

6568
Boozey Fields
off Griffiths Road, Summerhill, Gwersyllt, Wrexham, LL11 4YF

Proposed residential development consisting of 56 dwellings and construction of a new access.

Planning Application No. GWE/P/2015/0790

Supporting information for the discharge of the following drainage conditions:

Condition 5

No part of the development shall commence until a scheme for the comprehensive and integrated drainage of the site indicating provision for foul water, surface water and land drainage has been submitted to and approved in writing by the Local Planning Authority. Prior to the submission of those details, an assessment shall be carried out into the potential for disposing of surface water by means of Sustainable Urban Drainage Systems (SuDS) in accordance with the principles of sustainable drainage systems set out in Technical Advice Note 15: Development and Flood Risk, and the results of the assessment shall be submitted in writing to the Local Planning Authority.

Where a SuDS scheme is to be implemented, the submitted details shall:

- i) Provide information about the design storm period and intensity, the method employed to delay and control the surface water discharged from the site and the measures taken to prevent pollution of receiving ground water and/or surface waters;*
- ii) Specify the responsibilities of each party for the implementation of the SuDS scheme, together with a timetable for that implementation; and,*
- iii) Provide a timescale for implementation, management and maintenance plan for the lifetime of the development which shall include the arrangements for adoption by any public authority or statutory undertaker and any other arrangements to secure the operation of the scheme throughout its lifetime*

Condition 6

No part of the development shall be occupied until the sustainable drainage scheme for the site has been completed in accordance with condition no. 5. The sustainable drainage scheme shall be managed and maintained thereafter in strict accordance with the agreed management and maintenance plan.

Condition 7

No part of the development shall commence until a scheme of improvement works to the local watercourse to receive surface water from the development hereby approved has been submitted to, and approved in writing by, the Local Planning Authority. The improvement works as are approved shall be completed in all respects prior to first use / occupation of the development.

Surface Water Proposals

The Site Investigation Report produced by GroundSolve Ltd has stated the investigation failed to reveal any strata that is consistent across the site that can be considered suitable for soakaways. While isolated areas of granular material were encountered that may be suitable they were generally already saturated. It is also likely given the findings of the site investigation that any suitable material is probably limited in thickness and extent.

As infiltration is not possible for the disposal of surface water from the proposed development a discharge to the culverted watercourse located to the east of the site will be required. This will allow a gravity surface water network to serve the entire development.

Early investigations of the existing greenfield site have confirmed the presence of an existing 150mm Diameter drain passing under the Old Mold Road. This drain is associated with land drainage and has been found to have collapsed. The drain connects into a culvert which passes below the A541 dual carriageway. This in turn discharges into an open ditch, 355m long before passing below the railway. On the east side of the railway the watercourse connects to a series of small ponds which appear to be part of a naturally occurring infiltration basin within an area of open fields. This has established a "drainage right" (through the connection to the existing drainage system). Given the poor condition of the 150mm discharge pipe from the Boozey Field site and its importance to the drainage strategy, the Developer proposes to replace this asset to return it to good condition and a suitable receptor for surface water flow from the proposed residential development.

Further drainage investigations have confirmed the line and condition of the off-site network. The sewers have been cleaned to remove any debris and obstructions prior to CCTC surveys being recorded. These now confirm the route is free flowing. However, some sections of the culvert were found to be in poor condition and will require remedial works to ensure a free flowing robust network is provided for the future. Gower Homes are proposing a scheme of off-site drainage remedial works. Please refer to Coopers Drawing No. 6568 / 101 for details.

Flows from the proposed development will be restricted to 5 l/s as previously agreed, this will provide betterment to the existing situation in a storm event. The last manhole in the network prior to leaving site will have a hydrobrake vortex flow control installed to restrict the flows. A minimum 100mm orifice will be provided which will help prevent any future blockages.

The surface water network will be designed to attenuate a 100-year storm event plus a 30% allowance for climate change within the site boundary.

Attenuation will be provided off-line in the POS located at the eastern end (lower elevation) of the proposed development. Welsh Water have agreed in principle to an off-line Hydro Stormcell arrangement to accommodate all flows up to a 30-year storm event. The piped surface water network and the Hydro Stormcell will be offered to Welsh Water for adoption under a S104 Agreement.

Attenuation in excess of a 30-year storm event will be stored above the Hydro Stormcell in a surface feature. This will be designed as a shallow dry basin and will be landscaped to a specification which will also allow for any future maintenance requirements. The basin will be maintained by a management company set up by Gower Homes.

Foul Drainage Proposals

The site currently has a live 225 Dia public combined sewer routed through the site. This will require a diversion through the proposed development and will be subject to a S185 sewer diversion application to Welsh Water.

All foul flows from the proposed development will discharge under gravity into the new diverted combined sewers routed through the proposed development layout. All foul sewers serving more than one property will be offered to Welsh Water for adoption under a S104 Agreement in accordance with Sewers for Adoption 7th Edition.

Timescales, Maintenance and Responsibility

Both surface water and foul sewer networks being proposed to serve the residential development will be offered to Welsh Water for adoption under a S104 Agreement. All sewers will be subject to inspections and a maintenance period after which Welsh Water will be responsible for the future maintenance of the sewers as they will become a public asset.

Welsh Water will also be offered the Hydro Stormcell (30-year attenuation) for adoption under a S104 Agreement.

Gower Homes will be responsible for all components until the final certificates have been issued at the end of the maintenance period.

The shallow basin will be maintained by a management company set up by Gower Homes. It is essential that a Maintenance Plan is implemented to ensure the basin is fully functional at all times. A silt trap will be required between the basin and the surface water piped network to ensure no siltation is passed forward. Maintenance requirements should be minimal and will consist of periodic inspections to ensure the device is silt free. Inspections should also be made following any significant rainfall events. Details of the management company will be confirmed in due course and will be in place prior to first occupation.

The offsite drainage works (re-construct drains, dredge / re-profile ditch) will require work in third party land and whilst Gower Homes will undertake the work with the landowners consent it should be noted that any future maintenance will need to be undertaken by the landowner. All downstream improvement works will be undertaken prior to any connection from the development site being made to ensure no increase in flood risk locally.

Wrexham County Borough Council currently discharges highway water to the land drainage network and are understood to be the riparian owner for the section of 600mm Diameter concrete culvert under the bypass.

Ensuring all components of the ordinary watercourse are in good working order is the responsibility of the riparian owners and, if they fail to act then the Local Lead Flood Authority has powers under the Water Resources Act to undertake the necessary works and recover the associated costs.

Andy Jones
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COOPERS