

## Flood Risk

### Key Documents / Evidence Base:

- Flood and Water Management Act (2010)
- Arun District Draft Local Plan (2013-2028)
- Fluvial and Coastal Flood Risk in Aldingbourne Parish Map (Environment Agency)
- Surface Water Flood Risk in Aldingbourne Parish Map (Environment Agency)
- Surface Water Management Plan for Lidsey Catchment (WSCC and Southern Water Services (SWS)). **Incomplete.**
- Aldingbourne & Barnham Rife Strategy (EA). **Incomplete.**
- SWS to complete drainage model for Lidsey Catchment. **Incomplete.**

### Flood Risk:

Aldingbourne Parish is located within the Arun coastal plan at the foot of the South Downs National Park and is characterised by a flat, low lying and undulating landscape crisscrossed by a network of drainage ditches which feed into the Aldingbourne and **Lidsey Rifes?** The Aldingbourne Rife bounds the western part of the parish boundary just to the north of Aldingbourne continuing south to the former route of the Chichester and Arun canal where it continues southward to the west of Shripney. The **Lidsey Rife?** in part defines the eastern boundary of the parish from Church Lane on the boundary with Eastergate, southward to Lidsey Waste Water Treatment Works (LWWTW) where it is joined by the Barnham Rife, before continuing southward toward Bersted.

The topography within Aldingbourne Parish reflects the low lying coastal plain of the surrounding landscape rising at its southern tip from an elevation of 1m AOD in the vicinity of Sack Lane to a maximum of 42m AOD at Little Heath located within the northern part of the parish within the SDNP. Westergate itself lies at an elevation of approximately 11-12m AOD between Nyton Road and the Woodgate railway crossing. To the south of Woodgate the land falls to an elevation of between 3-7m AOD characterised by low lying farmland and drainage ditches.

A large proportion of the parish is located within the Lidsey wastewater catchment area as identified on **Plan No. NP\_006**. The Lidsey wastewater catchment includes flows from Barnham, Woodgate, Norton, Westergate, Eastergate, Walberton, Fontwell, Yapton, Blisham, Ford, Climping, Flansham, east Middleton-On-Sea and Elmer. Flow originating from these areas discharge to Lidsey WWTW via a combination of pumped and gravity flow.

It is acknowledged by WSCC, ADC, EA and SWS that, communities within the catchment area of Lidsey WWTW, including those within Aldingbourne Parish and the surrounding area have a long standing history in experiencing problems with both surface water flooding and foul water flooding of roads and property which has in turn led to the pollution of adjacent watercourses.

It is acknowledged that the Lidsey catchment is adversely affected following periods of prolonged rainfall due to deficiencies in the public and private sewer network and land drainage systems. The Barnham and Eastergate/Westergate trunk sewers, transferring flow to the Lidsey WWTW are extensively overloaded in wet weather causing flooding and pollution problems. The overloading of the sewer system is

considered to be caused mainly through ground water infiltration and inundation within the catchment.<sup>1</sup>

The resultant effects of these deficiencies within the public and private sewer network and the inability to cope with peak rainfall events are clearly recorded in the recent flooding events of June 2012 and December 2012. In particular the flood events of June 2012 were of such magnitude as to attract media attention at a national level.<sup>2</sup>

In addition to peak rainfall events, the following issues are considered to contribute to flood risk within Aldingbourne Parish.

- Overland flow from the local watercourses entering the foul water system causing it to become overloaded during peak events.
- Infiltration/inundation of surface water and groundwater into the foul water system through structural deficiencies in the water infrastructure pipe work.
- Run-off from impermeable hard surfaces (roof and hard standing) that are not connected to positive public surface water drainage. These elements may drain to soakaways, local watercourse or may in some cases be connected via lateral and direct connections to the foul water system.
- High groundwater levels in the area due to the low lying nature of the surrounding landscape.
- Poor land drainage and maintenance of field ditches.

Inevitably, there are serious concerns with the Parish about the impacts of flooding, and drainage both in respect of current properties at risk but also the impact from future development within the parish which is not sustainable.

Indeed, Southern Water has acknowledged in their response to a recent planning application for approximately 100 housing units that;

*'Following initial investigations, there is currently inadequate capacity in the local network to provide foul sewage disposal to service the proposed development. The proposed development would increase flows to the public sewerage system, and existing properties and land may be subject to a greater risk of flooding as a result. Additional off-site sewers, or improvements to existing sewers, will be required to provide sufficient capacity to service the development.'*<sup>3</sup>

It should be noted that Southern Water is not able to formally object to planning applications as it has a statutory duty to allow connections, however the acknowledgement that there is inadequate capacity within the system is significant in determining the appropriate scale and location of new development within the parish.

