

A3. Chorlton Brook

3.1. Overview

Cheadle is a small historic village, and a wider District Centre located approximately 3 km west of Stockport town centre, bordered both by the areas of Cheadle Hulme in the south, Gatley in the west, and East Didsbury to the north. There are two Main Rivers, Micker Brook and Chorlton Brook, that travel north-west through Cheadle towards the River Mersey.

Chorlton Brook rises in the Cale Green and Davenport area but much of the watercourses have been lost in that area. The catchment also includes most of Adswood and parts of Cheadle Hulme. It is a relatively smaller but complex catchment and has experienced much modification and diversion. Both the Cheshire and the Sheffield railway lines followed much of one old valley and as such natural waterflows are affected significantly. Most of the brook tributaries have been lost and culverted through Cheadle Hulme at the east of Bird Hall Lane.

In addition, part of the catchment and brook that followed Councillor Lane has been artificially diverted to Micker Brook near Calderbrook Drive. Such lost watercourses will impact on surface water issues and can result in groundwater flooding along former watercourse routes. Natural flows from the east part of Councillor Lane can no longer flow along Councillor Lane and instead move towards Lavington Avenue Playing Fields around Easton Drive and Minster Drive. A culverted section of watercourse is installed at the playing fields that connects to Chorlton Brook at Boundary Road.

What remains of the brook is mostly artificially modified with culverting and channelisation throughout. The Environment Agency have installed several trash screens to protect the culvert inlets. An open section through Adswood Park is heavily modified and artificially speeds flow through to a more natural but again modified route along the rear of Bird Hall Industrial Estate to Boundary Park Playing Fields connecting to the original confluence at St Philips Close. The brook is then channelised between properties along Boundary Road and Lavington Avenue where it is then culverted with two doglegs under St Davids Road and St Marys Drive. It opens again between Shakespeare Drive and Brook Street.

A highway culverted section goes under the north end of Councillor Lane and under the footway at Stockport Road. It opens up through channel sections at Park Road under Chorlton Bridge along Chorlton Drive where again it is culverted under Wrenbury Drive under the Cheshire railway line before outfalling in Abney Park where it feeds the large duck ponds. Two more major trash screens protect the culvert inlets at Abney Hall access road, under Manchester Road and the M60. The brook flows more naturally towards the Garden Centre at Manchester Road where it meets the confluences of the Micker Brook and River Mersey.

The area surrounding Lavington Avenue and Boundary Road appears to have been built around the 1960s according to the historic maps, with Chorlton Brook flowing freely from southeast to northwest prior to this. The area known as the poet's estate around Shakespeare Drive was built in the 1930s.

There is a high risk of flooding from Chorlton Brook around the areas of Lavington Avenue and Boundary Road, as well as north-west up to Roscoe's Roundabout (Figure A3.1).

