



Project

Project Name: 2021_01_26 Westakes Edge

Project Date: 26/01/2021

Inspection Standard: MSCC5 Sewers & Drainage GB (SRM5 Scoring)

Ver: 1.2019.7.6 2021_01_26 Westakes Edge



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Unit 10 Kerry Park, Workington Tel. 01900 870140 info@unblockcumbria.co.uk

Project Information

 Project Name
 Project Number
 Project Date

 2021_01_26 Westakes Edge
 26/01/2021

Client

Company: Westlakes Engineering Ltd

Contact: Eleni Zachara

Department: Senior Infrastructure Engineer

Street: Unit 2.1 20 Dale Street

Town or City: Manchester Post Code: M1 1EZ

Site

Company: Westlakes

Description: The Egde Whitehaven Harbour

Contact: Eleni Zachara
Street: West Strand
Town or City: Whitehaven

Contractor

Company: Unblock Cumbria Limited

Contact: lan Woodhouse

Department: Surveying

Street: Unit 10 Kerry Park

Town or City: Workington
County: Cumbria
Post Code: CA14 3TT
Phone: 01900 870140
Mobile: 07747011653

Email: info@unblockcumbria.co.uk



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Project Information

| Project Name | Project Number | Project Date |
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| 2021 01 26 Westakes Edge | | 26/01/2021 |

Project Summary

CCTV Drain Survey - West Strand Whitehaven

Investigate existing surface and combined drains around the Wellington car park on West Strand for a proposed activity centre.

Surface water- there is a road gully opposite the car park etrance. Dye tests confirmed this gully discharges via a slit drain in the outer harbour wall. There is a slot rain within the car park. This collects to a gully that ischarges into a lateral drain that connects to MH 8300 located in the car park. This is a combined drain.

Foul Effluent. The combined drain runs down West Strand, crosses into the car park, flows down beside the buttress wall, enters a manhole addjacent to the harbour and then flows down West Strand past the Beacon and probably enters the pumping station located below the Beacon. Starting at the top, seaward end of the site the United Utility manhole numbers are 8302 IL 870mm, 8301 IL770mm, 8300 IL1340mm, CL1934, 8299 IL 1900, CL1932. The combined sewer is quite shallow at the seaward end of the site. Above MH8300 the sewer is in good condition. Below 8300 the sewer is in a poor condition, there are many open and displaced joints, there is evience of poor rehabilitation and repair and below 8299 there is evidence of surcharging in the sewer.



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Defect Grade Description (Node)

| | • | |
|--------------------------|----------------|--------------|
| Project Name | Project Number | Project Date |
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1: Brick: No structural defects.

Pipe: No structural defects.

Acceptable structural condition.

2: Brick: Circumferential cracking; single longitudinal crack; surface mortar loss (depth missing < 15mm); surface damage - slight spalling (breaking away of small fragments from the surface); surface damage - slight wear (increased roughness).

Pipe: Circumferential crack; moderate joint defects (i.e. medium open joint or medium displaced joint); surface damage - slight spalling (breaking away of small fragments from the surface) or slight wear (increased roughness).

Minimal collapse likelihood in the short term but potential for further deterioration.

Brick: Medium mortar loss (depth missing 15-50mm) without other defects; more than one longitudinal crack (at a single location); multiple cracking; single bricks displaced; deformation < 5%; no fracture and only moderate mortar loss; surface damage - medium spalling (large areas of chipped brick); surface damage - medium wear (large area of brick surface is missing).

Pipe: Fracture with no deformation or deformation < 5%; longitudinal cracking or multiple cracking; minor loss of level; severe joint defects (i.e. large open joint or large displaced joint); surface damage - partial area of pipe surface is missing or worn.

! Collapse unlikely in the near future but further deterioration likely!

4: Brick: Total mortar loss (depth missing > 50mm) with deformation > 10%; deformation up to 10% and fractured; displaced or hanging brickwork; small number of missing bricks; dropped invert (drop > 20mm); moderate loss of level; surface damage - large spalling (entire surface of brick is missing); surface damage - large wear (entire surface of brick is missing).

Pipe: Broken; deformation up to 10% and broken; fracture with deformation 5-10%; multiple fractures; serious loss of level; serious joint defects with voids or soil visible (open joint with > 50mm soil or void visible or joint displacement > 25% of diameter); surface damage - entire area of pipe surface is missing or severly worn.

!! Collapse likely in the foreseeable future !!

5: Brick: Already collapsed; missing Invert; deformation > 10% and fractured; displaced or hanging brickwork and deformation < 10%; extensive areas of missing brickwork.

Pipe: Already collapsed; deformation > 10% and broken; extensive areas of pipe fabric missing; fractures with deformation > 10%

!!! Collapsed or collapse imminent !!!



