

FRA Technical Note

5 Shelley Wood, Gatehouse Lane, Burgess Hill, RH15 9XL

- 1.1 This Technical Note has been prepared to support the Applicant's retrospective Planning Application at this site. The applicant infilled a pond in the rear garden and the Local Planning Authority, Mid Sussex District Council, have insisted on a Flood Risk Assessment to support this.
- 1.2 The LLFA drainage engineer have provided the following feedback to the Planning Case Officer:
- The site is in flood zone 1 and is at low fluvial flood risk (risk of flooding from Main Rivers). The site is shown to be at high surface water flood risk (comparable to flood zone 3b); however, the surface water flood risk is an isolated and confined area that does not appear to be associated with any flood flow route or part of a wider surface water attenuation system. It is also not in-line with any ordinary watercourse system. This appears to be a historic pond.*
- 1.3 The EA's online Rivers and Seas flood map shows this site lies in fluvial Flood Zone 1, Low Risk. The EA's surface water flood maps show the area where the pond used to be is affected - in all 3 scenarios (30 yrs, 100 yrs and 1000 yrs). The 1 in 30 years flood map is shown in Figure 1:

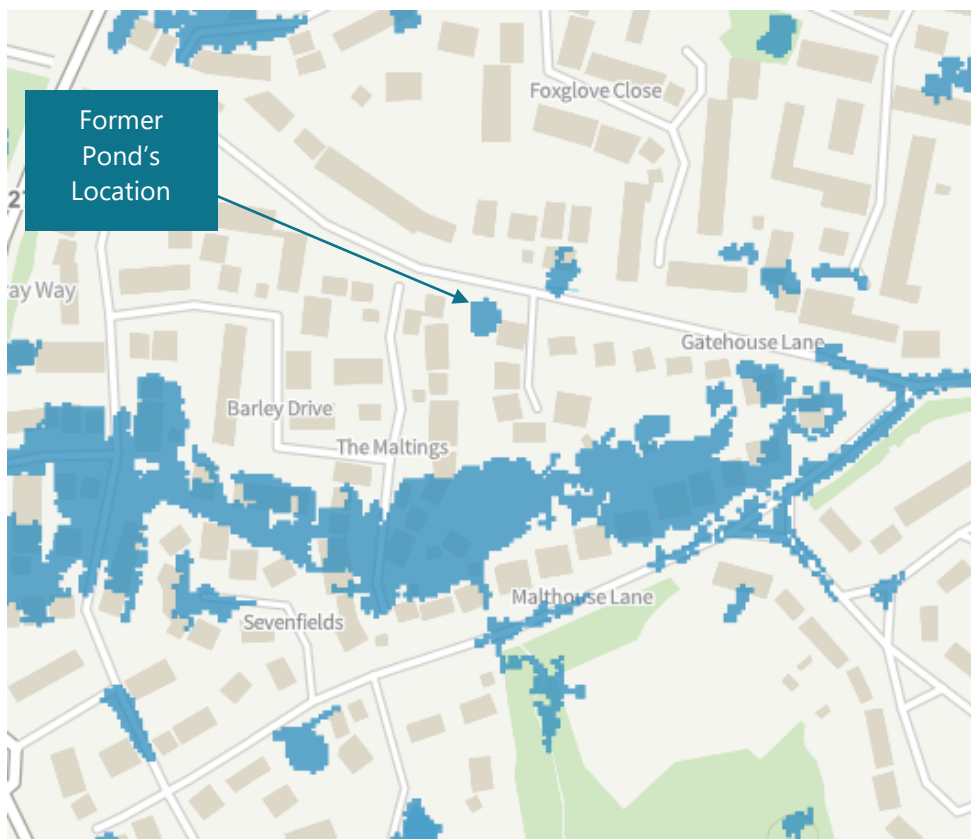


Figure 1: EA's Surface Water Flood Map – 1 in 30 Years Annual likelihood of flooding
(Reference: flood-map-for-planning.service.gov.uk)

