

Ellen Grove

Section 19 Flood Investigation Report Ellen Grove, Maryport



Flood Event Saturday 15th October 2022

Cumberland Council as a Lead Local Flood Authority under Section 19 of the Flood and Water Management Act 2010 have produced this flood investigation report.

Version	Undertaken by	Reviewed by	Approved by	Date
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				05.12.2023
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Executive Summary

It should be noted at the time of the incident Cumbria County Council was the LLFA for the area, since then and during writing of this report, Local Government Reform (LGR) has been undertaken, meaning Cumbria County Council has been replaced by the unitary authority of Cumberland Council.

Cumberland Council as Lead Local Flood Authority has prepared this report with the assistance of other Flood Risk Management Authorities as it considers necessary to do so under Section 19 of the Flood and Water Management Act 2010.

Local authorities: investigations

(1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate—

- (a) which risk management authorities have relevant flood risk management functions, and
- (b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

(2) Where an authority conducts an investigation under subsection (1) it must—

- (a) publish the results of its investigation, and
- (b) notify any relevant risk management authorities.

Flooding Incident Summary

Ellen Grove, Maryport, CA15 6RE

GR: 304882:537052



The properties around Ellen Grove sit near to the bottom of a hill on the A596 close to the town of Maryport, it sits approx. 45m lower than the hills around Gar Knot to the North-East.

On the Weekend of Friday the 14th of October 2022 to Sunday the 16th of October 2022 flooding occurred to the properties of Ellen Grove, Maryport CA15 6RE. This location experienced extreme and intense rainfall during a period of 24 hours on the 15th of October 2022 (from around 03:00). This rainfall with resultant pluvial water flow caused internal flooding to the property at Ellen Grove.

This part of the Highway Network is the A596 and maintained by Connect Roads, and as such they were initially called to deal with this incident.

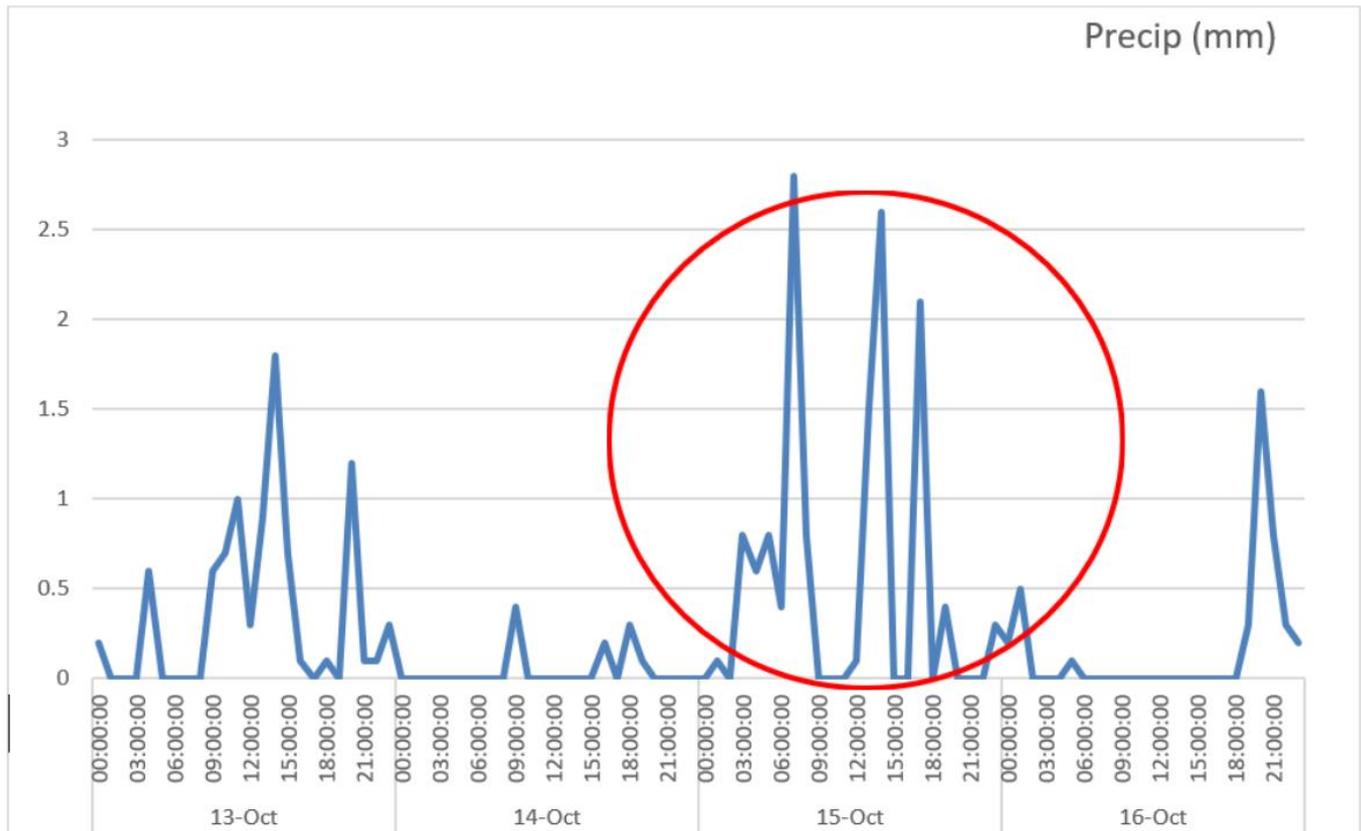
Two out-of-hours calls (09:10 and 14:15) were received on the 15th of October relating to the water running off the field and blocked gullies. Sandbags were put in place by the field entrance to slow the flow of water coming out of the field by diverting it into the roadside gullies.

Connect Roads Emergency Call-out Log

ID	Description	Locations	Status	Call Time & Date	Call ref no	Road	Works Type	Start Date and Time	Primary Response Category	Response Time	Action taken	End Time	Cat 1 Response Time Met
005119	A596 Birkby Flooding from Field entrance	Road Network > A596	Closed	15 Oct 2022 09:10	Police	A596	Sweeping/Cleaning	15/10/22 10:30	ECO - 2h	1 hours, 20 minutes	installed sand bags to prevent water coming on to road	1300	Yes
005123	A596 Ellen Bank Farm, Silt & water coming out of farmer's field, washed down road and flooded property	Road Network > A596	Closed	15 Oct 2022 14:15	Police	A596	Sweeping/Cleaning	15/10/22 15:00	ECO - 2h	45 minutes	Built a dam with sandbags to help prevent further flooding	1700	Yes

Event Background

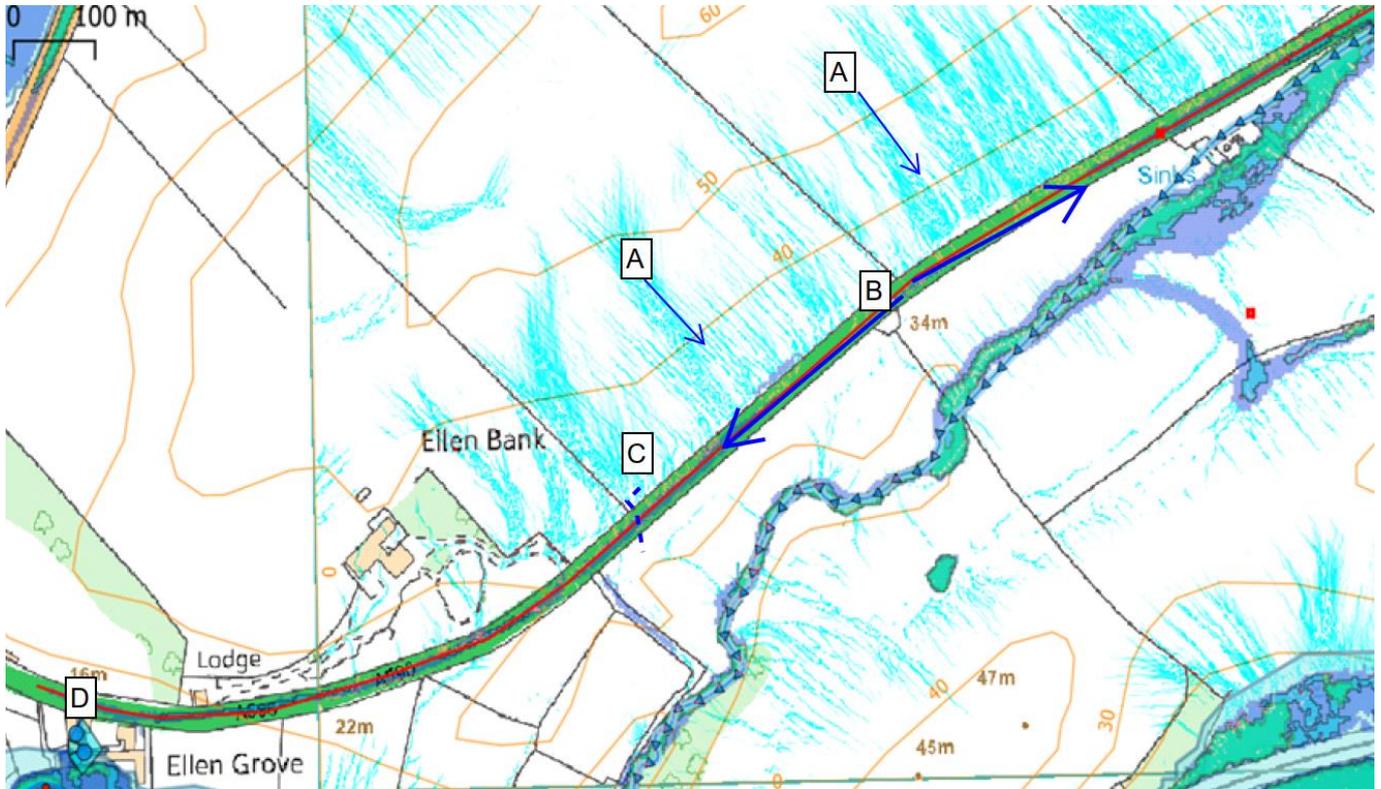
This location experienced intense rainfall over a 24-hour period from around 03:00 on Saturday the 15th of October 2022. Exacerbated by run off from the fields and the existing highway drainage system unable to convey the volume of surface water from the fields as well as the road, the water running down the hill bypassed the surcharging gullies and ponded at the entrance to Ellen Grove.



