



METHOD STATEMENT

CCTV Camera Structural and Service Condition Survey of Sewers including Combination Jet Vac Cleaning

Contract Title	Land East of New Place Nursery, Arundel Road, Angmering		
Client	GD Group Construction Services	Author:	Liam Sellar
Job No:	Q200267	Date:	26 February 2020
SITE ADDRESS		LOCATION OF WORKS	
Arundel Road, Angmering BN16 4ET		As site address and as required on site.	
Nearest A&E:	Worthing Hospital, Lyndhurst Road, Worthing, West Sussex BN11 2DH		
SCOPE OF WORKS			
Carry out a CCTV condition survey inclusive of Medium Combi Jet Vac cleaning of the accessible existing underground surface water / highway drainage system as detailed between points A – C/D on the plan in Appendix A			
RESOURCES			
Work Equipment		Materials (including Hazardous Substances)	
➤ CCTV Survey vehicle ➤ HGV Combination Jet Vac Unit ➤ Portable CCTV survey unit ➤ Safety Harness ➤ Gas Detector ➤ Fall arrest equipment ➤ Manhole lifter ➤ Manhole keys ➤ Hand tools: Chisels, Hammer, Screwdrivers, Scoops, Broom, Shovel etc. ➤ Manhole barriers, pedestrian barriers, road cones, signs ➤ Van mounted CCTV rig ➤ Mobile Phones All equipment shall be inspected before and after use, and a weekly recorded inspection taken of service, calibration and test dates.		None Applicable	
Site Operatives			
CCTV Crew Leader	- Driving licence - Confined spaces entry - CSCS - Traffic Management - Signing lighting & guarding - Manual Handling - Use of Equipment - MSCC4 Pipe Sewer Condition Classification		

CCTV Crew Assistant	- Confined Space Entry - CSCS - Manual Handling - Use of Equipment
HGV Combi Operator / Driver	- HGV Driving licence - Confined spaces entry - CSCS - Traffic Management - Signing lighting & guarding - Manual Handling - Trained in Use of Tanker - Water Jetting Association Training
HGV Combi Assistant	- Confined Space Entry - CSCS - Manual Handling - Use of Equipment - Water Jetting Association Training

PERSONAL PROTECTIVE EQUIPMENT							
TYPE							
REF	Workwear	EN471	EN 20345 200 joules	Hard Hat EN397	EN166 1b 3.4.9 Goggles		
WHEN	All Works	Work near traffic	Manual Handling	Risk of Falling Objects / Strike of Head on Object	Drilling Strike By Flying / Falling Object		
TYPE							
REF	EN352Part 1 Muff / Part 3 Helmet Mounted	FFP3 Disposable Dust Mask EN 149	Criss Cross EN374 Vinyl / Latex / PVC Grippped Gloves EN388	Breathing Apparatus EN 402 Escape Mask	Local Exhaust Ventilation and Combined Filter RPE		
WHEN	Noise: Drilling /	Cutting / Dust	Biological / Chemical Hazard inc. Cement Manual Handling	Confined Space Escape	When welding		
TYPE							
REF	Powder	First Aid	Spill Kit	Pedestrian Management Signs	Safety Harness EN 361		
WHEN	Fire	Injury	Fuel Spillage	Pedestrian Traffic			
Safety Signs:	Large Road Cones	12	Men at Work	2			
	Left Arrow	2	Right Arrow	2	Road narrow Left & Right		2

Welfare:	Basins with hot water washes are available on the majority of vehicles, with industrial wet wipes provided where absent. Toilet facilities to be identified on a site-by-site basis. Employees are recommended to receive appropriate inoculations.
Other (Specify):	Drain Blocker required for work on potentially contaminated (e.g. oil / fuel) surface water sewers.