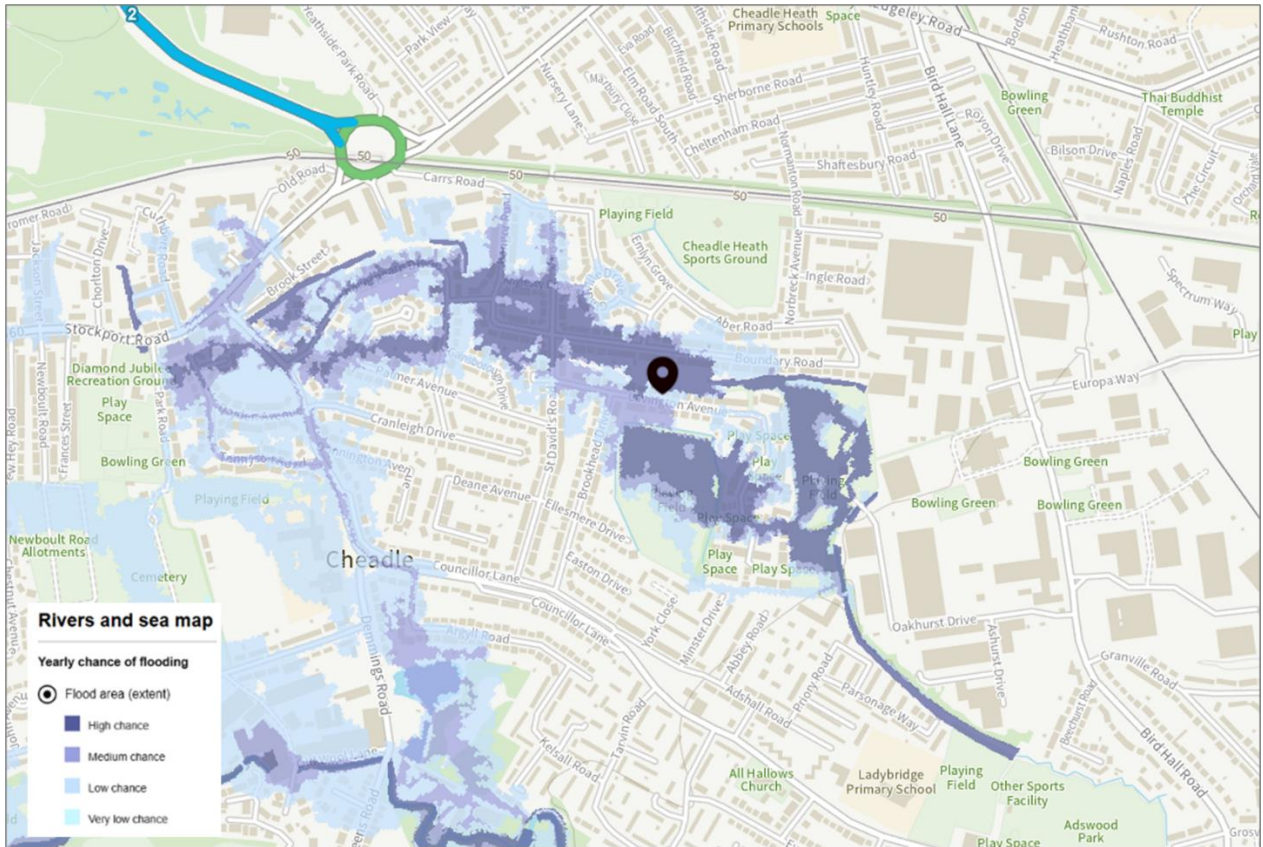


Figure A3.1. Chorlton Brook Fluvial Flood Risk maps. Image Source: Environment Agency

No properties were flooded internally in the events of 2016 and 2019. Until 2022, properties had avoided significant flooding and as such did not feature on programmes for flood investigation. In 2022, a few properties were impacted with a blockage within the dogleg section, and it impacted St Davids Road, Bangor Road, St Marys Drive and Shakespeare Drive. The Environment Agency responded with investigations and an enhanced maintenance programme of inspections.

The wider Chorlton Brook area is largely at low or medium risk of surface water flooding with any high risk areas within locations also defined as high risk of fluvial flooding (Figure A3.2).

