



FOUL AND SURFACE WATER DRAINAGE STRATEGY

FOR

**DEVELOPMENT AT
FORMER SMITHYBRIDGE PUB,
SMITHY BRIDGE, ROCHDALE**

ON BEHALF OF

ARMSTRONG PROJECTS LTD

ARP ASSOCIATES

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Foul and Surface Water Drainage Strategy for Development at Former Smithybridge Pub

NW149/02r2b

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1.0 INTRODUCTION

- 1.1 Armstrong Projects Ltd is proposing a residential development on the site of the former Smithybridge Pub, Smithy Bridge, Rochdale OL15 0DY. To support the planning application and assist with the appraisal of the site, a Foul and Surface Water Drainage Strategy is required to outline the proposed means of sustainably managing foul effluent and surface water runoff from the development.
- 1.2 ARP Associates have been appointed to carry out a Foul and Surface Water Drainage Strategy for the development, implement appropriate consultations and prepare a report to satisfy the requirements of the Planning Authority.
- 1.3 The consultations and site appraisal for this assessment were carried out between January and May 2021. The strategy has been refreshed in April 2023 to reflect minor design development changes to the proposals.
- 1.4 The report has been initially prepared for the use and reliance of the Client only. The report shall not be relied upon or transferred to any other parties without the written agreement of ARP Associates. For the avoidance of any doubt, where ARP Associates enters into a letter of reliance for the benefit of a third party, that third party will be permitted to rely on the report. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party without ARP Associates consent.
- 1.5 Attention is drawn to the requirements of the Construction Design and Management Regulations 2015, and in particular, the duties and obligations of the Client.

2.0 SITE DESCRIPTION

General

- 2.1 The site, which is centred on Ordnance Survey Grid Reference 392740, 415160, is located off Smithy Bridge Road, in Rochdale.
- 2.2 A site location plan and aerial photograph are presented in Appendix A.
- 2.3 A walkover survey was conducted on 2nd February 2021. Details obtained from the walkover survey, and information obtained from review of other available sources, is discussed below.
- 2.4 The site is irregular in shape, with an area of approximately 0.12 hectares. The site has overall dimensions of approximately 55m (north - south) by 25m (east - west).

Current Use

- 2.5 Publicly available aerial and 'street view' images have been assessed in conjunction with the site walkover. The centre of the site is currently occupied by a brick building (the former Smithy Bridge Pub), with bitmac hardstanding to the north, south and east of the building. A small landscaped area is present to the west of the building.
- 2.6 The building is constructed from brick and stone, with ceramic roofing tiles. The building is generally in poor condition, with broken windows, and darkened areas possibly indicating minor fire damage.
- 2.7 The site currently has vehicular access at two locations off Bridgenorth Drive to the west.

Topography

- 2.8 A topographical survey of the site was undertaken in December 2020. A copy of the topographical survey plan is included in Appendix B for reference.
- 2.9 From the survey it can be seen that the site itself is broadly flat, with external levels of between approximately 149.7mAOD and 150.0mAOD. Along the east of the site is a large concrete retaining wall up to approximately 3.0-4.0m in height. There is a smaller retaining wall along the south-eastern boundary of the site, with Smithy Bridge Road elevated above the site by up to 1.4m, and a set of steps providing pedestrian access to the site from Smithy Bridge Road.
- 2.10 Levels in Smithy Bridge Road fall from east to west past the site, such that the level of the highway at its junction with Bridgenorth Drive is similar to the level of the site. Bridgenorth Drive is relatively flat adjacent to the site, then falls slightly to the north just past the site. The area surrounding the site slopes generally down to the southwest.

Site Boundaries and Surrounding Land Use

- 2.11 The site boundary is formed by low stone walls on the south and west, by dense hedgerow on the north and a concrete retaining structure on the east. The site is bounded to the west by Bridgenorth Drive and to the south by Smithy Bridge Road. To the east of the site there is a church community centre with charity shop, just beyond the retaining wall. A car park is present to the north and a patio area is between the building and the retaining wall.

Hydrology

- 2.12 There are no watercourses within or adjacent to the site. Review of Ordnance Survey mapping suggests the nearest waterbody is the Rochdale Canal (a Canal & River Trust asset). This is approximately 60m north-west of the site at the nearest point. Smithy Bridge Road is bridged over the canal, and the canal is therefore some metres, lower than the site. Beyond this, the

River Roch is located approximately 270m north-west of the site, over 10m lower in elevation than the site.

Existing Drainage

- 2.13 United Utilities public sewer records (Appendix E) indicate a 300mm diameter combined public sewer flows west past the site along Smithy Bridge Road. This is joined by a 300mm diameter combined public sewer which flows south past the site along Bridgenorth Road, before continuing towards the west. A further combined public sewer, 375mm in diameter, flows west past the site on the opposite side of Smithy Bridge Road, and is similarly joined by a 675mm diameter combined public sewer which flows south past the site along Bridgenorth Road, before continuing towards the west.
- 2.14 A survey of the existing on-site drainage was undertaken by IWJS in March 2021, and a copy of the survey report and plan is provided in Appendix C for reference. The survey confirmed that the existing site is served by a comprehensive foul and surface water drainage system, with flows discharging, via a combined connection, to an existing manhole located on the 300mm diameter combined public sewer in Bridgenorth Drive. It is noted that the final pipe connecting the site to the public sewer was found to have a sag in it, causing a backfall at the downstream end.

3.0 CONSULTATION

Environment Agency

- 3.1 Formal consultation with the Environment Agency has not been undertaken as the site is not located in an area shown to be at significant risk of fluvial flooding, and the Environment Agency do not provide advice on drainage matters. However, publicly available Environment Agency data has been reviewed for reference, and extracts from relevant online Environment Agency mapping are presented in Appendix D for reference.
- 3.2 The Environment Agency Flood Map for Planning shows areas of land that may flood from rivers or the sea to be shaded blue. These areas do not take into account defences, as water can overtop them or the defences can fail in extreme conditions. The Flood Zone classifications are:-
- Flood Zone 1 - "Low Probability" is assessed as having a less than 1 in 1,000 annual probability of river or sea flooding in any year (less than 0.1%).
- Flood Zone 2 - "Medium Probability" is assessed as having between a 1 in 100 and 1 in 1,000 annual probability of river flooding in any year (1% - 0.1%) and between a 1 in 200 and 1 in 1,000 annual probability of flooding from the sea (0.5% - 0.1%).
- Flood Zone 3 - "High Probability" is assessed as having a 1 in 100 or greater annual probability of river flooding in any year (greater than 1%) and a 1 in 200 chance or greater annual probability of flooding from the sea (less than 0.5%).
- 3.3 The Flood Map for Planning confirms that the site is located entirely within Flood Zone 1, and therefore at a low probability of fluvial flooding.

3.4 The Environment Agency provide a map on their website showing the likelihood of flooding from surface water which shows areas at risk of flooding from surface water flow paths or surface water ponding. The classifications of risk for surface water flooding are as follows:-

Very low - This area has a chance of flooding of less than 1 in 1000 (0.1%) in any given year.

Low - This area has a chance of flooding between 1 in 1000 (0.1%) and 1 in 100 (1%) in any given year.

Medium - This area has a chance of flooding between 1 in 100 (1%) and 1 in 30 (3.3%) in any given year.

High - This area has a chance of flooding greater than 1 in 30 in any given year (annual probability of flooding 3.3%).

3.5 The Environment Agency Risk of Flooding from Surface Water map suggests that the majority of the site is at a 'very low' risk of flooding from surface water. However, a small area in the south-west of the site is highlighted as being at 'low' risk of pluvial flooding.¹

Water Authority

3.6 Consultation was undertaken with United Utilities, which is the Water Authority for this area, and a copy of the response, reference 4200037735 and dated 9th March 2021, is presented in Appendix E for reference. Further correspondence with United Utilities was subsequently undertaken to confirm a number of points, and a copy of the additional response, dated 14th April 2021, is also presented in Appendix E.

¹ The flood risk area within the site appears to be linked to a surface water flow route following the local topography along Smithy Bridge Road, with the flood map suggesting any surface water accumulating on Smithy Bridge Road in this locality flows through the south-west of the site and onwards into Bridge North Drive. However, the flood mapping does not take account of the presence of features such as walls, which would, in reality, prevent water from flowing into the site from Smithy Bridge Road. When reviewed against the topographical survey, it can be seen that surface water flowing west along Smithy Bridge Road would be expected to either flow onto Bridgenorth Drive or continue to flow along Smithy Bridge Road. No flood water would be expected to flow into the site due to the physical features along the boundary.

- 3.7 The Water Authority confirmed that foul water domestic waste can discharge to the combined sewer at an unrestricted rate and at any convenient connection point. United Utilities initially suggested the preferred point of connection would be the 675mm combined public sewer in Bridgenorth Drive. However, having noted that the existing site discharges to the 300mm combined sewer, it was confirmed that discharge to this asset, including using the existing connection, would be acceptable.
- 3.8 In respect of surface water, reference is made to the hierarchy of surface water disposal set out in NPPF, which requires consideration to be given to discharge by infiltration, to a surface waterbody, before considering a surface water sewer or highway drain, and finally a combined sewer, in that priority order.
- 3.9 Evidence on infiltration potential (discussed further in Section 6) was presented to United Utilities and it was accepted that infiltration is not considered feasible on this site.
- 3.10 With reference to the discharge hierarchy, United Utilities advised that consideration should be given to a discharge of surface water to the Rochdale Canal to the west of the site. The feasibility of this has been discussed further with both the Lead Local Flood Authority (LLFA) and United Utilities and has subsequently been discounted, as discussed further in Section 6. United Utilities has confirmed agreement with this (Appendix E).
- 3.11 In its initial consultation response, United Utilities also recommended the potential of surface water discharge to any existing highway drainage systems be considered by investigation. Again, the feasibility of this was subsequently discussed further with both the LLFA and United Utilities and has subsequently been discounted. This is discussed further in Section 6. United Utilities has confirmed agreement with this (Appendix E).
- 3.12 United Utilities confirmed that, subject to providing evidence that the above options can be discounted, surface water discharge can be made to the 300mm combined sewer in Bridgenorth drive, including using the existing connection.

Lead Local Flood Authority

- 3.13 Preliminary consultation with Rochdale Council, which is the Lead Local Flood Authority (LLFA) for this area, has been undertaken to confirm the local requirements for the management of surface water and confirm key principles.
- 3.14 A guidance document was provided by the LLFA setting out requirements for the reduction of surface water runoff from development sites, and a copy of this guidance is included in Appendix F for reference. The guidance confirms that a reduction of 50% on the existing 'Qbar' (1 in 2.3 year) brownfield runoff rate is required for brownfield sites.
- 3.15 The feasibility of the potential for discharge of surface water to the Rochdale Canal and/or any existing highway drainage system, as suggested by United Utilities, has been discussed with the LLFA and has been discounted (discussed further in Section 6).
- 3.16 The LLFA has reviewed calculations of existing surface water runoff rate and has provided a copy of its own calculation spreadsheet for comparison. The proposed surface water discharge rate, as set out in Section 6, has subsequently been agreed with the LLFA. This correspondence is included in Appendix F for reference.

4.0 CLIMATE CHANGE

- 4.1 NPPF requires that the projected impacts of climate change are taken into account over the lifetime of a development. Studies have projected that the global sea levels will continue to rise, and there will be an increase in river flows and rainfall intensity across the country, with the degree of change depending on greenhouse gas emissions and the sensitivity of the climate system.
- 4.2 Recommended allowances for assessment are set out in Environment Agency publication 'Flood risk assessments: climate change allowances' (published February 2016; last updated May 2022). Within this guidance, a regionalised approach is adopted to climate change impacts based upon the river Management Catchment within which the proposed development site falls, the intended design life of the development, the flood risk vulnerability of the proposed development, and the Flood Zone classification of the site.
- 4.3 The site is situated within the Irwell Management Catchment of the North West River Basin District. For residential development, climate change impacts over a design life of at least 100 years should be considered (taking the design life to 2124 assuming opening in 2024).
- 4.4 In accordance with the current guidance, the impacts of the "upper end" climate change scenario (95th percentile of potential scenarios) should be considered with regards to rainfall intensity, where the development lifetime extends to between 2061 and 2025. Within this Management Catchment, this is predicted to lead to an increase in rainfall intensity of up to 40% in the 1 in 30 year (3.33% annual exceedance probability) rainfall event, and up to 45% in the 1 in 100 year (1% annual exceedance probability) rainfall event.
- 4.5 The above allowances have been considered in relation to the surface water drainage systems serving the development, such that the capacity of the surface water drainage system would be expected to remain robust over the lifetime of the development and will not lead to an increase in flood risk in the future.

5.0 DEVELOPMENT PROPOSALS

- 5.1 The development proposals for the site are for the demolition of the existing structure, and construction of a single block of apartments, comprising 14 residential units over three floors. Parking and landscaping will surround the building, with vehicular access to the site being from Bridgenorth Drive.
- 5.2 The development proposals are illustrated in the Proposed Site Plan in Appendix G.

6.0 SURFACE WATER DRAINAGE

6.1 It is a requirement of the NPPF to ensure that surface water run-off from any proposed development has negligible consequence on downstream areas, either in terms of impact upon downstream sewer capacity or flood risk impacts due to discharge to a watercourse. The existing and proposed surface water run-off regime is considered below.

6.2 This section should be read in conjunction with the ARP Private Drainage Layout plan (NW149/02/03), which has been prepared to illustrate the proposals.

Existing Surface Water Run-off

6.3 As set out above, the site is currently 'brownfield', and is served by an existing combined drainage system. As demonstrated by the drainage survey, surface water from the existing site is currently discharged to the combined public sewer system in Bridgenorth Drive via the on-site combined system of drainage.

6.4 In order to estimate the existing surface water runoff from the site to the combined public sewer via the existing connection, an estimate of the existing impermeable area on site has been undertaken. From the topographical survey it can be seen that the majority of the site is impermeable, with the exception of a relatively small landscaped area to the east of the existing building, and on this basis the existing impermeable area is approximately 0.116ha.

6.5 The Rational Method has been utilised to estimate the potential existing run-off from the site, based on estimates of rainfall intensity calculated using the FSR method. However, it must be recognised that the rate of discharge from the site may also be limited by the capacity of the outgoing pipe. The capacity of the pipe at the downstream end of the system has therefore been estimated using the Colebrook-White formula. Using a combination of these methods, an estimate of the existing surface water discharge rate to the combined sewer was determined for a range of return period events. The full calculations are included in Appendix J for

reference. The resulting estimated existing surface water discharge rate to the combined public sewer is summarised in Table 1.

Table 1. Estimated Existing Surface Water Discharge

Return Period	Estimated Runoff Rate (l/s)
1 in 1	8.5
1 in 2	10.9
1 in 30	12.6 *
1 in 100	12.6 *

* Limited by pipe capacity

Proposed Surface Water Runoff Destination

- 6.6 The proposed means of managing surface water runoff from the proposed development has been considered with respect to the hierarchy set out in Building Regulations Part H (2010) as follows.
- 6.7 Infiltration - Consideration of the proposed means of surface water drainage should firstly be given to infiltration techniques (to ground). The potential for use of infiltration has been considered by ARP Geotechnical, as detailed within the Soakaway Feasibility Assessment report (reference NW149/02/DMBnml1, dated March 2021) which is included in Appendix H for reference. The report concludes that, in light of the underlying ground conditions, coupled with the shallow groundwater table across the site, the use of soakaway drainage is not a viable option for the development.
- 6.8 Watercourse – As infiltration is unfeasible, discharge to a watercourse is considered to be the next most favourable option. However, as set out in Section 2, there are no watercourses within, or adjacent, to the site. For clarity, the nearest waterbody to the site is the Rochdale Canal (a Canal & River Trust asset), which is located approximately 60m north-west of the site, with the River Roch located approximately 270m north-west of the site at the closest point.

- 6.9 Construction of a new outfall to the canal would require significant works in public highway and/or third-party land outside of the site, and would require the consent and license from the Canal & River Trust. As the site is served by an existing positive surface water drainage system with proven outfall to the public sewer, and as there is an opportunity to provide betterment by a reduction of the current surface water discharge rate (discussed below), it is considered disproportionate to construct a new outfall to the canal to serve the development.
- 6.10 The LLFA has confirmed that it does not consider the canal to be a ‘watercourse’ as per the hierarchy defined in Building Regulations Part H, and that it does not expect the developer to pursue investigations into this option as it is not considered practical or proportionate. On this basis United Utilities has confirmed that connection to a watercourse does not require further consideration.
- 6.11 Surface Water Public Sewer – There are no existing surface water public sewers within the roads or land surrounding the site, therefore this option has not been considered further.
- 6.12 Highway Drain - The LLFA is not aware of a separate system of highway drainage and notes that local highway gullies are expected to connect to the combined sewer system. Also, there is no watercourse within the vicinity of the site which could support a discharge from a separate highway drainage system. On this basis United Utilities has confirmed that this option does not require further consideration.
- 6.13 Combined Public Sewer – On the above basis, as surface water from the existing site currently discharges to the combined public sewer, the continued discharge of surface water from the proposed development to this combined sewer is proposed. However, the discharge will be made at a restricted rate such that the proposed development will significantly reduce runoff to the combined public sewer (discussed further below). This has been agreed with United Utilities and the LLFA. It should be noted that the development drainage will be constructed as separate surface water and foul water systems, only combining prior to outfall into the public system.

Proposed Rate of Surface Water Discharge

- 6.14 As discussed above, it is proposed that surface water from the proposed development will be discharged via a connection to the combined public sewer in Bridgenorth Drive, at the same point as the existing connection from site. With reference to the requirements of the LLFA, the proposed rate of discharge will be based on a 50% reduction of the existing 'Qbar' (1 in 2.3 year) brownfield runoff from the site. As a conservative approach, the existing 1 in 2 year runoff has been taken as the benchmark and reduced by 50% to give a proposed surface water discharge rate of 5.5l/s.
- 6.15 The LLFA and United Utilities have confirmed that a discharge at this rate is acceptable.