Once it had reached the top of the dropped kerb at Ellen Grove, it flowed over the dropped access and into the yard and property where the domestic system which consists of only a small domestic trapped gully and a domestic type Aco type slot channel drain. These are only designed to take the water from the property and as such were overwhelmed and were soon blocked due to the addition of silt and mud from the carriageway.

The water level was approximately 1m deep at the front of the property, The water then flowed through the property through the front and side doors then down through the cellar and out through doors and into the rear garden.

Flow Routes and Causes of Flooding



The fields at the top of the hill (A) are ploughed perpendicular with the road and water ran through these furrows through the hedgerow and out of the field entrance (B). There was no ditch in the field to stop this water, so it ran straight out and over the verge onto the road and footway. Silt that had been picked up as part of this run off was deposited onto the carriageway and into the drainage system.

The outfall close to Ellen Bank (C) was obstructed in the field by pieces of large debris and blockages at choke points along the watercourse also prevented the water to discharge at full capacity. Water that could not get into the two drainage systems up-stream then bypassed the gullies and collected in the dip in the carriageway at Ellen Grove (D). It then over-topped the kerb face and into the property it was also pushed by the tidal motion of passing vehicles.

Flooding History (2022)

5.10.22

The defect records from Connect show that on the 5th October 2022 there were calls to say that blocked gullies (silt from field run-off) were causing issues with standing water at this location. Records show the Connect Roads contractor attended and cleared gullies which resolved the local flooding.

14.10.22

Email correspondence from Age Concern state they had also contacted Connect Roads on the 14th of October on behalf to pass on concerns relating to the volume of water still coming from the highway. This was the day before the flooding incident.

Investigation

The flooding incident of 15th October was brought to the attention of the LLFA on 17th October 2022. A site visit was carried out on 18th October to investigate the circumstances around the event. As this is on the Connect Roads network, the investigation included a CNDR Network Engineer who assists in the management of the contract on behalf of Cumberland Council.

A CCTV survey was commissioned at the beginning of December 2022 with the objective to map and assess the condition of the drainage system(s).



Photographs of the silt deposits at the driveway to the affected properties

Initial Flood Mitigation Measures Implemented & Investigation

Notice was served on the landowner of the fields to the north of the A596 on 3 November 2023 to prevent overland surface water flowing onto the verge and road, depositing mud on the highway and footway.

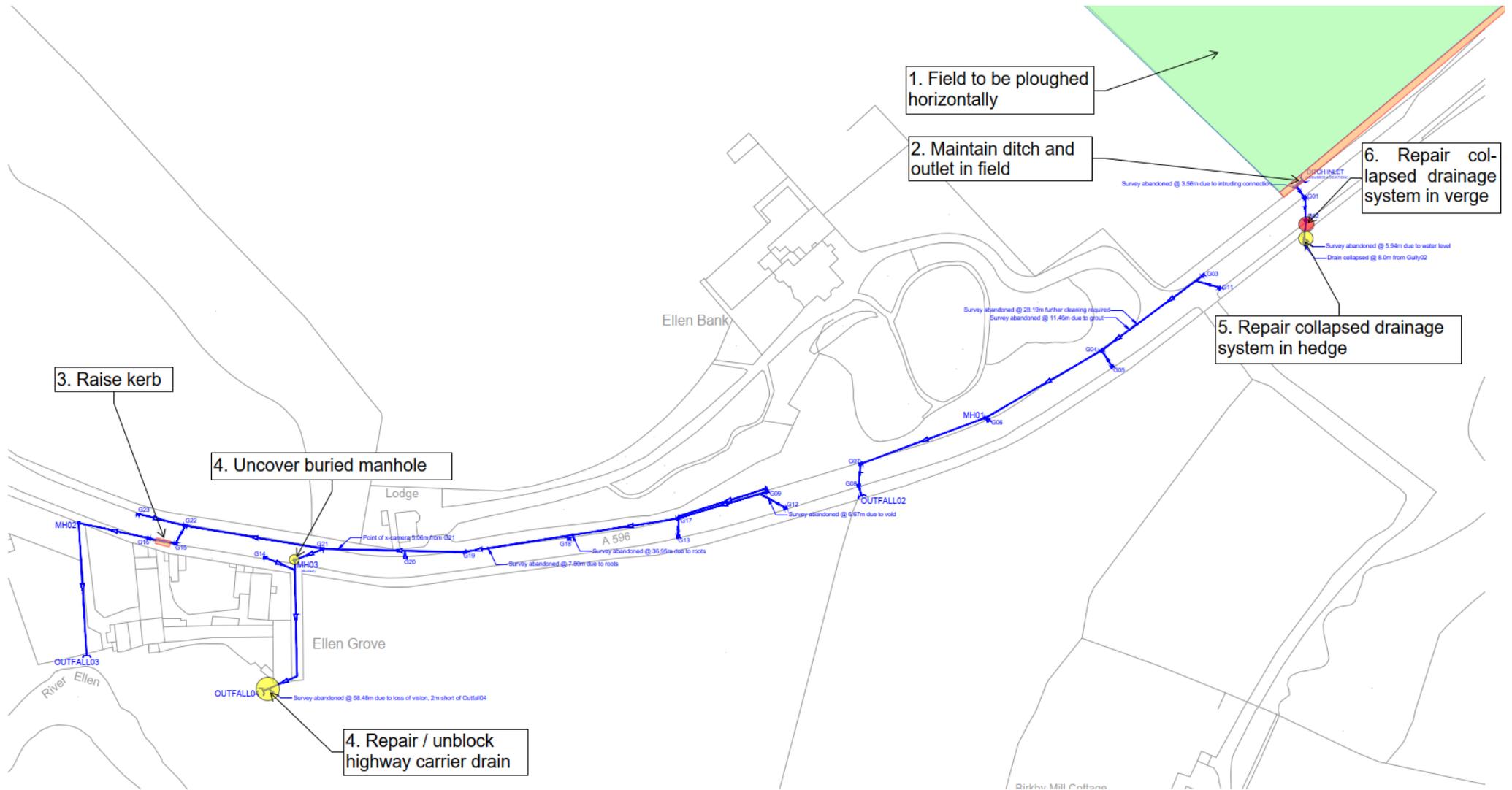
The following remedial measures and further investigations were undertaken in the immediate follow up to the incident to reduce the risk or eliminate a repeat occurrence of the flooding.

1. Straw bales placed at the bottom of the fields to prevent silt flowing onto the A596.
2. Drainage outlet in the southwest corner of the land near to the east-bound bus stop cleaned.
3. Placing of additional sandbags within the highway verge to also alleviate silt and run off from entering the highway.
4. Repair of two blockages in one of the outfalls of the project network within adjacent landowner fields which were identified using drainage dye.
5. New filter drain installed in the east-bound verge where the main source of the run-off came from.
6. Detailed drainage CCTV survey of the area was carried out (See Appendix 4)

These measures have proven to be successful in preventing similar flooding since the incident but further, more permanent, solutions and mitigation measures are required.

Recommended Actions

	Recommended Action	Action by	Comments / Timescale / Next Steps
1	Land to be ploughed horizontal in the future.	Landowner	In principle this has been agreed with landowner.
2	Maintain existing drainage outlets within the fields.	Landowner	Ongoing maintenance requirement and obligation under Highways Act 1980 S151 - <i>Prevention of soil etc. being washed on to street.</i>
3	Lift the kerbed entrance to current highway specification	Highway Authority/Connect Roads	Highway Authority to undertake required works
4	Repair damaged drainage systems serving the project network as identified in the drainage report and uncover buried manhole in the carriageway.	Highway Authority/Connect Roads	Highway Authority to undertake required works
5	Repair collapsed drainage system which is situated within the farmland	Landowner	Landowner has repaired two blockages that serve the drainage system, there is one further blockage to repair within the hedge line.
6	Repair collapsed drainage system which is situated within the highway verge.	Highway Authority/Connect Roads	Highway Authority to undertake required works



Recommended Actions Plan

Next Steps

The Highway Authority will carry out the actions identified in the table above and going forward will carry out the necessary inspections and maintenance to the drainage infrastructure in the highway to mitigate the risk of repeated flooding onto the highway.

The Highway Authority will also continue to liaise with the landowner(s) as necessary to ensure the agreed land management and maintenance of the fields and drains are carried out as agreed. Where necessary the Highway Authority may use the appropriate sections of the Highways Act for enforcement purposes to deliver the agreed actions.

Appendix 1: Glossary

Acronyms

EA	Environment Agency
CC	Cumberland Council
CCC	Cumbria County Council
UU	United Utilities
LLFA	Lead Local Flood Authority
LFRM	Local Flood Risk Management
MSfW	Making Space for Water Group
FAG	Flood Action Group
FWMA	Flood and Water Management Act 2010
LDA	Land Drainage Act 1991
WRA	Water Resources Act 1991

The Flood Risk Regulations 1999 and the Flood and Water Management Act 2010 (the Act) have established Cumberland Council (previously CCC) as the Lead Local Flood Authority (LLFA) for Cumberland. This has placed various responsibilities on Cumberland Council including Section 19 of the Act which states:

Section 19

- (1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate—
 - (a) which risk management authorities have relevant flood risk management functions, and
 - (b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.
- (2) Where an authority conducts an investigation under subsection (1) it must—
 - (a) publish the results of its investigation, and
 - (b) notify any relevant risk management authorities.

A ‘Risk Management Authority’ (RMA) means:

- (a) the Environment Agency,
- (b) a lead local flood authority,
- (c) a district council for an area for which there is no unitary authority,
- (d) an internal drainage board,
- (e) a water company, and
- (f) a highway authority.

