

Method Statement for Survey Work
At Trod Beck, Wolsingham

1.0 Location

The topographic surveys are to be undertaken at Trod Beck, Wolsingham, DL13 3EX.

1.1 The survey is to be undertaken on Wednesday 23rd July 2014.

2.0 Scope of Works

2.1 The works shall involve the measurement of wall positions, flood defences, slope embankments and ground levels using GPS and TPS survey techniques.

2.2 The works will also involve the mapping of the site topography in relation to a fixed datum – Ordnance Survey GPS Active Network.

2.3 The works will be subject to the rules and regulations governing EA contractors working within / on the site, which will be given upon induction.

2.4 All surveys are to be within accordance with The Environment Agency National Specification for Surveying Services, Version 3.1

3.0 Hazards Identified

The hazards to working in the environment are to be set out in the risk assessment, these are briefly (but not limited to):

- Underfoot Conditions: Slip/Trip Hazards;
- Moving Vehicles/Machinery.
- Overhead Services.
- Stockpiles.
- Open Water Bodies Adjacent to site.
- Vegetation.
- Public Vehicles.

3.1 Latitude Surveys shall ensure that all survey personnel shall wear appropriate PPE, including Orange High-Visibility Vests/Coats, Hard-Hats and Safety Boots with Steel Mid-Soles/Toe caps and gloves if required.

Environmental Protection Arrangements

- 4.1 **Water Pollution / Water Quality** - No effluent or waste-water shall be generated as a result of the proposed work activities.
- 4.2 **Air Pollution / Air Quality** (Dust, Smoke, Vapours, Others) - No items of plant or processes shall be used which could emit air pollution, or produce dust that could be a nuisance.
- 4.3 **Noise and Vibration Nuisance** - The proposed work activities shall not produce noise or vibration.
- 4.4 **Contaminated Land and Waste** (Discovery of contaminated land, contaminated arisings, waste management, special waste) - No waste materials shall be produced as a result of the proposed work activities. The proposed work activities shall not disturb any contaminated land or materials that may be present.
- 4.5 **Ecology** (vegetation clearance, protected species and sites, nesting birds, noxious and invasive plants) - It is not envisaged that there shall be any requirement to clear dense vegetation.
- 4.6 **Archaeology and Built Heritage** - The proposed work activity shall not disturb any archaeological remains that may be present.
- 4.7 **Hoarding and Lighting Arrangements** - In accordance with the on-site traffic management health and safety requirement.

5.0 Working Methods

- 5.1 All survey work is to be undertaken by the surveyors using both GPS Survey receivers and Robotic Total Stations.
- 5.2 Enough detail is to be surveyed as to ascertain the general topography of the site. Level detail to be taken at 10 meter intervals.
- 5.3 All survey instrumentation shall be positioned to minimise inconvenience to the works and shall be so situated that the workforce shall not be at risk of injury due to the above.
- 5.4 Where applicable, the surveyor shall follow safety guidelines laid down by the site management staff. The surveyor shall work within the 'zone of safety' at all times, and remain in constant contact with the site management team.
- 5.5 The surveyor shall establish survey control in positions necessary to enable all relevant data to be collected.
- 5.6 New control stations shall be installed, marked, and prepared on station description sheets, in accordance with client specifications. They shall be positioned in GPS friendly areas, where on open view of the sky exists, to minimise cycle slips, multipath, and other interference. Markers shall be road nails or ground anchors as appropriate to the surface to which they are installed.
- 5.7 The following equipment shall be used to undertake the survey:
- **Leica GS15 GNSS receivers**
 - **Leica Smart Rover GPS system.**
 - **Leica TS15 Total Station.**

One GPS base station shall be established at a central location in the survey area (unless otherwise instructed). This should be in an open area with a clear sky view, as described above.

- 5.8 The survey is to be tied into OS Net, by means of Leica Smart Net.

- 5.9 Roving GPS receivers shall establish a network of control stations around the perimeter of the site. They shall log data in rapid-static mode at a rate applicable to achieve the accuracy required.
- 5.10 For detail work, Real Time Kinematic (RTK) techniques shall be used for data collection, but only within the area of the transformation described above.
- 5.11 Any further extension of the transformation shall be extended by establishing a minimum of two control points within the extension boundary.
- 5.12 For total station work, the instrument is to be set up over a known point, referenced to another known point, and a check measurement observed and recorded. The collection of topographic detail is to proceed in a systematic manner as to allow the rapid collection of data and ensure the safety of the surveyor.
- 5.13 If the survey requires the data to be tied into Ordnance Survey datum, then the Ordnance Survey GPS RTK network shall be used (if a data signal can be obtained). The GS15 receiver will obtain correctional data using Leica Geosystems "Smart Net" correction service, allowing the surveyor to measure on the OS projection on site.
- 5.14 All control stations shall be observed for at least two epochs of 3 minutes each, separated by at least 20 minutes. The control stations will employ either the quick-release tripod or wooden tripod for stability.

6.0 Contact Details

- 6.1 The survey is to be undertaken by Latitude Surveys personnel. The head office address is:

DBH Business Centre
Melton Court
Melton
East Riding of Yorkshire
HU14 3HH

Telephone: 0845 4593051
Email: gary@latitudesurveys.co.uk

- 6.2 The project co-ordinator for the survey and contact point for Latitude Surveys Personnel:

Gary Cunningham BSc MRICS (Managing Director)
Telephone: 07720 147297

- 6.3 Personnel on-site during survey works :

Gary Cunningham

Home Address:
(For Emergencies)
83 Beverley Road
Hessle
East Yorkshire
HU1 9AJ