

# Public Document Pack



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11 September 2014

Dear Councillor

I am now able to enclose, for consideration at the meeting of the **DOVER JOINT TRANSPORTATION BOARD** on Thursday 11 September 2014 at 6.00 pm, the following reports that were unavailable when the agenda was printed.

7 **DRAINAGE UPDATE** (Pages 2 - 9)

To receive an update on drainage matters from Mr Steve Rivers on behalf of Katie Lewis, KCC's Drainage Manager.

Yours sincerely

A handwritten signature in black ink, appearing to be "Nicky", written over a horizontal line. The signature is fluid and cursive, with a long, sweeping tail that extends to the right.

Chief Executive

## Response to Member questions regarding highway drainage in Dover

### The highway drainage cleansing regime

Since September 2011, drainage cleansing has been undertaken on a cyclic basis and the current cleansing frequencies are as follows:

Road Type/ Risk Category	Number of Gullies	Cleansing Frequency
Hot spots*	-	Every 6 months
High Speed Roads	9,000	Every 12 months
Strategic and Locally Important Routes	41,000	Every 12 months
Minor Urban <sup>1</sup> Roads	115,000	Visual inspections every 12 months + targeted cleansing as required
Minor Rural Roads	85,000	Every 2 years

\* Hotspots are sites that are known to be particularly prone to significant flooding i.e. highway safety or residential property is impacted. An six monthly cleanse is undertaken where enhanced maintenance is deemed to be an effective way of reducing the risk of flooding.

In addition to cyclic cleansing, reactive cleansing is undertaken at sites where highway surface water is deemed to pose a risk to highway safety or where properties are at risk of internal flooding.

The scheduled approach to cleansing has significantly increased the number of drains being attended however perception of the service has remained divided. Feedback from Members, Parish Councils and members of the public has indicated that there is a demand for a more reactive service.

Proposed changes to the way in which the service is delivered are currently being reviewed and once approved will be shared with JTB members. The key focuses of these changes will be the following:

- Delivering the service in a way that is more responsive to customer demand
- Improving the visibility of the service we provide by publishing quarterly programmes of work
- Continuing to maintain the highway drainage system in a cost effective manner

### Preparing for winter

#### Planning

Following the flooding last winter, a lot of work has been undertaken in partnership with the Environment Agency, Southern Water and many of the district councils to review how we responded. Opportunities for improvement have been identified and our response plan has been updated accordingly.

#### Maintenance

Throughout October and November we will be carrying out targeted cleansing at all drainage “hotspots” in preparation for the winter.

Hotspot sites are identified and prioritised via a review of all flood reports received over the preceding 12 months. Consideration is given to the frequency, severity and impact of the flooding on highway safety, residential property and the movement of traffic on the road network.

A list of locations in Dover, including Sandwich, Worth and Woodnesborough, that will be attended in October and November as part of this targeted maintenance regime has been attached for Members’ information.

## Drainage Improvements

The County Council is investing an additional £3m to enable the completion of 120 drainage improvement schemes in 2014/15. The following locations in Dover have been included in this programme of works:

- Church Hill, Sutton
- Cooting Road, Aylesham
- Elms Vale Road, Dover
- Homestead Lane, Sutton
- Kingsdown Road, Walmer
- Nursery Lane, Whitfield
- Ranelagh Road, Deal – Complete
- Strakers Hill, Sutton
- Wootten Lane, Denton with Wootton
- Adelaide Road, Elvington
- Griffin Hill, Dover

In addition, minor repairs and improvements will be undertaken. These will be prioritised on the basis of the associated risk to highway safety and the risk of internal property flooding.

## The capacity of the drainage system in Dover

Development and changes in land use have resulted in increased volumes of surface water being discharged into the drainage system. In many places such as Deal and Sholden, the sewers are now running at capacity.