The table below summarises the relevant Risk Management Authority and details the various local source of flooding that they will take a lead on.

Flood Source	Environment Agency	Lead Local Flood Authority	District Council	Water Company	Highway Authority
RIVERS					
Main river					
Ordinary watercourse					
SURFACE RUNOFF					
Surface water					
Surface water on the highway					
OTHER					
Sewer flooding					
The sea					
Groundwater					
Reservoirs					

The following information provides a summary of each Risk Management Authority’s roles and responsibilities in relation to flood reporting and investigation.

Government – Defra develop national policies to form the basis of the Environment Agency’s and Cumbria County Council’s work relating to flood risk.

Environment Agency has a strategic overview of all sources of flooding and coastal erosion as defined in the Act. As part of its role concerning flood investigations this requires providing evidence and advice to support other risk management authorities. The EA also collates and reviews assessments, maps, and plans for local flood risk management (normally undertaken by LLFA).

Lead Local Flood Authorities (LLFAs) – Cumberland Council (previously Cumbria County Council) is the LLFA for Cumberland. Part of their role requires them to investigate significant local flooding incidents and publish the results of such investigations. LLFAs have a duty to determine which risk management authority has relevant powers to investigate flood incidents to help understand how they happened, and whether those authorities have or intend to exercise their powers. LLFAs work in partnership with communities and flood risk management authorities to maximise knowledge of flood risk to all involved. This function is conducted at CCC by the Local Flood Risk Management Team.

District and Borough Councils – These organisations perform a significant amount of work relating to flood risk management including providing advice to communities and gathering information on flooding.

Water and Sewerage Companies manage the risk of flooding to water supply and sewerage facilities and the risk to others from the failure of their infrastructure. They make sure their systems have the appropriate level of resilience to flooding and where frequent and severe flooding occurs, they are required to address this through their capital investment plans. It should also be noted that following the Transfer of Private Sewers Regulations 2011 water and sewerage companies are responsible for a larger number of sewers than prior to the regulation.

Highway Authorities have the lead responsibility for providing and managing highway drainage and certain roadside ditches that they have created under the Highways Act 1980. The owners of land adjoining a highway also have a common-law duty to maintain ditches to prevent them causing a nuisance to road users.

Flood risk in Cumbria is managed through the Making Space for Water process which involves the cooperation and regular meetings of the Environment Agency, United Utilities, District/Borough Councils and CC’s Highway and LFRM Teams to develop processes and schemes to minimise flood risk. The MSfW meet approximately four times per year to cooperate and work together to improve the flood risk in the vulnerable areas identified in this report by completing the recommended actions. CC as LLFA has a responsibility to oversee the delivery of these actions.

Where minor works or quick win schemes can be identified, these will be prioritised and subject to available funding and resources will be conducted as soon as possible. Any major works requiring capital investment will be considered through the Environment Agency’s Medium-Term Plan or a partners own capital investment process.

Flood Action Groups are usually formed by residents who wish to work together to resolve flooding in their area. The FAGs are often supported by either CC or the EA and provide a useful mechanism for residents to forward information to the MSfW.

Appendix 3: Useful contacts and links

Cumberland Council (Local Flood Risk Management):

LFRMS@cumberland.gov.uk, www.cumberland.gov.uk, tel: 01228 221330

Cumberland Council (Highways):

Highways@cumberland.gov.uk

www.cumberland.gov.uk, tel: 0845 609 6609

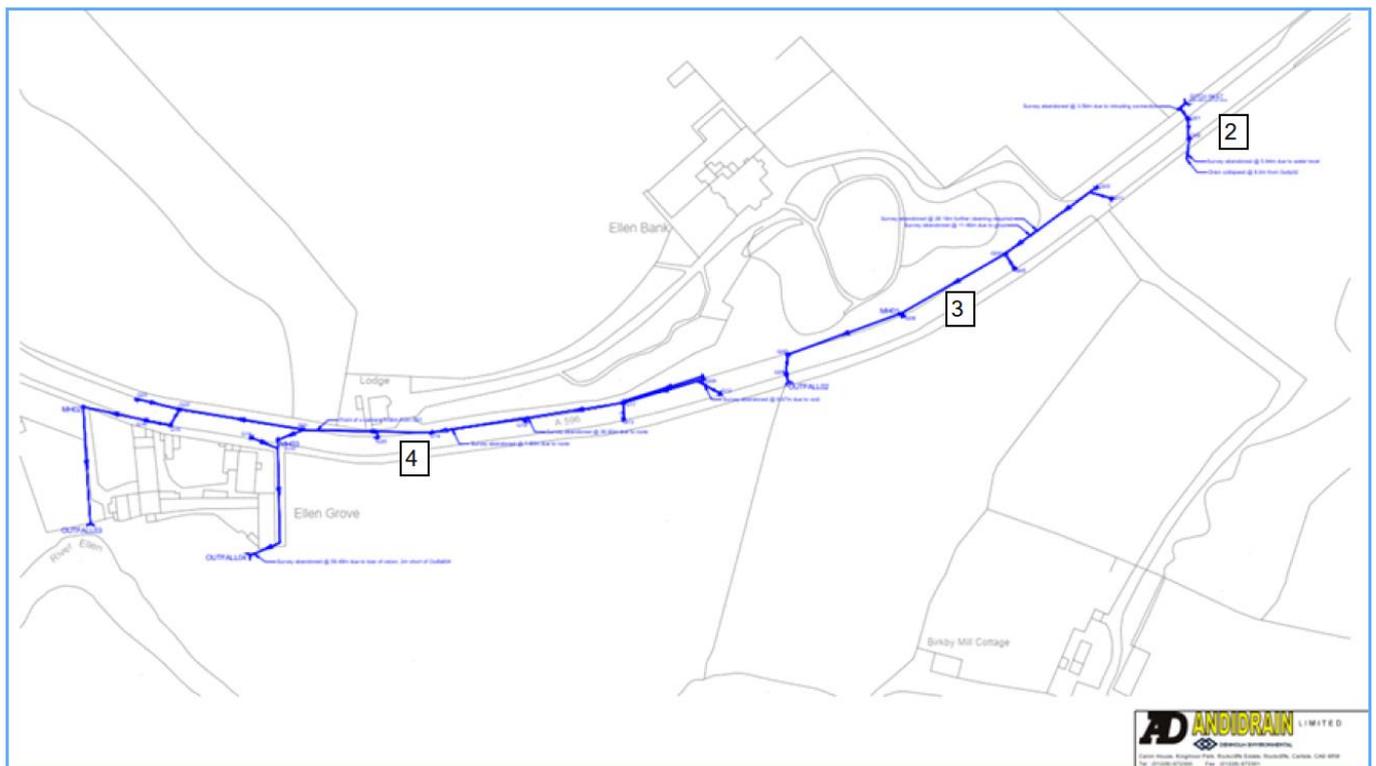
Out of hours emergencies should be reported via the Police on 101

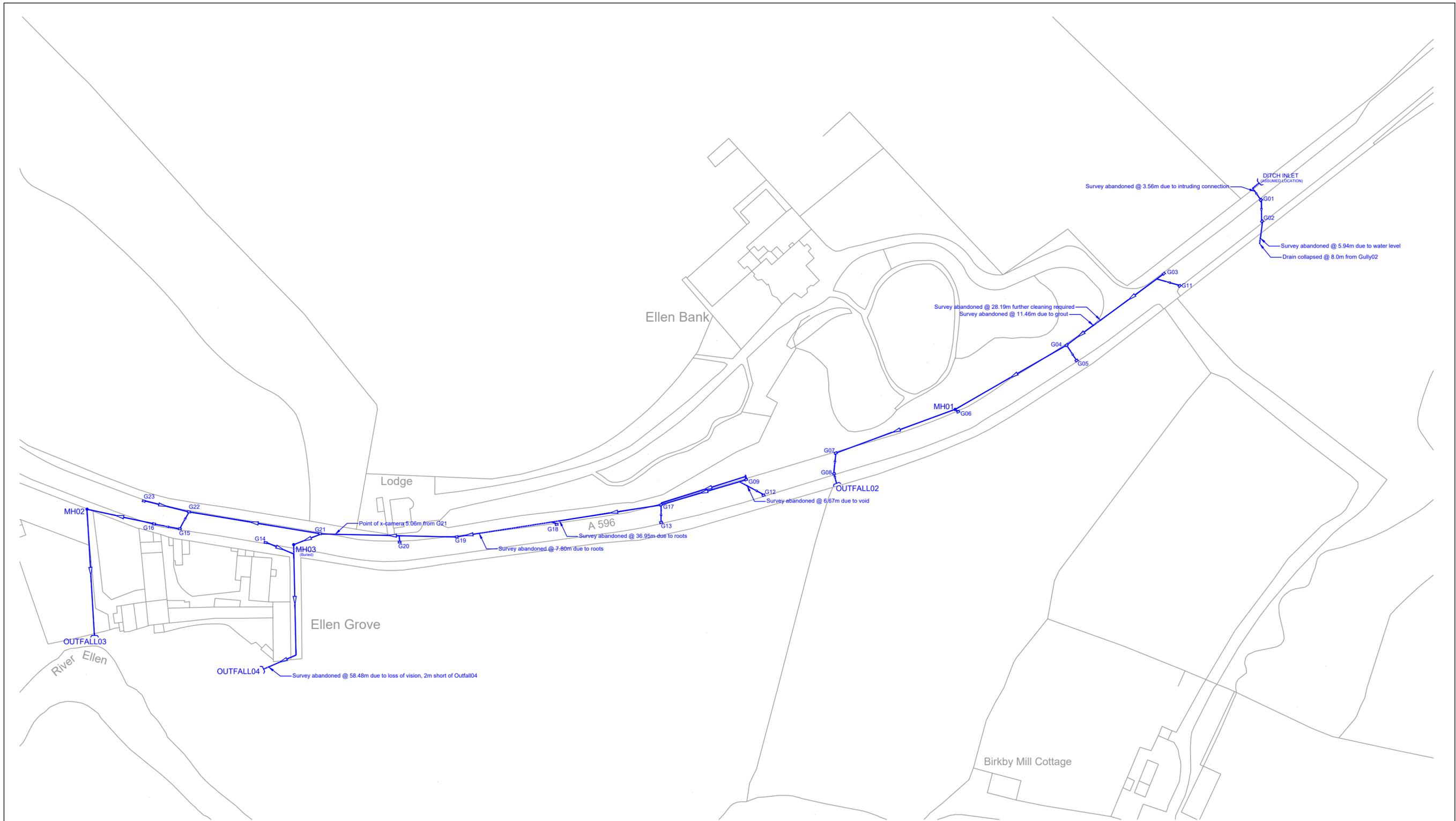
United Utilities: www.unitedutilities.com, tel: 0845 746 2200

