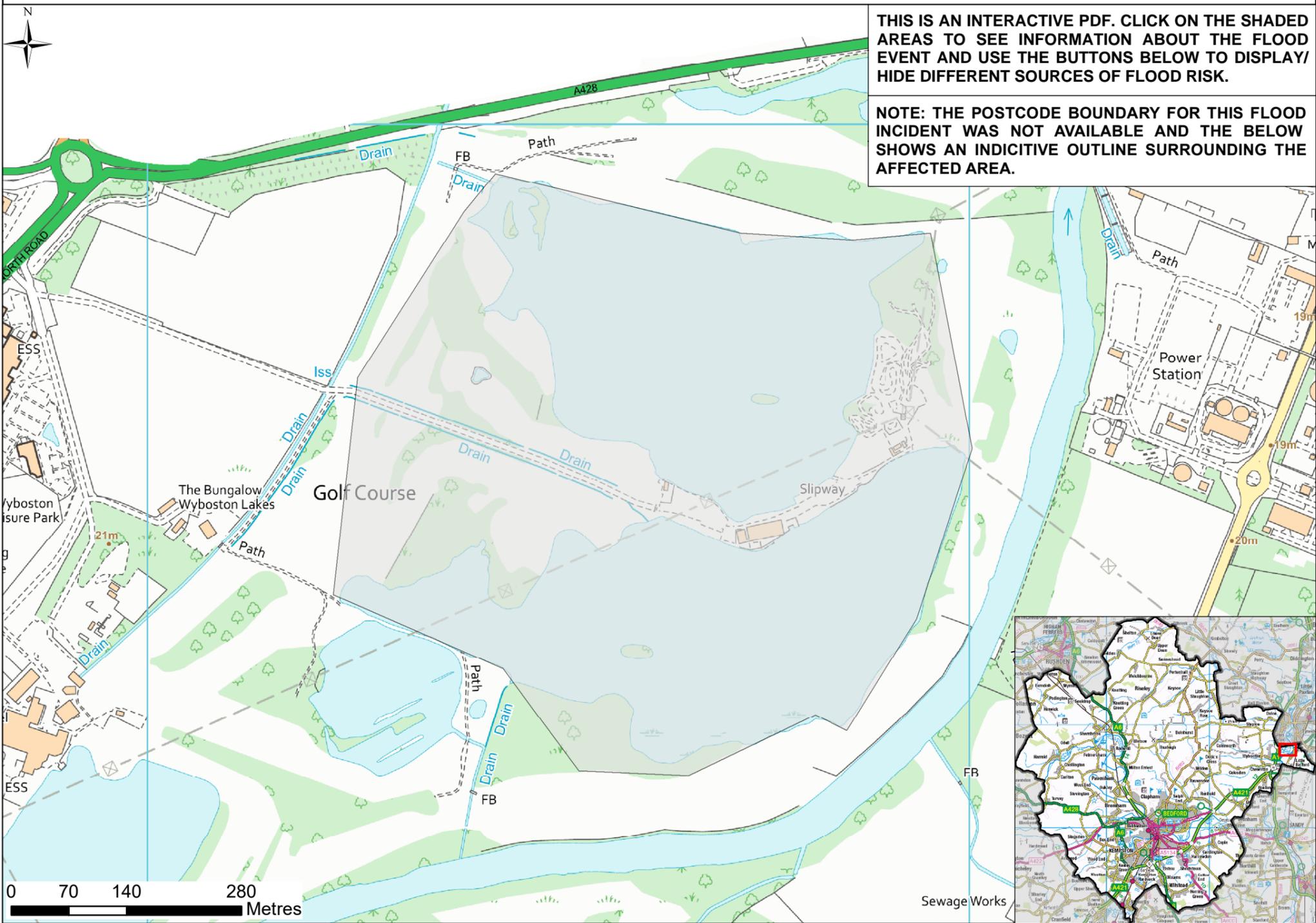


The village of Wyboston suffered flooding in December 2020. Under the Flood and Water Management Act 2010, Bedford Borough Council as the Lead Local Flood Authority (LLFA) has the duty to investigate the flood event. The scope of this flood investigation is to identify the source, cause and impact of flooding from available information, identify actions completed by relevant Risk Management Authorities (RMAs) in response to the flood event, and consider actions to better understand and manage the risk of flooding in the affected area.



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Legend

- Indicative Boundary
- EA Flood Warning Areas**
 - Flood Warning Areas
 - Areas benefitting from flood defences

Flood Map for Planning

- Flood Zone 3
- Flood Zone 2

Risk of Flooding from Surface Water

- High risk of flooding (3.3% AEP)
- Medium risk of flooding (1% AEP)
- Low risk of flooding (0.1% AEP)