In considering new locations for development and to minimise future risks, it is important that developers consult the latest Strategic Flood Risk Assessment (SFRA) and Environment Agency flood maps to ensure that development is avoided in areas at risk from flooding, or likely to be at risk as a result of climate change, or in areas where development is likely to increase flooding elsewhere.

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<sup>1</sup> Barnham Flooding & Pollution Position Statement, Atkins (2010)

<sup>2</sup> WSCC Report on June 2012 Flood Event (November 2012)

<sup>3</sup> Southern Water Planning & Development Services, Ref:PLAN-001591 (2012)

**Policy:**

- The completion of the Surface Water Management Plan for Lidsey Catchment and the Aldingbourne & Barnham Rife Strategy are seen as intrinsic to the protection of the parish from additional flood risk and to the future remediation and management of problems associated with the current drainage network. Until the completion of these studies, any development, other than minor housing or commercial extensions, will not be supported.
- No development will be permitted unless it is demonstrated that adequate drainage capacity exists or appropriate drainage capacity can be provided as part of the development, including the provision of a site specific Flood Risk Assessment.
- The site specific Flood Risk Assessment must demonstrate that the development will be safe, including access and egress, without increasing flood risk elsewhere and reduce flood risk overall. Any proposed mitigation measures proposed as part of the Flood Risk Assessment must be deliverable and sustainable, including details for the provision of long term maintenance and management of any new feature for the lifetime of the development.
- All developments in flood sensitive areas, including those within the Lidsey WWTW catchment area will be designed and constructed to reduce the overall level of flood risk when compared to their current use.
- In line with Level 5 of the Cod for Sustainable Homes (DCLG), all new dwellings will be designed to have a predicted water discharge of no more than 80 litres of water per person per day.
- Consideration should be given to the use of Sustainable Urban Drainage Systems (SUDS) as alternative to conventional drainage where appropriate. Sustainable drainage systems on private property, whether they are private or adopted, must be approved by the relevant SUDS Approval Body (SAB) prior to the commencement of development. All approved sustainable drainage systems shall be recorded on the flood risk register.

**These policies aim contribute to sustainable development by:**

- Identifying appropriate flood protection measures to minimise the impact of climate change.
- Preventing adverse harm to the water environment in terms of pollution and flooding.
- Making sure that the necessary flood protection and drainage infrastructure is in place before further development takes place.
- Requiring new housing development to reduce water discharge.
- Ensuring that the appropriate long term maintenance and management mechanisms are put in place for flood protection and SUDS features for the lifetime of the development.

**Reason for our Policies:**

Aldingbourne Parish is located on the Arun coastal flood plain and together with the neighbouring parishes of Barnham and Eastergate have experienced recorded incidents of localised flooding over a number of years during peak rainfall events. The most recent incidents occurred in June 2012 and December 2012 resulting in the flooding of resident homes and property, surcharging of the local foul sewer network and closure of the A29. The community has strong views on the need to reduce and minimise flood risk and seeks to ensure that potential development does not increase the risk of flooding within the Parish or to its neighbours.

It is strongly in favour of restricting development until the Surface Water Management Plan has been completed and actions to reduce flood risk have been put in place.

Aldingbourne Parish Council supports the partnership between WSCC and SWS to progress the Surface Water Management Plan for the Lidsey Catchment.

Aldingbourne Parish Council supports the EA to develop the Aldingbourne and Barnham Rifes Strategy.

Completion of an area drainage model for the Lidsey Catchment is seen as imperative to better understand and determine future investment needs due to growth and possible future flooding.

**Relevant Policy Guidance:**

Flood and Water Management Act (2010)

National Planning Policy Framework (NPPF)

