Summary Reports of Smallfield and Burstow S19 Investigations

Contents:

Annex A: Location 1 (Enquiry Reference: 2419524)

Flood Event Summary:

On November 17th, 2022, extensive flooding impacted 3 properties externally, including one commercial property and the highways following heavy rainfall.

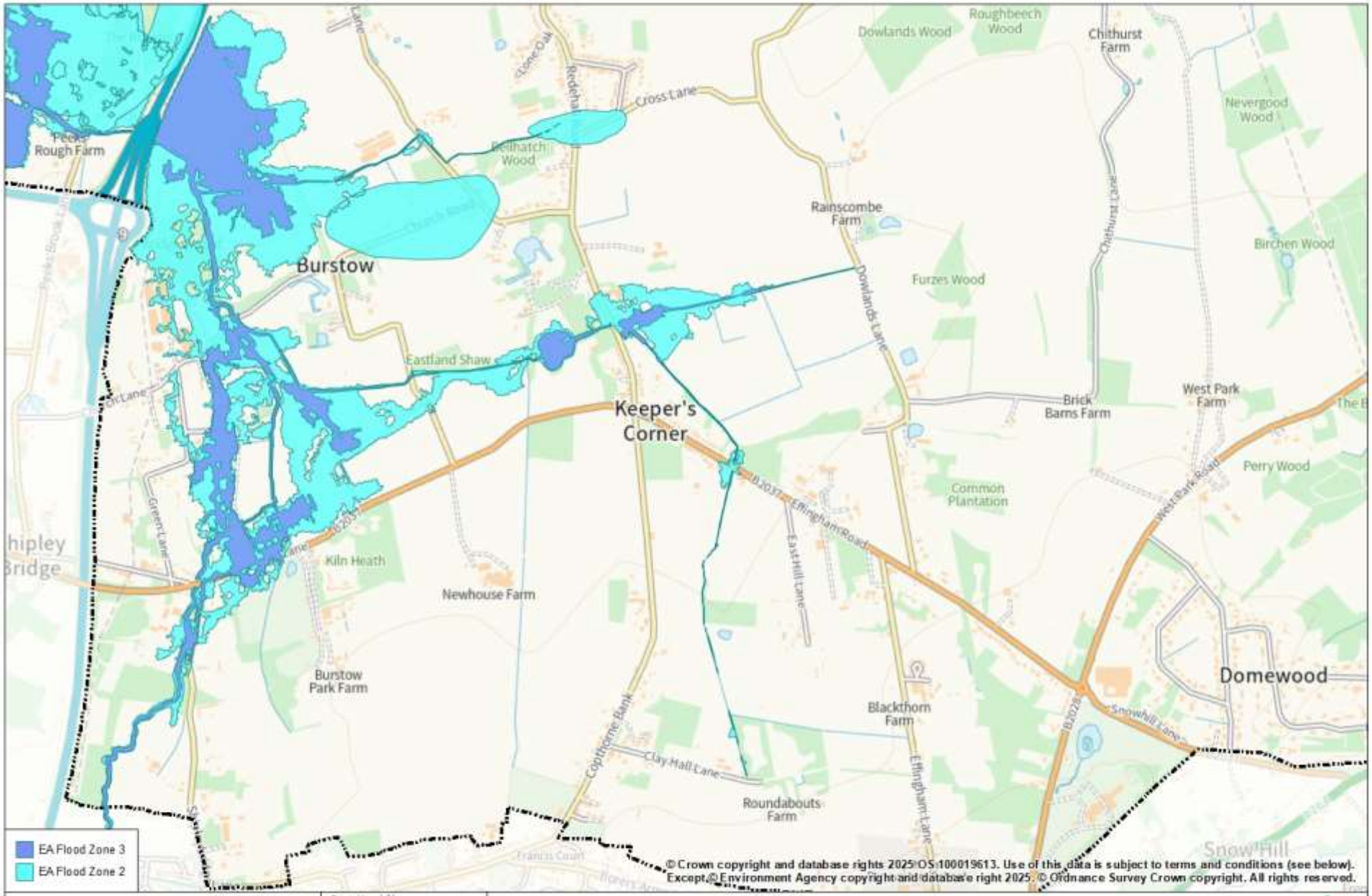
The flooding occurred as surface water runoff accumulated on adjacent roads due to blocked ditches and multiple gully defects. Consequently, water overflowed from the ditches, bypassed gullies, and converged several surrounding roads.

The site is classified as a Wetspot, characterized by a high risk of surface water flooding, fluvial flooding, and potential groundwater flooding. The affected properties and highways have experienced a history of recurring flooding over the past four years.

Recommendations:

- **Landowners** to carry out maintenance to the watercourse within the boundaries of their land to allow flow of water.
- **Landowners** to consider implementing property flood resilience to reduce risk of flooding to property, sought from a suitably qualified professional.
- **SCC Highways** to consider an inspection of gullies, should a defect be found, to fix assets.

Flood Risk Maps:



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Location 1: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex B: Location 2 (Enquiry Reference: ME-50067307)

Flood Event Summary:

On November 17th, 2022, two properties experienced external flooding following heavy rainfall. Water accumulated at the front and rear of the properties, overtopping the ditch running alongside them. During the site visit, water was still present in the ditch.

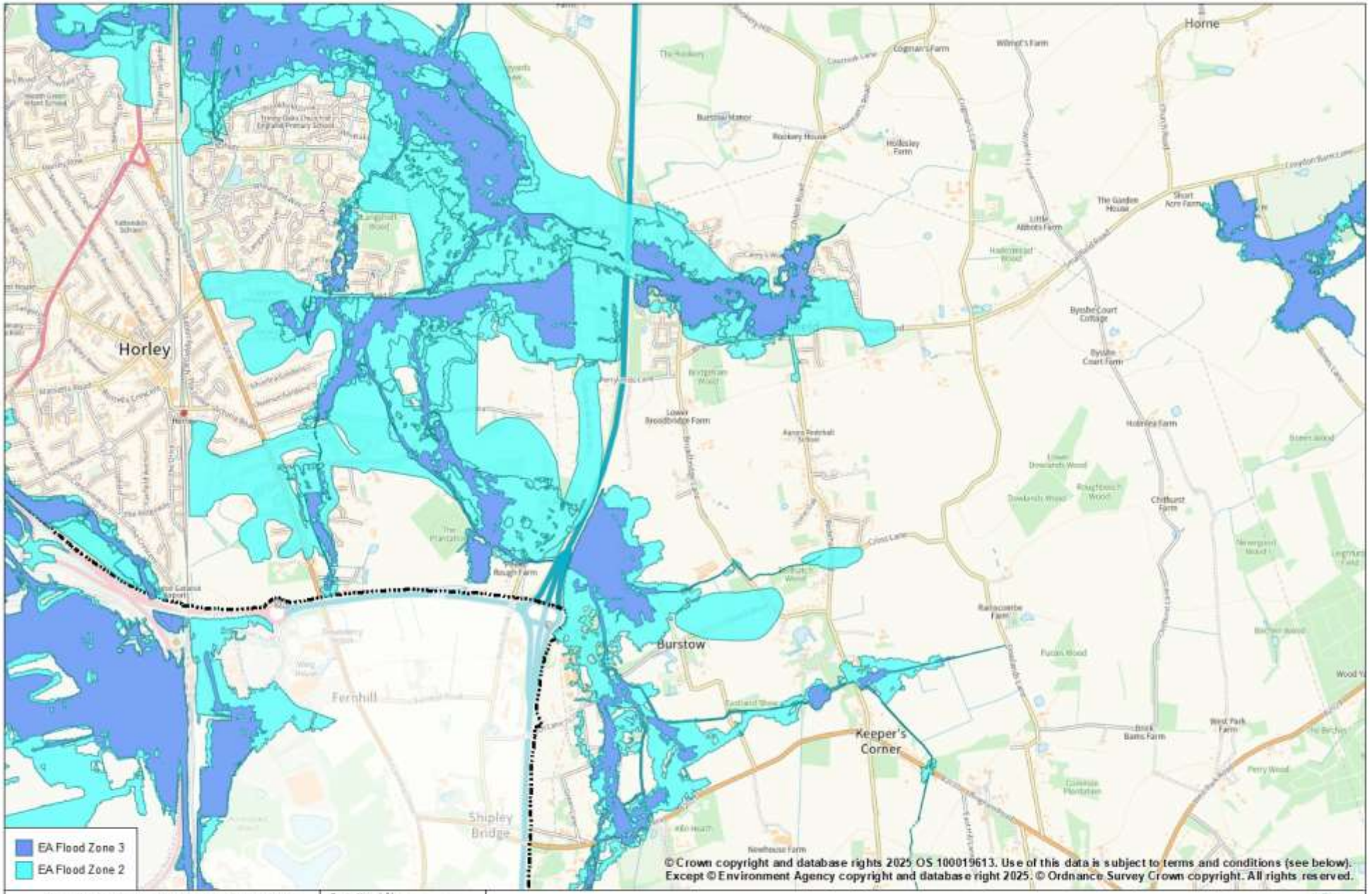
The properties are located in an area at high risk of surface water flooding, with a history of nearby highway flooding. The underlying bedrock consists of mudstone, which reduces permeability and prevents water from draining away quickly, thereby increasing the likelihood of flash flooding during storm events.

