

To: Bhukya Veeranna

From: Nick Bosanko

Company: Hertfordshire County Council / WSP

SLR Consulting Limited

cc: Naomi Reynard (North Herts Council)
Richard Kelly (Croudace Homes)

Date: 7 March 2025

Project No. 416.065599.00001

RE: Land at Roundwood Back Lane, Graveley, SG1 6GJ
Response to LLFA Consultation Comments on Surface Water Drainage

1.0 Introduction

A Flood Risk Assessment (FRA) was prepared by SLR Consulting in December 2024 to support the full planning application for Land at Roundwood Back Lane, Graveley, SG1 6GJ (planning ref 24/02889/FP). The Flood Risk Management Team of Hertfordshire County Council (otherwise known as the Lead Local Flood Authority (LLFA)) provided comments (dated 25th February 2025) following their review of the planning submission. Their comments concern the surface water drainage strategy, which formed part of the FRA.

It should be noted that the LLFA previously approved the surface are drainage strategy for the site, which was based on the same principles and formed an earlier planning application (planning ref 23/02492/FP), both of which were for Croudace Homes. Whilst this previous application was withdrawn, the agreed principles were taken forward for the latest application. It appears that the new LLFA officer has not reflected on what was previously agreed.

It is disappointing that there has been no positive reflection on the surface water drainage strategy that the applicant has committed to. In terms of Sustainable Drainage Systems (SuDS), it goes beyond what is typically proposed by house builders, which includes an extensive network of swales, cascading ponds and rain gardens.

SLR Consulting have been instructed to help overcome the LLFA comments. It is the purpose of this note to address each of the LLFA comments and agree a way forward. The LLFA comments have been extracted below and are addressed in turn.

2.0 Response to LLFA Comments

LLFA Comment 1

The applicant has provided the evidence of the agreement from Thames water for discharging to their asset and quantity of approved discharge information dated 26 October 2021. However, the approval is too old to be accepted and that was for 292 dwellings associated with the case 23/02492/FP. Now the number of dwellings has been amended to 281 and new consent is required from Thames Water.

SLR Response 1

Thames Water have been consulted as part of the planning application and make no objection to the proposed development, which includes connection to the surface water and foul water sewer. Nevertheless, we will seek an updated response from Thames Water regarding the discharge rates.

LLFA Comment 2

Drawings of cross sections and long sections of all the network and structures such as ponds and swales need to be supplied.

SLR Response 2

We query the necessity of these drawings. They do little or nothing to prove the acceptability or viability of the surface water drainage strategy. It is our view that these requirements can be addressed via a condition, when detailed designs are prepared. This is not a pre-determination matter.

LLFA Comment 3

The Applicant must use CV values of 1.0 in their hydraulic calculations. Have used CV values of 0.75 and 0.84 for summer and winter respectively. Considering lower CV values may under predict the flood in the calculations.

SLR Response 3

The same CV values were adopted as that agreed for the earlier planning application (planning ref 23/02492/FP). These are the default values in the modeling software. Rarely are different CV values requested. We have found no guidance from the LLFA that refers to a higher CV value.

A 100% impermeable factor has been assumed for impermeable areas, as required by SSG. The SuDS Manual refers to a CV value of 0.8 to 1.0.

Application of a CV value of 1 for all impermeable areas is considered conservative and we ask that this is reconsidered. We suggest a value of 0.9, which allows for some losses through puddling and infiltration etc.

LLFA Comment 4

The applicant must provide hydraulic calculations for 50% AEP rainfall event. Furthermore, half-drain times should be provided for all storage features.

SLR Response 4

The 50% AEP results will be provided. All the attenuation features do not achieve half-drain time within 24 hours. However, based on the discharge of surface water at restricted rates (and as agreed with the Thames Water), half-drain time within 24 hours is not achievable (it fails in 3 of 5 attenuation features).

In these circumstances, evidence of storage volumes available at 24 hours past the end of rainfall can provide comfort that resilience in the surface water drainage network is available for subsequent storm events.

