A2. Cheadle West

2.1. Overview

Gatley is a suburb in Stockport, situated around 2 km west of Cheadle centre, and borders with Manchester boroughs. There is one Main River, Gatley Brook, that flows north-west through Gatley towards the River Mersey where this confluences near the M60 Motorway.

Borrowdale Avenue and Springfield Road and its surrounding streets in the west of Cheadle (Gatley), runs parallel to the Styal train line between Heald Green and Gatley train stations. Constructed in 1908, the historic maps show the train line to be existing at least 20 years before the houses were built.

The Cheadle West area of interest is classified as Flood Zone 1 and has a low risk of flooding from rivers. The Surface Water Flood Risk Maps (Figure A2.1.) show there to be a high chance of yearly flooding around the areas of Springfield Road, Alcester Road and Borrowdale Avenue to the east of the railway line as well as Beech Avenue to the west of the railway line.

Figure A2.1. Cheadle West Surface Water Flood Risk. Image Source: Environment Agency.

2.2. Flooding Analysis

A major contributor to the flooding is considered be water run-off from the railway line at the back of the houses on Levens Close, where there is a dip in the railway line that has affected both sides of the railway track, and produced major flooding on Borrowdale Avenue and beyond.

Figure A2.2. provides the ground elevations at Cheadle West and the indication of transition in the railway from cutting to embankment at the vicinity of Borrowdale Avenue.

