m |
| 5 | 1 | GY02 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF, MH8 | 2.46 m |
| 6 | 1 | MH8 | MH7 | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 5 | MHF | 11.19 m |
| 7 | 1 | MH7 | MH9 | US | C.Layfield | 17/03/2020 | 0:00 | 4 | 1 | SA, unable to pass | 1.13 m |
| 8 | 1 | MH9 | MH10 | DS | C.Layfield | 17/03/2020 | 0:00 | 3 | 5 | MHE | 13.69 m |
| 9 | 1 | CWMH01 | CWMH02 | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF | 13.56 m |
| 10 | 1 | GY03 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 1.68 m |
| 11 | 1 | GY04 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 1 | OCF, reached | 5.75 m |
| 12 | 1 | GY05 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 2 | OCF, reached | 4.90 m |
| 13 | 1 | GY06 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 3 | 1 | OCF, intercptor | 14.29 m |
| 14 | 1 | GY08 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 3 | 1 | OCF, reached | 1.83 m |
| 15 | 1 | GY09 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 1 | OCF, reached | 3.49 m |
| 16 | 1 | GY07 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 3 | 1 | OCF, reached | 3.87 m |
| | | | - | | | | | | | Total: | 98.57 m |

| mopeodicii cuminal y by i rome | Inspection | Summary | by | Profile |
|--------------------------------|------------|---------|----|----------------|
|--------------------------------|------------|---------|----|----------------|

| A CONTRACTOR OF THE PARTY OF TH | | | | | | | | | |
|--|--------------|-----------------|--|--|--|--|--|--|--|
| Profile | Total Length | No. Inspections | | | | | | | |
| Circular 100mm | 0.56 m | | | | | | | | |
| Circular 100mm | 1.97 m | | | | | | | | |
| Circular 100mm | 2.46 m | | | | | | | | |
| Circular 100mm | 1.68 m | | | | | | | | |
| Circular 100mm | 5.75 m | | | | | | | | |
| Circular 100mm | 4.90 m | | | | | | | | |
| Circular 100mm | 14.29 m | | | | | | | | |

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Profile | | Total Length | No. Inspections |
|--|------|------------------------------|-----------------|
| Circular 100mm Circular 100mm Circular 100mm | | 1.83 m 3.49 m 3.87 m | |
| Circular 100mm | = " | 40.80 m | 10 |
| Circular 150mm Circular 150mm Circular 150mm | | 3.60 m 14.60 m 11.19 m | |
| Circular 150mm | = " | 29.39 m | 3 |
| Circular 225mm | | 1.13 m | |
| Circular 225mm | | 1.13 m | 1 |
| Circular 300mm | | 13.69 m | |
| Circular 300mm | 561 | 13.69 m | 1 |
| Circular 350mm | | 13.56 m | |
| Circular 350mm | 1.0 | 13.56 m | 1 |
| Total | 1197 | 98.57 m | 16 |

| Defe | efect Summary | | | | | | | | | | CTV | Oraina | ge Su | rvey O | bserva | ation C | ount | | | | | | | |
|-------|---------------|---------------|-----------------|---------------------|-----------------------|---------------------|-----------------------|--------|----------------------|--------|----------|-----------|-------|-------------------|---------------------|-------------------|-------|--------------|--------------|------|--------|-------------|-------|------------------|
| | | and the same | | | General | | | | Structural Condition | | | | | | | Service Condition | | | | | | | | |
| Sect. | Insp. | Upstream Node | Downstream Node | Insp. Length (m) | No. Grade 4/5 Obs. | Survey Abandoned | Camera Under Water | Cracks | Fractures | Broken | Deformed | Collapsed | Holes | Surface Damage | Displaced Joints | Open Joints | Roots | Infiltration | Encrustation | Silt | Grease | Obstruction | Water | Line Deviates |
| 1 | 1 | LAT A.MH6 | MH6 | 0.6 | | | | | | | | | | | | | | | | | | | 1 | 2 |
| 2 | 1 | GY01 | DS | 3.6 | | | 1=1 | | | | | | | | | | | | 12.0 | 11 | 1 | | 1 | 1 |
| 3 | 1 | MH6 | MH8 | 14.6 | | | | | | | | | | | | | | | | - 11 | | 100 | 1 | 12.0 |
| 4 | 1 | ACO 01 | DS | 2.0 | | | | | | | | | | | | | | | | | | | 1 | 3 |
| 5 | 1 | GY02 | DS | 2.5 | | | | | | | | | | | | | | | | | | | 1 | 1 |
| 6 | 1 | MH8 | MH7 | 11.2 | 2 | | | | | | 3 | | | | | | | | | | | | 1 | 1 |
| 7 | 1 | MH7 | мн9 | 1.1 | 1 | 1 | | | | | | | | | | | | | | 1 | | | 1 | |
| 8 | . 1 | MH9 | MH10 | 13.7 | 2 | | | | | | 2 | | | | | | | | LI | 1 | | | 1 | 4 |
| 9 | 1 | CWMH01 | CWMH02 | 13.6 | | | | | | | | | | | | | | 1 1 | | | 11 | | 1 | 2 |



Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Sect. | | Upstream Node | Downstream Node | Insp. Length (m) | No. Grade 4/5 Obs. | Survey Abandoned | Camera Under Water | Cracks | Fractures | Broken | Deformed | Collapsed | Holes | Surface Damage | Displaced Joints | Open Joints | Roots | Infiltration | Encrustation | Silt | Grease | Obstruction | Water | Line Deviates |
|-------|---|---------------|-----------------|---------------------|-----------------------|---------------------|-----------------------|--------|-----------|--------|----------|-----------|-------|-------------------|---------------------|----------------|-------|--------------|--------------|------|--------|-------------|-------|------------------|
| 10 | 1 | GY03 | DS | 1.7 | 1 | | | | | | | | | | | | | | | | 1-25 | | 1 | 2 |
| 11 | 1 | GY04 | DS | 5.8 | 9 11 | 1 1 | | | | | | | | | | | | | | | 10.00 | | 1 | 3 |
| 12 | 1 | GY05 | DS | 4.9 | | | | | | | 1 | | | | | | | | | | | | 1 | 3 |
| 13 | 1 | GY06 | DS | 14.3 | | | 2 | | | | | | | | | | | | | 1 | | | 2 | 1 |
| 14 | 1 | GY08 | DS | 1.8 | | | == 1 | | | | | | | | | | | 1 | = = | 1 | | - | 1 | - |
| 15 | 1 | GY09 | DS | 3.5 | | | | | | | | | | | | | | | | 7.1 | | | 1 | 2 |
| 16 | 1 | GY07 | DS | 3.9 | | | | | | | | | | | | | | | | 1 | Test | | 1 | |
| | | | Total: | 98.6 | 5 | 11 | 2 | | | | | | | | | | | | 100 | 5 | 1-00-1 | | 17 | 25 |



Section Inspection - 17/03/2020 - LAT A.MH6X

| Section 1 | Inspection | Date 17/03/20 | Time 12:02 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR LAT A.MH6X |
|-----------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|-------------------|
| | erator avfield | Vehi PF65 | icle | Camera Proteus Crawler | Preset Length | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Upstream | Upstream Node: | LAT.A.MH6 |
|---------------------|-------------------------|-----------------------|------------------|----------------------------------|-----------|
| Road: | 51 Durward Street | Inspected Length: | 0.56 m | Upstream Pipe Depth: | 1.650 m |
| Location: | Property with buildings | Total Length: | 0.56 m | Downstream Node: | MH6 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 1.750 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cl | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Campagnia | | | | | |

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|------------|-------------------|--------------|------|---|----------|---------------------------------|-------|
| E | Depth: 1.7 MH6 | '5 m | | | | | |
| (| | 0.00 | МН | Start node type, manhole, reference number: MH6 | 00:00:00 | 200317_1 202C-Surv ey.jpg | |
| A (| | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:02 | 200317_1 202D-Surv ey.jpg | |
| LA | T A.MH6 | 0.02 | LL | Line deviates left | 00:00:07 | 200317_1 202E-Surv ey.jpg | |
| | | 0.14 | ĽÚ | Line deviates up | 00:00:12 | 200317_1 202F-Surv ey.jpg | |
| | | 0.56 | OCF | Finish node type, other special chamber, reference number: LAT A: REDUNDANT OR CAPPED | 00:00:18 | 200317_1 202G-Surv | |
| C | Depth: 1.6 | 5 m | | | | ey.jpg | |

| | Cor | struction Feat | ures | | Miscellaneous Features Service & Operational Observations | | | | | | | | | |
|-------------|----------|-----------------|-----------|-----------|---|----------|----------|-----------|-----------|--|--|--|--|--|
| | S | tructural Defec | ts | | | | | | | | | | | |
| 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 | | | | | |

Section Pictures - 17/03/2020 - LAT A.MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------------|------------------|----------------------|
| 1 | Upstream | LAT A.MH6X | PJ00366135 | PJ00366135 |



200317_1202C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH6



200317_1202D-Survey.jpg, 00:00:02, 0.00 m Water level, 0% % of the vertical dimension



200317_1202E-Survey.jpg, 00:00:07, 0.02 m Line deviates left



200317_1202F-Survey.jpg, 00:00:12, 0.14 m Line deviates up



Section Pictures - 17/03/2020 - LAT A.MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------------|------------------|----------------------|
| 1 | Upstream | LAT A.MH6X | PJ00366135 | PJ00366135 |



200317_1202G-Survey.jpg, 00:00:18, 0.56 m
Finish node type, other special chamber, reference number:
LAT A, REDUNDANT OR CAPPED



Section Inspection - 17/03/2020 - GY01X

| | | | | | | 2. 30. 2. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10 | |
|---------|------------|----------|-------|------------------|-----------------|--|--|
| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
| 2 | 2 | 17/03/20 | 12:06 | PJ00366135 | No Rain Or Snow | Yes | GY01X |
| Ope | erator | Vehi | icle | Camera | Preset Length | Legal Status | Alternative ID |
| C.La | ayfield | PF65 | JEO | Proteus Crawler | 0.00 m | Private Drain | A STATE OF THE PARTY OF THE PAR |

| London | Inspection Direction: | Downstream | Upstream Node: | GY01 |
|-------------------------|---|---|---|---|
| 51 Durward Street | Inspected Length: | 3.60 m | Upstream Pipe Depth: | 0.000 m |
| Property with buildings | Total Length: | 3.60 m | Downstream Node: | DS |
| Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Surface water | | Pipe Shape: | Circular | |
| Gravity drain/sewer | | Dia/Height: | 150 mm | |
| | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| No flow control | | Lining Type: | No Lining | |
| Investigation of known | defects | Lining Material: | No Lining | |
| | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer No flow control | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer | 51 Durward Street Property with buildings Asphalt Footway Joint Length: 3.60 m Surface water Gravity drain/sewer Pipe Material: No flow control Lining Type: | 51 Durward Street Property with buildings Asphalt Footway For Surface water Gravity drain/sewer Pipe Material: No flow control No flow control Surface Visit Inspected Length: 3.60 m |

Comments:

Recommendations:

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------------------|--------------|--------------------------------|--|--|--|--|
| Oepth: 0.0 GY01 | 0 m | | | | | |
| | 0.00 | GY | Start node type, gully, reference number: GY01 | 00:00:00 | 200317_1 205C-Surv | |
| | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:03 | ey.jpg 200317_1 205D-Surv ey.jpg | |
| - | 2.45 | LĎ | Line deviates down | 00:00:11 | 200317_1 205E-Surv ey.jpg | |
| | 3.60 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:21 | 200317_1 205F-Surv ey.jpg | |
| | epth: 0.0 | 0.00 m GY01 0.00 0.00 | 0.00 GY 0.00 WL | 0.00 GY Start node type, gully, reference number: GY01 0.00 WL Water level, 0% % of the vertical dimension 2.45 LD Line deviates down 3.60 OCF Finish node type, other special chamber, reference number: | Depth: 0.00 m GY01 0.00 GY Start node type, gully, reference number: GY01 0.00 WL Water level, 0% % of the vertical dimension 00:00:03 2.45 LD Line deviates down 00:00:11 | Depth: 0.00 m GY01 O.00 GY Start node type, gully, reference number: GY01 O0:00:00 200317_1 205C-Surv ey jpg O.00 WL Water level, 0% % of the vertical dimension O0:00:03 200317_1 205D-Surv ey jpg O:00 O:00:01 200317_1 205E-Surv ey jpg O:00 O:00:01 O:00:01 200317_1 205E-Surv O:00:00:01 O:00:01 O:00 |

| | Con | struction Feat | ures | | | Misc | ellaneous Feat | ures | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------------|-----------|-----------|
| | S | tructural Defec | ts | | 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 Pictures - 17/03/2020 - GY01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 2 | Downstream | GY01X | PJ00366135 | PJ00366135 |



200317_1205C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY01



200317_1205D-Survey.jpg, 00:00:03, 0.00 m Water level, 0% % of the vertical dimension



200317_1205E-Survey.jpg, 00:00:11, 2.45 m Line deviates down



200317_1205F-Survey.jpg, 00:00:21, 3:60 m Finish node type, other special chamber, reference number: DS, REACHED



Section Inspection - 17/03/2020 - MH6X

| Section 3 | Inspection 3 | Date 17/03/20 | Time 12:33 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR MH6X |
|-----------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|
| | erator avfield | Vehi PF65 | 17.1.3.1.1 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH6 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 14.60 m | Upstream Pipe Depth: | 1.750 m |
| Location: | Property with buildings | Total Length: | 14.60 m | Downstream Node: | MH8 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.100 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 150 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Comments: | | | | | |

Recommendations:

| Code | Observation | MPEG | Photo | Grade |
|------------|--|---|--|--|
| | | | | |
| MH | Start node type, manhole, reference number: MH6 | 00:00:00 | 231C-Surv | |
| WL | Water level, 5% % of the vertical dimension | 00:00:02 | ey.jpg 200317_1 232A-Surv ey.jpg | |
| NL | Junction, at 11 o'clock, diameter: 150 mm | 00:00:11 | 200317_1 232B-Surv ey.jpg | |
| JN | Junction, at 10 o'clock, diameter: 150 mm | 00:00:25 | 200317_1 232C-Surv ey.jpg | |
| MHF | Finish node type, manhole, reference number: MH8 | 00:00:45 | 200317_1 233A-Surv ey.jpg | |
| n Features | | ous Features | | |
| | MH WL | MH Start node type, manhole, reference number: MH6 WL Water level, 5% % of the vertical dimension JN Junction, at 11 o'clock, diameter: 150 mm JN Junction, at 10 o'clock, diameter: 150 mm | MH Start node type, manhole, reference number: MH6 00:00:00 WL Water level, 5% % of the vertical dimension 00:00:02 JN Junction, at 11 o'clock, diameter: 150 mm 00:00:11 JN Junction, at 10 o'clock, diameter: 150 mm 00:00:25 | MH Start node type, manhole, reference number: MH6 00:00:00 200317_1 231C-Survey.jpg WL Water level, 5% % of the vertical dimension 00:00:02 200317_1 232A-Survey.jpg JN Junction, at 11 o'clock, diameter: 150 mm 00:00:11 200317_1 232B-Survey.jpg JN Junction, at 10 o'clock, diameter: 150 mm 00:00:25 200317_1 232C-Survey.jpg MHF Finish node type, manhole, reference number: MH8 00:00:45 200317_1 233A-Survey.jpg |

STR Total | STR Grade | SER No. Def | SER Peak

0.0

STR No. Def STR Peak

STR Mean

0.0

SER Total | SER Grade

0.0

SER Mean

0.0

0.0

Section Pictures - 17/03/2020 - MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 3 | Downstream | MH6X | PJ00366135 | PJ00366135 |



200317_1231C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH6



200317_1232A-Survey.jpg, 00:00:02, 0.04 m Water level, 5% % of the vertical dimension



200317_1232B-Survey.jpg, 00:00:11, 2.79 m Junction, at 11 o'clock, diameter: 150 mm



200317_1232C-Survey.jpg, 00:00:25, 7.59 m Junction, at 10 o'clock, diameter: 150 mm



Section Pictures - 17/03/2020 - MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 3 | Downstream | MH6X | PJ00366135 | PJ00366135 |



200317_1233A-Survey.jpg, 00:00:45, 14.60 m Finish node type, manhole, reference number: MH8



MPEG

Photo

Grade

Section Inspection - 17/03/2020 - ACO 01X

| Section 4 | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|------------------------|------------|--------------|-----------|---------------------------|-------------------------|-------------------------------|----------------|
| | 4 | 17/03/20 | 12:39 | PJ00366135 | No Rain Or Snow | Yes | ACO 01X |
| Operator C.Layfield | | Vehi PF65 | *3.13.2.1 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | ACO 01 |
|---------------------|----------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.97 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 1.97 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | v Control: No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Comments: | None | | | | |

1:50

Position [m] Code Observation

Recommendations:

Scale:

| De | epth: 0.00 m | | | | |
|----|--------------|-----|--|----------|---|
| AC | 00 01 | | | | |
| | 0.00 | RE | Start node type, rodding eye, reference number: ACO 01 | 00:00:00 | 200317_1 237C-Surv |
| | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:02 | ey.jpg 200317_1 237D-Surv ey.jpg |
| + | 0.00 | LD | Line deviates down | 00:00:04 | 200317_1 237E-Surv ey.jpg |
| | 0.25 | LR | Line deviates right | 00:00:14 | 200317_1 238A-Surv ey.jpg |
| | 0.25 | LD | Line deviates down | 00:00:16 | 200317_1 238B-Surv ey.jpg |
| | DS 1.90 | SC | Size changes, new size(s), 150 mm high | 00:00:28 | 200317_1 238C-Surv ey.jpg |
| | 1.97 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:33 | 200317_1 238D-Surv ey.jpg |
| De | epth: 0.00 m | | | | -1-1ha |