Appendix 4: CCTV Drainage Investigation

The CCTV survey showed that there are four parts to the drainage system with several defects / blockages:

1. From close to the field entrance and outfalls across the carriageway into a ditch in the field opposite. (not shown on the CCTV survey plan)
2. Open channel / headwall in the south-western corner of the field, this takes the field drainage and two road gullies and outfalls across the road into the field. This drain has collapsed in the field.
3. A third system runs down the hill adjacent to Ellen Bank it takes seven gullies and outfalls across the road half-way down the hill and outfalls into a small watercourse.
4. The fourth system slightly lower down is a little more complex and comprises of two outfalls either side of the Ellen Grove properties, as this is at the low point, this was naturally silted up more and had problems with root ingress at certain points. This drainage network only takes highway surface water drainage and thus the complete extent of this network, including the two outfalls into the river is the responsibility of the Highway Authority.





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 E-Mail : enquiries@andidrain.co.uk

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Client : CUMBRIA COUNTY COUNCIL		
Drawing Title : A596 MARYPORT		
Scale : NTS	Revision :	
Drawn By : J LANGLEY	Revision date :	
Date : 13/12/2022	Description :	
Job No : 33269-12	Dwg No : 1	Rev : 0

Project Summary

Project Name
 A596 Maryport

Project Number
 33269-12

Project Date
 07/12/2022

Pipe Summary

No.	Type	PLR	Upstream Node	Downstream Node	Road	Town	Use	Mat.	Profile	Length
1	SEC	UpstreamX	UPSTREAM	GULLY01	A596	Maryport	S	VC	Circular 150mm	3.56 m
2	SEC	Gully01X	GULLY01	GULLY02	A596	Maryport	S	CI	Circular 225mm	8.50 m
3	SEC	Gully03X	GULLY03	GULLY04	A596	Maryport	S	VC	Circular 150mm	43.06 m
4	SEC	Gully05X	GULLY05	GULLY04	A596	Maryport	S	CI	Circular 150mm	7.20 m
5	SEC	Gully04X	GULLY04	MH01	A596	Maryport	S	VC	Circular 225mm	47.28 m
6	SEC	Gully06X	GULLY06	MH01	A596	Maryport	S	VC	Circular 150mm	1.16 m
7	SEC	MH01X	MH01	GULLY07	A596	Maryport	S	VC	Circular 225mm	45.13 m
8	SEC	Gully07X	GULLY07	GULLY08	A596	Maryport	S	VC	Circular 225mm	7.02 m
9	SEC	Gully09X	GULLY09	GULLY17	A596	Maryport	S	VC	Circular 150mm	32.75 m
10	SEC	Gully02X	GULLY02	OUTFALL01	A596	Maryport	S	VC	Circular 225mm	5.94 m
11	SEC	Gully11X	GULLY11	MAIN	A596	Maryport	S	VC	Circular 150mm	8.46 m
12	SEC	Gully08X	GULLY08	OUTFALL02	A596	Maryport	S	VC	Circular 225mm	3.34 m
13	SEC	Gully12X	GULLY12	MAIN	A596	Maryport	S	VC	Circular 150mm	9.88 m
14	SEC	MH02X	MH02	OUTFALL03	A596	Maryport	S	VC	Circular 300mm	46.20 m
15	SEC	Gully13X	GULLY13	GULLY17	A596	Maryport	S	CI	Circular 150mm	6.17 m
16	SEC	Gully14X	GULLY14	OUTFALL04	A596	Maryport	S	VC	Circular 150mm	60.48 m
17	SEC	Gully22X	GULLY22	GULLY15	A596	Maryport	S	VC	Circular 150mm	7.33 m
18	SEC	Gully15X	GULLY15	GULLY16	A596	Maryport	S	VC	Circular 300mm	8.67 m
19	SEC	Gully16X	GULLY16	MH02	A596	Maryport	S	VC	Circular 300mm	24.98 m
20	SEC	Blank EndX	BLANK END	GULLY17	A596	Maryport	S	VC	Circular 150mm	31.69 m
21	SEC	Gully17X	GULLY17	GULLY19	A596	Maryport	S	VC	Circular 150mm	74.45 m
22	SEC	Gully18X	GULLY18	MAIN	A596	Maryport	S	VC	Circular 150mm	1.82 m
23	SEC	Gully17X	GULLY17	GULLY19	A596	Maryport	S	VC	Circular 150mm	74.45 m
24	SEC	Gully19X	GULLY19	GULLY21	A596	Maryport	S	VC	Circular 150mm	47.33 m
25	SEC	Gully20X	GULLY20	MAIN	A596	Maryport	S	VC	Circular 150mm	2.22 m
26	SEC	Gully19X	GULLY19	GULLY21	A596	Maryport	S	VC	Circular 150mm	47.33 m
27	SEC	Gully21X	GULLY21	MH03	A596	Maryport	S	CI	Circular 150mm	9.06 m
28	SEC	Gully21X	GULLY21	GULLY22	A596	Maryport	S	VC	Circular 150mm	46.70 m
29	SEC	Gully23X	GULLY23	GULLY22	A596	Maryport	S	VC	Circular 150mm	16.45 m
Total:										728.61 m

Section Inspection - 07/12/2022 - UpstreamX

Item No. 1	Insp. No. 1	Date 07/12/22	Time 9:03	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR UPSTREAMX
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	UPSTREAM
Road:	A596	Inspected Length:	3.56 m	Upstream Pipe Depth:	0.600 m
Location:	Road	Total Length:	3.56 m	Downstream Node:	GULLY01
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully01	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:39		
		1.80	REM	General remark: Possible buried chamber or void	00:00:39	1	
		3.06	CXPI	Connection defective, position incorrect and intruding at 4 o'clock, 100mm dia, intrusion: 50%	00:01:20	2	4
		3.56	SA	Survey abandoned: Due to intruding connection	00:01:45		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	8.0	2.2	8.0	4.0

Section Pictures - 07/12/2022 - UpstreamX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	UPSTREAMX	33269-12	



1, 00:00:39, 1.80 m
General remark, Possible buried chamber or void



2, 00:01:20, 3.06 m
Connection defective, position incorrect and intruding at 4 o'clock, 100mm dia, intrusion: 50%

Section Inspection - 07/12/2022 - Gully01X

Item No. 2	Insp. No. 1	Date 07/12/22	Time 9:10	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY01X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY01
Road:	A596	Inspected Length:	8.50 m	Upstream Pipe Depth:	0.810 m
Location:	Road	Total Length:	8.50 m	Downstream Node:	GULLY02
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	225 mm
Type of Pipe:	Gravity drain/sewer	Material:	Cast iron	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:

Recommendations:

Scale:	1:74	Position [m]	Code	Observation	MPEG	Photo	Grade
<p>Depth: 0.81 m Gully01</p>							
		0.00	GY	Start node, gully, reference: Gully01	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:38		
		8.50	GYF	Finish node, gully, reference: Gully02	00:01:13		
<p>Gully02 Depth: m</p>							

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 07/12/2022 - Gully03X

Item No. 3	Insp. No. 1	Date 07/12/22	Time 10:37	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY03X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY03
Road:	A596	Inspected Length:	11.46 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	43.06 m	Downstream Node:	GULLY04
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:

Recommendations:

Scale:	1:373	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully04	00:00:00		
		0.00	WL	Water level, 15% of the vertical dimension	00:00:04		
		1.12	S01 DEE	Attached deposits, encrustation from 4 o'clock to 8 o'clock, 30% cross-sectional area loss, start	00:00:33	1	
		3.31	OBX	Other obstacles, other object in invert from 3 o'clock to 9 o'clock, 30% cross-sectional area loss: Loose grout	00:00:44	2	5
		9.15	DEX	Settled deposits, other, 75% cross-sectional area loss: Loose grout	00:01:22	3	4
		9.20	F01 DEE	Attached deposits, encrustation from 4 o'clock to 8 o'clock, 30% cross-sectional area loss, finish	00:01:22		4
		10.68	DEE	Attached deposits, encrustation from 3 o'clock to 9 o'clock, 50% cross-sectional area loss: Grout	00:01:45	4	4
		11.46	SA	Survey abandoned: Due to grout	00:02:23		
		43.06		End of pipe			

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	4	15.0	5.9	68.0	5.0

Section Pictures - 07/12/2022 - Gully03X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Upstream	GULLY03X	33269-12	



1, 00:00:33, 1.12 m
Attached deposits, encrustation from 4 o'clock to 8 o'clock,
30% cross-sectional area loss, start



2, 00:00:44, 3.31 m
Other obstacles, other object in invert from 3 o'clock to 9
o'clock, 30% cross-sectional area loss, Loose grout



3, 00:01:22, 9.15 m
Settled deposits, other, 75% cross-sectional area loss, Loose
grout



4, 00:01:45, 10.68 m
Attached deposits, encrustation from 3 o'clock to 9 o'clock,
50% cross-sectional area loss, Grout