The site visit also identified a buildup of debris in a ditch further upstream, where a submerged culvert was observed. This obstruction likely caused water to back up downstream, contributing to the flooding incident.

Recommendations:

- Landowner to carry out maintenance to the watercourse within the boundaries of their land. Clearing build-up in channel bed to revealing outlet.
- Landowners to consider implementing property flood resilience measure to reduce the risk of flooding to property sought from a suitably qualified professional.

Flood Risk Maps:



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Location 2: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex C: Location 3 (Enquiry Reference: ME-50068407)

Flood Event Summary:

A development site and nearby residential properties experienced external flooding on three occasions—November 16th, 17th, and 23rd, 2022—following heavy rainfall. Surface water runoff originating from fields opposite the properties accumulated to a depth of 2–3 inches and entered the development through the fencing. Flooding occurred shortly after rainfall and typically took approximately 2–3 hours to drain.

An unmaintained ditch within the field was observed, but it is unlikely to either resolve the issue or be a direct cause of flooding. Key observations include:

1. **Flood Risk:** While the location is not classified as being at high risk of surface water, groundwater, or fluvial flooding, there is a documented history of highway and external property flooding in the vicinity.

2. **Resident Actions:** Residents blocked an ACO drain to prevent flooding of the development, which may inadvertently impact flood risk for surrounding properties. Although the ditch opposite the property is well-maintained, surface water runoff does not follow its route.

3. **Drainage Capacity:** During the site visit, manholes in front of the development were filled with water, indicating that the drainage system may be operating at full capacity.

Recommendations:

- Landowner of field to carry out maintenance to the watercourse within the boundaries of their land. Clearing build up in channel bed.
- Landowners to consider implementing additional flood protection to reduce risk of flooding to property sought from a suitably qualified professional.

Flood Risk Maps:

Annex D: Location 4 (Enquiry Reference: ME-50079165, ME-50101232,ME-50101280, ME-50101271)

Flood Event Summary:

Since 2014, this area has experienced frequent foul flooding following heavy rainfall, most notably on November 17th and November 19th, 2022. The issue arises from manholes and private sewerage drains discharging foul water during heavy rainfall. This leads to water pooling at the entrances of buildings and foul water escaping through the concrete surrounding the manholes due to pressure build-up. Although toilets have backed up, they have not yet overtopped.

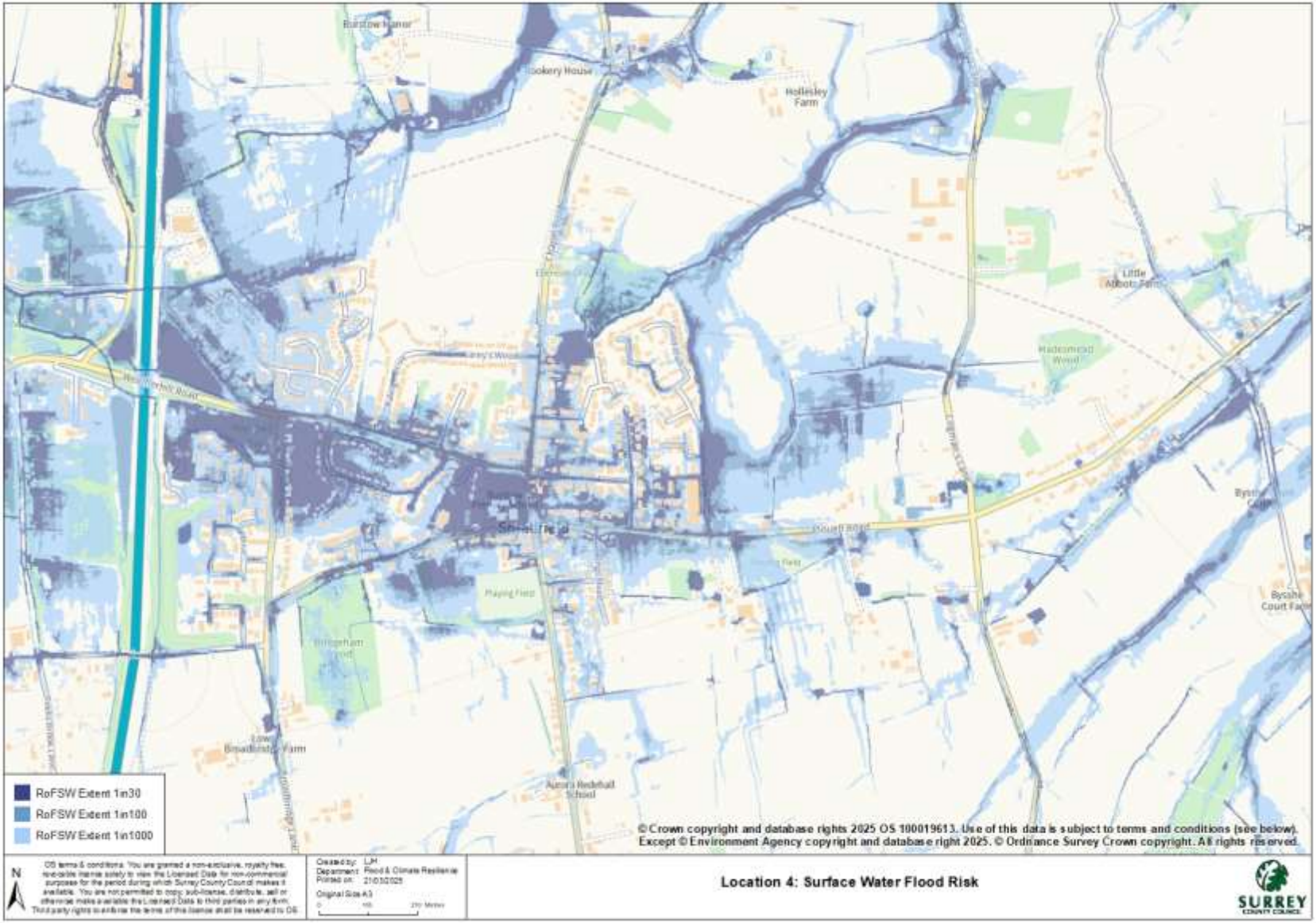
A Thames Water inspection revealed significant pressure build-up in the manhole at the end of the combined foul and surface sewer, though it did not overflow. Heavy rainfall events may overwhelm Thames Water's foul sewerage system, leading to foul water discharge. The system appears to be experiencing hydro locking.

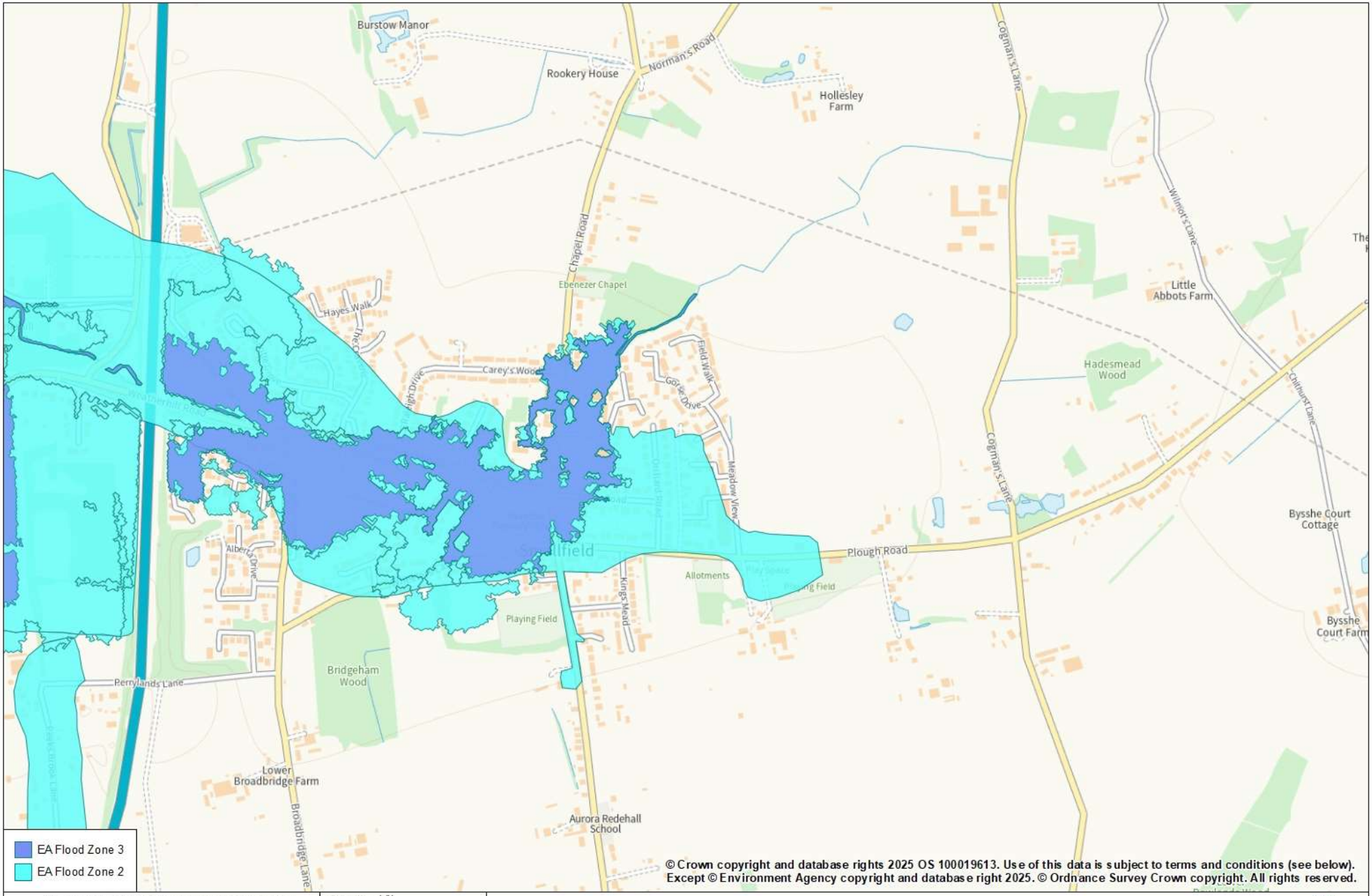
Foul flooding has been an ongoing problem in the area, with underreporting contributing to its persistence. The only previous report to the SCC Flood and Climate Resilience Team dates back to 2020.