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| | S | tructural Defec | ts | | 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 |

Section Pictures - 17/03/2020 - ACO 01X

Inspection Direction PLR Client's Job Ref Section Contractor's Job Ref ACO 01X PJ00366135 PJ00366135 4 Downstream



200317_1237C-Survey.jpg, 00:00:00, 0.00 m Start node type, rodding eye, reference number: ACO 01



200317_1237D-Survey.jpg, 00:00:02, 0.00 m Water level, 0% % of the vertical dimension



200317_1237E-Survey.jpg, 00:00:04, 0.00 m Line deviates down



200317_1238A-Survey.jpg, 00:00:14, 0.25 m Line deviates right

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Section Pictures - 17/03/2020 - ACO 01X

 Section
 Inspection Direction
 PLR
 Client's Job Ref
 Contractor's Job Ref

 4
 Downstream
 ACO 01X
 PJ00366135
 PJ00366135



200317_1238B-Survey.jpg, 00:00:16, 0.25 m Line deviates down



200317_1238C-Survey.jpg, 00:00:28, 1.90 m Size changes, new size(s), 150 mm high



200317_1238D-Survey.jpg, 00:00:33, 1.97 m
Finish node type, other special chamber, reference number:
DS, REACHED



Section Inspection - 17/03/2020 - GY02X

| | | | | and high resident and to be high to | | | |
|--------------------|----------|------------------|---------------|-------------------------------------|----------------------------|-------------------------------|----------------|
| Section In | spection | Date 17/03/20 | Time 12:46 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY02X |
| Operat C.Lavfie | 2.00 | Vehi PF65 | icle | Camera Proteus Crawler | Preset Length | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY02 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 2.46 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 2.46 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Commente: | < | | 1 | | |

Recommendations:

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grad |
|--------------------|--------------|----------------------|--|--|--|--|
| Depth: 0.0 GY02 | 0 m | | | | | |
| Q | 0.00 | GY | Start node type, gully, reference number: GY02 | 00:00:00 | 200317_1 245A-Surv | |
| | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | 200317_1 245B-Surv | |
| | 0.31 | LD | Line deviates down | 00:00:18 | 200317_1 245C-Surv ey.jpg | |
| - | 1.96 | SC | Size changes, new size(s), 150 mm high | 00:00:35 | 200317_1 245D-Surv | |
| | 2.46 | MHF | Finish node type, manhole, reference number: DS: MH8 | 00:00:46 | 200317_1 246A-Surv ey.jpg | |
| | Depth: 0.0 | 0.00 0.00 0.31 | 0.00 GY 0.00 WL 0.31 LD | Depth: 0.00 m GY02 0.00 GY Start node type, gully, reference number: GY02 0.00 WL Water level, 5% % of the vertical dimension 1.96 SC Size changes, new size(s), 150 mm high | 0.00 GY Start node type, gully, reference number: GY02 00:00:00 0.00 WL Water level, 5% % of the vertical dimension 00:00:03 0.31 LD Line deviates down 00:00:18 1.96 SC Size changes, new size(s), 150 mm high 00:00:35 | Depth: 0.00 m GY02 O:000 m O:0000 GY Start node type, gully, reference number: GY02 O:00:00 200317_1 245A-Surv ey.jpg O:00 WL Water level, 5% % of the vertical dimension O:00:03 200317_1 245B-Surv ey.jpg O:31 LD Line deviates down O:00:18 200317_1 245C-Surv ey.jpg O:00 O:00:05 O:00 |

Depth: 0.00 m

DS

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| | S | tructural Defec | ts | | 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 |

Section Pictures - 17/03/2020 - GY02X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | GY02X | PJ00366135 | PJ00366135 |



200317_1245A-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY02



200317_1245B-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200317_1245C-Survey.jpg, 00:00:18, 0.31 m Line deviates down



200317_1245D-Survey.jpg, 00:00:35, 1.96 m Size changes, new size(s), 150 mm high



Section Pictures - 17/03/2020 - GY02X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | GY02X | PJ00366135 | PJ00366135 |



200317_1246A-Survey.jpg, 00:00:46, 2.46 m Finish node type, manhole, reference number: DS, MH8



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Section Inspection - 17/03/2020 - MH8X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 6 | 6 | 17/03/20 | 13:38 | PJ00366135 | No Rain Or Snow | Yes | MH8X |
| 100 | erator avfield | Vehi PF65 | | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH8 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 11.19 m | Upstream Pipe Depth: | 2.100 m |
| Location: | Property with buildings | Total Length: | 11.19 m | Downstream Node: | MH7 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.330 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 150 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Commente: | | | | | |

Comments:

Recommendations:

| Scale: | 1:98 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|-------------------|--------------|----------|--|---------------|---|-------|
| ı | Depth: 2.1 | 0 m | | | | | |
| (| R | 0.00 | МН | Start node type, manhole, reference number: MH8 | 00:00:00 | 200317_1 335C-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | 336A-Surv | |
| | | 0.64 | MC | Material changes Polypropylene @REM | 00:00:10 | 336B-Surv | |
| | | 0.71 | D | Deformed drain or sewer, 10% % | 00:00:20 | ey.jpg 200317_1 336C-Surv | 2 |
| | H// | 1.80 | JN | Junction, at 10 o'clock, diameter: 150 mm | 00:00:25 | ey.jpg 200317_1 336D-Surv | |
| | | 2.34 | D | Deformed drain or sewer, 40% % | 00:00:30 | 337A-Surv | 5 |
| + | | 2.86 | LD | Line deviates down | 00:00:34 | 337B-Surv | |
| | ı | 3.85 | D | Deformed drain or sewer, 30% % | 00:00:38 | ey.jpg 200317_1 337C-Surv ey.jpg | 4 |
| | 0 | 8.41 | SC | Size changes, new size(s), 225 mm high | 00:00:51 | 200317_1 337D-Surv | |
| | | 8.58 | JN | Junction, at 12 o'clock, diameter: 100 mm | 00:00:54 | ey.jpg 200317_1 338A-Surv ey.jpg | |
| (| | 11.19 | MHF | Finish node type, manhole, reference number: MH7 | 00:01:07 | 200317_1 338B-Surv ey.jpg | |
| | MH7 Depth: 2.3 | 13 m | | | | | |
| | Jepui. Z. | 70 III | | | | | |
| | | Construction | Features | Miscellane | eous Features | | |

STR No. Def STR Peak STR Mean STR Total STR Grade SER No. Def SER Peak SER Mean SER Total SER Grade

0

5.0

165.0

Structural Defects

23.7

Service & Operational Observations

0.0

0.0

0.0

Section Pictures - 17/03/2020 - MH8X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 6 | Downstream | MH8X | PJ00366135 | PJ00366135 |



200317_1335C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH8



200317_1336A-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200317_1336B-Survey.jpg, 00:00:10, 0.64 m Material changes Polypropylene @REM



200317_1336C-Survey.jpg, 00:00:20, 0.71 m Deformed drain or sewer, 10% %

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Section Pictures - 17/03/2020 - MH8X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 6 | Downstream | MH8X | PJ00366135 | PJ00366135 |



200317_1336D-Survey.jpg, 00:00:25, 1.80 m Junction, at 10 o'clock, diameter: 150 mm



200317_1337A-Survey.jpg, 00:00:30, 2.34 m Deformed drain or sewer, 40% %



200317_1337B-Survey.jpg, 00:00:34, 2.86 m Line deviates down



200317_1337C-Survey.jpg, 00:00:38, 3.85 m Deformed drain or sewer, 30% %

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Section Pictures - 17/03/2020 - MH8X

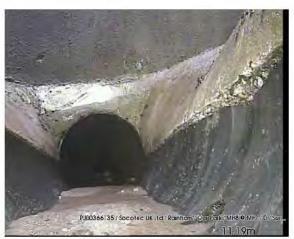
| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 6 | Downstream | MH8X | PJ00366135 | PJ00366135 |



200317_1337D-Survey.jpg, 00:00:51, 8.41 m Size changes, new size(s), 225 mm high



200317_1338A-Survey.jpg, 00:00:54, 8.58 m Junction, at 12 o'clock, diameter: 100 mm



200317_1338B-Survey.jpg, 00:01:07, 11.19 m Finish node type, manhole, reference number: MH7



Section Inspection - 17/03/2020 - MH7X

| Section inspection - 17/03/2020 - Will X | | | | | | | | | |
|--|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|--|--|
| Section 7 | Inspection 7 | Date 17/03/20 | Time 14:38 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned No | PLR MH7X | | |
| | erator avfield | Vehi PF65 | 17173 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID | | |

| Town or Village: | London | Inspection Direction: | Upstream | Upstream Node: | MH7 |
|---------------------|-------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.13 m | Upstream Pipe Depth: | 2.330 m |
| Location: | Property with buildings | Total Length: | 1.13 m | Downstream Node: | MH9 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.920 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 225 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Comments: | <u> </u> | | | | |

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|-------------------|--------------|------|---|----------|---------------------------------|-------|
| | Depth: 2.9 MH9 | 2 m | | | | | |
| | | 0.00 | МН | Start node type, manhole, reference number: MH9 | 00:00:00 | 200317_1 435C-Surv ev.jpg | |
| * | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:04 | 200317_1 435D-Surv ey.jpg | |
| 1 | 1 | 0.00 | DES | Settled deposits, fine, 40% % cross-sectional area loss | 00:00:09 | 200317_1 436A-Surv ey.jpg | 4 |
| | | 1.13 | SA | Survey abandoned: unable to pass | 00:02:08 | 200317_1 438A-Surv ey.jpg | |

| | Cor | struction Feati | ures | | Miscellaneous Features Service & Operational Observations | | | | |
|-------------|----------|-----------------|-----------|-----------|---|----------|----------|-----------|-----------|
| | S | tructural Defec | ts | | | | | | |
| 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 | 4.4 | 5.0 | 4.0 |

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Section Pictures - 17/03/2020 - MH7X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 7 | Upstream | MH7X | PJ00366135 | PJ00366135 |



200317_1435C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH9



200317_1435D-Survey.jpg, 00:00:04, 0.00 m Water level, 5% % of the vertical dimension



200317_1436A-Survey.jpg, 00:00:09, 0.00 m Settled deposits, fine, 40% % cross-sectional area loss



200317_1438A-Survey.jpg, 00:02:08, 1.13 m Survey abandoned, unable to pass



Section Inspection - 17/03/2020 - MH9X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 8 | 8 | 17/03/20 | 14:45 | PJ00366135 | No Rain Or Snow | No | MH9X |
| 100 | erator avfield | Vehi PF65 | | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH9 |
|---------------------|-------------------------|-----------------------|------------------|----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 13.69 m | Upstream Pipe Depth: | 2.920 m |
| Location: | Property with buildings | Total Length: | 13.69 m | Downstream Node: | MH10 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 300 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cl | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Commente: | | | | | |

Recommendations:

| Photo Grad | F | MPEG | bservation | ode |] Co | osition [m] | 120 P | ale: | Sca |
|--|--|--|--|---------|-------|--------------------------------------|----------------|---------|-----|
| | | | | | | | h: 2.92 m 9 | De N | |
| 9C-Surv | 439 | 00:00:00 | tart node type, manhole, reference number: MH9 | IH | MI | 0.00 | | | |
| ey.jpg 10317_1 9D-Surv ey.jpg | 200 439 | 00:00:02 | ater level, 5% % of the vertical dimension | /L | W | 0.00 | | | |
| 0317_1 0A-Surv ey.jpg | 20 440 | 00:00:04 | ne deviates right | R | LF | 0.00 | | | |
| 0317_1 0B-Surv | 20 44(| 00:00:15 | ne deviates left | L | L | 1.44 | 111 | | |
| ey.jpg 10317_1 0C-Surv ey.jpg | 200 440 | 00:00:19 | aterial changes Polyvinyl chloride @REM | IC | M | 1.49 | 111 | | |
| 0317_1 0D-Surv ey.jpg | 20 440 | 00:00:26 | ne deviates down | D | LI | 2.86 | /// | | |
| 0317_1 3 0E-Surv | 20 440 | 00:00:32 | ettled deposits, fine, 10% % cross-sectional area loss | ES | DE | 3.94 | 1/1 | • | 1 |
| ey.jpg 10317_1 1A-Surv | 20 | 00:00:41 | ne deviates down | D | LI | 5.44 | | | |
| ey.jpg 10317_1 3 1B-Surv | 20 | 00:00:52 | ettled deposits, coarse, 10% % cross-sectional area loss | ER | DE | 6.72 | | М | |
| ey.jpg 10317_1 5 2A-Surv | 20 442 | 00:01:29 | eformed drain or sewer, 20% % |) | D | 7.91 | // | | |
| ey.jpg 10317_1 4 2B-Surv ey.jpg | 20 442 | 00:02:05 | eformed drain or sewer, 10% % | 0 | + D | 9.46 | | | |
| 0317_1 5A-Surv ey.jpg | 445 | 00:02:27 | nish node type, manhole, reference number: MH10 | HF | MH | 13.69 | | | |
| | | | | | | | | M | |
| | 200 4440 6 200 444 6 200 444 6 200 444 6 200 444 6 200 444 6 200 444 6 200 444 6 6 200 444 6 6 6 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | 00:00:32 00:00:41 00:00:52 00:01:29 00:02:05 | ettled deposits, fine, 10% % cross-sectional area loss ne deviates down ettled deposits, coarse, 10% % cross-sectional area loss eformed drain or sewer, 20% % eformed drain or sewer, 10% % | ES D ER | DE LU | 3.94 5.44 6.72 7.91 9.46 | | | |

| Construction Features | | | | Miscellaneous Features Service & Operational Observations | | | | | |
|---|-------|------|--------|---|-------------|----------|----------|-----------|-----------|
| Structural Defects | | | | | | | | | |
| STR No. Def STR Peak STR Mean STR Total STR Grade | | | | | SER No. Def | SER Peak | SER Mean | SER Total | SER Grade |
| - 0 | 105.0 | 17.0 | 0.45.0 | F.0 | | 0.0 | 0.0 | 4.0 | 0.0 |

Section Pictures - 17/03/2020 - MH9X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 8 | Downstream | MH9X | PJ00366135 | PJ00366135 |



200317_1439C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH9



200317_1439D-Survey.jpg, 00:00:02, 0.00 m Water level, 5% % of the vertical dimension



200317_1440A-Survey.jpg, 00:00:04, 0.00 m Line deviates right



200317_1440B-Survey.jpg, 00:00:15, 1.44 m Line deviates left



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Section Pictures - 17/03/2020 - MH9X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 8 | Downstream | MH9X | PJ00366135 | PJ00366135 |



200317_1440C-Survey.jpg, 00:00:19, 1.49 m Material changes Polyvinyl chloride @REM



200317_1440D-Survey.jpg, 00:00:26, 2.86 m Line deviates down



200317_1440E-Survey.jpg, 00:00:32, 3.94 m Settled deposits, fine, 10% % cross-sectional area loss



200317_1441A-Survey.jpg, 00:00:41, 5.44 m Line deviates down

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Section Pictures - 17/03/2020 - MH9X

 Section
 Inspection Direction
 PLR
 Client's Job Ref
 Contractor's Job Ref

 8
 Downstream
 MH9X
 PJ00366135
 PJ00366135



200317_1441B-Survey.jpg, 00:00:52, 6.72 m Settled deposits, coarse, 10% % cross-sectional area loss



200317_1442A-Survey.jpg, 00:01:29, 7.91 m Deformed drain or sewer, 20% %



200317_1442B-Survey.jpg, 00:02:05, 9.46 m Deformed drain or sewer, 10% %



200317_1445A-Survey.jpg, 00:02:27, 13.69 m Finish node type, manhole, reference number: MH10



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Section Inspection - 17/03/2020 - CWMH01X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|--------|---------------------------|-------------------------|-------------------------------|----------------|
| 9 | 9 | 17/03/20 | 14:58 | PJ00366135 | No Rain Or Snow | No | CWMH01X |
| | erator avfield | Vehi PF65 | 17,133 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | CWMH01 |
|---------------------|--------------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 13.56 m | Upstream Pipe Depth: | 3.310 m |
| Location: | Property with buildings | Total Length: | 13.56 m | Downstream Node: | CWMH02 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Combined | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 350 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known defects | | Lining Material: | No Lining | |

Comments:

Recommendations:

| Scale: 1: | :118 Position [m] | Code | Observation | MPEG | Photo | Grade |
|-------------|----------------------------|----------|--|--------------|---|-------|
| Dept CWM | h: 3.31 m H01 | | | | | |
| | 0.00 | MH | Start node type, manhole, reference number: CWMH01 Water level, 5% % of the vertical dimension: Strong flow | 00:00:00 | 200317_1 456C-Surv ey.jpg 200317_1 | |
| | 0.00 | WL | vvater level, 3% % of the vertical dimension. Strong now | 00.00.02 | 456D-Surv ey.jpg | |
| · · | 6.97 | LD | Line deviates down | 00:00:35 | 200317_1 457A-Surv ey.jpg | |
| | 10.78 | LD | Line deviates down | 00:00:51 | 200317_1 457B-Surv ey.jpg | |
| CWM | 13.56 H02 th: 0.00 m | MHF | Finish node type, manhole, reference number: CWMH02 | 00:01:18 | 200317_1 458A-Surv ey.jpg | |
| - 6170 | Construction | Features | Miscellaneou | is Epatiires | | |
| | Structural I | | Service & Operatio | | ions | |

