



DAVIDSONS

Stoke Golding

Drainage Proposals and Operations and Maintenance

22/00595/CONDIT Conditions 10 and 12
22/01080/REM Condition 6

Issue Number	Author	Checked	Date
01	NP	BT	19.05.23

Residential • Commercial • Strategic Land • Joint Ventures
Wilson House, Leicester Road, Ibstock, Leicestershire. LE67 6HP
T: 01530 261 444 F: 01530 267 101 www.davidsonsgroup.co.uk

Davidsons Developments Ltd. Registered in England No 04346861. VAT Reg No 974 8986 34.
Registered Office: Fishers Solicitors, Unit R Ivanhoe Business Park, Ashby de la Zouch, Leicestershire, LE65 2AB

Introduction

This report is to provide information to satisfy conditions relating to surface water drainage strategy at the Davidsons Development at Stoke Golding, Wykin Lane.

Site Summary

- Proposed development of 55 new residential plots, with associated roads, drainage infrastructure and public open space.
- The topography of the site is relatively flat, with a minor incline from the eastern boundary of the site at 106m AOD, to the western boundary of the site at 111m AOD.
- It comprises approximately 2.05ha of land located to the southern edge of Stoke Golding, in Hinckley and Bosworth.
- It is bordered by residential properties to the north, an existing farmhouse and agricultural fields to the south, a recreational ground to the east and Wykin Lane Cemetery to the west.

Existing Flood Risk

A Flood Risk Assessment was prepared by ADC Infrastructure. The site is not at any direct risk of flooding as it lies within Flood Zone 1.

Proposed Site Drainage

Condition 10 on the Outline Planning Permission ref 22/00595/CONDIT states:

“No development shall commence until drainage details for the disposal of surface water have been submitted to and approved in writing by the Local Planning Authority. The approved details shall be implemented in full before the development is first occupied.”

Condition 6 on the Reserved Matters Planning Permission ref 22/01080/REM states:

“No part of the development hereby permitted shall be occupied until such time as site drainage details have been submitted to and approved by the Local Planning Authority. Thereafter surface water shall not drain into the Public Highway and thereafter shall be so maintained.”

Please see **Appendix A** for the site’s Foul and Surface Water Drainage proposals, and **Appendix B** for surface water modelling results, and a description below of the foul and surface water drainage details for the site.

Foul Water Drainage Proposals

The site drains via a network of private pipes, into proposed sewers to be adopted by the Sewerage Undertaker, Severn Trent Water. The sewers outfall into an adoptable pumping station to the low spot at the east of the site. The foul sewage is then pumped into the nearest Severn Trent Water Manhole in Wykin Lane.

Surface Water Drainage Proposals

The surface water is drained via a network of private pipes into proposed sewers to be adopted by the Sewerage Undertaker Severn Trent Water. The sewer outfalls into an open attenuation pond to the east of the site, with enhanced biodiversity features, which will attenuate and treat flows prior to a controlled discharge into the existing Ordinary Watercourse at the eastern boundary.

Proposed flows from hardstanding areas such as roads, private shared drives, and plot driveways will be discharged into a series of filter drains, gullies with catchpits, and channel drains. At the site access, the levels backfall into the site to prevent any run-off into the public highway.

Sustainable Surface Water Maintenance Plan

Condition 12 on the Outline Planning Permission ref 22/00595/CONDIT states:

“No development shall commence until details in relation to the long-term maintenance of the sustainable surface water drainage system on the development have been submitted to and approved in writing by the local planning authority. The system will be implemented in accordance with the approved details and maintained in perpetuity. Details of the SuDS. Maintenance Plan should include for routine maintenance, remedial actions and monitoring of the separate elements of the system and should also include procedures that must be implemented in the event of pollution incidents within the development site.”

This chapter has been produced to identify the maintenance requirements of the proposed Sustainable Urban Drainage Systems (SuDS) on site at Stoke Golding. These requirements are in accordance with the guidance contained within CIRIA 753 “The SuDS Manual”.

Ownership and Maintenance

Across the site a range of proposed drainage assets are proposed. This includes a SuDS attenuation pond, flow controls and piped features for both the foul and surface water drainage, and a foul water pumping station.

The responsibility for the maintenance of these will be the responsibility of Davidsons Developments until the maintenance period has expired following a satisfactory inspection of the works by the regulators, and those parts of the system to be adopted as shown on the Section 38 and Section 104 drawings have been vested with the adopting authority.

It is anticipated that the maintenance responsibility for the SuDS attenuation pond will eventually be held by the agreed Management Company.