Proposed Surface Water Drainage

- 6.16 The proposed development layout has been assessed as having a proposed impermeable area of approximately 0.091ha, based on the masterplan (Appendix G). The ARP Impermeable Areas Plan drawing (NW149/02/09) shows the catchment areas of the proposed surface water drainage network.
- 6.17 The proposed surface water system has been designed to accommodate a 1 in 30 year plus 40% climate change allowance storm event without flooding, and to accommodate the 1 in 100 year plus 45% climate change allowance storm event without causing flooding of property or third-party land. A surface water drainage design has been prepared as shown in the ARP Private Drainage Layout plan (NW149/02/03). Drainage calculations have been prepared using the Causeway Flow computer program and these are presented in Appendix J for reference.
- 6.18 The calculations show that, when restricting the discharge rate to no greater than 5.5l/s, on-site storage for a 1 in 100 year plus 45% climate change event can be accommodated by means of storage in the 350mm deep granular sub-base beneath the proposed parking spaces, which provides a total storage volume of approximately 18.6m³, as indicated in the ARP Private

Drainage Layout plan (NW149/02/03). Additional storage is also provided in a 450mm diameter pipe running the length of the car park, upstream of the flow control.

Exceedance Flow Routes

- 6.19 For rainfall events in excess of the design standard (i.e. greater than 1 in 100 year plus climate change event) the capacity of the drainage system is likely to be exceeded. There also remains a residual risk of flows leaving the surface water drainage system in the event of a blockage.
- 6.20 So that exceedance flows do not adversely affect properties on or off site, site levels have been designed to direct flows from hard-paved areas away from building entrances, so that any flooding remains in areas where the consequences of surface water flooding would be less significant. The exceedance flow routing is indicated in the ARP Exceedance Flow Routing Plan (NW149/02/07), where it can be seen that the majority of exceedance flows would be retained in the car parking areas around the north and east of the site, with some exceedance flows leaving the site onto the adjacent highway to the east, where flows would continue to follow the fall of the highway towards the canal, and would not be expected to lead to a detrimental impact off-site.

Sustainable Drainage Systems (SuDS)

- 6.21 NPPF requires that SuDS are implemented in 'major development', if feasible. It must be recognised that not all types of SuDS are feasible or appropriate for all development sites, with factors such as available space, ground conditions, and site gradient influencing the feasibility of their use.
- 6.22 As discussed above, the use of infiltration drainage systems is not considered feasible on this site due to geological conditions. The available space (constrained by the requirement for parking provision and the building itself) is not conducive to the provision of a detention basin or other open SuDS features such as swales. However, the use of permeable paving in parking

areas has been proposed (with an under-drain system due to no infiltration), with surface water storage within the granular sub-base beneath.

Surface Water Quality

- 6.23 Appropriate measures will be incorporated in the surface water drainage system to mitigate the risk of contaminated runoff from the site causing adverse impacts on surface water bodies downstream.
- 6.24 A significant proportion of run-off from the proposed development will be from the proposed building roof, which is considered to be relatively 'clean' surface water run-off, and would be expected to have a very low level of potential contamination. On this basis no specific treatment for this run-off is proposed, except for suitable leaf debris traps and silt traps.
- 6.25 Runoff from areas subject to vehicular traffic may contain suspended solids, metals and hydrocarbons. However, as these areas of the site are limited to the residential parking and access, the risk to downstream water quality is unlikely to be significant.
- 6.26 It is also noted that surface water will be discharged to the combined public sewer, and will therefore be robustly treated prior to any discharge to watercourse, thus providing a further level of protection against downstream water quality impacts.
- 6.27 However, as a precautionary approach, the surface water drainage system for the proposed parking area has been designed in accordance with the risk-based approach outlined in CIRIA C753 The SuDS Manual. For the purpose of this Drainage Strategy, the 'simple index approach' has been used to make a preliminary assessment of the likely pollution hazard and the likely requirements for mitigation.
- 6.28 The SuDS Manual sets out the 'Pollution Hazard Indices' for different proposed land uses. Table 2 summarises the applicable indices for the proposed development (based on Table 26.2 of the SuDS Manual).

Table 2. Pollution Hazard Indices for Proposed Development

Proposed Land Use	Pollution Hazard Level	Pollution Hazard Index		
		Total Suspended Solids	Metals	Hydro-carbons
Driveways, residential car parks, low traffic roads, non-residential car parks with infrequent changeover	Low	0.5	0.4	0.4

6.29 To achieve appropriate pollution mitigation, the selected SuDS components should have a total ‘Mitigation Index’ equal to or greater than the ‘Pollution Hazard Index’ for each contaminant.

6.30 The SuDS Manual sets out the ‘Mitigation Index’ for different SuDS components. Table 3 summarises the applicable indices for the proposed SuDS components (based on Table 26.3 of The SuDS Manual).

Table 3. Mitigation Indices for Proposed SuDS

Proposed SuDS Component	Mitigation Index		
	Total Suspended Solids	Metals	Hydro-carbons
Permeable pavement	0.7	0.6	0.7

6.31 From comparison of the above tables, it can be seen that the mitigation index for each type of pollutant is equal to or greater than the hazard indices for the proposed development. On this basis the proposed SuDS strategy is considered to be appropriate in providing mitigation for water quality impacts.

7.0 FOUL DRAINAGE

- 7.1 This section sets out the proposed means of managing foul discharge from the development. It should be read in conjunction with the ARP Private Drainage Layout plan (NW149/02/03), which has been prepared to illustrate the proposals.
- 7.2 As per the advice of United Utilities, foul water domestic waste from the proposed development will be discharged to the 300mm diameter combined public sewer in Bridgenorth Drive. The existing point of connection to the combined sewer shall be retained, but the final pipe will be re-laid to remove the existing sag which was identified by the drainage survey.
- 7.3 As noted above, the development drainage will be constructed as separate surface water and foul water systems, only combining prior to outfall into the public system.

8.0 MAINTENANCE

- 8.1 There is a residual risk of flooding from drainage systems in the event of siltation or a blockage occurring. It is therefore essential that all drainage systems are subject to periodic inspection and maintenance, so that the design standard is not compromised, and to reduce the risk of blockage.
- 8.2 It is envisaged that responsibility for the surface water and foul drainage outfall pipe (connecting to the public sewer) beyond the site boundary will lie with United Utilities (via Section 106 sewer connection agreements).
- 8.3 Responsibility for the ongoing inspection and maintenance of the remainder of the drainage systems on this development is expected to remain the responsibility of the site/building owner or to be transferred to a management company.
- 8.4 An appropriate inspection and maintenance plan document will be required, to be implemented by the responsible party, using suitably qualified professionals where necessary. However, an indicative draft 'Drainage Maintenance and Management Plan' has been prepared at this stage to outline the likely requirements for maintenance for agreement with the LLFA, and this is included in Appendix K for reference. The plan shall be finalised and agreed with the LLFA prior to occupation.

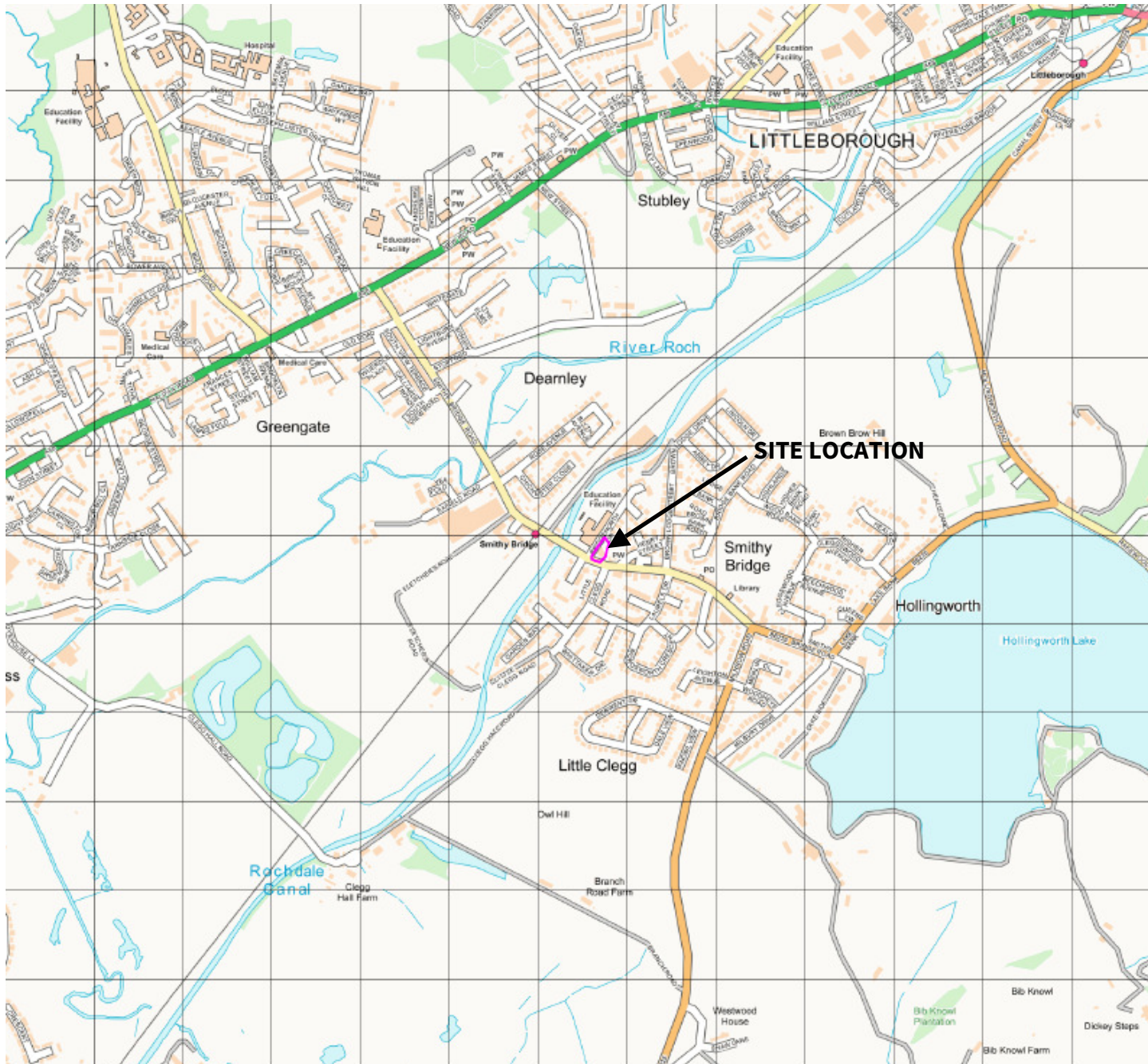
9.0 SUMMARY

- 9.1 The principles of a sustainable surface water management strategy for the proposed development are set out within the report. It has been determined that infiltration techniques are unsuitable on this particular site, and the construction of a new outfall to the Rochdale Canal would be disproportionate. It is therefore proposed that surface water will be discharged to the combined public sewer in Bridgenorth Drive, to the west of the site, as per the existing site, and this has been agreed in principle with United Utilities and the LLFA.
- 9.2 It is proposed that the surface water discharge will be attenuated to a maximum rate of 5.5l/s, which provides a 50% reduction on the estimated existing brownfield rate of runoff from the site (currently to the combined public sewer) during the 1 in 2 year event, and accords with the requirements of both United Utilities and the LLFA.
- 9.3 Surface water storage will be provided within the granular sub-base of the proposed permeable parking areas within the site, to manage surface water up to the 1 in 100 year plus climate change event before discharge to the sewer. A 45% increase in rainfall intensity has been incorporated into the proposals to account for the projected impacts of climate change.
- 9.4 Foul water domestic waste from the proposed development will be discharged to the 300mm diameter combined public sewer in Bridgenorth Drive.
- 9.5 The drainage systems on site shall be separate up until the final demarcation chamber which shall be a combined chamber. The existing point of connection to the combined sewer shall be retained, but the final combined discharge pipe will be re-laid to remove the existing sag which was identified by the drainage survey.
- 9.6 The proposed strategy is illustrated in the ARP Private Drainage Layout plan (NW149/02/03), and supporting calculations are included in Appendix J for reference.

- 9.7 Suitable maintenance regimes will be required for proposed drainage infrastructure. An indicative draft plan has been prepared, but details of the maintenance plan will be confirmed and agreed with the LLFA prior to occupation.
- 9.8 The findings of this report are subject to the approval of the Regulatory Authorities. The detailed design and calculations shall be submitted to the Planning Authority for approval prior to construction on the development site.
- 9.9 As required by the Local Planning Authority, a copy of the 'North West SuDS Proforma' has been completed for the proposed development, and is included in Appendix L for reference.
- 9.10 Subject to compliance with the above, the proposed development can satisfy the requirements of the National Planning Policy Framework and the Planning Practice Guidance in relation to surface water management and foul drainage.

APPENDIX A

SITE LOCATION PLAN AND AERIAL IMAGE



0m 500m
Approximate Scale



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Project **SMITHY BRIDGE PUB
SMITHYBRIDGE
ROCHDALE**

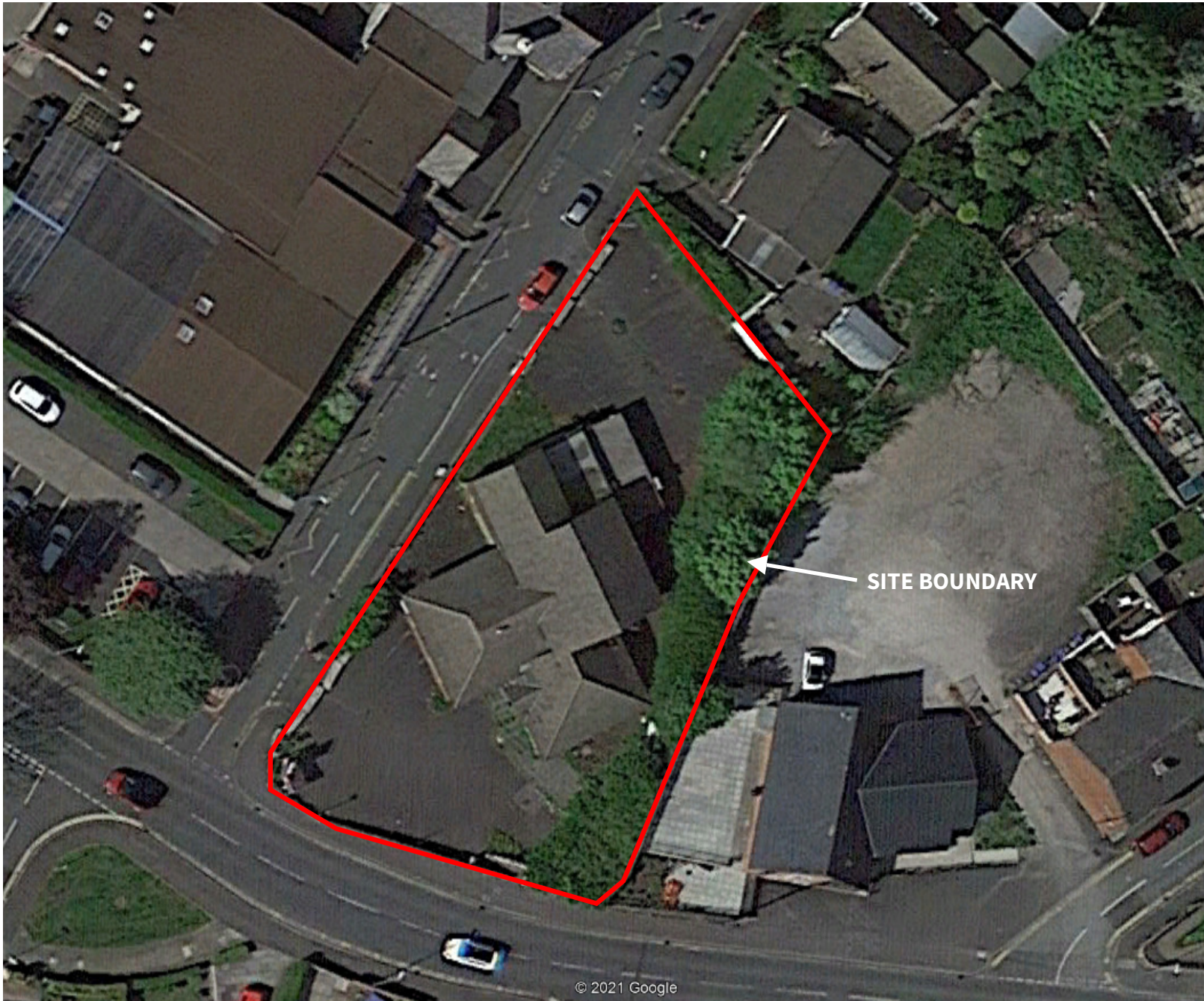
Client
ARMSTRONG PROJECTS LTD

Title
SITE LOCATION PLAN

Date
MARCH 2021

Drawn DMB	Scale AS SHOWN
---------------------	--------------------------

Job No.
NW149/02



0m 15m
Approximate Scale



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Project **SMITHY BRIDGE PUB**
SMITHYBRIDGE
ROCHDALE

Client
ARMSTRONG PROJECTS LTD

Title
AERIAL PHOTOGRAPH

Date
MARCH 2021

Drawn DMB	Scale AS SHOWN
---------------------	--------------------------

Job No. NW149/02

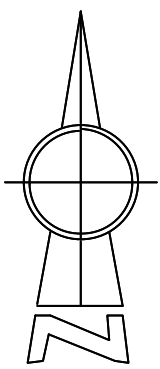
APPENDIX B

TOPOGRAPHICAL SURVEY

ABBREVIATIONS

MH.	Manhole
GU.	Gully
FH.	Fire Hydrant
CATV.	Cable Television Point
WM.	Water Meter
WSV.	Water Stop Valve
GSV.	Gas Stop Valve
RE.	Rodding Eye
GU.	Gully
LP.	Lamp Post
TP.	Telegraph Pole
EP.	Electricity Pole
SP.	Sign Post
TS.	Traffic Sign
BS.	Bus Stop
GM.	Gas Marker

Station	Easting	Northing	Level
J1	392726.621	415175.577	149.774
J2	392746.670	415188.435	149.795
J3	392752.006	415169.154	149.996
J4	392756.559	415153.105	149.949



N O T E S

ATTENTION IS DRAWN TO THE REQUIREMENTS OF THE CONSTRUCTION DESIGN AND MANAGEMENT REGULATIONS 2015 AND THE DUTIES AND RESPONSIBILITIES CONTAINED THEREIN

- Do not scale from this drawing.
- Topographical survey undertaken by PD Site Surveys on behalf of ARP (North West) Ltd. Date of survey 15/12/2020.
- Survey based on OS Grid and Level as surveyed with GPS OS GB36-15. Grid set at 25m - contours set at 500mm.
- This survey shows physical site boundaries only. Confirmation of legal ownership boundaries should be obtained by reference to the H.M. Land Registry Title Plan. Every effort is made to identify all visible above ground features. However, it should be borne in mind that there may be items obscured at the time of survey.
- The contractor is to check and verify all building and site dimensions, levels and sewer invert levels at connection points before work starts. Should there be any conflict between the details indicated on this drawing and those indicated on other drawings, the engineer should be informed prior to construction on site.

