



Project: A442 Eastern Primary Bypass Surveys

Project Summary

Project Activity: Pipework and chamber defect survey

Length of Drainage Surveyed: 15km

Hours of Works: Weekday daytime working

Summary of Works: Crown Plus were commissioned by Balfour Beatty Living Places (BBLP) to undertake High Pressure Water Jetting, CCTV and GPS surveys of the existing highway drainage as set out on scheme drawings.

The A442 is a high-speed dual carriageway, the highway drainage was approximately 50 years old and had not received a detailed inspection for a great number of years with the records held by the local authority incomplete and inadequate to enable forthcoming major maintenance works to be designed and implemented.

Crown Plus undertook the drainage technical surveys on with no safety incidents, no environmental incidents and no near misses, which was achieved through close collaboration between BBPL, the Traffic Management contractor and Crown Plus.

As a result of our works on the A442 project Crown Plus were recommended to additional Balfour Beatty Living Places procurement managers, directly culminating in a contract award to work on the Herefordshire Highways contract (Aug 2021).

Deliverables: The final deliverables for the scheme were as follows:

- Electronic footage of all drainage surveys
- PDF reports of all surveys together with defect schedules
- Asset Inventory drawings detailing all surface assets (Chambers, Gullies, Kerbs and other surface features)
- Asset condition drawings showing location of defects in each section of drainage
- Design drawings detailing cover levels and all invert levels of incoming/outgoing pipes
- Compliant shapefiles that met the requirements of DMRB CS551.
- Detailed remediation schedules detailing every defect identified as part of the surveys together with a recommendation as to how to repair the defect.

Location A442 Telford

Client Balfour Beatty
Living Places

Date January 2021 to
March 2021

Category Highways Drainage
Surveys



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Full Programme Details

Working in collaboration with BBLP, and by reference to the pre-construction information provided by BBLP, our Contracts Manager prepared detailed Risk Assessments and Method Statement (RAMS) for the work to be undertaken.

All operatives are regularly assessed for their competency before they are permitted to carry out any works for Crown Plus. These assessments include training and experience in carrying out typical tasks and their attitude towards the safety checks relevant to their work. A record of all competencies is kept on file, together with copies of relevant licenses, certificates and training courses.

Prior to commencing works on site, we advised the Clients team of the respective individuals who would be working on site, and we provided all their training and competency documents so that they may review the same and ensure that we had the appropriate number of trained staff for the works.

All personnel received a client site-specific induction prior to working on site. The induction detailed the main contract requirements together with the requirements around incident reporting, emergency procedures, contact telephone numbers, and local hospital details.

The RAMS document was formally approved by the Client prior to any works being undertaken. Prior to commencement of the works on site the RAMS were communicated in detail to all staff and operatives working as part of our works. All personnel confirmed their understanding of the details within the documents and signed briefing sheets as confirmation, with copies submitted to the Clients H&S representatives.

Amongst the key risks identified were:

- High speed road with risks to and from the travelling public
- Manual handling
- Confined spaces
- High pressure water

As this project was over several weeks all personnel received regular toolbox talks on the various elements of the works to reinforce the main approved methods of working and risks associated with the works. In addition, as the CCTV and GPS survey works were undertaken in 'mobile works' and the work location changed on a daily basis, daily pre-shift briefings were provided and given by the site supervisor to reinforce the health and safety messages. This ensured everyone knew the tasks for the day and any new or revised working requirements.

All Crown Plus staff and operatives were provided with the appropriate PPE for the tasks involved and the environment that they were working in. Spares of all PPE were held on site and distributed as/when necessary. Our supervisor was the 'Appointed Person' for first aid, and responsible for reporting and recording accidents, incidents and near misses. All welfare was provided by the principal contractor.

Traffic management (TM) was arranged by BBLP. Detailed TM drawings for each phase of the works were provided. The daily pre-shift briefing discussed the TM layout for that day ensuring our teams were aware of access and egress points together with any special requirements.

Mobilisation to site only happened, after the briefings had been undertaken, and once the TM had been installed and checked by the TM supervisor. Access and egress to the TM area was only undertaken using the approved points.

Our supervisor liaised with BBLP and the TM contractor daily providing updates on the progress of the surveys relative to the programme of works. This enabled the road space booking teams to liaise closely with the local authority who approved all road space bookings. Any significant delays on site effected the planned programme dramatically as road space bookings would have to be amended, conversely when good progress was made, and we gained time on the programme early entry requests could be made at the appropriate times.

Full Programme Details (Cont.)

Welfare facilities were provided by BBPL. These were in the main site compound with a welfare van provided within the working area.

For this project the following specialist equipment was required:

- 28t Jetvac recycling unit
- Agilios XR60 Push Rod Camera system (Atex Zone 1&2 compliant)
- IPEK VC 500
- Rovion RX130 (Atex Zone 1&2 compliant)
- Rovion RMX2 (Atex Zone 1&2 compliant)
- WinCAN VX Expert
- Manhole keys and hydraulic cover lifter.

Only personnel trained and competent in the use of each piece of equipment was allowed to operate it. All equipment was examined before being taken to site and regular checks were carried out during operations. Special consideration was taken during days when freezing conditions were prevalent to the HPWJ operations and water spills. There were no spillages, or environmental incidents, during our time on site.

Before accessing any part of the drainage system, the relevant covers were removed and allowed to vent. Standard manual handling assessments were used for the lifting of covers.

Each day before work commenced, the survey area was inspected for signs of any protected plant or animal life that may be at risk as a result of the proposed works. No such signs were identified but had there been any they would have been reported to the client before continuing work.

Should a spillage or contamination have occurred during the works spill kits were available in the CCTV van. No spills occurred but should there have been any they would have been reported to the Client.

No subcontractors were used for this project.

Key Personnel

The key personnel involved in this project were:

- Contracts Manager (SMSTS),
- Supervisor (SSSTS),
- HPWJ operator (HPWJA),
- CCTV & GPS operator

Concluding Summary

Crown Plus undertook drainage technical surveys on a high-speed dual carriageway with no safety incidents, no environmental incidents and no near misses. This was achieved through close collaboration between BBPL as principal contractor, their TM contractor and Crown Plus. Crown Plus contributed to the high levels of health and safety achieved by:

- good planning and preparation
- respecting site rules
- good supervision
- using well maintained equipment
- deploying trained and competent operatives
- effective collaboration with the Client and supply chain partners