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Section Profile

| Project Name | Project Number | Project Date |
|--------------------------|----------------|--------------|
| 2021_01_26 Westakes Edge | | 26/01/2021 |

| Circul | ar, 225 mm, 22 | 5 mm | | | | | |
|---------|----------------|-----------------|------------|------------|----------------|--------------|---------------------|
| Section | Upstream Node | Downstream Node | Date | Road | Material | Total Length | Inspected Length |
| 2 | 8301 | 8300 | 26/01/2021 | West Stran | Vitrified clay | 16.70 m | 16.70 m |
| 3 | 8302 | 8301 | 26/01/2021 | West Stran | Vitrified clay | 22.00 m | 22.00 m |

Total: 2 Inspections x Circular 225 mm, 225 mm = 38.70 m Total Length and 38.70 m Inspected Length

Circular, 300 mm, 300 mm

| Se | ection | Upstream Node | Downstream Node | Date | Road | Material | Total Length | Inspected Length |
|----|--------|---------------|-----------------|------------|-------------|----------------|--------------|---------------------|
| | 5 | 8299 | 8298 | 26/01/2021 | West Strand | Vitrified clay | 85.00 m | 43.00 m |

Total: 1 Inspection x Circular 300 mm, 300 mm = 85.00 m Total Length and 43.00 m Inspected Length

Total: 3 Inspections = 123.70 m Total Length and 81.70 m Inspected Length



Section Summary

| Project Name | Project Number | Project Date |
|--------------------------|----------------|--------------|
| 2021_01_26 Westakes Edge | | 26/01/2021 |

| | | 2021_0 | J1_26 Westakes Edge | ! | | 26/01/2021 | |
|--|----------------------|------------|--|---------------------------------------|-------------|------------|--|
| Nu | Number of sections 5 | | | | | | |
| Total length of sewer network 195.70 m | | | | 195.70 m | | | |
| Тс | otal leng | ıth of in | spections | | | 138.10 m | |
| To | otal lend | ith of a | bandoned inspections | | | 15.60 m | |
| | | | d inspections | | | 2 | |
| | | | · | | | | |
| Nu | umber o | of section | on inspection photos | | | 38 | |
| Nι | umber o | f section | on inspection videos | | | 5 | |
| Nι | ımber o | f section | on inspection scans | | | 0 | |
| Nι | ımber o | f section | on inclination measurements | | | 0 | |
| | | | | | | | |
| PLR: | | | 8300X | Upstream Node: | 8300 | | |
| Inspec | tion Direct | tion: | Downstream | Downstream Node: | 8299 | | |
| - | ted Length | | 39.00 m Dia/Height: 300 mm | | | | |
| - | _ength: | | 50.00 m | Material: | Vitrified o | clay | |
| No. | m+ | Code | Observation | 1 | | | |
| 1 | 0.00 | IC | Start node type, inspection chamber, refer | ence number: 8300 | | | |
| 2 | 1.20 | OJM | Open joint, medium, start | | | | |
| 3 | 3.40 | OJM | Open joint, medium, finish | | | | |
| 4 | 5.20 | CX | Connection defective at 9 o'clock, diamete | er: 100mm. defunct | | | |
| 5 | 8.50 | CN | Connection other than junction at 2 o'clock | <u> </u> | | | |
| 6 | 9.00 | CN | Connection other than junction at 2 o'clock | | | | |
| 7 | 10.40 | В | Broken pipe from 11 o'clock to 1 o'clock, 0 | | | | |
| 8 | 12.30 | WLT | Turbid water level, 15% of the vertical dime | · · · · · · · · · · · · · · · · · · · | | | |
| 9 | 21.20 | CL | Crack, longitudinal at 10 o'clock, cracked a | along length | | | |
| 10 | 22.00 | WLT | Turbid water level, 5% of the vertical dime | | | | |
| 11 | 27.20 | OJM | Open joint, medium, start | | | | |
| 12 | 35.00 | WLT | Turbid water level, 15% of the vertical dime | ension | | | |
| 13 | 39.00 | OJM | Open joint, medium, finish | <u> </u> | | | |
| 14 | 39.00 | SA | Survey abandoned, Drop in drain | | | | |
| | | | | | | | |
| PLR: | | | 8301X | Upstream Node: | 8301 | | |
| | | | Upstream | Downstream Node: | 8300 | | |
| | ted Length | 1: | 16.70 m | Dia/Height: | 225 mm | day | |
| | _ength: | | 16.70 m | Material: | Vitrified o | ciay | |
| No. | m+ | Code | Observation | | | | |
| 1 | 0.00 | WLT | Turbid water level, 5% of the vertical dime | | | | |
| 2 | 0.80 | IC | Start node type, inspection chamber, refer | ence number: 8300, start | | | |
| 1 | | | | | | | |



