

Report on Drainage Strategy to
Accompany Planning Application
3/2021/1134 Condition 17
Land East of Chipping Lane, Longridge

by

Barratt Manchester

Revision	Date	Prepared By	Revision Notes
-	15.03.24	CD	First Issue

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1. Introduction

The following document has been prepared to assist the designer's preparation and the readers understanding of the drainage theory and calculations in one reference document.

This document covers all Phases 1, 2, & 3 of the Chipping Lane development, in order to demonstrate how the full site drains; supporting evidence has been provided. See Appendix A for the planning reference drawing.

The document has also been prepared in order to discharge the following drainage condition linked with the **3/2021/1134** full consent planning permission for the development of 47 no. homes off Chipping Lane, Longridge:

Condition 17

No development shall commence until a Construction Surface Water Management Plan, detailing how surface water and stormwater will be managed on the site during construction, including demolition and site clearance operations, has been submitted to and approved in writing by the Local Planning Authority.

The details of the plan to be submitted for approval shall include for each phase, as a minimum:

- a) Measures taken to ensure surface water flows are retained on-site during the construction phase(s), including temporary drainage systems, and, if surface water flows are to be discharged, they are done so at a restricted rate that must not exceed the equivalent greenfield runoff rate from the site.*

- b) Measures taken to prevent siltation and pollutants from the site into any receiving groundwater and/or surface waters, including watercourses, with reference to published guidance.*

The plan shall be implemented and thereafter managed and maintained in accordance with the approved plan for the duration of construction.

2. Site Details

Development Name	Bowland Meadows, Chipping Lane
Site Address	Land off Chipping Lane, Longridge, Preston, PR3 2NA
Longitude, Latitude (or OS Grid Ref)	360321; 437929
Site Description	7 No. open grassed fields separated by mature hedgerows and sporadic trees. Currently used by livestock for grazing.
Site Area (Ha)	14.41Ha Approx.
Site Area used for calculating Greenfield Run-Off Rates (Ha)	10.52Ha Approx. developable area, this excludes large areas of open spaces.
Existing Impermeable Area (Ha)	0Ha
Is the Site Steeply Sloping (Y/N), If "Yes" Typical Gradient.	Yes 1:30

Table 1

3. Pre-Development Greenfield Runoff Rates

A flood risk assessment which covers Phases 2 & 3, was carried out by Betts Hydro, in December 2018. This document states that the surface water discharge rate should be restricted to 13.6l/s/Ha, calculated using the HR Wallingford tool for greenfield runoff rates on uksuds.com. This FRA was revised in November 2021 to include for all planning layout amendments. See Appendix F for the latest revision of the full report.

Return Period	Greenfield Rate (L/s/Ha)
1 in 1 Year (l/s)	11.8
QBar	13.6
1 in 30 Year (l/s)	23.1
1 in 100 Year (l/s)	28.3

Table 2

4. Post-Development Surface Water Allowable Discharge Rates

Discharge rates have been limited to existing greenfield runoff rates of Qbar for all storm return periods. Refer to the phase specific FRA, and Tables 2 & 3 above for details of the greenfield runoff rates.

See Appendix I for the development area plan.

Surface Water Network	Developable Area (Ha)	Greenfield Rate (L/s/Ha)	Allowable Discharge Rate L/s
2	2.69	13.6	36.6
3	1.71	13.6	23.3
		Total	59.9

Table 3

Please refer to the drainage network plans within Appendix J.

5. Defect Reporting / Emergency Action

Prior to adoption of the highway drains, foul drains, surface water drains or SUDS, defects may be reported to Barratt Manchester by the local authority, local residents or members of the public.

All defects are can be reported to Barratt Manchester Customer Care Line using the following details:

Email: manchester@newhomecare.co.uk

Phone number during office hours: 0161 872 0161 option 3

Phone number out-of-hours: 0345 6016084

The customer care line's normal working hours are Monday to Friday 9am to 5.30pm, excluding bank holidays. For reports of defects outside normal working hours, a 24 hours out of hours call centre is in operation.

Most spillages on development sites are within compounds and do not pose a serious risk to the environment if they enter the drainage in a slow and controlled manner with time available for natural breakdown in a treatment system. Therefore small spillages of organic substances should be removed where possible using soak mats as recommended by the Environment Agency, with residual spillage allowed to bio-remediate in the drainage system.

In the event of a serious spillage, either by volume or of unknown or toxic compounds, then the spillage is to be isolated with soil, turf or fabric, and block the outlet pipes from chambers downstream of the spillage with a bung. A bung for blocking pipes may be made by wrapping soil or turf in a plastic sheet or closely woven fabric. Contact is to be made to the Environment Agency immediately.

6. Summary of Surface Water Management

A surface water management plan has been put together for Phases 2 & 3 of the development as a whole. This plan was put together to manage the surface water and silt issues during the construction of the development, and can be found in Appendix O.

Prevention methods will be implemented, including limiting topsoil removal, temporarily suspending earthworks and using road sweepers in order to prevent silts from running off the site. These methods are designed to stop the silt runoff at source, to limit the volume of silts.

Protection methods will also be used, such as silt matting within outfall headwalls and soil bunds adjacent to existing watercourse. These methods are used in order to trap silt to prevent them making their way into the watercourses.

All surface water discharge points require land drainage consent to connect to the existing watercourse. Land drainage consent is also required to culvert the watercourse beneath proposed highways. The LLFA will be contacted and permission granted prior to any works being done on the existing watercourses.

See Appendix O for the full surface water management plan and details.

7. Condition 17 Conclusion

No development shall commence until a Construction Surface Water Management Plan, detailing how surface water and stormwater will be managed on the site during construction, including demolition and site clearance operations, has been submitted to and approved in writing by the Local Planning Authority.

A full surface water management plan has been written and implemented on the development, this is located within Appendix O.

All works pertaining directly onto the watercourse has been detailed and submitted for Land Drainage Consent with the LLFA prior to works any works on the watercourse itself.

The details of the plan to be submitted for approval shall include for each phase, as a minimum:
a) Measures taken to ensure surface water flows are retained on-site during the construction phase(s), including temporary drainage systems, and, if surface water flows are to be discharged, they are done so at a restricted rate that must not exceed the equivalent greenfield runoff rate from the site.

All drainage has been designed in line with the phase specific flood risk assessment, located within Appendix F.

All flow rates are restricted to pre development runoff rates as detailed within Section 4 of this report.

a) Measures taken to prevent siltation and pollutants from the site into any receiving groundwater and/or surface waters, including watercourses, with reference to published guidance.

The plan shall be implemented and thereafter managed and maintained in accordance with the approved plan for the duration of construction.

Surface water management plan have been produced and implements on this development. Silt management plans have been summarised within Section 6 of this report and detailed within Appendix O.