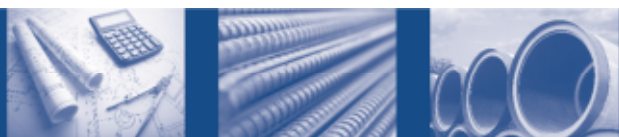


**RESIDENTIAL DEVELOPMENT
MANOR FARM & COPSEYS NURSERY
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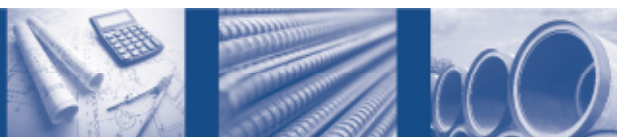
SUDS INSPECTION REPORT

BARRATT DAVID WILSON HOMES SOUTHAMPTON

25TH FEBRURAY 2016



Date of Inspection:	25th February 2016
Time:	15.00pm
By:	Karl Gebhart
Position in Company:	Director
Weather Conditions on Date of Inspection:	Overcast
SUDS Item(s) Inspected:	Attenuation Pond and Impermeable Liner, Flow control and piped outfall to stream, Land Drainage System & Connection to Pond, Permeable paving



1 Scope

- 1.1 The objective of this report is to document the 'SUDS inspections', carried out during the construction phase of the development at Manor Farm and Copseys Nursery, Denvilles.
- 1.2 This inspection took place in February 2016.
- 1.3 The purpose of the inspection process is to check and verify that all constructed surface water drainage systems are being implemented and are functioning in strict accordance with the designed and approved surface water SUDS scheme and that the correct materials are being used.
- 1.4 This report is to be read in conjunction with MJA Consulting drawing 4527:01, 02, 03 & 04. 'Engineering Layouts' for the location of all SUDS features.

2 Attenuation Ponds

- 2.1 The associated inlet headwalls and high level overflows from the road sub-base for Attenuation pond No.1 (Manor Farm southernmost) has been constructed in accordance with the approved design.
The required safety measures to pond No.1 including fencing and lifebuoy are provided (Image 1 & 2).
- 2.2 Evidence of impermeable membrane used in pond (image 3).
- 2.3 The outfall headwall, flow control chamber and the downstream outfall pipe to the Nore Farm Stream has been constructed (image 5).
- 2.4 Link headwall between ponds (image 4)

3 Land Drainage System

- 3.1 The perforated piped land drainage system for Manor Farm is now fully constructed along the western boundary of the site and the connection to the attenuation ponds has also been installed via a standard pipe outfalling into chamber LD1 (refer to previous SUD's report for details)
- 3.2 Land drainage outfall for Copsesy Nursery (image 7).

4 Cellular Soakaways

- 4.1 During the visit all housing soakaways for constructed plots had been installed, so a visual inspection could not be made.
However I am satisfied that the correct type of cellular crate and permeable geotextile membrane is being used during construction, as evident from the materials storage yard.

5 Conclusion

- 5.1 MJA Consulting are satisfied that the installed SUDS systems including the house soakaways attenuation ponds with connection to the Nore Farm Stream and the land drainage system is being installed and operating in accordance with the approved engineering design scheme.

Maintenance of the permeable paving is required ie removal of detritus from the block joints by vacuum sweeping. This will improve performance and longevity of the system

