

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

Our Ref:
JM/BB/2108611 _LLFA-R2

08th March 2024

RESPONSE TO LLFA COMMENTS ON APPLICATION DC/23/0406

I am writing in response to the latest feedback dated 02/02/24 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'.

We have responded to each of the comments made and where applicable the corresponding action. We would welcome the opportunity to present the updates prior to resubmission to ensure comments are addressed. Quite some time has passed since the original reports were completed and would welcome your collaboration in resolving these issues.

Drainage feedback timeline:

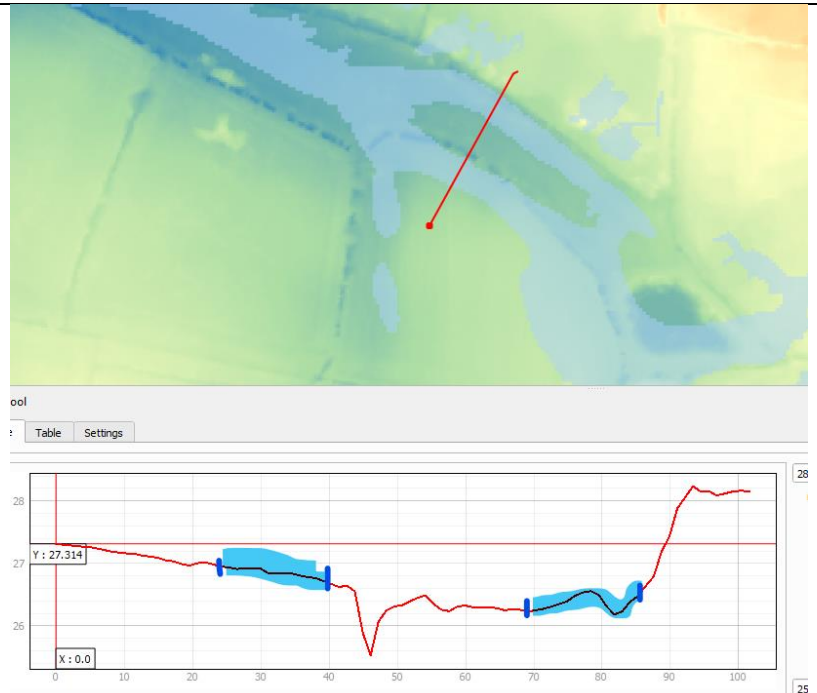
FRA Report submitted –	Feb 2023
Horsham no objection –	March 2023
WSCC LLFA First Comments –	08/11/23
Ardent Response –	08/12/23
WSCC LLFA Second Comments –	02/02/24

LLFA Comment 02/02/24	Ardent Response
Objection: In the north of the site, the residential development is shown to be located within a surface water flow path. The EA surface water flood risk maps show this area to be impacted by low, medium and high surface water flood risk. The application is not in accordance with NPPF paragraph 165, 173 and 175, PPG Flood risk and coastal change and S10 in	From a review of the EA mapping against the topographic survey and latest LIDAR, it's clear the modelled flood extent is not accurate. The image below shows an example of how the extents to do not accord with the surface. In reality we believe a baseline hydraulic model will show the extent of flooding for the 1000 year and 100 year to be much less than currently shown.

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Sustainable Drainage Systems Non-statutory technical standards for sustainable drainage systems (Defra, 2015).



The surface water flooding is clearly based on old levels data over a large grid as it shows flooding in areas higher than the watercourse.

As for depths of the flooding at the largest outcrop, the range is estimates to be 0.15m-0.3m (though does not take into account the current topography). The current site levels are 0.5m minimum above the top of ditch level in the topo which suggests existing flood risk will be on the opposite side of the watercourse where the existing pond is.

We appreciate a baseline hydraulic model may be required to confirm the exact depths and extents but we are confident that there is significant land available to the client (within the redline application area) directly north of the outcrop to provide like for like compensatory storage, to mitigate the effects of any level raising. Given the time that has passed since the original work on this site and changes to planning policy during the application, it is suggested that any hydraulic modelling is conditioned and undertaken as part of detailed design to confirm the new modelled extents of flooding is acceptable.