In many areas of the county, the highway drainage system discharges into a third party sewer, for example the public surface water sewer or the combined sewer which are maintained by the local sewerage authority. There is no mechanism for us to require the party responsible for the sewer to upgrade their infrastructure so the only option is to divert the water elsewhere. Where the drainage system is owned and maintained by the County Council, the drainage system can be altered, upgraded or replaced entirely.

Diverting or changing a drainage system often requires significant investment and in the past, cost has made schemes of this nature unaffordable. Instead, the impact of flooding due to insufficient capacity has tended to be managed by installing permanent warning signs, increasing the height of kerbs and re-profiling the road to divert water away from properties.

## Specific site updates

Site Name	Update
Kingsdown Road, Walmer	The installation of new road drains and 2 new soakaways is scheduled to commence on 22 September 2014
Albert Road, Deal	A full investigation has been completed following flooding in May 2014. A final report compiled by the KCC Flood Risk Management Team has been attached for Members' information.
Canute Road, Deal	Repairs to an existing soakaway were completed in June 2014 – we have received no further reports of flooding however we will continue to monitor the site over the next 12 months.
Lord Warden Avenue, Deal	Four soakaways were located and extensive cleansing was completed in July 2014 – we have received no further reports of flooding however we will continue to monitor the site over the next 12 months.
Homestead Lane, Sutton	Pond clearance works scheduled to commence in October 2014
Ranelagh Road, Deal	Two additional gullies installed in July 2014 - we have received no further reports of flooding however we will continue to monitor the site over the next 12 months.
Church Lane, Deal	No current plans as no reports of flooding since 2011
Mill Hill, Deal	No current plans as no reports of flooding since 2012

## Known Hotspots

The following sites have been identified following a review of the reports of flooding received over the past 12 months.

Each site has been assessed and where enhanced maintenance is deemed to be beneficial, a 6 monthly cleanse of the drainage system will be undertaken.

Alkham Valley Road	Alkham
Hogbrook Hill Lane	Alkham
The Street	Ash
Aylesham Road	Aylesham
Cooting Road	Aylesham
Palm Tree Lane	Aylesham
Northbourne Lane	Bettsehanger
Albert Road	Deal
Middle Deal Road	Deal
Cambridge Terrace	Dover
East Cliff	Dover
Elms Vale Road	Dover
London Road	Dover
Snargate Street	Dover
Broadsole Lane	Hougham Without
Elms Vale Road	Hougham Without
Old Court Hill	Nonington
Dover Road	Sandwich
New Street	Sandwich
Long Lane	Shepherdswell With Coldred
Hotel Road	St Margarets At Cliffe
Reach Road	St Margrets At Cliffe
Alkham Road	Temple Ewell
Alkham Valley Road	Temple Ewell
Dover Road	Walmer
Palmerston Avenue	Walmer
Sandwich Road	Whitfield
Staple Road	Wingham
Sandwich Road	Worth

# Flood Investigation Report

## Albert Road – Deal Dover

**Kent  
County  
Council**  
kent.gov.uk



As the Lead Local Flood Authority for Kent, the County Council has a duty to investigate flood incidents as detailed within **Section 19** of the **Flood and Water Management Act 2010**:

A flood event occurred on 21<sup>st</sup> May 2014 at Albert Road, Deal. The flood event caused damage to six properties.