Civil Engineering - Transport Planning - Flood Risk

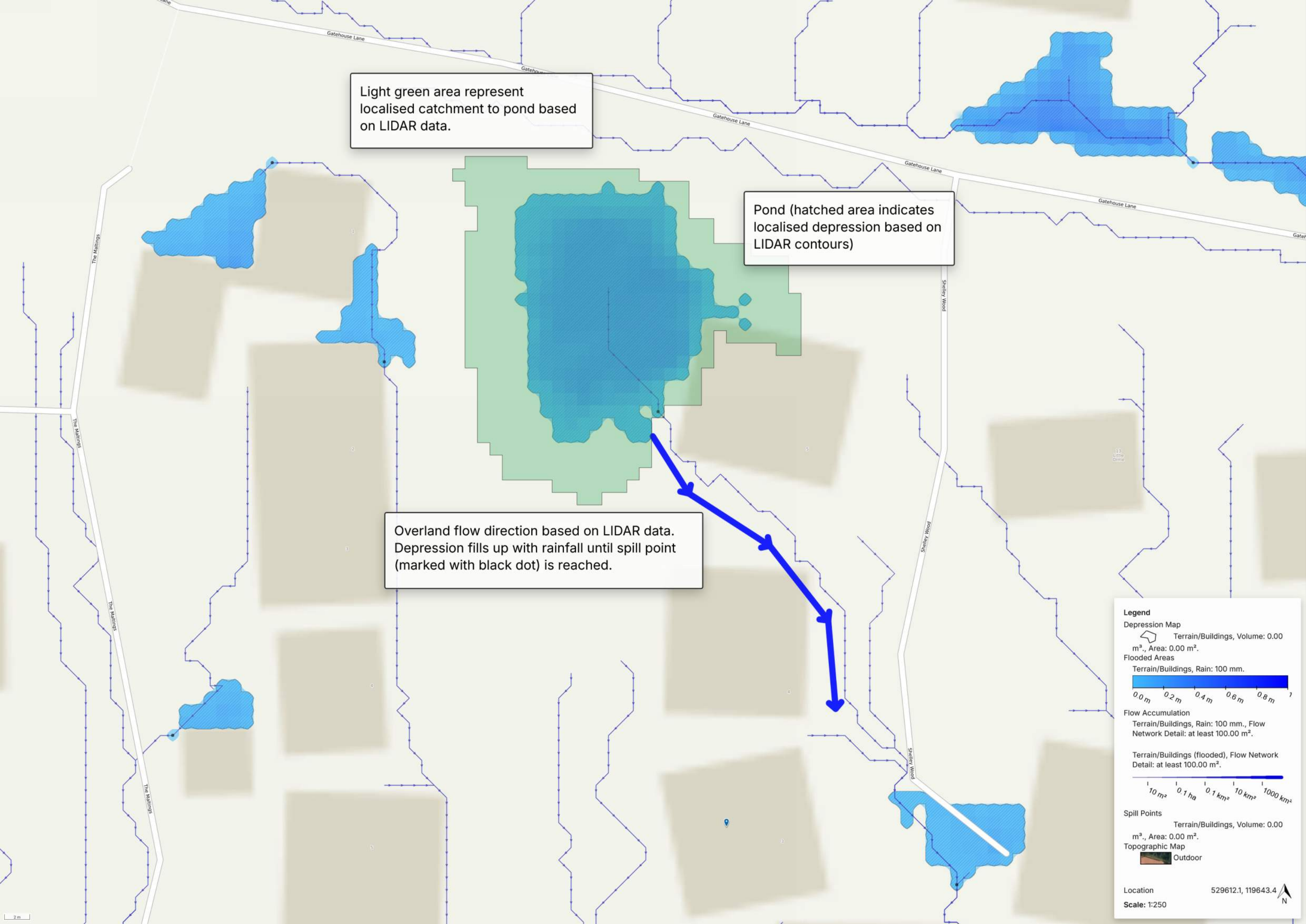
GTA Civils & Transport, Maple House, 192-198 London Road, Burgess Hill, West Sussex, RH15 9RD
T: 01444 871444 E: enquiries@gtacivils.co.uk www: gtacivils.co.uk

GTA Civils & Transport Limited, Registered in England No. 11917461. VAT Registration No. 319 2609 02



- 1.4 Figure 1 shows the pond in isolation: the nearby overland flow route to the south (flowing west) provides context.
- 1.5 GTA C&T are in agreement with the LLFA's contention that this isolated flood pattern is not associated with the nearby overland flow route. Indeed it is clearly removed from any such influence. Appendices A & B contain 2 flood maps, generated using ScalgoLIVE (at Scalgo.com). This online application draws on publicly available flood and LIDAR data. The map in appendix A shows the 'existing' condition, before the pond was infilled. The flow accumulations map show the route that any overflow from the pond would follow – to the southeast. The map in appendix B shows the 'proposed' or current day scenario. The ground levels have been raised digitally in the application - to represent the infilling of said pond. There is no increase in the flood patterns downstream of this pond, meaning that the pond was ephemeral/ornamental.
- 1.6 It is understood that a comment was received from an interested neighbour - to the effect that the infilling of this pond has affected (blocked or impeded) a spring. There is no evidence to suggest that a spring existed in this location. For a spring to exist there must be an aquifer overlying an impervious layer. The geology in this locality is Weald Clay only (no drift deposits) and so it is contended that this comment, if made, was not based on fact.
- 1.7 It is contended that this FRA Technical Note demonstrates clearly that the infilling of the pond at this site has no detrimental impact on downstream sites.

Appendix A – Existing / Pre-Development Scenario



Light green area represent
localised catchment to pond based
on LIDAR data.

Pond (hatched area indicates
localised depression based on
LIDAR contours)

Overland flow direction based on LIDAR data.
Depression fills up with rainfall until spill point
(marked with black dot) is reached.

Legend

Depression Map
Terrain/Buildings, Volume: 0.00 m³, Area: 0.00 m².