Section Inspection - 07/12/2022 - Gully03X

Item No. 3	Insp. No. 2	Date 07/12/22	Time 10:27	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY03X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY03
Road:	A596	Inspected Length:	28.19 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	43.06 m	Downstream Node:	GULLY04
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:373	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m Gully03						
	0.00	GY	Start node, gully, reference: Gully03	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:05		
	1.60	S01 RFJ	Roots, fine at joint, start	00:00:26		
	2.75	JN	Junction at 10 o'clock, 150mm dia	00:00:30		
	9.92	F01 RFJ	Roots, fine at joint, finish	00:01:11		2
	10.90	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:01:12		
	13.51	D	Deformed sewer or drain, 45%	00:02:19	1	5 / 4
	20.16	DER	Settled deposits, coarse, 30% cross-sectional area loss	00:03:07	2	4
	23.62	DER	Settled deposits, coarse, 30% cross-sectional area loss	00:03:21	3	4
	25.93	WL	Water level, 30% of the vertical dimension	00:03:27		
	27.21	MCVC	Pipe material changes to vitrified clay at this point	00:03:32		
	28.19	SA	Survey abandoned: Further cleaning required	00:04:04		
	43.06		End of pipe			
Depth: m Gully04						

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	165.0	3.8	165.0	5.0	4	5.0	0.6	24.0	4.0

Section Pictures - 07/12/2022 - Gully03X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Downstream	GULLY03X	33269-12	



1, 00:02:19, 13.51 m
Deformed sewer or drain, 45%



2, 00:03:07, 20.16 m
Settled deposits, coarse, 30% cross-sectional area loss



3, 00:03:21, 23.62 m
Settled deposits, coarse, 30% cross-sectional area loss

Section Inspection - 07/12/2022 - Gully05X

Item No. 4	Insp. No. 1	Date 07/12/22	Time 9:28	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY05X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY05
Road:	A596	Inspected Length:	7.20 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	7.20 m	Downstream Node:	GULLY04
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Cast iron		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:63	Position [m]	Code	Observation	MPEG	Photo	Grade
<p>Depth: m Gully04</p>							
		0.00	GY	Start node, gully, reference: Gully04	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:02		
		7.20	GYF	Finish node, gully, reference: Gully05	00:01:03		
<p>Gully05 Depth: m</p>							

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 07/12/2022 - Gully04X

Item No. 5	Insp. No. 1	Date 07/12/22	Time 10:52	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY04X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY04
Road:	A596	Inspected Length:	47.28 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	47.28 m	Downstream Node:	MH01
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:410	Position [m]	Code	Observation	MPEG	Photo	Grade
	Depth: m						
	MH01						
	0.00	MH		Start node, manhole, reference: MH01	00:00:00		
	0.00	WL		Water level, 5% of the vertical dimension	00:00:14		
	5.14	JN		Junction at 9 o'clock, 150mm dia	00:00:40		
	31.05	CXI		Connection defective, connecting pipe is intruding at 2 o'clock, 100mm dia, intrusion: 15%	00:02:42	1	3
	46.18	JDM		Joint displaced, medium	00:04:01	2	1 / 3
	46.25	MCCI		Pipe material changes to cast iron at this point	00:04:01		
	47.28	GYF		Finish node, gully, reference: Gully04	00:04:53		
	Gully04						
	Depth: m						

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	1.0	0.0	1.0	1.0	2	2.0	0.1	4.0	3.0

Section Pictures - 07/12/2022 - Gully04X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
5	Upstream	GULLY04X	33269-12	



1, 00:02:42, 31.05 m
Connection defective, connecting pipe is intruding at 2 o'clock,
100mm dia, intrusion: 15%



2, 00:04:01, 46.18 m
Joint displaced, medium

Section Inspection - 07/12/2022 - Gully06X

Item No. 6	Insp. No. 1	Date 07/12/22	Time 10:49	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY06X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY06
Road:	A596	Inspected Length:	1.16 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	1.16 m	Downstream Node:	MH01
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:

Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m					
		MH01					
		0.00	MH	Start node, manhole, reference: MH01	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:02		
		1.16	GYF	Finish node, gully, reference: Gully06	00:00:44		
		Gully06					
		Depth: m					

Construction Features

Structural Defects

Miscellaneous Features

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 Inspection - 07/12/2022 - MH01X

Item No. 7	Insp. No. 1	Date 07/12/22	Time 11:02	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH01X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	MH01
Road:	A596	Inspected Length:	45.13 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	45.13 m	Downstream Node:	GULLY07
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	225 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:

Recommendations:

Scale:	1:391	Position [m]	Code	Observation	MPEG	Photo	Grade
<p>Depth: m MH01</p>							
	0.00	MH		Start node, manhole, reference: MH01	00:00:00		
	0.00	WL		Water level, 5% of the vertical dimension	00:01:14		
	12.00	WL		Water level, 10% of the vertical dimension	00:01:19		
	16.72	WL		Water level, 5% of the vertical dimension	00:01:43		
	45.13	GYF		Finish node, gully, reference: Gully07	00:04:06		
<p>Gully07 Depth: m</p>							

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 07/12/2022 - Gully07X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	Downstream	GULLY07X	33269-12	



1, 00:00:40, 4.88 m
Other obstacles, pipe material in invert from 4 o'clock to 7 o'clock, 10% cross-sectional area loss



2, 00:00:47, 5.97 m
Attached deposits, encrustation from 8 o'clock to 4 o'clock, 10% cross-sectional area loss

Section Inspection - 07/12/2022 - Gully09X

Item No. 9	Insp. No. 1	Date 07/12/22	Time 11:24	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY09X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY09
Road:	A596	Inspected Length:	32.75 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	32.75 m	Downstream Node:	GULLY17
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:284	Position [m]	Code	Observation	MPEG	Photo	Grade
<p>Depth: m Gully09</p>							
	0.00	GY	Start node, gully, reference: Gully09	00:00:00			
	0.00	WL	Water level, 5% of the vertical dimension	00:00:02			
	2.08	JN	Junction at 9 o'clock, 150mm dia	00:00:26			
	19.27	RFJ	Roots, fine at joint	00:01:37	1	2	
	32.75	GYF	Finish node, gully, reference: Gully17	00:02:49			
<p>Gully17 Depth: m</p>							

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	1.0	0.0	1.0	2.0

Section Pictures - 07/12/2022 - Gully09X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Downstream	GULLY09X	33269-12	



1, 00:01:37, 19.27 m
 Roots, fine at joint

Section Inspection - 07/12/2022 - Gully02X

Item No. 10	Insp. No. 1	Date 07/12/22	Time 12:32	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY02X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY02
Road:	A596	Inspected Length:	5.94 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	5.94 m	Downstream Node:	OUTFALL01
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:52	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully02	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:06		
		1.97	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:26		3
		2.67	WL	Water level, 10% of the vertical dimension	00:00:29		
		3.17	WL	Water level, 30% of the vertical dimension	00:00:31		
		3.63	WL	Water level, 50% of the vertical dimension	00:00:36		
		4.15	WL	Water level, 70% of the vertical dimension	00:00:42	1	
		4.84	CUW	Loss of vision, camera under water	00:00:55		
		5.94	REM	General remark: Drain collapsed 8 metres from Gully02 in field	00:02:01		
		5.94	SA	Survey abandoned: Due to water level	00:02:01		

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

Section Pictures - 07/12/2022 - Gully02X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
10	Downstream	GULLY02X	33269-12	



1, 00:00:42, 4.15 m
Water level, 70% of the vertical dimension

Section Inspection - 07/12/2022 - Gully11X

Item No. 11	Insp. No. 1	Date 07/12/22	Time 12:55	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY11X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY11
Road:	A596	Inspected Length:	8.46 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	8.46 m	Downstream Node:	MAIN
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:
Recommendations:

Scale:	1:74	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	GY		Start node, gully, reference: Gully11	00:00:00		
	0.00	WL		Water level, 20% of the vertical dimension	00:00:01		
	0.60	D		Deformed sewer or drain, 40%	00:00:11		5 / 4
	0.60	B		Broken pipe from 9 o'clock to 3 o'clock	00:00:11	1	4
	0.96	FM		Fractures, multiple from 12 o'clock to 12 o'clock	00:00:18	2	4 / 2
	8.46	OCF		Finish node, other special chamber, reference: Main: Main	00:01:11		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
3	325.0	38.4	325.0	5.0	2	6.0	0.7	6.0	4.0

Section Pictures - 07/12/2022 - Gully11X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	Downstream	GULLY11X	33269-12	



1, 00:00:11, 0.60 m
Broken pipe from 9 o'clock to 3 o'clock



2, 00:00:18, 0.96 m
Fractures, multiple from 12 o'clock to 12 o'clock

Section Inspection - 07/12/2022 - Gully08X

Item No. 12	Insp. No. 1	Date 07/12/22	Time 13:12	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY08X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY08
Road:	A596	Inspected Length:	3.34 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	3.34 m	Downstream Node:	OUTFALL02
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully08	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
		3.04	LD	Line deviates down	00:00:22		
		3.04	JDL	Joint displaced, large	00:00:22	1	1 / 4
		3.34	OFF	Finish node, outfall, reference: Outfall02	00:00:38		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.6	2.0	1.0	1	5.0	1.5	5.0	4.0

Section Pictures - 07/12/2022 - Gully08X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
12	Downstream	GULLY08X	33269-12	



1, 00:00:22, 3.04 m
 Joint displaced, large

Section Inspection - 07/12/2022 - Gully12X

Item No. 13	Insp. No. 1	Date 07/12/22	Time 13:34	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY12X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY12
Road:	A596	Inspected Length:	6.67 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	9.88 m	Downstream Node:	MAIN
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:86	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully12	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:02		
		0.60	FM	Fractures, multiple from 12 o'clock to 12 o'clock	00:00:14	1	4 / 2
		1.69	CL	Crack, longitudinal at 10 o'clock	00:00:28	2	2 / 2
		2.43	FL	Fracture, longitudinal at 10 o'clock	00:00:33	3	3 / 2
		2.43	FL	Fracture, longitudinal at 12 o'clock	00:00:34		3 / 2
		5.00	WL	Water level, 10% of the vertical dimension	00:00:52		
		6.37	WL	Water level, 20% of the vertical dimension	00:00:57		
		6.67	H	Hole in drain or sewer from 12 o'clock to 12 o'clock: Large void	00:01:10	4	5
		6.67	VV	Void visible beyond defect	00:01:17	5	
		6.67	SA	Survey abandoned: Due to void	00:01:21		
		9.88		End of pipe			