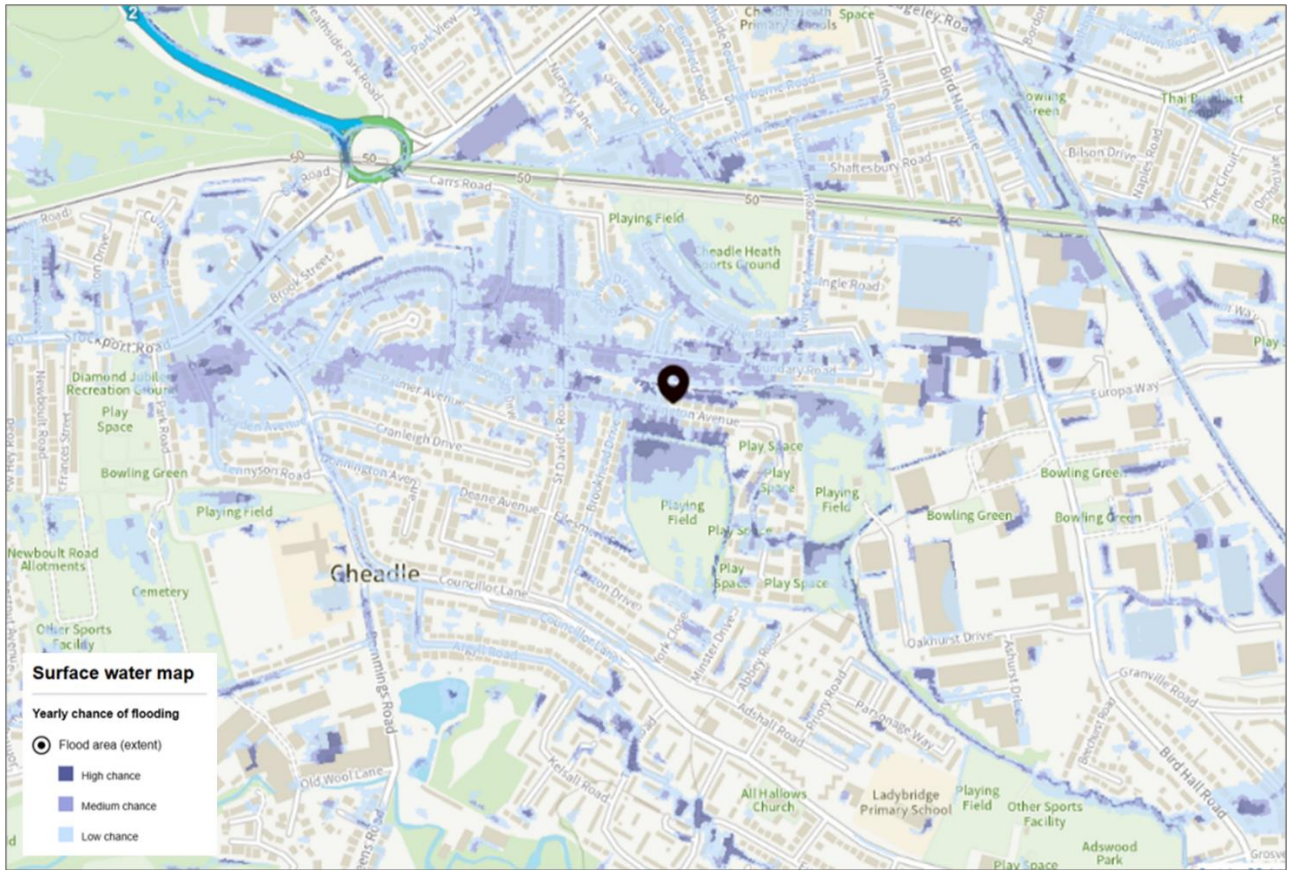


Figure A3.2. Chorlton Brook Surface Water Flood Risk maps. Image Source: Environment Agency

3.2. Flooding Analysis

A combination of fluvial flooding from Chorlton Brook, groundwater, along with surface water flooding and an overwhelmed drainage system, was the cause of flooding along Lavington Avenue and surrounding roads. As the area is also heavily culverted, runoff within the catchment is not always able to enter the watercourse resulting in excess overland flow along roads which spills into gardens.

Figure A3.3. summarises the indicative flood flow routes from Chorlton Brook around Boundary Road and Lavington Avenue along with flow paths from ordinary watercourses within Lavington playing fields and flow along highways, including Brookhead Drive and St. David's Road.