Section Summary

| Project Name | Project Number | Project Date |
|--------------------------|----------------|--------------|
| 2021_01_26 Westakes Edge | - | 26/01/2021 |

| | | 2021_0 | J1_26 Westakes Edge | | 26/01/2021 | |
|---------|-------------------------|--------|--|---|-------------------------|--|
| No. | m+ | Code | Observation | | | |
| 3 | 5.00 | GP | General photograph taken at this point, Co | General photograph taken at this point, Condition | | |
| 4 | 10.40 | GP | General photograph taken at this point, Co | ndition | | |
| 5 | 11.00 | RFJ | Roots, fine at joint | | | |
| 6 | 13.00 | OJM | Open joint, medium | | | |
| 7 | 16.70 | ICF | Finish node type, inspection chamber, refe | rence number: 8301, End | | |
| | | | 2000)/ | | | |
| PLR: | tion Direct | lon: | 8302X Upstream | Upstream Node: Downstream Node: | 8302 8301 | |
| • | ted Length | | 22.00 m | Dia/Height: | 225 mm | |
| - | ength: | | 22.00 m | Material: | Vitrified clay | |
| No. | m+ | Code | Observation | | <u> </u> | |
| 1 | 0.00 | IC | Start node type, inspection chamber, referen | ence number: 8301 | | |
| 2 | 0.00 | WLT | Turbid water level, 5% of the vertical dimer | nsion | | |
| 3 | 5.00 | GP | General photograph taken at this point, Co | ndition | | |
| 4 | 10.00 | GP | General photograph taken at this point, Co | ndition | | |
| 5 | 19.30 | CL | Crack, longitudinal at 2 o'clock | | | |
| 6 | 22.00 | MHF | Finish node type, manhole, reference num | ber: 8302, End of survey | | |
| DI D | | | | | N-J-V | |
| PLR: | tion Direct | ion | Node XX Upstream | Upstream Node: Downstream Node: | Node X 8300 | |
| • | ted Length | | 17.40 m Dia/Height: 225 mm | | | |
| - | ength: | • | 22.00 m | Material: | Vitrified clay | |
| No. | No. m+ Code Observation | | | | | |
| 1 | 0.00 | IC | Start node type, inspection chamber, refere | ence number: 8300 | | |
| 2 | 4.60 | CXZ | Connection defective, other at 12 o'clock, | diameter: 150mm, Defective | | |
| 3 | 5.30 | DES | Settled deposits, fine, 25% cross-sectional | area loss, start | | |
| 4 | 9.40 | CN | Connection other than junction at 3 o'clock | , diameter: 150mm | | |
| 5 | 17.40 | DES | Settled deposits, fine, 25% cross-sectional | area loss, finish | | |
| 6 | 17.40 | SA | Survey abandoned, Blockage | | | |
| PLR: | | | 8299X | Upstream Node: | 8299 | |
| | tion Direct | ion. | Downstream | Downstream Node: | 8298 | |
| • | ted Length | | 43.00 m | Dia/Height: | 300 mm | |
| Total L | ength: | | 85.00 m | Material: | Vitrified clay | |
| No. | m+ | Code | Observation | | | |
| 1 | 0.00 | MH | Start node type, manhole, reference numb | er: 8299, By Lamp post | | |
| 2 | 0.00 | WLT | Turbid water level, 5% of the vertical dimer | nsion | | |
| 3 | 0.40 | JDM | Joint displaced, medium, start | | | |
| 4 | 13.40 | WLT | Turbid water level, 10% of the vertical dime | ension | | |
| 5 | 14.20 | CL | Crack, longitudinal at 12 o'clock | | | |
| 6 | 17.90 | CL | Crack, longitudinal at 12 o'clock | | | |
| 7 | 20.50 | OBZJ | Other obstacles at joint from 10 o'clock to | 12 o'clock, 10% cross-section | onal area loss, plastic | |
| 8 | 21.90 | CM | Cracks, multiple from 8 o'clock to 3 o'clock | · · · · · · · · · · · · · · · · · · · | | |
| 9 | 23.10 | CLJ | Crack, longitudinal at joint at 7 o'clock | | | |
| 10 | 25.00 | CL | Crack, longitudinal at 12 o'clock | | | |
| | | | | | | |



Section Summary

| Project Name | Project Number | Project Date |
|--------------------------|----------------|--------------|
| 2021_01_26 Westakes Edge | · | 26/01/2021 |

| No. | m+ | Code | Observation |
|-----|-------|------|---|
| 11 | 38.80 | JDM | Joint displaced, medium, finish |
| 12 | 39.00 | CX | Connection defective at 2 o'clock, diameter: 100mm, Redundant |
| 13 | 42.20 | WLT | Turbid water level, 20% of the vertical dimension |
| 14 | 43.00 | JDM | Joint displaced, medium, finish |



Unit 10 Kerry Park, Workington Tel. 01900 870140 info@unblockcumbria.co.uk

Section Inspection - 26/01/2021 - 8300X

| Section | Inspection | | | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|------------|---------------|------|-----------------------------|---------------|--------------|----------------|
| 1 1 | | 26/01/21 | 9:59 | PO127 Rain | | No | 8300X |
| Ope | rator | Vehicle | | Camera | Preset Length | Legal Status | Alternative ID |
| lan | | Not Specified | | Not Specified Not Specified | | Public Sewer | Not Specified |

| Town or Village: | vn or Village: Whitehaven | | Downstream | Upstream N | lode: | 8300 |
|---------------------|---------------------------|-------------------|------------------|------------------|------------|---------|
| Road: | West Strand | Inspected Length: | 39.00 m | Upstream P | ipe Depth: | 1.340 m |
| Location: | Other walkway | Total Length: | 50.00 m | Downstream Node: | | 8299 |
| Surface Type: | | Joint Length: | 0.00 m | Downstream | : | |
| Use: | Combined | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 300 mm | Width: | 300 mm |
| Year Constructed: | | | Material: | Vitrified clay | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Sample condition surve | у | Lining Material: | No Lining | | |
| Comments: | | | | | | |

