

B.4 DA04 - Tonbridge Town and Hildenborough

Tonbridge and Malling Stage 1 SWMP: Summary and Actions

Drainage Area 04: Tonbridge Town and Hildenborough

Area overview

Area (km ²)	36.5
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Drainage assets/systems	Type	Known Issues/problems	Responsibility
Sewer networks	Sewer (foul and surface water)	There are issues linked with Southern Water systems.	Southern Water
Watercourses	Main River	Known fluvial issues associated with the Hawden Stream, Hilden Brook, Pen Stream (Upper) and River Medway.	Environment Agency
Watercourses, drains and ditches	Non-Main River	Known fluvial issues associated with ordinary watercourses in Hildenborough.	Kent County Council and Tonbridge and Malling Borough Council
Watercourses, drains and ditches	Non-Main River	Known fluvial issues associated with IDB Drains	Upper Medway Internal Drainage Board
Watercourses, drains and ditches	Non-Main River	No specific known problems	Riparian

Flood risk

Receptor	Source	Pathway	Historic Evidence
A: Hollenden	Heavy rainfall resulting in surface water run off. Fluvial	FMfSW (deep) also follows the Hilden Brook and an unnamed drain. Ridings Lane, Mill Lane and Vines Lane Hilden Brook and unnamed watercourse	Records describe recent flooding in 2010, 2011 on Riding Lane, it has also been identified by KCC as a drainage hotspot. The EA explained that where the Hilden Brook crosses a road there is potential for flooding to occur. FMfSW (deep) also follows the route of watercourses.
B: Hildenborough (north)	Heavy rainfall resulting in surface water run off and overloaded sewers Surface water (blocked drains / gullies) Fluvial	Southern Water sewers (Foxbush and Mount Pleasant) Coldharbour Lane, Ridings Lane, Knowsley Way, Hildenborough village green and Tonbridge Road Hilden Brook	Southern Water have reported incidences of flooding in 2012. Records of flooding from surface water affecting three properties at Hildenborough village green. Records of Ridings Lane, Foxbrush and Tonbridge Road being affected by surface water. FMfSW 200yr (deep) identified ponding at Knowsley Road, London Road and Hardwick.
C: Hildenborough (south)	Heavy rainfall resulting in overloaded sewers Surface water (blocked drains / gullies) Fluvial Groundwater	Southern Water sewers (Leigh Road) Tonbridge Road, Hilden Park Leigh Road (Groundwater) Fellows Way, Copse Road, Bramble Close, Hilden Park Road are pathways identified by the FMfSW (deep) Hawden Stream - IDB Drain Unnamed Drain - Ordinary Watercourse	Southern Water have reported incidents in 2012 (Leigh Road). In addition, on Leigh Road, properties' gardens have been described as being affected by groundwater and fluvial flooding, 17 properties' gardens were reportedly affected by groundwater. Hilden Park, Stocks Green Primary School, Brookmead was affected by fluvial flooding of the Hawden Stream. Tonbridge Road has been repeatedly affected by surface water as a result of blocked drains/ gullies FMfSW (deep) shows several areas of ponded surface water.

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D: Powder Mill	<p>Heavy rainfall resulting in surface water run off</p> <p>Surface water (blocked drains / gullies)</p> <p>Fluvial</p>	<p>Powder Mills and Powder Mill Lane</p> <p>IDB Drain - No. 62</p> <p>Medway</p> <p>FMfSW highlights some ponding in the area</p>	<p>Powder Mills has been identified as a drainage hotspot, in 2012 KCC were called out to clear drains and gullies to improve drainage.</p>
E: Starvecrow	<p>Heavy rainfall resulting in surface water run off</p> <p>Surface water (blocked drains / gullies)</p>	<p>Shipbourne Road, Highham Lane</p> <p>FMfSW highlights some ponding in the area</p>	<p>Regular flooding at Shipbourne Lane which has been highlighted as a drainage hotspot.</p> <p>On Higham Lane, records describe surface water flooding a property.</p>
F: Trench Wood	<p>Heavy rainfall resulting in surface water run off</p> <p>Fluvial</p>	<p>FMfSW (deep) follows the route of the watercourse, with some isolated ponding.</p> <p>Shipbourne Road, Ashden Walk, Elmhurst Gardens, Fernholt, Hazel Shaw, Willow Lea and White Cottage Road</p> <p>Pen Stream (Upper)</p>	<p>Regular flooding at White Cottage Lane which has been highlighted as a drainage hotspot, although internal flooding was not identified, severe external flooding of gardens was recorded.</p> <p>EA explained that the Pen Stream (Upper) is a problematic ditch/Critical Ordinary Watercourse (COW), through Tonbridge.</p> <p>The FMfSW generally follows the line of the watercourses and there are isolated spots of ponding.</p>
G: Higham Wood	<p>Heavy rainfall resulting in surface water run off and overloaded sewers</p> <p>Surface water (blocked drains / gullies)</p> <p>Fluvial</p>	<p>Sewers (Off Cornwallis Avenue)</p> <p>Darwin Drive/Grange Farm, Dodd Road and Knight Road</p> <p>Pen Stream (Upper) (Main River and IDB Drain)</p> <p>FMfSW follows the line of the Penn Stream (Upper) and there is isolated ponding, particularly around Darwin Drive/Grange Farm</p>	<p>Darwin Drive/Grange Farm is floods regularly an investigation was carried out in 2004 by TMBC.</p> <p>The outline provided by the EA suggests that there were issues in 1958, the FMfSW (deep) follow this outline but it is not as extensive.</p> <p>There was one incident of sewer flooding described (2009).</p>
H: Cage Green / The Park	<p>Heavy rainfall resulting in surface water run off and overloaded sewers</p> <p>Fluvial</p>	<p>Southern Water sewers (Off Shipbourne Road, close to Cage Green Road, Salisbury Road, Off Hadlow Road, High Street and Mill Lane)</p> <p>Hilden Brook</p> <p>Unnamed Drains</p> <p>Tonbridge Mill Stream and Medway</p> <p>London Road, Chiltern Way, Tonbridge Sportsground, Yardley Close, Postern Lane, Darenth Avenue, Hildenborough, London Road, Bordyke and Mill Lane</p> <p>FMfSW deep identifies a flow route along Lodge Road and localised ponding.</p>	<p>There were five postcode areas where incidents of sewer flooding occurred, recorded between 2008 - 2012.</p> <p>There is evidence of historical flooding on the Hilden Brook and along the River Medway.</p> <p>At Chiltern Way, floodwater were threatening a property. TMBC describe at regular surface water flooding at Yardley Close. Shipbourne Road and Bordyke have been defined as drainage hotspots.</p>