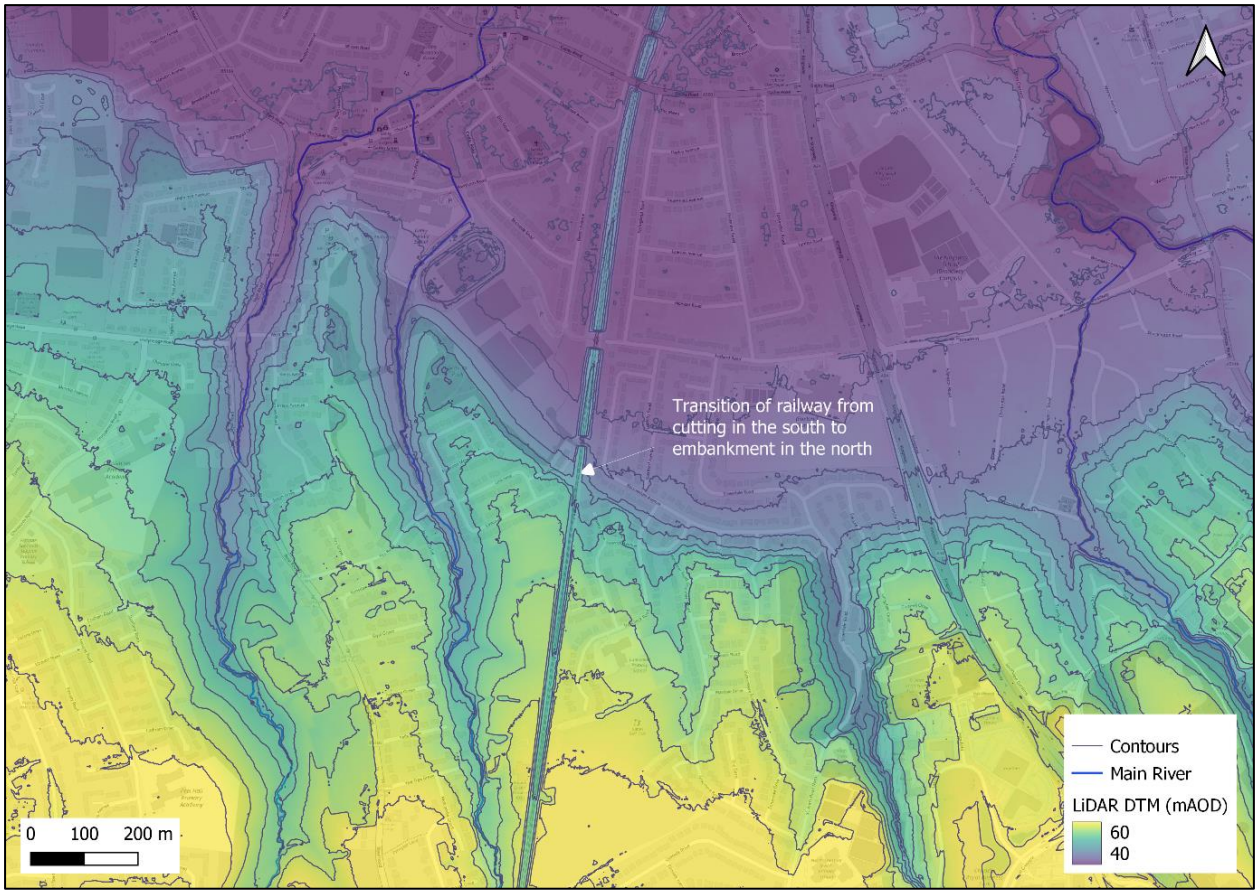

Figure A2.2. Cheadle West Elevations in Metres Above Ordnance Datum (mAOD).

Flood water is believed to have flowed north on the railway line within the cutting from as far south as Nixon's Farm. The watercourse crossing structures at Rose Vale Park and Nixon's Farm were overtopped with water flowing into the cutting. Runoff from adjacent fields were also observed to be entering the railway cutting upstream and downstream of Heald Green Station.

Springfield Road and Borrowdale Avenue along with adjacent roads are within a low-lying bowl so once water entered the area the only means of water draining away was through the highway gullies and surface water drainage system which are not designed to take runoff beyond the highway surface and roof area respectively. The potential catchment area draining onto the railway cutting via surcharge of structure crossings is 1.55 km^2 and the watercourses and their associated catchments are shown in Figure A2.3. During the 1st January 2025 event based on the nearest recorded rainfall at Prestbury up to 1.2 m^3/s of runoff was generated from the catchments based on Revitalised Flood Hydrograph 2.3

method which represents a flow volume of up to 90,000m^3 during the event. A proportion of this volume entered the lower lying areas of Cheadle West via the railway.

Figure A2.3. summarises the indicative flood flow routes from the wider catchments onto the railway cutting and the overtopping of the embankment and indicative flood flow routes in Cheadle West.