There are also several instances of blocked culverts on site that will be cleared for the development and this will form part of the hydraulic modelling.

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Objection: The PPG Flood risk and coastal change in paragraph 005 refers to guidance on safe access to be found in the Flood risk assessment guidance for new developments. This guidance refers to Flood Hazard Ratings and thresholds based on research in FD2320/TR2. Using this guidance, the access route has a Hazard Rating of danger for most (includes the general public) based on the Environment Agency Risk of flooding from surface water mapping. The PPG Flood Risk and Coastal change paragraph 047 states 'Access considerations should include the voluntary and free movement of people during a 'design flood'' (where a design flood is 1% AEP (1 in 100 chance a year) event). As the EA surface water mapping is the best available data, if the applicant disagrees with the EA mapping, the applicant must provide surface water modelling to demonstrate there are safe access and egress routes for the lifetime of the development. With the information submitted, it has not been demonstrated that safe access and egress is available for the proposed residential development site, therefore the application does not comply with the NPPF. The proposed access road could also create a loss in floodplain storage, increasing flood risk in the site itself and elsewhere.	There is an existing access road entering the site through the SW flood extents. The estimated depth is up to 150mm in the 100 year event which does not preclude safe vehicle entry/egress from the site. The proposed access road is in the same location and road levels will be raised above the flood levels and allow the existing culvert to be reconstructed/cleared. The offset in flood volume is considered to be negligible but the culvert will be assessed as part of the hydraulic modelling. As the site has a single access road, a flood evacuation plan can be produced as part of a pre-occupation condition indicating where alternative pedestrian refuge/evacuation routes are in the event of extreme flooding at the access road. <i>Recommendation: Planning condition to secure hydraulic modelling</i>
Objection: 3m unobstructed easements need to be provided for all watercourses and SuDS features. This may affect densities and layout, therefore it is essential it is demonstrated at this stage.	Noted in previous feedback, the layout has been adjusted to allow clear access to all watercourses. <i>Action: Show clearance/access on drainage layout</i>

Objection: SuDS should be designed to control surface water close to where it falls. Inlet restrictions to hard engineered drainage solutions prevent design storms up to the 1 in 100 plus climate change event from entering the system. The current design relies on pipes and end of pipe design (basin), which is not acceptable. Increased use of open, at the surface or above ground SuDS required. The current proposals have little biodiversity and amenity benefits (with the exception of the re-designed basin). The application is not in accordance with NPPF paragraph 159, 173 and 175 and PPG Flood risk and coastal change.	The strategy has been developed in conjunction with the layout and land allocation in the local plan of several years. There has been ample time for consultees to express concerns with the arrangement of the drainage scheme and Masterplanning and it's too far down the lane to redesign the site to accommodate additional drainage and multiple outfalls. The drainage proposals demonstrate they meet planning policy and the CIRIA suds guidance with regards to water quality (treatment indices) and the results are appended in the report.
Objection: The proposed discharge rate is greater than greenfield runoff rate. The highway drainage discharge rate from access road is 1.0 l/s and the residential area discharge rate has a discharge rate of 15.2l/s. This totals 16.2l/s for the whole site, however the greenfield runoff rate has been calculated to be 15.2l/s (with Qbar only calculated for the impermeable area). This could increase flood risk elsewhere, therefore the application is not in accordance with NPPF paragraph 175 and 175, PPG Flood risk and coastal change and S2 in Non statutory technical standards for sustainable drainage systems (Defra, 2015). Qbar must be recalculated for whole site, with the overall discharge rate based on the	Qbar is above and beyond policy compliance, as flow matching could be adopted for each return period. Though the larger catchment can be restricted to 14.2l/s due to redundancy in the wetland/basin volume, which should satisfy this comment. <i>Action: Update flow rates to 15.2l/s for whole site.</i> We disagree with the comments about Qbar. Qbar rates have been estimated based on the development area draining towards the ditches i.e the existing catchment excluding open spaces and existing trees and ditches. This is not based on impermeable area because the development parcels are positively drained. There will naturally be infiltration into the new topsoil but exceedance flow will find its way into the main drainage system and be attenuated accordingly. The post development QBar rates will therefore not exceed the pre-development rates. This is consistent with all of our previous applications in WSCC for various developers and councils