STR Grade SER No. Def

0

1.0

SER Peak | SER Mean

0.0

0.0

STR Mean

0.0

STR Total

STR Peak

0.0

STR No. Def

SER Total | SER Grade

0.0

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Section Pictures - 17/03/2020 - CWMH01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|---------|------------------|----------------------|
| 9 | Downstream | CWMH01X | PJ00366135 | PJ00366135 |



200317_1456C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: CWMH01



200317_1456D-Survey.jpg, 00:00:02, 0.00 m Water level, 5% % of the vertical dimension, Strong flow



200317_1457A-Survey.jpg, 00:00:35, 6.97 m Line deviates down



200317_1457B-Survey.jpg, 00:00:51, 10.78 m Line deviates down



Section Pictures - 17/03/2020 - CWMH01X

Inspection Direction PLR Client's Job Ref Contractor's Job Ref Section Downstream CWMH01X PJ00366135 PJ00366135 9



200317_1458A-Survey.jpg, 00:01:18, 13.56 m Finish node type, manhole, reference number: CWMH02



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Section Inspection - 18/03/2020 - GY03X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|----------|---------------------------|-------------------------|-------------------------------|----------------|
| 10 | 10 | 18/03/20 | 11:36 | PJ00366135 | No Rain Or Snow | Yes | GY03X |
| | erator avfield | Vehi PF65 | 10,133.0 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY03 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.68 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 1.68 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polypropylene | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

Depth: 0.00 m

| 00:00:00 | 200318_1 135C-Surv ey.jpg |
|-----------------------|----------------------------------|
| 00:00:02 | 200318_1 135D-Surv ey.jpg |
| 00;00:04 | 200318_1 135E-Surv ey.jpg |
| 00:00:11 | 200318_1 135F-Surv ey.jpg |
| ence number: 00:00:21 | 200318_1 136A-Surv ey.jpg |
| | 00:00:02 00:00:04 00:00:11 |

Section Pictures - 18/03/2020 - GY03X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 10 | Downstream | GY03X | PJ00366135 | PJ00366135 |



200318_1135C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY03



200318_1135D-Survey.jpg, 00:00:02, 0.00 m Water level, 5% % of the vertical dimension



200318_1135E-Survey.jpg, 00:00:04, 0.00 m Line deviates down



200318_1135F-Survey.jpg, 00:00:11, 0.50 m Line deviates right



Section Pictures - 18/03/2020 - GY03X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 10 | Downstream | GY03X | PJ00366135 | PJ00366135 |



200318_1136A-Survey.jpg, 00:00:21, 1.68 m
Finish node type, other special chamber, reference number:
DS, REACHED



| 18/03/2020 - GY04X |
|--------------------|
| • |

| | | | | mark to go word of and to be had to | | | |
|---------------|-------------------|------------------|---------------|-------------------------------------|----------------------------|-------------------------------|----------------|
| Section 11 | Inspection | Date 18/03/20 | Time 11:46 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY04X |
| | erator ayfield | Vehi PF65 | 10,330 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY04 |
|---------------------|--------------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 5.75 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 5.75 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polypropylene | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known defects | | Lining Material: | No Lining | |

Comments:

Recommendations:

| | 1:50 Position [m] | Code | Observation | MPEG | Photo | Grade |
|------------|-------------------|------|--|-------------------------------------|---|--------|
| GY | th: 0.00 m 04 | | | | | |
| (| 0.00 | GY | Start node type, gully, reference number: GY04 | 00:00:00 | 144C-Surv | |
| | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | ey.jpg 200318_1 144D-Surv ey.jpg | |
| | 0.33 | LL | Line deviates left | 00;00:10 | 200318_1 145A-Surv ey.jpg | |
| , | 3.20 | ILL | Line deviates left | 00:00:24 | 200318_1 145B-Surv | |
| | 3.43 | LD | Line deviates down | 00:00:27 | ey.jpg | |
| | | | | | 145C-Surv ey.jpg | |
| | | | | | | |
| | 5.75 | OCF | Finish node type, other special chamber, reference no DS; reached | imber: 00:00:41 | 200318_1 146A-Surv ey.jpg | |
| D: Dep | S th: 0.00 m | | | | | |
| | Construction | | | aneous Features | | |
| STR No. De | Structural I | | | erational Observa SER Mean SER | | R Grad |

1.0

0

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Section Pictures - 18/03/2020 - GY04X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 11 | Downstream | GY04X | PJ00366135 | PJ00366135 |



200318_1144C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY04



200318_1144D-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200318_1145A-Survey.jpg, 00:00:10, 0.33 m Line deviates left



200318_1145B-Survey.jpg, 00:00:24, 3.20 m Line deviates left



Section Pictures - 18/03/2020 - GY04X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 11 | Downstream | GY04X | PJ00366135 | PJ00366135 |



200318_1145C-Survey.jpg, 00:00:27, 3.43 m Line deviates down



200318_1146A-Survey.jpg, 00:00:41, 5.75 m
Finish node type, other special chamber, reference number: DS, reached



| Section | Inspection - | 18/03/2020 - | GY05X |
|---------|--------------|--------------|-------|
|---------|--------------|--------------|-------|

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|----------------|------------|-------------------------|--------------------------------|-------------------------------|----------------|
| 12 | 12 | 18/03/20 | 12:04 | PJ00366135 | No Rain Or Snow | Yes | GY05X |
| | erator ayfield | Vehi Not Sp | 300P 11 /4 | Camera Not Specified | Preset Length Not Specified | Legal Status Not Specified | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY05 |
|---------------------|--------------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 4.90 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 4.90 m | Downstream Node: | DS |
| Surface Type: | | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polypropylene | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known defects | | Lining Material: | No Lining | |

Comments:

Recommendations:

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------------------|--------------------|--|--|--|---|--------------------|
| Depth: 0.0 GY05 | 00 m | | | | | |
| | | | | | | |
| K | 0.00 | GY | Start node type, gully, reference number: GY05 | 00:00:00 | 202C-Surv | |
| | 0.00 | WL | Water level, 10% % of the vertical dimension | 00:00:02 | 200318_1 202D-Surv | |
| | 0.00 | REM | General remark: belly in pipe | 00:00:04 | | |
| | 1.59 | D | Deformed drain or sewer, 10% % | 00:00:20 | 202F-Surv | 2 |
| | 1.78 | LD | Line deviates down | 00:00:22 | 200318_1 202G-Surv | |
| | 2.42 | LD | Line deviates down | 00:00:27 | | |
| | 3.27 | MC | Material changes Vitrified clay pipe @REM | 00:00:33 | 200318_1 203B-Surv ey.jpg | |
| | 3.85 | LD | Line deviates down | 00:00:39 | 200318_1 203C-Surv ey.jpg | |
| | 4.90 | OCF | Finish node type, other special chamber, reference number. DS: reached | 00:00:51 | 200318_1 203D-Surv ey.jpg | |
| | 00 m | | | | | |
| | Depth: 0.0 GY05 | 0.00 0.00 0.00 1.59 1.78 2.42 3.27 3.85 | 0.00 GY 0.00 WL 0.00 REM 1.59 D 1.78 LD 2.42 LD 3.27 MC 3.85 LD | Depth: 0.00 m GYOS O.00 GY Start node type, gully, reference number: GY05 O.00 WL Water level, 10% % of the vertical dimension O.00 REM General remark: belly in pipe 1.59 Deformed drain or sewer, 10% % 1.78 LD Line deviates down 2.42 LD Line deviates down 3.27 MC Material changes Vitrified clay pipe @REM 3.85 LD Line deviates down OCF Finish node type, other special chamber, reference number: DS: reached | Depth: 0.00 m GY05 O.00 GY Start node type, gully, reference number: GY05 D0:00:00 0.00 WL Water level, 10% % of the vertical dimension 00:00:02 0.00 REM General remark: belly in pipe 00:00:04 1.59 D Deformed drain or sewer, 10% % 00:00:20 1.78 LD Line deviates down 00:00:22 2.42 LD Line deviates down 00:00:27 3.27 MC Material changes Vitrified clay pipe @REM 00:00:33 3.85 LD Line deviates down 00:00:39 4.90 OCF Finish node type, other special chamber, reference number: 00:00:51 DS: reached DS: reached 00:00:51 | Depth: 0.00 m GY |

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|--|
| | S | tructural Defec | ts | | 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 | 20.0 | 4.1 | 20.0 | 2.0 | 0 | 0.0 | 0.0 | 0.0 | 1.0 | |

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Section Pictures - 18/03/2020 - GY05X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | Downstream | GY05X | PJ00366135 | Socotec UK Ltd |



200318_1202C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY05



200318_1202D-Survey.jpg, 00:00:02, 0.00 m Water level, 10% % of the vertical dimension



200318_1202E-Survey.jpg, 00:00:04, 0.00 m General remark, belly in pipe



200318_1202F-Survey.jpg, 00:00:20, 1.59 m Deformed drain or sewer, 10% %



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Section Pictures - 18/03/2020 - GY05X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | Downstream | GY05X | PJ00366135 | Socotec UK Ltd |



200318_1202G-Survey.jpg, 00:00:22, 1.78 m Line deviates down



200318_1203A-Survey.jpg, 00:00:27, 2.42 m Line deviates down



200318_1203B-Survey.jpg, 00:00:33, 3.27 m Material changes Vitrified clay pipe @REM



200318_1203C-Survey.jpg, 00:00:39, 3.85 m Line deviates down



Section Pictures - 18/03/2020 - GY05X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | Downstream | GY05X | PJ00366135 | Socotec UK Ltd |



200318_1203D-Survey.jpg, 00:00:51, 4.90 m Finish node type, other special chamber, reference number: DS, reached



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Section Inspection - 18/03/2020 - GY06X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 13 | 13 | 18/03/20 | 13:57 | PJ00366135 | No Rain Or Snow | Yes | GY06X |
| | erator avfield | Vehi PF65 | | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY06 |
|---------------------|--------------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 14.29 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 14.29 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known defects | | Lining Material: | No Lining | |

Comments:

Recommendations:

| Scale: | 1:125 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|---------------------|--------------|----------|---|----------|---|-------|
| 113 | Depth: 0.00 GY06 | 0 m | | | | | |
| | Q | 0.00 | GY | Start node type, gully, reference number: GY06 | 00:00:00 | 354C-Surv | |
| | | 0.02 | WL | Water level, 5% % of the vertical dimension | 00:00:02 | ey.jpg 200318_1 354D-Surv ey.jpg | |
| | | 5.58 | LR | Line deviates right | 00:00:28 | 200318_1 354E-Sury | |
| 1 | | 7.11 | WL | Water level, 10% % of the vertical dimension | 00:00:40 | ey.jpg 200318_1 355A-Surv | |
| | | 7.13 | DES | Settled deposits, fine, 10% % cross-sectional area loss | 00:00:42 | ey.jpg 200318_1 355B-Surv ey.jpg | 3 |
| | 7 | 9.98 | JN | Junction, at 09 o'clock, diameter: 100 mm | 00:00:59 | 200318_1 355C-Surv ey.jpg | |
| | | 11.76 S01 | CUW | Loss of vision, camera under water, S01 | 00:01:10 | 200318_1 356A-Surv ey.jpg | |
| | | 13.61 F01 | CUW | Loss of vision, camera under water, F01 | 00:01:28 | | |
| 3 | DS | 14.29 | OCF | Finish node type, other special chamber, reference number: DS: intercptor | 00:01:44 | 200318_1 357A-Surv ey.jpg | |
| | Depth: 0.0 | 0 m | | | | | |
| | | Construction | Features | Miscellaneous | Features | | |

STR No. Def STR Peak STR Mean STR Total STR Grade SER No. Def SER Peak SER Mean SER Total SER Grade

1.0

0.0

Structural Defects

0.0

3.0

Service & Operational Observations

0.1

2.0

2.0

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Section Pictures - 18/03/2020 - GY06X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | | GY06X | PJ00366135 | PJ00366135 |
| 13 | Downstream | GIUOX | FJUU300133 | FJUU300133 |



200318_1354C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY06



200318_1354D-Survey.jpg, 00:00:02, 0.02 m Water level, 5% % of the vertical dimension



200318_1354E-Survey.jpg, 00:00:28, 5.58 m Line deviates right



200318_1355A-Survey.jpg, 00:00:40, 7.11 m Water level, 10% % of the vertical dimension

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Section Pictures - 18/03/2020 - GY06X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 13 | Downstream | GY06X | PJ00366135 | PJ00366135 |



200318_1355B-Survey.jpg, 00:00:42, 7.13 m Settled deposits, fine, 10% % cross-sectional area loss



200318_1355C-Survey.jpg, 00:00:59, 9.98 m Junction, at 09 o'clock, diameter: 100 mm



200318_1356A-Survey.jpg, 00:01:10, 11.76 m Loss of vision, camera under water, S01



200318_1357A-Survey.jpg, 00:01:44, 14.29 m Finish node type, other special chamber, reference number: DS, intercptor



Section Inspection - 18/03/2020 - GY08X

| Section 14 | Inspection 14 | Date 18/03/20 | Time 14:11 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY08X |
|---------------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|
| | erator avfield | Vehi PF65 | 10,133.0 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| London | Inspection Direction: | Downstream | Upstream Node: | GY08 |
|--------------------------------|---|--|--|--|
| 51 Durward Street | Inspected Length: | 1.83 m | Upstream Pipe Depth: | 0.000 m |
| Property with buildings | Total Length: | 1.83 m | Downstream Node: | DS |
| Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Surface water | | Pipe Shape: | Circular | |
| Gravity drain/sewer | | Dia/Height: | 100 mm | |
| | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| No flow control | | Lining Type: | No Lining | |
| Investigation of known defects | | Lining Material: | No Lining | |
| | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer No flow control | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer Inspected Length: Total Length: Joint Length: No flow control | 51 Durward Street Property with buildings Asphalt Footway Joint Length: 1.83 m Surface water Gravity drain/sewer Pipe Material: No flow control Length: 1.83 m 1.83 m 0.00 m Pipe Shape: Dia/Height: Pipe Material: Lining Type: | 51 Durward Street Property with buildings Asphalt Footway Joint Length: 0.00 m Downstream Pipe Depth: Dia/Height: 100 mm Pipe Material: Vitrified clay pipe (i.e. all class No flow control Lining Type: No Lining |

Comments:

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|--|----------|---------------------------------|-------|
| | Depth: 0.0 GY08 | 0 m | | | | | |
| | | 0.00 | GY | Start node type, gully, reference number: GY08 | 00:00:00 | 200318_1 410C-Surv ey.jpg | |
| 0 | | 0.00 | WL | Water level, 10% % of the vertical dimension | 00:00:02 | 200318_1 410D-Surv ey.jpg | |
| * | | 0.00 | DES | Settled deposits, fine, 10% % cross-sectional area loss | 00:00:04 | 200318_1 411A-Surv ey.jpg | 3 |
| | | 1.83 | OCF | Finish node type, other special chamber, reference number. DS: reached | 00:00:23 | 200318_1 411B-Surv ey_jpg | |
| | DS | | | | | | |

| | Cor | struction Feati | ures | | 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 | 1.1 | 2.0 | 3.0 |

Section Pictures - 18/03/2020 - GY08X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 14 | Downstream | GY08X | PJ00366135 | PJ00366135 |



200318_1410C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY08



200318_1410D-Survey.jpg, 00:00:02, 0.00 m Water level, 10% % of the vertical dimension



200318_1411A-Survey.jpg, 00:00:04, 0.00 m Settled deposits, fine, 10% % cross-sectional area loss



200318_1411B-Survey.jpg, 00:00:23, 1.83 m Finish node type, other special chamber, reference number: DS, reached



Section Inspection - 18/03/2020 - GY09X

| Section | Inspection | Date 18/03/20 | Time 14:19 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY09X |
|---------|-------------------|------------------|---------------|--------------------------------|----------------------------|----------------------------|----------------|
| | erator evfield | Vehi PF65 | cle | Camera Proteus Crawler | Preset Length | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY09 |
|------------------------|--------------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 3.49 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 3.49 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known defects | | Lining Material: | No Lining | |
| Purblish of Processing | | | | | |

Comments:

Recommendations:

Depth: 0.00 m

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|---|----------|---|-------|
| | Depth: 0.0 GY09 | 0 m | | | | | |
| (| | 0.00 | GY | Start node type, gully, reference number: GY09 | 00:00:00 | 200318_1 418A-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | ey.jpg 200318_1 418B-Surv ey.jpg | |
| | | 0.00 | MC | Material changes Polyvinyl chloride @REM | 00:00:05 | 200318_1 418C-Surv ey.jpg | |
| | ш | 0.00 | LD | Line deviates down | 80:00:08 | 200318_1 418D-Surv ey.jpg | |
| * | | 2.00 | LR | Line deviates right | 00:00:22 | 200318_1 418E-Surv ey.jpg | |
| (| | 3.49 | OCF | Finish node type, other special chamber, reference number DS; reached | 00:00:33 | 200318_1 419A-Surv ey.jpg | |
| , | DS | | | | | | |

| | Cor | struction Feati | ures | | 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 |





Section Pictures - 18/03/2020 - GY09X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 15 | Downstream | GY09X | PJ00366135 | PJ00366135 |