Recommendations:

| Scale: | 1:435 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|----------|---------------------|--|------|---|----------|---|-------|
| | Depth: 1.34 8300 | m 0.00 | IC | Start node type, inspection chamber, reference number: 8300 | 00:00:00 | | |
| | | 1.20 S01 | OJM | Open joint, medium, start | 00:00:30 | 8300X_3c 2c67f0-87 08-4fc2-80 | |
| | | 3.40 F01 | OJM | Open joint, medium, finish | 00:01:33 | 8300X_b3 112f4e-bf1 | 1 |
| | | 5.20 | СХ | Connection defective at 9 o'clock, diameter: 100mm: defunct | 00:02:15 | 9-41eb-9e 8300X_91 22fc2a-8fc b-4f3d-87f | |
| | | 8.50 | CN | Connection other than junction at 2 o'clock, diameter: 100mm | 00:02:54 | D-413u-671 | |
| | | 9.00 | CN | Connection other than junction at 2 o'clock, diameter: 50mm | 00:03:09 | | |
| | | 10.40 | В | Broken pipe from 11 o'clock to 1 o'clock: Old access point - repaired | 00:03:26 | 8300X_f10 5f827-fbda -4d9e-92e | 4 |
| 1 | | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ | | Turbid water level, 15% of the vertical dimension | 00:04:23 | -4000-020 | |
| ' | | 21.20 | CL | Crack, longitudinal at 10 o'clock: cracked along length | 00:05:59 | 8300X_32 a619e3-77 b9-40d4-b | 2/2 |
| | | 22.00 | WLT | Turbid water level, 5% of the vertical dimension | 00:06:21 | D9-4004-D | |
| | | 27.20 S02 | OJM | Open joint, medium, start | 00:07:11 | 8300X_7e 689ab5-75 8e-4139-a | |
| | | 35.00 | WLT | Turbid water level, 15% of the vertical dimension | 00:08:53 | 8300X_48 e006d8-77 4a-473d-af | |
| | | 39.00 F02 | OJM | Open joint, medium, finish | 00:09:29 | 8300X_02 7885fd-01 94-4e7f-ba | 1 |
| | | 39.00 | SA | Survey abandoned: Drop in drain | 00:09:48 | 8300X_ae 598982-02 d1-4213-b | |
| | 8299 Depth: m | 50.00 | | End of pipe | | u 1-42 13-0 | |
| | | | | 1 | | | |
| <u> </u> | | Construction F | | Miscellaneous | | | |
| 0.75 | | Structural De | | Service & Operations | | | |

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

 4
 80.0
 2.7
 105.0
 4.0
 1
 1.0
 0.0
 1.0
 2.0

 2021_01_26 Westakes Edge
 1





Section Pictures - 26/01/2021 - 8300X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 1 | Downstream | 8300X | PO127 | 24574 |



8300X_3c2c67f0-8708-4fc2-80d0-f0ac6a738835_20210127_0 85230_436.jpg, 00:00:30, 1.20 m Open joint, medium, start



8300X_9122fc2a-8fcb-4f3d-87fb-abdfed0b38db_20210127_08 5659_944.jpg, 00:02:15, 5.20 m Connection defective at 9 o'clock, diameter: 100mm, defunct





8300X_b3112f4e-bf19-41eb-9e4f-7ef07e9f85ff_20210127_085 419_027.jpg, 00:01:33, 3.40 m Open joint, medium, finish



8300X_f105f827-fbda-4d9e-92ed-00a32f8fc4f0_20210127_09 0258_468.jpg, 00:03:26, 10.40 m Broken pipe from 11 o'clock to 1 o'clock, Old access point -



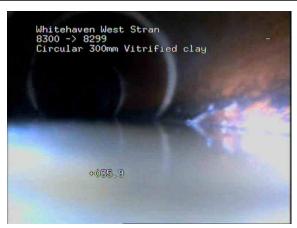
8300X_7e689ab5-758e-4139-a4b1-d54a4769d5c1_20210127 _091117_727.jpg, 00:07:11, 27.20 m Open joint, medium, start





Section Pictures - 26/01/2021 - 8300X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 1 | Downstream | 8300X | PO127 | 24574 |



8300X_48e006d8-774a-473d-af09-569ac07c0270_20210127_ 091344_834.jpg, 00:08:53, 35.00 m Turbid water level, 15% of the vertical dimension



8300X_027885fd-0194-4e7f-bac6-b044ea709bdc_20210127_ 091553_409.jpg, 00:09:29, 39.00 m Open joint, medium, finish



8300X_ae598982-02d1-4213-b522-96764395a7cc_20210127_ 091719_289.jpg, 00:09:48, 39.00 m Survey abandoned, Drop in drain