SYMBOL LEGEND

	Borehole		Pylon
	Benchmark		Rodding Eye
	Bollard		BT Exchange Box
	Bus Stop		Sign Post
	Electric Box		Spot Height
	Electricity Pole		Eave Level
	Fence Post		Ridge Level
	Gas Stop Valve		Stile
	Gate Post		Survey Station
	Gas Marker		Traffic Camera
	Gully Drain		Telephone Box
	Electric Inspection Cover		Trial Pit
	Kerb Outlet		Telegraph Pole
	Litter Bin		Deciduous Tree
	BT Inspection chamber		Road Sign
	Lamp Post		GATE
	Manhole Point		Fire Hydrant
	MH Triangular		Water Meter
	MH Square		Letter Box
	MH Round		CATV Inspection Chamber
	Marker Post		Water Stop Valve

LINETYPE LEGEND

	Bridge
	Bottom of Bank
	Building
	Canopy Edge
	Concrete Edge
	Ditch
	Drop Kerb
	Overhead Cable
	Grid
	Tactile Paver
	Kerb
	Path
	Pipe Line
	Foul Sewer
	Surface Water Sewer
	Chanel Line
	Road Centre Line
	Tarmac Edge
	Top of Bank
	Track
	Wall
	Verge
	Flagstone Paving
	Stone
	Hedgeline
	Grass Edge
	Vegetation Line
	Post and Rail Fence
	Post and Wire Fence
	Contour Normal
	Contour Prominent

TITLE
TOPOGRAPHICAL SURVEY

PROJECT
SMITHYBRIDGE PUB
LITTLEBOROUGH

CLIENT
ARMSTRONG PROJECTS LTD

DRAWING STATUS
FOR INFORMATION

Scale	Date	Drawn	JC
1:125 @ A1	JAN 21	Chk.	MW
Drg. No.	NW149/02/00		Rev /

A P P E N D I X C

EXISTING DRAINAGE SURVEY



CCTV SURVEY INSPECTION REPORT

Client:	ARP Geotechnical Ltd
Location:	Smithybridge Pub, 43 Smithy Bridge Rd, Littleborough
Date:	26.03.2021



Industrial Water Jetting Systems Ltd

Dickens House, Old Stowmarket Road, Woolpit, Bury St. Edmunds IP22 9QS

Tel: 01359 242606 Fax: 01359 242 621
Web: www.iwjs.co.uk Email: surveys@iwjs.co.uk



Project

Project Name: 2021_03_17 ARP. Smithybridge Pub

Project Date: 17/03/2021

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

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2021_03_17 ARP. Smithybridge Pub		17/03/2021

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Project Information

Project Name	Project Number	Project Date
2021_03_17 ARP. Smithybridge Pub		17/03/2021

Client

Company: ARP Geotechnical Ltd
Contact: Matthew Wilson
Street: 5-6 Northwest Business Park
Town or City: Servia Hill, Leeds
County: Yorkshire
Post Code: LS6 2QH

Site

Company: ARP Geotechnical Ltd
Contact: Matthew Wilson
Street: Smithybridge Pub, 43 Smithy Bridge Rd
Town or City: Littleborough
County: Greater Manchester
Post Code: OL15 0DY
Mobile: 07307 849 396
Email: matthewwilson@arnorthwest.co.uk

Contractor

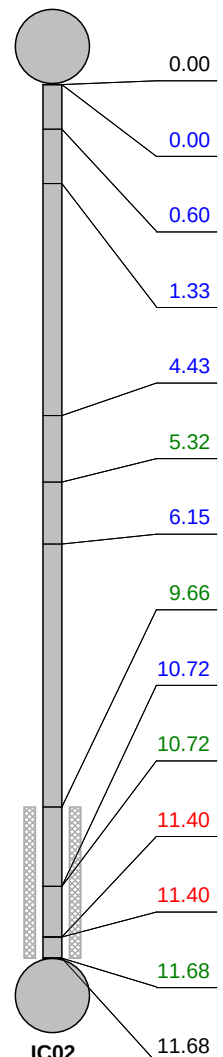
Company: IWJS
Contact: Sara Knight
Department: Account Executive
Street: Huntsman Drive, Northbank Industrial Park
Town or City: Irlam
County: Greater Manchester
Post Code: M44 5EG
Phone: 01274 924 580
Mobile: 07464529600
Email: Sara.knight@iwjs.co.uk

Section Inspection - 17/03/2021 - IC01X

Section	Inspection	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
1	1	17/03/21	11:50	Not Specified	No Rain Or Snow	No	IC01X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Roy Nelson		FL65 WZE		Pushrod	0.60 m	Private Sewer	Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	IC01
Road:	The Smithybridge Pub	Inspected Length:	11.68 m	Upstream Pipe Depth:	0.395 m
Location:	Property or buildings	Total Length:	11.68 m	Downstream Node:	IC02
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.030 m
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT
Recommendations:		CLICK TO OPEN THIS SECTION

Scale:	1:101	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 0.40 m IC01 							
		0.00	IC	Start node, inspection chamber, reference: IC01	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
		0.60	GP	General photograph taken at this point	00:00:01	IC01X_bff edaaf-491 0-402c-99f	
		1.33	WL	Water level, 10% of the vertical dimension	00:00:06		
		4.43	WL	Water level, 5% of the vertical dimension	00:00:26		
		5.32	LL	Line deviates left: Approx 45 degrees	00:00:31		
		6.15	GP	General photograph taken at this point	00:00:36	IC01X_93 491887-3c 86-4817-9f	
		9.66	S01 LD	Line deviates down, start: steep	00:00:54		
		10.72	GP	General photograph taken at this point	00:01:00	IC01X_16 4e1793-c6 0e-4484-9	
		10.72	LL	Line deviates left: Approx 20 degrees	00:01:00		
		11.40	FLJ	Fracture, longitudinal at joint at 11 o'clock	00:01:11		3 / 2
		11.40	FLJ	Fracture, longitudinal at joint at 1 o'clock	00:01:11		3 / 2
		11.68	F01 LD	Line deviates down, finish: steep	00:01:15		
		11.68	ICF	Finish node, inspection chamber, reference: IC02	00:01:15	IC01X_fae 65e3b-d66 d-42b9-bd	
Depth: 1.03 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
2	80.0	0.0	80.0	3.0	2	2.0	0.0	2.0	3.0

Section Pictures - 17/03/2021 - IC01X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Downstream	IC01X		



IC01X_bffedaaf-4910-402c-99f7-d0e334cd5fe1_20210326_100658_049.jpg, 00:00:01, 0.60 m
General photograph taken at this point



IC01X_93491887-3c86-4817-9fa4-894a7640107e_20210326_101325_149.jpg, 00:00:36, 6.15 m
General photograph taken at this point



IC01X_164e1793-c60e-4484-99d6-fb5d9f011dcc_20210326_101401_637.jpg, 00:01:00, 10.72 m
General photograph taken at this point



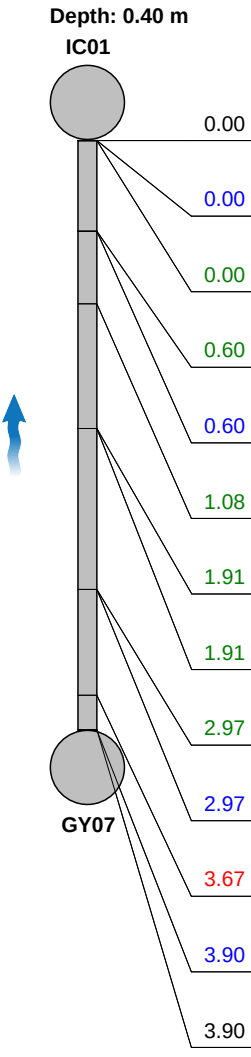
IC01X_fae65e3b-d66d-42b9-bde6-6874127e1edd_20210326_101607_541.jpg, 00:01:15, 11.68 m
Finish node, inspection chamber, reference: IC02

Section Inspection - 17/03/2021 - GY07X

Section 2	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR GY07X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.60 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	GY07
Road:	The Smithybridge Pub	Inspected Length:	3.90 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.90 m	Downstream Node:	IC01
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	0.395 m
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
						
	0.00	IC	Start node, inspection chamber, reference: IC01	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.00	LU	Line deviates up	00:00:00		
	0.60	DES	Settled deposits, fine, 10% cross-sectional area loss	00:00:00		3
	0.60	GP	General photograph taken at this point	00:00:00	GY07X_a1 97b9db-3f 21-46a5-a	
	1.08	DER	Settled deposits, coarse, 5% cross-sectional area loss	00:00:12		3
	1.91	DERJ	Settled deposits, coarse at joint, 10% cross-sectional area loss	00:00:17		3
	1.91	LR	Line deviates right: Approx 90 degrees	00:00:17		
	2.97	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:28		3
	2.97	GP	General photograph taken at this point	00:00:28	GY07X_b9 ff7f6a-d4b a-4225-bc	
	3.67	SS	Surface damage, spalling from 12 o'clock to 2 o'clock: At the joint	00:00:32		2
	3.90	REM	General remark: Syphon from gully	00:00:34		
	3.90	GYF	Finish node, gully, reference: GY07	00:00:34	GY07X_e3 f78160-28 ca-4f6f-a6	

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	20.0	33.3	20.0	2.0	4	2.0	13.3	8.0	5.0

Section Pictures - 17/03/2021 - GY07X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	Upstream	GY07X		



GY07X_a197b9db-3f21-46a5-a057-83edfd12c2de_20210326_101803_535.jpg, 00:00:00, 0.60 m
General photograph taken at this point



GY07X_b9ff7f6a-d4ba-4225-bcaf-fecb5ef973ec_20210326_101926_539.jpg, 00:00:28, 2.97 m
General photograph taken at this point



GY07X_e3f78160-28ca-4f6f-a6d9-405d2d6ae78b_20210326_102037_491.jpg, 00:00:34, 3.90 m
Finish node, gully, reference: GY07

Section Inspection - 17/03/2021 - IC01 U/S BX

Section	Inspection	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
3	1	17/03/21	11:50	Not Specified	No Rain Or Snow	No	IC01 U/S BX
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Roy Nelson		FL65 WZE		Pushrod	0.40 m	Private Sewer	Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC01 U/S B
Road:	The Smithybridge Pub	Inspected Length:	3.82 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.82 m	Downstream Node:	IC01
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	0.395 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT
Recommendations:		CLICK TO OPEN THIS SECTION

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 0.40 m IC01 						
	0.00	IC	Start node, inspection chamber, reference: IC01	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.40	GP	General photograph taken at this point	00:00:04	IC01 U_S BX_c4bf4e87-ed12-4	
	0.93	S01	RPL Point repair, localised lining from 12 o'clock to 12 o'clock, start	00:00:12	IC01 U_S BX_d01a7057-fa8b-4	
	1.74	S02	LU Line deviates up, start	00:00:19		
	2.28	LR	Line deviates right: Approx 30 degrees	00:00:22		
	3.34	F02	LU Line deviates up, finish	00:00:30		
	3.68	LR	Line deviates right: Approx 10 degrees	00:00:33		
	3.82	F01	RPL Point repair, localised lining from 12 o'clock to 12 o'clock, finish	00:00:35		
	3.82	LU	Line deviates up: Vertical	00:00:35		
	3.82	OCF	Finish node, other special chamber, reference: IC01 U/S B: Waste discharge point	00:00:35		
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 Pictures - 17/03/2021 - IC01 U/S BX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Upstream	IC01 U/S BX		



IC01 U_S
BX_c4bf4e87-ed12-4168-8fc1-2ba682eca3b3_20210326_1027
19_989.jpg, 00:00:04, 0.40 m
General photograph taken at this point



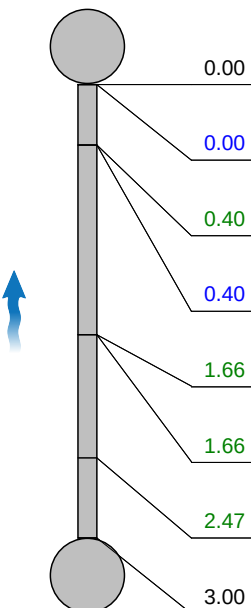
IC01 U_S
BX_d01a7057-fa8b-4ee8-9392-acd33942c42b_20210326_103
016_752.jpg, 00:00:12, 0.93 m
Point repair, localised lining from 12 o'clock to 12 o'clock, start

Section Inspection - 17/03/2021 - IC01 U/S CX

Section 4	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC01 U/S CX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC01 U/S C
Road:	The Smithybridge Pub	Inspected Length:	3.00 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.00 m	Downstream Node:	IC01
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	0.395 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 0.40 m IC01  IC01 U/S C						
	0.00	IC	Start node, inspection chamber, reference: IC01	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.40	LR	Line deviates right: slight	00:00:00		
	0.40	GP	General photograph taken at this point	00:00:00	IC01 U_S CX_253f7 ec9-8de0-	
	1.66	LR	Line deviates right: Approx 30 degrees	00:00:13		
	1.66	LU	Line deviates up	00:00:13		
	2.47	LU	Line deviates up: Vertical	00:00:19		
	3.00	OCF	Finish node, other special chamber, reference: IC01 U/S C: Waste discharge point	00:00:25	IC01 U_S CX_9a79e 9b9-b9a3-	

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 Pictures - 17/03/2021 - IC01 U/S CX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Upstream	IC01 U/S CX		



IC01 U_S
CX_253f7ec9-8de0-4d41-86f0-ab6e9564c929_20210326_104
622_508.jpg, 00:00:00, 0.40 m
General photograph taken at this point



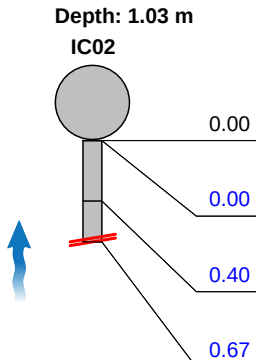
IC01 U_S
CX_9a79e9b9-b9a3-42cf-b09a-94b395639466_20210326_104
922_040.jpg, 00:00:25, 3.00 m
Finish node, other special chamber, reference: IC01 U/S C,
Waste discharge point

Section Inspection - 17/03/2021 - IC02 U/S DX

Section 5	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC02 U/S DX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC02 U/S D
Road:	The Smithybridge Pub	Inspected Length:	0.67 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	0.67 m	Downstream Node:	IC02
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.030 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
							
		0.00	IC	Start node, inspection chamber, reference: IC02	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
		0.40	GP	General photograph taken at this point	00:00:00	IC02 U_S DX_4d300 f2d-fa71-4	
		0.67	SA	Survey abandoned: Capped off Not in use	00:00:10	IC02 U_S DX_981bf d3d-3bfb-4	

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 - 17/03/2021 - IC02 U/S DX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
5	Upstream	IC02 U/S DX		



IC02 U_S
DX_4d300f2d-fa71-47ca-85cc-0aafb8d3c54a_20210326_1050
09_927.jpg, 00:00:00, 0.40 m
General photograph taken at this point



IC02 U_S
DX_981bfd3d-3bfb-4873-b6a9-a4d86b7b5449_20210326_105
043_537.jpg, 00:00:10, 0.67 m
Survey abandoned, Capped off Not in use

Section Inspection - 17/03/2021 - IC02 U/S CX

Section 6	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC02 U/S CX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC02 U/S C
Road:	The Smithybridge Pub	Inspected Length:	8.38 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	8.38 m	Downstream Node:	IC02
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.030 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

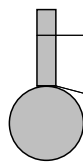
Comments:		
Recommendations:		

Scale:	1:67	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.03 m							
IC02		0.00	IC	Start node, inspection chamber, reference: IC02	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
		0.40	GP	General photograph taken at this point	00:00:00	IC02 U_S CX_c05dc a78-e744-	
		0.40	LL	Line deviates left: Approx 10 degrees	00:00:00		
		0.40	LU	Line deviates up: slight	00:00:00		
		0.40	JDM	Joint displaced, medium: Band seal visible	00:00:00		1 / 3
		3.28	LR	Line deviates right: Approx 20 degrees	00:00:20		
		3.28	MCCI	Pipe material changes to cast iron at this point	00:00:20		
		3.28	S01 SCP	Surface damage, corrosion products from 12 o'clock to 12 o'clock, start	00:00:20		
		5.70	GP	General photograph taken at this point	00:00:34	IC02 U_S CX_f40f73 d4-74ac-4	
		7.04	DEZJ	Attached deposits, other at joint from 2 o'clock to 8 o'clock, 5% cross-sectional area loss: grout	00:00:39		3
		7.04	MCVC	Pipe material changes to vitrified clay at this point	00:00:39		
		7.04	F01 SCP	Surface damage, corrosion products from 12 o'clock to 12 o'clock, finish	00:00:39		1
		7.45	CN	Connection other than junction at 12 o'clock, diameter: 25mm	00:00:42	IC02 U_S CX_70b95 ca6-0eb4-	
		7.47	FLJ	Fracture, longitudinal at joint at 12 o'clock	00:00:43		3 / 2