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
5	165.0	50.2	335.0	5.0	4	3.0	0.6	4.0	3.0

Section Pictures - 07/12/2022 - Gully12X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	Downstream	GULLY12X	33269-12	



1, 00:00:14, 0.60 m
Fractures, multiple from 12 o'clock to 12 o'clock



2, 00:00:28, 1.69 m
Crack, longitudinal at 10 o'clock



3, 00:00:33, 2.43 m
Fracture, longitudinal at 10 o'clock



4, 00:01:10, 6.67 m
Hole in drain or sewer from 12 o'clock to 12 o'clock, Large void

Section Pictures - 07/12/2022 - Gully12X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	Downstream	GULLY12X	33269-12	



5, 00:01:17, 6.67 m
Void visible beyond defect

Section Inspection - 08/12/2022 - MH02X

Item No. 14	Insp. No. 1	Date 08/12/22	Time 9:15	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH02X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	MH02
Road:	A596	Inspected Length:	46.20 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	46.20 m	Downstream Node:	OUTFALL03
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:401	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH02							
	0.00	MH	Start node, manhole, reference: MH02		00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension		00:00:30		
	4.21	RFJ	Roots, fine at joint		00:00:36	1	2
	16.26	RFJ	Roots, fine at joint		00:01:27	2	2
	21.87	RFJ	Roots, fine at joint		00:01:46	3	2
	23.84	CL	Crack, longitudinal at 3 o'clock		00:01:54	4	2 / 2
	24.25	CL	Crack, longitudinal at 9 o'clock		00:01:56		2 / 2
	28.22	CL	Crack, longitudinal at 8 o'clock		00:02:16	5	2 / 2
	33.27	CL	Crack, longitudinal at 4 o'clock		00:02:49	6	2 / 2
	38.55	RFJ	Roots, fine at joint		00:03:19	7	2
	46.20	OFF	Finish node, outfall, reference: Outfall03		00:04:08		
Outfall03							
Depth: m							

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	20.0	0.9	40.0	2.0	8	2.0	0.2	8.0	3.0

Section Pictures - 08/12/2022 - MH02X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	Downstream	MH02X	33269-12	



1, 00:00:36, 4.21 m
Roots, fine at joint



2, 00:01:27, 16.26 m
Roots, fine at joint



3, 00:01:46, 21.87 m
Roots, fine at joint



4, 00:01:54, 23.84 m
Crack, longitudinal at 3 o'clock

Section Pictures - 08/12/2022 - MH02X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	Downstream	MH02X	33269-12	



5, 00:02:16, 28.22 m
Crack, longitudinal at 8 o'clock



6, 00:02:49, 33.27 m
Crack, longitudinal at 4 o'clock



7, 00:03:19, 38.55 m
Roots, fine at joint

Section Inspection - 08/12/2022 - Gully14X

Item No. 16	Insp. No. 1	Date 08/12/22	Time 11:45	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY14X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY14
Road:	A596	Inspected Length:	58.48 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	60.48 m	Downstream Node:	OUTFALL04
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

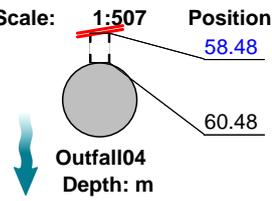
Recommendations:

Scale:	1:507	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
Gully14							
		0.00	GY	Start node, gully, reference: Gully14	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:13		
		1.37	FL	Fracture, longitudinal at 12 o'clock	00:00:19	1	3 / 2
		3.07	S01 RFJ	Roots, fine at joint, start	00:00:29	2	
		3.79	RM	Roots, mass, 40% cross-sectional area loss	00:00:33	3	5
		6.32	F01 RFJ	Roots, fine at joint, finish	00:00:58		2
		10.67	LR	Line deviates right: Entering a main line	00:01:11		
		10.67	SC	Pipe size changes, new size(s), 225mm high	00:01:11		
		26.64	FM	Fractures, multiple from 12 o'clock to 12 o'clock	00:03:32	4	4 / 2
		41.68	FC	Fracture, circumferential from 12 o'clock to 12 o'clock	00:04:40	5	3 / 2
		43.88	FM	Fractures, multiple from 12 o'clock to 12 o'clock	00:04:48	6	4 / 2
		47.56	LR	Line deviates right	00:04:55		
		56.97	WL	Water level, 20% of the vertical dimension	00:07:26		
		57.54	WL	Water level, 30% of the vertical dimension	00:07:30		
		58.46	CUW	Loss of vision, camera under water	00:07:56		

Section Inspection - 08/12/2022 - Gully14X

Item No. 16	Insp. No. 1	Date 08/12/22	Time 11:45	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY14X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Scale:	Position [m]	Code	Observation	MPEG	Photo	Grade
1:507	58.48	SA	Survey abandoned: 2 metres short of Outfall04	00:08:43		
	60.48		End of pipe			



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	80.0	4.0	240.0	4.0	6	10.0	0.3	18.0	5.0

Section Pictures - 08/12/2022 - Gully14X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	Downstream	GULLY14X	33269-12	



1, 00:00:19, 1.37 m
Fracture, longitudinal at 12 o'clock



2, 00:00:29, 3.07 m
Roots, fine at joint, start



3, 00:00:33, 3.79 m
Roots, mass, 40% cross-sectional area loss



4, 00:03:32, 26.64 m
Fractures, multiple from 12 o'clock to 12 o'clock

Section Pictures - 08/12/2022 - Gully14X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	Downstream	GULLY14X	33269-12	



5, 00:04:40, 41.68 m
Fracture, circumferential from 12 o'clock to 12 o'clock



6, 00:04:48, 43.88 m
Fractures, multiple from 12 o'clock to 12 o'clock

Section Inspection - 08/12/2022 - Gully22X

Item No. 17	Insp. No. 1	Date 08/12/22	Time 12:13	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY22X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY22
Road:	A596	Inspected Length:	7.33 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	7.33 m	Downstream Node:	GULLY15
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:

Recommendations:

Scale:	1:64	Position [m]	Code	Observation	MPEG	Photo	Grade
	Depth: m						
	Gully15						
	0.00	GY		Start node, gully, reference: Gully15	00:00:00		
	0.00	WL		Water level, 5% of the vertical dimension	00:00:01		
	0.75	FC		Fracture, circumferential from 9 o'clock to 3 o'clock	00:00:14	1	3 / 2
	1.43	MCCI		Pipe material changes to cast iron at this point	00:00:20		
	7.33	GYF		Finish node, gully, reference: Gully22	00:00:44		
	Gully22						
	Depth: m						

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	40.0	5.5	40.0	3.0	1	1.0	0.1	1.0	2.0

Section Pictures - 08/12/2022 - Gully22X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
17	Upstream	GULLY22X	33269-12	



1, 00:00:14, 0.75 m
Fracture, circumferential from 9 o'clock to 3 o'clock

Section Inspection - 08/12/2022 - Gully15X

Item No. 18	Insp. No. 1	Date 08/12/22	Time 12:29	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY15X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY15
Road:	A596	Inspected Length:	8.67 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	8.67 m	Downstream Node:	GULLY16
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:



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

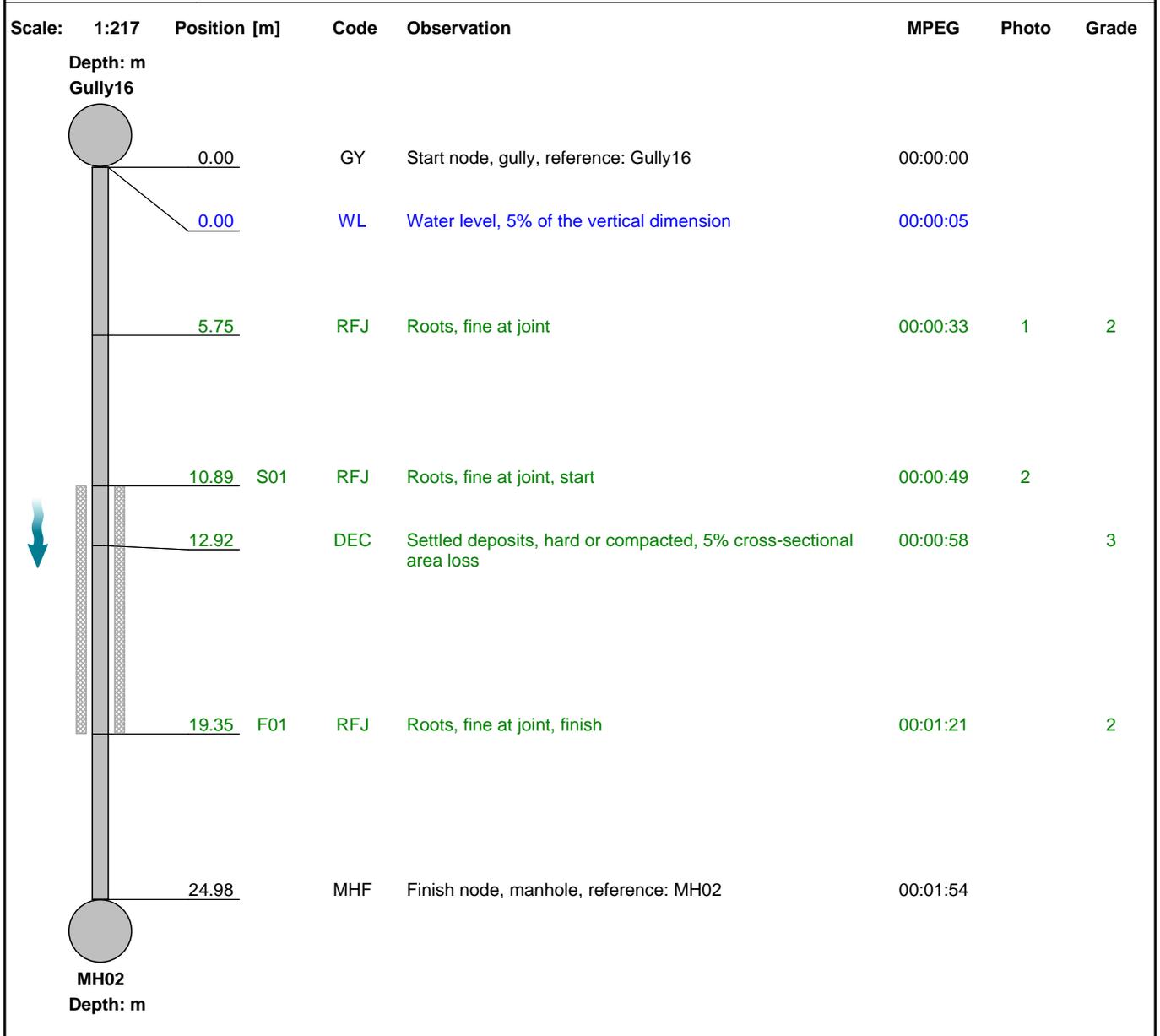
Section Inspection - 08/12/2022 - Gully16X