We have undertaken an appraisal of this and note that the volume available in the three attenuation features (all of which are ponds) at 24 hours past the end of critical event is approximately 1,800 m³. This includes the freeboard volume and accounts for around 45% of the total volume of storage available in these ponds. This large volume will easily accommodate the 1 in 10 year storm.

LLFA Comment 5

Exceedance of the design 1% AEP rainfall event plus climate change (or failure of the drainage network) must be shown on a drawing, minimising impacts to people and property. This drawing will include proposed external ground levels, finished floor levels and any designed slopes on impermeable surfaces such as roads or car parks.

SLR Response 5

Indicative exceedance flow paths have been presented on the surface water drainage layout enclosed in the FRA. Details of all proposed external ground levels and finished floor levels are not available at this stage. This information will do little or nothing to prove the acceptability of the surface water drainage strategy. It is our view that these requirements



can be addressed via a condition, when detailed designs are prepared. This is not a pre-determination matter.

LLFA Comment 6

Appropriate easements (to the adopting authority standard) to SuDS features (Ponds and Swales) should be shown on a drawing, this will be a minimum of 3m.

SLR Response 6

The swales and ponds would be privately maintained or adopted by the district council.

It is accepted that maintenance access is required, but this requires pragmatism and consideration of impacts / viability. A swale with an unobstructed 3 m easement down both sides, or just one side, makes such a feature undesirable due to land take and appearance etc. We need to encourage the use of swales, and this sort of blanket approach will lead to undesirable impacts. The swales could easily be removed and replaced with a pipe system. The water quality mitigation indices would still be met, so a considered approach is urged.

A 3 m wide swale has been proposed, with an adjacent 1-2 m wide grass strip and adjacent 1.2 m wide footpath. A wider area is available on the opposite side but will include some trees. Maintenance access to the swale will be on foot and is likely to require irregular strimming.

I have enclosed two sketches which show a 3m wider buffer from the edge of the swale and ponds. You'll note that a 3m wide area is available around the swales but includes footpaths and hedges in places.

Access to the ponds for maintenance purposes will also be required on foot. A minimum 1m wide grassed verge was incorporated around each pond with additional space for footpaths and a cycle path. These features can offer dual functionality. The enclosed sketches show the availability of a 3m wide area for maintenance access provision.

We would be happy to take the opinion of district council in terms of whether they consider sufficient space to be available for the occasional maintenance requirements.

LLFA Response 7

Vehicular access route and off-road parking needs to be provided to ponds and swales.

SLR Response 7

It is unclear what is being suggested with respect to a vehicular access route. The SuDS are in areas of green infrastructure that would also be subject to maintenance requirements. It is anticipated that the SuDS would be maintained at the same time as the surrounding green infrastructure. These areas are easily accessible across the scheme.

Provision of off-road parking for occasional maintenance is not desired and is likely to be appropriated by nearby residents.

LLFA Response 7

The existing greenfield runoff rates considered a developable area of 8.14 ha whereas the total site area is approximately 11.4 ha. It should be clearly demonstrated that landscaped areas will not still drain to the proposed drainage features. Greenfield runoff volumes are missing in the provided FRA.

Landscaped areas will not be formally drained. Levels within landscaped areas will be directed away from drainage arrangements. Level design of landscaped areas is not



something that would normally be undertaken at this planning stage. It is a matter for detailed design, prior to construction. These requirements could be addressed via a condition, when detailed designs are prepared. This is not a pre-determination matter.

LLFA Response 8 – 12

These comments were labelled by the LLFA as informative. We assume that the LLFA are satisfied that these are addressed as part of a condition.

3.0 Closure

This note has been prepared to provide an initial response to comments from the LLFA regarding the planning application at Land at Roundwood Back Lane, Graveley, SG1 6GJ (planning ref 24/02889/FP). Each of the comments has been considered in turn and we look forward to the response. We hope that some of the comments can now be considered overcome, whilst others will need further input, once a further LLFA response has been received. We assume that the remaining comments can be dealt with by condition.

It may be necessary to hold a meeting with the LLFA, or subject to their response, updated information can be provided to overcome any remaining concerns.

