

Drainage Strategy

Former St. Stephen's Church, Hamsland, Horsted Keynes

This drainage strategy has been prepared to support a Full Planning Application for residential development on the former St. Stephen's Church site in Hamsland, Horsted Keynes.

The full planning application is for 3no. new residential dwellings along with associated parking, landscaping and access.

As part of preparing this strategy we have also consulted with the immediate adjoining landowner, Macar Homes, who are in the process of construction on a greenfield site, who have kindly assisted with providing relevant data, which considering the two land parcels are adjoined is considered to equally be relevant on the proposed development site that this strategy supports.

It is referenced that the application is only for 3no. Plots only and therefore is a minor application. The strategy is aimed at highlighting the drainage options available and therefore providing comfort that an approval could be granted with any further information being secured by condition as necessary.

Location

The development site is located to the south of Hamsland in Horsted Keynes, West Sussex, RH17 7DX. Grid Reference: TQ383279.

The site is accessed from Hamsland to the north. The existing land use comprises the former St. Stephen's Church and extends to approximately 0.09 Ha. On this basis this is a brownfield site. It is bounded to the east by existing residential properties and to the south and west by a residential development site, approved under application ref: DM/20/4692.

Topography

The available topographic information is included within the submission shows that ground levels within the development site range between 92.5m AOD to the north of the site at the boundary with Hamsland and 91.5m AOD along the southern boundary, with an average gradient north to south of 1:32.

Geology and Hydrogeology

Geological records indicate that the site is generally underlain by the Ashdown Formation with part potentially underlain by the Upper Tunbridge Wells Sand Formation, albeit this formation is more evident on the land south of the site. Both are sedimentary bedrock consisting of interbedded Sandstone and Siltstone strata and both geologies are considered to be relatively impermeable.

DEFRA MAGiC maps classify the site's bedrock geology as a Secondary A Aquifer, defined as *"permeable layers capable of supporting water supplies at a local rather than strategic scale, in some cases forming an important source of base flow to rivers"*. The site is also identified as being

in a groundwater vulnerability zone with high vulnerability. This is referenced in the Mid-Sussex County Council Strategic Flood Risk Assessment which states that any SuDS design for this area must address the high groundwater vulnerability for the site.

Hydrology

The closest watercourse is a stream 700m to the south-west of the neighboring development site and approximately 10m lower than the general site levels. This stream is a tributary to the Cockhaise Brook. An existing drainage ditch runs along the western boundary of the neighboring site, which then flows out of this land to the south into a network of ditches which ultimately discharges into the Danehill Brook approximately 850m south of the development site.

Flood Risk Assessment

All potential sources of flood risk at the development site have been assessed. The key sources of flood risk to the proposed development are identified as follows: -

- Coastal - The site is 25km from the coast and is therefore considered to be safe from coastal flooding.
- Fluvial - The site is considered to be at low risk of fluvial flooding. It resides within Flood Zone 1. The closest watercourse is 700m away to the south-west and the site is set 10m AOD higher than this feature.
- Surface Water - The site is at low risk of surface water flooding with flood maps showing no flood risk on site and EA flood mapping indicating a very low risk. An overland flow path has been identified flowing south, 30m east of the site boundary which has no falling gradient towards the site. The surface water generated within the site will be offset against the existing built form on this brownfield site and the potential strategies to manage the surface water on site are noted below.
- Groundwater - Based on the available information, Groundwater flood risk is considered low. From the geotechnical investigations carried out on the neighboring land no groundwater was encountered in excavations and the proposed site is residing at a higher ordnance datum level.

Based on this assessment the site is not at risk from flooding and will present no increased risk to flooding off-site.

Foul Water

Sewerage undertakers have a legal obligation under the Water Industries Act 1991 to provide developers with the right to connect to public (foul) networks. These obligations extend to ensuring that flows resulting from new developments do not cause detriment to the existing public sewerage networks, imposing a duty on sewerage undertakers to carry out works required to accommodate additional flows into their networks.

Noting the above, the proposed development site is currently occupied by the former St Stephen's Church. As a brownfield site then there would be an offset in any flows against the proposed development for 3no. new residential dwellings.