Risk Register (RAC)		
RAC 01 & 02 Confined Spaces - Category 1 / 2	RAC 21 Lone Working	RAC 16 Protected Species Habitat Protection/ Nature Conservation
RAC 18 Dealing with the Public	RAC 05 Manual Handling	RAC 06 Sewage and Contaminated Waters
RAC 09 Hand tools & Handheld Equipment	RAC 25 Noise	RAC 07 Sharps and Needles
RAC 10 Vehicle & Pedestrian Management	RAC22 Outdoor Work	RAC20 Waste – Storage, Transfer and Disposal
RAC 23 Site conditions, Slips, Trips and Litter	RAC19 Vehicles Operating On sites	RAC 03 Drain Cleaning
RAC 04 High Pressure Water Jetting		
Quality Issues / Customer Specific Requirements		
1. Visual inspection of all manholes and tanks to ensure empty and clean 2. CCTV survey undertake by trained personnel using approved software systems. 3. High Pressure Sewer Jetting to Water Jetting Association and WRc Sewer Jetting Code of Practice.		
Cooperation and Coordination of Work		
As required a pre-start meeting and then periodic meeting shall be held between the Project Manager and the client's representative to plan and coordinate site activities. On arrival on site and then ongoing the Crew Leader will evaluate site conditions and any overlap with other site activities. Should an overlap occur that introduces risk arrangements shall be made to control these. If this cannot be adequately resolved on site the Crew Leader shall stop work and consult with the Project Manager, who will liaise with the client as required. Project Manager or Supervisor shall as required periodically attend site to monitor works.		
Arrangements for Involving Workers		
Directors, Managers and Crew Leaders shall regularly discuss with employees safety issues, and ensure their suitable involvement in: - Risk Assessments and safety planning - Change planning - Incident Evaluation - Workforce feedback on the adequacy of safety systems - Recommendations for improvement. On arrival on site the Crew Leader will provide a suitable site induction communicating the scope of works, safety objectives, appointed roles, site rules, and arrangements for safety, security, welfare and emergencies.		
Task Pre-Requisites / Permits / Consents (As Applicable)		
	None Specified	

SITE METHODOLOGY		
	Description	Risk Control Measure
1.	Attend Site: Stop vehicles in a safe place and switch on roof mounted amber beacons. Set out Keep Right Sign and always set out signs before commencing works. Wear the required PPE as specified above.	Highways / Traffic Management
2.	Conduct site specific risk assessment: identifying as a minimum: ➤ coordination with other site activities ➤ pedestrian and traffic circulation,, ➤ access and egress ➤ pedestrians, ➤ sensitive neighbours, ➤ surface water gullies ➤ aggressive persons or violence at work ➤ weather conditions or poor lighting. With consideration to above, determine capability to complete job [Refusal to Work on Safety Grounds]. If further advice or assistance is required, contract Operations Manager.	
3.	Site Induction: Foreman to induct crew communicating Method Statement, Risk Control Measures, Site Rules and Emergency Response Procedures. Site Induction Receipt completed by all site crew. All equipment inspected.	
4.	Traffic Management: As required Establish Signing, Lighting and Guarding (Barriers where required) providing adequate pedestrian access were required.	Highways Pedestrian Management
5.	Manhole Cover Lift: Clean around manhole cover perimeter and lift manhole cover using mechanical assistance where practicable or safe system of manual lifting	Hand Tools; Manual Handling Confined Space: Fall of equipment or persons into or down access shaft
6.	Pre-Entry Inspection for sharps and needles, debris and protected species eg Great Crested Newts.	Sharps and Needles Contaminated Waters Protected Species
7.	Check for dangerous atmosphere using gas monitor for 5 minutes	Confined Space

8.	Drain Clearance: A combination of high pressure water jetting and tankering shall be used cyclically with CCTV surveys until a clear survey is completed, or the survey abandoned due to severe blockage or collapse. High Pressure Water Jetting: Where possible work from downstream manhole. Select correct nozzle for foreseen blockage type. Layout out hoses to minimise risk of trip hazards. Correct pressure for pipe material type maximum 340 bar / 5000 psi for clay / concrete. Break blockage into small pieces to flush downstream. Once the nozzle head has passed through the blockage, a steady rewind rate of between 100 and 200 mm per second should be maintained in order to effectively clean the drain. Mandatory Noise Protection Zone during jetting operation. Tankering: Select appropriate hoses and lay out and connect to inlet valve on tanker ensuring marked safe route. Drainage Operative & Tanker Operator to agree signals. Proceed to empty manhole chamber via suction hose. When the manholes / tanks are empty or the tanker full: Remove and stow suction hoses ensuring that the hose is subjected to full vacuum suction when clear of liquid. Mandatory Noise Protection Zone during jetting operation. If debris is present in chamber – Suck accumulated silts into tanker using suction hoses / boom. Once chamber is clean remove and stow suction hoses. No entry below manhole cover level unless under Permit to Enter with correct confined spaces training and equipment (see 10 below). During work operatives to pay particular attention to falling into open manhole, hose trip hazards, wet surface slip hazards, high pressure water jet and pedestrians. At end of cleaning operation, wash back any sewer contaminated waters into manhole and disinfect.	Drain Cleaning High Pressure Water Jetting Manual Handling
9.	Set up and test CCTV equipment.	Manual Handling
10.	Confined Space Entry: It is unlikely that a confined space entry is required however if chambers are blocked or CCTV or other equipment becomes trapped then entry may be required. Entry to be only made by confined space entry trained operative. Calibrated as monitor used to monitor atmosphere for 5 minutes – no entry if gas detected. If greater than 1.2 meters deep tripod, full-body harness with D-Ring and rescue rope erected. Entry operative to wear gas monitor, emergency escape set and hard hat with chin strap. Confined Space Entry Permit raised. Top Man operates descender and descends entry operative into chamber. Any fixed steel rungs must not be used. Ladder may be used to assist entry. Entry operative shall stay on rescue rope at all times. If gas monitor alarms or any other incident occurs Top Man shall extract the operative.	Confined Space
11.	Lower camera into manhole and agree signals: between CCTV Crew Leader & Assistant	Manual Handling Confined Space Slips, Trips & Falls