<b>Date of Incident:</b>	21 <sup>st</sup> May 2014	<b>Date of Investigation:</b>	22 <sup>nd</sup> May - 11 <sup>th</sup> August 2014
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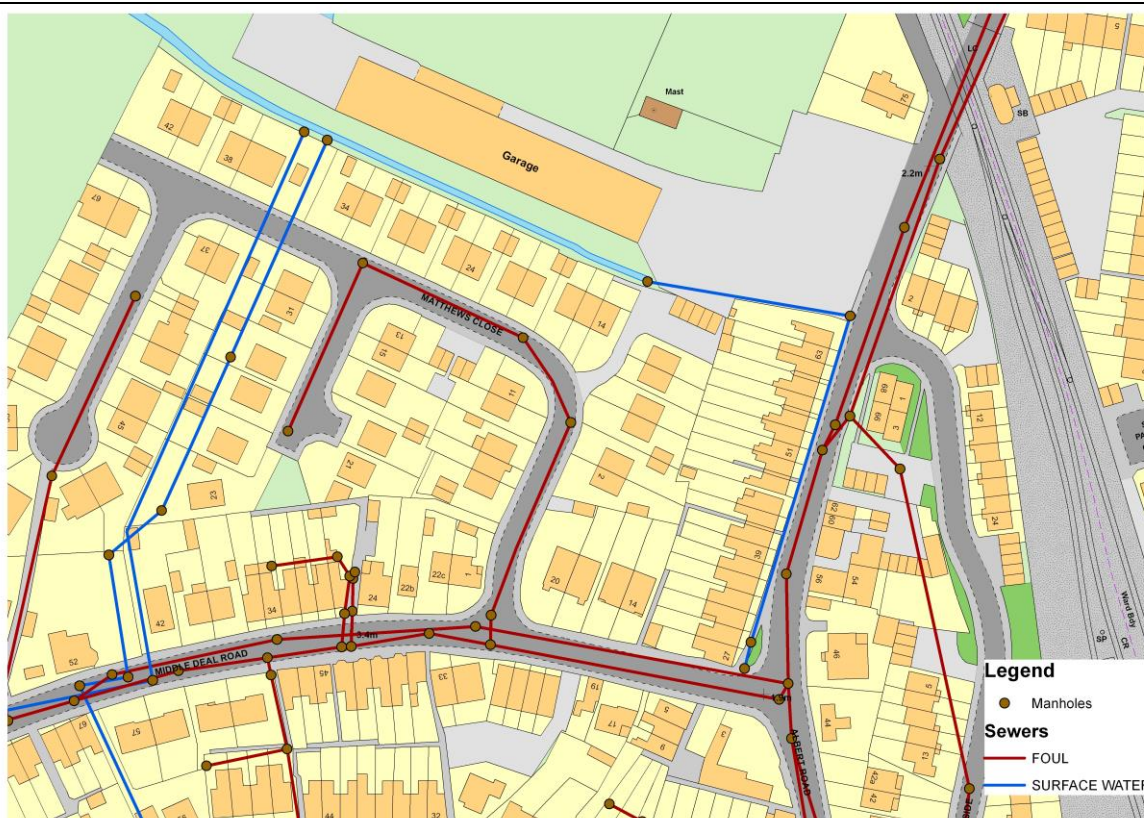
**Site Location:** Albert Road, Deal



**Figure 1** Location plan



<p><b>Summary of Extent &amp; Impact:</b></p>	<p>On the 21<sup>st</sup> May 2014 it was reported to Kent County Council that Albert Road, Deal, shown in Figure 1 had flooded. Photo 1 shows the flooding that was experienced.</p> <p>The flooding followed a period of heavy rainfall and resulted in damage to several properties on Albert Road and flooding on the road, estimated to be approximately 30cm deep. Six properties were flooded internally, and damage was reported to properties and vehicles.</p>  <p><b>Figure 2 Flooding at Albert Road on 21 May 2014</b></p>
<p><b>Cause:</b></p>	<p>There are two foul sewers under Albert Road. Foul sewers carry foul sewage to a sewage treatment works. Foul sewers usually also carry surface water as well as they are often in areas where the sewer was used to carry both foul sewage and surface water.</p> <p>In Albert Road the sewers flow under gravity to the pumping station on Golf Road, where the sewage is pumped to the sewage treatment works at Weatherlees Hill near Sandwich.</p> <p>There is also a separate surface water sewer in Albert Road that collects the surface water runoff from a rainstorm event via the gullies in Albert Road and discharges to the ditch at the back of Matthews Close.</p> <p>These sewers can be seen on Figure 3. The two foul sewers are 1200 mm and 450 mm in diameter and the surface water sewer is 450 mm in diameter.</p>



**Figure 3 Albert Road sewers**

An unexpected electrical fault at the Golf Road pumping station resulted in the foul sewers backing up with the rainwater that was entering them and surcharging. Albert Road is the low point along these sewers and the excess water discharged there.