Item No. 19	Insp. No. 1	Date 08/12/22	Time 12:42	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY16X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY16
Road:	A596	Inspected Length:	24.98 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	24.98 m	Downstream Node:	MH02
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

Recommendations:



Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	3	2.0	0.5	12.0	3.0

Section Pictures - 08/12/2022 - Gully16X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
19	Downstream	GULLY16X	33269-12	



1, 00:00:33, 5.75 m
Roots, fine at joint



2, 00:00:49, 10.89 m
Roots, fine at joint, start

Section Inspection - 08/12/2022 - Blank EndX

Item No. 20	Insp. No. 1	Date 08/12/22	Time 13:39	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR BLANK ENDX
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	BLANK END
Road:	A596	Inspected Length:	31.69 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	31.69 m	Downstream Node:	GULLY17
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale: 1:275	Position [m]	Code	Observation	MPEG	Photo	Grade			
Depth: m									
Gully17									
	0.00	GY	Start node, gully, reference: Gully17	00:00:00					
	0.00	WL	Water level, 5% of the vertical dimension	00:00:14					
	0.60	LR	Line deviates right	00:00:14					
	4.36	CXI	Connection defective, connecting pipe is intruding at 10 o'clock, 100mm dia, intrusion: 20%	00:00:33	1	4			
	11.19	RFJ	Roots, fine at joint	00:00:57	2	2			
	13.11	RFJ	Roots, fine at joint	00:01:03	3	2			
	29.18	JN	Junction at 3 o'clock, 150mm dia	00:01:51					
	29.58	RFJ	Roots, fine at joint	00:01:52	4	2			
	31.41	JN	Junction at 3 o'clock, 150mm dia, from Gully09	00:02:03					
Blank End	31.69	OCF	Finish node, other special chamber, reference: Blank End: Blank End	00:02:13					
Construction Features				Miscellaneous Features					
Structural Defects				Service & Operational Observations					
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	4	5.0	0.3	8.0	4.0

Section Pictures - 08/12/2022 - Blank EndX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
20	Upstream	BLANK ENDX	33269-12	



1, 00:00:33, 4.36 m
Connection defective, connecting pipe is intruding at 10 o'clock, 100mm dia, intrusion: 20%



2, 00:00:57, 11.19 m
Roots, fine at joint



3, 00:01:03, 13.11 m
Roots, fine at joint



4, 00:01:52, 29.58 m
Roots, fine at joint

Section Inspection - 08/12/2022 - Gully17X

Item No. 21	Insp. No. 1	Date 08/12/22	Time 14:42	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY17X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY17
Road:	A596	Inspected Length:	36.95 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	74.45 m	Downstream Node:	GULLY19
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:645	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully17	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:02		
		7.55	S01 RFJ	Roots, fine at joint, start	00:01:03	1	
		21.54	FCJ	Fracture, circumferential at joint from 9 o'clock to 10 o'clock	00:01:54		3 / 2
		21.54	FCJ	Fracture, circumferential at joint from 2 o'clock to 4 o'clock	00:01:54	2	3 / 2
		24.02	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:02:01		
		28.71	RM	Roots, mass, 20% cross-sectional area loss	00:02:17	3	5
		35.36	S02 RM	Roots, mass, 40% cross-sectional area loss, start	00:02:39	4	
		36.38	F01 RFJ	Roots, fine at joint, finish	00:03:19		2
		36.38	F02 RM	Roots, mass, 40% cross-sectional area loss, finish	00:03:19		5
		36.38	RM	Roots, mass, 70% cross-sectional area loss	00:03:19	5	5
		36.95	SA	Survey abandoned: Due to roots	00:03:27		
		74.45		End of pipe			

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	80.0	2.2	80.0	3.0	6	25.0	2.1	76.0	5.0

Section Pictures - 08/12/2022 - Gully17X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
21	Downstream	GULLY17X	33269-12	



1, 00:01:03, 7.55 m
Roots, fine at joint, start



2, 00:01:54, 21.54 m
Fracture, circumferential at joint from 2 o'clock to 4 o'clock



3, 00:02:17, 28.71 m
Roots, mass, 20% cross-sectional area loss



4, 00:02:39, 35.36 m
Roots, mass, 40% cross-sectional area loss, start

Section Pictures - 08/12/2022 - Gully17X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
21	Downstream	GULLY17X	33269-12	



5, 00:03:19, 36.38 m
Roots, mass, 70% cross-sectional area loss

Section Inspection - 08/12/2022 - Gully18X

Item No. 22	Insp. No. 1	Date 08/12/22	Time 14:50	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY18X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY18
Road:	A596	Inspected Length:	1.82 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	1.82 m	Downstream Node:	MAIN
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Material:	Vitrified clay
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully18	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:03		
		1.82	OCF	Finish node, other special chamber, reference: Main: Main	00:00:21		

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

Section Pictures - 09/12/2022 - Gully17X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
23	Upstream	GULLY17X	33269-12	



1, 00:00:29, 3.84 m
Roots, fine at joint



2, 00:00:33, 5.03 m
Roots, fine at joint, start



3, 00:00:48, 7.80 m
Roots, mass, 70% cross-sectional area loss

Section Inspection - 09/12/2022 - Gully19X

Item No. 24	Insp. No. 1	Date 09/12/22	Time 9:39	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY19X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY19
Road:	A596	Inspected Length:	42.27 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	47.33 m	Downstream Node:	GULLY21
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale: 1:410	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m Gully19	0.00	GY	Start node, gully, reference: Gully19	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:01:19		
	2.52	MCCI	Pipe material changes to cast iron at this point	00:00:23		
	15.54	MVCV	Pipe material changes to vitrified clay at this point	00:01:02		
	20.46	WL	Water level, 10% of the vertical dimension	00:01:19		
	20.48	JN	Junction at 9 o'clock, 150mm dia	00:01:20		
	20.97	RFJ	Roots, fine at joint	00:01:22	1	2
	23.44	RFJ	Roots, fine at joint	00:01:30	2	2
	29.15	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:02:04		
	29.15	JDL	Joint displaced, large	00:02:04	3	1 / 4
	31.50	S01	RFJ	00:02:22	4	
	42.26	F01	RFJ	00:03:35		2
	42.27	RTJ	Roots, tap at joint	00:03:18	5	4
	42.27	SA	Survey abandoned: To x-camera	00:03:37		
Gully21 Depth: m	47.33		End of pipe			

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.0	2.0	1.0	5	5.0	0.5	23.0	4.0

Section Pictures - 09/12/2022 - Gully19X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
24	Downstream	GULLY19X	33269-12	



1, 00:01:22, 20.97 m
Roots, fine at joint



2, 00:01:30, 23.44 m
Roots, fine at joint



3, 00:02:04, 29.15 m
Joint displaced, large



4, 00:02:22, 31.50 m
Roots, fine at joint, start

Section Pictures - 09/12/2022 - Gully19X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
24	Downstream	GULLY19X	33269-12	



5, 00:03:18, 42.27 m
Roots, tap at joint

Section Inspection - 09/12/2022 - Gully20X

Item No. 25	Insp. No. 1	Date 09/12/22	Time 9:48	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY20X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY20
Road:	A596	Inspected Length:	2.22 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	2.22 m	Downstream Node:	MAIN
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	Not Specified				
Inspection Purpose:	Sample condition survey				

Comments:

Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m Gully20					
		0.00	GY	Start node, gully, reference: Gully20	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:02		
		2.22	OCF	Finish node, other special chamber, reference: Main: Main Line	00:00:47		
		Main Depth: m					

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 09/12/2022 - Gully19X

Item No. 26	Insp. No. 1	Date 09/12/22	Time 9:58	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY19X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY19
Road:	A596	Inspected Length:	25.16 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	47.33 m	Downstream Node:	GULLY21
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:410	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully21	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:03		
		2.02	S01 RFJ	Roots, fine at joint, start	00:00:25	1	
		5.06	REM	General remark: Point of x-camera	00:00:49		
		5.06	RTJ	Roots, tap at joint	00:00:49	2	4
		16.06	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:01:31		
		16.39	F01 RFJ	Roots, fine at joint, finish	00:01:31		2
		18.53	JDL	Joint displaced, large	00:01:40	3	1 / 4
		18.53	MCVC	Pipe material changes to vitrified clay at this point	00:01:40		
		25.16	SA	Survey abandoned: Extent of survey required	00:02:17		
		47.33		End of pipe			

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.0	2.0	1.0	3	5.0	0.5	25.0	4.0

Section Pictures - 09/12/2022 - Gully19X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
26	Upstream	GULLY19X	33269-12	