Section Inspection - 26/01/2021 - 8301X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|------------|---------------|----------------------------|------------------|---------------|--------------|----------------|
| 2 2 | | 26/01/21 | /01/21 10:35 PO127 Rain No | | No | 8301X | |
| Ope | rator | Vehicle | | Camera | Preset Length | Legal Status | Alternative ID |
| lan | | Not Specified | | Not Specified | Not Specified | Public Sewer | Not Specified |

| Town or Village: | Whitehaven | Inspection Direction: | Upstream | Upstream N | ode: | 8301 |
|---------------------|------------------------|-----------------------|------------------|----------------|------------|--------|
| Road: | West Stran | Inspected Length: | 16.70 m | Upstream P | ipe Depth: | |
| Location: | Other walkway | Total Length: | 16.70 m | Downstream | Node: | 8300 |
| Surface Type: | | Joint Length: | 0.00 m | Downstream | : | |
| Use: | Combined | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 225 mm | Width: | 225 mm |
| Year Constructed: | | | Material: | Vitrified clay | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Sample condition surve | ey . | Lining Material: | No Lining | | |
| Comments: | | | • | | | |

Recommendations:

| Scale: | 1:146 | S Position | n [m] Co | de Obs | servation | | | М | PEG | Photo |) (| Grade |
|---------|------------------|------------|------------------|------------|---------------------------------|-------------------|----------------|-----------------|-------|-------------------------------|------------|-------|
| | Depth: r 8300 | n | | | | | | | | | | |
| (| | 0.00 | WI | LT Turl | oid water level, 5% | of the vertical | dimension | 00: | 00:38 | | | |
| | | 0.80 | - | Sta 830 | rt node type, inspe 0: start | ection chamber, | reference nur | nber: 00: | 00:00 | 8301X_ a98fdd- 1f-4ab8 | 66 | |
| | | 5.00 | G | P Ger | neral photograph t | aken at this poir | it: Condition | 00: | 01:18 | 8301X_ 2d6c8e ed-46e9 | -9f | |
| 1 | | 10.40 | G | P Ger | neral photograph t | aken at this poir | it: Condition | 00: | 02:11 | 8301X_ 51ad97- fc-41c6- | -63 | |
| | | 11.00 | RF | FJ Roo | ots, fine at joint | | | 00: | 02:17 | 8301X_ 416dba- ab-4a75 | 15 -28 | 2 |
| | | 13.00 | OJ. | ІМ Оре | en joint, medium | | | 00: | 02:36 | 8301X_ ef21b-fc -4dbe-b | f55 ldd | 1 |
| | 8301 | 16.70 | IC | | sh node type, insp 1: End | ection chamber | , reference nu | mber: 00: | 03:22 | 8301X_ceea9f-ab-410 | 0c | |
| | Depth: r | m | | | | | | | | | | |
| | | | struction Featu | | | | | cellaneous Feat | | | | |
| STR No | Def | | tructural Defect | STR Tot | al STD Cracts | SER No. Def | | Operational Ob | | Total | eep. | Grade |
| JOIK NO | o. Det | STR Peak | STR Mean | SIKIOU | ai SIK Grade | JOEK NO. DET | SER Peak | SEK Wean | ∣SEK | ıotai | SEK | Grade |

0.1





Section Pictures - 26/01/2021 - 8301X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 2 | Upstream | 8301X | PO127 | 24574 |



8301X_1da98fdd-661f-4ab8-b1e9-04d584876fa6_20210126_1 03901_309.jpg, 00:00:00, 0.80 m Start node type, inspection chamber, reference number: 8300,



8301X_3151ad97-63fc-41c6-8164-e88e63f17644_20210127_ 114637_476.jpg, 00:02:11, 10.40 m General photograph taken at this point, Condition



8301X_f55ef21b-fddd-4dbe-b114-ff3381fb8722_20210127_11 4838_133.jpg, 00:02:36, 13.00 m Open joint, medium



8301X_aa2d6c8e-9fed-46e9-a24e-f756ea440e7b_20210127_ 114507_795.jpg, 00:01:18, 5.00 m General photograph taken at this point, Condition



8301X_15416dba-28ab-4a75-a224-647719843da8_20210127 _114723_554.jpg, 00:02:17, 11.00 m Roots, fine at joint



8301X_9bceea9f-0cab-4101-b9a0-6ba34ffe39a2_20210126_1 04320_173.jpg, 00:03:22, 16.70 m Finish node type, inspection chamber, reference number: 8301,



Section Inspection - 26/01/2021 - 8302X

| Section | Inspection | Date Time | | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|------------|---------------|-------|------------------|---------------|--------------|----------------|
| 3 | 3 | 26/01/21 | 10:44 | PO127 | Rain | No | 8302X |
| Ope | rator | Vehicle | | Camera | Preset Length | Legal Status | Alternative ID |
| lan | | Not Specified | | Not Specified | Not Specified | Public Sewer | Not Specified |

| Town or Village: | Whitehaven | Inspection Direction: | Upstream | Upstream No | ode: | 8302 |
|---------------------|------------------------|-----------------------|------------------|----------------|-----------|--------|
| Road: | West Stran | Inspected Length: | 22.00 m | Upstream Pi | pe Depth: | |
| Location: | Other walkway | Total Length: | 22.00 m | Downstream | Node: | 8301 |
| Surface Type: | | Joint Length: | 0.00 m | Downstream | | |
| Use: | Combined | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 225 mm | Width: | 225 mm |
| Year Constructed: | | | Material: | Vitrified clay | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Sample condition surve | у | Lining Material: | No Lining | | |
| Commonts: | | | | | | |