Recommendations:

- **Thames water:** To consider an inspection of foul sewerage system.
- **SCC Flood and Climate resilience team**: To commence talks with Thames Water to discuss a localised strategy.

Flood Risk Maps:





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Location 4: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex E: Location 5 (Enquiry Reference: ME-50079229)

Flood Event Summary:

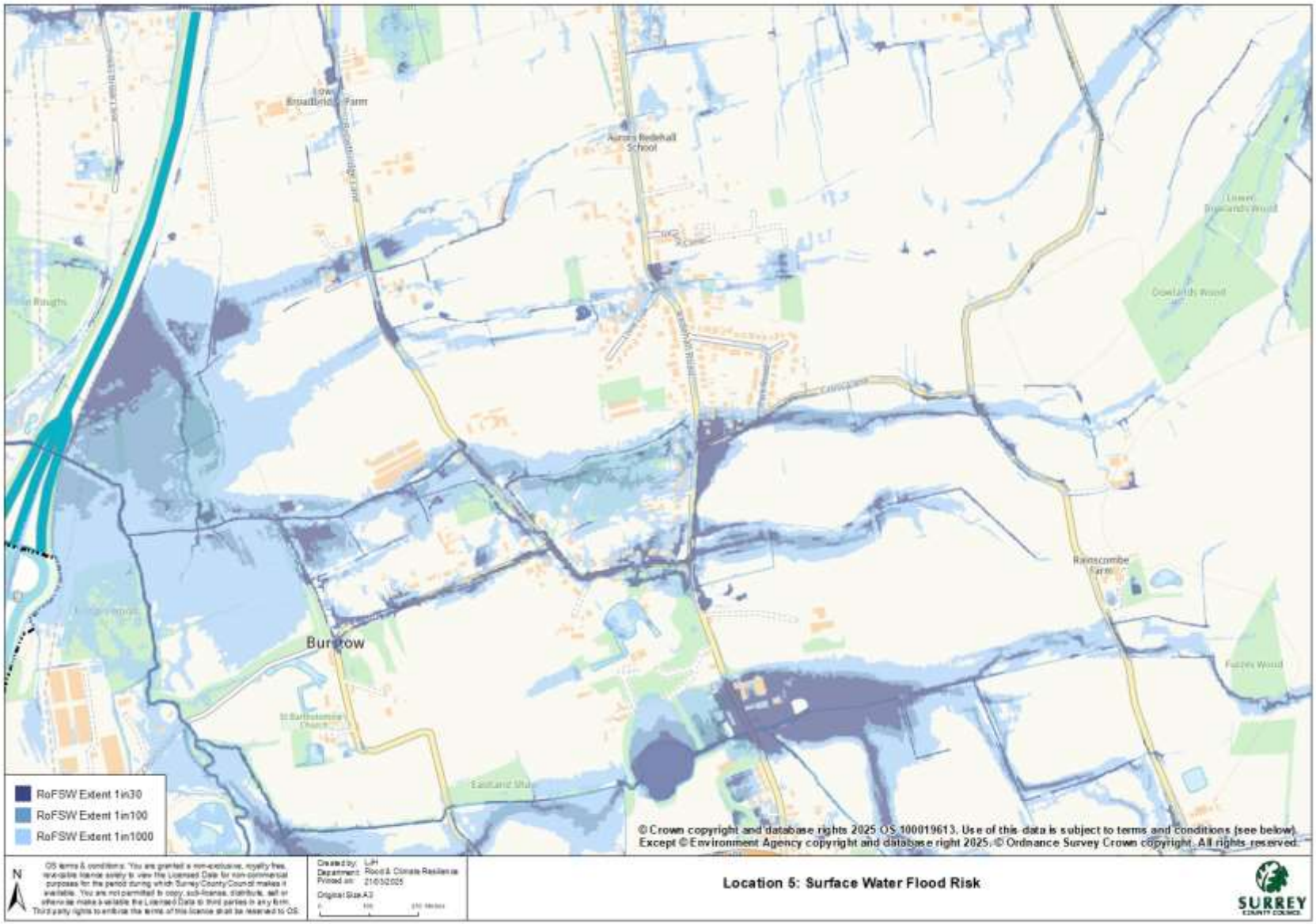
The area experienced flooding three times in November 2022 and on January 8th, 2023, following heavy rainfall. Surface water runoff flows down the road and toward properties, pooling along boundaries. While flooding has been an issue for seven years, its frequency has increased in the last two years.

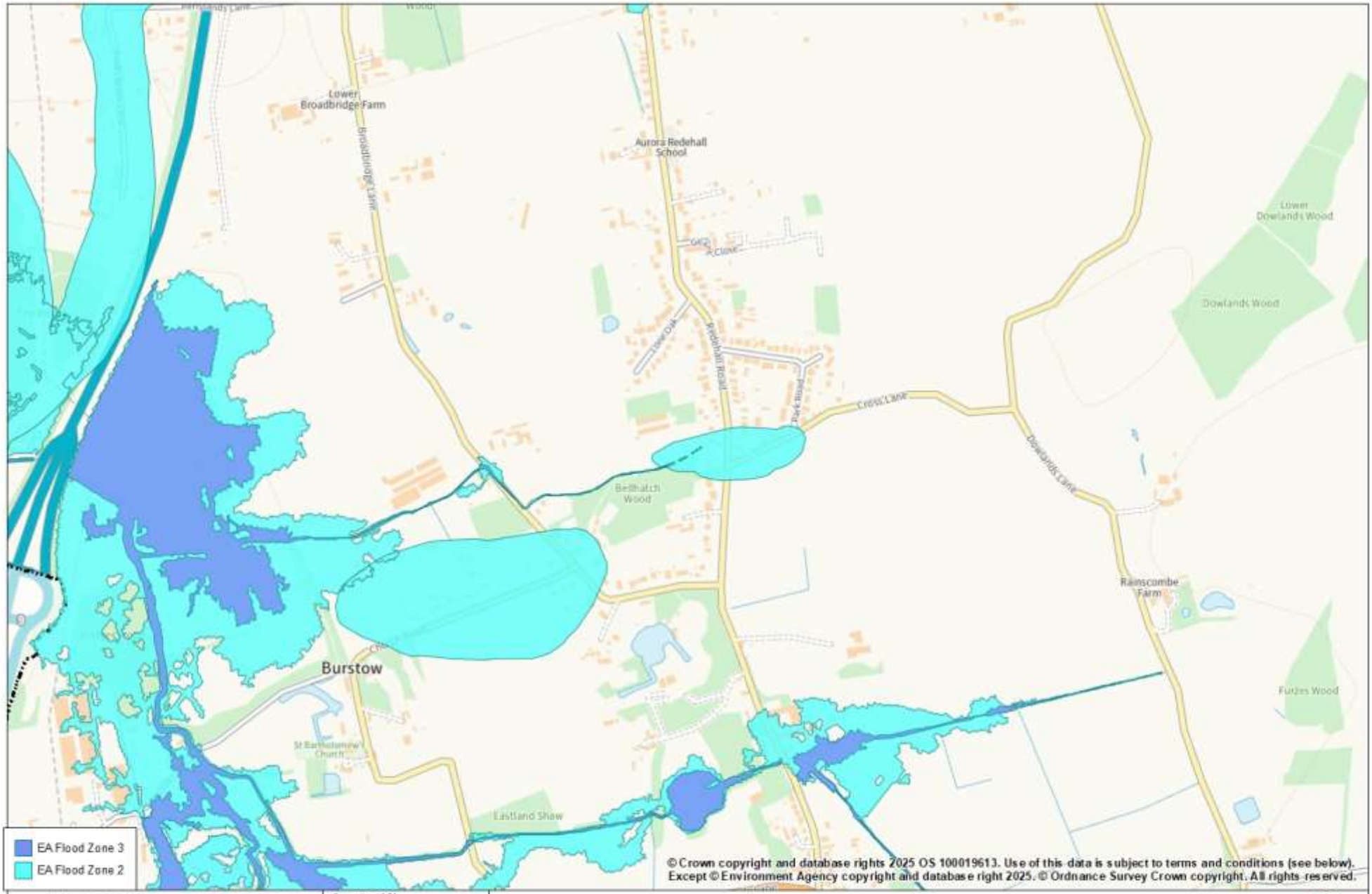
Erosion of the drop kerb has reduced its level, allowing more water to flow toward properties. Although gullies are not blocked, surface water cannot reach them and instead follows the natural flow path. The eroded drop kerb likely contributes to the increased water volume.