Section Inspection - 17/03/2021 - IC02 U/S CX

Section 6	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC02 U/S CX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Scale:	1:67	Position [m]	Code	Observation	MPEG	Photo	Grade
		7.93	LU	Line deviates up: Vertical	00:00:45		
		8.38	OCF	Finish node, other special chamber, reference: IC02 U/S C: Waste discharge point	00:00:54	IC02 U_S CX_02fdb 13b-785b-	



IC02 U/S C

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
3	45.0	0.0	61.0	3.0	3	3.0	0.0	5.0	3.0

Section Pictures - 17/03/2021 - IC02 U/S CX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
6	Upstream	IC02 U/S CX		



IC02 U_S
CX_c05dca78-e744-4819-b1ed-a5d5036f9838_20210326_095
130_462.jpg, 00:00:00, 0.40 m
General photograph taken at this point



IC02 U_S
CX_f40f73d4-74ac-47b8-8c70-8ca3797d4c23_20210326_0956
17_417.jpg, 00:00:34, 5.70 m
General photograph taken at this point



IC02 U_S
CX_70b95ca6-0eb4-4064-962c-fb0f0544179a_20210326_095
853_176.jpg, 00:00:42, 7.45 m
Connection other than junction at 12 o'clock, diameter: 25mm



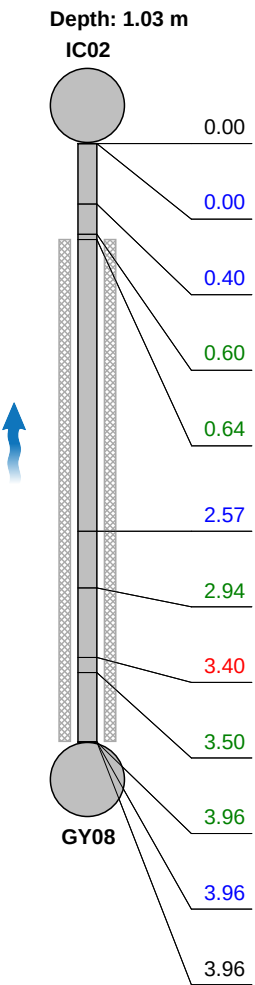
IC02 U_S
CX_02fdb13b-785b-42cd-8000-b0512d5cf0cf_20210326_1001
42_734.jpg, 00:00:54, 8.38 m
Finish node, other special chamber, reference: IC02 U/S C,
Waste discharge point

Section Inspection - 17/03/2021 - GY08X

Section 7	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR GY08X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	GY08
Road:	The Smithybridge Pub	Inspected Length:	3.96 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.96 m	Downstream Node:	IC02
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.030 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
						
	0.00	IC	Start node, inspection chamber, reference: IC02	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.40	GP	General photograph taken at this point	00:00:00	GY08X_eb 75e575-97 15-4534-9	
	0.60	LL	Line deviates left: Approx 45 degrees	00:00:11		
	0.64	S01	Settled deposits, hard or compacted, 5% cross-sectional area loss, start	00:00:16		
	2.57	GP	General photograph taken at this point	00:00:30	GY08X_da 1f80c1-b3 d6-40e5-8	
	2.94	LR	Line deviates right: Approx 90 degrees	00:00:32		
	3.40	SS	Surface damage, spalling from 8 o'clock to 11 o'clock: At the joint	00:00:37		2
	3.50	LL	Line deviates left: Approx 45 degrees	00:00:39		
	3.96	F01	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish	00:00:46		3
	3.96	REM	General remark: Syphon at gully pot is not visible due to angle.	00:00:46		
	3.96	GYF	Finish node, gully, reference: GY08	00:00:46	GY08X_f3 eb5e01-af b1-4d0c-9f	

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	20.0	0.0	20.0	2.0	1	2.0	0.0	8.0	3.0

Section Pictures - 17/03/2021 - GY08X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
7	Upstream	GY08X		



GY08X_eb75e575-9715-4534-94f6-f420e8364a0b_20210326_105238_660.jpg, 00:00:00, 0.40 m
General photograph taken at this point



GY08X_da1f80c1-b3d6-40e5-8a65-42b870347a63_20210326_110109_422.jpg, 00:00:30, 2.57 m
General photograph taken at this point



GY08X_f3eb5e01-afb1-4d0c-9f89-7dd39f4ae273_20210326_110633_738.jpg, 00:00:46, 3.96 m
Finish node, gully, reference: GY08

Section Inspection - 17/03/2021 - IC02 U/S BX

Section	Inspection	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
8	1	17/03/21	11:50	Not Specified	No Rain Or Snow	No	IC02 U/S BX
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID		
Roy Nelson	FL65 WZE	Pushrod	0.60 m	Private Sewer	Not Specified		

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC02 U/S B
Road:	The Smithybridge Pub	Inspected Length:	7.69 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	7.69 m	Downstream Node:	IC02
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.030 m
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT
Recommendations:		CLICK TO OPEN THIS SECTION

Scale:	1:67	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.03 m 							
		0.00	IC	Start node, inspection chamber, reference: IC02	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
		0.60	GP	General photograph taken at this point	00:00:00	IC02 U_S BX_1c2a95b0-b665-	
		0.60	S01	Line deviates up, start	00:00:02		
		0.84	LR	Line deviates right: slight	00:00:04		
		1.29	JN	Junction at 8 o'clock, diameter: 150mm	00:00:07	IC02 U_S BX_835b8aab-5741-	
		1.73	JN	Junction at 8 o'clock, diameter: 100mm	00:00:13	IC02 U_S BX_ff442f2-28d4-43	
		2.08	SS	Surface damage, spalling from 9 o'clock to 5 o'clock: At the joint	00:00:16		2
		2.71	F01	Line deviates up, finish	00:00:24		
		2.71	S02	Surface damage, corrosion products from 12 o'clock to 12 o'clock, start	00:00:24		
		2.71	MCCI	Pipe material changes to cast iron at this point	00:00:24	IC02 U_S BX_242ec4b5-9145-	
		5.18	GP	General photograph taken at this point	00:00:47	IC02 U_S BX_cdc80993-c9b6-	
		7.08	LU	Line deviates up: Vertical	00:01:00		
		7.69	F02	Surface damage, corrosion products from 12 o'clock to 12 o'clock, finish	00:01:13		1
		7.69	OCF	Finish node, other special chamber, reference: IC02 U/S B: Waste discharge point	00:01:13	IC02 U_S BX_d2a3e845-ad65-	

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	20.0	0.0	45.0	2.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/03/2021 - IC02 U/S BX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	Upstream	IC02 U/S BX		



IC02 U_S
BX_1c2a95b0-b665-4c5d-9fd2-bach2e39159b_20210326_110
711_484.jpg, 00:00:00, 0.60 m
General photograph taken at this point



IC02 U_S
BX_835b8aab-5741-41e1-9aac-735842a1afe5_20210326_110
753_842.jpg, 00:00:07, 1.29 m
Junction at 8 o'clock, diameter: 150mm



IC02 U_S
BX_ff442f2-28d4-438b-82ea-4f5a3b9cefeb_20210326_11081
1_071.jpg, 00:00:13, 1.73 m
Junction at 8 o'clock, diameter: 100mm



IC02 U_S
BX_242ec4b5-9145-4bb9-b8d8-355af8a53835_20210326_110
943_193.jpg, 00:00:24, 2.71 m
Pipe material changes to cast iron at this point

Section Pictures - 17/03/2021 - IC02 U/S BX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	Upstream	IC02 U/S BX		



IC02 U_S
BX_cdc80993-c9b6-4b3e-9047-55dade229b73_20210326_111
015_283.jpg, 00:00:47, 5.18 m
General photograph taken at this point



IC02 U_S
BX_d2a3e845-ad65-413e-8335-d81d7f5fc821_20210326_111
111_904.jpg, 00:01:13, 7.69 m
Finish node, other special chamber, reference: IC02 U/S B,
Waste discharge point

Section Inspection - 17/03/2021 - IC02X

Section	Inspection	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
9	1	17/03/21	11:50	Not Specified	No Rain Or Snow	No	IC02X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Roy Nelson		FL65 WZE		Pushrod	0.60 m	Private Sewer	Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	IC02
Road:	The Smithybridge Pub	Inspected Length:	11.25 m	Upstream Pipe Depth:	1.030 m
Location:	Property or buildings	Total Length:	11.25 m	Downstream Node:	IC03
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.420 m
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:



Scale:	1:97	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.03 m IC02							
		0.00	IC	Start node, inspection chamber, reference: IC02	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
		0.60	GP	General photograph taken at this point	00:00:00	IC02X_5b 5218fa-4d 9f-4e92-95	
		1.49	JN	Junction at 10 o'clock, diameter: 100mm	00:00:10	IC02X_36 4c3182-ee 9f-4bfb-a9	
		5.20	GP	General photograph taken at this point	00:00:35	IC02X_96 06513a-df 07-4c40-9	
		7.10	JN	Junction at 2 o'clock, diameter: 100mm	00:00:46	IC02X_6c7 172f1-f529 -4103-9b4	
		7.71	JN	Junction at 10 o'clock, diameter: 100mm	00:00:54	IC02X_8d dd73b6-77 aa-4340-bf	
		10.55	GP	General photograph taken at this point	00:01:10	IC02X_64 9e419c-12 4c-4f1e-81	
		11.13	DEEJ	Attached deposits, encrustation at joint from 1 o'clock to 5 o'clock, 5% cross-sectional area loss	00:01:14		3
		11.25	ICF	Finish node, inspection chamber, reference: IC03	00:01:16	IC02X_0d 4c0fe4-c70 e-42f3-b07	
				IC03			
				Depth: 1.42 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	1	2.0	0.0	2.0	3.0

Section Pictures - 17/03/2021 - IC02X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Downstream	IC02X		



IC02X_5b5218fa-4d9f-4e92-95a8-04225bfe15f4_20210326_112123_386.jpg, 00:00:00, 0.60 m
General photograph taken at this point



IC02X_364c3182-ee9f-4bfb-a9cb-aff01ec17db7_20210326_112159_505.jpg, 00:00:10, 1.49 m
Junction at 10 o'clock, diameter: 100mm



IC02X_9606513a-df07-4c40-9211-803555284ada_20210326_112343_543.jpg, 00:00:35, 5.20 m
General photograph taken at this point



IC02X_6c7172f1-f529-4103-9b40-56763bc648ec_20210326_112416_943.jpg, 00:00:46, 7.10 m
Junction at 2 o'clock, diameter: 100mm

Section Pictures - 17/03/2021 - IC02X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Downstream	IC02X		



IC02X_8ddd73b6-77aa-4340-bf19-cdd7b9f01124_20210326_1
12447_119.jpg, 00:00:54, 7.71 m
Junction at 10 o'clock, diameter: 100mm



IC02X_649e419c-124c-4f1e-8107-f98a7563e25f_20210326_1
12551_197.jpg, 00:01:10, 10.55 m
General photograph taken at this point



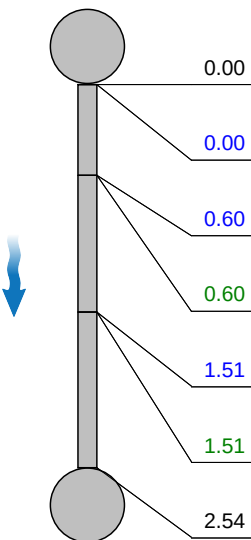
IC02X_0d4c0fe4-c70e-42f3-b07d-fe43837d78ff_20210326_11
2617_823.jpg, 00:01:16, 11.25 m
Finish node, inspection chamber, reference: IC03

Section Inspection - 17/03/2021 - IC03X

Section 10	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC03X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	IC03
Road:	The Smithybridge Pub	Inspected Length:	2.54 m	Upstream Pipe Depth:	1.430 m
Location:	Property or buildings	Total Length:	2.54 m	Downstream Node:	IC04
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT CLICK TO OPEN THIS SECTION
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.43 m IC03  IC04						
	0.00	IC	Start node, inspection chamber, reference: IC03	00:00:00		
	0.00	WL	Water level, 10% of the vertical dimension	00:00:00		
	0.60	GP	General photograph taken at this point	00:00:00	IC03X_f88 64313-051 5-4d69-b6	
	0.60	DER	Settled deposits, coarse, 10% cross-sectional area loss	00:00:04		3
	1.51	WL	Water level, 5% of the vertical dimension	00:00:14		
	1.51	LR	Line deviates right: slight	00:00:14		
	2.54	ICF	Finish node, inspection chamber, reference: IC04	00:00:27	IC03X_83f 4e0ee-2fd 8-4424-a3	

Depth: m

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

Section Pictures - 17/03/2021 - IC03X

Section 10	Inspection Direction Downstream	PLR IC03X	Client's Job Ref	Contractor's Job Ref
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IC03X_f8864313-0515-4d69-b666-fadb1a99beca_20210326_1
12735_797.jpg, 00:00:00, 0.60 m
General photograph taken at this point



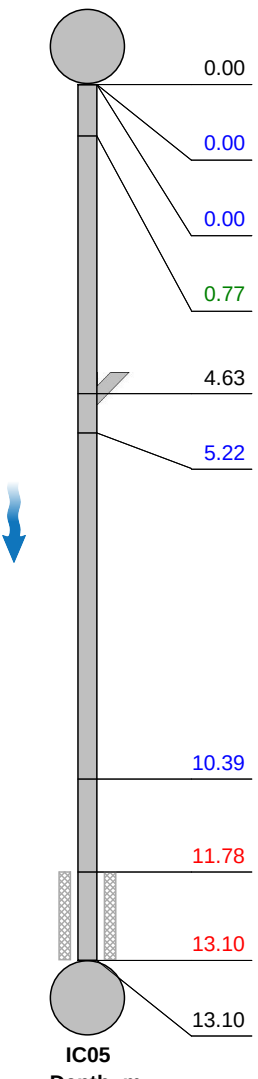
IC03X_83f4e0ee-2fd8-4424-a37d-eea1e018da35_20210326_1
12836_659.jpg, 00:00:27, 2.54 m
Finish node, inspection chamber, reference: IC04

Section Inspection - 17/03/2021 - IC04X

Section	Inspection	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
11	1	17/03/21	11:50	Not Specified	No Rain Or Snow	No	IC04X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Roy Nelson		FL65 WZE		Pushrod	0.00 m	Private Sewer	Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	IC04
Road:	The Smithybridge Pub	Inspected Length:	13.10 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	13.10 m	Downstream Node:	IC05
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT
Recommendations:		CLICK TO OPEN THIS SECTION

Scale:	1:113	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m IC04  IC05 Depth: m							
	0.00	IC	Start node, inspection chamber, reference: IC04	00:00:00			
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00			
	0.00	GP	General photograph taken at this point	00:00:00	IC04X_4a 0a36b9-1c 78-47b7-9		
	0.77	DECJ	Settled deposits, hard or compacted at joint, 5% cross-sectional area loss	00:00:08			3
	4.63	JN	Junction at 10 o'clock, diameter: 100mm	00:00:42	IC04X_8cc 0c8f9-525 7-4923-83f		
	5.22	GP	General photograph taken at this point	00:00:43	IC04X_73 127741-2e b4-43d4-8		
	10.39	GP	General photograph taken at this point	00:01:19	IC04X_d1 40ea32-a5 bf-43a0-a0		
	11.78	S01	SCP	Surface damage, corrosion products from 12 o'clock to 12 o'clock, start	00:01:26	IC04X_bb 2fe570-70 59-4250-9f	
	13.10	F01	SCP	Surface damage, corrosion products from 12 o'clock to 12 o'clock, finish	00:01:35		1
	13.10	ICF	Finish node, inspection chamber, reference: IC05	00:01:35	IC04X_3ca afd62-505 b-45ff-9d0		

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	5.0	0.0	10.0	1.0	1	2.0	0.0	2.0	3.0

Section Pictures - 17/03/2021 - IC04X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	Downstream	IC04X		



IC04X_4a0a36b9-1c78-47b7-9ef5-3f6af86b4ba1_20210326_1
12906_998.jpg, 00:00:00, 0.00 m
General photograph taken at this point



IC04X_8cc0c8f9-5257-4923-83f0-b68e224434c7_20210326_1
13209_390.jpg, 00:00:42, 4.63 m
Junction at 10 o'clock, diameter: 100mm



IC04X_73127741-2eb4-43d4-80d3-87a78fdee0f6_20210326_1
13019_099.jpg, 00:00:43, 5.22 m
General photograph taken at this point



IC04X_d140ea32-a5bf-43a0-a085-e15dd781f3f8_20210326_1
13255_926.jpg, 00:01:19, 10.39 m
General photograph taken at this point

Section Pictures - 17/03/2021 - IC04X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	Downstream	IC04X		



IC04X_bb2fe570-7059-4250-9fdb-52abdbfb31b6_20210326_1
13346_864.jpg, 00:01:26, 11.78 m
Surface damage, corrosion products from 12 o'clock to 12
o'clock, start



