

FAO Case Officer
Lead Local Flood Authority
County Hall
Chichester
West Sussex
PO19 1RH

Our Ref:
JM/BB/2108611 _LLFA-R1

08 December 2023

RESPONSE TO LLFA COMMENTS ON APPLICATION DC/23/0406

I am writing in response to the feedback dated 08/11/23 from West Sussex County Council LLFA regarding the development at 'Land To The West of Ashington C of E School, Park Lane, Ashington, West Sussex'.

For context the FRA report was produced in December 2022 and updated for submission in February 2023. The report was reviewed by consultees and a response was provided by Horsham District Council's drainage engineer confirming no objection to the proposals. The response advised the basin should be reviewed and reconfigured to better integrate with the landscaping. This has subsequently been addressed and updated basin landscape drawings have been submitted.

LLFA Specific Comment	Ardent Response
Objection: There are surface water flow paths around the perimeter of the site, following the ditches, these should be considered within the FRA to ensure that the development will not increase the risk of flooding to the site or elsewhere.	The FRA considers the risk of flooding from all sources. The ditches are not shown on the environment agency Fluvial maps but can be seen as low risk of flooding from surface water runoff. The flow paths originate from the catchment south of the site and as a result all ditches on the site have been conserved and the masterplan has been developed accordingly. There will be a reduction in flood risk in the perimeter watercourse due the positive drainage being installed and attenuation provided to restrict runoff to greenfield runoff rates. Any crossing of the ditches will include pipes or culverts to maintain the existing capacity of the ditches. These works will be subject to a Section 23 ordinary watercourse consent post planning. The development does not increase flood risk off site and

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	is considered policy compliant.
Objection: 3m easements to all watercourses should be shown on a layout plan.	The watercourses will be maintained and easements provided for the management company to maintain those as required. Most of the ditches are accessible from public open space and verges, and where houses abut the watercourse they have been set back. <i>Please note as most of the ditches are tree lined and next to woodland to the north and southwest, the existing ditches will only be accessible from the development side in most places.</i> The exact width of easements will be determined at detailed design stage dependent on final levels design and boundary conditions etc. It is suggested a suitable condition could be applied to maintain the watercourses and demonstrate the easements provided.
Objection: Greenfield volumes have not been provided.	There is an increase in impermeable area thus an increase in runoff volume. The site discharges all events up to the 100yr+40% at Qbar rates and satisfies the long term storage criterion, therefore greenfield volumes were not provided.
Informative: We would recommend the use of other source control features such as bioretention, rather than the reliance on the attenuation basin.	To improve the water quality benefits of the above ground suds system, we have redesigned the attenuation basin with the landscape architect to incorporate permanently wetted areas and aquatic benches to create more of a wetland type system and increase bioretention and biodiversity. Please refer to latest landscape drawings.
Informative: Proposed discharge and greenfield volumes have not been provided. Objection: It is not clear whether urban creep has been included correctly. Please clarify and/or update the proposed discharge rates if they include an allowance for urban creep.	See item above on greenfield volumes. As for discharge rates, the greenfield area assessed was based on the developable area discharging to the watercourses around the site, and not the whole site area. The proposed rates are not influenced by the urban creep or climate change. The proposed development discharges at the greenfield Qbar rate for all events up to 100yr+cc. The urban creep % has been added to impermeable area to allow for future development of the plots and the attenuation has been sized to accommodate the additional future runoff.

Objection: Please provide full network calculations rather than source control, using FEH2022, and demonstrating that a 10% allowance for urban creep has been included in the storage volume required. Calculations should also be provided for the 3.33% AEP plus an allowance for climate change.	The FRA and strategy demonstrate that: The runoff rate is limited to Qbar rates, The attenuation can accommodate the proposed impermeable areas with allowance for urban creep and current climate change allowances. WSCC Policy, the NPPF and NSTS do not require a full hydraulic model using FEH22 calculations. The calculations demonstrate the volume of attenuation is sufficient for the 1% AEP + 45% therefor considered suitable for the 3.33% event, however these can be included for completeness.
Objections: Please provide a layout drawing labelled to match drainage calculations and a cross section of the basin.	The basin has been updated to address some comments above and previous consultee responses and updated landscape proposals are available to show the design intent. Sections of the suds can be developed at the detailed design stage and can be suitable conditioned
Objection: Please provide full network calculations using FEH2022 for these return periods. Objection: Please demonstrate the correct finished floor levels will be applied. Objection: Please include exceedance routes on the drainage plan.	WSCC Policy, the NPPF and NSTS do not require a full hydraulic model using FEH22 calculations. The attenuation has been sized to accommodate the 100year+45% runoff and sewers will be sized to convey the runoff without surcharge in the 2 year event or flood in the 30 year. This is also a requirement of the adopting authority and will be demonstrated in the detailed calculations at the next stage. Finished floor levels are all set above surrounding hardstanding and highway levels, and levels generally fall away from property thresholds to provide exceedance routes in extreme events. Exceedance arrows can be added to the drawing. Furthermore the site benefits from the perimeter watercourses which will minimise impact of exceedance events on people and property.
Objection: Please confirm that there is a 3m easement to the SuDS features and that there will be vehicular access.	Easements will be provided to the adopting authorities requirements to allow for maintenance. The basin will also have off road parking near the sport pavilion and the basin is surrounded by footpaths for access.

The FRA has assessed the flood risk and drainage requirements of the site. The proposals are considered to be policy compliant and remaining details indicated above could be suitably conditioned prior to construction of the drainage.