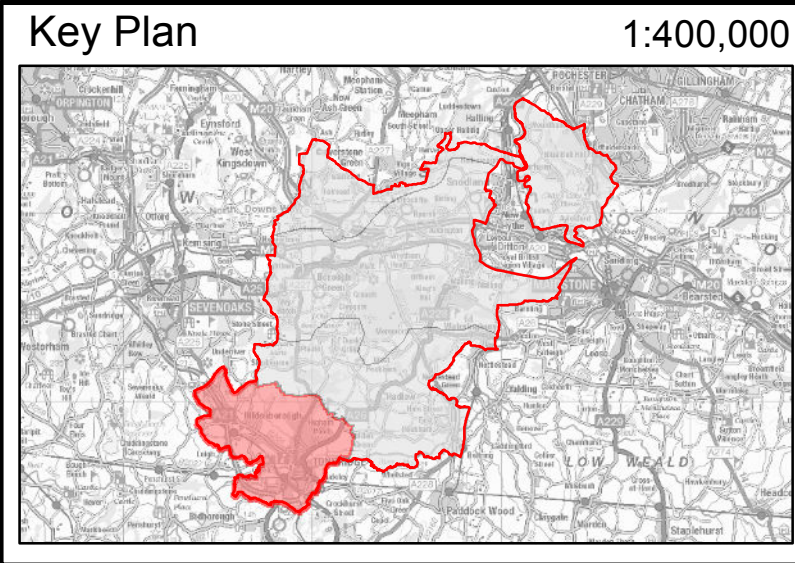
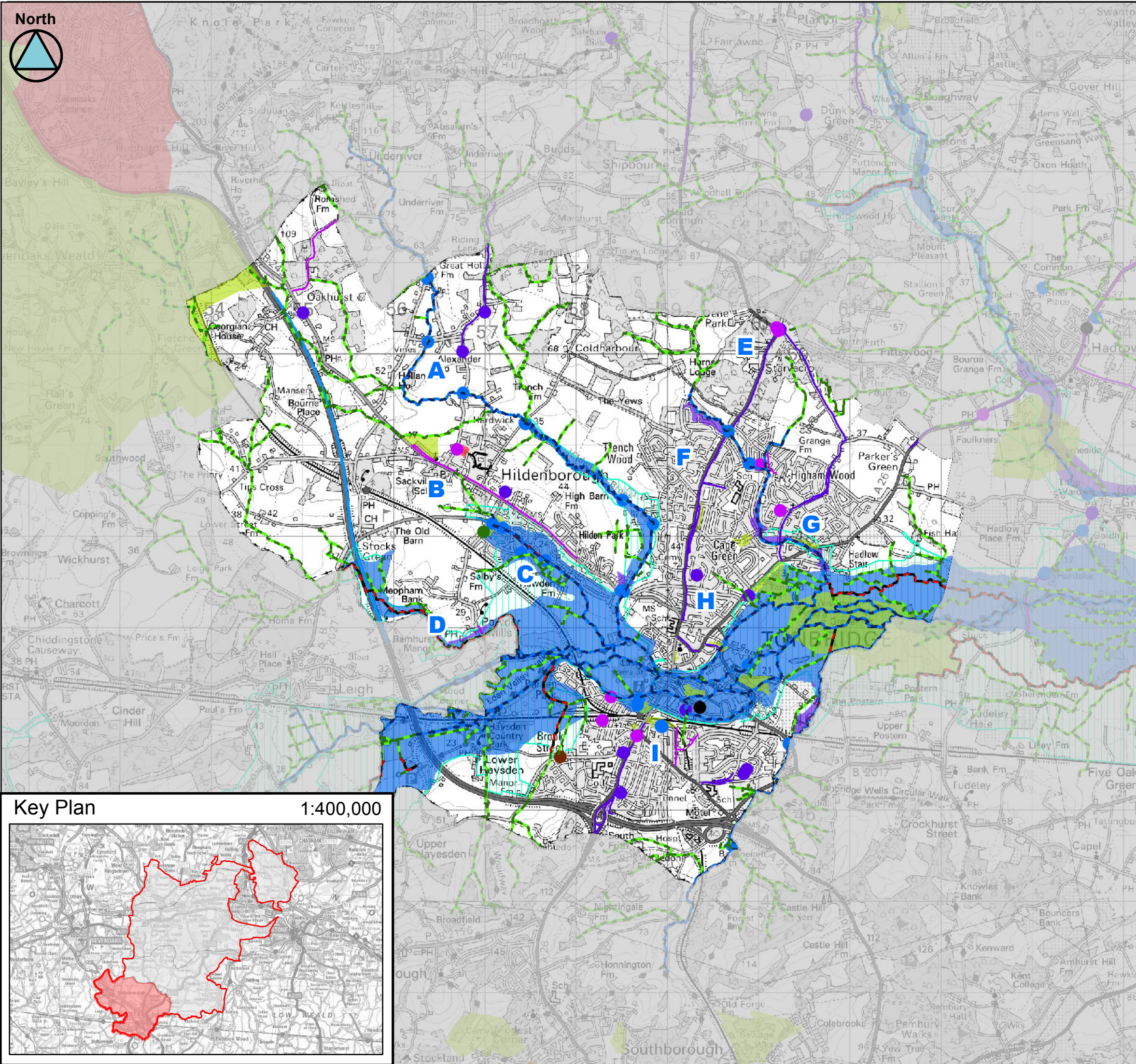
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I: Tonbridge Centre (Police Station and Brook Street College)	<p>Heavy rainfall resulting in surface water run off and overloaded sewers</p> <p>Surface water (blocked drains / gullies)</p> <p>Fluvial</p>	<p>Southern Water sewers (numerous locations)</p> <p>River Medway</p> <p>IDB Drain 94b</p> <p>Baltic Road, Dowgate Close, Albany Close, Brook Street, Sussex Road, Barden Road, Quarry Hill Road, Quarry Hill Road, Holford Street, Tudeley Lane, Albany Close, Lavender Hill and Pembury Grove</p> <p>FMfSW deep identifies a flow route along the railway. Localised ponding is indicated, specific areas include the police station and K College, Brook Street.</p>	<p>Records for Baltic Road describe surface water entering a property. Gardens were flooded on Dowgate Street. The road was affected by surface water on Brook Street. Blocked drains caused disruption to Barden Road and Brook Street. Records suggest that flooding is a regular occurrence on Quarry Hill Road and on Albany Close. During an event sandbags were requested on Holford Road. In 2012 KCC were called out to cleanse gullies and drains to remove blockages.</p> <p>Fluvial issues have been recorded on Danvers Road, Avebury Avenue, Bournemill Cottages/Oast, Jnc. Holford Street & Danvers Road, Priory Road and Woodgate Way.</p> <p>Incidents attributed to sewer flooding have been recorded at nine locations (between 2009-2012), three of which include the hydraulic overload of a surface water sewer (Bath Road, Baltic Road and Waterloo Road).</p>