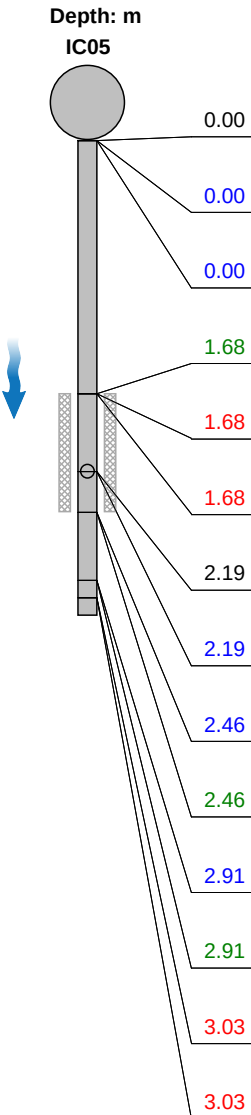
IC04X_3caafd62-505b-45ff-9d04-3c207b800e15_20210326_1
13409_657.jpg, 00:01:35, 13.10 m
Finish node, inspection chamber, reference: IC05

Section Inspection - 17/03/2021 - IC05X

Section 12	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC05X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.60 m	Legal Status Private Sewer	Alternative ID Not Specified

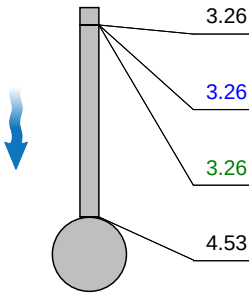
Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	IC05
Road:	The Smithybridge Pub	Inspected Length:	4.53 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	4.53 m	Downstream Node:	SD92157104
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
						
Depth: m						
IC05						
0.00	0.00	IC	Start node, inspection chamber, reference: IC05	00:00:00		
0.00	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
0.00	0.00	GP	General photograph taken at this point	00:00:00	IC05X_82 9f2e07-11 44-4736-b	
1.68	S01	LD	Line deviates down, start	00:00:12		
1.68		CL	Crack, longitudinal at 3 o'clock	00:00:12		2 / 2
1.68		CL	Crack, longitudinal at 12 o'clock	00:00:12		2 / 2
2.19		JN	Junction at 12 o'clock, diameter: 150mm	00:00:15		
2.19		WL	Water level, 10% of the vertical dimension	00:00:15		
2.46		WL	Water level, 20% of the vertical dimension	00:00:16		
2.46	F01	LD	Line deviates down, finish	00:00:16		
2.91		WL	Water level, 10% of the vertical dimension	00:00:39		
2.91		LU	Line deviates up: Slight backfall	00:00:39		
3.03		CLJ	Crack, longitudinal at joint at 10 o'clock	00:00:42		2 / 2
3.03		CLJ	Crack, longitudinal at joint at 12 o'clock	00:00:42		2 / 2

Section Inspection - 17/03/2021 - IC05X

Section 12	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC05X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.60 m	Legal Status Private Sewer	Alternative ID Not Specified

Scale: 1:50  SD92157104	Position [m]	Code	Observation	MPEG	Photo	Grade			
	3.26	JN	Junction at 6 o'clock, diameter: 150mm: Backdrop	00:00:44					
	3.26	WL	Water level, 5% of the vertical dimension	00:00:44					
	3.26	LU	Line deviates up: Backfall from backdrop to manhole chamber access point	00:00:44					
4.53	MHF	Finish node, manhole, reference: SD92157104: UU Asset	00:01:12	IC05X_afd 0d3a8-0ac 6-4f6c-a80					
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	0.0	40.0	2.0	4	2.0	0.0	4.0	3.0

Section Pictures - 17/03/2021 - IC05X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
12	Downstream	IC05X		



IC05X_829f2e07-1144-4736-ba59-2aec8c64bc2f_20210326_1
13437_203.jpg, 00:00:00, 0.00 m
General photograph taken at this point



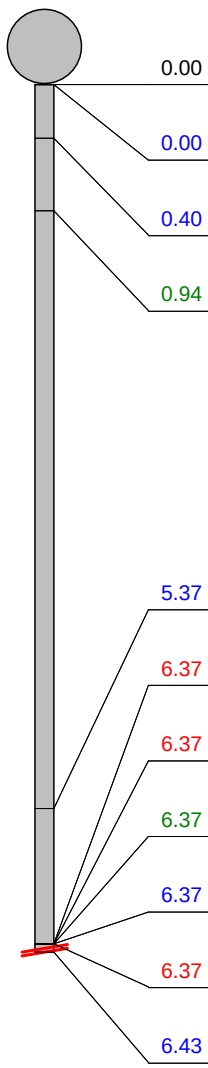
IC05X_afd0d3a8-0ac6-4f6c-a802-72de62750eb2_20210326_1
13913_060.jpg, 00:01:12, 4.53 m
Finish node, manhole, reference: SD92157104, UU Asset

Section Inspection - 17/03/2021 - IC03 U/S AX

Section 13	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC03 U/S AX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC03 U/S A
Road:	The Smithybridge Pub	Inspected Length:	6.43 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	6.43 m	Downstream Node:	IC03
Surface Type:		Joint Length:	3.00 m	Downstream Pipe Depth:	1.430 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:56	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.43 m IC03 						
	0.00	IC	Start node, inspection chamber, reference: IC03	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.40	GP	General photograph taken at this point	00:00:00	IC03 U_S AX_4c7db 823-06f6-4	
	0.94	LR	Line deviates right: Approx 90 degrees	00:00:07	IC03 U_S AX_9e3a0 a8c-97fe-4	
	5.37	GP	General photograph taken at this point	00:00:26	IC03 U_S AX_b5677 2ef-3dba-4	
	6.37	D	Deformed sewer or drain, 30%	00:00:31		4 / 4
	6.37	CC	Crack, circumferential from 9 o'clock to 12 o'clock	00:00:31		2 / 2
	6.37	DER	Settled deposits, coarse, 40% cross-sectional area loss: from hole	00:00:31		4
	6.37	REM	General remark: Assumed disused. No obvious location for an upstream connection	00:00:31		
	6.37	H	Hole in drain or sewer from 12 o'clock to 3 o'clock	00:00:31	IC03 U_S AX_eedd9 3d8-598c-	5
	6.43	SA	Survey abandoned: Deformed pipe with 40% debris from hole	00:00:39	IC03 U_S AX_f84d16 3a-9015-4	

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	255.0	0.0	255.0	5.0	3	11.0	0.0	11.0	5.0

Section Pictures - 17/03/2021 - IC03 U/S AX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	Upstream	IC03 U/S AX		



IC03 U_S
AX_4c7db823-06f6-49dd-ba08-d21253f20bf3_20210326_1148
42_228.jpg, 00:00:00, 0.40 m
General photograph taken at this point



IC03 U_S
AX_9e3a0a8c-97fe-463f-90c9-c8c96d97aafc_20210326_1150
41_713.jpg, 00:00:07, 0.94 m
Line deviates right, Approx 90 degrees



IC03 U_S
AX_b56772ef-3dba-4b96-8e86-91a19c9f51ca_20210326_1151
07_920.jpg, 00:00:26, 5.37 m
General photograph taken at this point



IC03 U_S
AX_eedd93d8-598c-4417-91fb-52df387d14ff_20210326_1153
22_382.jpg, 00:00:31, 6.37 m
Hole in drain or sewer from 12 o'clock to 3 o'clock

Section Pictures - 17/03/2021 - IC03 U/S AX

Section 13	Inspection Direction Upstream	PLR IC03 U/S AX	Client's Job Ref	Contractor's Job Ref
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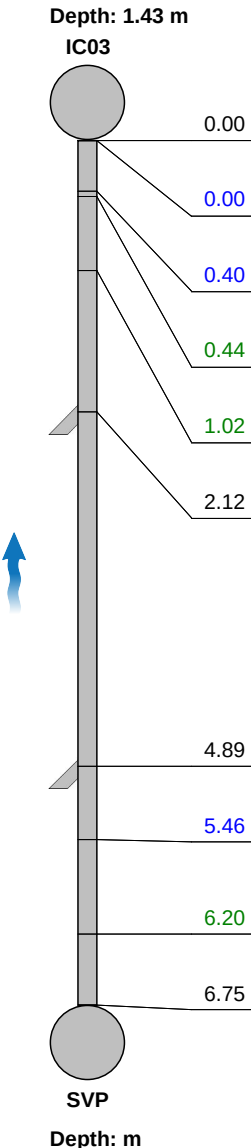
IC03 U_S
AX_f84d163a-9015-4487-ac1b-01b63cef9926_20210326_1155
17_773.jpg, 00:00:39, 6.43 m
Survey abandoned, Deformed pipe with 40% debris from hole

Section Inspection - 17/03/2021 - SVPX

Section 14	Inspection 1	Date 17/03/21	Time 11:50	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR SVPX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	SVP
Road:	The Smithybridge Pub	Inspected Length:	6.75 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	6.75 m	Downstream Node:	IC03
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.430 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale:	1:59	Position [m]	Code	Observation	MPEG	Photo	Grade
							
		0.00	IC	Start node, inspection chamber, reference: IC03	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
		0.40	GP	General photograph taken at this point	00:00:00	SVPX_fe8 68a87-72a 2-4fac-973	
		0.44	DEEJ	Attached deposits, encrustation at joint from 8 o'clock to 12 o'clock, 5% cross-sectional area loss	00:00:03		3
		1.02	DEEJ	Attached deposits, encrustation at joint from 9 o'clock to 5 o'clock, 5% cross-sectional area loss	00:00:07		3
		2.12	JN	Junction at 2 o'clock, diameter: 100mm	00:00:15	SVPX_731 bb806-471 4-4449-ae	
		4.89	JN	Junction at 2 o'clock, diameter: 100mm	00:00:33	SVPX_b0e be08b-677 f-423d-9e6	
		5.46	GP	General photograph taken at this point	00:00:40	SVPX_62b cf494-8c00 -4155-80b	
		6.20	LU	Line deviates up: Vertical	00:00:43		
		6.75	OCF	Finish node, other special chamber, reference: SVP: Soil stack	00:00:49	SVPX_a13 5fa71-76e d-44a6-9f8	

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	0.0	4.0	3.0

Section Pictures - 17/03/2021 - SVPX

Section 14	Inspection Direction Upstream	PLR SVPX	Client's Job Ref	Contractor's Job Ref
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SVPX_fe868a87-72a2-4fac-9739-69fe3592c8f4_20210326_115701_230.jpg, 00:00:00, 0.40 m
General photograph taken at this point



SVPX_731bb806-4714-4449-ae77-cf0db3dc7702_20210326_120422_045.jpg, 00:00:15, 2.12 m
Junction at 2 o'clock, diameter: 100mm



SVPX_b0ebe08b-677f-423d-9e63-7cb37e57115c_20210326_120450_924.jpg, 00:00:33, 4.89 m
Junction at 2 o'clock, diameter: 100mm



SVPX_62bcf494-8c00-4155-80bc-5146b88080fe_20210326_120527_157.jpg, 00:00:40, 5.46 m
General photograph taken at this point

Section Pictures - 17/03/2021 - SVPX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	Upstream	SVPX		



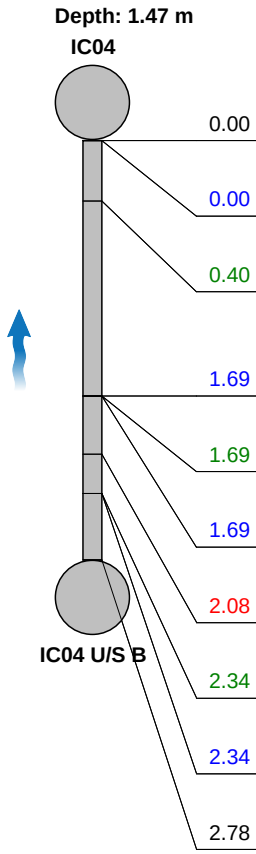
SVPX_a135fa71-76ed-44a6-9f8c-06981d7863d6_20210326_1
20620_407.jpg, 00:00:49, 6.75 m
Finish node, other special chamber, reference: SVP, Soil stack

Section Inspection - 17/03/2021 - IC04 U/S BX

Section 15	Inspection 1	Date 17/03/21	Time 13:32	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC04 U/S BX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC04 U/S B
Road:	The Smithybridge Pub	Inspected Length:	2.78 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	2.78 m	Downstream Node:	IC04
Surface Type:		Joint Length:	1.50 m	Downstream Pipe Depth:	1.465 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
						
	0.00	IC	Start node, inspection chamber, reference: IC04	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.40	LR	Line deviates right: Approx 90 degrees	00:00:00		
	1.69	GP	General photograph taken at this point	00:00:17	IC04 U_S BX_3a19d 02f-3985-4	
	1.69	DES	Settled deposits, fine, 10% cross-sectional area loss	00:00:17		3
	1.69	WL	Water level, 10% of the vertical dimension	00:00:17		
	2.08	JDM	Joint displaced, medium	00:00:22		1 / 3
	2.34	LU	Line deviates up: Vertical	00:00:25		
	2.34	WL	Water level, 0% of the vertical dimension	00:00:25		
	2.78	OCF	Finish node, other special chamber, reference: IC04 U/S B: Node point from building	00:00:37	IC04 U_S BX_cbb95 5bb-b81c-	

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	2.5	1.0	1.0	2	2.0	10.0	4.0	5.0

Section Pictures - 17/03/2021 - IC04 U/S BX

Section 15	Inspection Direction Upstream	PLR IC04 U/S BX	Client's Job Ref	Contractor's Job Ref
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IC04 U_S
BX_3a19d02f-3985-415d-a1de-1ce7cee48966_20210326_120
949_034.jpg, 00:00:17, 1.69 m
General photograph taken at this point



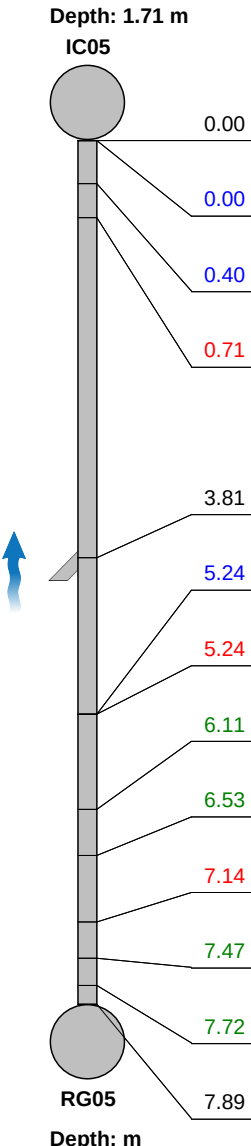
IC04 U_S
BX_cbb955bb-b81c-472f-b187-6a448b6202c6_20210326_121
153_173.jpg, 00:00:37, 2.78 m
Finish node, other special chamber, reference: IC04 U/S B,
Node point from building

Section Inspection - 17/03/2021 - RG05X

Section 16	Inspection 1	Date 17/03/21	Time 13:33	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG05X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	RG05
Road:	The Smithybridge Pub	Inspected Length:	7.89 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	7.89 m	Downstream Node:	IC05
Surface Type:		Joint Length:	1.50 m	Downstream Pipe Depth:	1.710 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:69	Position [m]	Code	Observation	MPEG	Photo	Grade
						
	0.00	IC	Start node, inspection chamber, reference: IC05	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:02		
	0.40	GP	General photograph taken at this point	00:00:02	RG05X_7b 90a9a9-30 72-4c5e-a	
	0.71	SS	Surface damage, spalling from 9 o'clock to 2 o'clock: At the joint	00:00:05		2
	3.81	JN	Junction at 3 o'clock, diameter: 100mm	00:00:21	RG05X_1d 0c6782-b4 f7-462f-9fe	
	5.24	GP	General photograph taken at this point	00:00:31	RG05X_3c c1f169-8a 7e-4505-a	
	5.24	SS	Surface damage, spalling from 12 o'clock to 3 o'clock: At the joint	00:00:31		2
	6.11	DEEJ	Attached deposits, encrustation at joint from 1 o'clock to 10 o'clock, 5% cross-sectional area loss	00:00:35		3
	6.53	RFJ	Roots, fine at joint	00:00:38		2
	7.14	SS	Surface damage, spalling from 10 o'clock to 3 o'clock: At the joint	00:00:41		2
	7.47	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss	00:00:43		3
	7.72	DEEJ	Attached deposits, encrustation at joint from 12 o'clock to 12 o'clock, 15% cross-sectional area loss	00:00:44		3
	7.89	GYF	Finish node, gully, reference: RG05	00:01:03	RG05X_d8 7ac500-43 ab-4f26-b1	

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	20.0	0.0	60.0	2.0	4	2.0	0.0	7.0	3.0

Section Pictures - 17/03/2021 - RG05X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	Upstream	RG05X		



RG05X_7b90a9a9-3072-4c5e-ac56-f53953649c42_20210326_121228_079.jpg, 00:00:02, 0.40 m
General photograph taken at this point



RG05X_1d0c6782-b4f7-462f-9fe1-2de1d3ea2e99_20210326_121330_977.jpg, 00:00:21, 3.81 m
Junction at 3 o'clock, diameter: 100mm



RG05X_3cc1f169-8a7e-4505-a0a4-dda083e1e434_20210326_121353_520.jpg, 00:00:31, 5.24 m
General photograph taken at this point



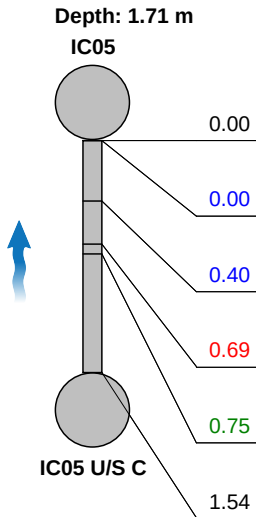
RG05X_d87ac500-43ab-4f26-b197-79fe25f380a9_20210326_121708_757.jpg, 00:01:03, 7.89 m
Finish node, gully, reference: RG05

Section Inspection - 17/03/2021 - IC05 U/S CX

Section 17	Inspection 1	Date 17/03/21	Time 13:33	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC05 U/S CX
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC05 U/S C
Road:	The Smithybridge Pub	Inspected Length:	1.54 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.54 m	Downstream Node:	IC05
Surface Type:		Joint Length:	0.60 m	Downstream Pipe Depth:	1.710 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
						
