

TECHNICAL NOTE



JBA Project Code	2026s0496
Contract	Land South of Sacheverell Way, Groby, Leicestershire
Client	Bloor Homes East Midlands
Day, Date and Time	2 nd September 2026
Author	Charlotte Lickman
Reviewer / Sign off	John Panesar
Subject	Response to LLFA Consultation Response

1 Introduction

This technical note has been prepared by JBA Consulting on behalf of Bloor Homes East Midlands in response to the Lead Local Flood Authority consultation response dated 20 August 2026 (reference 2025/1213/04/F/R2) for the outline planning application at Land South of Sacheverell Way, Groby, Leicestershire. It focuses specifically on matters raised in relation to the submitted Outline Surface Water and Foul Water Drainage Strategy, reference NXG-JBA-XX-XX-RP-C-0001-S3-P02-OSFWDS, dated July 2026.

The LLFA response advises that further information is required before a substantive response can be provided. JBA has reviewed the comments against the information already submitted within the Drainage Strategy and supporting appendices. Further clarification is provided below to assist the LLFA's review of the submitted information.

2 Summary of LLFA Matters and Response

LLFA matter	JBA response summary
Greenfield runoff rate and contributing area	The submitted greenfield runoff rate was calculated using the total site area capable of contributing runoff to the drainage system during extreme events. This is consistent with the approach in the National standards for SuDS guidance and the submitted Drainage Strategy identifies the QBAR contributing area as 10.56 ha.
Climate change and urban creep	The submitted InfoDrainage calculations already include a 40% climate change allowance for the 1 in 100 year event and a 10% urban creep allowance.
Infiltration and first 5 mm interception	Soakaway testing has been completed. The proposed basin is configured to provide interception of the first 5 mm of rainfall, and the submitted strategy demonstrates compliance with Standard 2 of the National standards for SuDS guidance.
Range of SuDS features	The outline strategy includes a swale corridor and detention basin. The strategy demonstrates compliance with the National standards for SuDS guidance and is therefore considered to be acceptable for outline planning purposes.

LLFA matter	JBA response summary
Existing culvert	The existing culverted watercourse is understood to serve the existing residential area to the north and is proposed to remain in its current arrangement. This matter has previously been agreed with the LLFA, and relevant correspondence was submitted with the application.

3 Greenfield Runoff Rate and Contributing Area

The LLFA comments state that the discharge rate provided is unacceptable and request evidence where the whole site area is proposed to drain to the surface water drainage system, rather than only those impermeable areas formally connected to the system.

The submitted Drainage Strategy calculated the greenfield runoff rate using the total site area of 10.56 ha. This approach reflects the principle set out in Section 3.29 of the National standards for SuDS guidance, which indicates that the greenfield runoff rate should be based on the full development area that could potentially contribute runoff to the proposed surface water drainage system during an extreme rainfall event, including both permeable and impermeable surfaces. Section 6.1 of the submitted Drainage Strategy identifies the QBAR contributing area as 10.56 ha.

The greenfield runoff calculation sheet included within Appendix E of the submitted Drainage Strategy confirms that the UK SuDS greenfield runoff rate estimation tool was used for a total site area of 10.56 ha. The calculated QBAR rate is 54.6 l/s. In accordance with the LLFA's previous request that discharge be limited to QBAR minus 20%, the proposed controlled discharge rate is 43.68 l/s for all events up to and including the 1 in 100 year plus climate change event.

At detailed design stage, the hydraulic model will be developed to distinguish clearly between impermeable and permeable contributing areas. Impermeable areas will be modelled as fully contributing to the surface water drainage system. Any permeable areas within the hydraulic modelling that are capable of generating runoff to the drainage system during extreme rainfall events will be represented using an appropriate percentage runoff or runoff coefficient, with the adopted value clearly documented in the model assumptions and supporting calculations.

4 Climate Change, Urban Creep and Attenuation

The LLFA requested that the drainage calculations include a 40% climate change allowance in the 1 in 100 year event and a 10% allowance for urban creep. These allowances have already been included within the submitted InfoDrainage calculations in Appendix F of the Drainage Strategy.

The estimated attenuation assessment was undertaken using InfoDrainage for the 1 in 100 year plus 40% climate change event. The submitted calculations also apply a 10% urban creep allowance to the impermeable area, increasing the analysed impermeable area from 3.072 ha to 3.379 ha. The critical storm is identified as the 720-minute summer event, with a maximum resident volume of approximately 2,660 m³ and no flooded volume. The proposed basin provides a total available storage volume of approximately 3,006 m³, which exceeds the estimated attenuation requirement.

5 Infiltration and Interception

The LLFA comments state that surface water drainage proposals should seek to infiltrate unless demonstrated to be unfeasible, and that the first 5 mm of rainfall should be retained on-site. Site-specific soakaway testing was completed by GeoDyne Geotechnical and Environmental Consultants in June 2026 and submitted within Appendix D of the Drainage Strategy.