Once the water discharged onto the road there it was unable to escape quickly enough. The surface water sewer, which was already carrying the surface water from Albert Road, does not have the capacity to carry the water surcharging from the foul sewers, due to the difference in their sizes (nor is the surface water sewer intended to provide back-up in this eventuality).

**Drainage Assets:**

Southern Water Services own and is responsible for the maintenance of the surface water and foul sewers located in the vicinity of Albert Road and the foul water pumping station located on Golf Road.

Southern Water has undertaken a survey of these systems since the flooding and has reported that the pumping station failed due to an electrical fault. They have also found that there was silt and debris in their sewer, which they have removed.

Kent County Council (KCC) is responsible for the maintenance of the road drains and connections to the surface water sewer located on Albert Road. KCC has undertaken a survey of the road drains and found these to be clear and working properly. The road drains have been cleared of the foul effluent from the flooding.

The surface water sewer discharges into the ditch at the rear of Matthews Close which flows into the network of drains and ditches on the marshes. Dover District Council are responsible for the maintenance of the ditch, KCC is responsible for the maintenance of the culvert.

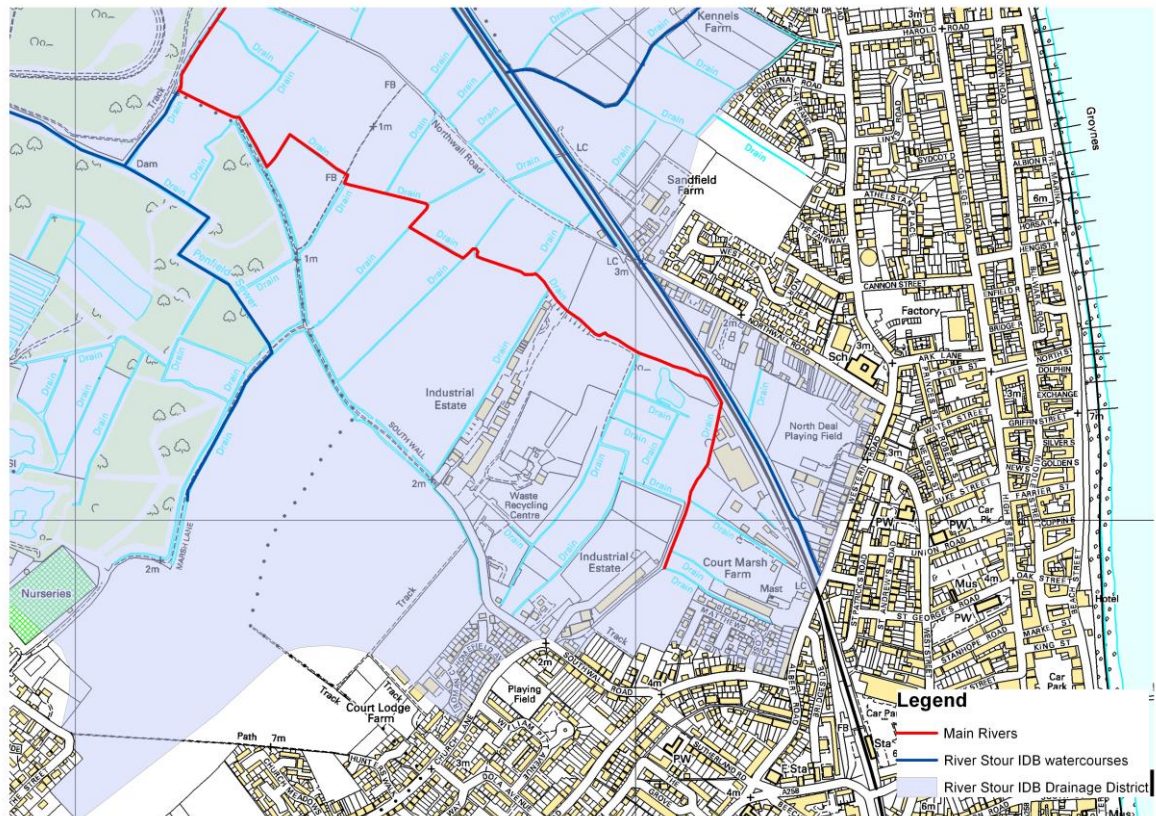
KCC has inspected this ditch and the culvert and found them to be working properly. Work was being undertaken at the time of the flooding to improve this ditch. These works were not found to have caused any problems. A further explanation of these works is given below.