A Southern Water Foul Sewer flows east to west along Hamsland. The approximate depth of the sewer below Hamsland in the proximity of the site is 1.8m BGL with an invert in the order of 90.40m AOD. Whilst FFL levels will be a matter for a later design stage, considering existing levels along Hamsland at the access to the site are at 92.50m AOD and the existing gradient across the site, it is clear that a direct connection can be achieved to the public sewer following a S106 connections application.

Surface Water

It is noted that the proposed development site is a brownfield site comprising of the existing St Stephen's Church and hardstandings. Existing impermeable areas equate to 50-60% of the site area. The proposed development sees a small reduction in the impermeable area.

The existing surface water drainage disposal on the site is unknown.

For the proposed development, Surface Water run-off from roofs and hardstandings can be managed via onsite treatment and attenuation or infiltration. The inclusion of treatment in the proposed development also presents a betterment over the existing arrangements.

Infiltration testing on the neighbouring development site provided a strong indication that shallow infiltration is unlikely to be acceptable (it wasn't on this land). An observation that was similarly captured in the Mid Sussex SFRA for this locality. It may be feasible that infiltration would be achievable at depth, i.e. via deep bore soakaways. However, considering the data available and site characteristics it would seem more likely that surface water run-off would be attenuated and discharged to the previously referenced watercourse south-west of the site. Access across the adjacent land use is reserved following previous single ownership across these land titles.

Eitherway, there is sufficient space available on site for either mode of discharging the surface water generated from the site.

Attenuation could be provided via permeable paving or geo-cellular crates, or a combination of both. The use of permeable paving would also provide treatment for any pollution risk, in accordance with the SUDs Manual.

In the event that the surface water discharge is via the watercourse on the neighbouring land, It is proposed that the surface water discharge rate from site is a matter that can be subject to a planning condition but it is observed that considering the limited impermeable area of the site, that generally a discharge rate of less than 2 l/s is commonly appreciated to be difficult to reliably control. Regardless sufficient area is available on the site to accommodate surface water attenuation.

Exceedance Events

Plot finished floor levels will be set at least 150 mm above external ground levels and external ground levels will be designed to safely route overland flows away from buildings. Which will be

combined with the surface water drainage strategy proposed, which will prevent any increased exceedance off-site.