impermeable area for the whole site (i.e. the area that will be drained by the SuDS).	
Objection: The drainage strategy must be labelled to match the pipe/manhole numbers in the submitted calculations. The drainage strategy must also include finished floor levels. A catchment plan must be submitted demonstrating impermeable areas and discharge points.	We are not aware of any planning policy that asks for a detailed drainage network model with every pipe and manhole and catchment. This is usually secured by condition as the design will be progressed in detail at the next stage (fully coordinated with levels and highways designs) and submitted for adoption and to discharge the condition. A levels strategy was produced, this will be appended to the FRA for avoidance of doubt.
Objections: FSR rainfall on average underestimates the volume of rainfall by approximately 20%, which means the volume of storage required is being underestimated. FEH2022 must be used in calculations instead.	The initial design were undertaken in Dec 2022 prior to the latest FEH data. We are not aware of any planning policy that asks for FEH2022 to be used. We have re-run calculations to show the latest FEH data can be accommodated in the proposed design and these will be appended to the FRA.
Objection: NPPF paragraph 173 states 'Development should only be allowed in areas at risk of flooding where ... it can be demonstrated that ... d)any residual risk can be safely managed'. This is supported by PPG paragraph 041 which explains what residual flood risk is. Reliance on the watercourses for exceedance routes is not acceptable, as this assumed they are maintained and have capacity for additional flows. Therefore we need exceedance routing to demonstrate that if the drainage system within the development floods, the routes direct towards the highway and public open space, avoiding risk to people and property.	Noted, exceedance arrows to be shown on drainage plan. There will also be more redundancy/capacity in the ditches around the site as a drainage system is now collecting what was running off into those ditches. The ditches provide flow routes that minimise risk to people and property as this mimics existing overland flows.

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Objection: The topographical survey in the FRA has no numbers on. We require this to check the levels on the drainage strategy and within the full network calculations match the topographical survey. We also need this to ensure there is no ground raising in the floodplain of the ordinary watercourses, as this will reduce storage on the site and increase flood risk elsewhere.	The levels appear on our version, we can append the topo at a different scale for clarity. Existing levels will also be shown on the proposed levels strategy. <i>Action: Append new topo</i>
Objection: Full network calculations using up to date parameters must be provided for 50% AEP rainfall event and 3.33% AEP event plus climate change allowance. The application is currently not in accordance with SuDS Non statutory technical standards.	The SuDS Non statutory technical standards require the peak runoff for the 1 year and 100 year to not exceed the equivalent greenfield event. It also states the site should not flood in the 30 year/3.33% AEP event – the calculations provided demonstrate the site does not flood in the 100 year + cc event which exceeds this requirement but they will be included for completeness. The guide does not ask for 50%/2 year. The guide does not ask for full network calculations. <i>Action: Add 30 year + cc results to FRA</i>
Objection: As the network is discharging into a watercourse, surcharged outfall results are required. The surcharged level must be the 1% AEP flood event of the receiving watercourse if known or bank full if not already hydraulically modelled. This is to ensure flood risk is not increased downstream, increasing flood risk outside of the site.	We do not have an accurate surcharge level but the calculations can be re-run based on bank levels as a sensitivity check to ensure the additional volume can be accommodated within the freeboard. <i>Action: Sensitivity testing of model for surcharging</i>
Objection: No drainage for the football pitch has been provided. This must be provided and drained to meet Sports England standards.	This is subject to detailed design and specification of the pitches. One will be a natural turf pitch so will mimic existing conditions, and one a MUGA which will provide storage for it's own runoff and connected to the proposed network where required. We will indicate on the drawing the MUGA is to be restricted and provide it's own storage for avoidance of doubt. This has no bearing on the layout or the objection.