

Planning Application Technical Response

Site:	Land North Of A507 and West Of A10
LPA Reference:	3/24/0966/OUT
Date Assessed:	27 June 2024

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 <i>Policy WAT1 Flood Risk Management (East Herts District Plan)</i>	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	OBJECTION: Further information required on the surface water flow paths on the site. Without carrying out further modelling, the Environment Agency maps are the best source of data available. We understand that this modelling may not account for some mitigation measures in and around the proposed site, however in the absence of detailed modelling the site outline development areas MUST be located outside of the 0.1% AEP outline and any likely road crossings to be indicated to connect development parcels. If the drainage system is to cater for flow paths, the extra volumes must be calculated and included in any outline drainage storage calculations. This may influence the Parameter Plan that would be associated with an outline application and the available space for the number of dwellings indicated with associated infrastructure e.g. road with swales and SuDS attenuation features.
		☐ 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

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Mitigation not appropriate	NPPF Paragraph 165, 173 and 174 PPG Paragraph 004, 023, 037, 041, 042, 043 and 044 <i>Policy WAT1 Flood Risk Management (East Herts District Plan)</i>	☒ 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	OBJECTION: Development should be steered away from any existing flow paths.
		☐ 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).	INFORMATIVE: Main access point from the site is not in an area of current flood risk but this may need to be revisited at a detailed design stage.
Long term sustainability of the development	NPPF Paragraph 173 and 174 PPG Paragraph 004, 036, 061, 068 and 069 <i>Policy WAT1 Flood Risk Management (East Herts District Plan)</i>	☒ Provide site specific ordinary watercourse or surface water flow path hydrological and hydraulic modelling.	INFORMATIVE: This will be required if development is not steered away from the existing Environment Agency 0.1% AEP surface water flow paths (1% plus 40% climate change proxy).
		☐ Demonstrate that any residual risk is managed with appropriate flood resistance and resilience measures.	Commitment to provide finished floor levels a minimum of 150mm above existing ground levels, ground profile should slope away from vulnerable areas.

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		☐ Include evidence of appropriate freeboard to finished floor levels from the design flood level.	Commitment to provide finished floor levels a minimum of 150mm above existing ground levels.
		☐ Include appropriate climate change allowance on modelling scenarios for assessment of the lifetime of the development (including the 3.33% AEP design flood event).	
		☐ Use up to date FEH2013 or 2022 rainfall data for all design flood events.	
		☐ 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).	
How does the site currently drain?	NPPF Paragraph 175 PPG Paragraph 059 SDNSTS S1, S2, S3, S4, S5, S6 <i>Policy WAT5 Sustainable Drainage (East Herts District Plan)</i>	☒ Evidence required on ground conditions / BRE365 or similar infiltration testing / dissolution potential / seasonally high groundwater levels.	Informative: We note that no ground investigation (including infiltration testing) has been carried out). We would expect this to take place to confirm the viability of infiltration techniques before the application progresses to reserved matters. We suggest at this stage indicative testing is undertaken to help understand the general conditions in the area. This 'Plan A' could be conditioned if the applicant is agreeable but only if there is a viable and evidenced 'Plan B' provided.

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		☒ Greenfield runoff rates and volumes are missing or need to be recalculated (incorrect input parameters).	Objection: To enable 'Plan B' to be checked we require catchment plans to go with the calculations provided. We require clarification on the different catchments used and how the total area for each one has been derived e.g. using topographical information from on site, LIDAR or other sources plus the full hydrological assumptions for each catchment labelled.
		☐ Pre-development brownfield runoff rates are missing or need to be recalculated (incorrect input parameters).	N/A
		☒ Drawing required to show where existing drainage network and outfall/s are, plus confirmation if will they be retained or removed.	Objection: Whilst a plan of the current land drainage network is provided, the LLFA need confirmation if this land drainage will be removed as part of the development and a drawing showing the current catchment areas that drain to each location within the proposed development site boundary. It must be shown that if land drainage is cut off as part of the works, a continuation of that drainage be provided without increasing the risk of flooding.

