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Project Number: 20-0201

Project Title: Harpur Hill, Buxton

Client: Harpur Hill Limited

Location: Morland Way, Harpur Hill, Buxton, Derbyshire, SK17 9JH

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Prepared By: JO

Management of Surface Water During Construction

1.0 INTRODUCTION

- 1.1.1 The proposed works involve the construction of a new industrial unit for Harpur Hill Ltd.
- 1.1.2 The prevalent ground conditions on site are sandy topsoil underlain by sandy clays and Limestone, thus the soils on site have high permeability. It is however accepted that rainfall during construction has potential to run off to adjacent areas. Consequently **site specific measures as outline in section 3.3 and Appendix A** will be implemented early in the construction programme to act as a contingency.
- 1.1.3 The site specific and the good practice measures outlined below will ensure effective management of surface water during construction.

2.0 OBJECTIVES

- 2.1.1 The Site team must work to ensure the Surface Water run-off is minimised and that the Best Practicable Means (BPM) are used to firstly avoid creating run off, and then if any is produced ensure it is controlled.
- 2.1.2 Key elements of this plan are to be given to site workers via a Toolbox Talk prior to the start of the works. All key trades will be targeted for the On-Site Toolbox talk, but primarily will focus on the Earthworks, Groundworks and Roofing Subcontractors.
- 2.1.3 All Construction team members and Supervisors of the key trades will be briefed on this plan, and in particular with regard to the following:
 - Management of Subcontractors
 - Liaison with Neighbours and the public
 - Reacting to Incidents or Complaints
 - Ensuring that BPM is used to manage the works
- 2.1.4 Briefings will be taken up by requirements in contract appendices and Subcontractor Environmental Requirements.

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3.0 SURFACE WATER RUN-OFF MANAGEMENT

3.1 MITIGATION METHODS

- 3.1.1 Harpur Hill Limited (HHL) will seek to control, and limit, any surface water run-off during all aspects of construction activity.
- 3.1.2 The Main Contractor will ensure that there is no discharging, or allowing of water contaminated with silt, to exit the site and enter the offsite Surface Water system, that may cause pollution.
- 3.1.3 HHL will insist that all relevant Subcontractors seek to minimise offsite surface water discharge and also protect all SW drains by the likes of cut-off ditches or earth bunds.
- 3.1.4 Works will be planned prior to commencement and control measures placed in each task specific Method Statement, approved by the Main Contractor prior to works commencing. This is to ensure that each element of the works has addressed the potential for water run-off and potential contamination to contaminate SW drains or exit the site.
- 3.1.5 All SW drains will be identified both visibly on site and marked on the site plan for all to see.
- 3.1.6 No silty water will be discharged over the ground, unless into pre-excavated settlement beds (fenced off) or via adequately sized settlement tanks situated adjacent to the works in question.
- 3.1.7 Daily Inspections by the Main Contractor's Site Management team will progress for all high-risk sections of work, with additional inspections taking place when adverse weather is expected to ensure no changes to site circumstances have occurred.

3.2 METHOD STATEMENTS – PHASING OF WORKS

- 3.2.1 During the works the Main Contractor (in liaison with Earthworks, Groundworks and Roofing Subcontractors), will aim to minimize the amount of exposed ground and temporary stockpiles of soil in order to minimize the amount of silty water that has to be dealt with.
- 3.2.2 Open trench excavation works (drainage runs / foundation works) will be sequenced so that the length of trench open at any moment in time is kept to a minimum, thus reducing the potential risk of over generation of silty water extracted from the excavations.
- 3.2.3 Works will be phased to ensure mud from vehicles entering and exiting site will be minimised. This will be done by means of (constantly maintained) Haul Roads, 'Just-in time' deliveries, and regular road sweeper attendance during peak phases.

3.3 DEALING WITH ATTENUATION SURFACE WATER FLOWS DURING CONSTRUCTION – SITE SPECIFIC MEASURES

- 3.3.1 The installation of the site's permanent drainage system will be prioritised in the scheme programme so that it will be available for use during the remainder of the construction period.
- 3.3.2 An initial construction arrangement is shown on the drawing included at **Appendix A**. This includes creating excavations to expose the Limestone bedrock where temporary soakaways are shown. Temporary filter drains will capture surface

water run off. The storm water will pass through straw bales situated between the filter drain and the soakaway, removing silt and sediment.

At the site entrance, filter drains will be constructed down to the limestone (approx. 1200mm deep), surface water captured will outfall straight through the base with the filter material removing silt and sediment.

- 3.3.3 The soakaway inlet manhole silt trap will be regularly inspected; initially weekly and then as required. Any siltation to the soakaway should be excavated prior to the construction of the final crate infiltration system.

4.0 STANDARD GOOD PRACTICE

- 4.1.1 As a minimum, and to comply with the conditions of best practice, the following measures will be adopted on site:

- Plant and wheel washing is carried out in a designated area of hard standing at least 10m from any watercourse or surface drain.
- Run-off is collected in a sump and recycled where possible. Settled solids are removed regularly.
- Discharge of contaminated water will need to be tankered off site, with permission from the sewerage provider.
- Refuel mobile plant in a designated area, on an impermeable base away from drains or watercourses
- All fuel to be stored in a (double skinned) bunded bowser.
- All refuelling and bulk deliveries are to be supervised.
- Check the available capacity of the tank before refuelling.
- On plant check hoses and valves regularly for signs of wear.
- Turn off valves after refuelling and lock them when not in use.
- Position drip trays to catch minor spills.
- Spill kits and sand will be available at all times to contain any spillages. Designated contained area for washing out ready mix concrete lorries.
- Regular road sweeping will take place to control mud and dust on roads.
- All foul water during the construction phase will be tankered for disposal offsite.
- Material stockpiles will have silt fences at the toe of the slope made from geotextiles if required.
- Staff & contractors will be trained in incident response.
- Slow silt laden site water down by the use of filter drains, straw bale walls and temporary soakaways.
- Have a Yellow / Amber / Red alert level warning system in place for look ahead weather alerts. Typically, these would include assessment of the alert level in relation to the likely event of either low level disruption, potentially disruptive weather, or extreme weather warnings that will result in pre-determined control measures to be adopted (additional to the ones indicated above)

5.0 INCIDENT RESPONSE

- 5.1.1 Any incidents that could have an environmental impact will be reported to the Environmental Agency: - Environment incident hotline 0800 807060

6.0 LEGISLATION & GUIDANCE

- The Water Environment (England & Wales) regulation 2009
- Land Drainage Act 1991
- SEPA Engineering in the Water Environment Good Practice Guide Temporary Construction Methods
- Control of Water Pollution from Construction Sites – Guide to Good Practice (SP156)
- Environmental Good Practice – Site Guide (C650)

Appendix A

Management of Surface Water During Construction – Site Specific Measures

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