200318_1418A-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY09



200318_1418B-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200318_1418C-Survey.jpg, 00:00:05, 0.00 m Material changes Polyvinyl chloride @REM



200318_1418D-Survey.jpg, 00:00:08, 0.00 m Line deviates down



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Section Pictures - 18/03/2020 - GY09X

 Section
 Inspection Direction
 PLR
 Client's Job Ref
 Contractor's Job Ref

 15
 Downstream
 GY09X
 PJ00366135
 PJ00366135



200318_1418E-Survey.jpg, 00:00:22, 2.00 m Line deviates right



200318_1419A-Survey.jpg, 00:00:33, 3.49 m Finish node type, other special chamber, reference number: DS, reached



Section Inspection - 18/03/2020 - GY07X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 16 | | 18/03/20 | 14:33 | PJ00366135 | No Rain Or Snow | Yes | GY07X |
| Ope | erator ayfield | Vehi PF65 | cle | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| London | Inspection Direction: | Downstream | Upstream Node: | GY07 |
|--------------------------------|---|--|---|--|
| 51 Durward Street | Inspected Length: | 3.87 m | Upstream Pipe Depth: | 0.000 m |
| Property with buildings | Total Length: | 3.87 m | Downstream Node: | DS |
| Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Surface water | | Pipe Shape: | Circular | |
| Gravity drain/sewer | | Dia/Height: | 100 mm | |
| | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| No flow control | | Lining Type: | No Lining | |
| Investigation of known defects | | Lining Material: | No Lining | |
| | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer No flow control | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer Inspected Length: Total Length: Joint Length: No flow control | 51 Durward Street Property with buildings Asphalt Footway Joint Length: 3.87 m Surface water Pipe Shape: Dia/Height: Pipe Material: Lining Type: | 51 Durward Street Property with buildings Asphalt Footway Joint Length: 0.00 m Downstream Pipe Depth: Downstream Pipe Depth: O.00 m Downstream Pipe Depth: Downstream Pipe Depth: Downstream Pipe Depth: Downstream Pipe Depth: Dia/Height: 100 mm Pipe Material: Vitrified clay pipe (i.e. all class No flow control Lining Type: No Lining |

Comments:

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|--|----------|---|-------|
| | Depth: 0.0 GY07 | 0 m | | | | | |
| | R | 0.00 | GY | Start node type, gully, reference number: GY07 | 00:00:00 | 200318_1 432C-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | ey.jpg 200318_1 432D-Surv ey.jpg | |
| | | 0.92 | DES | Settled deposits, fine, 10% % cross-sectional area loss | 00:00:14 | 200318_1 432E-Surv ey.jpg | 3 |
| 1 | | | | | | | |
| | ı | | | | | | |
| | | 3.87 | OCF | Finish node type, other special chamber, reference number: | 00:00:39 | 200318 1 | |

| | Con | struction Feat | ures | | 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 | 0.5 | 2.0 | 3.0 | |



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Section Pictures - 18/03/2020 - GY07X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 16 | Downstream | GY07X | PJ00366135 | PJ00366135 |



200318_1432C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY07



200318_1432D-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200318_1432E-Survey.jpg, 00:00:14, 0.92 m Settled deposits, fine, 10% % cross-sectional area loss



200318_1433A-Survey.jpg, 00:00:39, 3.87 m Finish node type, other special chamber, reference number: DS, reached

Jacob Gemma

From: Kelly Darren **Sent:** 12 May 2020 15:55

To: Storer Richard; Venn Daniel

Subject: RE: Kempton Court - Bucks Row

Attachments: C512-BBM-A-RGN-D061_WS106-50253_Rev.1.0.pdf

BBMV have updated the report but have just caveated the section outside the works as not part of the works but kept the damage details in question the report.

Not what I asked for – shall we submit as is ? Otherwise it could take time to try and do this again Regards

Darren

From: Storer Richard
Sent: 12 May 2020 10:17
To: Venn Daniel; Kelly Darren

Subject: Kempton Court - Bucks Row

Dan/Darren.

Any idea how much longer you will need? Is it possible that some of the work could restart soon as 'niche' works?

BucBucks Row agreed to allow continued occupation of the small landscape area at no charge until end March on the basis that we would jet wash the whole of the rest of the car park (done), provide a 'barrier' between the play area and the car park until the shrubs matured (done), replace the lighting bollards (in hand) and provide a drainage survey (not yet done). On the basis that the licence fee for the extended use of the car park was £1500/month and that the residents now have full use of the car park I will suggest a fee of £500/month back dated to the beginning of January for 6 months and remind them of the above. Of course it would help if we could issue the drainage survey!!

RiRRichard.

Richard Storer

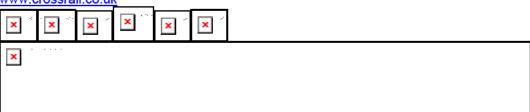
Community Relations Manager

M:

crossrail.tfl.gov.uk

Crossrail, 6R5, 5 Endeavour Square, London, E20 1JN

www.crossrail.co.uk



Jacob Gemma

From: Alex Smithson
Sent: 01 April 2020 11:01

To: Kelly Darren

Cc: Neal Egan; bbmv.co.uk; bbmv.co.uk; Forrest Jim

Subject: RE: Kempton Court CCTV Survey

Attachments: PJ00366135_Socotec UK Limited_51 Durvward Street.pdf; 1241_001.pdf

Hi Darren,

Spoke to Socotec on the phone and I've they've sent through the report and reference sketch (attached).

Believe this is what you were looking for!

Kind Regards,

Alex Smithson

Section Engineer – Demobilisation BBMV – C512 Whitechapel

M:

From: Kelly Darren < crossrail.tfl.gov.uk>

Sent: 27 March 2020 10:45

To: Smithson, Alex (BBM<u>V</u>) <

Cc: Egan, Neal (BBMV) < BBMV.co.uk>; Gaffney, Jack (BBMV) < bbmv.co.uk>; Gilmour, Cooper (BBMV) < bbmv.co.uk>; Forrest Jim < crossrail.tfl.gov.uk>

Subject: Re: Kempton Court CCTV Survey

Alex,

Its a bit unclear what is on the website and what it means. The objective of the survey is to demonstrate the drainage system has not been damaged or blocked by our works especially after our cleaning exercise and is in no worse a condition when we took it over

I would expect some sort of report with the CCTV survey that summarises and demonstrates all is good unless I am missing something?

Regards

Darren Kelly Project Construction Manager C512 Whitechapel Station Works

Essex Wharf, Durward St. London E1 5BA

M crossrail.tfl.gov.uk

MOVING LONDON FORWARD

| From: BBMV.co.uk Sent: 26 March 2020 13:24 To: Kelly Darren crossrail.tfl.gov.uk> Cc: Neal Egan bbmv.co.uk bbmv.co.uk bbmv.co.uk bbmv.co.uk subject: Kempton Court CCTV Survey |
|--|
| Darren, |
| Neal's requested I forward through our results for the drainage surveys. Given the files are approximately 200mb total, I've forwarded the Lanes Drains website, where you can stream/download the videos below: |
| https://web.wincan.com/Project/PJ00366135SocotecUKLimited51DurvwardStreet-jmslc7 |
| (GY runs are the existing Kempton Court Drainage east of our working area). |
| Also attached is the previous report, including the drawing showing the node names. |
| Kind Regards, |
| Alex Smithson Section Engineer – Demobilisation BBMV – C512 Whitechapel M: |
| +++++++++++++++++++++++++++++++++++++++ |
| This e-mail (including any attachments) is intended only for the recipient(s) named above. It may contain |
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Cedex, France; and, Bachy Soletanche Limited (company no 752082) whose registered office is at Henderson house,

Langley Place, Higgins Lane, Burscough, Lancashire L40 8JS

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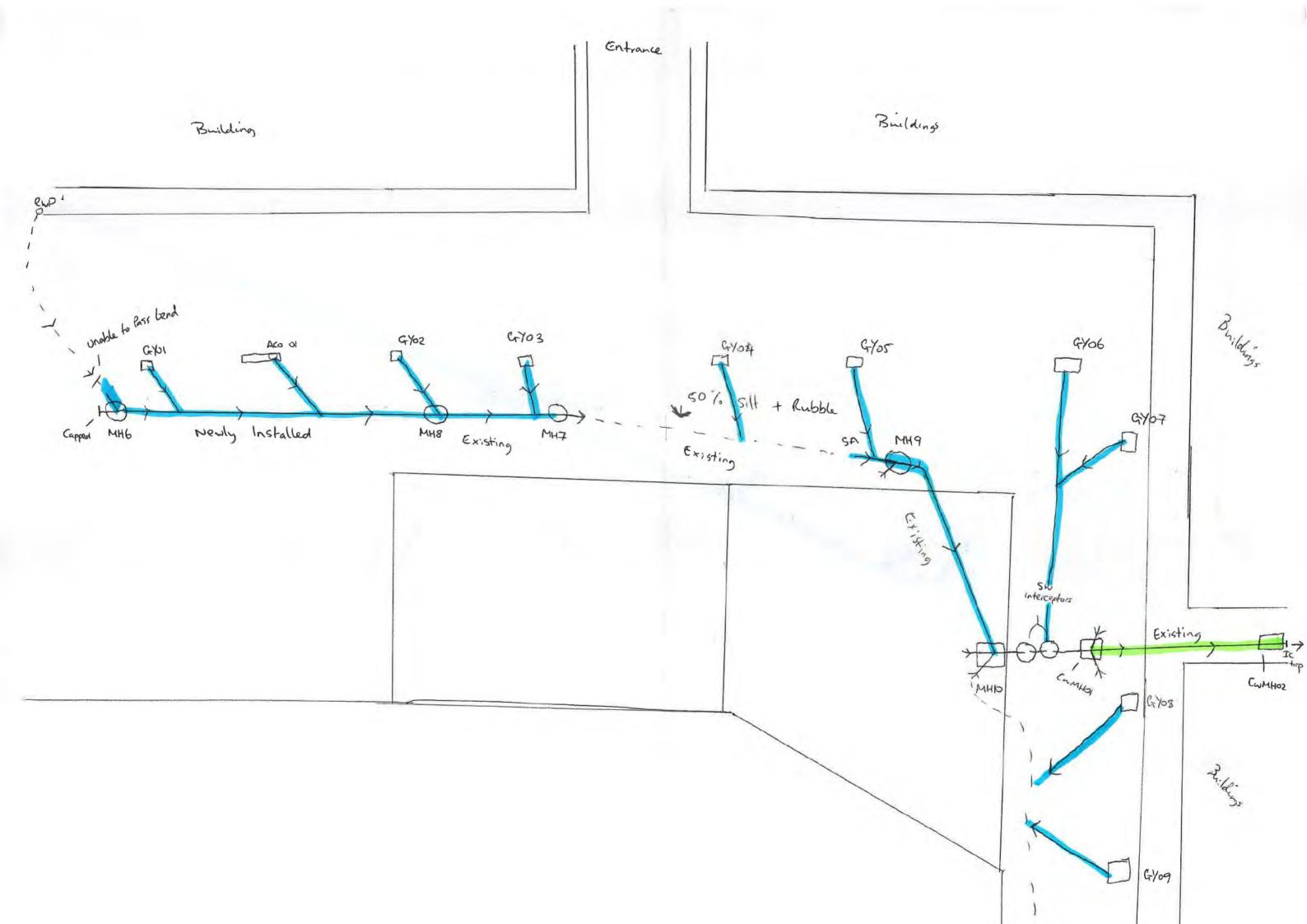
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Cedex, France; and, Bachy Soletanche Limited (company no 752082) whose registered office is at Henderson house.

Langley Place, Higgins Lane, Burscough, Lancashire L40 8JS







Project

Project Name: PJ00366135_Socotec UK Limited_51 Durvward Street

Project Description: CCTV survey **Project Number:** PJ00366135

Project Status: Complete
Project Date: 20/03/2020



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16 Lamson Road, Rainham

Tel. londonops@lanesgroup.co.uk

Project Information

 Project Name
 Project Number
 Project Date

 PJ00366135_Socotec UK Limited_51 Durward Street
 PJ00366135
 20/03/2020

Client

Company: Socotec UK Limited
Department: Socotec House

Street: Ashby Road, Bretby Business Park

Town or City: Burton-On-Trent
County: Staffordshire
Post Code: DE15 0YZ

Site

Company: Socotec UK Limited Street: 51 Durward Street

Town or City: London Post Code: E1 5BA

Email: socotec.com

Contractor

Company: Lanes Group Plc
Department: Branch Manager
Street: 16 Lamson Road

Town or City: Rainham
County: Essex
Post Code: RM13 9YY
Phone:

Email: londonops@lanesgroup.co.uk



16 Lamson Road, Rainham

londonops@lanesgroup.co.uk

Project Information

 Project Name
 Project Number
 Project Date

 PJ00366135_Socotec UK Limited_51 Durvward Street
 PJ00366135
 20/03/2020

Project Notes

Client: Socotec UK Limited

Date: 17/03/2020

Job/Ref No: PJ00366135

Site Address: 51 Durward Street, London E1 5BA

Dear Sir / Madam,

As requested, we have recently carried out a drainage CCTV survey at the above site and our full and detailed findings are contained in the attached CCTV report which you can review at your leisure.

We have identified the need for further works for which a quotation will be sent via our sales team which highlights the areas of concern, the most appropriate remedial techniques and associated costings.

We would like to take this opportunity to thank you for using Lanes Group plc and I hope we can be of service to you again soon. Please visit our website for full details of all services we can provide, follow us on social media or even share details of your customer experience with us.

Yours Sincerely,

Lanes Group London

Tel:

londonops@lanesgroup.co.uk



Scoring Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

Structural Defects

- Grade 3: Best practice suggests consideration should be given to repairs in the medium term.
- Grade 4: Best practice suggests consideration should be given to repairs to avoid a potential collapse.
- Grade 5: Best practice suggests that this pipe is at risk of collapse at any time. Urgent consideration should be given to repairs to avoid total failure.

| Section | PLR | Grade | Description |
|---------|------|-------|--------------------------------|
| 6 | MH8X | 5 | Deformed drain or sewer, 40% % |
| 8 | MH9X | 5 | Deformed drain or sewer, 20% % |

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 |
|---------|-------|-------|---|
| 7 | MH7X | 4 | Settled deposits, fine, 40% % cross-sectional area loss |
| 8 | MH9X | 3 | Multiple defects |
| 13 | GY06X | 3 | Settled deposits, fine, 10% % cross-sectional area loss |
| 14 | GY08X | 3 | Settled deposits, fine, 10% % cross-sectional area loss |
| 16 | GY07X | 3 | Settled deposits, fine, 10% % cross-sectional area loss |

Abandoned Surveys

| Section | PLR | Description |
|---------|------|------------------|
| 7 | MH7X | Survey abandoned |

Information

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



Project Pictures

Project Name
PJ00366135_Socotec UK Limited_51 Durvward Street

Project Number PJ00366135

Project Date 20/03/2020



200317_1203A-Survey



200317_1206A-Survey



200317_1207A-Survey



200317_1234A-Survey



200317_1236A-Survey



200317_1240A-Survey



Project Pictures

Project Name
PJ00366135_Socotec UK Limited_51 Durvward Street

Project Number PJ00366135

Project Date 20/03/2020



200317_1339A-Survey



200317_1447A-Survey



200317_1501A-Survey

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Pipe | Sun | nmary | | | | | | | | | |
|------|------|------------|---------------|-----------------|-------------------|--------|-----|------|----------------|----------|------|
| No. | Туре | PLR | Upstream Node | Downstream Node | Road | Town | Use | Mat. | Profile | Ler | ngth |
| 1 | SEC | LAT A.MH6X | LAT A.MH6 | MH6 | 51 Durward Street | London | S | VC | Circular 100mm | 0.5 | 66 m |
| 2 | SEC | GY01X | GY01 | DS | 51 Durward Street | London | S | VC | Circular 150mm | 3.6 | 60 m |
| 3 | SEC | MH6X | MH6 | MH8 | 51 Durward Street | London | S | PVC | Circular 150mm | 14.6 | 60 m |
| 4 | SEC | ACO 01X | ACO 01 | DS | 51 Durward Street | London | S | PVC | Circular 100mm | 1.9 | 97 m |
| 5 | SEC | GY02X | GY02 | DS | 51 Durward Street | London | S | PVC | Circular 100mm | 2.4 | 16 m |
| 6 | SEC | MH8X | MH8 | MH7 | 51 Durward Street | London | S | PVC | Circular 150mm | 11.1 | 19 m |
| 7 | SEC | MH7X | MH7 | MH9 | 51 Durward Street | London | S | VC | Circular 225mm | 1.1 | 13 m |
| 8 | SEC | MH9X | MH9 | MH10 | 51 Durward Street | London | S | VC | Circular 300mm | 13.6 | 69 m |
| 9 | SEC | CWMH01X | CWMH01 | CWMH02 | 51 Durward Street | London | С | VC | Circular 350mm | 13.5 | 56 m |
| 10 | SEC | GY03X | GY03 | DS | 51 Durward Street | London | S | PP | Circular 100mm | 1.6 | 88 m |
| 11 | SEC | GY04X | GY04 | DS | 51 Durward Street | London | S | PP | Circular 100mm | 5.7 | 75 m |
| 12 | SEC | GY05X | GY05 | DS | 51 Durward Street | London | S | PP | Circular 100mm | 4.9 | 90 m |
| 13 | SEC | GY06X | GY06 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 14.2 | 29 m |
| 14 | SEC | GY08X | GY08 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 1.8 | 33 m |
| 15 | SEC | GY09X | GY09 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 3.4 | 19 m |
| 16 | SEC | GY07X | GY07 | DS | 51 Durward Street | London | S | VC | Circular 100mm | 3.8 | 37 m |
| | | | | | | | | | Tot | al: 98.5 | 57 m |

