



**ARCH
ASSOCIATES**

DESIGNER'S RESPONSE TO LLFA COMMENTS



UPPER ACRE,
ONE HORTON HEATH

DESIGNER'S RESPONSE TO LLFA COMMENTS

for

UPPER ACRE
ONE HORTON HEATH

Client:

Eastleigh Borough Council (One Horton Heath Team)
Eastleigh House
Upper Market Street
Eastleigh
SO50 9YN

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1.0 Introduction

This report has been prepared in response to the comments raised by the Lead Local Flood Authority in their consultation responses to the discharge of conditions for the Reserved Matters Application (RMA) referenced RM/25/100575 for Upper Acre, One Horton Heath made on 12/01/2026.

2.0 Designer's Response

2.1 LLFA Comment

"Confirmation that basin H and J been constructed."

2.2 Response

Eastleigh Borough Council (EBC) have confirmed that Basin H, the basin to the west of Upper Acre, will be constructed prior to the commencement of the surface water drainage for Upper Acre. Both basins to the south of Upper Acre (including Basin J, the larger of the two), have already been constructed.

2.3 LLFA Comment

"Discharge rates have been identified at the outline application but these were indicative figures and need to be reviewed based on the current permeable / impermeable areas."

2.4 Response

The discharge rate for Basin H has been reviewed based on the permeable and impermeable areas shown on the revised catchment plan. The PFA strategy calculated the discharge rate (QMed) to be 70.8l/s. Utilising the UK SuDS greenfield runoff estimation tool, the discharge rate (QMed) for Basin H has been calculated at 74.3l/s. The discharge rate of 29.6l/s for Basin J is in accordance with the Reserved Matters submission for Lower Acre, with the basin and associated flow control chambers having since been installed.

The surface water strategy has been revised accordingly. Refer to Appendix 1 for the technical drawing pack, Appendix 2 for the UK SuDS greenfield runoff calculation and Appendix 3 for the revised hydraulic calculations.

2.5 LLFA Comment

"A catchment plan has been provided but this needs to confirm the impermeable / permeable area and demonstrate urban creep allowances."

2.6 Response

The catchment plan has been revised to include a table stating the total permeable and impermeable areas, inclusive of a 10% urban creep allowance applied to roof areas, which is reflected in the revised hydraulic calculations. Please note that the hydraulic model contains nodes with contributing area from Lower Acre (refer to LA S12 and Basin I with the hydraulic calculations) totalling 0.557ha that have been included to verify the capacity of Basin J. However, the catchment plan refers only to contributing areas from Upper Acre.

The hydraulic software does not currently support assigning of additional area (urban creep) to specific contributing catchments. As such, two hydraulic models have been created to cater for both scenarios:

- Model 1 – The PIMP is assigned as per the true value of a contributing catchment. This model provides simulation results for the 1:1YR and 1:30YR+40%CC storm events. Refer to the table below.
- Model 2 – The PIMP for contributing areas not subject to urban creep (all but roof areas) have been prorated down such that applying an overall additional area brings the PIMP up to their true value in the resulting output. This model provides simulation results for the 1:100YR+45%CC+10%UC storm events. Refer to the table below.

Contributing Area Type	Model 1 PIMP (0% UC)	Model 2 PIMP (10% UC)
Hard Landscaping	100%	91%
Roofs	100%	100%
Soft Landscaping	15%	13.7%
Playing Fields (North of Upper Acre)	30%	27.3%

2.7 LLFA Comment

"It is noted that an allowance in basin H has been provided for 3 separate areas. As such, the 70.8l/s encompasses more than the upper acre site and may need to be revised however it is noted that an allowance has been included for the northern area beyond this plot boundary. The calculations indicate this contributing area as 0.564. Clarification should be provided."

2.8 Response

In accordance with the response provided in Section 2.4, the discharge rate for Basin H has been revised to 74.3l/s. The updated catchment plan provides further clarification on the permeable and impermeable areas that have informed this calculation, inclusive of the playing field to the north of Upper Acre that will drain to Basin H under a separate application. A 30% PIMP has been applied to the playing field in accordance with the PFA strategy.

Please note that when reading contributing areas assigned to a node from the hydraulic model output, it does not distinguish between PIMP. The hydraulic model converts all contributing area to 100% PIMP. Therefore, $0.102\text{ha} \times 100\% \text{ PIMP} + 1.54\text{ha} \times 30\% \text{ PIMP} = 0.564\text{ha}$, as an example.

2.9 LLFA Comment

"A filter drain / enhanced swale has been provided on the eastern boundary but it is not clear what this is draining or why it is required. It references road runoff but it is not clear which road it is referring to."

2.10 Response

At present, runoff from Burnetts Lane (located along the eastern boundary of Upper Acre) falls towards the fields where the Upper Acre scheme is proposed and ultimately discharges to the existing watercourse that runs through the site. To maintain this strategy, the enhanced swale / filter drain has been provided to collect runoff from Burnetts Lane and convey this to the existing watercourse, remaining entirely separate from the drainage strategy for the proposed development.

2.11 LLFA Comment

"Drainage is shown in rear gardens however the gardens are not included in the catchment plans. Any areas positively drained need to be included in the calculations with an appropriate factor applied for permeability."

2.12 Response

The catchment plan and hydraulic model have been revised to incorporate all positively drained areas. A 15% PIMP has been assigned to the permeable surfaces such as gardens and public open spaces in accordance with the SuDS Manual Table 26.14.



2.13 LLFA Comment

"The headwall details identify a vertical grate. This needs to be angled to be in accordance with ciria requirements.."

2.14 Response

The headwall details have been revised to show an angled grating in accordance with CIRIA requirements.

2.15 LLFA Comment

"Exceedance flow plans have been provided which show flows generated by impermeable areas should be appropriately routed within the roads and towards the balancing ponds / ditches. It is noted that the natural fall of the gardens would allow exceedance flows generated within gardens towards properties . It is proposed to raise the damp proof courses in these areas so the risk is considered low."

2.16 Response

DPC of properties with gardens sloping towards the dwelling to be raised.

2.17 LLFA Comment

"The maintenance plan needs to include the enhanced swale / filter drain feature."

2.18 Response

The maintenance plan has been amended to detail maintenance activities and frequency for the enhanced swale / filter drain. Refer to Appendix 4.