Recommendations:

| Scale: | 1:19 | 2 Positio | n [m] Co | ode O | Observa | tion | | | | | MP | EG | Phot | 0 | Grade |
|--------|-------------|-----------|----------------|-------|----------------------|-----------------|--------------|---------|--------------|-------------|------|-------|-----------------------------|------------|---------|
| | Depth: 8301 | m | | | | | | | | | | | | | |
| | | 0.00 | | | Start nod 301 | e type, inspe | ction cham | ber, ı | eference nu | mber: | 00:0 | 00:00 | 8302X_ adc144 9f-4f42 | -3f | |
| | ı | 0.00 | W | LT T | urbid wa | ater level, 5% | of the ver | tical c | limension | | 00:0 | 0:17 | 31-4142 | -00 | |
| | | 5.00 | G | SP G | Seneral _l | ohotograph ta | aken at this | poin | : Condition | | 00:0 | 00:52 | 8302X_ 2f4a4c e1-480 | -8e | |
| † | | 10.00 | G | SP G | General _I | bhotograph ta | aken at this | poin | t: Condition | | 00:0 |)1:47 | 8302X_ df0247 c6-44ff | - -59 | |
| | | 19.30 | C | CL C | Crack, lo | ngitudinal at : | 2 o'clock | | | | 00:0 | 03:28 | 8302X_ 8fea1b a0-411 | -cd | 2/2 |
| (| 8302 | 22.00 | M | | inish no urvey | de type, man | hole, refere | ence | number: 830 | 2: End of | 00:0 | 04:05 | 8302X_d0a4b6 eb-4f87 | _be -ed | |
| . | Depth: | m | | | | | | | | | | | | | |
| | | | struction Feat | | | | | | | scellaneous | | | | | |
| | | | ructural Defec | | | | | | | Operation | | | | | |
| STR No | . Det | STR Peak | STR Mean | STR T | | STR Grade | SER No. | Det | SER Peak | | | | Total | SEF | R Grade |





Section Pictures - 26/01/2021 - 8302X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 3 | Upstream | 8302X | PO127 | 24574 |



8302X_4badc144-3f9f-4f42-8869-63380eace53e_20210126_1 04617_262.jpg, 00:00:00, 0.00 m Start node type, inspection chamber, reference number: 8301



8302X_ccdf0247-59c6-44ff-9753-ed91a7579fb4_20210127_1 15435_871.jpg, 00:01:47, 10.00 m General photograph taken at this point, Condition



8302X_bed0a4b6-edeb-4f87-aaed-e52f4edcbde4_20210127_ 115915_541.jpg, 00:04:05, 22.00 m Finish node type, manhole, reference number: 8302, End of



8302X_922f4a4c-8ee1-4808-aaaa-3bfa3a809fd8_20210127_1 15306_921.jpg, 00:00:52, 5.00 m General photograph taken at this point, Condition



8302X_2a8fea1b-cda0-4112-aef6-51178ebace45_20210127_ 115735_137.jpg, 00:03:28, 19.30 m Crack, longitudinal at 2 o'clock



Section Inspection - 26/01/2021 - Node XX

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|-------------|------------|----------|---------|------------------|---------------|--------------|----------------|
| 4 | 4 | 26/01/21 | 10:53 | PO127 | Rain | No | NODE XX |
| Operator Ve | | Veh | icle | Camera | Preset Length | Legal Status | Alternative ID |
| la | an | Not Sp | ecified | Not Specified | Not Specified | Public Sewer | Not Specified |

| Town or Village: | Whitehaven | Increation Directions | Unatroom | Unatroom Nada | NODE X |
|---------------------|------------------------|-----------------------|------------------|------------------------|--------|
| Trown or village: | vvriiteriaven | Inspection Direction: | Upstream | Upstream Node: | NODE V |
| Road: | West Stran | Inspected Length: | 17.40 m | Upstream Pipe Depth: | |
| Location: | Other walkway | Total Length: | 22.00 m | Downstream Node: | 8300 |
| Surface Type: | | Joint Length: | 0.00 m | Downstream Pipe Depth: | |
| Use: | Combined | | Pipe Shape: | Circular | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 225 mm | |
| Year Constructed: | | | Material: | Vitrified clay | |
| Flow Control: | No flow control | | Lining Type: | No Lining | |
| Inspection Purpose: | Sample condition surve | y | Lining Material: | No Lining | |
| Comments: | | | • | | |