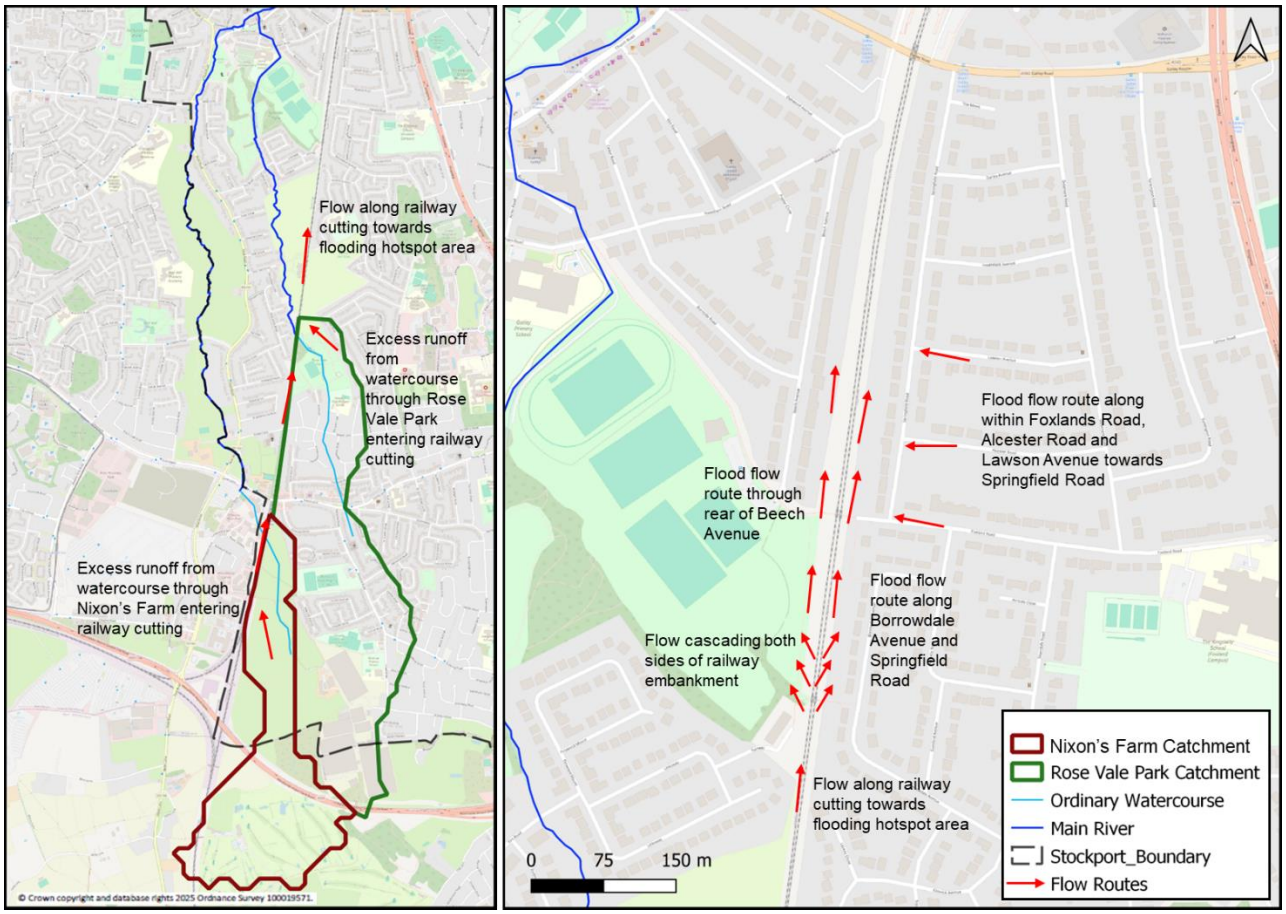

Figure A2.3. Cheadle West Site overview Image with indicative flood flow routes (left image: upper catchment inflows and right image: flood hotpot area).

2.3. Flooding Impacts

Properties along Springfield Road and Alcester Road were impacted on New Years Day, with flood waters breaching the threshold of houses, flooding them internally. Gardens were also flooded in this area, with flood waters reaching up as far as the junction of Alcester Road and Delamere Road. Flooding was also reported along Beech Avenue with properties and gardens flooded.

Residents on Springfield Road reported internal flooding due to waters flowing with great force through their back gardens and into their properties. This was reported as coming from the adjacent railway line, which was acting “like a fast-flowing river”. The water was also reported to be up to a foot deep in gardens, as well as four to five inches deep in garages. Roads were flooded.

Figure A2.4. Image of the flooding during the event.

Figure A2.4. Image showing flood waters in Cheadle West on Alcester Road, early hours of 01.01.2025. Image Source: Beverley Johnson, BBC News.

Many properties were affected externally with driveway and garden flooding. The number of properties evacuated and internally flooded within Cheadle West area are summarised in Table A2.1.

Table A2.1. Flood Impact Summary

Number of properties evacuated	Number of properties flooded	Number of domestic properties flooded	Number of commercial premises flooded	Comment
3	38	37	1	As reported to Stockport Council prior to publishing

Table A2.2. provides a summary of the flood event, impact and response in Cheadle West.