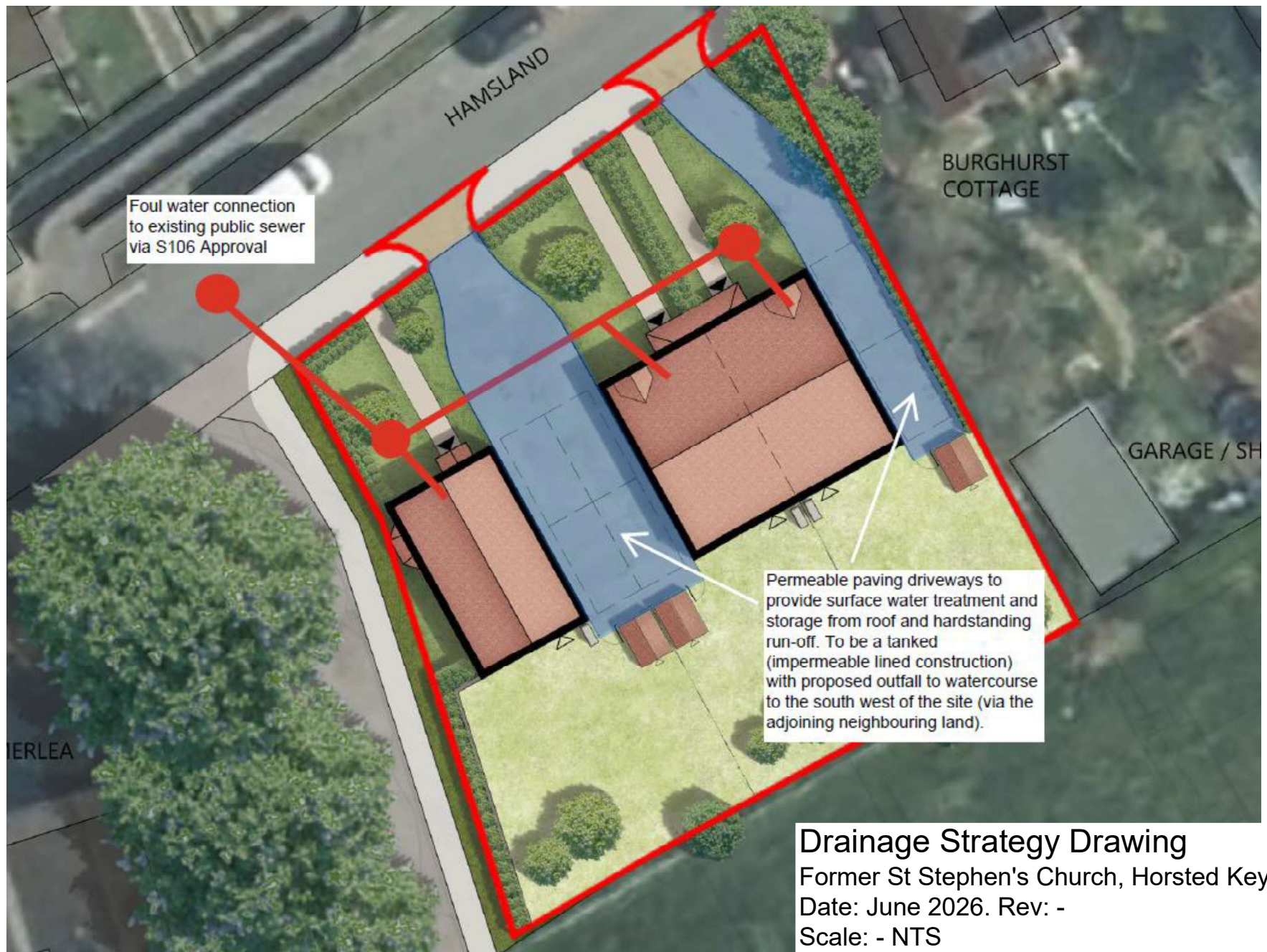
Maintenance

Considering the nature of the proposed development – 3no. residential dwellings, maintenance of private on-plot features would be the responsibility of the respective homeowners. This responsibility would be included in the home buyer's pack.

Conclusions

The development proposals are not considered to present any significant or unmanageable risk of flooding. Surface water run-off can sufficiently be attenuated on-site and either discharged via infiltration through deep bore arrangement (soakaway) or via the watercourse located SW of the site. In either iteration the surface water strategy can provide interception and treatment of run-off via permeable paving to driveways in line with both the National standards for SuDS and The SuDS Manual (C753). A public foul sewer is located in Hamsland north of the site which will enable a connection to be made following a S106 application.

Therefore, there are no identified reasons that a Planning permission cannot be granted for flood risk or drainage reasons.



Drainage Strategy Drawing

Former St Stephen's Church, Horsted Keynes

Date: June 2026. Rev: -

Scale: - NTS



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Date: 20/10/25

Scale: 1:1250

Map Centre: 538419,127861

Data updated: 21/09/25

Our Ref: 1915682 - 2

Wastewater Plan A3
Powered by digdat

The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site. This plan is produced by Southern Water Services Ltd (c) Crown copyright and database rights 2025 Ordnance Survey AC0000808122. This map is to be used for the purposes of viewing the location of Southern Water plant only. Any other uses of the map data or further copies is not permitted.

WARNING: BAC pipes are constructed of Bonded Asbestos Cement.

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement.

Foul Gravity Sewer	Combined Gravity Sewer	Culverted Water Course or Treated Effluent	Surface Water Gravity Sewer
Rising Main, Vacuum or Syphon	Combined Outfall	Surface Water Outfall	Surface Water Inlet
Combined Pumping Station	Surface Water Pumping Station	Foul Pumping Station	Foul Manhole
Combined Manhole	Surface Water Manhole	Water Treatment Works	Side Entry Manhole, Demarcation Chamber, Dummy Manhole or Surface Water Soakaway
Section 104 Area	Building Over Agreement Area		

melanie@cornerstoneprojects.co.uk

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