	0.00	IC	Start node, inspection chamber, reference: IC05	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.40	GP	General photograph taken at this point	00:00:00	IC05 U_S CX_7852e daf-3922-4	
	0.69	JDL	Joint displaced, large: Band seal visible	00:00:05	IC05 U_S CX_3d934 8c4-45f9-4	1 / 4
	0.75	LU	Line deviates up: Vertical	00:00:06		
	1.54	OCF	Finish node, other special chamber, reference: IC05 U/S C: Waste discharge point	00:01:59	IC05 U_S CX_ffba0a 50-97c4-4	
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	2.0	0.0	2.0	1.0	1	5.0	0.0	5.0	4.0

Section Pictures - 17/03/2021 - IC05 U/S CX

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
17	Upstream	IC05 U/S CX		



IC05 U_S
CX_7852edaf-3922-4b58-895f-82cb2e5aa157_20210326_123
336_208.jpg, 00:00:00, 0.40 m
General photograph taken at this point



IC05 U_S
CX_3d9348c4-45f9-4fe4-848a-202ea901d854_20210326_123
358_614.jpg, 00:00:05, 0.69 m
Joint displaced, large, Band seal visible



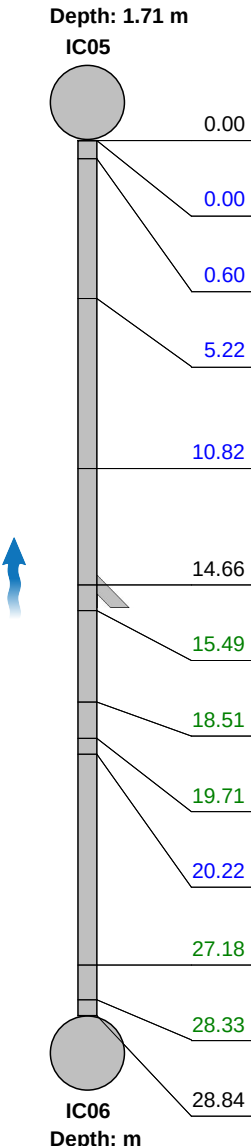
IC05 U_S
CX_ffba0a50-97c4-4a54-96ec-78fb6d810f9b_20210326_1235
33_219.jpg, 00:01:59, 1.54 m
Finish node, other special chamber, reference: IC05 U/S C,
Waste discharge point

Section Inspection - 17/03/2021 - IC06X

Section 18	Inspection 1	Date 17/03/21	Time 13:33	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR IC06X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.60 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Upstream	Upstream Node:	IC06
Road:	The Smithybridge Pub	Inspected Length:	28.84 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	28.84 m	Downstream Node:	IC05
Surface Type:		Joint Length:	1.80 m	Downstream Pipe Depth:	1.710 m
Use:	Foul	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:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:249	Position [m]	Code	Observation	MPEG	Photo	Grade
						
	0.00	IC	Start node, inspection chamber, reference: IC05	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.60	GP	General photograph taken at this point	00:00:00	IC05 U_S DX_6970f791-91ba-	
	5.22	GP	General photograph taken at this point	00:00:32	IC05 U_S DX_f4755a17-49c3-	
	10.82	GP	General photograph taken at this point	00:01:02	IC05 U_S DX_c32dc713-5af0-4	
	14.66	JN	Junction at 10 o'clock, diameter: 100mm	00:01:27	IC05 U_S DX_e578da2d-5c77-	
	15.49	DEEJ	Attached deposits, encrustation at joint from 8 o'clock to 9 o'clock, 5% cross-sectional area loss	00:01:33		3
	18.51	DEZJ	Attached deposits, other at joint from 8 o'clock to 9 o'clock, 5% cross-sectional area loss: Grout	00:01:54		3
	19.71	DEZ	Attached deposits, other from 4 o'clock to 5 o'clock, 10% cross-sectional area loss: Grout	00:02:01		3
	20.22	GP	General photograph taken at this point	00:02:05	IC05 U_S DX_b5a6df72-6270-4	
	27.18	DEZ	Attached deposits, other from 3 o'clock to 4 o'clock, 5% cross-sectional area loss: grout	00:02:45		3
	28.33	RM	Roots, mass, 10% cross-sectional area loss: from buried manhole chamber	00:03:06		3
	28.84	ICF	Finish node, inspection chamber, reference: IC05 U/S D: Buried / Shown as IC05 on the screen	00:03:39	IC05 U_S DX_e148923e-c4e2-	

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	5	4.0	0.0	12.0	3.0

Section Pictures - 17/03/2021 - IC06X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
18	Upstream	IC06X		



IC05 U_S
DX_6970f791-91ba-4ddc-a457-c533055f833a_20210326_123
724_894.jpg, 00:00:00, 0.60 m
General photograph taken at this point



IC05 U_S
DX_f4755a17-49c3-487d-bba8-0853d8dae6c0_20210326_123
806_342.jpg, 00:00:32, 5.22 m
General photograph taken at this point



IC05 U_S
DX_c32dc713-5af0-48bc-b8d8-bc4c29819c20_20210326_123
855_123.jpg, 00:01:02, 10.82 m
General photograph taken at this point



IC05 U_S
DX_e578da2d-5c77-4bc2-861b-8a0ae9aaa63c_20210326_123
935_093.jpg, 00:01:27, 14.66 m
Junction at 10 o'clock, diameter: 100mm

Section Pictures - 17/03/2021 - IC06X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
18	Upstream	IC06X		



IC05 U_S
DX_b5a6df72-6270-4107-8a6b-ff5aa99fc8b9_20210326_1242
02_465.jpg, 00:02:05, 20.22 m
General photograph taken at this point



IC05 U_S
DX_e148923e-c4e2-4c17-84b8-2d7ced156081_20210326_124
425_674.jpg, 00:03:39, 28.84 m
Finish node, inspection chamber, reference: IC05 U/S D,
Buried / Shown as IC05 on the screen

Section Inspection - 17/03/2021 - RG01X

Section 19	Inspection 1	Date 17/03/21	Time 16:16	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG01X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	RG01
Road:	The Smithybridge Pub	Inspected Length:	3.43 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.43 m	Downstream Node:	RG01 D/S
Surface Type:		Joint Length:	1.80 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT CLICK TO OPEN THIS SECTION
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m RG01 RG01 D/S Depth: m						
	0.00	GY	Start node, gully, reference: RG01	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:02		
	0.48	GP	General photograph taken at this point	00:00:20	RG01X_5a fc0aa8-ece e-4f87-a7e	
	3.08	CCJ	Crack, circumferential at joint from 11 o'clock to 12 o'clock	00:00:50		2 / 2
	3.08	LD	Line deviates down	00:00:50		
	3.43	OCF	Finish node, other special chamber, reference: RG01 D/S: T Junction	00:01:21	RG01X_3f bc5cbf-7d7 2-4847-8a	

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	10.0	0.0	10.0	2.0	1	1.0	0.0	1.0	2.0

Section Pictures - 17/03/2021 - RG01X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
19	Downstream	RG01X		



RG01X_5afc0aa8-ecee-4f87-a7ea-91e11bec8a87_20210326_134538_997.jpg, 00:00:20, 0.48 m
General photograph taken at this point



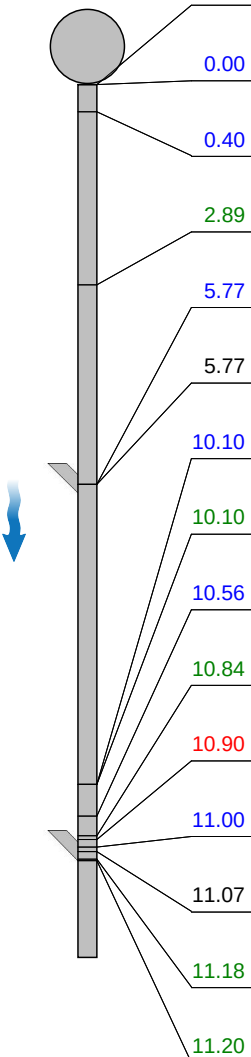
RG01X_3fbc5cbf-7d72-4847-8a92-9fedb3a477a7_20210326_134713_318.jpg, 00:01:21, 3.43 m
Finish node, other special chamber, reference: RG01 D/S, T Junction

Section Inspection - 17/03/2021 - RG02X

Section 20	Inspection 1	Date 17/03/21	Time 16:17	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG02X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

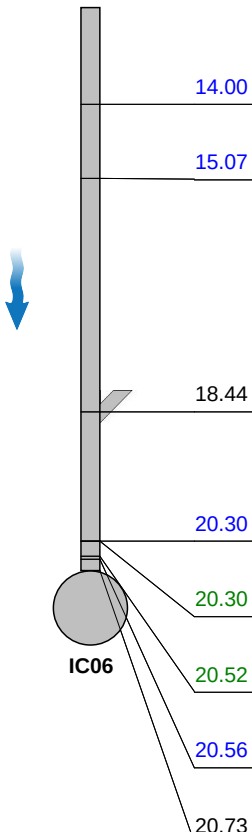
Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	RG02
Road:	The Smithybridge Pub	Inspected Length:	20.73 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	20.73 m	Downstream Node:	IC06
Surface Type:		Joint Length:	1.80 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		CLICK TO OPEN THIS SECTION

Scale:	1:109	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m RG02 							
		0.00	GY	Start node, gully, reference: RG02	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
		0.40	GP	General photograph taken at this point	00:00:00	RG02X_82 73f697-a6 e3-4520-9	
		2.89	LL	Line deviates left: Approx 45 degrees	00:00:21		
		5.77	GP	General photograph taken at this point	00:01:55	RG02X_67 cb7ecb-59 83-4ab8-9	
		5.77	JN	Junction at 2 o'clock, diameter: 100mm	00:01:55	RG02X_dc 1e3951-a3 9f-495d-90	
		10.10	GP	General photograph taken at this point	00:03:18	RG02X_11 81fd41-fee 3-42f6-902	
		10.10	RF	Roots, fine	00:03:18		2
		10.56	WL	Water level, 10% of the vertical dimension	00:03:23		
		10.84	DES	Settled deposits, fine, 10% cross-sectional area loss	00:03:30		3
		10.90	JDL	Joint displaced, large: Band seal visible	00:03:27		1 / 4
		11.00	WL	Water level, 20% of the vertical dimension	00:06:48		
		11.07	JN	Junction at 2 o'clock, diameter: 100mm	00:05:22	RG02X_63 dd7449-0c d9-4f5b-8a	
		11.18	RM	Roots, mass, 15% cross-sectional area loss: from junction	00:05:20		3
		11.20	RT	Roots, tap: from junction	00:05:33	RG02X_d9 0418a4-f5 63-4736-b	4

Section Inspection - 17/03/2021 - RG02X

Section 20	Inspection 1	Date 17/03/21	Time 16:17	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG02X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Scale:	1:109	Position [m]	Code	Observation	MPEG	Photo	Grade
	14.00	WL	Water level, 5% of the vertical dimension	00:07:33			
	15.07	REM	General remark: Attempting to clear the lens after going through roots from connection	00:08:43			
	18.44	JN	Junction at 10 o'clock, diameter: 100mm	00:09:23	RG02X_c0 266c47-0f a4-4d91-8		
	20.30	GP	General photograph taken at this point	00:10:28	RG02X_82 402c47-e7 8f-40ac-8a		
	20.30	LD	Line deviates down: steep	00:10:28			
	20.52	RM	Roots, mass, 20% cross-sectional area loss	00:10:54			5
	20.56	WL	Water level, 20% of the vertical dimension	00:10:55			
	20.73	ICF	Finish node, inspection chamber, reference: IC06: Shown as RG02 D/S on the screen / IC06 is buried	00:11:59	RG02X_0b 5727fb-a0 89-4d19-9		

Section Pictures - 17/03/2021 - RG02X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
20	Downstream	RG02X		



RG02X_8273f697-a6e3-4520-94bf-ef4121f2d542_20210326_134756_779.jpg, 00:00:00, 0.40 m
General photograph taken at this point



RG02X_67cb7ecb-5983-4ab8-9259-0fe1dee003fe_20210326_135053_042.jpg, 00:01:55, 5.77 m
General photograph taken at this point



RG02X_dc1e3951-a39f-495d-9086-abf775369a2a_20210326_135107_487.jpg, 00:01:55, 5.77 m
Junction at 2 o'clock, diameter: 100mm



RG02X_1181fd41-fee3-42f6-9025-08794d3551ea_20210326_135240_208.jpg, 00:03:18, 10.10 m
General photograph taken at this point

Section Pictures - 17/03/2021 - RG02X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
20	Downstream	RG02X		



RG02X_63dd7449-0cd9-4f5b-8a10-e60ffb3a7324_20210326_135601_131.jpg, 00:05:22, 11.07 m
Junction at 2 o'clock, diameter: 100mm



RG02X_d90418a4-f563-4736-bd08-961766937f07_20210326_135910_556.jpg, 00:05:33, 11.20 m
Roots, tap, from junction



RG02X_c0266c47-0fa4-4d91-83d9-57a424ca9848_20210326_140522_007.jpg, 00:09:23, 18.44 m
Junction at 10 o'clock, diameter: 100mm



RG02X_82402c47-e78f-40ac-8a9c-20758b29f13b_20210326_140613_841.jpg, 00:10:28, 20.30 m
General photograph taken at this point

Section Pictures - 17/03/2021 - RG02X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
20	Downstream	RG02X		



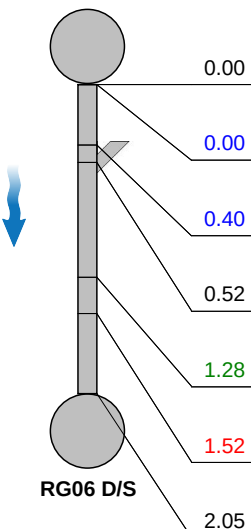
RG02X_0b5727fb-a089-4d19-99b9-6f168c8d709e_20210326_140820_000.jpg, 00:11:59, 20.73 m
Finish node, inspection chamber, reference: IC06, Shown as RG02 D/S on the screen / IC06 is buried

Section Inspection - 17/03/2021 - RG06X

Section 21	Inspection 1	Date 17/03/21	Time 16:17	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG06X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	RG06
Road:	The Smithybridge Pub	Inspected Length:	2.05 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	2.05 m	Downstream Node:	RG06 D/S
Surface Type:		Joint Length:	1.60 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m RG06 						
	0.00	GY	Start node, gully, reference: RG06	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:01		
	0.40	GP	General photograph taken at this point	00:00:01	RG06X_bb 364ba2-3d da-46a0-a	
	0.52	JN	Junction at 9 o'clock, diameter: 100mm	00:00:33	RG06X_37 00d764-50 51-4fc4-98	
	1.28	LD	Line deviates down	00:00:46		
	1.52	SS	Surface damage, spalling from 9 o'clock to 3 o'clock: At joint	00:00:50		2
	2.05	OCF	Finish node, other special chamber, reference: RG06 D/S: T Junction	00:01:09	RG06X_43 6b3aa2-f3 2a-4cce-8	

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	20.0	0.0	20.0	2.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/03/2021 - RG06X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
21	Downstream	RG06X		



RG06X_bb364ba2-3dda-46a0-ab46-7abdd55dfc16_20210326_141029_695.jpg, 00:00:01, 0.40 m
General photograph taken at this point



RG06X_3700d764-5051-4fc4-9839-647e2de48980_20210326_141104_473.jpg, 00:00:33, 0.52 m
Junction at 9 o'clock, diameter: 100mm



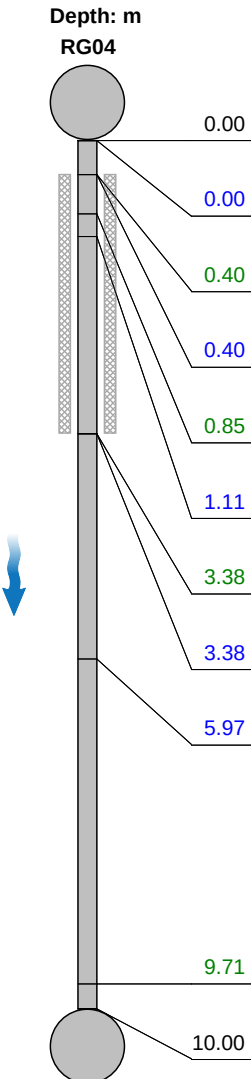
RG06X_436b3aa2-f32a-4cce-894b-458d5eec30bc_20210326_141307_109.jpg, 00:01:09, 2.05 m
Finish node, other special chamber, reference: RG06 D/S, T Junction

Section Inspection - 17/03/2021 - RG04X

Section 22	Inspection 1	Date 17/03/21	Time 16:17	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG04X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	RG04
Road:	The Smithybridge Pub	Inspected Length:	10.00 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	10.00 m	Downstream Node:	RG04 D/S
Surface Type:		Joint Length:	1.60 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		
Recommendations:		

Scale:	1:87	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m RG04  RG04 D/S Depth: m							
	0.00	GY		Start node, gully, reference: RG04	00:00:00		
	0.00	WL		Water level, 10% of the vertical dimension	00:00:02		
	0.40	S01	DES	Settled deposits, fine, 20% cross-sectional area loss, start	00:00:02		
	0.40	GP		General photograph taken at this point	00:00:02	RG04X_9d 073a66-c6 ac-4ab6-9	
	0.85	RF		Roots, fine	00:00:12		2
	1.11	WL		Water level, 10% of the vertical dimension	00:00:13		
	3.38	F01	DES	Settled deposits, fine, 20% cross-sectional area loss, finish	00:00:28		4
	3.38	WL		Water level, 5% of the vertical dimension	00:00:28		
	5.97	GP		General photograph taken at this point	00:00:42	RG04X_9e fa3488-8d 11-486f-b1	
	9.71	LD		Line deviates down: sharp	00:01:00		
	10.00	OCF		Finish node, other special chamber, reference: RG04 D/S: T Junction	00:01:03	RG04X_36 5068e8-a4 af-4fe9-81	