Five soakaway test pits were excavated in the area of the proposed attenuation pond. The recorded infiltration rates ranged from 8.87 x 10⁻⁶ m/s to 2.49 x 10⁻⁵ m/s. The submitted strategy adopts the slowest recorded infiltration rate of 8.87 x 10⁻⁶ m/s for design purposes. While these results demonstrate some infiltration potential, the strategy identifies that infiltration only drainage is not considered appropriate as the primary runoff destination due to the relatively low infiltration rates and the scale of the proposed residential development.

Notwithstanding this, the proposed drainage strategy provides interception through the detention basin. The basin has a flat unlined base area of 2,720 m² and is designed to allow the first 5 mm of runoff to infiltrate slowly to ground. The submitted interception assessment confirms that 100% of the impermeable area drains to a compliant SuDS feature and that the basin base area exceeds the required area when applying the 25:1 criterion for detention basins.

6 SuDS Features, Amenity and Biodiversity

The LLFA has requested a wider range of SuDS features, including source control features such as permeable paving, swales, and rain gardens. The submitted outline strategy includes a swale corridor, conveyance pipework within the built area, and a detention basin in the south of the site. The vegetated basin is intended to provide attenuation, interception, water quality treatment, amenity, and biodiversity benefits.

The strategy has been prepared at outline stage when no specific drainage elements are fixed. The submitted approach establishes the site-wide drainage principles and principal SuDS components required to demonstrate compliance at this stage, while allowing more localised source control measures to be reviewed through reserved matters and detailed design once the final layout, levels, highway arrangement, and plot configuration are confirmed.

The submitted strategy is considered appropriate for outline planning purposes. If the LLFA requires further consideration of additional SuDS features following review of the submitted information, these could be assessed at the detailed design stage and incorporated where practicable.

7 Existing Culvert

The LLFA response suggests that there is an expectation that existing culverts should be opened where possible. The existing watercourse flows through the site as an open ditch for part of its length before entering a culverted section towards the downstream part of the site. The submitted drainage strategy drawing identifies the existing watercourse as being partially culverted and notes that it is understood to serve the development to the north.

There is, therefore, an existing culvert, which is proposed to be maintained, and the outline drainage strategy does not propose to increase the capacity of, or discharge unrestricted runoff into, the existing culvert. Rather, post-development surface water runoff will be attenuated within the proposed basin and discharged to the ordinary watercourse at the controlled greenfield rate.

As outlined in previous correspondence with the LLFA (both ahead of the applicant's submission, and following receipt of initial comments), the proposal would **not** conflict with the Council's Ordinary Watercourse Regulation and Culvert Policy, in that:

- The guidance relates to a general opposition in **new** culverts, rather than the retention of existing culverts.
- The guidance is focussed primarily on significant watercourses, which is not the case here, with this being more aligned to a sewered drainage feature than a natural watercourse.
- Notwithstanding that, this means that the policy does **not** apply to this proposal the policy does not impose a blanket restriction to culverting. Rather, the policy provides some flexibility where there is no reasonably practicable alternative, or if the detrimental effects of culverting would be so minor that they would not justify a more costly alternative. In that regard, it is noted that daylighting the watercourse would have a substantial impact on the efficient development of an emerging allocation site, as this would reduce the available developable area and undermine a number of key design principles, leading to scheme proposals that would not make an efficient use of the site.
- Setting aside the above, paragraph 3.8 of the Policy is arguably the only relevant excerpt from the document and sets out that the LLFA are 'supportive' of de-culverting existing watercourses. That is not an absolute requirement, and in the context of the above considerations and that the proposal seeks to maintain the status quo in order to efficiently manage overland surface water flows, there is clear evidence not to seek the de-culverting of the watercourse.

It is also noted that the recently revised NPPF states that “*development proposals should not enclose existing watercourses where this is not already the case, unless there are compelling reasons to do so; and should where possible remove existing culverts and renaturalise existing river channels*”. Again, the NPPF exercises a similar degree of flexibility. In that regard, the proposed approach aligns entirely with the LLFA’s policy and the NPPF.

Furthermore, the proposal to maintain the existing culvert arrangement has previously been discussed with the LLFA and agreed on the basis that it would maintain the existing position. The relevant correspondence in that regard is contained in Appendix A of our previous LLFA Response (dated 13th July 2026). Any further works or consents associated with the culvert can be confirmed at detailed design stage if required.

8 Conclusions

JBA has reviewed the LLFA consultation response against the information submitted within the Outline Surface Water and Foul Water Drainage Strategy and supporting appendices. The submitted documentation provides evidence in relation to the greenfield runoff rate, contributing area, controlled discharge rate, 40% climate change allowance, 10% urban creep allowance, infiltration testing, first 5 mm interception, attenuation requirements, and the proposed outline SuDS arrangement.

The drainage strategy is considered to be consistent with current national SuDS guidance and proportionate to the outline stage of the planning application. It is recommended that the LLFA be asked to undertake a further review of the submitted Drainage Strategy and supporting appendices before any additional modelling, redesign or supplementary work is progressed. An independent review of the hydraulic modelling is also currently being progressed, following which its findings, together with any further LLFA comments, will be considered and addressed as appropriate at the detailed design stage. Any further comments arising from that review can then be considered and addressed as appropriate