Recommendations:

- **Landowners**: to consider implementing property flood resilience to reduce risk of flooding to property, sought from a suitably qualified professional.
- **SCC Highways**: to consider maintenance of drop kerb.

Flood Risk Maps:





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Original Size A3

0 105 210 Metres

Location 5: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex F: Location 6 (Enquiry Reference: ME-50095882)

Flood Event Summary:

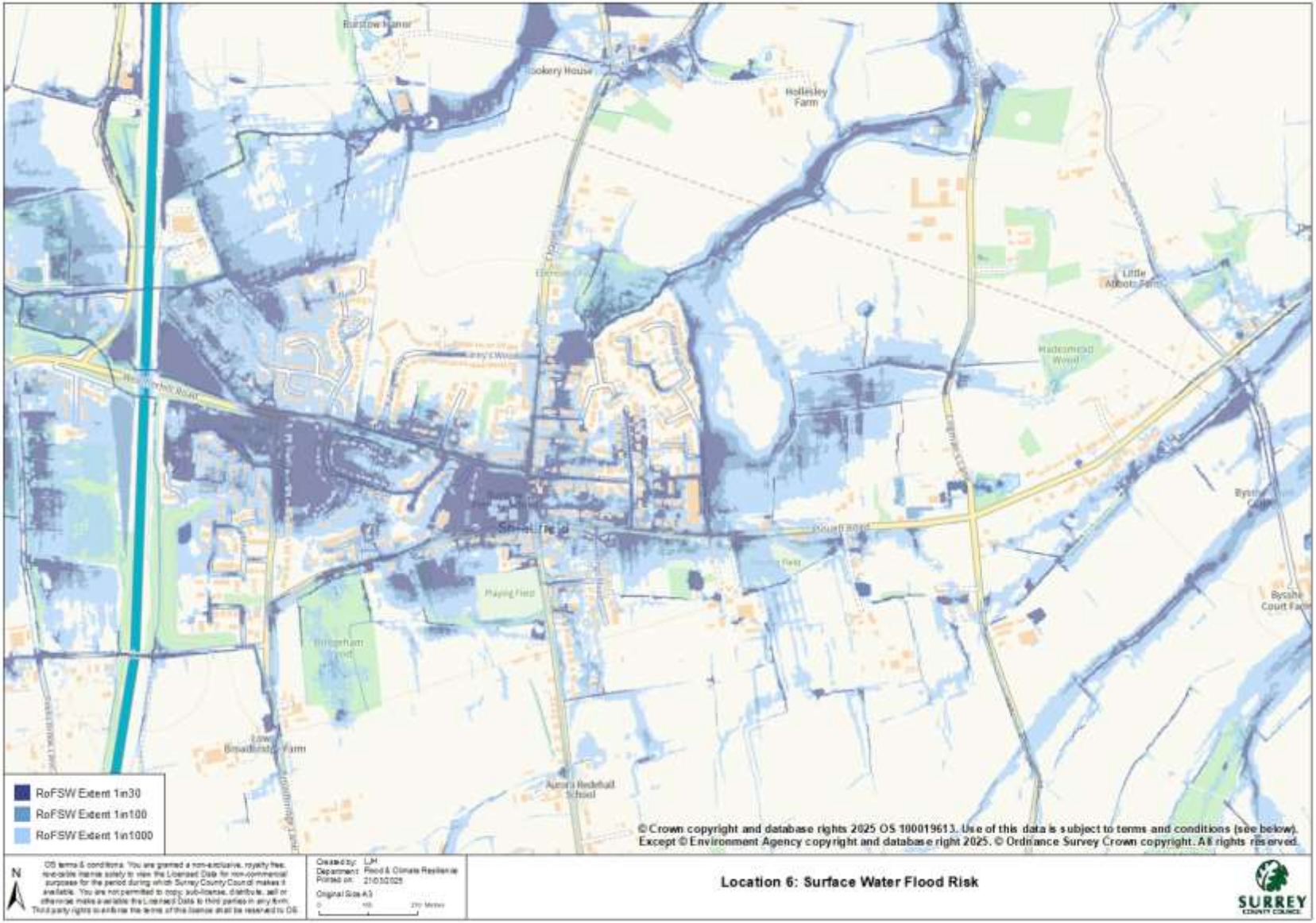
External property flooding occurred on November 21st due to water overtopping from ditches adjacent to rear gardens. The fluctuating levels of the ditch bed caused water to be held back, preventing adequate drainage. Back gardens remained waterlogged from November 21st until the week of January 16th, and again from March 9th to the time of this report.

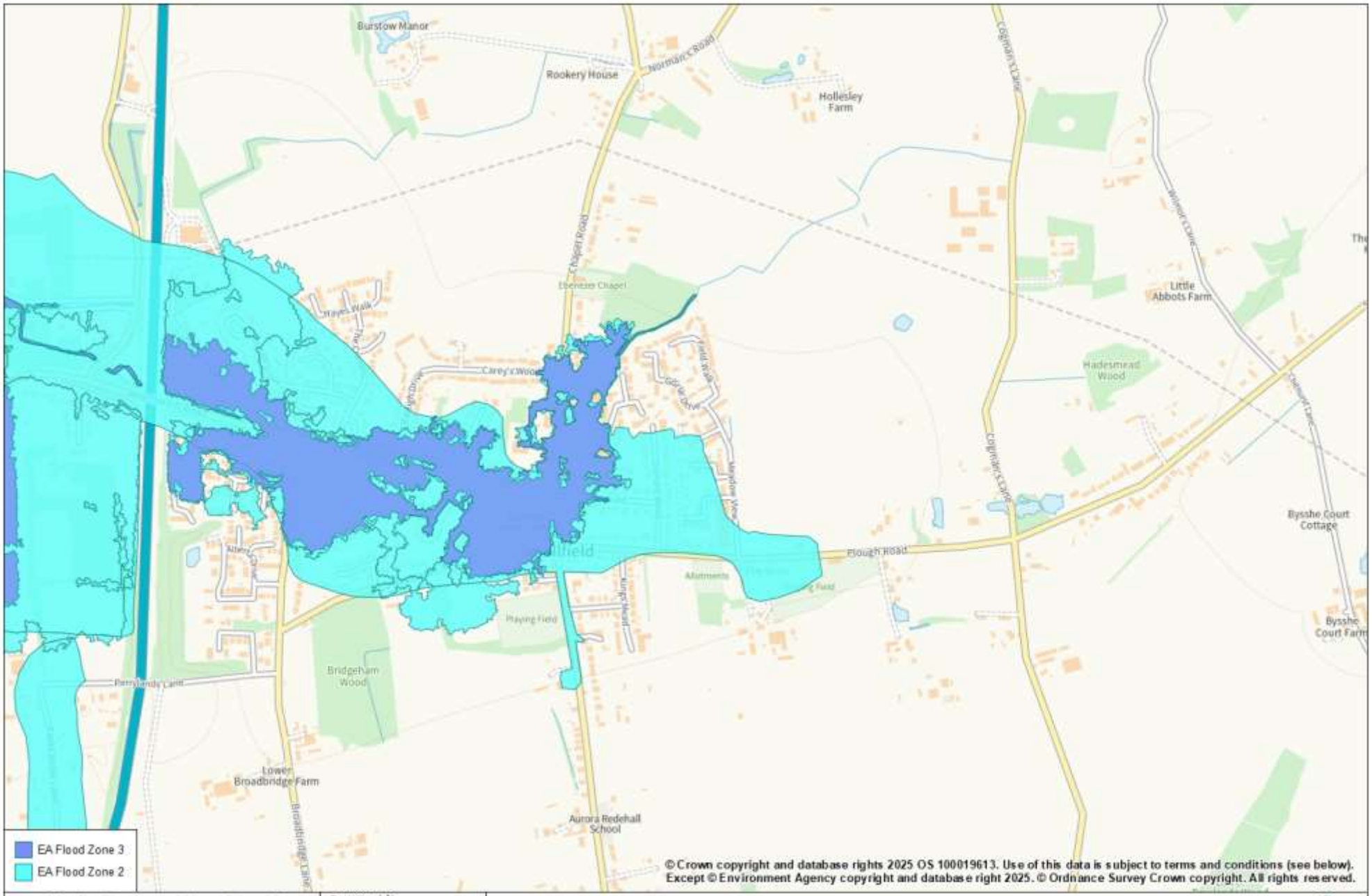
Several obstructions to the watercourse, including debris, obstructed culverts, and unconsented culverting of ditches, contributed to flooding and waterlogging of surrounding land. The location faces high risks of fluvial, surface water, and potential groundwater flooding, making future flooding likely during heavy rainfall or storm conditions.