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	6.0	40.0	16.0	5.0

Section Pictures - 17/03/2021 - RG04X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
22	Downstream	RG04X		



RG04X_9d073a66-c6ac-4ab6-94a3-9da814fe5b1d_20210326_141408_892.jpg, 00:00:02, 0.40 m
General photograph taken at this point



RG04X_9efa3488-8d11-486f-b1ba-503ec1890e95_20210326_141623_289.jpg, 00:00:42, 5.97 m
General photograph taken at this point



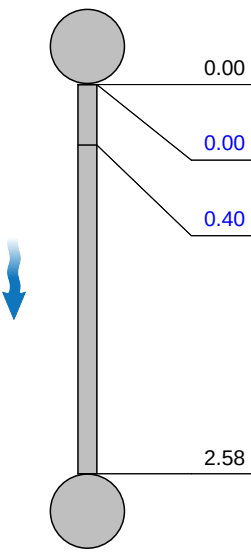
RG04X_365068e8-a4af-4fe9-8118-bb322dd4378f_20210326_141659_286.jpg, 00:01:03, 10.00 m
Finish node, other special chamber, reference: RG04 D/S, T Junction

Section Inspection - 17/03/2021 - RG03X

Section 23	Inspection 1	Date 17/03/21	Time 16:17	Client's Job Ref Not Specified	Weather No Rain Or Snow	Pre Cleaned No	PLR RG03X
Operator Roy Nelson		Vehicle FL65 WZE		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Littlebrough	Inspection Direction:	Downstream	Upstream Node:	RG03
Road:	The Smithybridge Pub	Inspected Length:	2.58 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	2.58 m	Downstream Node:	RG03 D/S
Surface Type:		Joint Length:	1.80 m	Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:		WEB PROJECT CLICK TO OPEN THIS SECTION
Recommendations:		

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m RG03  RG03 D/S						
	0.00	GY	Start node, gully, reference: RG03	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
	0.40	GP	General photograph taken at this point	00:00:00	RG03X_72 e3ce49-ea 7f-40dc-aa	
	2.58	OCF	Finish node, other special chamber, reference: RG03 D/S: T Junction	00:00:47	RG03X_11 130214-96 49-436d-9	

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 - 17/03/2021 - RG03X

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
23	Downstream	RG03X		



RG03X_72e3ce49-ea7f-40dc-aa71-564052f5ebe3_20210326_141724_628.jpg, 00:00:00, 0.40 m
General photograph taken at this point



RG03X_11130214-9649-436d-94f8-bf45aaf29857_20210326_141811_497.jpg, 00:00:47, 2.58 m
Finish node, other special chamber, reference: RG03 D/S, T Junction

Grade Defect Report								
Section	Road	m+	Upstream Node	Inspection Direction	Downstream Node	Observation	Structural	Service
9	The Smithybridge Pub	0	IC02	Downstream	IC03	Start node, inspection chamber, reference: IC02		
9	The Smithybridge Pub	0	IC02	Downstream	IC03	Water level, 5% of the vertical dimension		
9	The Smithybridge Pub	0.6	IC02	Downstream	IC03	General photograph taken at this point		
9	The Smithybridge Pub	1.49	IC02	Downstream	IC03	Junction at 10 o'clock, diameter: 100mm		
9	The Smithybridge Pub	5.20	IC02	Downstream	IC03	General photograph taken at this point		
9	The Smithybridge Pub	7.10	IC02	Downstream	IC03	Junction at 2 o'clock, diameter: 100mm		
9	The Smithybridge Pub	7.71	IC02	Downstream	IC03	Junction at 10 o'clock, diameter: 100mm		
9	The Smithybridge Pub	10.55	IC02	Downstream	IC03	General photograph taken at this point		
9	The Smithybridge Pub	11.13	IC02	Downstream	IC03	Attached deposits, encrustation at joint from 1 o'clock to 5 o'clock, 5% cross-sectional area loss		3
9	The Smithybridge Pub	11.25	IC02	Downstream	IC03	Finish node, inspection chamber, reference: IC03		
23	The Smithybridge Pub	0	RG03	Downstream	RG03 D/S	Start node, gully, reference: RG03		
23	The Smithybridge Pub	0	RG03	Downstream	RG03 D/S	Water level, 0% of the vertical dimension		
23	The Smithybridge Pub	0.4	RG03	Downstream	RG03 D/S	General photograph taken at this point		
23	The Smithybridge Pub	2.58	RG03	Downstream	RG03 D/S	Finish node, other special chamber, reference: RG03 D/S		
19	The Smithybridge Pub	0	RG01	Downstream	RG01 D/S	Start node, gully, reference: RG01		
19	The Smithybridge Pub	0	RG01	Downstream	RG01 D/S	Water level, 0% of the vertical dimension		
19	The Smithybridge Pub	0.48	RG01	Downstream	RG01 D/S	General photograph taken at this point		
19	The Smithybridge Pub	3.08	RG01	Downstream	RG01 D/S	Crack, circumferential at joint from 11 o'clock to 12 o'clock	2	2
19	The Smithybridge Pub	3.08	RG01	Downstream	RG01 D/S	Line deviates down		
19	The Smithybridge Pub	3.43	RG01	Downstream	RG01 D/S	Finish node, other special chamber, reference: RG01 D/S		
17	The Smithybridge Pub	0	IC05 U/S C	Upstream	IC05	Start node, inspection chamber, reference: IC05		
17	The Smithybridge Pub	0	IC05 U/S C	Upstream	IC05	Water level, 5% of the vertical dimension		
17	The Smithybridge Pub	0.4	IC05 U/S C	Upstream	IC05	General photograph taken at this point		
17	The Smithybridge Pub	0.69	IC05 U/S C	Upstream	IC05	Joint displaced, large	1	4
17	The Smithybridge Pub	0.75	IC05 U/S C	Upstream	IC05	Line deviates up		
17	The Smithybridge Pub	1.54	IC05 U/S C	Upstream	IC05	Finish node, other special chamber, reference: IC05 U/S C		
22	The Smithybridge Pub	0	RG04	Downstream	RG04 D/S	Start node, gully, reference: RG04		
22	The Smithybridge Pub	0	RG04	Downstream	RG04 D/S	Water level, 10% of the vertical dimension		
22	The Smithybridge Pub	0.4	RG04	Downstream	RG04 D/S	Settled deposits, fine, 20% cross-sectional area loss, start		
22	The Smithybridge Pub	0.4	RG04	Downstream	RG04 D/S	General photograph taken at this point		
22	The Smithybridge Pub	0.85	RG04	Downstream	RG04 D/S	Roots, fine		2
22	The Smithybridge Pub	1.11	RG04	Downstream	RG04 D/S	Water level, 10% of the vertical dimension		
22	The Smithybridge Pub	3.38	RG04	Downstream	RG04 D/S	Settled deposits, fine, 20% cross-sectional area loss, finish		4
22	The Smithybridge Pub	3.38	RG04	Downstream	RG04 D/S	Water level, 5% of the vertical dimension		
22	The Smithybridge Pub	5.97	RG04	Downstream	RG04 D/S	General photograph taken at this point		
22	The Smithybridge Pub	9.71	RG04	Downstream	RG04 D/S	Line deviates down		
22	The Smithybridge Pub	10	RG04	Downstream	RG04 D/S	Finish node, other special chamber, reference: RG04 D/S		
6	The Smithybridge Pub	0	IC02 U/S C	Upstream	IC02	Start node, inspection chamber, reference: IC02		
6	The Smithybridge Pub	0	IC02 U/S C	Upstream	IC02	Water level, 0% of the vertical dimension		
6	The Smithybridge Pub	0.4	IC02 U/S C	Upstream	IC02	General photograph taken at this point		
6	The Smithybridge Pub	0.4	IC02 U/S C	Upstream	IC02	Line deviates left		
6	The Smithybridge Pub	0.4	IC02 U/S C	Upstream	IC02	Line deviates up		
6	The Smithybridge Pub	0.4	IC02 U/S C	Upstream	IC02	Joint displaced, medium	1	3
6	The Smithybridge Pub	3.28	IC02 U/S C	Upstream	IC02	Line deviates right		
6	The Smithybridge Pub	3.28	IC02 U/S C	Upstream	IC02	Pipe material changes to cast iron at this point		
6	The Smithybridge Pub	3.28	IC02 U/S C	Upstream	IC02	Surface damage, corrosion products from 12 o'clock to 12 o'clock, start		
6	The Smithybridge Pub	5.70	IC02 U/S C	Upstream	IC02	General photograph taken at this point		
6	The Smithybridge Pub	7.04	IC02 U/S C	Upstream	IC02	Attached deposits, other at joint from 2 o'clock to 8 o'clock, 5% cross-sectional area loss		3
6	The Smithybridge Pub	7.04	IC02 U/S C	Upstream	IC02	Pipe material changes to vitrified clay at this point		
6	The Smithybridge Pub	7.04	IC02 U/S C	Upstream	IC02	Surface damage, corrosion products from 12 o'clock to 12 o'clock, finish	1	

6	The Smithybridge Pub	7.45	IC02 U/S C	Upstream	IC02	Connection other than junction at 12 o'clock, diameter: 25mm		
6	The Smithybridge Pub	7.47	IC02 U/S C	Upstream	IC02	Fracture, longitudinal at joint at 12 o'clock	3	2
6	The Smithybridge Pub	7.93	IC02 U/S C	Upstream	IC02	Line deviates up		
6	The Smithybridge Pub	8.38	IC02 U/S C	Upstream	IC02	Finish node, other special chamber, reference: IC02 U/S C		
7	The Smithybridge Pub	0	GY08	Upstream	IC02	Start node, inspection chamber, reference: IC02		
7	The Smithybridge Pub	0	GY08	Upstream	IC02	Water level, 0% of the vertical dimension		
7	The Smithybridge Pub	0.4	GY08	Upstream	IC02	General photograph taken at this point		
7	The Smithybridge Pub	0.6	GY08	Upstream	IC02	Line deviates left		
7	The Smithybridge Pub	0.64	GY08	Upstream	IC02	Settled deposits, hard or compacted, 5% cross-sectional area loss, start		
7	The Smithybridge Pub	2.57	GY08	Upstream	IC02	General photograph taken at this point		
7	The Smithybridge Pub	2.94	GY08	Upstream	IC02	Line deviates right		
7	The Smithybridge Pub	3.4	GY08	Upstream	IC02	Surface damage, spalling from 8 o'clock to 11 o'clock	2	
7	The Smithybridge Pub	3.5	GY08	Upstream	IC02	Line deviates left		
7	The Smithybridge Pub	3.96	GY08	Upstream	IC02	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish		3
7	The Smithybridge Pub	3.96	GY08	Upstream	IC02	General remark		
7	The Smithybridge Pub	3.96	GY08	Upstream	IC02	Finish node, gully, reference: GY08		
1	The Smithybridge Pub	0	IC01	Downstream	IC02	Start node, inspection chamber, reference: IC01		
1	The Smithybridge Pub	0	IC01	Downstream	IC02	Water level, 5% of the vertical dimension		
1	The Smithybridge Pub	0.6	IC01	Downstream	IC02	General photograph taken at this point		
1	The Smithybridge Pub	1.33	IC01	Downstream	IC02	Water level, 10% of the vertical dimension		
1	The Smithybridge Pub	4.43	IC01	Downstream	IC02	Water level, 5% of the vertical dimension		
1	The Smithybridge Pub	5.32	IC01	Downstream	IC02	Line deviates left		
1	The Smithybridge Pub	6.15	IC01	Downstream	IC02	General photograph taken at this point		
1	The Smithybridge Pub	9.66	IC01	Downstream	IC02	Line deviates down, start		
1	The Smithybridge Pub	10.72	IC01	Downstream	IC02	General photograph taken at this point		
1	The Smithybridge Pub	10.72	IC01	Downstream	IC02	Line deviates left		
1	The Smithybridge Pub	11.40	IC01	Downstream	IC02	Fracture, longitudinal at joint at 11 o'clock	3	2
1	The Smithybridge Pub	11.40	IC01	Downstream	IC02	Fracture, longitudinal at joint at 1 o'clock	3	2
1	The Smithybridge Pub	11.68	IC01	Downstream	IC02	Line deviates down, finish		
1	The Smithybridge Pub	11.68	IC01	Downstream	IC02	Finish node, inspection chamber, reference: IC02		
2	The Smithybridge Pub	0	GY07	Upstream	IC01	Start node, inspection chamber, reference: IC01		
2	The Smithybridge Pub	0	GY07	Upstream	IC01	Water level, 0% of the vertical dimension		
2	The Smithybridge Pub	0	GY07	Upstream	IC01	Line deviates up		
2	The Smithybridge Pub	0.6	GY07	Upstream	IC01	Settled deposits, fine, 10% cross-sectional area loss		3
2	The Smithybridge Pub	0.6	GY07	Upstream	IC01	General photograph taken at this point		
2	The Smithybridge Pub	1.08	GY07	Upstream	IC01	Settled deposits, coarse, 5% cross-sectional area loss		3
2	The Smithybridge Pub	1.91	GY07	Upstream	IC01	Settled deposits, coarse at joint, 10% cross-sectional area loss		3
2	The Smithybridge Pub	1.91	GY07	Upstream	IC01	Line deviates right		
2	The Smithybridge Pub	2.97	GY07	Upstream	IC01	Settled deposits, fine, 5% cross-sectional area loss		3
2	The Smithybridge Pub	2.97	GY07	Upstream	IC01	General photograph taken at this point		
2	The Smithybridge Pub	3.67	GY07	Upstream	IC01	Surface damage, spalling from 12 o'clock to 2 o'clock	2	
2	The Smithybridge Pub	3.9	GY07	Upstream	IC01	General remark		
2	The Smithybridge Pub	3.9	GY07	Upstream	IC01	Finish node, gully, reference: GY07		
13	The Smithybridge Pub	0	IC03 U/S A	Upstream	IC03	Start node, inspection chamber, reference: IC03		
13	The Smithybridge Pub	0	IC03 U/S A	Upstream	IC03	Water level, 0% of the vertical dimension		
13	The Smithybridge Pub	0.4	IC03 U/S A	Upstream	IC03	General photograph taken at this point		
13	The Smithybridge Pub	0.94	IC03 U/S A	Upstream	IC03	Line deviates right		
13	The Smithybridge Pub	5.37	IC03 U/S A	Upstream	IC03	General photograph taken at this point		
13	The Smithybridge Pub	6.37	IC03 U/S A	Upstream	IC03	Deformed sewer or drain, 30%	4	4
13	The Smithybridge Pub	6.37	IC03 U/S A	Upstream	IC03	Crack, circumferential from 9 o'clock to 12 o'clock	2	2
13	The Smithybridge Pub	6.37	IC03 U/S A	Upstream	IC03	Settled deposits, coarse, 40% cross-sectional area loss		4
13	The Smithybridge Pub	6.37	IC03 U/S A	Upstream	IC03	General remark		
13	The Smithybridge Pub	6.37	IC03 U/S A	Upstream	IC03	Hole in drain or sewer from 12 o'clock to 3 o'clock	5	
13	The Smithybridge Pub	6.43	IC03 U/S A	Upstream	IC03	Survey abandoned		
4	The Smithybridge Pub	0	IC01 U/S C	Upstream	IC01	Start node, inspection chamber, reference: IC01		

