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**Our Ref:** TWBC/2023/094017  
**Date:** 24 February 2023

**Application No:** 23/00118/HYBRID

**Location:** Land West Of Queen Street, Paddock Wood, Tonbridge, Kent, TN12 6NP

**Proposal:** Hybrid Application: Full Application for erection of 170 homes and Waste Water Treatment Works together with temporary construction/haul road off Queen Street to enable the delivery of the Waste Water Treatment Works and up to 150 dwellings, Outline Application (appearance, landscaping, layout and scale reserved) for the erection of up to 430 additional homes, inclusive of associated infrastructure including land for a new primary school, play areas, allotments, network of new roads (and widening of existing roads), surface water drainage features, car and cycle parking and open space and associated works

Thank you for your consultation on the above referenced planning application.

Kent County Council as Lead Local Flood Authority have Reviewed the Flood Risk Assessment report prepared by Stantec (Revision F- 16/12/2022), in addition to the Drainage Strategy report by Barter Hill (December 2022) for the phase 1 development (full permission). The LLFA have the following comments to provide to this information:

1. The Flood Risk Assessment prepared by Stantec sets out the proposed drainage principles to serve the future development, including both outline and full permissions being sought. The report also examines the existing flood risk from the Rhoden Stream and watercourses.

The core principles as understood from the report are for:

- All dwellings and surface water drainage features to be located within flood zone 1. Where this is not possible for a select number of properties within Phase 1, land raising has been proposed for these areas to ensure the ground level becomes outside the 100 year annual probability event plus climate change allowance (27%). It is understood that compensatory storage has been allocated within the greenspace to ensure that no flood storage capacity is lost and subsequently redistributed into the wider area.
- The adherence to greenfield QBAR (2.2 year return) value for all return events. This has been calculated as being 5.3 l/s per hectare. The application of this value across the development results in improvements in peak discharge rate for the 30 and 100

year events, even with the additional flows (10 l/s) from the packaged treatment plant.

- The phases located within the areas of outline consent, have been designed with an expectation that 50% of the phase will be impermeable in nature, with an additional 10% for urban creep allowance. Should this be exceeded as each phase comes forward, additional storage will need to be provided within each phases through below ground attenuation of permeable paving systems.
  - Consideration for the possible submersion of the outfalls into the Rhoden Stream during high levels. Statement 10.4.7 within the report highlights that during times of high flow levels within the river, the outfall may be submerged, resulting in a reduced discharge into the stream. With this scenario, ample storage should be provided within the basins freeboard. The LLFA expect further work regarding this as part of any future reserved matters and detailed design stages. This is to simulate the impact of surcharged outfalls within each network.
2. The Drainage Strategy report prepared by Barter Hill sets out the drainage vision for phase 1 of the development. The drainage proposals adhere to the wider principles set out under the Flood Risk Assessment document. This being the limiting of discharge from this phase to the greenfield Qbar rate of 5.3 l/s per hectare and the locating of all properties and drainage features outside modelled flood zones.

A combination of attenuation basins, below ground attenuation tanks, swales acting as interception from overland flows and permeable paving systems have been proposed to provide the necessary storage. To support the design, Microdrainage Modelling has been provided to demonstrate the systems expected performance against varying storm intensities and durations. The simulations show that no flooding should be experienced on site for events up to an including the climate adjusted 100 year return period.

It is noted that there are several discrepancies within the Microdrainage Model when compared to the Preliminary Drainage Sheet 2 of 2 (Revision E- February 2022), showing the eastern network. These include:

- Eastern Outfall Pipe number 2.000 has an invert in the simulations as 18.730m, the same as the downstream node of 1.001. On the
- Headwall 4 into Eastern Basin for phase 1 has an invert level of 17.08m whereas the drawing shows a value of 16.63m. It is expected that this is because of two parts of the network discharging into the same outfall to the basin.
- Different Invert levels shown for Manhole S36 for Eastern Network. Value shown in simulations is 18.501 compared to the drawing showing 18.426.

The LLFA would expect for these to be corrected upon moving to the detailed design stage, along with further work relating to the possibility of a surcharged outfall into the Rhoden Stream.

Should the Local Planning Authority be minded to grant planning permission, the LLFA would request the following conditions be attached for the outline and full application:

## **Conditions for Outline Application:**

### Condition:

No development shall take place until the details required by Condition 1 (assumed to be reserved matters condition for layout) shall demonstrate that requirements for surface water drainage for all rainfall durations and intensities up to and including the climate change adjusted critical 100 year storm can be accommodated within the proposed development layout.