Pipe Levels

| No. | PLR | Upstream Node | Upstream C.L. | Upstream I.L. | Upstream I.D. | Downstream Node | Downstream C.L. | Downstream I.L. | Downstream I.D. |
|-----|------------|---------------|---------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| 1 | LAT A.MH6X | LAT A.MH6 | | | 1.650 m | MH6 | | | 1.750 m |
| 2 | GY01X | GY01 | | | 0.000 m | DS | | | 0.000 m |
| 3 | MH6X | MH6 | | | 1.750 m | MH8 | | | 2.100 m |
| 4 | ACO 01X | ACO 01 | | | 0.000 m | DS | 11111 | 1 | 0.000 m |
| 5 | GY02X | GY02 | | | 0.000 m | DS | | | 0.000 m |
| 6 | MH8X | MH8 | | | 2.100 m | MH7 | | | 2.330 m |
| 7 | MH7X | MH7 | | | 2.330 m | MH9 | | | 2.920 m |

Project Summary

| Project Name | Project Number | Project Date | |
|--|----------------|--------------|--|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 | |

| No. | PLR | Upstream Node | Upstream C.L. | Upstream I.L. | Upstream I.D. | Downstream Node | Downstream C.L. | Downstream I.L. | Downstream I.D. |
|-----|---------|---------------|---------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| 8 | MH9X | MH9 | | | 2.920 m | MH10 | | | 0.000 m |
| 9 | CWMH01X | CWMH01 | | | 3.310 m | CWMH02 | | | 0.000 m |
| 10 | GY03X | GY03 | | | 0.000 m | DS | | | 0.000 m |
| 11 | GY04X | GY04 | | | 0.000 m | DS | | | 0.000 m |
| 12 | GY05X | GY05 | | | 0.000 m | DS | | | 0.000 m |
| 13 | GY06X | GY06 | | 11 | 0.000 m | DS | | | 0.000 m |
| 14 | GY08X | GY08 | | | 0.000 m | DS | | | 0.000 m |
| 15 | GY09X | GY09 | | | 0.000 m | DS | | | 0.000 m |
| 16 | GY07X | GY07 | | | 0.000 m | DS | | | 0.000 m |

Pipe Summary by Profile

| Profile | | Total Length | No. Pipes | | | | |
|----------------|----------|--------------|-----------|--|--|--|--|
| Circular 100mm | | 0.56 m | | | | | |
| Circular 100mm | | 1.97 m | | | | | |
| Circular 100mm | | 2.46 m | | | | | |
| Circular 100mm | | 1.68 m | | | | | |
| Circular 100mm | | 5.75 m | | | | | |
| Circular 100mm | | 4.90 m | | | | | |
| Circular 100mm | | 14 29 m | | | | | |
| Circular 100mm | | 1.83 m | | | | | |
| Circular 100mm | | 3.49 m | | | | | |
| Circular 100mm | | 3.87 m | | | | | |
| Circular 100mm | - | 40.80 m | 10 | | | | |
| Circular 150mm | | 3.60 m | | | | | |
| Circular 150mm | | 14 60 m | | | | | |
| Circular 150mm | | 11.19 m | | | | | |
| Circular 150mm | - | 29.39 m | 3 | | | | |
| Circular 225mm | | 1.13 m | | | | | |
| Circular 225mm | ± | 1.13 m | 1 | | | | |
| Circular 300mm | | 13 69 m | | | | | |
| Circular 300mm | = | 13.69 m | 1 | | | | |
| Circular 350mm | | 13 56 m | 4 1 - | | | | |
| Circular 350mm | | 13.56 m | 1 | | | | |

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Profile | 1 | Total Length | No. Pipes |
|---------|---|--------------|-----------|
| Total | | 98.57 m | 16 |

Inspection Summary

| Pipe No. | Insp. No. | Upstream Node | Downstream Node | Dir. | Operator | Insp. Date | Insp. Time | Str | Ser | Final Observation | Length |
|-------------|--------------|---------------|-----------------|------|------------|------------|--------------|-----|-----|--------------------------|---------|
| 1 | 1 | LAT A.MH6 | MH6 | US | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REDUNDANT OR CAPPED | 0.56 m |
| 2 | 1 | GY01 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 3.60 m |
| 3 | 1 | MH6 | MH8 | DS | C.Layfield | 17/03/2020 | 0:00 1 1 MHF | | MHF | 14.60 m | |
| 4 | 1 | ACO 01 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 1.97 m |
| 5 | 1 | GY02 | DS | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF, MH8 | 2.46 m |
| 6 | 1 | MH8 | MH7 | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 5 | MHF | 11.19 m |
| 7 | 1 | MH7 | MH9 | US | C.Layfield | 17/03/2020 | 0:00 | 4 | 1 | SA, unable to pass | 1.13 m |
| 8 | 1 | MH9 | MH10 | DS | C.Layfield | 17/03/2020 | 0:00 | 3 | 5 | MHE | 13.69 m |
| 9 | 1 | CWMH01 | CWMH02 | DS | C.Layfield | 17/03/2020 | 0:00 | 1 | 1 | MHF | 13.56 m |
| 10 | 1 | GY03 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 1 | OCF, REACHED | 1.68 m |
| 11 | 1 | GY04 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 1 | OCF, reached | 5.75 m |
| 12 | 1 | GY05 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 2 | OCF, reached | 4.90 m |
| 13 | 1 | GY06 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 3 | 1 | OCF, intercptor | 14.29 m |
| 14 | 1 | GY08 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 3 | 1 | OCF, reached | 1.83 m |
| 15 | 1 | GY09 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 1 | 1 | OCF, reached | 3.49 m |
| 16 | 1 | GY07 | DS | DS | C.Layfield | 18/03/2020 | 0:00 | 3 | 1 | OCF, reached | 3.87 m |
| | | | - | | | | | | | Total: | 98.57 m |

Inspection Summary by Profile

| 0.56 m No. Inspections 0.46 m 1.68 m | | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|--|--|
| Total Length | No. Inspections | | | | | | | |
| 0.56 m | | | | | | | | |
| 1.97 m | | | | | | | | |
| 2.46 m | | | | | | | | |
| 1.68 m | | | | | | | | |
| 5.75 m | | | | | | | | |
| 4.90 m | | | | | | | | |
| 14.29 m | | | | | | | | |
| | 0.56 m 1.97 m 2.46 m 1.68 m 5.75 m 4.90 m | | | | | | | |

Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135 Socotec UK Limited 51 Durvward Street | PJ00366135 | 20/03/2020 |

| Profile | | Total Length | No. Inspections | | | |
|----------------------------------|-------|--------------------|-----------------|--|--|--|
| Circular 100mm | | 1.83 m | | | | |
| Circular 100mm Circular 100mm | | 3.49 m 3.87 m | | | | |
| Circular 100mm | | 40.80 m | 10 | | | |
| Circular 150mm | | 3.60 m | | | | |
| Circular 150mm Circular 150mm | | 14.60 m 11.19 m | | | | |
| Circular 150mm | = " | 29.39 m | 3 | | | |
| Circular 225mm | | 1.13 m | | | | |
| Circular 225mm | | 1.13 m | 1 | | | |
| Circular 300mm | | 13.69 m | | | | |
| Circular 300mm | 61 | 13.69 m | 1 | | | |
| Circular 350mm | | 13.56 m | | | | |
| Circular 350mm | | 13.56 m | 1 | | | |
| Total | - TET | 98.57 m | 16 | | | |

| Defe | ect S | ummary | | | | | | | | | CCTV | Oraina | ge Su | rvey O | bserv | ation C | ount | | | | | | | |
|-------|-------|---------------|-----------------|---------------------|-----------------------|---------------------|-----------------------|----------------------|-----------|--------|----------|-----------|-------|-------------------|---------------------|----------------|-------------------|--------------|--------------|------|--------|-------------|-------|------------------|
| | | and the same | | General | | | | Structural Condition | | | | | | | | | Service Condition | | | | | | | |
| Sect. | Insp. | Upstream Node | Downstream Node | Insp. Length (m) | No. Grade 4/5 Obs. | Survey Abandoned | Camera Under Water | Cracks | Fractures | Broken | Deformed | Collapsed | Holes | Surface Damage | Displaced Joints | Open Joints | Roots | Infiltration | Encrustation | Silt | Grease | Obstruction | Water | Line Deviates |
| 1 | 1 | LAT A.MH6 | MH6 | 0.6 | | | | | | | | | | | | | | | | | | | 1 | 2 |
| 2 | 1 | GY01 | DS | 3.6 | | | 1 = 1 | | | | | | | | | | | | | | 1 | | 1 | 1 |
| 3 | 1 | MH6 | MH8 | 14.6 | | | | | | | | | | | | | | | 100 | - 41 | 1 | 10.0 | 1 | 10 1 |
| 4 | 1 | ACO 01 | DS | 2.0 | | | | | | | | | | | | | | | | | | | 1 | 3 |
| 5 | 1 | GY02 | DS | 2.5 | | | | | | | | | | | | | | | | | 11 | | 1 | 1 |
| 6 | 1 | MH8 | MH7 | 11.2 | 2 | | | | | | 3 | | | | | | | | 1 | | | | 1 | 1 |
| 7 | 1 | MH7 | MH9 | 1.1 | 1 | 1 | | | | | | | | | | | | | | 1 | | | 1 | |
| 8 | . 1 | MH9 | MH10 | 13.7 | 2 | | | | | | 2 | | | | | | | | 1 1 | 1 | | | 1 | 4 |
| 9 | 1 | CWMH01 | CWMH02 | 13.6 | = , | | L T | | | | | | | | | | | | 1-1 | | 1 - 1 | | 1 | 2 |



Project Summary

| Project Name | Project Number | Project Date |
|--|----------------|--------------|
| PJ00366135_Socotec UK Limited_51 Durvward Street | PJ00366135 | 20/03/2020 |

| Sect. | | Upstream Node | Downstream Node | Insp. Length (m) | No. Grade 4/5 Obs. | Survey Abandoned | Camera Under Water | Cracks | Fractures | Broken | Deformed | Collapsed | Holes | Surface Damage | Displaced Joints | Open Joints | Roots | Infiltration | Encrustation | Silt | Grease | Obstruction | Water Level | Line Deviates |
|-------|---|---------------|-----------------|---------------------|-----------------------|---------------------|-----------------------|--------|-----------|--------|----------|-----------|-------|-------------------|---------------------|----------------|-------|--------------|--------------|------|--------|-------------|----------------|------------------|
| 10 | 1 | GY03 | DS | 1.7 | 1 | | | | | | | | | | | | | | | | 1-25 | | 1 | 2 |
| 11 | 1 | GY04 | DS | 5.8 | 9 11 | 1 1 | | | | | | | | | | | | | | | 10.00 | | 1 | 3 |
| 12 | 1 | GY05 | DS | 4.9 | | | | | | | 1 | | | | | | | | | | | L | 1 | 3 |
| 13 | 1 | GY06 | DS | 14.3 | | | 2 | | | | | | | | | | | | | 1 | | | 2 | 1 |
| 14 | 1 | GY08 | DS | 1.8 | | | == 1 | | | | | | | | | | | 1 | = = | 1 | | == | 1 | - |
| 15 | 1 | GY09 | DS | 3.5 | | | | | | | | | | | | | | | | 7.1 | | | 1 | 2 |
| 16 | 1 | GY07 | DS | 3.9 | | | | | | | | | | | | | | | | 1 | Test | | 1 | |
| | | | Total: | 98.6 | 5 | 11 | 2 | | | | | | | | | | | | 100 | 5 | 1-00-1 | | 17 | 25 |



Section Inspection - 17/03/2020 - LAT A.MH6X

| Section 1 | Inspection | Date 17/03/20 | Time 12:02 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR LAT A.MH6X |
|-----------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|-------------------|
| | erator avfield | Vehi PF65 | icle | Camera Proteus Crawler | Preset Length | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Upstream | Upstream Node: | LAT.A.MH6 |
|---------------------|-------------------------|-----------------------|------------------|----------------------------------|-----------|
| Road: | 51 Durward Street | Inspected Length: | 0.56 m | Upstream Pipe Depth: | 1.650 m |
| Location: | Property with buildings | Total Length: | 0.56 m | Downstream Node: | MH6 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 1.750 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cl | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Campagnia | | | | | |

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|------------|-------------------|--------------|------|---|----------|---------------------------------|-------|
| E | Depth: 1.7 MH6 | '5 m | | | | | |
| (| | 0.00 | МН | Start node type, manhole, reference number: MH6 | 00:00:00 | 200317_1 202C-Surv ey.jpg | |
| A (| | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:02 | 200317_1 202D-Surv ey.jpg | |
| LA | T A.MH6 | 0.02 | LL | Line deviates left | 00:00:07 | 200317_1 202E-Surv ey.jpg | |
| | | 0.14 | ĽÚ | Line deviates up | 00:00:12 | 200317_1 202F-Surv ey.jpg | |
| | | 0.56 | OCF | Finish node type, other special chamber, reference number: LAT A: REDUNDANT OR CAPPED | 00:00:18 | 200317_1 202G-Surv | |
| C | Depth: 1.6 | 5 m | | | | ey.jpg | |

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|--|
| | S | tructural Defec | ts | | 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 | |

Section Pictures - 17/03/2020 - LAT A.MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------------|------------------|----------------------|
| 1 | Upstream | LAT A.MH6X | PJ00366135 | PJ00366135 |



200317_1202C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH6



200317_1202D-Survey.jpg, 00:00:02, 0.00 m Water level, 0% % of the vertical dimension



200317_1202E-Survey.jpg, 00:00:07, 0.02 m Line deviates left



200317_1202F-Survey.jpg, 00:00:12, 0.14 m Line deviates up



Section Pictures - 17/03/2020 - LAT A.MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------------|------------------|----------------------|
| 1 | Upstream | LAT A.MH6X | PJ00366135 | PJ00366135 |



200317_1202G-Survey.jpg, 00:00:18, 0.56 m
Finish node type, other special chamber, reference number:
LAT A, REDUNDANT OR CAPPED



Section Inspection - 17/03/2020 - GY01X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR | | | |
|---------|------------|----------|-------|------------------|-----------------|---------------|--|--|--|--|
| 2 | 2 | 17/03/20 | 12:06 | PJ00366135 | No Rain Or Snow | Yes | GY01X | | | |
| Ope | erator | Vehi | icle | Camera | Preset Length | Legal Status | Alternative ID | | | |
| C.La | ayfield | PF65 | JEO | Proteus Crawler | 0.00 m | Private Drain | A STATE OF THE PARTY OF THE PAR | | | |

| London | Inspection Direction: | Downstream | Upstream Node: | GY01 |
|-------------------------|---|---|---|---|
| 51 Durward Street | Inspected Length: | 3.60 m | Upstream Pipe Depth: | 0.000 m |
| Property with buildings | Total Length: | 3.60 m | Downstream Node: | DS |
| Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Surface water | | Pipe Shape: | Circular | |
| Gravity drain/sewer | | Dia/Height: | 150 mm | |
| | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| No flow control | | Lining Type: | No Lining | |
| Investigation of known | defects | Lining Material: | No Lining | |
| | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer No flow control | 51 Durward Street Property with buildings Asphalt Footway Surface water Gravity drain/sewer | 51 Durward Street Property with buildings Asphalt Footway Joint Length: 3.60 m Surface water Gravity drain/sewer Pipe Material: No flow control Lining Type: | 51 Durward Street Property with buildings Asphalt Footway For Surface water Gravity drain/sewer Pipe Material: No flow control No flow control Surface Visit Inspected Length: 3.60 m |

Comments:

Recommendations:

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------------------|--------------|--------------------------------|--|--|--|---|
| Oepth: 0.0 GY01 | 0 m | | | | | |
| | 0.00 | GY | Start node type, gully, reference number: GY01 | 00:00:00 | 200317_1 205C-Surv | |
| | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:03 | ey.jpg 200317_1 205D-Surv ey.jpg | |
| - | 2.45 | LĎ | Line deviates down | 00:00:11 | 200317_1 205E-Surv ey.jpg | |
| | 3.60 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:21 | 200317_1 205F-Surv ey.jpg | |
| | epth: 0.0 | 0.00 m GY01 0.00 0.00 | 0.00 GY 0.00 WL | 0.00 GY Start node type, gully, reference number: GY01 0.00 WL Water level, 0% % of the vertical dimension 2.45 LD Line deviates down 3.60 OCF Finish node type, other special chamber, reference number: | Depth: 0.00 m GY01 0.00 GY Start node type, gully, reference number: GY01 0.00 WL Water level, 0% % of the vertical dimension 00:00:03 2.45 LD Line deviates down 00:00:11 | Depth: 0.00 m GY01 O.00 GY Start node type, gully, reference number: GY01 O0:00:00 200317_1 205C-Surv ey jpg O.00 WL Water level, 0% % of the vertical dimension O0:00:03 200317_1 205D-Surv ey jpg O:00 O:00:01 200317_1 205E-Surv ey jpg O:00 O:00:01 O:00:01 200317_1 205E-Surv O:00:00:01 O:00:01 200317_1 205E-Surv O:00:00:01 O:00:01 O:00:01 |

| | Con | struction Feat | ures | | Miscellaneous Features | | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|--|
| | S | tructural Defec | ts | | 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 Pictures - 17/03/2020 - GY01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 2 | Downstream | GY01X | PJ00366135 | PJ00366135 |