- NPPF10: Meeting the challenge of climate change, flooding and coastal change

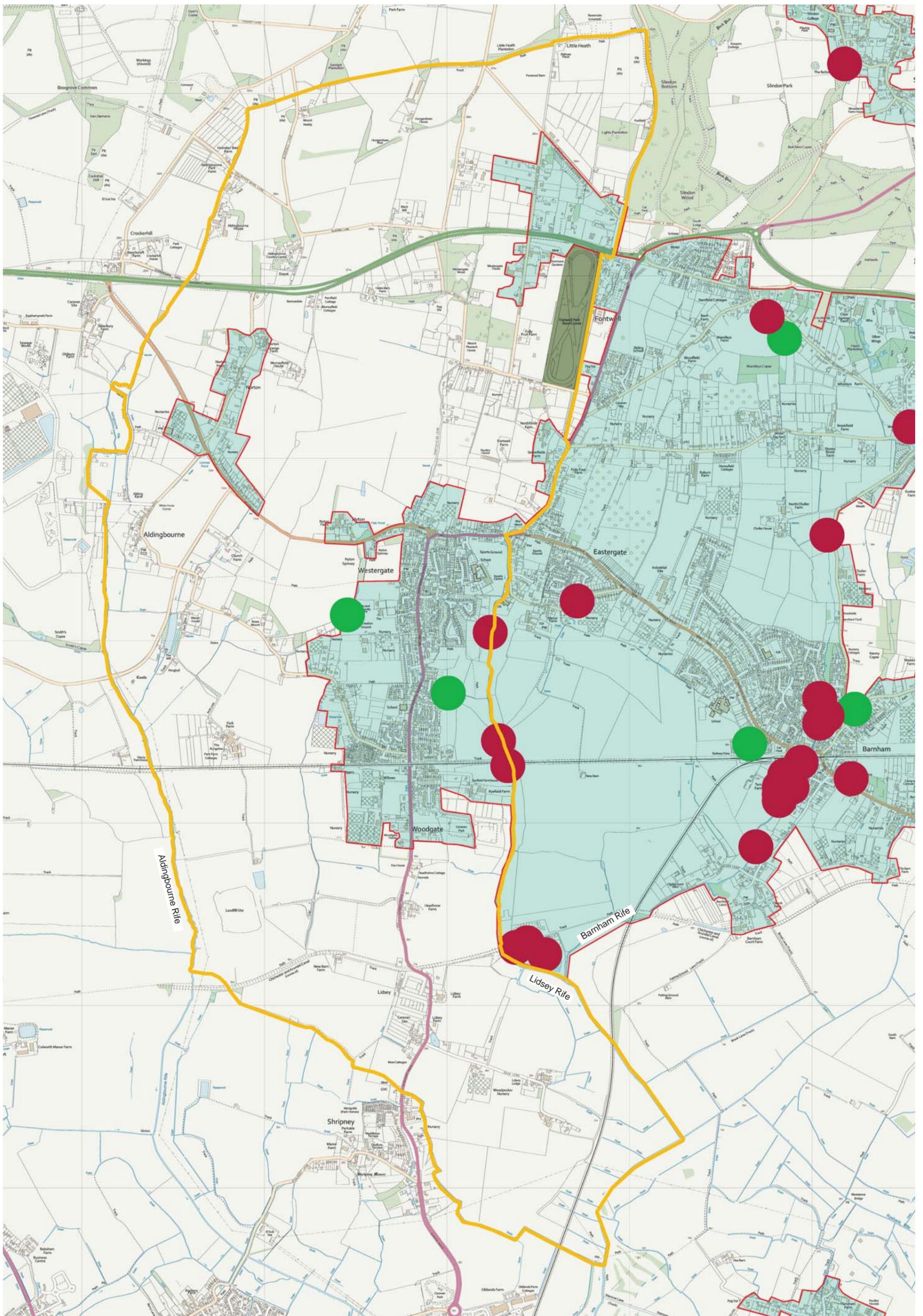
Arun District Draft Local Plan (2013-2028)

- DM 40: Flood Risk

- DM 41: Sustainable Drainage Systems

**Abbreviations:**

|      |                                    |
|------|------------------------------------|
| ADC  | Arun District Council              |
| AOD  | Above Ordnance Datum               |
| APC  | Aldingbourne Parish Council        |
| EA   | Environment Agency                 |
| LCA  | Landscape Character Area           |
| NPPF | National Planning Policy Framework |
| SDNP | South Downs National Park          |
| SWS  | Southern Water Services            |
| SAB  | SUDS Approval Body                 |
| SFRA | Strategic Flood Risk Assessment    |
| SUDS | Sustainable Urban Drainage System  |
| WSCC | West Sussex County Council         |
| WWTW | Waste Water Treatment Works        |



# Aldingbourne Parish - Pollution Incidents

Draft

-  Aldingbourne Parish Boundary
-  Lidsey STW Catchment (Source: Environment Agency)
-  Pollution Incidents: Water Industry (Source: EA 2010)
-  Pollution Incidents: Other Sources (Source: EA 2010)

Date: Mar 2013  
Drawing No. APC\_NP\_006  
Rev.A

SCALE

