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**DRAINAGE
CONSULTANTS LTD**

Professional Drainage Contractors

CCTV DRAIN SURVEY CONDITION REPORT

SITE: St Andrew's Church, Keighley, BD21 5HT
CLIENT: Church on the Green Neighbourhood Foundation
DATE: 4th December, 2024

Church on the Green Neighbourhood Foundation
The Old Vicarage
Briggate
Silsden
BD20 9JS

Dear,

CCTV Drain Survey Quotation

Following our receipt of your order and as requested our engineers have attended the above mentioned site. The purpose of our visit was to carryout a CCTV survey of the drainage system as instructed to establish the pipe work condition, location and connectivity.

The following summary highlights the findings on site, and where necessary we have put forward recommendations for repairs to be carried out on the drainage system. We would strongly recommend that all repairs that have been identified are completed to prevent further defects arising. The drainage system has been designed to work in a particular way – any defects identified could be preventing the drainage system from performing as it should.

Here at Drainage Consultants Ltd. we regularly research the market to ensure that our clients are receiving extremely competitive quotations for drain repairs.

Please find below our summary of the investigation.

Findings & Recommendations

While on site we have identified the below defects on the drainage system. All other drainage lines surveyed did not exhibit any visible defects. Please see the accompanying document (CCTV Report) for further details of all drains surveyed.

Manhole-1 downstream to Discharge

The drain surveyed is a circular 100mm diameter vitrified clay pipe transporting foul waste.

The pipe work was surveyed to 5.6m where it finished inside a manhole (beyond the site boundary). A cracked section was located at 4.6m.

To repair the cracked section, we recommend the below work.

Undertake high-pressure water-jetting to thoroughly clean the pipework.

Carry out a CCTV survey to establish the precise location of the defect on the drainage system.

Supply and install 1x 100mm diameter, ambient cured epoxy resin structural patch liner over the defective section of pipework using cured-in-place pipe lining bladder system. (All materials used are approved by the Water Research Council).

The cost for this is £600.00 plus VAT.

Manhole-2 downstream to Discharge

The drain surveyed is a circular 100mm diameter vitrified clay pipe transporting surface water.

The pipe work was surveyed to 15.2m where it finished inside Manhole-3. A build up of debris was located from 7.4m to 12.4m (10%).

In an attempt to remove the debris build up, we recommend undertaking High Pressure Water Jetting (including CCTV survey).

The cost for this is £240.00 plus VAT.



Manhole-3 Branch-1 upstream to Head of Line

The drain surveyed is a circular 100mm diameter PVCu pipe transporting surface water.

The pipe work was surveyed to 9.0m where it was abandoned (camera unable to pass bend). Large displaced joints were located at 4.5m and 6.0m. A build up of debris was located from 0.0m to 1.6m (25%).

In an attempt to remove the debris build up, we recommend undertaking High Pressure Water Jetting (including CCTV survey).

The cost for this is £240.00 plus VAT.

To repair the large displaced joints, we recommend the below work.

Undertake high-pressure water-jetting to thoroughly clean the pipework.

Carry out a CCTV survey to establish the precise location of the defect on the drainage system.

Supply and install 2x 100mm diameter, ambient cured epoxy resin structural patch liners over the defective sections of pipework using cured-in-place pipe lining bladder system. (All materials used are approved by the Water Research Council).

The cost per patch liner is £600.00 plus VAT (total cost is £1,200.00 plus VAT).

Manhole-3 downstream to Discharge

The drain surveyed is a circular 100mm diameter PVCu pipe transporting surface water.

The pipe work was surveyed to 12.2m where it was abandoned (camera unable to progress). An increased water level (40%) was located from 4.4m onwards, resulting in the camera lens submerging underwater (loss of picture).

In an attempt to clear the drain through, we recommend undertaking High Pressure Water Jetting (including CCTV survey).

The cost for this is £240.00 plus VAT.

Manhole-4 downstream to Discharge

The drain surveyed is a circular 100mm diameter vitrified clay pipe transporting surface water.

The pipe work was surveyed to 5.3m where it finished inside Manhole-5. A displaced joint (medium) was located at 4.8m.

