
Job name: Mill Moor Road

Job No: B21957

Note No: JNP-93-XX-RP-C-1001

Date: 03/03/2020

Prepared by: C Yates

Subject: Temporary Surface Water Drainage Note

1. Introduction

- 1.1 JNP Group were instructed by Vogue Homes to produce a temporary Surface Water Drainage Plan to satisfy planning condition 9 for Application No. 2018/94006.
- 1.2 JNP Group produced a letter report, dated 23/08/2019 to address the pertinent temporary surface water points concerning the development site. The letter report Ref: B21957-L006/ne can be seen in Appendix A.
- 1.3 The content of the letter report B21957-L006/ne is still relevant to the scheme. The purpose of this Technical Note is to supplement the existing information, further to comments made by Kirklees Metropolitan Borough Council, Land Drainage and Flooding Department (see Appendix B).
- 1.4 This Technical Note details more site-specific solutions for the development. The proposals included are detailed on the Temporary Surface Water Drainage Plan Rev A, Document B21957-D-SK101A in Appendix C.

2. Risk Assessment of Development Site – Temporary Surface Water

- 2.1 Work on Phase 1 of the Development is ongoing and reaching completion. Phase 2 should be split into two stages, building the southern plots first, as stage 1 and working towards the bottom of the site, stage 2. It is proposed to install the below ground drainage infrastructure prior to constructing plots.
- 2.2 The appended plan indicates the phasing order. The site strip should be in two stages: the first being up to the lower private estate road (for stage 1), and the second site strip below the lower private estate road. In keeping the topsoil and vegetation in place on the lower half of the site, runoff from this area will remain the same and it will drain as per its current state.
- 2.3 During the first stage of the Phase 2 works a bund should be put in place to the north west of the phased work site. This will provide protection to the existing dwelling neighbouring the site.
- 2.4 A shallow depth perforated land drain in a gravel filled trench should be provided along the boundary of the two phases to capture any runoff from stage 1 and distribute back to the ground as per the existing situation. Should the land drain become overwhelmed, the overflow will be onto stage 2 land which, as it is to remain vegetated, will slow runoff and hold up off site runoff.
- 2.5 Should failure of the system occur, or the whole site becomes overwhelmed, a temporary sediment fence can be erected along the northern boundary of phase 2. This would be at the discretion of

the principle contractor on the site.

- 2.6 Should it become evident that the principles in place cannot cope with the runoff amount, infiltration basins can be introduced at either side of the lateral spanning area to contain water and silt.
- 2.7 For the time period of pre-permanent drainage being installed, the above measures should be put in place. Any connections to the proposed drainage should be capped off during construction and fully jetted and cleaned prior to connection to the attenuation SuDS devices.
- 2.8 For the second stage of Phase 2, a similar set up should be applied to that of the first stage with the exception of having the undisturbed land on site. The onsite drainage infrastructure is proposed to be built out during the first stage of Phase 2. Any connections from the second stage should not be introduced until the completion of the works. The runoff from stage 1 will be directed to the new drainage system and outfallen at the reduced rate given for the site.
- 2.9 With the runoff from the site now reduced due to drainage systems being in place, the potential for high volumes of runoff will be reduced. No bunds are proposed for the sides of the site and a land drain should be able to cater for any runoff from the second stage of works.
- 2.10 As per Stage 1, emergency sediment fences and detention basins can be supplied by the contractor should they be deemed necessary in the same location on the northern boundary.

3. Conclusion

- 3.1 The content of this document should be read in conjunction with the previously submitted letter report and the Temporary Surface Water Drainage Plan.
- 3.2 The elements detailed within the submitted documents show a workable solution to the potential issue of temporary surface water drainage.
- 3.3 In splitting Phase 2 of the works into stages, the lower half of the site can be kept as existing thus helping to slow down runoff and provide a buffer zone for any runoff further up the site.
- 3.4 Additional methods can be introduced on the northern boundary to prevent runoff from the site in extreme conditions and if the site becomes overwhelmed, which will be monitored by the contractor on site.