200317_1205C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY01



200317_1205D-Survey.jpg, 00:00:03, 0.00 m Water level, 0% % of the vertical dimension



200317_1205E-Survey.jpg, 00:00:11, 2.45 m Line deviates down



200317_1205F-Survey.jpg, 00:00:21, 3:60 m Finish node type, other special chamber, reference number: DS, REACHED



Section Inspection - 17/03/2020 - MH6X

| Section 3 | Inspection 3 | Date 17/03/20 | Time 12:33 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR MH6X |
|-----------|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|
| | erator avfield | Vehi PF65 | 17.1.3.1.1 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH6 | |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|--|
| Road: | 51 Durward Street | Inspected Length: | 14.60 m | Upstream Pipe Depth: | 1.750 m | |
| Location: | Property with buildings | Total Length: | 14.60 m | Downstream Node: | MH8 | |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.100 m | |
| Use: | Surface water | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 150 mm | | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | | |
| Comments: | | | | | | |

Recommendations:

| Code | Observation | MPEG | Photo | Grade |
|------------|--|---|--|--|
| | | | | |
| MH | Start node type, manhole, reference number: MH6 | 00:00:00 | 231C-Surv | |
| WL | Water level, 5% % of the vertical dimension | 00:00:02 | ey.jpg 200317_1 232A-Surv ey.jpg | |
| NL | Junction, at 11 o'clock, diameter: 150 mm | 00:00:11 | 200317_1 232B-Surv ey.jpg | |
| JN | Junction, at 10 o'clock, diameter: 150 mm | 00:00:25 | 200317_1 232C-Surv ey.jpg | |
| MHF | Finish node type, manhole, reference number: MH8 | 00:00:45 | 200317_1 233A-Surv ey.jpg | |
| n Features | | ous Features | | |
| | MH WL | MH Start node type, manhole, reference number: MH6 WL Water level, 5% % of the vertical dimension JN Junction, at 11 o'clock, diameter: 150 mm JN Junction, at 10 o'clock, diameter: 150 mm | MH Start node type, manhole, reference number: MH6 00:00:00 WL Water level, 5% % of the vertical dimension 00:00:02 JN Junction, at 11 o'clock, diameter: 150 mm 00:00:11 JN Junction, at 10 o'clock, diameter: 150 mm 00:00:25 | MH Start node type, manhole, reference number: MH6 00:00:00 200317_1 231C-Survey.jpg WL Water level, 5% % of the vertical dimension 00:00:02 200317_1 232A-Survey.jpg JN Junction, at 11 o'clock, diameter: 150 mm 00:00:11 200317_1 232B-Survey.jpg JN Junction, at 10 o'clock, diameter: 150 mm 00:00:25 200317_1 232C-Survey.jpg MHF Finish node type, manhole, reference number: MH8 00:00:45 200317_1 233A-Survey.jpg |

STR Total | STR Grade | SER No. Def | SER Peak

0.0

STR No. Def STR Peak

STR Mean

0.0

SER Total | SER Grade

0.0

SER Mean

0.0

0.0

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Section Pictures - 17/03/2020 - MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 3 | Downstream | MH6X | PJ00366135 | PJ00366135 |



200317_1231C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH6



200317_1232A-Survey.jpg, 00:00:02, 0.04 m Water level, 5% % of the vertical dimension



200317_1232B-Survey.jpg, 00:00:11, 2.79 m Junction, at 11 o'clock, diameter: 150 mm



200317_1232C-Survey.jpg, 00:00:25, 7.59 m Junction, at 10 o'clock, diameter: 150 mm



Section Pictures - 17/03/2020 - MH6X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 3 | Downstream | MH6X | PJ00366135 | PJ00366135 |



200317_1233A-Survey.jpg, 00:00:45, 14.60 m Finish node type, manhole, reference number: MH8



MPEG

Photo

Grade

Section Inspection - 17/03/2020 - ACO 01X

| Section 4 | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|-----------|--------------------------------------|----------|---------------------------|-------------------------|-------------------------------|----------------|---------|
| | 4 | 17/03/20 | 12:39 | PJ00366135 | No Rain Or Snow | Yes | ACO 01X |
| | Operator Vehicle C.Layfield PF65 JEO | | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID | |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | ACO 01 | |
|---------------------|---------------------------------------|-----------------------|------------------|------------------------|---------|--|
| Road: | 51 Durward Street | Inspected Length: | 1.97 m | Upstream Pipe Depth: | 0.000 m | |
| Location: | Property with buildings Total Length: | | 1.97 m | Downstream Node: | DS | |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m | |
| Use: | Surface water | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | | |
| Comments: | None | | | | | |

1:50

Position [m] Code Observation

Recommendations:

Scale:

| De | epth: 0.00 m | | | | |
|----|--------------|-----|--|----------|---|
| AC | 00 01 | | | | |
| | 0.00 | RE | Start node type, rodding eye, reference number: ACO 01 | 00:00:00 | 200317_1 237C-Surv |
| | 0.00 | WL | Water level, 0% % of the vertical dimension | 00:00:02 | ey.jpg 200317_1 237D-Surv ey.jpg |
| + | 0.00 | LD | Line deviates down | 00:00:04 | 200317_1 237E-Surv ey.jpg |
| | 0.25 | LR | Line deviates right | 00:00:14 | 200317_1 238A-Surv ey.jpg |
| | 0.25 | LD | Line deviates down | 00:00:16 | 200317_1 238B-Surv ey.jpg |
| | DS 1.90 | SC | Size changes, new size(s), 150 mm high | 00:00:28 | 200317_1 238C-Surv ey.jpg |
| | 1.97 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:33 | 200317_1 238D-Surv ey.jpg |
| De | epth: 0.00 m | | | | -1-1ha |

| | Cor | struction Feat | ures | | 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 | |

Section Pictures - 17/03/2020 - ACO 01X

Inspection Direction PLR Client's Job Ref Section Contractor's Job Ref ACO 01X PJ00366135 PJ00366135 4 Downstream



200317_1237C-Survey.jpg, 00:00:00, 0.00 m Start node type, rodding eye, reference number: ACO 01



200317_1237D-Survey.jpg, 00:00:02, 0.00 m Water level, 0% % of the vertical dimension



200317_1237E-Survey.jpg, 00:00:04, 0.00 m Line deviates down



200317_1238A-Survey.jpg, 00:00:14, 0.25 m Line deviates right

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Section Pictures - 17/03/2020 - ACO 01X

 Section
 Inspection Direction
 PLR
 Client's Job Ref
 Contractor's Job Ref

 4
 Downstream
 ACO 01X
 PJ00366135
 PJ00366135



200317_1238B-Survey.jpg, 00:00:16, 0.25 m Line deviates down



200317_1238C-Survey.jpg, 00:00:28, 1.90 m Size changes, new size(s), 150 mm high



200317_1238D-Survey.jpg, 00:00:33, 1.97 m
Finish node type, other special chamber, reference number:
DS, REACHED



Section Inspection - 17/03/2020 - GY02X

| Section In | spection | Date 17/03/20 | Time 12:46 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY02X | |
|--------------------------------------|----------|---------------------------|---------------|--------------------------------|----------------------------|--------------------|--------------|--|
| Operator Vehicle C.Lavfield PF65 JEO | | Camera Proteus Crawler | Preset Length | Legal Status Private Drain | Alternative ID | | | |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY02 | |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|--|
| Road: | 51 Durward Street | Inspected Length: | 2.46 m | Upstream Pipe Depth: | 0.000 m | |
| Location: | Property with buildings | Total Length: | 2.46 m | Downstream Node: | DS | |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m | |
| Use: | Surface water | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | | |
| Commente: | < | | | | | |

Recommendations:

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grad |
|--------------------|--------------|----------------------|--|--|--|--|
| Depth: 0.0 GY02 | 0 m | | | | | |
| Q | 0.00 | GY | Start node type, gully, reference number: GY02 | 00:00:00 | 200317_1 245A-Surv | |
| | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | 200317_1 245B-Surv | |
| | 0.31 | LD | Line deviates down | 00:00:18 | 200317_1 245C-Surv ey.jpg | |
| - | 1.96 | SC | Size changes, new size(s), 150 mm high | 00:00:35 | 200317_1 245D-Surv | |
| | 2.46 | MHF | Finish node type, manhole, reference number: DS: MH8 | 00:00:46 | 200317_1 246A-Surv ey.jpg | |
| | Depth: 0.0 | 0.00 0.00 0.31 | 0.00 GY 0.00 WL 0.31 LD | Depth: 0.00 m GY02 0.00 GY Start node type, gully, reference number: GY02 0.00 WL Water level, 5% % of the vertical dimension 1.96 SC Size changes, new size(s), 150 mm high | 0.00 GY Start node type, gully, reference number: GY02 00:00:00 0.00 WL Water level, 5% % of the vertical dimension 00:00:03 0.31 LD Line deviates down 00:00:18 1.96 SC Size changes, new size(s), 150 mm high 00:00:35 | Depth: 0.00 m GY02 O:000 m O:0000 GY Start node type, gully, reference number: GY02 O:00:00 200317_1 245A-Surv ey.jpg O:00 WL Water level, 5% % of the vertical dimension O:00:03 200317_1 245B-Surv ey.jpg O:31 LD Line deviates down O:00:18 200317_1 245C-Surv ey.jpg O:00 O:00:05 O:00 |

Depth: 0.00 m

DS

| | Cor | struction Feat | ures | | Miscellaneous Features | | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|--|
| | S | tructural Defec | ts | | 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 | |

Section Pictures - 17/03/2020 - GY02X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | GY02X | PJ00366135 | PJ00366135 |



200317_1245A-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY02



200317_1245B-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200317_1245C-Survey.jpg, 00:00:18, 0.31 m Line deviates down



200317_1245D-Survey.jpg, 00:00:35, 1.96 m Size changes, new size(s), 150 mm high



Section Pictures - 17/03/2020 - GY02X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | GY02X | PJ00366135 | PJ00366135 |



200317_1246A-Survey.jpg, 00:00:46, 2.46 m Finish node type, manhole, reference number: DS, MH8



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Section Inspection - 17/03/2020 - MH8X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 6 | 6 | 17/03/20 | 13:38 | PJ00366135 | No Rain Or Snow | Yes | MH8X |
| 100 | erator avfield | Vehi PF65 | | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH8 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 11.19 m | Upstream Pipe Depth: | 2.100 m |
| Location: | Property with buildings | Total Length: | 11.19 m | Downstream Node: | MH7 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.330 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 150 mm | |
| Year Constructed: | | | Pipe Material: | Polyvinyl chloride | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Commente: | | | | | |

Comments:

Recommendations:

| Scale: | 1:98 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|-------------------|--------------|----------|--|---------------|---|-------|
| ı | Depth: 2.1 | 0 m | | | | | |
| (| R | 0.00 | МН | Start node type, manhole, reference number: MH8 | 00:00:00 | 200317_1 335C-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | 336A-Surv | |
| | | 0.64 | MC | Material changes Polypropylene @REM | 00:00:10 | 336B-Surv | |
| | | 0.71 | D | Deformed drain or sewer, 10% % | 00:00:20 | ey.jpg 200317_1 336C-Surv | 2 |
| | H// | 1.80 | JN | Junction, at 10 o'clock, diameter: 150 mm | 00:00:25 | ey.jpg 200317_1 336D-Surv | |
| | | 2.34 | D | Deformed drain or sewer, 40% % | 00:00:30 | 337A-Surv | 5 |
| + | | 2.86 | LD | Line deviates down | 00:00:34 | 337B-Surv | |
| | ı | 3.85 | D | Deformed drain or sewer, 30% % | 00:00:38 | ey.jpg 200317_1 337C-Surv ey.jpg | 4 |
| | 0 | 8.41 | SC | Size changes, new size(s), 225 mm high | 00:00:51 | 200317_1 337D-Surv | |
| | | 8.58 | JN | Junction, at 12 o'clock, diameter: 100 mm | 00:00:54 | ey.jpg 200317_1 338A-Surv ey.jpg | |
| (| | 11.19 | MHF | Finish node type, manhole, reference number: MH7 | 00:01:07 | 200317_1 338B-Surv ey.jpg | |
| | MH7 Depth: 2.3 | 13 m | | | | | |
| | Jepui. Z. | 70 III | | | | | |
| | | Construction | Features | Miscellane | eous Features | | |

STR No. Def STR Peak STR Mean STR Total STR Grade SER No. Def SER Peak SER Mean SER Total SER Grade

0

5.0

165.0

Structural Defects

23.7

Service & Operational Observations

0.0

0.0

0.0

Section Pictures - 17/03/2020 - MH8X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 6 | Downstream | MH8X | PJ00366135 | PJ00366135 |



200317_1335C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH8



200317_1336A-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200317_1336B-Survey.jpg, 00:00:10, 0.64 m Material changes Polypropylene @REM



200317_1336C-Survey.jpg, 00:00:20, 0.71 m Deformed drain or sewer, 10% %

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Section Pictures - 17/03/2020 - MH8X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 6 | Downstream | MH8X | PJ00366135 | PJ00366135 |



200317_1336D-Survey.jpg, 00:00:25, 1.80 m Junction, at 10 o'clock, diameter: 150 mm



200317_1337A-Survey.jpg, 00:00:30, 2.34 m Deformed drain or sewer, 40% %



200317_1337B-Survey.jpg, 00:00:34, 2.86 m Line deviates down



200317_1337C-Survey.jpg, 00:00:38, 3.85 m Deformed drain or sewer, 30% %

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Section Pictures - 17/03/2020 - MH8X

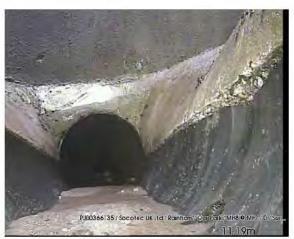
| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 6 | Downstream | MH8X | PJ00366135 | PJ00366135 |



200317_1337D-Survey.jpg, 00:00:51, 8.41 m Size changes, new size(s), 225 mm high



200317_1338A-Survey.jpg, 00:00:54, 8.58 m Junction, at 12 o'clock, diameter: 100 mm



200317_1338B-Survey.jpg, 00:01:07, 11.19 m Finish node type, manhole, reference number: MH7



Section Inspection - 17/03/2020 - MH7X

| Section inspection - 17/03/2020 - Will/X | | | | | | | | |
|--|-------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|--|
| Section 7 | Inspection 7 | Date 17/03/20 | Time 14:38 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned No | PLR MH7X | |
| | erator avfield | Vehi PF65 | 17173 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID | |

| Town or Village: | London | Inspection Direction: | Upstream | Upstream Node: | MH7 |
|---------------------|-------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.13 m | Upstream Pipe Depth: | 2.330 m |
| Location: | Property with buildings | Total Length: | 1.13 m | Downstream Node: | MH9 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 2.920 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 225 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Comments: | <u> </u> | | | | |

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|-------------------|--------------|------|---|----------|---------------------------------|-------|
| | Depth: 2.9 MH9 | 2 m | | | | | |
| | | 0.00 | МН | Start node type, manhole, reference number: MH9 | 00:00:00 | 200317_1 435C-Surv ev.jpg | |
| * | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:04 | 200317_1 435D-Surv ey.jpg | |
| 1 | 1 | 0.00 | DES | Settled deposits, fine, 40% % cross-sectional area loss | 00:00:09 | 200317_1 436A-Surv ey.jpg | 4 |
| | | 1.13 | SA | Survey abandoned: unable to pass | 00:02:08 | 200317_1 438A-Surv ey.jpg | |

| | Cor | struction Feati | ures | | Miscellaneous Features | | | | |
|-------------|----------|-----------------|-----------|-----------|------------------------------------|----------|----------|-----------|-----------|
| | S | tructural Defec | ts | | 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 | 4.4 | 5.0 | 4.0 |

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Section Pictures - 17/03/2020 - MH7X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 7 | Upstream | MH7X | PJ00366135 | PJ00366135 |



200317_1435C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH9



200317_1435D-Survey.jpg, 00:00:04, 0.00 m Water level, 5% % of the vertical dimension



200317_1436A-Survey.jpg, 00:00:09, 0.00 m Settled deposits, fine, 40% % cross-sectional area loss



200317_1438A-Survey.jpg, 00:02:08, 1.13 m Survey abandoned, unable to pass



Section Inspection - 17/03/2020 - MH9X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 8 | 8 | 17/03/20 | 14:45 | PJ00366135 | No Rain Or Snow | No | MH9X |
| 100 | erator avfield | Vehi PF65 | | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | MH9 |
|---------------------|-------------------------|-----------------------|------------------|----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 13.69 m | Upstream Pipe Depth: | 2.920 m |
| Location: | Property with buildings | Total Length: | 13.69 m | Downstream Node: | MH10 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 300 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cl | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Commente: | | | | | |