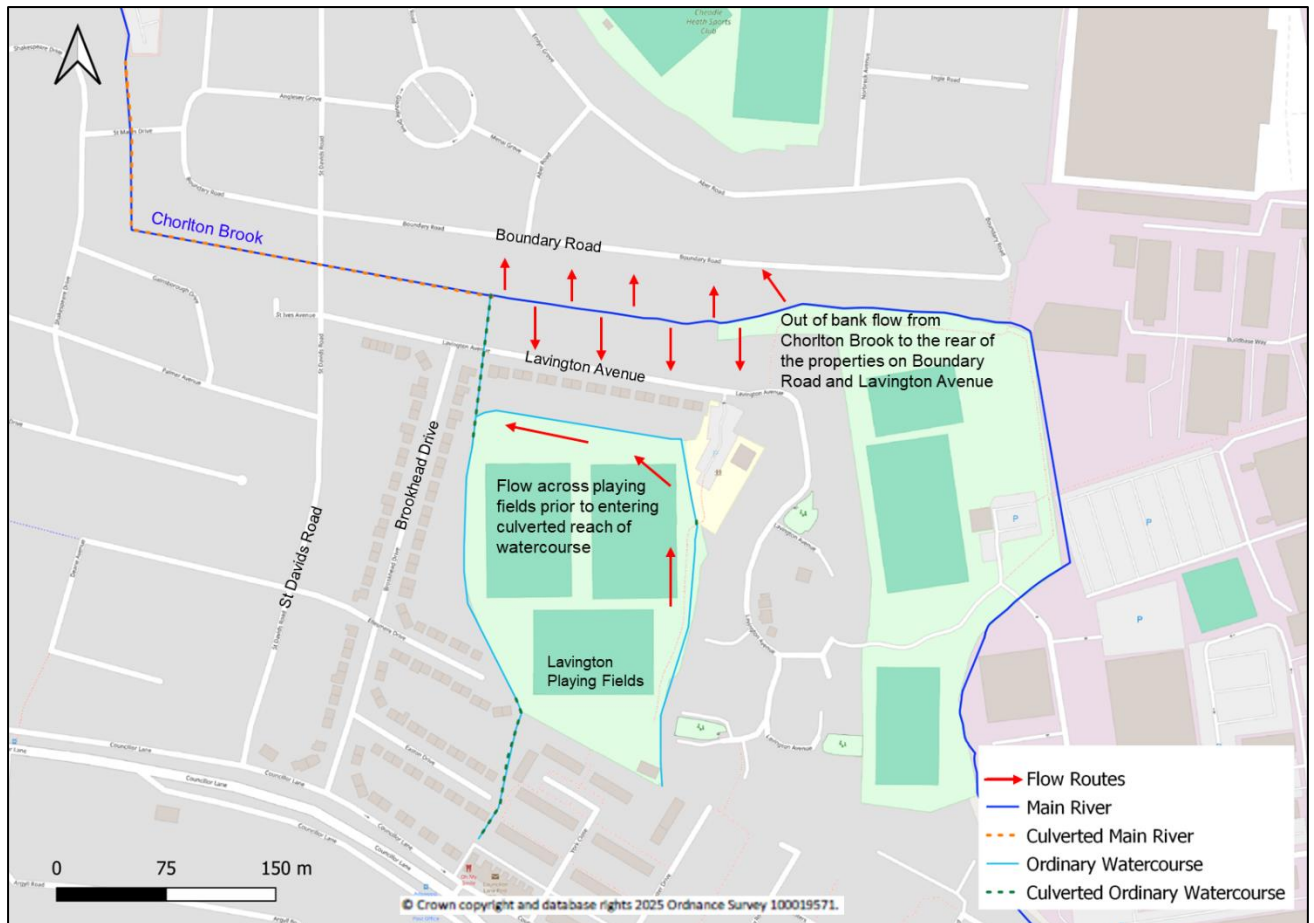


Figure A3.3. Chorlton Brook Site overview Image with indicative flood flow routes.

3.3. Flooding Impacts

On Tuesday 31st December 2024, at around 11pm rain had been falling for several hours. Large puddles of water were starting to form in the roadway outside houses on Boundary Road, and flowing water was running along the road. Rear gardens at this time had approximately an inch of water settling, and by midnight there was 4 inches of water in rear gardens.

At approximately 1am on Wednesday 1st January 2025, Chorlton Brook that runs alongside the field was higher than average and was almost overflowing the bridge/walkway from Boundary Road onto Lavington Avenue Playing Fields. The path at the side of Lavington Avenue Playing Fields was under approximately 17 inches of water.

Figure A3.4 shows an image of the flooding on Boundary Road during the event.