Recommendations:

- **Landowners**: to maintain the watercourse within the boundaries of their land. Clearing build up in channel bed to reveal outlet and level out the bed of the ditch.
- **Landowners**: to maintain pipes/ drainage system to allow flow of water.
- **Landowner:** to reinstate the ditch within the boundary of their land.
- **SCC Flood and Climate Resilience Team:** may wish to consider re-levelling of the ditch to the rear of affected properties to allow water to sufficiently drain away.

Flood Risk Maps:





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Location 6: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex G: Location 7 (Enquiry Reference: ME-50101234 & ME-50101226 & ME-50101257)

Flood Event Summary:

External and internal property flooding from foul and surface water occurred on November 11th, 2022, November 16th, 2022, and December 31st, 2022, following heavy rainfall. Drainage plans indicate that surface and foul water from a nearby development are connected to Thames Water's combined sewers via the highway; however, two non-return valves have been installed, and the development is not currently considered to have increased flood risk.

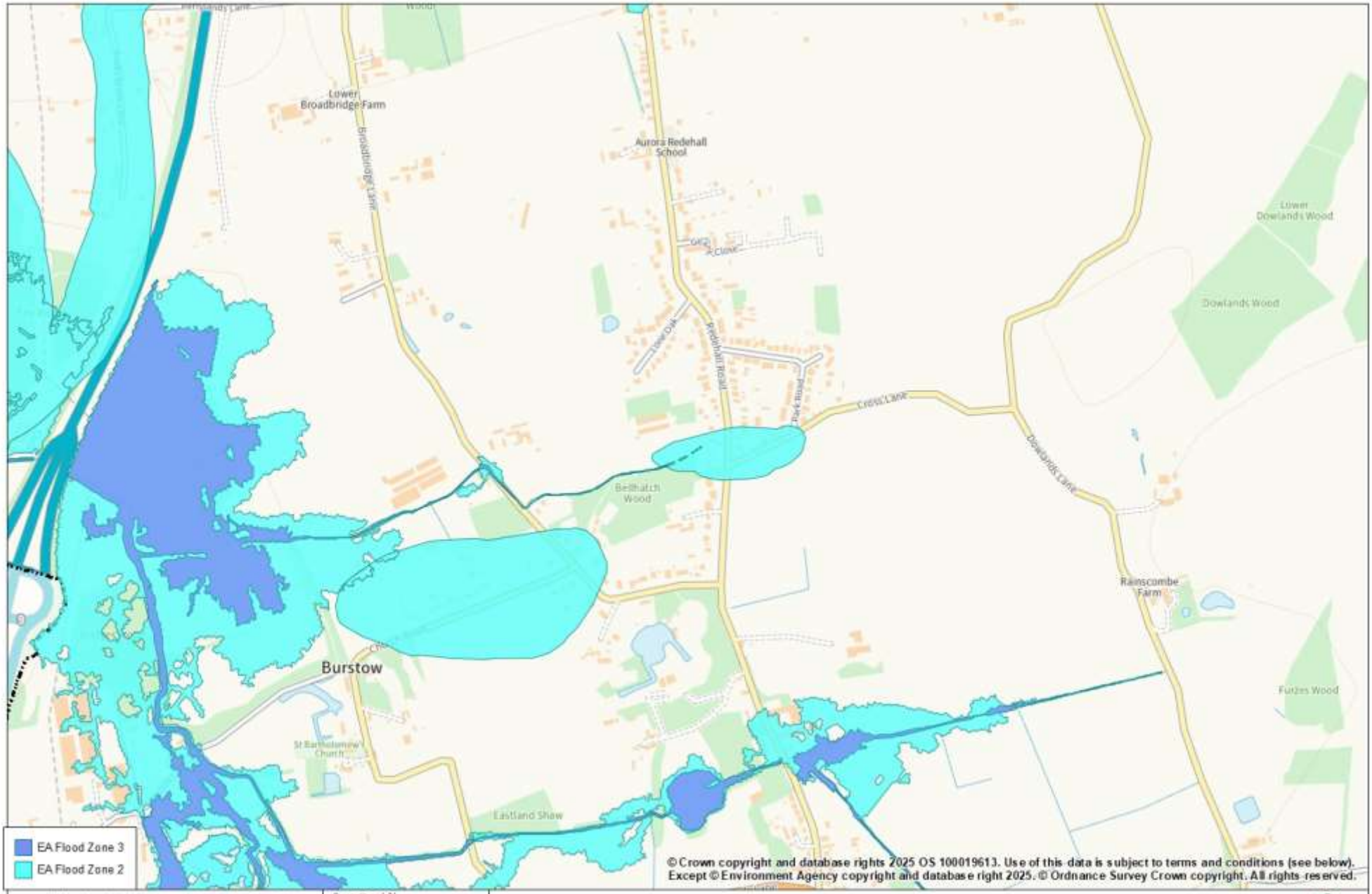
Both highway manholes surcharged with foul water during the flooding events, and a private foul pipe and manholes burst, causing external foul flooding. Properties also experienced flooding from surface water running down the highway, possibly linked to a ditch overtopping. Historically, water has entered driveways from the highway in the same manner. Water pooling on the western side of the road, potentially due to blocked gullies, and the highway drainage system being at capacity may have exacerbated the flooding.

Plans to culvert a ditch were noted on-site, but at the time of this report, ordinary watercourse consent has not been applied for or granted.

Recommendations:

- **Landowners**: may wish to consider implementing property flood resilience measures to protect their property from risk of flooding, sought from a suitably qualified professional.
- **Landowners**: Should works be carried out to culvert a watercourse without ordinary water course consent, for landowner to reinstate the watercourse.
- **Thames Water:** may wish to consider an inspection of their assets, should a defect be found, to fix asset.
- **SCC highways:** may wish to consider an inspection of their assets, should a defect be found, to fix asset.
- **SCC Wetspots**: may wish to consider adding location of the wetspots programme.

Flood Risk Maps:



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Location 7: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex H: Location 8 (Enquiry Reference: ME-50101298)

Flood Event Summary:

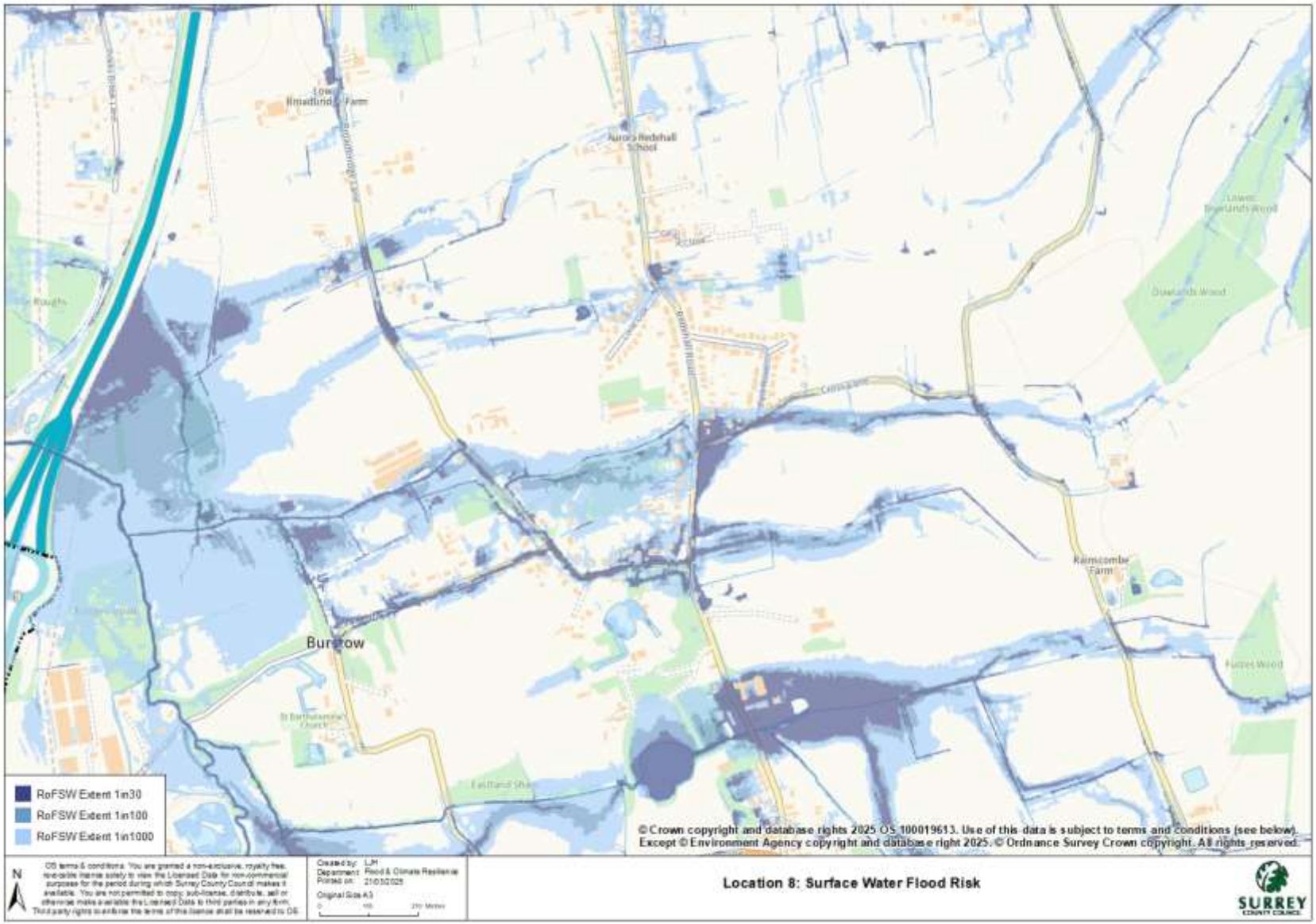
External property flooding affected front and back gardens at the beginning of January 2023, with additional incidents occurring once in 2022 and twice in 2021. Northern ditches on both sides of the junction overtopped, flooding the highway and causing surface water to flow toward properties.