1, 00:00:25, 2.02 m
Roots, fine at joint, start



2, 00:00:49, 5.06 m
Roots, tap at joint



3, 00:01:40, 18.53 m
Joint displaced, large

Section Inspection - 09/12/2022 - Gully21X

Item No. 27	Insp. No. 1	Date 09/12/22	Time 10:07	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY21X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY21
Road:	A596	Inspected Length:	9.06 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	9.06 m	Downstream Node:	MH03
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Cast iron		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:79	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	GY	Start node, gully, reference: Gully21	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:05		
		1.76	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:00:43		
		2.23	MCCI	Pipe material changes to cast iron at this point	00:00:48		
		9.06	CPF	Finish node, catchpit, reference: MH03: Buried	00:01:39		

Construction Features

Miscellaneous Features

Structural Defects

Service & Operational Observations

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 09/12/2022 - Gully21X

Item No. 28	Insp. No. 1	Date 09/12/22	Time 11:51	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY21X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Downstream	Upstream Node:	GULLY21
Road:	A596	Inspected Length:	46.70 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	46.70 m	Downstream Node:	GULLY22
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:

Scale: 1:405	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	GY	Start node, gully, reference: Gully21	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	1.30	S01 RF	Roots, fine, start	00:00:35	1	
	46.14	F01 RF	Roots, fine, finish	00:03:16		2
	46.70	GYF	Finish node, gully, reference: Gully22	00:03:44		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	1.0	1.0	45.0	2.0

Section Pictures - 09/12/2022 - Gully21X

Item No. 28	Inspection Direction Downstream	PLR GULLY21X	Client's Job Ref 33269-12	Contractor's Job Ref
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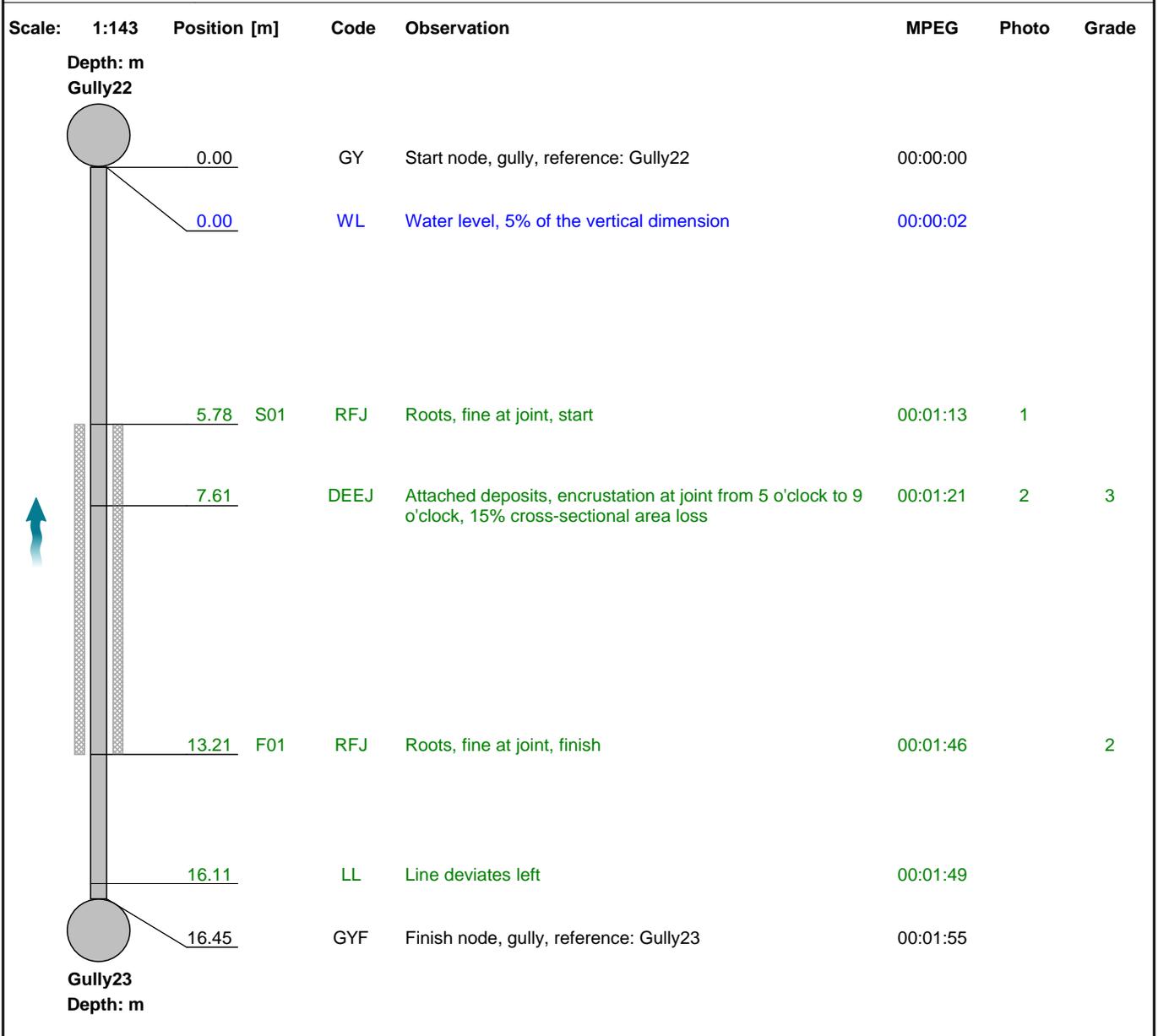
1, 00:00:35, 1.30 m
Roots, fine, start

Section Inspection - 09/12/2022 - Gully23X

Item No. 29	Insp. No. 1	Date 09/12/22	Time 12:03	Client's Job Ref 33269-12	Weather No Rain Or Snow	Pre Cleaned Yes	PLR GULLY23X
Operator ST		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	Maryport	Inspection Direction:	Upstream	Upstream Node:	GULLY23
Road:	A596	Inspected Length:	16.45 m	Upstream Pipe Depth:	
Location:	Road	Total Length:	16.45 m	Downstream Node:	GULLY22
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations:



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	2	2.0	0.6	10.0	3.0

Section Pictures - 09/12/2022 - Gully23X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
29	Upstream	GULLY23X	33269-12	

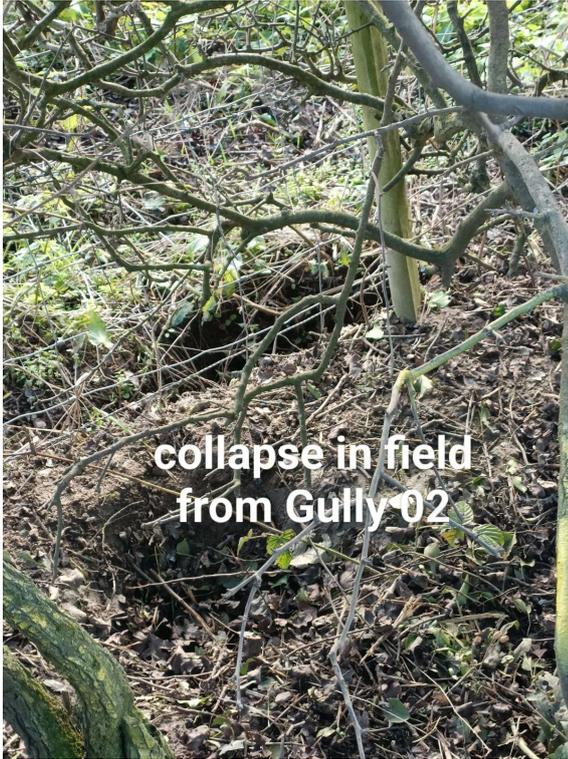


1, 00:01:13, 5.78 m
Roots, fine at joint, start

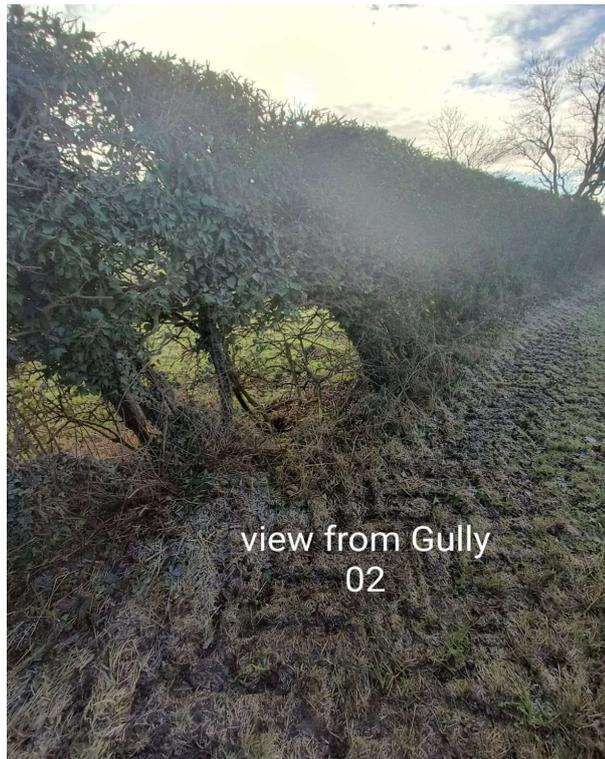


2, 00:01:21, 7.61 m
Attached deposits, encrustation at joint from 5 o'clock to 9 o'clock, 15% cross-sectional area loss

SURVEY PHOTOS



**collapse in field
from Gully 02**



**view from Gully
02**

Appendix 5: Legislation & Info

Flood and Water Management Act 2010:

<http://www.legislation.gov.uk/ukpga/2010/29/contents>

Water Resources Act 1991:

<http://www.legislation.gov.uk/all?title=water%20resources%20act>

Land Drainage Act:

<http://www.legislation.gov.uk/all?title=land%20drainage%20act>

Highways Act 1980:

<http://www.legislation.gov.uk/all?title=highways%20act>

EA – ‘Living on the Edge’ a guide to the rights and responsibilities of riverside occupation:

<http://www.environment-agency.gov.uk/homeandleisure/floods/31626.aspx>

EA – ‘Prepare your property for flooding’ how to reduce flood damage including flood protection products and services:

<http://www.environment-agency.gov.uk/homeandleisure/floods/31644.aspx>

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