Recommendations:

| Photo Grad | F | MPEG | bservation | ode |] Co | osition [m] | 120 P | ale: | Sca |
|--|--|--|--|---------|-------|--------------------------------------|----------------|---------|-----|
| | | | | | | | h: 2.92 m 9 | De N | |
| 9C-Surv | 439 | 00:00:00 | tart node type, manhole, reference number: MH9 | IH | MI | 0.00 | | | |
| ey.jpg 10317_1 9D-Surv ey.jpg | 200 439 | 00:00:02 | ater level, 5% % of the vertical dimension | /L | W | 0.00 | | | |
| 0317_1 0A-Surv ey.jpg | 20 440 | 00:00:04 | ne deviates right | R | LF | 0.00 | 1/ | | |
| 0317_1 0B-Surv | 200 | 00:00:15 | ne deviates left | L | L | 1.44 | 111 | | |
| ey.jpg 10317_1 0C-Surv ey.jpg | 200 440 | 00:00:19 | aterial changes Polyvinyl chloride @REM | IC | M | 1.49 | 111 | | |
| 0317_1 0D-Surv ey.jpg | 20 440 | 00:00:26 | ne deviates down | D | LI | 2.86 | /// | | |
| 0317_1 3 0E-Surv | 20 440 | 00:00:32 | ettled deposits, fine, 10% % cross-sectional area loss | ES | DE | 3.94 | 1/1 | • | 1 |
| ey.jpg 10317_1 1A-Surv | 20 | 00:00:41 | ne deviates down | D | LI | 5.44 | | | |
| ey.jpg 10317_1 3 1B-Surv | 20 | 00:00:52 | ettled deposits, coarse, 10% % cross-sectional area loss | ER | DE | 6.72 | | М | |
| ey.jpg 10317_1 5 2A-Surv | 20 442 | 00:01:29 | eformed drain or sewer, 20% % |) | D | 7.91 | // | | |
| ey.jpg 10317_1 4 2B-Surv ey.jpg | 20 442 | 00:02:05 | eformed drain or sewer, 10% % | 0 | + D | 9.46 | | | |
| 0317_1 5A-Surv ey.jpg | 445 | 00:02:27 | nish node type, manhole, reference number: MH10 | HF | MH | 13.69 | | | |
| | | | | | | | | M | |
| | 200 4440 6 200 444 6 200 444 6 200 444 6 200 444 6 200 444 6 200 444 6 200 444 6 6 200 444 6 6 6 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 | 00:00:32 00:00:41 00:00:52 00:01:29 00:02:05 | ettled deposits, fine, 10% % cross-sectional area loss ne deviates down ettled deposits, coarse, 10% % cross-sectional area loss eformed drain or sewer, 20% % eformed drain or sewer, 10% % | ES D ER | DE LU | 3.94 5.44 6.72 7.91 9.46 | | | |

| | Cor | struction Feat | ures | | 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 | 105.0 | 17.0 | 0.45.0 | F.0 | | 0.0 | 0.0 | 4.0 | 0.0 |

Section Pictures - 17/03/2020 - MH9X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 8 | Downstream | MH9X | PJ00366135 | PJ00366135 |



200317_1439C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: MH9



200317_1439D-Survey.jpg, 00:00:02, 0.00 m Water level, 5% % of the vertical dimension



200317_1440A-Survey.jpg, 00:00:04, 0.00 m Line deviates right



200317_1440B-Survey.jpg, 00:00:15, 1.44 m Line deviates left



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Section Pictures - 17/03/2020 - MH9X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|------|------------------|----------------------|
| 8 | Downstream | MH9X | PJ00366135 | PJ00366135 |



200317_1440C-Survey.jpg, 00:00:19, 1.49 m Material changes Polyvinyl chloride @REM



200317_1440D-Survey.jpg, 00:00:26, 2.86 m Line deviates down



200317_1440E-Survey.jpg, 00:00:32, 3.94 m Settled deposits, fine, 10% % cross-sectional area loss



200317_1441A-Survey.jpg, 00:00:41, 5.44 m Line deviates down

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Section Pictures - 17/03/2020 - MH9X

 Section
 Inspection Direction
 PLR
 Client's Job Ref
 Contractor's Job Ref

 8
 Downstream
 MH9X
 PJ00366135
 PJ00366135



200317_1441B-Survey.jpg, 00:00:52, 6.72 m Settled deposits, coarse, 10% % cross-sectional area loss



200317_1442A-Survey.jpg, 00:01:29, 7.91 m Deformed drain or sewer, 20% %



200317_1442B-Survey.jpg, 00:02:05, 9.46 m Deformed drain or sewer, 10% %



200317_1445A-Survey.jpg, 00:02:27, 13.69 m Finish node type, manhole, reference number: MH10



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Section Inspection - 17/03/2020 - CWMH01X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|--------|---------------------------|-------------------------|-------------------------------|----------------|
| 9 | 9 | 17/03/20 | 14:58 | PJ00366135 | No Rain Or Snow | No | CWMH01X |
| | erator avfield | Vehi PF65 | 17,133 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | CWMH01 |
|---------------------|-------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 13.56 m | Upstream Pipe Depth: | 3.310 m |
| Location: | Property with buildings | Total Length: | 13.56 m | Downstream Node: | CWMH02 |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Combined | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 350 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

| Scale: 1: | :118 Position [m] | Code | Observation | MPEG | Photo | Grade |
|-------------|----------------------------|----------|--|-------------|---|-------|
| Dept CWM | th: 3.31 m H01 | | | | | |
| | 0.00 | MH | Start node type, manhole, reference number: CWMH01 Water level, 5% % of the vertical dimension: Strong flow | 00:00:00 | 200317_1 456C-Surv ey.jpg 200317_1 | |
| | 0.00 | WL | vvater level, 3% % of the vertical dimension. Strong now | 00.00.02 | 456D-Surv ey.jpg | |
| • | 6.97 | LD | Line deviates down | 00:00:35 | 200317_1 457A-Surv ey.jpg | |
| | 10.78 | LD | Line deviates down | 00:00:51 | 200317_1 457B-Surv ey.jpg | |
| CWM | 13.56 H02 th: 0.00 m | MHF | Finish node type, manhole, reference number: CWMH02 | 00:01:18 | 200317_1 458A-Surv ey.jpg | |
| - 611 | Construction | Features | Miscellaneou | is Features | | |
| | Structural I | | Service & Operatio | | ions | |

STR Grade SER No. Def

0

1.0

SER Peak | SER Mean

0.0

0.0

STR Mean

0.0

STR Total

STR Peak

0.0

STR No. Def

SER Total | SER Grade

0.0

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Section Pictures - 17/03/2020 - CWMH01X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|---------|------------------|----------------------|
| 9 | Downstream | CWMH01X | PJ00366135 | PJ00366135 |



200317_1456C-Survey.jpg, 00:00:00, 0.00 m Start node type, manhole, reference number: CWMH01



200317_1456D-Survey.jpg, 00:00:02, 0.00 m Water level, 5% % of the vertical dimension, Strong flow



200317_1457A-Survey.jpg, 00:00:35, 6.97 m Line deviates down



200317_1457B-Survey.jpg, 00:00:51, 10.78 m Line deviates down



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Section Pictures - 17/03/2020 - CWMH01X

Inspection Direction PLR Client's Job Ref Contractor's Job Ref Section Downstream CWMH01X PJ00366135 PJ00366135 9



200317_1458A-Survey.jpg, 00:01:18, 13.56 m Finish node type, manhole, reference number: CWMH02



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Section Inspection - 18/03/2020 - GY03X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|----------|---------------------------|-------------------------|-------------------------------|----------------|
| 10 | 10 | 18/03/20 | 11:36 | PJ00366135 | No Rain Or Snow | Yes | GY03X |
| | erator avfield | Vehi PF65 | 10,133.0 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY03 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.68 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 1.68 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polypropylene | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

Depth: 0.00 m

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--|--------------------|--------------------------|--|--|---|--|
| Depth: 0.0 GY03 | 0 m | | | | | |
| The state of the s | 0.00 | GY | Start node type, gully, reference number: GY03 | 00:00:00 | 200318_1 135C-Surv ev.iog | |
| | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:02 | 200318_1 135D-Surv ey.jpg | |
| | 0.00 | LD | Line deviates down | 00:00:04 | 200318_1 135E-Surv ev.ipg | |
| | 0.50 | LR | Line deviates right | 00:00:11 | 200318_1 135F-Surv | |
| DS | 1.68 | OCF | Finish node type, other special chamber, reference number: DS: REACHED | 00:00:21 | 200318_1 136A-Surv ey.jpg | |
| | Depth: 0.0 GY03 | 0.00 0.00 0.00 0.50 1.68 | 0.00 GY 0.00 WL 0.00 LD 0.50 LR 0.68 OCF | 0.00 GY Start node type, gully, reference number: GY03 0.00 WL Water level, 5% % of the vertical dimension 0.00 LD Line deviates down 1.68 OCF Finish node type, other special chamber, reference number: DS: REACHED | Depth: 0.00 m GY Start node type, gully, reference number: GY03 00:00:00 0.00 WL Water level, 5% % of the vertical dimension 00:00:02 0.00 LD Line deviates down 00:00:04 0.50 LR Line deviates right 00:00:11 1.68 OCF Finish node type, other special chamber, reference number: 00:00:21 | 0.00 GY Start node type, gully, reference number: GY03 00:00:00 200318_1 135C-Surv ey.jpg 0.00 WL Water level, 5% % of the vertical dimension 00:00:02 200318_1 135D-Surv ey.jpg 0.00 LD Line deviates down 00:00:04 200318_1 135E-Surv ey.jpg 0.50 LR Line deviates right 00:00:11 200318_1 135F-Surv ey.jpg 1.68 OCF Finish node type, other special chamber, reference number: 00:00:21 200318_1 136A-Surv ey.jpg |

Section Pictures - 18/03/2020 - GY03X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 10 | Downstream | GY03X | PJ00366135 | PJ00366135 |



200318_1135C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY03



200318_1135D-Survey.jpg, 00:00:02, 0.00 m Water level, 5% % of the vertical dimension



200318_1135E-Survey.jpg, 00:00:04, 0.00 m Line deviates down



200318_1135F-Survey.jpg, 00:00:11, 0.50 m Line deviates right



Section Pictures - 18/03/2020 - GY03X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 10 | Downstream | GY03X | PJ00366135 | PJ00366135 |



200318_1136A-Survey.jpg, 00:00:21, 1.68 m
Finish node type, other special chamber, reference number:
DS, REACHED



| Section Inspection - 1 | 8/03/2020 - GY04X |
|------------------------|-------------------|
|------------------------|-------------------|

| | | | | mark to go word of and to be had to | | | |
|---------------|-------------------|------------------|---------------|-------------------------------------|----------------------------|-------------------------------|----------------|
| Section 11 | Inspection | Date 18/03/20 | Time 11:46 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY04X |
| | erator ayfield | Vehi PF65 | 10,330 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY04 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 5.75 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 5.75 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polypropylene | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments: Recommendations:

| Scale: 1 | 1:50 Position [m] | Code | Observation | | MPEG | Photo | Grade |
|------------|-------------------|------|---------------------------------------|---|-------------|---|--------|
| Dept | th: 0.00 m 04 | | | | | | |
| | 0.00 | GY | Start node type, gully, re | eference number: GY04 | 00:00:00 | 144C-Surv | |
| | 0.00 | WL | Water level, 5% % of the | e vertical dimension | 00:00:03 | ey.jpg 200318_1 144D-Surv ey.jpg | |
| | 0.33 | II. | Line deviates left | | 00:00:10 | 200318_1 145A-Surv ey.jpg | |
| , | 3.20 | Œ. | Line deviates left | | 00:00:24 | 200318_1 145B-Surv | |
| | 3.43 | LD | Line deviates down | | 00:00:27 | ey.jpg 200318_1 145C-Surv ey.jpg | |
| | 5.75 | OCF | Finish node type, other : DS: reached | special chamber, reference number: | 00:00:41 | 146A-Surv | |
| DS Dept | S th: 0.00 m | | | | | ey.jpg | |
| | Construction | | | Miscellaneous | | tions | |
| TR No. De | Structural I | | R Total STR Grade S | Service & Operation ER No. Def SER Peak SER M | an Opserval | Total CF | R Grad |

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Section Pictures - 18/03/2020 - GY04X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 11 | Downstream | GY04X | PJ00366135 | PJ00366135 |



200318_1144C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY04



200318_1144D-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200318_1145A-Survey.jpg, 00:00:10, 0.33 m Line deviates left



200318_1145B-Survey.jpg, 00:00:24, 3.20 m Line deviates left



Section Pictures - 18/03/2020 - GY04X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 11 | Downstream | GY04X | PJ00366135 | PJ00366135 |



200318_1145C-Survey.jpg, 00:00:27, 3.43 m Line deviates down



200318_1146A-Survey.jpg, 00:00:41, 5.75 m
Finish node type, other special chamber, reference number: DS, reached



Section Inspection - 18/03/2020 - GY05X

| A 7 | 100000000000000000000000000000000000000 | 4.01 | | | | B = 57 | |
|---------|---|----------|---------|------------------|-----------------|---------------|----------------------------|
| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
| 12 | 12 | 18/03/20 | 12:04 | PJ00366135 | No Rain Or Snow | Yes | GY05X |
| Op | erator | Vehi | icle | Camera | Preset Length | Legal Status | Alternative ID |
| C.L | ayfield | Not Sp | ecified | Not Specified | Not Specified | Not Specified | Principle of the last last |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY05 |
|---------------------|-------------------------|-----------------------|------------------|------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 4.90 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 4.90 m | Downstream Node: | DS |
| Surface Type: | | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Polypropylene | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

| 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------------------|--------------------|--|--|--|---|--------------------|
| Depth: 0.0 GY05 | 00 m | | | | | |
| | | | | | | |
| K | 0.00 | GY | Start node type, gully, reference number: GY05 | 00:00:00 | 202C-Surv | |
| | 0.00 | WL | Water level, 10% % of the vertical dimension | 00:00:02 | 200318_1 202D-Surv | |
| | 0.00 | REM | General remark: belly in pipe | 00:00:04 | | |
| | 1.59 | D | Deformed drain or sewer, 10% % | 00:00:20 | 202F-Surv | 2 |
| | 1.78 | LD | Line deviates down | 00:00:22 | 200318_1 202G-Surv | |
| | 2.42 | LD | Line deviates down | 00:00:27 | | |
| | 3.27 | MC | Material changes Vitrified clay pipe @REM | 00:00:33 | 200318_1 203B-Surv ey.jpg | |
| | 3.85 | LD | Line deviates down | 00:00:39 | 200318_1 203C-Surv ey.jpg | |
| | 4.90 | OCF | Finish node type, other special chamber, reference number. DS: reached | 00:00:51 | 200318_1 203D-Surv ey.jpg | |
| | 00 m | | | | | |
| | Depth: 0.0 GY05 | 0.00 0.00 0.00 1.59 1.78 2.42 3.27 3.85 | 0.00 GY 0.00 WL 0.00 REM 1.59 D 1.78 LD 2.42 LD 3.27 MC 3.85 LD | Depth: 0.00 m GYOS O.00 GY Start node type, gully, reference number: GY05 O.00 WL Water level, 10% % of the vertical dimension O.00 REM General remark: belly in pipe 1.59 Deformed drain or sewer, 10% % 1.78 LD Line deviates down 2.42 LD Line deviates down 3.27 MC Material changes Vitrified clay pipe @REM 3.85 LD Line deviates down OCF Finish node type, other special chamber, reference number: DS: reached | Depth: 0.00 m GY05 O.00 GY Start node type, gully, reference number: GY05 D0:00:00 0.00 WL Water level, 10% % of the vertical dimension 00:00:02 0.00 REM General remark: belly in pipe 00:00:04 1.59 D Deformed drain or sewer, 10% % 00:00:20 1.78 LD Line deviates down 00:00:22 2.42 LD Line deviates down 00:00:27 3.27 MC Material changes Vitrified clay pipe @REM 00:00:33 3.85 LD Line deviates down 00:00:39 4.90 OCF Finish node type, other special chamber, reference number: 00:00:51 DS: reached DS: reached 00:00:51 | Depth: 0.00 m GY |

| Construction Features Structural Defects | | | | Miscellaneous Features Service & Operational Observations | | | | | |
|--|------|-----|------|---|---|-----|-----|-----|-------------|
| | | | | | | | | | STR No. Def |
| 1 | 20.0 | 4.1 | 20.0 | 2.0 | 0 | 0.0 | 0.0 | 0.0 | 1.0 |

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Section Pictures - 18/03/2020 - GY05X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | Downstream | GY05X | PJ00366135 | Socotec UK Ltd |



200318_1202C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY05



200318_1202D-Survey.jpg, 00:00:02, 0.00 m Water level, 10% % of the vertical dimension



200318_1202E-Survey.jpg, 00:00:04, 0.00 m General remark, belly in pipe



200318_1202F-Survey.jpg, 00:00:20, 1.59 m Deformed drain or sewer, 10% %



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Section Pictures - 18/03/2020 - GY05X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | Downstream | GY05X | PJ00366135 | Socotec UK Ltd |



200318_1202G-Survey.jpg, 00:00:22, 1.78 m Line deviates down



200318_1203A-Survey.jpg, 00:00:27, 2.42 m Line deviates down



200318_1203B-Survey.jpg, 00:00:33, 3.27 m Material changes Vitrified clay pipe @REM



200318_1203C-Survey.jpg, 00:00:39, 3.85 m Line deviates down



Section Pictures - 18/03/2020 - GY05X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 12 | Downstream | GY05X | PJ00366135 | Socotec UK Ltd |



200318_1203D-Survey.jpg, 00:00:51, 4.90 m Finish node type, other special chamber, reference number: DS, reached