Figure A3.4. Image showing flood waters around Chorlton Brook on Boundary Road, early hours of 01.01.2025. Image Source: Cheadle Flood Prevention Alliance

A large number of properties were affected externally with driveways and gardens flooded those that experienced internal flooding within Chorlton Brook area are summarised in Table A3.1.

Table A3.1. Flood Impact Summary

Number of properties evacuated	Number of properties flooded	Number of domestic properties flooded	Number of commercial premises flooded	Comment
0	30	30	0	As reported to Stockport Council prior to publishing

Table A3.2. provides a brief summary of the flood event, impact and response in Chorlton Brook.

Table A3.2. Chorlton Brook Flooding Summary

Date	<ul style="list-style-type: none"> 1st January 2025
Affected Roads	<ul style="list-style-type: none"> Lavington Avenue, Boundary Road, Brookhead Drive, St. Davids Road
Description	<ul style="list-style-type: none"> Out of bank flow of Chorlton Brook and overland flow along highways. Surface water runoff within playing fields.
Flood Alert / Warning Issued	<ul style="list-style-type: none"> Flood Alert issued for Middle River Mersey catchment including areas near Bramhall, Stockport, Sale, Altrincham and Urmston on 31/12/24 at 17:06. The properties on Bridge Lane were included. Chorlton Brook is covered by three Flood Warning Areas 013FWFGM51, 013FWFGM52 and 013FWFGM53 but no flood warnings were issued during the event.
Flooding Impacts and Observations	<ul style="list-style-type: none"> Property damage Highways flooded affecting access Additional stress and mental anguish on the community over flooding
Summary of Flooding Incident Response	<ul style="list-style-type: none"> Stockport Community Incident Officers attended the site to liaise with affected residents in Chorlton Brook area. Property owners do what they can to protect their own properties

3.4. Existing Measures in the Catchment

In 2023, a scheme was completed for Lavington Avenue playing fields. The Natural Flood Management (NFM) scheme provides a sustainable solution that captures surface water runoff from the playing fields into swales around the eastern and northern boundary of the playing fields along with an offline detention basin prior to connection into the culverted reach under Lavington Avenue and outfall into Chorlton Brook. The NFM measures divert the surface water flood risk away from residential properties most at risk as well as prevent future waterlogging of the playing fields. The NFM measures are designed to manage high frequency small magnitude events (c. 1 in 10 year) event and not of the nature of the high magnitude event experienced on the 1st January 2025. An Environment Agency led project was included on the Capital Programme to study this area of Chorlton Brook and is ongoing.

Ongoing regular inspection of Chorlton Brook channel is undertaken by the Environment Agency and regular inspection of the Lavington Avenue Debris screen. Ongoing condition assessment of culverted sections of the ordinary watercourses within Lavington Playing Fields by Stockport Council as Lead Local Flood Authority.

Gullies in the areas referred to will be cleaned in line with the gully cleansing operational plan with a risk-based approach.

3.5. Recommended Actions

The following actions are recommended for the Chorlton Brook flooding hotspot area:

Action ID	Recommended Action	RMA Lead	Stakeholders	Timescale	Constraint
CB1	When requested provide advice to riparian landowners of their channel maintenance obligations for Chorlton Brook along the rear of Boundary Road and Lavington Avenue properties.	Environment Agency	Riparian owners	Ongoing	Riparian owners, especially homeowners, are unable to carry out maintenance due to physical or financial constraints. Environment Agency will need to monitor resource availability and situational circumstances when responding to enquiries regarding riparian responsibilities.
CB2	Investigate any further potential natural flood management measures to attenuate flows within Lavington Avenue playing fields.	Stockport Council, as LLFA	Local Residents, Stockport Council Parks Department	3 years	Availability of funding to support investigations and potential works. Engagement and approval required from Parks department for works in playing fields
CB3	Review the onset of flooding threshold for the flood warnings for Chorlton Brook based on the 1 st January 2025 event.	Environment Agency	Local residents	6 years	Available budget to undertake review of existing flood warning coverage. Prioritisation of review flood warning will need to be considered leaving some outside of the current 6 year budget programme.