



**BLOOR HOMES
PROPOSED RESIDENTIAL
DEVELOPMENT
PHASE 3B, BEREWOOD,
WATERLOOVILLE**

**DRAINAGE STRATEGY
(REF. 25418-MBL-XX-00-RP-D-0001)**

OCTOBER 2021

A light blue silhouette of a family riding a bicycle. The father is in the driver's seat, the mother is seated behind him, and a child is seated in front of her. The bicycle has a basket on the front.

the journey is the reward

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1 Introduction

- 1.1 Mayer Brown Ltd has been commissioned by Bloor Homes Ltd to provide an infrastructure design service for the delivery of the Phase 3B residential area at Berewood, Waterloooville.
- 1.2 The location of the site is shown on Dwg. 25418-MBL-XX-00-DR-D-0001 in Appendix A.
- 1.3 This drainage strategy has been prepared in support of the reserved matters application to demonstrate how foul and surface water will be drained and managed.
- 1.4 This document relates to Condition 18 of the outline consent, and in part Condition 6(d).

2 Planning

- 2.1 The Berewood Development benefits from Outline Consent granted by Winchester City Council on 18th April 2012, reference APP/10/00828.
- 2.2 This site is referred to in the outline application as Phase 3B and falls within the “Garden Suburb” area as defined in the design codes. The site has also been marketed as ‘Larkfields’.
- 2.3 Condition 18 of the outline planning consent relates to the provision of Sustainable Drainage and is applicable in the context of a drainage strategy. Condition 18 states:
- “Prior to the commencement of each reserved matters area a surface water drainage scheme, based on sustainable drainage principles and an assessment of the hydrological and hydro-geological context of the development, shall be submitted to and approved in writing by the Local Planning Authority. The drainage scheme for each reserved matters area shall be implemented prior to the completion of each reserved matters area and thereafter managed and maintained in accordance with the approved Phased Area Strategy. Information regarding the design storm period and intensity, the method employed to delay and control the surface water discharge from the site shall be included in the scheme.*
- The drainage scheme for each reserved matters area shall be designed in accordance with the principles set out in “Proposed Outline SUDS Strategy Statement” by Mayer Brown dated October 2010 submitted in support of the planning application.*
- Where the drainage scheme relies on drainage features outside of the reserved matters area boundary these must be completed to a point where that particular reserved matters area can be serviced. No reserved matters area shall be allowed to discharge run-off un-attenuated and untreated into receiving watercourses reliant on future reserved matters area can be serviced. No reserved matters area shall be allowed to discharge run-off un-attenuated and untreated into the receiving watercourses reliant on future reserved matters downstream for attenuation and treatment”*
- 2.4 In relation to the general layout of foul and surface water condition 6 part (d) requires plans and particulars to be submitted and approved prior to commencement and requests information on:

The layout, depth and capacity of all foul sewers and surface drainage including SUDS and their means of disposal; and details of any other proposed ancillary drainage works / plant (e.g. pumping stations)

3 Existing Drainage

- 3.1 The current topography of the site is shown on Dwg. 25418-MBL-XX-00-DR-D-0002 in Appendix A.
- 3.2 The proposed development will be wholly serviced by the strategic infrastructure provided by the vendor, West of Waterlooville Developments Ltd.
- 3.3 This includes the strategic road network, which abuts the northern boundary (Laxton Leaze) and the western boundary (Plant Farm Crescent); a main foul sewer in Laxton Leaze and Plant Farm Crescent, including spurs for connection into the site and strategic SuDS features.
- 3.4 The SuDS provision for Phase 3B has already been constructed and forms part of the wider strategic SuDs provision as referred to in '*Proposed Outline SUDS Strategy Statement*' and more specifically, in relation to Phase 3B in Doc Ref. "*Phase 3B Infrastructure – Berewood, Waterlooville – SuDS Design Document*" produced by Mayer Brown dated August 2020. A copy of the above report is contained in Appendix B for ease of reference.
- 3.5 The strategic stormwater network is being adopted on-site by LEAP under a S104 Agreement. All of the stormwater drains by gravity eventually discharging to the River Wallingford approximately 0.5km to the north of the Phase 3B site.
- 3.6 The stormwater network relevant to Phase 3B and located in Laxton Leaze, has been designed to take a portion of the Phase 3B catchment area. This network discharges into the SuDs features, which are located to the north west of the Houghton Ave roundabout.
- 3.7 Two additional SuDs features (Phase 3B Pond A and Pond B) have been constructed to provide attenuation for the remainder of the Phase B catchment. Pond A to the west of the site discharges to the existing ditch, which is routed through Phase 3A residential before veering north to eventually discharge to the River Wallingford. Pond B abutting Laxton Leaze, forms part of the strategic network drainage serving Laxton Leaze. Section 3 of "*Phase 3B Infrastructure – Berewood, Waterlooville – SuDS Design Document*" explains in more detail how discharge from the site is attenuated and distributed in accordance with the wider strategic drainage design.
- 3.8 The location and details of Ponds A and B are indicated on GTWVILLE_3B/UT/01 and GTWVILLE_3B/DR/01 and 02 in Appendix B.

