Planning Application Technical Response

Site:	Land South of A507, West of A10
LPA Reference:	3/24/1255/OUT
Date Assessed:	16 August 2024

Hertfordshire
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OUTLINE / Reserved Matters APPLICATION	Related Policy or Standard	Applicant Action Required	LLFA Specific Comment
All sources of flooding considered?	**NPPF Paragraph 165, 173** **PPG Paragraph 051** **SDNSTS S10** *Policy WAT1 Flood Risk Management (East Herts District Plan)*	Provide updated information within an amended FRA on; ☐Fluvial flooding from the ordinary watercourse ☐Surface water flow path originating offsite ☐Groundwater flooding ☐Rainwater surcharged sewer flooding ☐Historic flood information	Site is wholly within Flood Zone 1 and is at low risk from overland surface water flow paths.
		☐ Address concerns that there is not sufficient room within the development boundary to address flood risk mitigation and also achieved the suggested density of the development.	N/A
Mitigation not appropriate	**NPPF Paragraph 165, 173 and 174** **PPG Paragraph 004, 023, 037, 041, 042, 043 and 044** *Policy WAT1 Flood Risk Management (East Herts District Plan)*	☐Use sequential approach with the following hierarchy. I. how can the development first avoid the risk of flooding II. how will it be mitigated (with evidence) III. how will flood resistance and resilience be employed	Development steered away from small areas of surface water flood risk (as per EA mapping).
		☐The proposal increases the risk of flooding to existing infrastructure, dwellings, or property. Mitigation should be re-assessed to show how flood risk can be reduced overall.	N/A
		☐ Provide information on safe access and egress to show how the development will be safe for its lifetime. This may include assessment of how proposals will not increase the number of people living and working in areas of flood risk and if there is any additional burden placed on the emergency services. An emergency plan may also form part of this assessment (see www.adeptnet.org.uk).	N/A

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Long term sustainability of the development	**NPPF Paragraph 173 and 174 PPG Paragraph 004, 036, 061, 068 and 069** *Policy WAT1 Flood Risk Management (East Herts District Plan)*	☐Provide site specific ordinary watercourse or surface water flow path hydrological and hydraulic modelling.	N/A
		☐ Demonstrate that any residual risk is managed with appropriate flood resistance and resilience measures.	N/A
		☒Include evidence of appropriate freeboard to finished floor levels from the design flood level.	Commitment to raising finished floor levels (minimum of 150mm above external ground levels) should be stated.
		☐Include appropriate climate change allowance on modelling scenarios for assessment of the lifetime of the development (including the 3.33% AEP design flood event).	N/A
		☐Use up to date FEH2013 or 2022 rainfall data for all design flood events.	N/A
		☐ Identification is required of those structures which require consent for works on an ordinary watercourse (from the LLFA), this extends to works required within 8m from the top of the bank (see HCC LLFA website).	N/A
How does the site currently drain?	**NPPF Paragraph 175 PPG Paragraph 059 SDNSTS S1, S2, S3, S4, S5, S6** *Policy WAT5 Sustainable Drainage (East Herts District Plan)*	☒Evidence required on ground conditions / BRE365 or similar infiltration testing / dissolution potential / seasonally high groundwater levels.	We note that no ground investigation has taken place – we would usually expect testing to be carried out to confirm the viability of infiltration techniques.
		☐Greenfield runoff rates and volumes are missing or need to be recalculated (incorrect input parameters).	Greenfield runoff calculations provided in the appendices.
		☐Pre-development brownfield runoff rates are missing or need to be recalculated (incorrect input parameters).	N/A

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		☐Drawing required to show where existing drainage network and outfall/s are, plus confirmation if will they be retained or removed.	N/A
		☐Drainage survey required to provide evidence of existing discharge rate and condition (may include detailed asset or CCTV survey and estimation of discharge from an existing pipe diameter/slope).	N/A
Where will the site drain to?	**NPPF Paragraph 175** **PPG Paragraph 055, 056, 059, 060, 061, 062 and 063** **SDNSTS S12, 13 and S14** *Policy WAT5 Sustainable Drainage (East Herts District Plan)*	Drainage location hierarchy has not been followed, further information is required on; ☐ Evidence why rainwater reuse can't be included.	Rainwater harvesting suggested for use in the site wide strategy.
		☐ Source control and interception has not been provided by the provision of vegetated SuDS.	Rain gardens and swales are suggested for use in the site wide strategy.
		☐Infiltration proposals – re Groundwater Source Protection Zone I restrictions (only clean roof water in a sealed system may be discharged).	N/A
		☒Surface watercourse – does it connect to the wider network and is there permission and there are agreed access locations for proposed outfalls with the riparian owner?	It is not clear where the ditch is located that the site is proposed to discharge into – this should be shown on a plan. We would also expect it to be demonstrated how this ditch links with the wider watercourse/sewer network. In addition, the applicant should clarify that this watercourse will have sufficient capacity to take the onsite flows. It is unlikely that the ditch

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			currently takes runoff from the entirety of the site as a result of the topography and so discharging all the runoff into one point in the ditch could potentially increase the flood risk downstream.
		☐Surface water sewer – no in principle agreement from owner of the asset.	N/A
		☐ Combined sewer – no in principle agreement from owner of the asset.	N/A
		☐ In principle objection - proposing to connect surface water runoff to foul sewer.	N/A
		☐ Detailed justification required why the application cannot be drained via gravity and a pump is required.	N/A
		☐ Full impact assessment of failure of a pumped system and emergency procedures to store 24 hours of water is required.	N/A
		☐ Justification is required as to why a deep bore infiltration feature has been proposed prior to shallow infiltration or connection to a surface watercourse.	N/A
Are the 4 pillars of SuDS provided and are they multifunctional?	**NPPF Paragraph 175 PPG Paragraph 036, 055, 056,**	☐ Overarching commitment to proposals of how application must provide water quantity benefits in open and above ground SuDS.	Rain gardens, swales and an attenuation basin are suggested for use in the site wide strategy.