Document Issue Record

Technical Note No	Rev	Date	Prepared	Reviewed	Approved
JNP-93-XX-RP-C-1001	-	03/03/2020	CPY	ST-S	ST-S

List of Appendices

- Appendix A* *JNP Group Letter Report B21957-L006/ne*
- Appendix B* *Response from KC Lead Local Flood Authority*
- Appendix C* *B21957-D-SK101A Temporary Surface Water Drainage Plan Rev A*

This document is for the sole use and reliance of JNP Group's client and has been prepared in accordance with the scope of the appointment of JNP Group and is subject to the terms of that appointment.

JNP Group accepts no liability for any use of this document other than by its client and only for the purposes for which it has been prepared.

No person other than the client may copy (in whole or in part) or use the contents of this document, without the prior written permission of JNP Group.

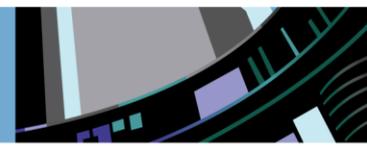
Any advice, opinions or recommendations within this document should be read and relied upon only in the context of this document as a whole.

Any comments given within this report are based on the understanding that the proposed works to be undertaken will be as described in the introduction. The information referred to and provided by others and will be assumed to be correct and will not have been checked by JNP Group, JNP Group will not accept any liability or responsibility for any inaccuracy in such information.

Any deviation from the recommendations or conclusions contained in this report should be referred to JNP Group in writing for comment and JNP Group reserve the right to reconsider their recommendations and conclusions contained within. JNP Group will not accept any liability or responsibility for any changes or deviations from the recommendations noted in this report without prior consultation and our full approval.

Appendix A

JNP Group Letter Report B21957- L006/ne



Our Ref: B21957-L006/ne
 Your Ref: Planning Ref 2018/94006
 Chkd: cpy
 Date: 23rd August 2019

Mr Sam Hough,
 Vogue Homes,
 Spring Villa Farm,
 Long Lane,
 Honley,
 HD9 6EB

Dear Mr Hough

Re: Discharging of Planning Condition 9 for Application No. 2018/94006

In relation to discharging the above planning condition, please find below information which should be considered as part of a scheme for the temporary surface water drainage design for your development at Mill Moor Road.

Installing the designed drainage system and managing temporary runoff are key aspects of the construction works involved in any development. The information provided below is in accordance with the 'C698 Site handbook for the construction of SuDS' (CIRIA, 2007).

Management of Construction (Including Drainage)

Drainage is typically an early activity in the construction stage of a development, taking form during the earthworks phase. However, the final construction i.e. piped drainage system connection to the outfall devices, should not take place until the end of site development work, unless a robust strategy for silt-removal is implemented prior to occupation of the site.

The following key general construction issues associated with SuDS should be recognised:

- Silt-laden waters from construction sites represent a common form of waterborne pollution.
- These silt-laden waters cannot enter SuDS drainage systems unless specifically designed to accept this, as it can clog the systems and pollute receiving waters. Therefore, piped drainage systems should not be connected to the attenuation SuDS devices until the late stages of construction.
- Any gulleys and piped systems should be capped off during construction and fully jetted and cleaned prior to connection to the attenuation SuDS devices.

Temporary Drainage During Construction

The three principal aspects of drainage control during construction are trapping sediment, conveying runoff, and controlling runoff.

Brighouse

Woodvale House
 Woodvale Road
 Brighouse
 West Yorkshire
 HD6 4AB

telephone

01484 400691

email

brighouse@jnpgroup.co.uk

- Civil Engineering
- Consulting
- Flood Risk
- Geo-Environmental
- Green Energy
- Rail
- Structural Engineering
- Transport Planning

Offices at:

Brighouse
 Chesham
 Hartlepool
 Leamington Spa
 Sheffield

Reg. Office

Bourbon Court Nightingales Corner
 Little Chalfont Buckinghamshire HP7 9QS

Reg. No.