- 3.9 The utilisation of the above SuDs features has been approved within the consented Phase 1 Infrastructure reserved matters application and the Phase 3B Infrastructure reserved matters application.
- 3.10 The existing foul drainage network has been designed to accommodate discharge from Phase 3B. Stub connections for use by the Phase 3B site have been provided at several locations in Laxton Leaze and at the highway link from Plant Farm Crescent.
- 3.11 The existing stormwater and foul water networks are being adopted by LEAP under a S104 Agreement.

4 Proposed Drainage

- 4.1 It is important that the distribution of surface water catchments within the proposed Phase 3B layout is equivalent to that assumed for the original strategic design. This is to ensure that there is not an uneven distribution of surface water, which could potentially overload one or more of the SuDS features.
- 4.2 Dwg. GTWVILLE_P3B/SK/03, contained in *Phase 3B Infrastructure – Berewood, Waterloooville – SuDS Design Document* Appendix B, indicates the design catchments assigned to Phase 3B.
- 4.3 Figure 4.1 in Appendix A shows the current design catchments proposed for Phase 3B following adjustment to suit the proposed layout. The catchments have been designed as close as possible to the original provision in order to ensure that all of the SuDS features do not exceed capacity.
- 4.4 Dwg. 25418-MBL-XX-00-DR-D-0110 in Appendix A shows the proposed surface water drainage layout routed to each of the SuDS features.

Catchment	Associated SuDs Feature	Design Catchment Area* (Ha)	Total Catchment Area** (Ha)	Allowable Catchment Area (Ha)***
3D	Ph3B Pond A	0.720	0.761	0.979
3A	Ph3B Pond B	0.656	0.675	0.677
3B	Phase 1 SuDs system located north west of Houghton Ave Roundabout.	0.155	0.155	0.175
3C		0.334	0.352	0.383
3E		0.503	0.534	0.584
Total		2.379	2.496	2.798

* Impermeable Area calculated from Bloor Homes Residential Layout

** Includes 10% allowance (added to parcels) to reflect urban creep

*** Total Strategic Allowance applying factors of 0.65 to account for impermeable area and 1.1 to account for urban creep (Ref. '*Phase 3B Infrastructure – Berewood, Waterloooville – SuDS Design Document*')

Table 4.1 – Proposed/Allowable Catchments

- 4.5 Table 4.1 above shows the strategic SUDS catchment allowance and the catchment associated with each Phase 3B outfall for comparison. The Table and the drawings in Appendix A demonstrate that none of the allowable catchments are exceeded.
- 4.6 Note all of Catchment A is considered impermeable area. Therefore, the allowance for urban creep has not been added.
- 4.7 Dwg. 25418-MBL-XX-00-DR-D-0105 also show the foul sewer drainage network and its connection to the existing strategic network.
- 4.8 Calculations to support storm and foul pipe sizing and alignment are contained in Appendix C.
- 4.9 The detailed design of the pipework shall be progressed once the layout is approved by the appropriate reserved matters consent. This shall in turn be submitted for reserved matters approval under condition 6(d) prior to commencement.
- 4.10 As has been stated above, stormwater attenuation for the development is catered for by the existing strategic SuDS features. However, there is a requirement under the Berewood design code (section GS07.01.05) to incorporate pervious paving into the design of all private parking areas and drives. Dwg. 25418-MBL-XX-00-DR-D-0110 in Appendix A indicates the location and extent of these areas.
- 4.11 The stormwater and foul water pipe networks will drain by gravity to their designated connections on the wider strategic network.
- 4.12 The stormwater and foul water pipe networks will be designed in accordance with the current edition of Sewers for Adoption with the intention both networks are adopted by LEAP Utilities (incumbent adopting authority on the Berewood Estate) under a Section 104 Agreement.

5 Conclusion

- 5.1 The proposed surface water drainage layout as shown in Appendix B conveys the drained areas by gravity to the appropriate previously consented Phase 3B and Ph1 Infrastructure SuDS features. This is demonstrated with reference to drawings in Appendix A and associated calculations in Appendix C, thereby fulfilling the requirements of Condition 18.
- 5.2 Private drive and parking areas shall incorporate appropriate pervious pavement in accordance with the Berewood Design Code.
- 5.3 The proposed foul water drainage layout as shown in Appendix A conveys the drained areas by gravity to the previously consented Phase 3 Infrastructure and Phase 1 Infrastructure foul networks.

Appendix A – Drawings

Appendix B – Reference Documents

Appendix C – Calculations