**Catchment Area:**

Albert Road is located to the north-west of Deal town centre. Topographically the area of flood risk is at a low point and overland flow from the south is trapped by the railway embankment. The properties on Albert Road do not have basements.

There is an area of marshes to the north west of this part of Deal. This area has a number of ditches, drains and rivers to manage water levels. Some of these watercourses are main rivers, which are managed by the Environment Agency. The other watercourses are known as ordinary watercourses, these are the responsibility of the neighbouring landowners. The River Stour Internal Drainage Board oversees watercourses within its district, some of these ordinary watercourses it adopts and provides maintenance for. Figure 4 shows the main rivers, the area of the River Stour IDB and the watercourses they provide maintenance for.



### Figure 4 River and drains near Deal

The ditch at the back of Matthews Close is an ordinary watercourse and part of this system. There has recently been work undertaken by the River Stour Countryside Management Partnership to improve this ditch.

The ditch is open at the Albert Road end and then flows into a culvert. There is an opening for the surface water sewers in Matthews Close to discharge into the ditch and then it is culverted again to the Penfield Sewer, a main river.

The proposed works are to provide an open ditch that runs parallel to the culvert. This will provide increased capacity in the ditch and an improved local environment. At the time of the flood the works had commenced but not been completed. These works did not prevent the culvert from functioning and inspection of the culvert has shown that it was working properly,

The improvement works are to be completed, which will include widening the ditch, which could not be done initially as the building on the site next door prevented it, and planting the area.

Once this has been completed the River Stour IDB will be invited to adopt the watercourse to maintain it.



<b>Historical Information:</b>	There has been previous flooding reported on Albert Road in 2006, June 2007, January 2008 and August 2010.
<b>Responsible Bodies:</b>	<p>Southern Water Services own and is responsible for the maintenance of the surface water and foul sewers located in the vicinity of Albert Road. They also own and maintain the foul water pumping station located on Golf Road.</p> <p>Kent County Council is responsible for the maintenance of the road drains and connections to the surface water sewer located on Albert Road.</p> <p>Dover District Council is responsible for the maintenance of the open ditch located to the rear of Matthews Close. Kent County Council is responsible for the maintenance of the culvert in this ditch.</p> <p>Kent County Council has no legal duty or authority to require Southern Water Services to repair, renew or enhance any part of their infrastructure.</p>
<b>Recommended Actions:</b>	<p>All drainage assets should be regularly checked and maintained by the responsible party(outlined above)</p> <p>Southern Water Services should investigate the cause of the electrical fault which resulted in the failure of the pumping station and take appropriate steps to minimise the likelihood of such a fault recurring.</p> <p>The works tot eh ditch at the rear of Matthews Close should be completed.</p>
<b>Next Steps:</b>	Kent County Council will circulate this flood investigation to all relevant stakeholders and publish this document online at <a href="http://www.kent.gov.uk/flooding">www.kent.gov.uk/flooding</a> .