

P e l l F r i s c h m a n n

Phase 2 Ratby, Reserved Matters

Response to Leicestershire County Council LLFA
Comments dated 14th June 2024

Project	Phase 2 Ratby, Reserved Matters
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1 Introduction

1.1 Context

- 1.1.1 Pell Frischmann has been appointed by Lagan Homes to develop a detailed drainage strategy and statement to support, and discharge conditions associated with, the Reserved Matters planning application to Hinckley and Bosworth Borough Council.
- 1.1.2 This drainage response note aims to respond to drainage and flood risk related comments made by Leicestershire County Council in their role as Lead Local Flood Authority.
- 1.1.3 Previously submitted documentation pertinent to flood risk and drainage comprise primarily of the relevant Sustainable Drainage Report (SDR) reference 106232-PEF-ZZ-XX-RP-CD-000001 and Flood Risk Assessment (FRA) reference 106232-PEF-ZZ-XX-RP-YE-000010 produced by Pell Frischmann and approved at outline planning.
- 1.1.4 The drainage statement, submitted as part of the Reserved Matters application, to discharge drainage related conditions has remained unaltered with this drainage response note addressing the comments raised by LCC's LFFA.

2 Lead Local Flood Authority Key Observations

- 2.1.1 The following observations were made by LCC's LFFA team in response to the Reserved Matters planning application:

"In our response to the outline application (22/00648/OUT) we highlighted that no commitment to source control SuDS has been provided in the outline surface water drainage strategy. In detailed design, the LLFA would expect source control SuDS be included in the internal site layout to provide greater benefit from SuDS.

The drainage strategy submitted out Outline says:

A wide variety of other SuDS features can also be implemented across the development as the design progresses and this could include, but is not limited to:

- *Water butts*
- *Swales*
- *Rainwater harvesting systems*
- *Rainwater gardens*
- *Permeable paving*
- *Filter drains*
- *Silt traps*
- *Sump gullies*

Additional measures are likely to be incorporated into the design at the appropriate stage, including swales and filter drains to convey water around the site and proprietary oil/petrol interceptors in areas at high risk of pollution.”

Furthermore, the Flood Risk Assessment also submitted with the outline application stated that additional SuDS would be considered at the design stage. At present there is no evidence that the above features have been considered as part of the drainage design and therefore the features above should be considered in more detail. Source control SuDS can reduce the volume of surface water run-off leaving the site, thus reducing flood risk on-site and within the downstream catchment. The proposals currently include block paving; an option to provide source control SuDS would be to make these areas block pervious paving instead.

Where no additional SuDS are to be proposed, the applicant should demonstrate that sufficient surface water treatment is provided in line with CIRIA C753.

Leicestershire County Council as Lead Local Flood Authority (LLFA) notes that the 5.47ha greenfield site is located within Flood Zone 1 being at low risk of fluvial flooding and a very low to surface water flooding. The proposals seek to discharge at 9.9 l/s via a detention basin to the on-site watercourse.”

3 Water Quality Risk Management

- 3.1.1 In response to LCC’s LLFA comments above, a simple index approach to water quality risk management in accordance with the Ciria SuDS Manual 2015 (C753) is appropriate for this site. The table below shows the pollution hazard indices as described in Table 26.2 in the Ciria SuDS Manual 2015.

Table 3.1 Pollution Hazard Indices

Site Area	Pollution Hazard Level	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Residential roofs	Low	0.2	0.2	0.05
Individual property driveways, residential carparks & low traffic roads eg. Cul de sacs, home zones and general access roads	Low	0.5	0.4	0.4

- 3.1.2 Table 2.2 details the SuDS Mitigation Indices as described in Table 26.3 in the Ciria SuDS Manual 2015. As set out in the drainage statement and detailed drainage strategy, a wetland has been incorporated into the design to act as both the attenuation and as mitigation against pollutants.

Table 3.2 SuDS Mitigation Indices

Site Area	SuDS Treatment Trains	Total Suspended Solids (TSS)	Metals	Hydrocarbons
Residential roofs	Wetland	0.8	0.8	0.8
Individual property driveways, residential carparks & low traffic roads eg. Cul de sacs, home zones and general access roads	Wetland	0.8	0.8	0.8

- 3.1.3 To provide adequate treatment, the total SuDS mitigation index should be equal to or greater than the pollution hazard index. In this instance, by providing a wetland, adequate treatment can be achieved even if the mitigation indices for a pond is considered if the wetland does not provide significantly enhanced treatment as set out in the Ciria SuDS Manual 2015.

- 3.1.4 In summary, the drainage strategy detailed within the Reserved Matters application demonstrates that an effective level of SuDs for the surface water drainage and treatment has been adopted for the site and complies with the Flood Risk Assessment & Sustainable Drainage Report produced at outline planning.

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