10234789 England

JNP Group is the trading name of JNP Group Consulting Engineers Ltd.



Sediment traps and barriers can include basin traps and sediment fences (with any necessary boundary controls). The principal basins should be installed after the construction site is accessed. Sediment fences and barriers should then be installed as needed during grading.

Conveyance of runoff can be achieved through small ditches/stream, storm drains, channels and slope drains with sufficient inlet/outlet protection. Slope stability needs to be considered when using any channels to convey runoff across the site into any basins etc. Runoff control measures should be implemented to ensure that runoff does not overwhelm the temporary system and cause flooding issues. Runoff rates from the site should be managed so they are no greater than pre-development. Any additional conveyance measures should be installed as needed during grading.

Runoff control should include provision of perimeter ditches or appropriate levels grading to ensure that any water from the construction site stays on site.

Construction runoff should be directed to dedicated infiltration basins with adequate upstream sediment and pollution control such as sediment basins, silt fences and straw bales prior to infiltration to ground. All discharge of runoff to ground should take recognisance of the Environment Agency's Groundwater Protection requirements.

Any necessary surface stabilisation measures should be applied immediately on all disturbed areas where construction work is either delayed or incomplete.

Maintenance inspections should be performed weekly, and maintenance repairs should be made immediately after periods of rainfall.

Protection of Drainage Infrastructure during Construction

All drainage infrastructure will be protected from damage by construction traffic and heavy machinery through the implementation of measures such as protective barriers and storing construction materials away from the drainage infrastructure.

Summary

The above information should be used by your earthworks contractor to develop phasing of the temporary drainage provision. The methods included will ensure silt debris and contaminants do not enter the existing drainage systems and watercourses. Due to the slope of the land on site, surface water drainage during construction is unlikely to flood areas to the south, east and west of the site. If the methods of collection, i.e. land drains are provided to the north of the site, flooding issues to neighbours and Meltham Dike to the north will be mitigated.

We trust the information contained within this letter and the accompanying sketch is sufficient for your contractor to develop a temporary surface water drainage design. Please send this letter and the attachments to the Planning Officer for discharge of condition. Should you require anything further, please let us know.

Regards,



Nathan Eastwood
Graduate Civil Engineer

Enc: B21957-D-SK101

Appendix B

KC Lead Local Flood Authority

Response

Consultation Response from KC Lead Local Flood Authority		
2019/93274 Rough Nook Farm, 112, Mill Moor Road, Meltham, Holmfirth, HD9 5LW		
Discharge of conditions 3, 4, 5, 6, 7, 9, 10, 11, 13, 14, 15, 16, 17, 18, 19 and 21 on previous permission no. 2017/93015 for erection of 19 dwellings (C3) with associated parking with vehicular access		
Date Responded: 28th January 2020	Responding Officer: Paul Farndale	Responding Ref:

Further to our comments of 11th November 2019 and the submission for clarity of microdrainage calculations by the applicant.

Further information is required for all conditions.

Condition 6 – General Drainage

The drainage design is accepted. It is noted there is minor flooding from tank 5.000 in the 1 in 100 year + 30% climate change event. Houses are protected by flood routing design and shaped driveways. The water volume for this event minimal.

Please note the use of pipes over 900mm under adoptable highway may preclude the adoption of the road. Please contact Farhad Khatibi, Kirklees Highways Structures for more details.

A detailed maintenance plan of attenuation tank and flow control, based on CDM regulations justification of design and operation of design. Access methodology, cleansing and checking operational parts and replacement of parts such as neoprene seals on the flow control should be stated along with responsibility and frequency.

If such a plan is also required in a section 106 (Town and Country Planning Act) undertaking then this should also be attached as required.

All responsibilities with a management company can cease upon the day of adoption by the Statutory Undertaker.

Condition 7 – Full investigation of Watercourse

No submission to discharge this condition has been received.

Condition 9 – Construction phase drainage, flood risk and pollution prevention.

Submitted information from JNP provides a snap shot of the types of methodology that could be used on any site and quite rightly asks for it to be included in a management plan.