Flooded Areas
Terrain/Buildings, Rain: 100 mm.
0.0 m 0.2 m 0.4 m 0.6 m 0.8 m 1

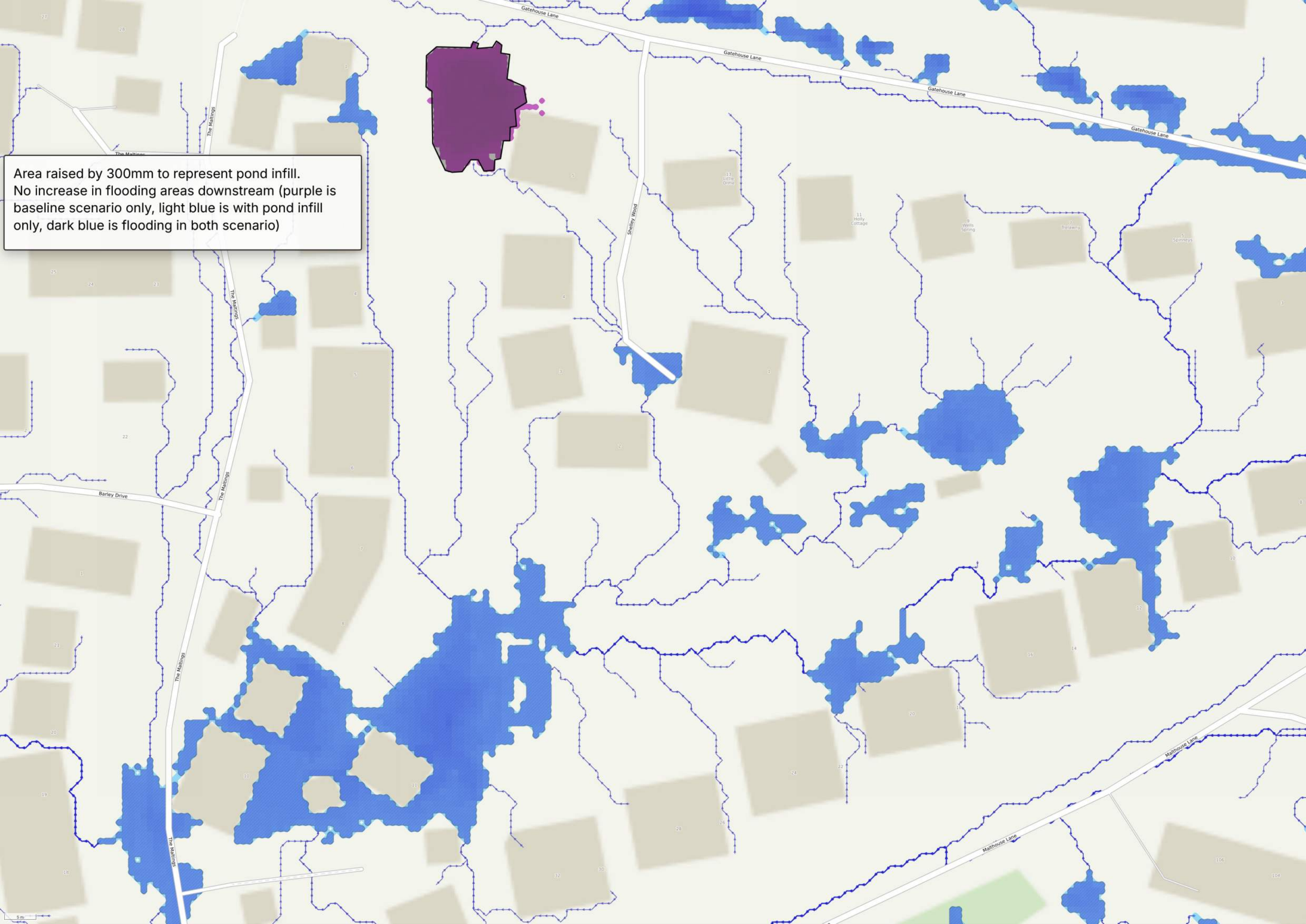
Flow Accumulation
Terrain/Buildings, Rain: 100 mm., Flow Network Detail: at least 100.00 m².
10 m² 0.1 ha 0.1 km² 10 km² 1000 km²

Spill Points
Terrain/Buildings, Volume: 0.00 m³, Area: 0.00 m².

Topographic Map
Outdoor

Location 529612.1, 119643.4
Scale: 1:250

Appendix B – Proposed / Post-Development Scenario



Area raised by 300mm to represent pond infill.
No increase in flooding areas downstream (purple is
baseline scenario only, light blue is with pond infill
only, dark blue is flooding in both scenario)



Civil Engineering - Transport Planning - Flood Risk

GTA Civils & Transport, Maple House, 192-198 London Road, Burgess Hill, West Sussex, RH15 9RD

T: 01444 871444 E: enquiries@gtacivils.co.uk www: gtacivils.co.uk

GTA Civils & Transport Limited, Registered in England No. 11917461. VAT Registration No. 319 2609 02