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Section Inspection - 18/03/2020 - GY06X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 13 | 13 | 18/03/20 | 13:57 | PJ00366135 | No Rain Or Snow | Yes | GY06X |
| | erator ayfield | Vehi PF65 | icle | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY06 |
|---------------------|-------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 14.29 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 14.29 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

| Scale: | 1:125 Depth: 0.00 | DO-THI TO SHEET | Code | Observation | MPEG | Photo | Grade |
|--------|----------------------|-----------------|----------|---|------------|---------------------------------|-------|
| | GY06 | · III | | | | | |
| (| | 0.00 | GY | Start node type, gully, reference number: GY06 | 00:00:00 | 200318_1 354C-Surv ey.jpg | |
| | | 0.02 | WL | Water level, 5% % of the vertical dimension | 00:00:02 | 200318_1 354D-Surv ey.jpg | |
| | | 5.58 | LR | Line deviates right | 00:00:28 | 200318_1 | |
| | | | | | | 354E-Surv ey.jpg | |
| 1 | | 7.11 | WL | Water level, 10% % of the vertical dimension | 00:00:40 | 200318_1 355A-Surv ey.jpg | |
| | | 7.13 | DES | Settled deposits, fine, 10% % cross-sectional area loss | 00:00:42 | 200318_1 355B-Surv ey.jpg | 3 |
| | 7 | 9.98 | JN | Junction, at 09 o'clock, diameter: 100 mm | 00:00:59 | 200318_1 355C-Surv ey.jpg | |
| | | 11.76 S01 | CUW | Loss of vision, camera under water, S01 | 00:01:10 | 200318_1 356A-Surv ey.jpg | |
| | | 13.61 F01 | CUW | Loss of vision, camera under water, F01 | 00:01:28 | | |
| (| DS | 14.29 | OCF | Finish node type, other special chamber, reference number: DS: intercptor | 00:01:44 | 200318_1 357A-Surv ey.jpg | |
| | Depth: 0.00 | u m | | | | | |
| | | Construction | Features | Miscellaneous | Features | | |
| | | Structural I | Defects | Service & Operation | al Observa | tions | |

STR No. Def STR Peak STR Mean STR Total STR Grade SER No. Def SER Peak SER Mean SER Total SER Grade

2.0

0.1

| P I00366135 | Sacatac IIIk | Limited | 51 Dur | wward Stroot |
|-------------|--------------|---------|--------|--------------|

0.0

0.0

2.0

16 Lamson Road, Rainham

Tel. londonops@lanesgroup.co.uk

Section Pictures - 18/03/2020 - GY06X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 13 | Downstream | GY06X | PJ00366135 | PJ00366135 |



200318_1354C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY06



200318_1354D-Survey.jpg, 00:00:02, 0.02 m Water level, 5% % of the vertical dimension



200318_1354E-Survey.jpg, 00:00:28, 5.58 m Line deviates right



200318_1355A-Survey.jpg, 00:00:40, 7.11 m Water level, 10% % of the vertical dimension

16 Lamson Road, Rainham

Tel. londonops@lanesgroup.co.uk

Section Pictures - 18/03/2020 - GY06X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 13 | Downstream | GY06X | PJ00366135 | PJ00366135 |



200318_1355B-Survey.jpg, 00:00:42, 7.13 m Settled deposits, fine, 10% % cross-sectional area loss



200318_1355C-Survey.jpg, 00:00:59, 9.98 m Junction, at 09 o'clock, diameter: 100 mm



200318_1356A-Survey.jpg, 00:01:10, 11.76 m Loss of vision, camera under water, S01



200318_1357A-Survey.jpg, 00:01:44, 14.29 m Finish node type, other special chamber, reference number: DS, intercptor



Section Inspection - 18/03/2020 - GY08X

| Section 14 | Inspection 14 | Date 18/03/20 | Time 14:11 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY08X |
|---------------|------------------|------------------|---------------|--------------------------------|----------------------------|-------------------------------|----------------|
| Oper C.Lav | | Vehi PF65 | 10,133.0 | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY08 |
|---------------------|-------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 1.83 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 1.83 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |

Comments:

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|--|----------|---------------------------------|-------|
| | Depth: 0.0 GY08 | 0 m | | | | | |
| | | 0.00 | GY | Start node type, gully, reference number: GY08 | 00:00:00 | 200318_1 410C-Surv ey.jpg | |
| 0 | | 0.00 | WL | Water level, 10% % of the vertical dimension | 00:00:02 | 200318_1 410D-Surv ey.jpg | |
| * | | 0.00 | DES | Settled deposits, fine, 10% % cross-sectional area loss | 00:00:04 | 200318_1 411A-Surv ey.jpg | 3 |
| | | 1.83 | OCF | Finish node type, other special chamber, reference number. DS: reached | 00:00:23 | 200318_1 411B-Surv ey_jpg | |
| | DS | | | | | | |

Depth: 0.00 m

| | Cor | struction Feati | ures | | Miscellaneous Features | | | | |
|--------------------|----------|-----------------|-----------|-----------|------------------------|-----------|----------------|------------|-----------|
| Structural Defects | | | | | ST. 1871 | Service & | Operational Ob | servations | |
| 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 | 1.1 | 2.0 | 3.0 |

Section Pictures - 18/03/2020 - GY08X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 14 | Downstream | GY08X | PJ00366135 | PJ00366135 |



200318_1410C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY08



 $200318_1410D\text{-Survey.jpg},\,00:00:02,\,0.00\text{ m}$ Water level, 10% % of the vertical dimension



200318_1411A-Survey.jpg, 00:00:04, 0.00 m Settled deposits, fine, 10% % cross-sectional area loss



200318_1411B-Survey.jpg, 00:00:23, 1.83 m Finish node type, other special chamber, reference number: DS, reached



Section Inspection - 18/03/2020 - GY09X

| Section | Inspection | Date 18/03/20 | Time 14:19 | Client's Job Ref PJ00366135 | Weather No Rain Or Snow | Pre Cleaned Yes | PLR GY09X |
|---------|-------------------|------------------|---------------|--------------------------------|----------------------------|----------------------------|----------------|
| | erator evfield | Vehi PF65 | cle | Camera Proteus Crawler | Preset Length | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY09 |
|------------------------|-------------------------|-----------------------|------------------|-----------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 3.49 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 3.49 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all cla | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Purblish of Processing | | | | | |

Comments:

Recommendations:

Depth: 0.00 m

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|---|----------|---|-------|
| | Depth: 0.0 GY09 | 0 m | | | | | |
| (| | 0.00 | GY | Start node type, gully, reference number: GY09 | 00:00:00 | 200318_1 418A-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | ey.jpg 200318_1 418B-Surv ey.jpg | |
| | | 0.00 | MC | Material changes Polyvinyl chloride @REM | 00:00:05 | 200318_1 418C-Surv ey.jpg | |
| | ш | 0.00 | LD | Line deviates down | 80:00:08 | 200318_1 418D-Surv ey.jpg | |
| * | | 2.00 | LR | Line deviates right | 00:00:22 | 200318_1 418E-Surv ey.jpg | |
| (| | 3.49 | OCF | Finish node type, other special chamber, reference number DS; reached | 00:00:33 | 200318_1 419A-Surv ey.jpg | |
| , | DS | | | | | | |

| | Cor | struction Feati | ures | | 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 0.0 1.0 | | | | | 0.0 | 0.0 | 0.0 | 1.0 |





Section Pictures - 18/03/2020 - GY09X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 15 | Downstream | GY09X | PJ00366135 | PJ00366135 |



200318_1418A-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY09



200318_1418B-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200318_1418C-Survey.jpg, 00:00:05, 0.00 m Material changes Polyvinyl chloride @REM



200318_1418D-Survey.jpg, 00:00:08, 0.00 m Line deviates down



Section Pictures - 18/03/2020 - GY09X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 15 | Downstream | GY09X | PJ00366135 | PJ00366135 |



200318_1418E-Survey.jpg, 00:00:22, 2.00 m Line deviates right



200318_1419A-Survey.jpg, 00:00:33, 3.49 m Finish node type, other special chamber, reference number: DS, reached



Section Inspection - 18/03/2020 - GY07X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|-------------------|--------------|-------|---------------------------|-------------------------|-------------------------------|----------------|
| 16 | 16 | 18/03/20 | 14:33 | PJ00366135 | No Rain Or Snow | Yes | GY07X |
| | erator ayfield | Vehi PF65 | C134. | Camera Proteus Crawler | Preset Length 0.00 m | Legal Status Private Drain | Alternative ID |

| Town or Village: | London | Inspection Direction: | Downstream | Upstream Node: | GY07 |
|---------------------|-------------------------|-----------------------|------------------|------------------------------------|---------|
| Road: | 51 Durward Street | Inspected Length: | 3.87 m | Upstream Pipe Depth: | 0.000 m |
| Location: | Property with buildings | Total Length: | 3.87 m | Downstream Node: | DS |
| Surface Type: | Asphalt Footway | Joint Length: | 0.00 m | Downstream Pipe Depth: | 0.000 m |
| Use: | Surface water | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 100 mm | |
| Year Constructed: | | | Pipe Material: | Vitrified clay pipe (i.e. all clay | ayware) |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Investigation of known | defects | Lining Material: | No Lining | |
| Camananta | | | | | |

Recommendations:

| Scale: | 1:50 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|--------------------|--------------|------|--|----------|---|-------|
| | Depth: 0.0 GY07 | 0 m | | | | | |
| | R | 0.00 | GY | Start node type, gully, reference number: GY07 | 00:00:00 | 200318_1 432C-Surv | |
| | | 0.00 | WL | Water level, 5% % of the vertical dimension | 00:00:03 | ey.jpg 200318_1 432D-Surv ey.jpg | |
| | | 0.92 | DES | Settled deposits, fine, 10% % cross-sectional area loss | 00:00:14 | 200318_1 432E-Surv ey.jpg | 3 |
| 1 | | | | | | | |
| | ı | | | | | | |
| | | 3.87 | OCF | Finish node type, other special chamber, reference number: | 00:00:39 | 200318 1 | |

| | Con | struction Feat | ures | | 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 0.5 2.0 | | | | | | 3.0 | | | |



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Tel. londonops@lanesgroup.co.uk

Section Pictures - 18/03/2020 - GY07X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor's Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 16 | Downstream | GY07X | PJ00366135 | PJ00366135 |



200318_1432C-Survey.jpg, 00:00:00, 0.00 m Start node type, gully, reference number: GY07



200318_1432D-Survey.jpg, 00:00:03, 0.00 m Water level, 5% % of the vertical dimension



200318_1432E-Survey.jpg, 00:00:14, 0.92 m Settled deposits, fine, 10% % cross-sectional area loss



200318_1433A-Survey.jpg, 00:00:39, 3.87 m Finish node type, other special chamber, reference number: DS, reached

Jacob Gemma

From: Kelly Darren
Sent: 15 April 2020 13:59
To: Alex Smithson

Cc: Neal Egan; bbmv.co.uk; bbmv.co.uk; Storer Richard; Forrest Jim

Subject: RE: Kempton Court CCTV Survey

Alex.

The red items in the report indicate areas that should be outside the remit of the survey area.

Is it possible to remove this red items in the report to avoid concern from the residents?

Regards

Darren

From: BBMV.co.uk [mailto: BBMV.co.uk]

Sent: 07 April 2020 12:44 To: Kelly Darren; Forrest Jim

Cc: Neal Egan; bbmv.co.uk; bbmv.co.uk

Subject: RE: Kempton Court CCTV Survey

Hi Darren, Jim,

Apologies on the delay on replying to you both, I've been looking into this to provide a comprehensive answer, given that I wasn't involved in any of the groundwork or installation in this area.

From my interpretation of the report, the sections installed by BBMV are acceptable, and the two 'red' items fall outside the previous site boundary (the orange items are also in the far eastern area of Kempton court). To give a general idea of location for the red items, it's the drainage pipes opposite the main Kempton Court gate, and a short distance to the west. Both issues are pipe deformities, which to me indicates either installation error, or settlement & compression over time from resident loading. As BBMV would have had no access to this area, I don't believe it would have been caused by us.

As for the Western Kempton Court bend that couldn't be passed - I have spoken to our foreman, who says that this is due to the presence of a U bend prior to entering the flats rainwater run-off. Further to this, the pipe also Y splits and heads around to Durward Street (Jim, Tony said that this is the orange pipe that runs along the Kempton Court Wall, and we believe feeds the North side rainwater outlets – to be determined when the road is dug up) – all these are pre-existing, and not installed by BBMV. The Westernmost end was capped by BBMV, as we removed the redundant pipes under the grassed area (south of the dividing wall, grass outstanding due to the upcoming V Mesh scaffold).

I've been looking for an initial survey of the drainage in these areas, but have been unable to locate anything in our records or on eB so far. If you are aware of where these are, please forward through and I'll do an exercise comparing the two. I will keep searching in the meantime, and get in touch with the previous team members where possible.

Hope this suffices for now and alleviates some concerns; I'll see what further information I can acquire.

Kind Regards,

Alex Smithson

Section Engineer – Demobilisation BBMV – C512 Whitechapel

M:

1

From: Kelly Darren < crossrail.tfl.gov.uk>

Sent: 06 April 2020 16:45

To: Smithson, Alex (BBMV) < BBMV.co.uk>

Cc: Egan, Neal (BBMV) < BBMV.co.uk>; Gaffney, Jack (BBMV) < bbmv.co.uk>; Gilmour, Cooper (BBMV) < bbmv.co.uk>; Forrest Jim < crossrail.tfl.gov.uk>

Subject: Re: Kempton Court CCTV Survey

Alex

The report highlights some red items that they recommend work for - can you confirm where these are as this will set alarm bells ringing

The survey has a missing section where the camera cant get round a bend - is this a back drop?

The aim of the report is to prove that our works have not made the Kempton Court drainage any worse through our works so ideally we should bench mark and compare to the original drainage survey before the land was handed over to you. I need some comparison and commentary assuming we have pre - drainage survey

Regards

Darren Kelly
Project Construction Manager
C512 Whitechapel Station Works

Essex Wharf, Durward St. London E1 5BA

M crossrail.tfl.gov.uk

MOVING LONDON FORWARD

From: Kelly Darren < <u>crossrail.tfl.gov.uk</u>>

Sent: 02 April 2020 07:54

To: Alex Smithson < BBMV.co.uk>; Forrest Jim < crossrail.tfl.gov.uk>
Cc: Neal Egan < bbmv.co.uk>; bbmv.co.uk < bbmv.co.uk>;

<u>bbmv.co.uk</u> < <u>bbmv.co.uk</u>>

Subject: Re: Kempton Court CCTV Survey

Alex

Thanks it makes sense now.

Jim - can you just have a quick look at it before we send it to Kempton court

Regards

Darren Kelly
Project Construction Manager
C512 Whitechapel Station Works
Essex Wharf, Durward St. London E1 5BA
M crossrail.tfl.gov.uk

MOVING LONDON FORWARD

From: BBMV.co.uk < BBMV.co.uk>

Sent: 01 April 2020 10:01

To: Kelly Darren < crossrail.tfl.gov.uk

Cc: Neal Egan < bbmv.co.uk>; bbmv.co.uk < bbmv.co.uk>;

<u>bbmv.co.uk</u> < <u>bbmv.co.uk</u>>; Forrest Jim

< crossrail.tfl.gov.uk>

Subject: RE: Kempton Court CCTV Survey

Hi Darren,

Spoke to Socotec on the phone and I've they've sent through the report and reference sketch (attached).

Believe this is what you were looking for!

Kind Regards,

Alex Smithson

Section Engineer – Demobilisation BBMV – C512 Whitechapel

M:

From: Kelly Darren < <u>crossrail.tfl.gov.uk</u>>

Sent: 27 March 2020 10:45

To: Smithson, Alex (BBMV) <

Cc: Egan, Neal (BBMV) < BBMV.co.uk>; Gaffney, Jack (BBMV) < bbmv.co.uk>; Gilmour, Cooper (BBMV) < bbmv.co.uk>; Forrest Jim < crossrail.tfl.gov.uk>

Subject: Re: Kempton Court CCTV Survey

Alex,

Its a bit unclear what is on the website and what it means. The objective of the survey is to demonstrate the drainage system has not been damaged or blocked by our works especially after our cleaning exercise and is in no worse a condition when we took it over

I would expect some sort of report with the CCTV survey that summarises and demonstrates all is good unless I am missing something?

Regards

Darren Kelly Project Construction Manager C512 Whitechapel Station Works

Essex Wharf, Durward St. London E1 5BA

M crossrail.tfl.gov.uk

MOVING LONDON FORWARD

From: BBMV.co.uk < BBMV.co.uk>

Sent: 26 March 2020 13:24

To: Kelly Darren < crossrail.tfl.gov.uk>

Cc: Neal Egan < bbmv.co.uk>; bbmv.co.uk < bbmv.co.uk>;

bbmv.co.uk < bbmv.co.uk>

Subject: Kempton Court CCTV Survey

Darren.

Neal's requested I forward through our results for the drainage surveys. Given the files are approximately 200mb total, I've forwarded the Lanes Drains website, where you can stream/download the videos below:

https://web.wincan.com/Project/PJ00366135SocotecUKLimited51DurvwardStreet-imslc7

(GY runs are the existing Kempton Court Drainage east of our working area).

Also attached is the previous report, including the drawing showing the node names.

Kind Regards,

Alex Smithson

Section Engineer – Demobilisation BBMV – C512 Whitechapel

M:

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| Cedex, France; and, Bachy Soletanche Limited (company no 752082) whose registered office is at Henderson house, |
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