Kirklees LLFA require a site specific plan indicating exactly what is to be included in the form of a risk assessment and method statement with accompanying plans. The plan(s) should look at phasing, for example some of the plots are adjacent to a proposed bund, they may not be appropriate.

This should be split into distinct phases of the development showing when site is to be stripped, areas being worked at any given period of time, and pre and post agreed permanent drainage being installed. Run off from higher ground should be considered.

Wheel washing, sweeping, gully protection on and off site, bunds, silt traps, fences, socks, silt buster can all be considered as should any licensing provision required by the Environment Agency.

The scheme should include back up measures in case the site becomes overwhelmed, such as tanker access, the use of chemical silt busters etc. We recommend that flows on this site for a 1 in 5 to 1 in 10 year event is considered critical rainfall event is considered.

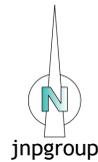
Condition 10 – Outfall Construction

The LLFA has no objection to a construction as long as it does not reduce the cross section of the existing channel. Flows from the development should be clearly turned to go with that of the Dike and not hit the Dike square on. It would also be prudent to include some form a baffling to prevent medium to long term erosion.

The planning officer should consider aesthetics of the headwall and whether stone facing is more appropriate than simple pre cast concrete.

Appendix C

B21957-D-SK101A Temporary Surface Water Drainage Plan Rev A



Key

- Perimeter Fence / Hoarding - Herras Mesh Fencing
- Phasing Boundary Line
- Shallow depth 150mmØ perforated land drain
- Surface Water run-off Earth Bund
- Surface water flow direction

- Notes:-
- Where this drawing has been issued in electronic .dwg format it has been done so in good faith. jnpgroup do not take any responsibility for any inaccuracies in the electronic data, which should be checked against the paper (or .pdf) drawing issue. Any apparent discrepancies should be immediately reported to jnpgroup. The electronic .dwg file should not be assumed to be to scale and should not be used for 'overlying', setting out or checking of any third party information. All dimensions should be taken from the paper (or .pdf) version of the drawing. Electronic drawings may contain third party information. jnpgroup take no responsibility for this information, which should be checked against the originators paper drawing(s).
 - All working dimensions to be checked on site.
 - Do not scale.
 - Any discrepancies between drawings of different scales, and between drawings and specification where appropriate to be notified to The Engineer for decision.
 - Copyright reserved. This drawing may only be used for The Client and location specified in the title block. It may not be copied or disclosed to any third party without the prior written consent of jnpgroup.
 - This drawing should only be used for construction if the drawing status is "Construction". jnpgroup take no responsibility for construction works undertaken to drawings which are not marked with this status.

Health and Safety Note:
 The details on this drawing have been prepared on the assumption that a competent contractor will be carrying out the works. If the contractor(s) considers that there is insufficient Health and Safety information on this drawing, this should immediately be brought to the attention of the designer.

HAZARD IDENTIFICATION BOX
 This table is provided to assist the Principal Contractor to fulfil their obligations under the CDM Regulations 2015

Construction Hazard	Maintenance / Cleaning Hazard	Demolition / Adaption Hazard

Rev.	Date	Amendment	By	Chk.
A	27.02.20	Temporary surface water scheme revised	CPY	ST-S

Status: **For Approval**

john newton & partners
jnpgroup
 Consulting Engineers
www.jnpgroup.co.uk
 Chesham • Brighouse • Hartlepool • Leamington Spa • Sheffield
 Tel: 01484 400891 E-mail: brighouse@jnpgroup.co.uk

Client	PENNINE DEVELOPMENT LTD
Job	LAND OFF MILL MOOR ROAD, MELTHAM, HUDDERSFIELD, HD9 5LW
Title	TEMPORARY SURFACE WATER DRAINAGE

Scale 1:250 @ A1 Date AUGUST 2019

Drawn by NE Checked by CPY Approved by

Drawing No.	B21957-D-SK101	Rev.	A
-------------	----------------	------	---

QA Ref: Q019 Rev D