4	The Smithybridge Pub	0	IC01 U/S C	Upstream	IC01	Water level, 0% of the vertical dimension		
4	The Smithybridge Pub	0.4	IC01 U/S C	Upstream	IC01	Line deviates right		
4	The Smithybridge Pub	0.4	IC01 U/S C	Upstream	IC01	General photograph taken at this point		
4	The Smithybridge Pub	1.66	IC01 U/S C	Upstream	IC01	Line deviates right		
4	The Smithybridge Pub	1.66	IC01 U/S C	Upstream	IC01	Line deviates up		
4	The Smithybridge Pub	2.47	IC01 U/S C	Upstream	IC01	Line deviates up		
4	The Smithybridge Pub	3	IC01 U/S C	Upstream	IC01	Finish node, other special chamber, reference: IC01 U/S C		
12	The Smithybridge Pub	0	IC05	Downstream	SD92157104	Start node, inspection chamber, reference: IC05		
12	The Smithybridge Pub	0	IC05	Downstream	SD92157104	Water level, 5% of the vertical dimension		
12	The Smithybridge Pub	0	IC05	Downstream	SD92157104	General photograph taken at this point		
12	The Smithybridge Pub	1.68	IC05	Downstream	SD92157104	Line deviates down, start		
12	The Smithybridge Pub	1.68	IC05	Downstream	SD92157104	Crack, longitudinal at 3 o'clock	2	2
12	The Smithybridge Pub	1.68	IC05	Downstream	SD92157104	Crack, longitudinal at 12 o'clock	2	2
12	The Smithybridge Pub	2.19	IC05	Downstream	SD92157104	Junction at 12 o'clock, diameter: 150mm		
12	The Smithybridge Pub	2.19	IC05	Downstream	SD92157104	Water level, 10% of the vertical dimension		
12	The Smithybridge Pub	2.46	IC05	Downstream	SD92157104	Water level, 20% of the vertical dimension		
12	The Smithybridge Pub	2.46	IC05	Downstream	SD92157104	Line deviates down, finish		
12	The Smithybridge Pub	2.91	IC05	Downstream	SD92157104	Water level, 10% of the vertical dimension		
12	The Smithybridge Pub	2.91	IC05	Downstream	SD92157104	Line deviates up		
12	The Smithybridge Pub	3.03	IC05	Downstream	SD92157104	Crack, longitudinal at joint at 10 o'clock	2	2
12	The Smithybridge Pub	3.03	IC05	Downstream	SD92157104	Crack, longitudinal at joint at 12 o'clock	2	2
12	The Smithybridge Pub	3.26	IC05	Downstream	SD92157104	Junction at 6 o'clock, diameter: 150mm		
12	The Smithybridge Pub	3.26	IC05	Downstream	SD92157104	Water level, 5% of the vertical dimension		
12	The Smithybridge Pub	3.26	IC05	Downstream	SD92157104	Line deviates up		
12	The Smithybridge Pub	4.53	IC05	Downstream	SD92157104	Finish node, manhole, reference: SD92157104		
14	The Smithybridge Pub	0	SVP	Upstream	IC03	Start node, inspection chamber, reference: IC03		
14	The Smithybridge Pub	0	SVP	Upstream	IC03	Water level, 0% of the vertical dimension		
14	The Smithybridge Pub	0.4	SVP	Upstream	IC03	General photograph taken at this point		
14	The Smithybridge Pub	0.44	SVP	Upstream	IC03	Attached deposits, encrustation at joint from 8 o'clock to 12 o'clock, 5% cross-sectional area loss		3
14	The Smithybridge Pub	1.02	SVP	Upstream	IC03	Attached deposits, encrustation at joint from 9 o'clock to 5 o'clock, 5% cross-sectional area loss		3
14	The Smithybridge Pub	2.12	SVP	Upstream	IC03	Junction at 2 o'clock, diameter: 100mm		
14	The Smithybridge Pub	4.89	SVP	Upstream	IC03	Junction at 2 o'clock, diameter: 100mm		
14	The Smithybridge Pub	5.46	SVP	Upstream	IC03	General photograph taken at this point		
14	The Smithybridge Pub	6.20	SVP	Upstream	IC03	Line deviates up		
14	The Smithybridge Pub	6.75	SVP	Upstream	IC03	Finish node, other special chamber, reference: SVP		
10	The Smithybridge Pub	0	IC03	Downstream	IC04	Start node, inspection chamber, reference: IC03		
10	The Smithybridge Pub	0	IC03	Downstream	IC04	Water level, 10% of the vertical dimension		
10	The Smithybridge Pub	0.6	IC03	Downstream	IC04	General photograph taken at this point		
10	The Smithybridge Pub	0.6	IC03	Downstream	IC04	Settled deposits, coarse, 10% cross-sectional area loss		3
10	The Smithybridge Pub	1.51	IC03	Downstream	IC04	Water level, 5% of the vertical dimension		
10	The Smithybridge Pub	1.51	IC03	Downstream	IC04	Line deviates right		
10	The Smithybridge Pub	2.54	IC03	Downstream	IC04	Finish node, inspection chamber, reference: IC04		
16	The Smithybridge Pub	0	RG05	Upstream	IC05	Start node, inspection chamber, reference: IC05		
16	The Smithybridge Pub	0	RG05	Upstream	IC05	Water level, 5% of the vertical dimension		
16	The Smithybridge Pub	0.4	RG05	Upstream	IC05	General photograph taken at this point		
16	The Smithybridge Pub	0.71	RG05	Upstream	IC05	Surface damage, spalling from 9 o'clock to 2 o'clock	2	
16	The Smithybridge Pub	3.81	RG05	Upstream	IC05	Junction at 3 o'clock, diameter: 100mm		
16	The Smithybridge Pub	5.24	RG05	Upstream	IC05	General photograph taken at this point		
16	The Smithybridge Pub	5.24	RG05	Upstream	IC05	Surface damage, spalling from 12 o'clock to 3 o'clock	2	
16	The Smithybridge Pub	6.11	RG05	Upstream	IC05	Attached deposits, encrustation at joint from 1 o'clock to 10 o'clock, 5% cross-sectional area loss		3
16	The Smithybridge Pub	6.53	RG05	Upstream	IC05	Roots, fine at joint		2
16	The Smithybridge Pub	7.14	RG05	Upstream	IC05	Surface damage, spalling from 10 o'clock to 3 o'clock	2	
16	The Smithybridge Pub	7.47	RG05	Upstream	IC05	Settled deposits, hard or compacted, 10% cross-sectional area loss		3
16	The Smithybridge Pub	7.72	RG05	Upstream	IC05	Attached deposits, encrustation at joint from 12 o'clock to 12 o'clock, 15% cross-sectional area loss		3
16	The Smithybridge Pub	7.89	RG05	Upstream	IC05	Finish node, gully, reference: RG05		

18	The Smithybridge Pub	0	IC06	Upstream	IC05	Start node, inspection chamber, reference: IC05		
18	The Smithybridge Pub	0	IC06	Upstream	IC05	Water level, 0% of the vertical dimension		
18	The Smithybridge Pub	0.6	IC06	Upstream	IC05	General photograph taken at this point		
18	The Smithybridge Pub	5.22	IC06	Upstream	IC05	General photograph taken at this point		
18	The Smithybridge Pub	10.82	IC06	Upstream	IC05	General photograph taken at this point		
18	The Smithybridge Pub	14.66	IC06	Upstream	IC05	Junction at 10 o'clock, diameter: 100mm		
18	The Smithybridge Pub	15.49	IC06	Upstream	IC05	Attached deposits, encrustation at joint from 8 o'clock to 9 o'clock, 5% cross-sectional area loss		3
18	The Smithybridge Pub	18.51	IC06	Upstream	IC05	Attached deposits, other at joint from 8 o'clock to 9 o'clock, 5% cross-sectional area loss		3
18	The Smithybridge Pub	19.71	IC06	Upstream	IC05	Attached deposits, other from 4 o'clock to 5 o'clock, 10% cross-sectional area loss		3
18	The Smithybridge Pub	20.22	IC06	Upstream	IC05	General photograph taken at this point		
18	The Smithybridge Pub	27.18	IC06	Upstream	IC05	Attached deposits, other from 3 o'clock to 4 o'clock, 5% cross-sectional area loss		3
18	The Smithybridge Pub	28.33	IC06	Upstream	IC05	Roots, mass, 10% cross-sectional area loss		3
18	The Smithybridge Pub	28.84	IC06	Upstream	IC05	Finish node, inspection chamber, reference: IC05 U/S D		
15	The Smithybridge Pub	0	IC04 U/S B	Upstream	IC04	Start node, inspection chamber, reference: IC04		
15	The Smithybridge Pub	0	IC04 U/S B	Upstream	IC04	Water level, 0% of the vertical dimension		
15	The Smithybridge Pub	0.4	IC04 U/S B	Upstream	IC04	Line deviates right		
15	The Smithybridge Pub	1.69	IC04 U/S B	Upstream	IC04	General photograph taken at this point		
15	The Smithybridge Pub	1.69	IC04 U/S B	Upstream	IC04	Settled deposits, fine, 10% cross-sectional area loss		3
15	The Smithybridge Pub	1.69	IC04 U/S B	Upstream	IC04	Water level, 10% of the vertical dimension		
15	The Smithybridge Pub	2.08	IC04 U/S B	Upstream	IC04	Joint displaced, medium	1	3
15	The Smithybridge Pub	2.34	IC04 U/S B	Upstream	IC04	Line deviates up		
15	The Smithybridge Pub	2.34	IC04 U/S B	Upstream	IC04	Water level, 0% of the vertical dimension		
15	The Smithybridge Pub	2.78	IC04 U/S B	Upstream	IC04	Finish node, other special chamber, reference: IC04 U/S B		
21	The Smithybridge Pub	0	RG06	Downstream	RG06 D/S	Start node, gully, reference: RG06		
21	The Smithybridge Pub	0	RG06	Downstream	RG06 D/S	Water level, 0% of the vertical dimension		
21	The Smithybridge Pub	0.4	RG06	Downstream	RG06 D/S	General photograph taken at this point		
21	The Smithybridge Pub	0.52	RG06	Downstream	RG06 D/S	Junction at 9 o'clock, diameter: 100mm		
21	The Smithybridge Pub	1.28	RG06	Downstream	RG06 D/S	Line deviates down		
21	The Smithybridge Pub	1.52	RG06	Downstream	RG06 D/S	Surface damage, spalling from 9 o'clock to 3 o'clock		2
21	The Smithybridge Pub	2.05	RG06	Downstream	RG06 D/S	Finish node, other special chamber, reference: RG06 D/S		
8	The Smithybridge Pub	0	IC02 U/S B	Upstream	IC02	Start node, inspection chamber, reference: IC02		
8	The Smithybridge Pub	0	IC02 U/S B	Upstream	IC02	Water level, 0% of the vertical dimension		
8	The Smithybridge Pub	0.6	IC02 U/S B	Upstream	IC02	General photograph taken at this point		
8	The Smithybridge Pub	0.6	IC02 U/S B	Upstream	IC02	Line deviates up, start		
8	The Smithybridge Pub	0.84	IC02 U/S B	Upstream	IC02	Line deviates right		
8	The Smithybridge Pub	1.29	IC02 U/S B	Upstream	IC02	Junction at 8 o'clock, diameter: 150mm		
8	The Smithybridge Pub	1.73	IC02 U/S B	Upstream	IC02	Junction at 8 o'clock, diameter: 100mm		
8	The Smithybridge Pub	2.08	IC02 U/S B	Upstream	IC02	Surface damage, spalling from 9 o'clock to 5 o'clock		2
8	The Smithybridge Pub	2.71	IC02 U/S B	Upstream	IC02	Line deviates up, finish		
8	The Smithybridge Pub	2.71	IC02 U/S B	Upstream	IC02	Surface damage, corrosion products from 12 o'clock to 12 o'clock, start		
8	The Smithybridge Pub	2.71	IC02 U/S B	Upstream	IC02	Pipe material changes to cast iron at this point		
8	The Smithybridge Pub	5.18	IC02 U/S B	Upstream	IC02	General photograph taken at this point		
8	The Smithybridge Pub	7.08	IC02 U/S B	Upstream	IC02	Line deviates up		
8	The Smithybridge Pub	7.69	IC02 U/S B	Upstream	IC02	Surface damage, corrosion products from 12 o'clock to 12 o'clock, finish		1
8	The Smithybridge Pub	7.69	IC02 U/S B	Upstream	IC02	Finish node, other special chamber, reference: IC02 U/S B		
5	The Smithybridge Pub	0	IC02 U/S D	Upstream	IC02	Start node, inspection chamber, reference: IC02		
5	The Smithybridge Pub	0	IC02 U/S D	Upstream	IC02	Water level, 0% of the vertical dimension		
5	The Smithybridge Pub	0.4	IC02 U/S D	Upstream	IC02	General photograph taken at this point		
5	The Smithybridge Pub	0.67	IC02 U/S D	Upstream	IC02	Survey abandoned		
3	The Smithybridge Pub	0	IC01 U/S B	Upstream	IC01	Start node, inspection chamber, reference: IC01		
3	The Smithybridge Pub	0	IC01 U/S B	Upstream	IC01	Water level, 0% of the vertical dimension		
3	The Smithybridge Pub	0.4	IC01 U/S B	Upstream	IC01	General photograph taken at this point		
3	The Smithybridge Pub	0.93	IC01 U/S B	Upstream	IC01	Point repair, localised lining from 12 o'clock to 12 o'clock, start		
3	The Smithybridge Pub	1.74	IC01 U/S B	Upstream	IC01	Line deviates up, start		
3	The Smithybridge Pub	2.28	IC01 U/S B	Upstream	IC01	Line deviates right		

3	The Smithybridge Pub	3.34	IC01 U/S B	Upstream	IC01	Line deviates up, finish		
3	The Smithybridge Pub	3.68	IC01 U/S B	Upstream	IC01	Line deviates right		
3	The Smithybridge Pub	3.82	IC01 U/S B	Upstream	IC01	Point repair, localised lining from 12 o'clock to 12 o'clock, finish		
3	The Smithybridge Pub	3.82	IC01 U/S B	Upstream	IC01	Line deviates up		
3	The Smithybridge Pub	3.82	IC01 U/S B	Upstream	IC01	Finish node, other special chamber, reference: IC01 U/S B		
11	The Smithybridge Pub	0	IC04	Downstream	IC05	Start node, inspection chamber, reference: IC04		
11	The Smithybridge Pub	0	IC04	Downstream	IC05	Water level, 5% of the vertical dimension		
11	The Smithybridge Pub	0	IC04	Downstream	IC05	General photograph taken at this point		
11	The Smithybridge Pub	0.77	IC04	Downstream	IC05	Settled deposits, hard or compacted at joint, 5% cross-sectional area loss		3
11	The Smithybridge Pub	4.63	IC04	Downstream	IC05	Junction at 10 o'clock, diameter: 100mm		
11	The Smithybridge Pub	5.22	IC04	Downstream	IC05	General photograph taken at this point		
11	The Smithybridge Pub	10.39	IC04	Downstream	IC05	General photograph taken at this point		
11	The Smithybridge Pub	11.78	IC04	Downstream	IC05	Surface damage, corrosion products from 12 o'clock to 12 o'clock, start		
11	The Smithybridge Pub	13.1	IC04	Downstream	IC05	Surface damage, corrosion products from 12 o'clock to 12 o'clock, finish	1	
11	The Smithybridge Pub	13.1	IC04	Downstream	IC05	Finish node, inspection chamber, reference: IC05		
20	The Smithybridge Pub	0	RG02	Downstream	IC06	Start node, gully, reference: RG02		
20	The Smithybridge Pub	0	RG02	Downstream	IC06	Water level, 0% of the vertical dimension		
20	The Smithybridge Pub	0.4	RG02	Downstream	IC06	General photograph taken at this point		
20	The Smithybridge Pub	2.89	RG02	Downstream	IC06	Line deviates left		
20	The Smithybridge Pub	5.77	RG02	Downstream	IC06	General photograph taken at this point		
20	The Smithybridge Pub	5.77	RG02	Downstream	IC06	Junction at 2 o'clock, diameter: 100mm		
20	The Smithybridge Pub	10.1	RG02	Downstream	IC06	General photograph taken at this point		
20	The Smithybridge Pub	10.1	RG02	Downstream	IC06	Roots, fine		2
20	The Smithybridge Pub	10.56	RG02	Downstream	IC06	Water level, 10% of the vertical dimension		
20	The Smithybridge Pub	10.84	RG02	Downstream	IC06	Settled deposits, fine, 10% cross-sectional area loss		3
20	The Smithybridge Pub	10.90	RG02	Downstream	IC06	Joint displaced, large	1	4
20	The Smithybridge Pub	11	RG02	Downstream	IC06	Water level, 20% of the vertical dimension		
20	The Smithybridge Pub	11.07	RG02	Downstream	IC06	Junction at 2 o'clock, diameter: 100mm		
20	The Smithybridge Pub	11.18	RG02	Downstream	IC06	Roots, mass, 15% cross-sectional area loss		3
20	The Smithybridge Pub	11.20	RG02	Downstream	IC06	Roots, tap		4
20	The Smithybridge Pub	14	RG02	Downstream	IC06	Water level, 5% of the vertical dimension		
20	The Smithybridge Pub	15.07	RG02	Downstream	IC06	General remark		
20	The Smithybridge Pub	18.44	RG02	Downstream	IC06	Junction at 10 o'clock, diameter: 100mm		
20	The Smithybridge Pub	20.30	RG02	Downstream	IC06	General photograph taken at this point		
20	The Smithybridge Pub	20.30	RG02	Downstream	IC06	Line deviates down		
20	The Smithybridge Pub	20.52	RG02	Downstream	IC06	Roots, mass, 20% cross-sectional area loss		5
20	The Smithybridge Pub	20.56	RG02	Downstream	IC06	Water level, 20% of the vertical dimension		
20	The Smithybridge Pub	20.73	RG02	Downstream	IC06	Finish node, inspection chamber, reference: IC06		

Project No.

Survey Date.

Surveyor.

Asset Survey Card

Asset ID: eg: MH, CP, GY

Status: Asset Type: Function: Cover Level:

Location:

Town:

COVER DETAILS

☒ Square
 ☐ Rectangle
 ☐ Triangle
 ☐ Dbl Triangle
 ☐ Circular
 ☐ Other Other

☐ Hinged
 ☐ Lockable
 ☐ Grating
 ☐ Cover Duty
 x Size (mm)

PIPE DETAILS

Incoming Pipes

Pipe	Depth from Cover (m)	Upstream / Downstream Ref	Shape	Height	Size (mm)	Width	Pipe Mat	Lining Mat	Soffit Level (m)	Invert Level (m)
A	4.41	SD92157204	C	300	x	300	VC		145.555	145.255
B	1.4	IC05	C	150	x	150	VC		148.415	148.265
C					x					
D					x					
E					x					
F					x					

Outgoing Pipes

X	4.42	SD92157101	C	300	x	300	VC		145.545	145.245
Y					x					

MANHOLE CONSTRUCTION DETAILS

Shaft

x Size (mm)
 Depth (m)
 No. of Reg Courses
 Soffit

Chamber

x Size (mm)
 Side Entry
 ☐ OX / H2S / METH Toxic atmosphere
 ☐ Evidence of Surcharge

☐ Pre Cast Concrete
 ☐ Insitu Concrete
 ☒ Brick
 ☐ GRP
 ☐ Reducing Slab

Step Irons
 ☐ Ladder
 ☐ No. of Landings
 Depth of Flow (mm)
 Depth of Silt (mm)

ADDITIONAL CONSTRUCTION DETAILS

☒ Y Flap Valve
 ☐ Orifice
 ☐ Sluice Gate
 ☐ Weir
 ☐ Screens
 ☐ Penstock
 ☐ Flume
 ☒ Y H/Wall

CONDITION INFORMATION (Specify in Remark)

	Cover	Shaft	Irons/Ladder	Chamber	Benching	Channel
OK	☒	☒	☒	☒	☒	☒
Needs Attention	☐	☐	☐	☐	☐	☐
Urgent Attention	☐	☐	☐	☐	☐	☐

Remark

See Overleaf for Key