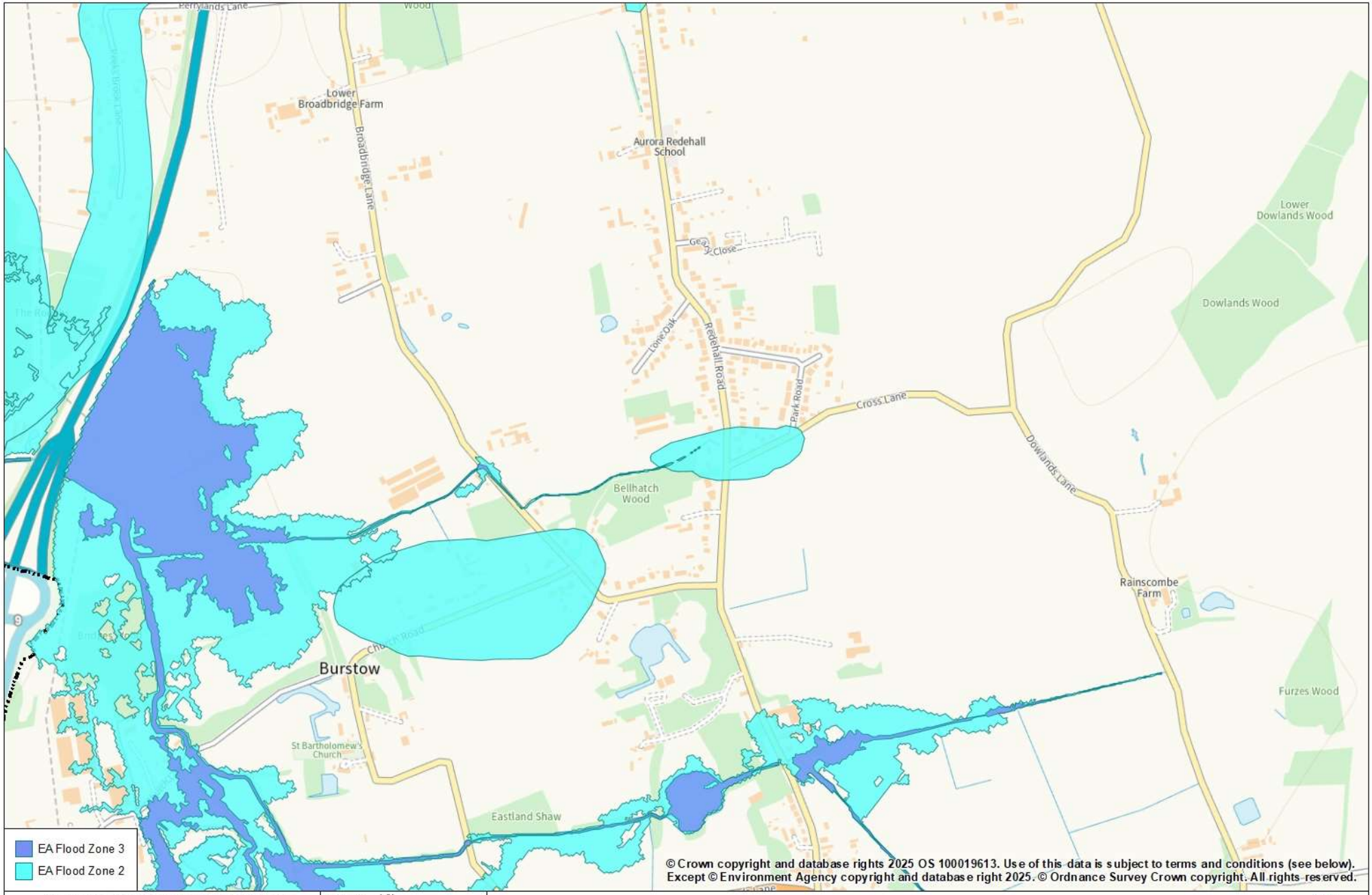
Pooling was observed in the northern ditch upstream, caused by a blocked 300mm pipe, along with several blockages in the southern ditch. Properties in the area are at high risk of surface water and fluvial flooding. Flooding is likely attributed to debris build-up and/or a blocked pipe running beneath the properties.

Recommendations:

- **Landowners**: to carry out maintenance to the watercourse within the boundaries of/ adjacent to their land. Clearing build up in channel bed to reveal outlet.
- **Landowners:** to carry out maintenance of pipes within the boundary of their land.
- **SCC Land and Property:** to carry out maintenance of watercourses within the boundary of their land.

Flood Risk Maps:





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Location 8: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex I: Location 9 (Enquiry Reference: ME-50101329)

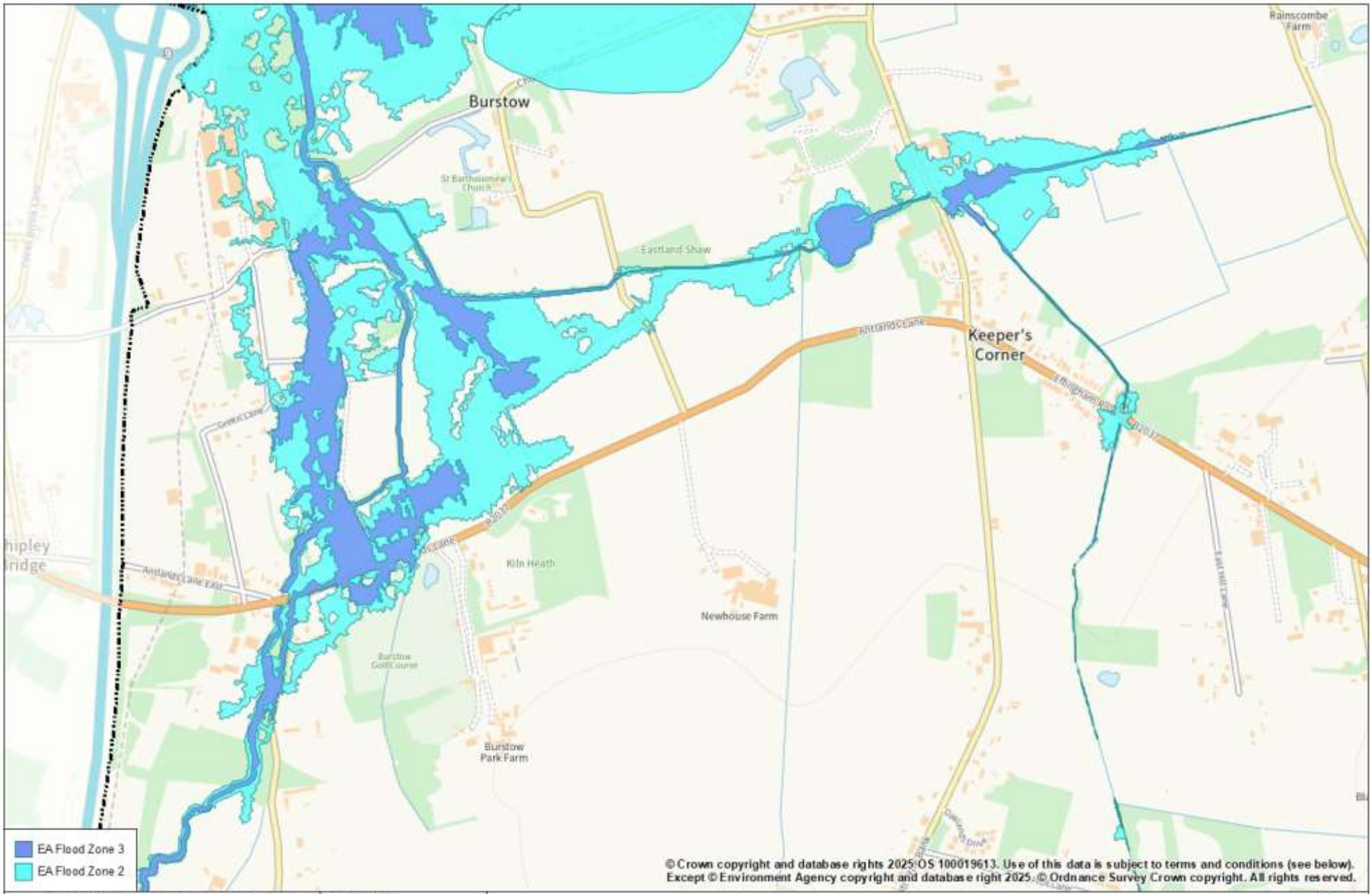
Flood Event Summary:

Obstruction to the Burstow stream further upstream, causing water levels to raise and overtop.