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		☐ 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).	
Where will the site drain to?	NPPF Paragraph 175 PPG Paragraph 055, 056, 059, 060, 061, 062 and 063 SDNSTS S12, 13 and S14 <i>Policy WAT5 Sustainable Drainage (East Herts District Plan)</i>	Drainage location hierarchy has not been followed, further information is required on;	Commitment to look into rainwater harvesting (via water butts) has been provided.
		☐ Evidence why rainwater reuse can't be included.	
		☐ Source control and interception has not been provided by the provision of vegetated SuDS.	Further above ground SuDS will be considered at the detailed design stage.
		☐ Infiltration proposals – re Groundwater Source Protection Zone I restrictions (only clean roof water in a sealed system may be discharged).	
		☒ 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?	Objection: Drainage system proposed to discharge to a ditch which connects into an ordinary watercourse, the condition of this watercourse to accept a discharge and evidence that it is connected to the wider watercourse network should be provided.
		☒ Surface water sewer – no in principle agreement from owner of the asset.	Objection: Prior to discharging to the sewer to the southeast, evidence for a connection to the watercourse to the south west should be explored and evidenced. There is no in principle agreement from Thames Water provided to confirm capacity in the surface

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			water sewer network. Nor is there agreement to install a new connection across third party land plus permission to cross Highways Authority infrastructure (including any existing drainage features).
		☐ 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 as gravity system proposed.
		☐ 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, 059, 060, 061, 062 and 063 <i>Policy WAT5 Sustainable Drainage (East Herts District Plan)</i>	☐ Overarching commitment to proposals of how application must provide water quantity benefits in open and above ground SuDS. ☐ Commitment to the use of SuDS and high-level assessment to include: ☐ water quality ☐ biodiversity ☐ amenity	Commitment stated in FRA to include other SuDS features in addition to the proposed attenuation basins. Commitment stated in FRA to include other SuDS features in addition to the proposed attenuation basins.

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How will the site drain without adversely effecting flood risk elsewhere?	NPPF Paragraph 173, 175 SDNSTS S2, S3, S4, S5, S6 <i>Policy WAT5 Sustainable Drainage (East Herts District Plan)</i>	☒ The most precautionary infiltration rate should be used in the design of the attenuation feature.	Informative: Infiltration not proposed within the drainage strategy, but this must be proved not to be viable prior to discounting it entirely.
		☐ Infiltration rates are shown to be favourable and should be used in the drainage design (where appropriate).	
		☐ Infiltration storage drainage design should be recalculated to either only discharge through the sides of the structure or apply the appropriate factor of safety.	
		☐ Infiltration drainage storage has half drain down time greater than 24 hours and an alternative design or mitigation is required.	
		☐ 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 discharge rates and volumes are greater than greenfield with no justification.	Discharge rate from site to be set to QBAR.
		☐ Proposed discharge rates include future allowances for climate change and / or urban creep. These must be removed, and all calculations resubmitted.	Discharge rate from site to be set to QBAR.
		☐ Require justification and supporting calculations for brownfield % betterment and why this can't be closer to the predevelopment greenfield scenario.	N/A as greenfield site.

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		☐ Proposed discharge rates would increase flood risk elsewhere and need to be re-assessed.	Discharge rate from site to be set 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?	Discharge rate from site to be set 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.	Discharge rate from site to be set to QBAR so no long term storage required.
		☐ Include appropriate climate change allowance for the lifetime of the development (including 3.33% AEP design) for drainage modelling storage volumes.	Storage requirement based off the 1% AEP event plus 40% climate change.
		☒ Outline drainage modelling calculations should be resubmitted and demonstrate how 10% urban creep has been included in the volume of SuDS storage required.	Informative: It is not clear whether urban creep has been included in the calculations – this should be clarified at this outline stage but details provided at the detailed design.
		☒ Outline drainage modelling calculations should be resubmitted using a CV value of 1.	Informative: Currently volumes of water to be stored will be underestimated. New calculations should be provided using CV value of 1
		☐ Use up to date FEH 2013 or FEH2022 rainfall parameters in any drainage modelling scenarios.	FEH13 has been used.

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Location of SuDS		☒ Masterplan drawings need to show the high-level location of all SuDS and demonstrate 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).	Informative: Drainage plan indicates potential locations for the main storage features. Some indication of where other above ground features (e.g. swales) could be located is beneficial to show there will be enough space on the site alongside the proposed development areas. E.g. the 5 to 10m of land take required next to the main spine road developments for swales.
		☐ 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.	See above.
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.	Assessment provided in Section 8 of the FRA.
		☒ Appropriate easements (to the adopting authority standard) to SuDS features should be shown on the masterplan drawing, this will be a minimum of 3m.	Informative: This additional space should be shown as a buffer around key locations.
		☐ Indicative vehicular access route and off-road parking needs to be provided to ponds, basins and swales within the masterplan.	

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		☐ 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).	N/A
		☐ 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.	Objection
		☒ 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.	Informative

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Other		☐ Bespoke advice	