12.	CCTV Survey: Under guidance of CCTV Crew Leader undertake the survey and record the assigned grade as per training. The system of structural condition grading for is summarised below:			
13.	SRM Sewer Condition Grade	Drain Condition Grade	Structural Condition (Examples Only)	
	1&2	A	- Structurally sound with no leakage evident. - Slight cracks / defects permitted.	
	3	B	- Cracks and/or fractures observed but pipe provides sufficient arching support. - Some leakage may be evident.	
	4&5	C	- Total collapse / blockage likely in the future - Structurally unsound with insufficient arching support. For Non-rigid pipes eg plastics or pitch fibre pipes provide insufficient arching support when deformation exceeds 20% of the diameter. Rigid pipes eg clay and concrete provide insufficient arching support when deformation exceeds 10%. - Fully-displaced joints ie displacement is at least equivalent to the pipe wall thick-ness.	
	Trees roots shall be noted along with any structural condition associated with them.			
14.	Drain Serviceability: The drain shall be assessed against the following drain serviceability checklist:			
	Is the drain failing to discharge normal household flows to the sewer system, i.e., recurrence of blockage		Yes / No	
	Is there evidence of leakage occurring (infiltration or exfiltration)?		Yes / No	
	Is there intermittent stormwater flooding?		Yes / No	
	Are existing roots or future root growth likely to lead to continuing blockages?		Yes / No	
	Has a leakage test failed (subsidence investigation only)?		Yes / No	
	Do defects make the drain unserviceable?		Yes / No	
15.	If leakage through cracks or joints (infiltration or exfiltration) is evident on CCTV, then the drain shall be considered to be unserviceable. Constant seepage/dripping or build-up of scale is evidence of infiltration. Where there is root ingress in a drain, it shall be considered unserviceable if the drain is suffering from repeated blockage problems or if the remaining flow capacity is inadequate. The drain may also be considered unserviceable if the roots are not presently causing serviceability problems but there are reasonable grounds to anticipate significant root growth later.			

	Drain Serviceability Continued: A section of drain known to be the cause of a recurrent problem may be considered to be unserviceable irrespective of other (eg CCTV) information eg because there is an insufficient gradient for self-cleansing. If as part of any subsidence investigation a leakage test may be undertaken (this will be under a separate method statement).	
16.	Survey Completion: On completion of CCTV remove & stow CCTV equipment. Refit manhole covers	Manual Handling
17.	Waste Any solid wastes eg brick ends etc is double bagged and removed from site at the close of each shift. Waste tanker takes waste to approved waste treatment facility with approved Environment Permit. Hydro Descaling Ltd. (t/a Insewer) Waste Carriers license CBDU92371 Exp 01/04/2022.	Waste
18.	Site checked for cleanliness and security	Slips, Trips and Falls
19.	Traffic Management Removal: Remove signing, lighting and guarding taking note of potentially changed traffic conditions	Highways
20.	Site Completion: Job Sheets and Inspection Records completed and Controller informed of Completion of Works. Electronic hard-drive containing survey video and report returned to CCTV survey administration office.	
21.	Administration Function: All surveys will be quality assured by MSCC4 qualified personnel at the following sampling regime: - For work under WRc Model Contract for Sewer Conditions Surveys – percentage as per guidance. - For all other works: 100%. Sewer surveys scores will be corrected with any significant differences in scoring consulted with the CCTV Team Leader and rectified. Survey videos and reports are issued to the client by email and/or electronic file transfer. No hard copies or DVD's are issued unless specifically agreed with the client. Waste transfer tickets to be supplied to client where applicable.	