Recommendations:

| Scale: | 1:192 | Position [m] | Code | Observation | | MPEG | Photo | Grade |
|--------|------------------|--------------|------------------------------|------------------------------------|---------------------------------------|--------------|--------------------------------|-------|
| | Depth: m 8300 | 0.00 | IC | | ction chamber, reference number: | 00:00:00 | Node | |
| | | | | 8300 | | | XX_244fc3 bd-33b0-4 | |
| | | 4.60 | CXZ | Connection defective, Defective | other at 12 o'clock, diameter: 150mm: | 00:01:14 | Node XX_2a651 6cd-1af3-4 | |
| | | 5.30 S0 | 1 DES | Settled deposits, fine, | 25% cross-sectional area loss, start | 00:02:08 | Node XX_9bfed 447-e1e1- | |
| 1 | | 9.40 | CN | Connection other than 150mm | junction at 3 o'clock, diameter: | 00:03:10 | Node XX_8d0aa f72-2fba-4 | |
| | | 17.40 F0 | 1 DES | Settled deposits, fine, | 25% cross-sectional area loss, finish | 00:05:24 | Node XX_804de 0fc-896e-4 | 4 |
| | | 17.40 | SA | Survey abandoned: BI | ockage | 00:05:24 | Node XX_f1b2c5 c0-0b1e-4 | |
| | | 22.00 | | End of pipe | | | | |
| | Node X | | | | | | | |
| | Depth: m | | | | | | | |
| | | Construct | tion Footures | | Miggstlensses | Footures | | |
| | | | tion Features ral Defects | | Miscellaneous Service & Operation | | ione | |
| | | Structu | iai Delects | | Service & Operation | ai Obsei Val | 10118 | |

| Structural Defects | | | | | | Operational Ob | | | |
|--------------------|----------|----------|-----------|-----------|---|----------------|--|--|--|
| STR No. Def | STR Peak | STR Mean | STR Total | STR Grade | e SER No. Def SER Peak SER Mean SER Total SER G | | | | |
| 0 | 0.0 | 0.0 | 0.0 | 1.0 | 1 5.0 3.7 65.0 | | | | |





Section Pictures - 26/01/2021 - Node XX

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|---------|------------------|----------------------|
| 4 | Upstream | NODE XX | PO127 | 24574 |



Node XX_244fc3bd-33b0-48b5-b85f-ee5e835b6f42_20210126_1056 44_152.jpg, 00:00:00, 0.00 m



Node XX_9bfed447-e1e1-46da-a2eb-85a20e7be8a0_20210127_132 059_239.jpg, 00:02:08, 5.30 m



Node XX_804de0fc-896e-4e6a-a3e1-e4113d379c9e_20210127_132 640_259.jpg, 00:05:24, 17.40 m



Node XX_2a6516cd-1af3-4454-b80c-31b1bfcd21a8_20210127_131 916_517.jpg, 00:01:14, 4.60 m



Node XX_8d0aaf72-2fba-457e-a09c-df67fcd8413e_20210127_1322 59_049.jpg, 00:03:10, 9.40 m



Node XX_f1b2c5c0-0b1e-4cac-9545-d1e4369b9bd8_20210127_132 742_753.jpg, 00:05:24, 17.40 m



Section Inspection - 26/01/2021 - 8299X

| Section | Inspection | Date | Time | Client's Job Ref | Weather | Pre Cleaned | PLR |
|---------|------------|----------|---------|------------------|---------------|--------------|----------------|
| 5 | 5 | 26/01/21 | 11:27 | PO127 | Rain | No | 8299X |
| Ope | rator | Veh | icle | Camera | Preset Length | Legal Status | Alternative ID |
| la | an | Not Sp | ecified | Not Specified | Not Specified | Public Sewer | Not Specified |

| Town or Village: | Whitehaven | Inspection Direction: | Downstream | Upstream No | ode: | 8299 |
|---------------------|------------------------|-----------------------|------------------|----------------|-------------|--------|
| Road: | West Strand | Inspected Length: | 43.00 m | Upstream Pi | pe Depth: | |
| Location: | Other walkway | Total Length: | 85.00 m | Downstream | Node: | 8298 |
| Surface Type: | | Joint Length: | 0.00 m | Downstream | Pipe Depth: | |
| Use: | Combined | | Pipe Shape: | Circular | | |
| Type of Pipe: | Gravity drain/sewer | | Dia/Height: | 300 mm | Width: | 300 mm |
| Year Constructed: | | | Material: | Vitrified clay | | |
| Flow Control: | No flow control | | Lining Type: | No Lining | | |
| Inspection Purpose: | Sample condition surve | y | Lining Material: | No Lining | | |
| • • | | | | - | | |