Regards,

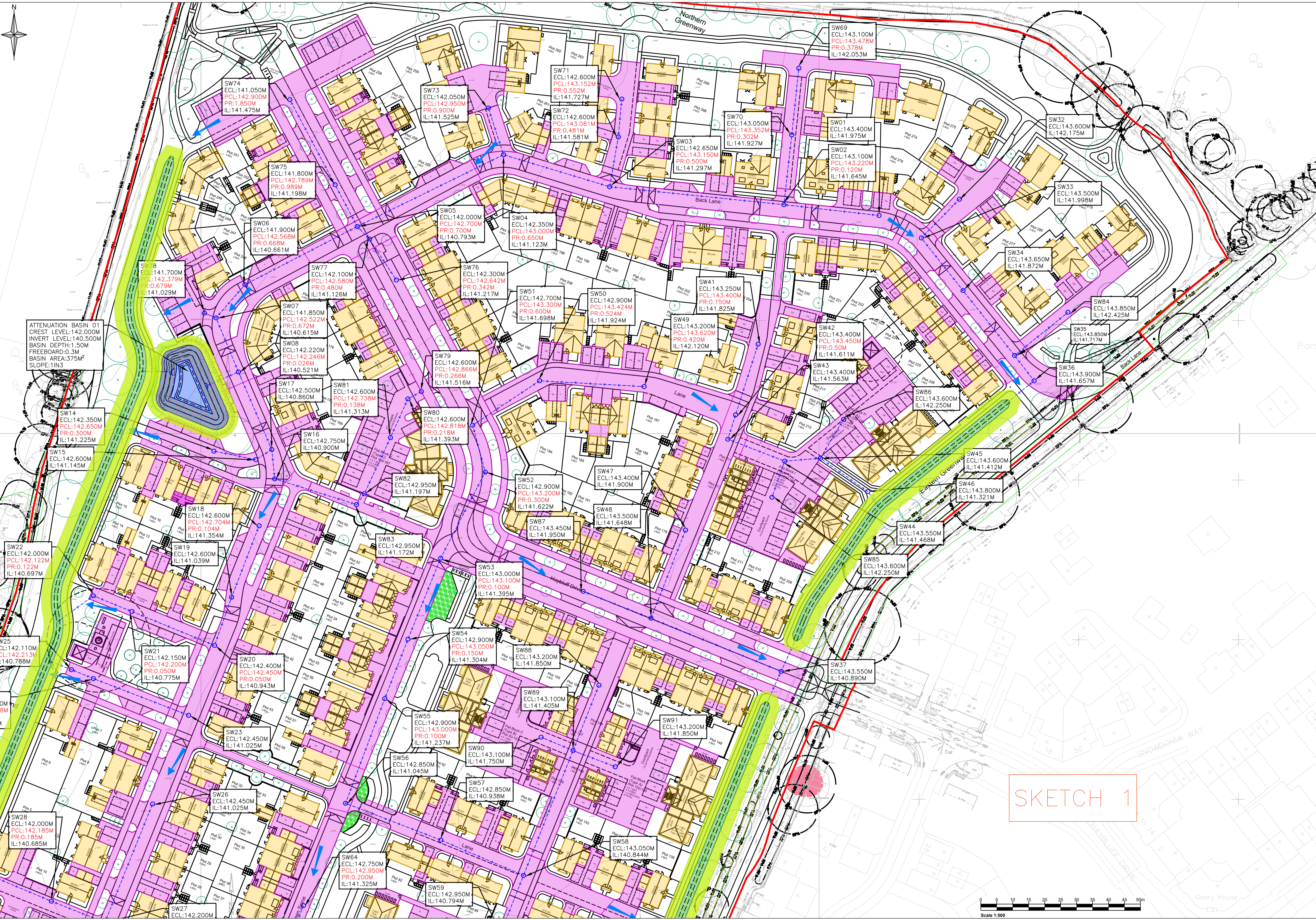
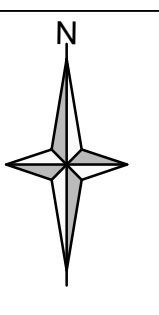
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SKETCH 1





SKETCH 2