SITE RULES

- (1) **Planning and Risk Assessment:**
 - Work shall be undertaken as specified in the Method Statement and risk assessments.
 - Any entry into Confined Spaces requires an entry permit. No Permit = No Work.
 - When working alongside other parties on the site e.g. other contractors or client's staff, coordinate works with them to ensure any overlap is controlled. Where this cannot be done then stop work and report to Manager.
 - Where a change / variation is required this shall be consented by the Manager.
 - Do not attempt any task unless authorised by your Crew Leader and you feel safe to do so. You have the right to Work Safe & refuse to work on safety grounds.
- (2) **Training:** Only undertake tasks that you are trained and properly equipped to do so. Hazardous tasks requiring specific training include confined spaces entry, high pressure water jetting, erecting traffic signing, lighting or guarding, buried service detection.
- (3) **Equipment:** All equipment must be checked daily before use and recorded on the Job Ticket. Check all service / inspection tags are in use. Don't tamper with any guards or safety equipment. Any defects must be reported and the Foreman.
- (4) **PPE:** All workers will be provided with free Personal Protective Equipment required for their job and this must be worn when required. A workers repeated failure to use or maintain PPE shall be subject to disciplinary proceedings. Do not tamper, adapt or attempt to repair PPE. Keep signs, lights and barriers clean. If PPE is defective or replacement then report to the Foreman.
- (5) **Cooperation and Coordination of Work:** As required a pre-start meeting and then periodic meeting shall be held between the Operations Manager and the client's representative to plan and coordinate site activities. On arrival on site and then ongoing the Crew Leader will evaluate site conditions and any overlap with other site activities. Should an overlap occur that introduces risk arrangements shall be made to control these. If this cannot be adequately resolved on site the Crew Leader shall stop work and consult with the Operations Manager, who will liaise with the client as required. Operations Manager shall as required periodically attend site to monitor works.
- (6) **Arrangements for Involving Workers:** Directors, Managers and Crew Leaders shall regularly discuss with employees safety issues, and ensure their suitable involvement in risk assessments, safety planning, change planning and incident evaluation. Workforce feedback on the adequacy of safety systems shall be encouraged along with recommendations for improvement. On arrival on site the Crew Leader will provide a suitable site induction communicating the scope of works, safety objectives, appointed roles, site rules, and arrangements for safety, security, welfare and emergencies.
- (7) **Security and Safety:** All persons, including visitors to site, will report to the Foreman and undergo a suitable induction course prior to entering or undertaking any work on the site. Site must be kept secure at all times. Use suitable signing, lighting and guarding shall be used to ensure the safety of pedestrians and drivers.
- (8) **Hygiene and Welfare:** All persons must maintain a high standard of personal hygiene at all times to protect from infection. Foreman must ensure that welfare facilities are provided before work commences and that they are suitably maintained.
- (9) **Weather:** Work shall not be undertaken in severe adverse weather conditions.
- (10) **Reputation and Conduct:** All workers will uphold the image of the company at all times. Branded PPE to be worn and kept reasonably clean. Foul and abusive language, harassment e.g. cat calling or horseplay is prohibited. Any person breaching these conduct rules or behaving in an unsafe or dangerous manner will be removed from site and undergo disciplinary proceedings.

EMERGENCY PROCEDURES APPLICABLE TO WORKS	
Fire	1. Carbon Dioxide and Foam Fire Extinguishers to be available on all vehicles. 2. Only persons trained in fire response to attempt to fight fires. 3. Local arrangements for contacting emergency services to be identified.
First Aid	1. First-Aid box provided on all vehicles. 2. Local arrangements for contacting emergency services to be identified. 3. Location of nearest hospital A&E as above. 4. In case of accident or injury requiring medical attention call 112/999 5. Always inform Control in an operative is injured, of any damage or near misses. 6. Ensure that the Incident Report Form is completed.
Environmental	1. Always wash back sewage spill into manhole. Do not allow to disperse. 2. If sewage enters surface water system or watercourse then inform Controller and Environment Agency on 0800 807060. 3. If Great Crested Newts or other protected animals found or work involves working in areas of invasive plants eg Japanese Knotweed, Himalayan Balsam then stop job and report to Manager.
Call-Back Time Exceeded	1. If the agreed call-back time is exceeded, the Operations Manager shall commence the missing persons procedure.

AUTHORISATIONS			
Authorised By	Liam Sellar	Signature	
Date	26 February 2020	Position	Director
Approved by		Signature	
Date		Position	Client's Representative

DECLARATION BY WORKERS		
1. I have been consulted and assisted where necessary in the development of this method statement and associated risk assessments 2. I have been given the opportunity to comment on the content of this method statement and associated risk assessments 3. I have read and understand how I am to carry out the activities listed in this method statement and associated risk assessments 4. I have been supplied with the personal protective equipment identified in this method statement and associated risk assessments and I have been given training in the safe use of this equipment		
Name	Signature	Date