To repair the displaced joint, we recommend the below work.

Undertake high-pressure water-jetting to thoroughly clean the pipework.

Carry out a CCTV survey to establish the precise location of the defect on the drainage system.

Supply and install 1x 100mm diameter, ambient cured epoxy resin structural patch liner over the defective section of pipework using cured-in-place pipe lining bladder system. (All materials used are approved by the Water Research Council).

The cost for this is £600.00 plus VAT.

Manhole-5 downstream to Discharge

The drain surveyed is a circular 150mm diameter vitrified clay pipe transporting combined waste.

The pipe work was surveyed to 20.6m where it was abandoned (camera unable to progress). Defective sections were located at 1.8m (broken, including obstruction through pipe wall, 10%), 8.7-9.0m, 14.0m (cracked sections), 14.3m (hole in the pipe wall) and 20.6m (fractured incoming connection).

Due to the obstruction intruding through the pipe wall, to remove and repair the drain an excavation will be required. We recommend the drain is traced as the stone grave markers in the excavation area may need to be lifted.

The cost to trace the drain is £120.00 plus VAT.

To repair the cracked sections at 8.7-9.0m and 14.0-14.3m, we recommend the below work.

Undertake high-pressure water-jetting to thoroughly clean the pipework.

Carry out a CCTV survey to establish the precise location of the defect on the drainage system.

Supply and install 2x 150mm diameter, ambient cured epoxy resin structural patch liners over the defective sections of pipework using cured-in-place pipe lining bladder system. (All materials used are approved by the Water Research Council).

The cost per patch liner is £640.00 plus VAT (total cost is £1,280.00 plus VAT).

To determine if the fractured connection at 20.6m is located on / off the site boundary, the drain will need to be traced.

The cost for this is £120.00 plus VAT.

Manhole-5 Branch-3 upstream to Head of Line

The drain surveyed is a circular 150mm diameter vitrified clay pipe transporting surface water.

The pipe work was surveyed to 11.2m where it was abandoned (camera unable to pass debris build up, 40%). Defective sections were located at 1.0m (cracked) 1.8m (displaced joint – medium) and 10.3m (large displaced joint).

In an attempt to remove the debris build up, we recommend undertaking High Pressure Water Jetting (including CCTV survey).

The cost for this is £240.00 plus VAT.

To repair the defective sections at 1.0-1.8m and 10.3m, we recommend the below work.

Undertake high-pressure water-jetting to thoroughly clean the pipework.

Carry out a CCTV survey to establish the precise location of the defect on the drainage system.

Supply and install 2x 150mm diameter, ambient cured epoxy resin structural patch liners over the defective sections of pipework using cured-in-place pipe lining bladder system. (All materials used are approved by the Water Research Council).

The cost per patch liner is £640.00 plus VAT (total cost is £1,280.00 plus VAT).

Manhole-6 downstream to Discharge

The drain surveyed is a circular 100mm diameter PVCu pipe transporting surface water.

The pipe work was surveyed to 21.3m where it finished at the discharge point (connection onto a drain). A small deformed section (5%) was located at 8.3m.

We do not recommend any further work at this time, however if any issues arise from this area an excavation will be required to replace the section.

Manhole-6 Branch-1 upstream to Head of Line

The drain surveyed is a circular 100mm diameter vitrified clay pipe transporting surface water.

The pipe work was surveyed to 0.6m where it was abandoned (camera unable to pass debris build up, 50%).

In an attempt to remove the debris build up, we recommend undertaking High Pressure Water Jetting (including CCTV survey).

The cost for this is £240.00 plus VAT.

While on site our engineer has noted the below.

Manhole-5A (unable to find).

The cost to trace the drain and locate Manhole-5A at ground level is £120.00 plus VAT. A further cost to access Manhole-5A and continue the CCTV survey will be provided once made accessible.

Manhole-4 (Silt Trap).

Manhole-6 (cover and frame in poor condition, 620x470mm light duty, grassed surface).

The cost to replace the cover and frame with new is £785.00 plus VAT.