J: Other (isolated incidences across the drainage area)	<p>Heavy rainfall resulting in surface water run off</p> <p>Surface water (blocked drains / gullies)</p> <p>Fluvial</p>	<p>Medway</p> <p>Unnamed Drain</p> <p>A21, Bank Lane, London Road</p> <p>FMfSW</p>	<p>The EA described that there were proposals to increase the capacity of a culvert under the A21 to improve conveyance.</p> <p>Bank Lane KCC was requested to clear flood water in 2012.</p> <p>In 2008 flood water removed surface tarmac from the road.</p>

Summary of Location-specific Actions

Area of benefit	Location of action	Action	Action owner	Priority



Legend

A

B

C

D

E

F

G

H

I

Hollenden

Hildenborough (north)

Hildenborough (south)

Powder Mill

Starvecrow

Trench Wood

Higham Wood

Cage Green / The Park

Tonbridge Centre

Main Rivers

IDB Maintained Watercourse

Ordinary Watercourse

Upper Medway IDB

Historic Flooding*

Surface Water

Surface Water with blocked gullies/drains

Sewer

Groundwater

Fluvial

Other/ Unknown

Tidal

* Where an entire road has been highlighted in the historic layer; this does not mean that all the road has flooded in the past but rather no specific location was identified in the records received.

Sewer Flooding Incidents**

Number of flood occurrences per postcode area

1 - 3

4 - 6

7 - 8 <

**Polygons only represent the postcode area and not the flood extent

Client:

Kent County Council

Consultant:

JBA consulting

Partners:

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Scale 1:40,000

Tonbridge and Malling Stage 1

SWMP

Historic Flooding

Tonbridge Town and Hildenborough

DA04