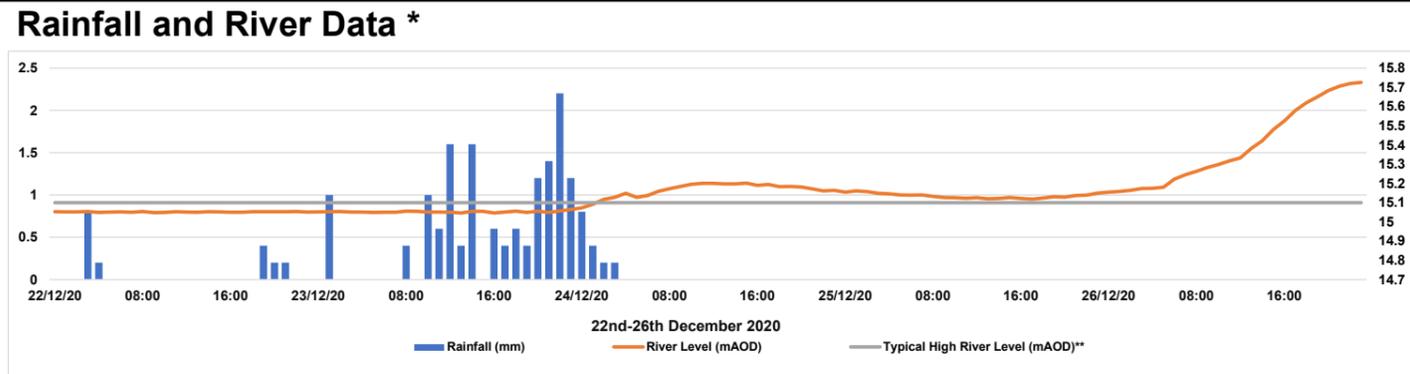
CLICK ON THESE BUTTONS

FLOOD MAP FOR PLANNING

RISK OF FLOODING FROM SURFACE WATER

FLOOD WARNING AREAS

BACKGROUND MAP



*Rainfall and River data was obtained from the Environment Agency (May 2021)
 **River levels below this level 90% of the time.

Rainfall and River Gauges

Nearest Rain Gauge	Bedford
Distance to Gauge	11.63 km
Nearest River Gauge	Eaton Socon
Distance to Gauge	1.48 km

Rainfall and River Data Interpretation

The graph identifies that the main rainfall event at the nearest rainfall gauge to Wyboston occurred between 19:00 on December 23rd and 03:00 on December 24th. The total rainfall volume is recorded as 17mm with a peak rainfall intensity of 2.2mm/hour. This single event saw a third of the 55mm of rainfall which is expected for the whole month of December on average.

The graph also shows that the river levels in the Great Ouse at the gauge closest to Wyboston were elevated above the 'typical high river level' from 01:00 on December 24th and stayed above this level until beyond December 26th. The 'typical high river level' at the nearest gauge station is identified as 15.1m Above Ordnance Datum (AOD). River levels above this are only expected to be recorded 5% of the time.

SOURCE OF FLOODING: Main River (Fluvial)

FLOOD EVENT & CAUSE

One commercial property located at the Wyboston Lakes reported internal flooding on December 25th, with standing water throughout the building causing damage to flooring, furniture, and electrics, particularly in the restaurant/kitchen. The business was closed at the time of the flood due to Covid-19 restrictions. Refurbishments were undertaken around April 2021 following which the business re-opened, however, some areas of the property remained damaged throughout summer 2021.

The Wyboston Lakes are adjacent to the western banks of the River Great Ouse. The Environment Agency Flood Map for Planning identifies the property in Flood Zone 3¹, which means that the chance of flooding is great than 1% in any given year. The mapping shows that the Wyboston Lakes and surrounding areas are located in the River Great Ouse floodplain, which means that they are expected to flood when the River Great Ouse overtops its banks. The Environment Agency Flood Warning in this area was not issued.

In conclusion, December 2020 was a very wet month with an average rainfall of 108mm across East Anglia, which is 95% higher than the December average². The three months leading up to December also saw higher than average rainfall such that by December 25th the ground was already saturated. This, combined with the rainfall recorded during the dates in question, meant that surface water was less able to infiltrate into the ground and more likely to run off into watercourses and form overland flood flow routes. It is thought this prolonged period of heavy rainfall and saturated ground conditions contributed to the River Great Ouse overtopping its banks.

FLOOD WARNINGS & IMMEDIATE RESPONSE

- **24/12/2020 04:44:** Environment Agency Flood Alert Lower River Great Ouse issued.
- **Not issued:** Environment Agency Flood Warning River Great Ouse at St Neots, Little Paxton, and The Offords.
- **25/12/2020 14:30:** Flooding experienced in the wider area declared a major incident by Bedford Borough Council.
- **28/12/2020:** Lead Local Flood Authority (LLFA), Bedford Flood Response Team, and volunteers from the Council visited properties to carry out impact assessment to help with recovery and clean up.

ACTIONS

Timescale	Action	Responsible Party
Inspections short term (1-6 months) Remedial works as required	Inspect Main River assets (sluices, weirs, gates, locks and river banks) and identify the requirement for remedial works. Over 5,000 checks are already complete across East Anglia (95% of relevant assets), with 22 assets identified as being in need of remedial works in the wider area ³ .	Environment Agency
Medium term (6-12 months)	Investigate the suitability of flood protection measures for the affected property (e.g. flood barriers, tanking the ground floor, waterproof wall sealant, non-return valves, etc.), and develop a flood action plan. Specialist advice should be sought from a Property Flood Resilience (PFR) surveyor.	Property / Business Owner
Medium term (6-12 months)	Investigate improvements to the Flood Warning system as no flood warning was issued. This Flood Warning has not yet been included in the Flood Warning Improvement Plan.	Environment Agency

ORIGINATED: Nora Balboni CEng C.WEM MCIWEM, Senior Engineer, 21/07/2021

CHECKED/VERIFIED: Matt Tandy C.WEM MCIWEM MInstLM, Principal Engineer, 23/07/2021



¹ Environment Agency Flood Map for Planning, <https://flood-map-for-planning.service.gov.uk/>, [accessed June 2021].

² Environment Agency, December 2020 Flooding Great Ouse Catchment Summary.

³ Environment Agency, May 2021. Harrold Winter Flooding Briefing.