Reading Flood Investigation- January 2024

Section 19 Flood Investigation Report

On behalf of **Reading Borough Council**

Project Ref: 332611243 | Rev: - | Date: March 2024

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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
final	28/3/24	Updated following client comment	VK	AH	AH

1 Section 19 Flood Investigation Report

1.1 Purpose of report

1.1.1 This Flood Investigation Report Summary has been prepared by Stantec UK Ltd (Stantec) on behalf of Reading Borough Council (RBC) in relation to flooding which occurred in early January 2024 within the RBC administrative boundary.

1.1.2 Section 19 of the Flood and Water Management Act 2010 (FWMA) states that on becoming aware of a flood in their area, the Lead Local Flood Authority (LLFA) must investigate (to the extent that it considers to be necessary or appropriate), which Flood Risk Management Authorities (RMAs) have relevant flood risk management functions and whether each RMA has exercised, or plans to exercise, those functions in response to the flood.

1.1.3 Table 1 shows the RMAs responsible for managing flood risk from different sources of flooding within the RBC administrative boundary.

Table 1: Responsible RMAs for different sources of flooding

Source of Flooding	Environment Agency	LLFA [RBC]	Water Company [Thames Water]	Highways Authority [RBC]
Main River	X			
Ordinary Watercourse		X		
Surface Water		X		
Surface water on or coming from the highway				X
Sewer			X	
Groundwater		X		
Reservoirs	X			

2 January 2024 Flood Event

2.1 Contributing Factors

2.1.1 The Reading area was impacted by flooding in January 2024 arising from the River Thames, River Kennet and Holy Brook, and associated ditches and tributaries of these watercourses.

2.1.2 The main contributing factor to the flood event was above average rainfall levels in the 3 months prior to January 2024 (up to 150% above the long term average), in combination with a period of intense rainfall in early January 2024 caused by Storm Henk.

2.1.3 Sixty-five percent of the total recorded rainfall for January 2024 in the Thames catchment (74mm) fell between 1st - 4th January, with 38% of the monthly total (28.4mm) falling within a 12-hour period between 15:00 hours on 4th January and 03:00 on 5th January, associated with Storm Henk. In the 8 days prior to Storm Henk, 54.6mm of rainfall was recorded.

2.1.4 High rainfall levels on a saturated catchment led river levels at the River Thames at Reading gauge to rise to their highest recorded level since the major flood event of 1947. The river level rose above flood warning trigger levels (7.25m AOD) on 5th January 2024, peaking at 7.54m AOD at 15:45 on 7th January, and returning to a level within its 'typical range' of below 7.00m AOD on 11th January.

2.2 Flood Alerts and Warnings

2.2.1 In England, the Environment Agency provides 3 types of flood warning:

- Flood alert – flooding is possible, issued between 2 to 12 hours before flooding.
- Flood warning – flooding is expected, issued between 30 minutes to 2 hours before flooding.
- Severe flood warning – flooding could be a risk to life and significant disruption to communities.

2.2.2 The state of the flood alerts and flood warnings, the date, and their sequence issued by EA, is not available at the time of writing this report. A request will be made to EA for the historical flood alert records to be provided for future references.

2.3 Flood Event Summary

2.3.1 Internal flooding to residential properties occurred between 5th – 7th January 2024. **Table 2** summarises key information relating to the flood event in January 2024.

Table 2: Summary of key information for January 2024 flood event.

Start Date	5 January 2024
Duration	6 days
Probability	Between a 1 in 30 and 1 in 50 year event (2% - 3.3% annual probability)
Main Source	Main River and Ordinary Watercourses
Main Mechanism	Natural exceedance
Main Characteristics	Natural flood - saturated ground conditions and extreme prolonged rainfall
Significant Consequences	17 residential properties and 3 commercial property and one static caravan were flooded internally from RBC records.

2.4 Consequences of Flooding

2.4.1 Reports of flooding from residents to the EA and/or RBC identified 17 residential properties, one static caravan, and 3 commercial properties which experienced internal flooding from this flood event. 10 residential properties impacted internally by Christchurch Ditch flooding and 4 by flooding from the Holy Brook. 4 properties experienced flooding originating from the River Thames. Table 3 shows a summary of reports to RBC of the impacts of flooding from the River Thames/Christchurch Ditch and the Holy Brook.

2.4.2 **Table 3** shows a summary of reports to RBC of the impacts of flooding from the River Thames/Christchurch Ditch and the Holy Brook.

Table 3: Summary of properties flooded by River Thames and River Kennet/Holy Brook

Location	Number of properties flooded internally	Number of properties flooded externally
Queens Road	9	11
Coldicutt Street	0	9
George Street	0	3
Piggotts Lane	0	1
Mill Green/ Mill Road	1	3
Crendon Court	0	3
Circuit Lane and Sylvan Walk	4	0
Scours Lane	1	1
Commercial properties	3	2
The Warren properties	2	0
Riverside Park Homes	1	0

2.5 Further Actions

2.5.1 RBC along with other relevant RMAs are undertaking an investigation into appropriate flood risk management responses and a further report will be prepared by Stantec to assist and inform the investigation process, which should be read in conjunction with this report, when available.