Comments: Recommendations:

| Scale: | 1:740 | Position [m] | Code | Observation | MPEG | Photo | Grade |
|--------|----------|--------------|---------------|--|----------|-------------------------------------|-------|
| | Depth: m | | | | | | |
| | 8299 | | | | | | |
| | | 0.00 | МН | Start node type, manhole, reference number: 8299: By Lamp post | | 8299X_13 44ac32-63 4a-49b2-b | |
| | | 0.00 | WLT | Turbid water level, 5% of the vertical dimension | 00:00:22 | | |
| | | 0.40 S0 | 1 JDM | Joint displaced, medium, start | 00:00:45 | 8299X_fb5 7aca2-85e 8-43c8-90 | |
| | | 13.40 | WLT | Turbid water level, 10% of the vertical dimension | 00:02:48 | 8299X_dc c401ee-cc 89-4e4b-b | |
| | | 14.20 | CL | Crack, longitudinal at 12 o'clock | 00:02:54 | 8299X_6a c32ab3-3f 60-49c2-b | |
| | | 17.90 | CL | Crack, longitudinal at 12 o'clock | 00:03:29 | 8299X_f08 c3c8e-743 1-4c64-ac | |
| 1 | | 20.50 | OBZJ | Other obstacles at joint from 10 o'clock to 12 o'clock, 10% cross-sectional area loss: plastic | 00:03:53 | 8299X_92 8b07dd-53 73-4e01-a | |
| ľ | | 21.90 | СМ | Cracks, multiple from 8 o'clock to 3 o'clock | 00:04:07 | 8299X_c0 c2e085-19 d3-4d35-9 | |
| | | 23.10 | CLJ | Crack, longitudinal at joint at 7 o'clock | 00:04:18 | 8299X_83 244a2d-91 ac-4d1f-8f | |
| | | 25.00 | CL | Crack, longitudinal at 12 o'clock | 00:04:45 | 8299X_c4 c59bfa-c8 98-4e95-a | |
| | | 38.80 F0 | 1 JDM | Joint displaced, medium, finish | 00:00:45 | 8299X_c6 5224e6-83 d1-4db8-af | |
| | | 39.00 | CX | Connection defective at 2 o'clock, diameter: 100mm: Redundant | 00:07:00 | 8299X_b6 d85f02-8f5 9-4d60-99 | |
| | | 42.20 | WLT | Turbid water level, 20% of the vertical dimension | 00:07:53 | 8299X_9b 51a8fc-0a 0b-4498-b | |
| | 8298 | 43.00 F0 | 1 JDM | Joint displaced, medium, finish | 00:09:53 | 0D-4430-D | |
| | Depth: m | | | | | | |
| | | Construct | tion Features | Miscellaneous | Features | | |

| | Construction Features | | | | | Misc | ellaneous Feat | tures | |
|--------------------|-----------------------|----------|-----------|------------------------------------|---|------|----------------|-------|-----------|
| Structural Defects | | | | Service & Operational Observations | | | | | |
| STR No. Def | STR Peak | STR Mean | STR Total | STR Grade | de SER No. Def SER Peak SER Mean SER Total SE | | | | SER Grade |
| 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 0.0 0.0 0.0 | | | | 0.0 |



Section Pictures - 26/01/2021 - 8299X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | 8299X | PO127 | 24574 |



8299X_1344ac32-634a-49b2-b580-d77ae9ad10a9_20210127 _133605_212.jpg, 0.00 m Start node type, manhole, reference number: 8299, By Lamp



8299X_dcc401ee-cc89-4e4b-b1ab-f3672884c418_20210127_ 134114_720.jpg, 00:02:48, 13.40 m Turbid water level, 10% of the vertical dimension



8299X_f08c3c8e-7431-4c64-ac4e-aa5525c6b757_20210127_ 134327_070.jpg, 00:03:29, 17.90 m Crack, longitudinal at 12 o'clock



8299X_fb57aca2-85e8-43c8-902c-79d34894295b_20210127_ 135207_363.jpg, 00:00:45, 0.40 m Joint displaced, medium, start



8299X_6ac32ab3-3f60-49c2-b8c1-3336fed06969_20210127_1 34159_796.jpg, 00:02:54, 14.20 m Crack, longitudinal at 12 o'clock



8299X_928b07dd-5373-4e01-a7ad-f3c668069da5_20210127_ 134459_300.jpg, 00:03:53, 20.50 m Other obstacles at joint from 10 o'clock to 12 o'clock, 10%



Section Pictures - 26/01/2021 - 8299X

| Section | Inspection Direction | PLR | Client's Job Ref | Contractor`s Job Ref |
|---------|----------------------|-------|------------------|----------------------|
| 5 | Downstream | 8299X | PO127 | 24574 |



8299X_c0c2e085-19d3-4d35-9365-69e53ab72fa0_20210127_ 134558_593.jpg, 00:04:07, 21.90 m Cracks, multiple from 8 o'clock to 3 o'clock



8299X_c4c59bfa-c898-4e95-ad7a-4c7b2ab741fb_20210127_1 34752_746.jpg, 00:04:45, 25.00 m Crack, longitudinal at 12 o'clock





8299X_83244a2d-91ac-4d1f-8f90-816056fd9270_20210127_1 34650_463.jpg, 00:04:18, 23.10 m Crack, longitudinal at joint at 7 o'clock



8299X_c65224e6-83d1-4db8-af87-a4a6a3af1c21_20210127_ 133833_441.jpg, 00:00:45, 38.80 m Joint displaced, medium, finish



8299X_9b51a8fc-0a0b-4498-b374-753f6b89415c_20210127_ 135551_203.jpg, 00:07:53, 42:20 m Turbid water level, 20% of the vertical dimension