The ownership and maintenance responsibilities for the S104 sewers will be offered to and technically approved by Severn Trent Water, which covers all the foul and storm sewers running under the proposed new public highway leading to the proposed foul pump station. This foul pump station also includes all associated infrastructure, such as the rising main, break chamber and connection to the existing foul sewer manhole. Road gullies will be adopted by Leicestershire County Council Highways.

Drainage features adopted by Severn Trent Water, Leicestershire County Council and the agreed Management Company are to be maintained in accordance with their own requirements and regimes. However, a summary of recommended SuDS maintenance requirements is outlined within Table 32.1 of CIRIA C753 as reproduced overleaf:

TABLE 32.1 Typical key SuDS components operation and maintenance activities (for full specifications, see Chapters 11–23)

Operation and maintenance activity	SuDS component												
	Pond	Wetland	Detention basin	Infiltration basin	Soakaway	Infiltration trench	Filter drain	Modular storage	Pervious pavement	Swale/bioretention/trees	Filter strip	Green roofs	Proprietary treatment systems
Regular maintenance													
Inspection	■	■	■	■	■	■	■	■	■	■	■	■	■
Litter and debris removal	■	■	■	■	□	■	■	□	■	■	■		□
Grass cutting	■	■	■	■	□	■	■	□	□	■	■		
Weed and invasive plant control	□	□	□	□		□	□		□		□	■	
Shrub management (including pruning)	□	□	□	□					□	□	□		
Shoreline vegetation management	■	■	□										
Aquatic vegetation management	■	■	□										
Occasional maintenance													
Sediment management ¹	■	■	■	■	■	■	■	■	■	■	■		■
Vegetation replacement	□	□	□	□						□	□	■	
Vacuum sweeping and brushing									■				
Remedial maintenance													
Structure rehabilitation /repair	□	□	□	□	□	□	□	□	□	□	□	□	
Infiltration surface reconditioning				□	□	□	□		□	□	□		

Key

■ will be required

□ may be required

Notes

¹ Sediment should be collected and managed in pre-treatment systems, upstream of the main device.

On this site, an attenuation pond is present to attenuate flows from the proposed development, which will include biodiversity enhancements and water treatment as identified by the Biodiversity Management Plan.

Further details of the maintenance are set out within CIRIA C753 as reproduced in Table 23.1, whereby these measures will form part of the Management Company's obligation.

TABLE 23.1 Operation and maintenance requirements for ponds and wetlands

Maintenance schedule	Required action	Typical frequency
Regular maintenance	Remove litter and debris	Monthly (or as required)
	Cut the grass – public areas	Monthly (during growing season)
	Cut the meadow grass	Half yearly (spring, before nesting season, and autumn)
	Inspect marginal and bankside vegetation and remove nuisance plants (for first 3 years)	Monthly (at start, then as required)
	Inspect inlets, outlets, banksides, structures, pipework etc for evidence of blockage and/or physical damage	Monthly
	Inspect water body for signs of poor water quality	Monthly (May – October)
	Inspect silt accumulation rates in any forebay and in main body of the pond and establish appropriate removal frequencies; undertake contamination testing once some build-up has occurred, to inform management and disposal options	Half yearly
	Check any mechanical devices, eg penstocks	Half yearly
	Hand cut submerged and emergent aquatic plants (at minimum of 0.1 m above pond base; include max 25% of pond surface)	Annually
	Remove 25% of bank vegetation from water's edge to a minimum of 1 m above water level	Annually
	Tidy all dead growth (scrub clearance) before start of growing season (Note: tree maintenance is usually part of overall landscape management contract)	Annually
	Remove sediment from any forebay.	Every 1–5 years, or as required
	Remove sediment and planting from one quadrant of the main body of ponds without sediment forebays.	Every 5 years, or as required
Occasional maintenance	Remove sediment from the main body of big ponds when pool volume is reduced by 20%	With effective pre-treatment, this will only be required rarely, eg every 25–50 years
Remedial actions	Repair erosion or other damage	As required
	Replant, where necessary	As required
	Aerate pond when signs of eutrophication are detected	As required
	Realign rip-rap or repair other damage	As required
	Repair / rehabilitate inlets, outlets and overflows.	As required

These tables are considered appropriate to inform the required maintenance of the proposed SuDS features. It is therefore proposed that this table be incorporated within the Management Company's obligations to ensure the efficiency and longevity of the SuDS network within the development.

Appendix A – Proposed Drainage Drawing

Appendix B – Surface Water Modelling Results