Recommendations:

- **Environment Agency (EA):** may wish to investigate flooding of the Burstow stream to identify potential blockages.

Flood Risk Maps:



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Original Size A3

Location 9: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex J: Location 10 (Enquiry Reference: ME-50101303)

Flood Event Summary:

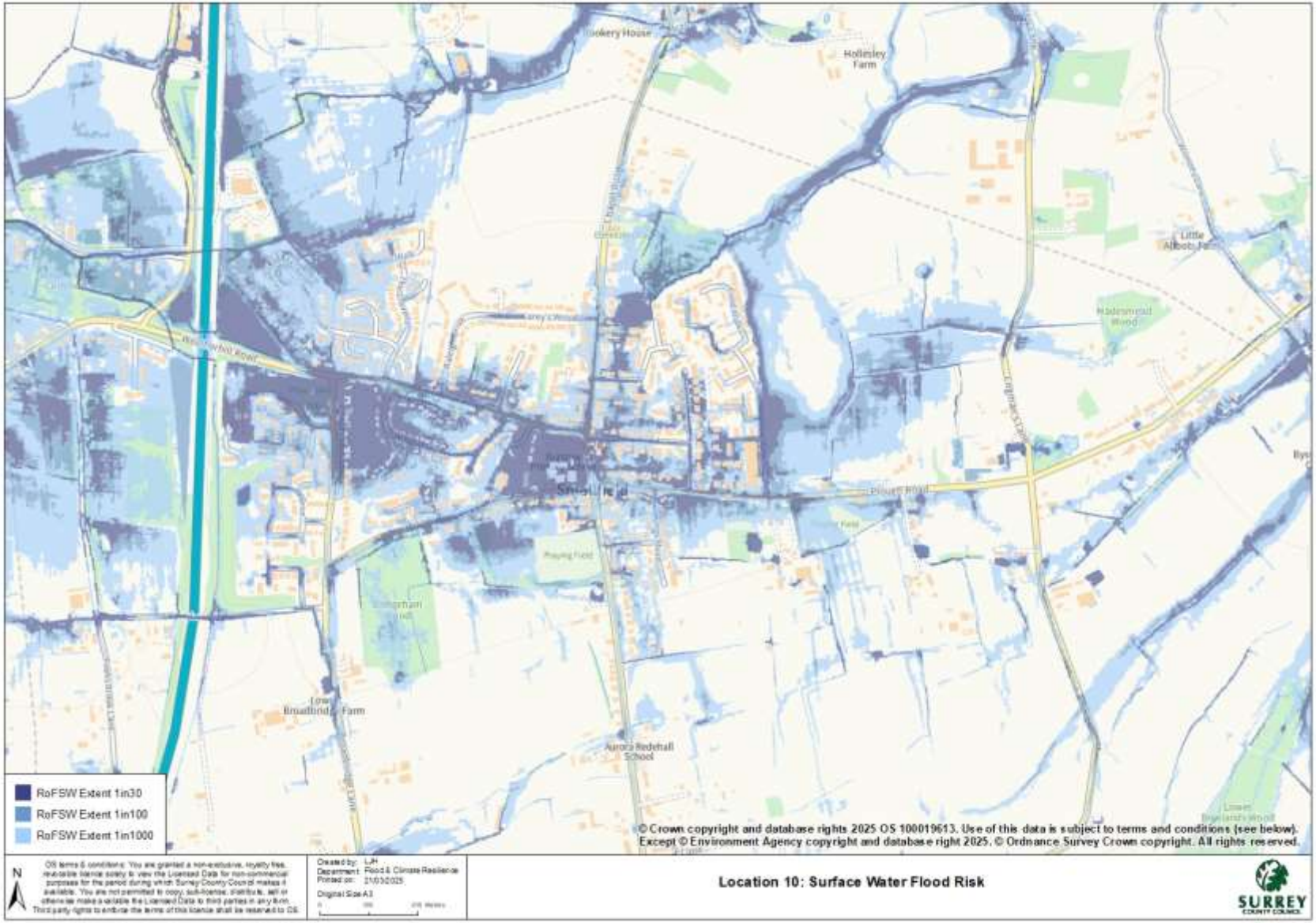
Flooding occurs following heavy rainfall, this is likely due to the garden being the lowest point.

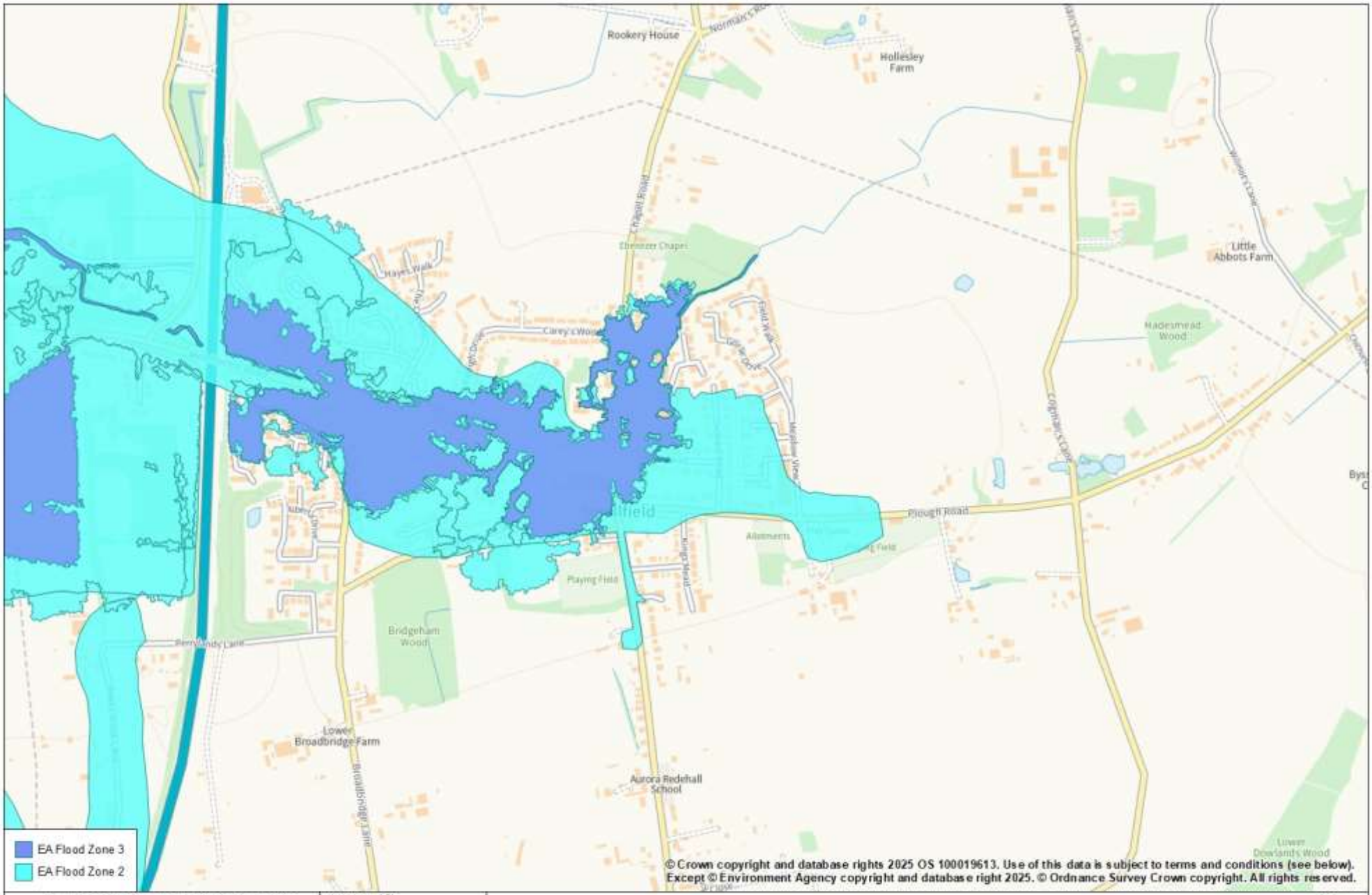
Broken guttering and blocked drains to the rear of property is likely contributing to the volume of water

Recommendations:

- **Landowners**: may wish to consider maintenance of broken guttering to the rear of the garages.
- **SCC Flood and Climate Resilience Team:** Further investigation may be carried out by SCC Flood and Climate Resilience Team to look into historic watercourse location.