Image No.1 – Overflow from permeable carriageway with protection fencing



Image No.2 – Pond with protection fencing and Lifebuoy



Image No.3 – Pond liner evident on embankment



Image No.4 – Headwall link between ponds with protection fencing



Image No.5 – Control structure and route of outfall to existing pond



Image No.6 – Permeable paving with moss in joints

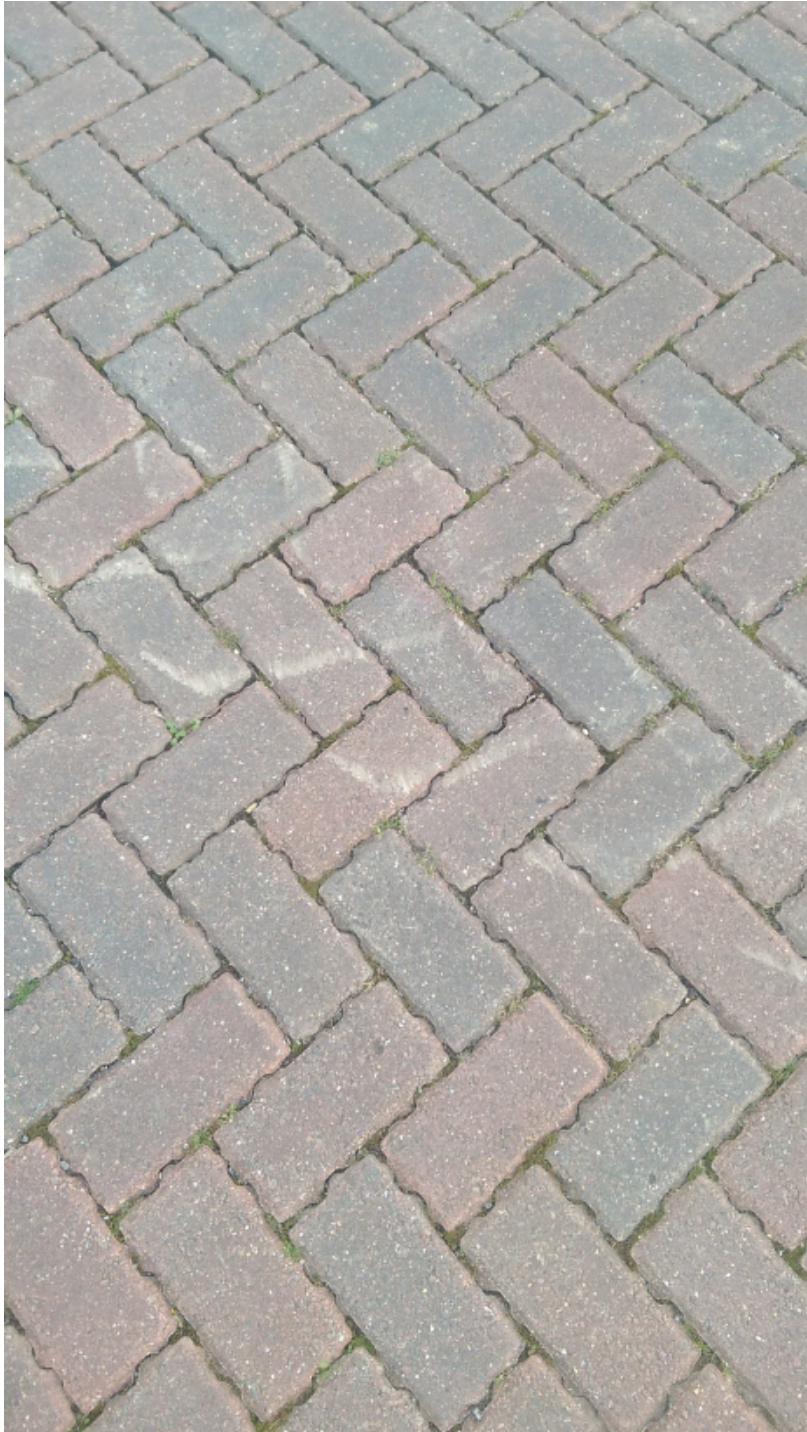


Image No.7- Copsey Nursery land drainage outfall



Image No.8 – Ditch between Manor Farm and Copsey Nursery cleaned out



Image No.8 – Permeable paving in Manor Farm with evidence of joints infilled with mud



Image No.9 – Permeable paving in Copsey Nursery with evidence of ponding due to infilled joints



Image No.10 – Permeable paving on Copsey Nursery being used by construction traffic causing blockage of the joints



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