### Reason:

To ensure the development is served by satisfactory arrangements for the disposal of surface water and that they are incorporated into the proposed layouts.

### Condition:

Development shall not begin in any phase until a detailed sustainable surface water drainage scheme for the site has been submitted to (and approved in writing by) the local planning authority. The detailed drainage scheme shall be based upon the overarching principles contained within the Flood Risk Assessment report prepared by Stantec (Revision F - 16/12/2022). The report will further demonstrate that the surface water generated by this development (for all rainfall durations and intensities up to and including the climate change adjusted critical 100 year storm) can be accommodated and disposed of without increase to flood risk on or off-site.

The drainage scheme shall also demonstrate (with reference to published guidance):

- that silt and pollutants resulting from the site use can be adequately managed to ensure there is no pollution risk to receiving waters.
- appropriate operational, maintenance and access requirements for each drainage feature or SuDS component are adequately considered, including any proposed arrangements for future adoption by any public body or statutory undertaker.

The drainage scheme shall be implemented in accordance with the approved details.

### Reason:

To ensure the development is served by satisfactory arrangements for the disposal of surface water and to ensure that the development does not exacerbate the risk of on/off site flooding. These details and accompanying calculations are required prior to the commencement of the development as they form an intrinsic part of the proposal, the approval of which cannot be disaggregated from the carrying out of the rest of the development.

### Condition:

No building on any phase (or within an agreed implementation schedule) of the development hereby permitted shall be occupied until a Verification Report, pertaining to the surface water drainage system and prepared by a suitably competent person, has been submitted to and approved by the Local Planning Authority. The Report shall demonstrate that the drainage system constructed is consistent with that which was approved. The Report shall contain information and evidence (including photographs) of details and locations of inlets, outlets and control structures; landscape plans; full as built drawings; information pertinent to the installation of those items identified on the

critical drainage assets drawing; and, the submission of an operation and maintenance manual for the sustainable drainage scheme as constructed.

Reason:

To ensure that flood risks from development to the future users of the land and neighbouring land are minimised, together with those risks to controlled waters, property and ecological systems, and to ensure that the development as constructed is compliant with and subsequently maintained pursuant to the requirements of paragraph 165 of the National Planning Policy Framework.

### **Conditions for Full Application:**

#### Condition:

Development shall not begin in any phase until a detailed sustainable surface water drainage scheme for the site has been submitted to (and approved in writing by) the local planning authority. The detailed drainage scheme shall be based upon the design set out within the Drainage Strategy Report prepared by Barter Hill (Version V.02-December 2022). The submission will also demonstrate that surface water generated by this development (for all rainfall durations and intensities up to and including the climate change adjusted critical 100 year storm) can be accommodated and disposed of without increase to flood risk on or off-site.

The drainage scheme shall also demonstrate (with reference to published guidance):

- that silt and pollutants resulting from the site use can be adequately managed to ensure there is no pollution risk to receiving waters.
- appropriate operational, maintenance and access requirements for each drainage feature or SuDS component are adequately considered, including any proposed arrangements for future adoption by any public body or statutory undertaker.

The drainage scheme shall be implemented in accordance with the approved details.

Reason:

To ensure the development is served by satisfactory arrangements for the disposal of surface water and to ensure that the development does not exacerbate the risk of on/off site flooding. These details and accompanying calculations are required prior to the commencement of the development as they form an intrinsic part of the proposal, the approval of which cannot be disaggregated from the carrying out of the rest of the development.

#### Condition:

No building on any phase (or within an agreed implementation schedule) of the development hereby permitted shall be occupied until a Verification Report, pertaining to the surface water drainage system and prepared by a suitably competent person, has been submitted to and approved by the Local Planning Authority. The Report shall demonstrate that the drainage system constructed is consistent with that which was approved. The Report shall contain information and evidence (including photographs) of details and locations of inlets, outlets and control structures; landscape plans; full as built drawings; information pertinent to the installation of those items identified on the critical drainage assets drawing; and, the submission of an operation and maintenance manual for the sustainable drainage scheme as constructed.

Reason:

To ensure that flood risks from development to the future users of the land and neighbouring land are minimised, together with those risks to controlled waters, property and ecological systems, and to ensure that the development as constructed is compliant with and subsequently maintained pursuant to the requirements of paragraph 165 of the National Planning Policy Framework.

This response has been provided using the best knowledge and information submitted as part of the planning application at the time of responding and is reliant on the accuracy of that information.

Yours faithfully,

**Daniel Hoare**

Flood Risk Project Officer

Flood and Water Management