Flood Risk Maps:





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Location 10: Fluvial Flood Risk

SURREY COUNTY COUNCIL

Annex K: Location 11 (Enquiry Reference: ME-50104011)

Flood Event Summary:

External property flooding occurred on November 17th and December 23rd, 2022, following heavy rainfall. Surface and foul water from the highway overwhelmed private drainage systems, leading to discharges from drains and a manhole on the highway.

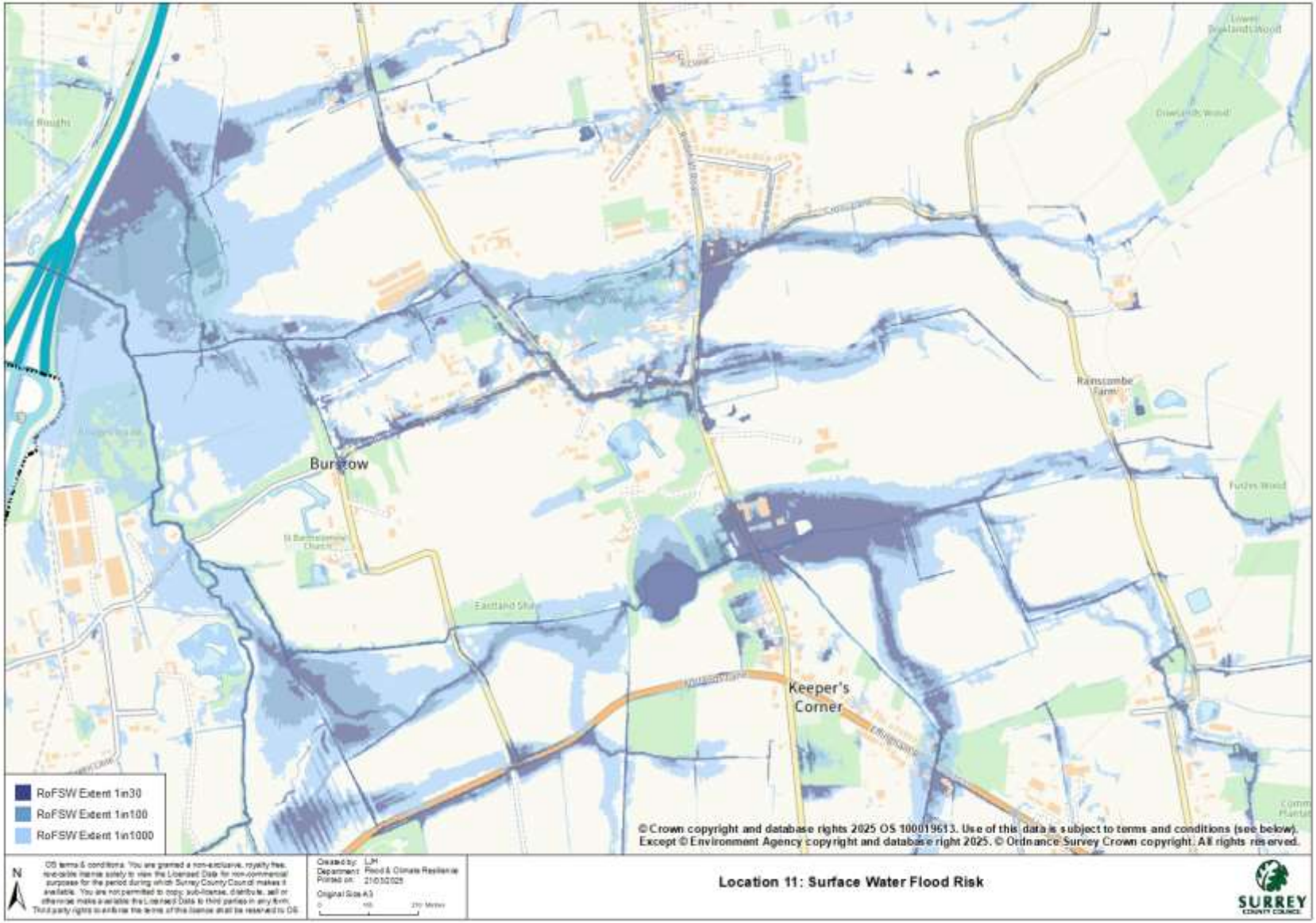
Local residents reportedly used a manhole further up the highway to drain surface water, which likely contributed to the combined sewer becoming overwhelmed and backing up. Additionally, debris build-up in several ditches caused water to flow down the highway.

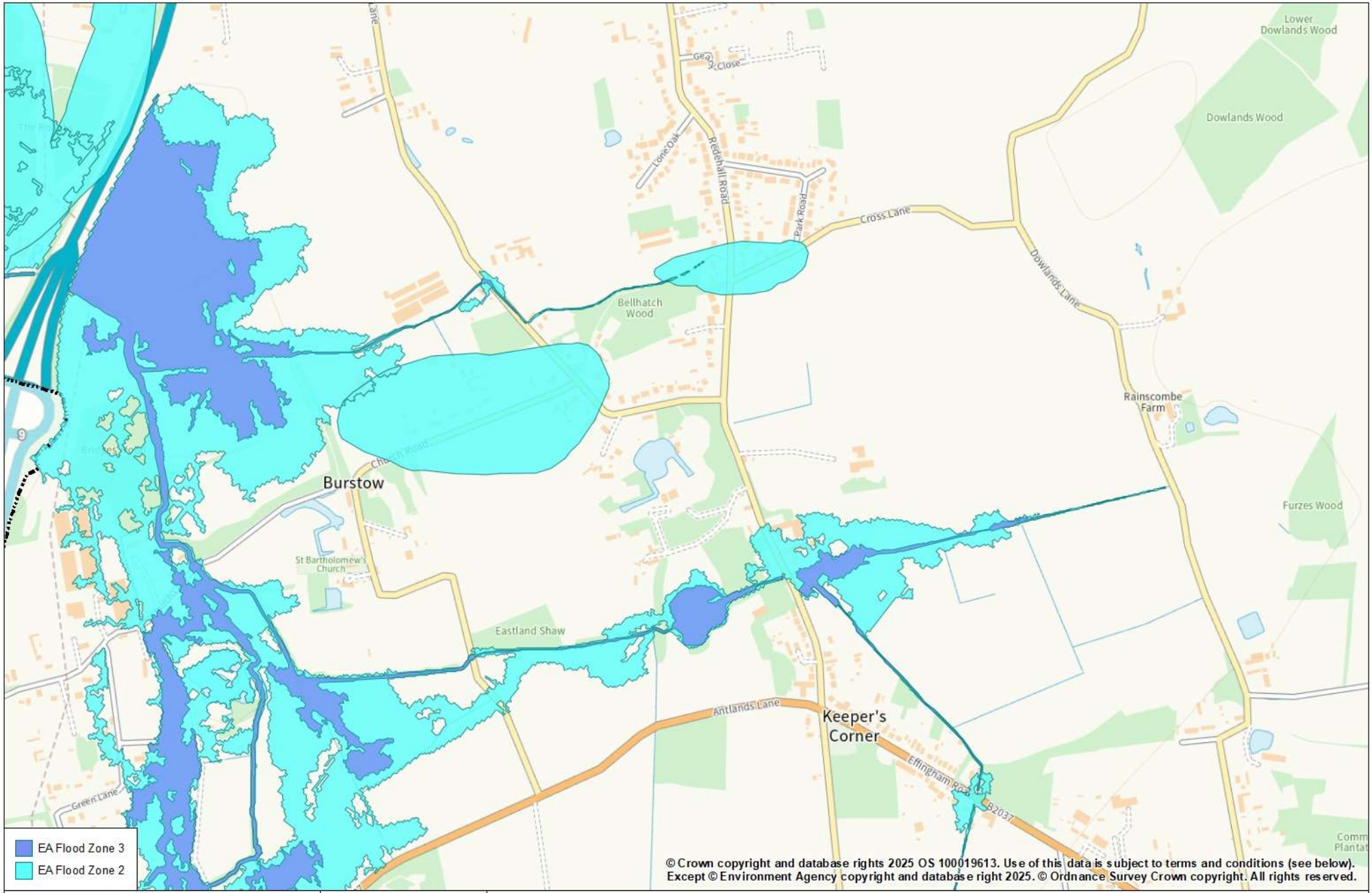
Potential mismanagement of drainage systems in the area may be exacerbating water accumulation and preventing proper drainage. Further investigation is required.

Recommendations:

- **Thames Water:** may wish to consider an inspection of their assets, should a defect be found, to fix asset.
- **The SCC wetspots team:** may wish to consider an inspection of their asset, should a defect be found, to review plans.
- **Landowners**: to manage the flow of water through the use and monitoring of the sluice gate.
- **Landowners**: to maintain the watercourse within the boundaries of/ adjacent to their land. Clearing build-up in channel bed to reveal outlet.
- **SCC Flood and Climate Resilience Team:** To monitor the location following clearance of ditches.

Flood Risk Maps:





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Location 11: Fluvial Flood Risk

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