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	059, 060, 061, 062 and 063 *Policy WAT5 Sustainable Drainage (East Herts District Plan)*	☐ Commitment to the use of SuDS and high-level assessment to include: ☐ water quality ☐ biodiversity ☐ amenity	Rain gardens, swales, permeable paving and an attenuation basin are suggested for use in the site wide strategy.
How will the site drain without adversely effecting flood risk elsewhere?	**NPPF Paragraph 173, 175** **SDNSTS S2, S3, S4, S5, S6** *Policy WAT5 Sustainable Drainage (East Herts District Plan)*	☐ The most precautionary infiltration rate should be used in the design of the attenuation feature.	N/A
		☐ Infiltration rates are shown to be favourable and should be used in the drainage design (where appropriate).	N/A
		☐ Infiltration storage drainage design should be recalculated to either only discharge through the sides of the structure or apply the appropriate factor of safety.	N/A
		☐ Infiltration drainage storage has half drain down time greater than 24 hours and an alternative design or mitigation is required.	N/A
		☐The post development 100% AEP (or 1 in 1 year) rainfall event runoff rate should also be controlled to the equivalent pre-development rate.	Proposed to restrict discharge from the site to QBAR.
		☐ Proposed discharge rates and volumes are greater than greenfield with no justification.	Proposed to restrict discharge from the site to QBAR.
		☐ Proposed discharge rates include future allowances for climate change and / or urban creep. These must be removed, and all calculations resubmitted.	N/A

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		☐ Require justification and supporting calculations for brownfield % betterment and why this can't be closer to the predevelopment greenfield scenario.	N/A
		☐ Proposed discharge rates would increase flood risk elsewhere and need to be re-assessed.	Proposed to restrict discharge from the site to QBAR.
		☐ A minimum runoff rate between 1 to 2 l/s/ha should be applied in groundwater dominated areas if infiltration cannot be undertaken.	N/A
		☐ How will the development not increase the volume of runoff as only pre and post calculations of greenfield runoff rate have been provided?	Proposed to restrict discharge from the site to QBAR.
		☐ A complex control for runoff rates with long term storage provided, is required, if the drainage proposal is not limiting runoff to QBAR or 2 l/s/ha.	N/A
		☐ Include appropriate climate change allowance for the lifetime of the development (including 3.33% AEP design) for drainage modelling storage volumes.	Correct climate change allowance has been applied to the 1% AEP event used to calculate the storage volume required.
		☐ Outline drainage modelling calculations should be resubmitted and demonstrate how 10% urban creep has been included in the volume of SuDS storage required.	N/A.
		☒ Outline drainage modelling calculations should be resubmitted using a CV value of 1.	
		☐ Use up to date FEH 2013 or FEH2022 rainfall parameters in any drainage modelling scenarios.	FEH2013 has been used.
Location of SuDS		☐ Masterplan drawings need to show the high-level location of all SuDS and demonstrate	

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		that the volume of storage can be achieved in the layout. This includes the consideration for constraints (e.g., pipeline crossings and how gravity drainage can be achieved).	
		☐ Address concerns that there is not enough room within the masterplan for all SuDS features e.g. sufficient room for swales along main roads and still achieved the required density of the development.	N/A
How will the drainage and watercourse features be managed and maintained?	**NPPF Paragraph 175** **PPG Paragraph 055, 057 and 058** **SDNSTS S10, S11, S12, S13 and S14**	☒ High level assessment of the maintenance of any SuDS features and structures and who will be adopting these features for the lifetime of the development.	**Informative:** Although a short section on maintenance has been provided in Section 8 of the FRA, we would also usually expect this to provide an indication of the specific maintenance activities which would be required for each drainage component.
		☐ Appropriate easements (to the adopting authority standard) to SuDS features should be shown on a the masterplan drawing, this will be a minimum of 3m.	
		☐ Indicative vehicular access route and off-road parking needs to be provided to ponds, basins and swales within the masterplan.	
		☐ Provide an easement of a minimum of 3 m from the top bank of any watercourse is required for maintenance. This should be on both banks, but justification should be provided if access is proposed from only one side of the bank or is less than 3m (e.g. 2.5 times the width of any plant likely to be used (from the top of bank with maintenance plant parallel to the watercourse).	

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		☐ Due to the likely long duration build out time (including phased development proposals), supporting drainage calculations and drawings are required to show a timeline of how temporary measures will be put in place to protect the water environment and any newly built SuDS features. This will include any temporary water quality and water quantity flow control devices required.	
		☐ As it is a phased development, a surface water management and construction phasing plan is required. This must show how each phase can be provided independently (in terms of surface water drainage) and how any infrastructure which is relies on will be constructed prior to any housing or commercial development.	
		☒ A high-level assessment of how water quantity and water quality will be managed during the construction phase is required. Identifying high level assumptions of a construction management plan, such as the need to discharge to a sewer or watercourse with appropriate pollution measures.	
Other		☐ Bespoke advice	