Table A2.2. Cheadle West Flooding Summary

Date	• 1st January 2025
Affected Roads	• Springfield Road, Lawson Avenue, Alcester Road, Levens Close, Borrowdale Avenue, Beech Avenue, Appleby Road, Foxdale Road
Description	• Flow from watercourses entering railway cutting at Nixon's Farm and Rose Vale Park is tracked towards Scholes Park where railway becomes embanked with runoff on both sides of the railway flowing into the residential areas.
Flood Alert / Warning Issued	• Cheadle West is not covered by a Flood Warning or a Flood Alert.
Flooding Impacts and Observations	• Property damage

	• Highways flooded affecting access • Additional stress and mental anguish on the community over repeated flooding
Summary of Flooding Incident Response	• Stockport Community Incident Officers attended the site to liaise with affected residents at Cheadle West. • Property owners do what they can to protect their own properties

2.4. Existing Measures in the Catchment

Upstream of the flood risk area in Rose Vale Park, Stockport Council provided 200 spring bulbs, which were planted in November 2024 by the Heald Green Team near the community orchard in the park. This tree planting can reduce flooding downstream by slowing down surface water by absorbing it, as well as reducing ground erosion. This process is called the "sponge effect".

Cyclical gully cleansing is undertaken in Heald Green as per the gulley operational plan and the risk-based approach.

Ongoing regular inspection of Gatley Brook is undertaken by the Environment Agency and regular inspection of the siphons under the railway at Rose Vale Park and Nixon's Farm are undertaken by Network Rail.

2.5. Review of previous Recommended Actions from July 2019 flood event.

As part of the Section 19 report for the July 2019 event a number of recommended actions were proposed for the mitigation of flood risk in the Cheadle West Area. Table A2.3 provides a summary of the progress to date and how an increased understanding of the flooding mechanisms following the 1st January 2025 event has shaped the recommended actions outlined in Section 2.6.

Table A2.3. Summary of progress on July 2019 S19 actions

Recommended Actions from July 2019 Section 19	**Progress Update**
Investigation is required to confirm what the Network Rail drainage arrangements are intended to be, their current state and to remediate if necessary. UU may have an input due to the foul flooding reported. LLFA should coordinate	Review undertaken on existing siphons under the railway at Rose Vale Park and Nixon's Farm along with associated trash screens at upstream inlets.

2.6. Recommended Actions

The following actions are recommended for the Cheadle West flooding hotspot area:

Action ID	Recommended Action	RMA Lead	Stakeholders	Timescale	Constraint
CW1	Remind landowners of channel maintenance and trash screen obligations for the ordinary watercourses in Rose Vale Park and Nixon's Farm.	Stockport Council, as LLFA	Riparian owners	Ongoing	Riparian owners are unable to carry out maintenance due to resource availability. Stockport Council needs to consider resources and circumstances when committing to enforcement action.
CW2	Network Rail to confirm inspection and maintenance regime for assets carrying watercourses beneath the railway at Rose Vale Park and Nixon's Farm crossings.	Stockport Council, as LLFA	Network Rail	6 months	Further multi-agency engagement required regarding responsibilities and future actions.
CW3	When requested provide advice to riparian landowners of their channel maintenance obligations for Gatley Brook.	Environment Agency	Riparian owners	Ongoing	Riparian owners, especially homeowners, are unable to carry out maintenance due to resources constraints. Environment Agency will need to monitor resource availability and situational circumstances when responding to enquiries regarding riparian responsibilities.
CW4	Investigate any potential natural flood management measures to attenuate flows upstream of the railway crossings within the ordinary watercourse catchments within Rose Vale Park and Nixon's Farm.	Stockport Council, as LLFA	Local Residents, Stockport Council Parks Department, Nixon's Farm	3 years	Available budget to undertake investigations and any potential opportunity for works identified Engagement and approval required from Parks department for works in Rose Vale Park and private landowner of Nixon's Farm.

Action ID	Recommended Action	RMA Lead	Stakeholders	Timescale	Constraint
CW5	Investigate potential natural flood management measures to manage flows within Scholes Park from Gatley and Heald Green Brook.	Environment Agency	Local Residents, Stockport Council as LLFA and Parks	3 years	Available resources and budget to undertake investigations and any potential opportunity for works identified Engagement and approval required from Parks department for works in Scholes Park.