

# Flood Investigation Report

Upon learning of the following flood event the Council determined it was necessary to carry out an investigation under Section 19 (1) of the Flood and Water Management Act in order to determine which risk management authorities had relevant flood risk management functions and whether each of those risk management authorities had exercised or was proposing to exercise those functions in response to the flood. In accordance with Section 19 (2) of the Flood and Water Management Act this report details the results of the investigation.

## Details of the flood event

**Reference:** 19122011/SO163JW  
Daisy Dip

**Date of flood event:** 19<sup>th</sup> December 2011      **Date flood event was reported to SCC:** 19<sup>th</sup> December 2011

**Date Investigating Officer was informed:** 20<sup>th</sup> December 2011      **Date of investigation:** 21<sup>st</sup> December 2011

**Reason for investigation:** Frequency of flooding

**Location:** Daisy Dip

**Duration:** Less than 12 hours

**Identified source(s):** Fluvial flooding from an ordinary watercourse

**Cause/pathway:** Heavy downpours resulting in large quantities of surface water being discharged into the watercourse from the surrounding area through a number of surface water drains (responsibility of Southern Water) and surface runoff from gardens and Daisy Dip park (Photos 1 – 4). The problem is exacerbated by rubbish and debris, intentionally or naturally, blocking the river channel, culverts and pipes under the bridges/footpaths and the trash screen (Photos 5 – 7).

### **Photos:**



Photo 1: Surface water drain (circled) which discharges into the watercourse



Photo 2: Surface water drain (circled) which discharges into the watercourse



Photo 3: Surface water runoff from gardens



Photo 4: Runoff from a spring within Daisy Dip park



Photo 5: Culvert under a foot bridge



Photo 6: Blocked piped section under a footpath



Photo 7: Trash screen where the watercourse enters the culvert under Lobelia Road

**Extent of flooding:**

Footpaths/bridges and natural flood plain flooded.

**History of flooding:**

Open Spaces team reported that flooding incidents at Daisy Dip occur quite frequently.  
Flooding incident recorded on Copperfield Road in September 2007.

**Additional information:**

Bassett Wood/Daisy Dip is semi-natural woodland and recreational park (managed by the Open Spaces team) which has an ordinary watercourse running along its length. The watercourse has two main tributaries (see Figure 1):

- One flows through Bassett Wood which extends from the vicinity of between Spindlewood Close and Redwood Way. A number of small bridges and footpaths cross over the watercourse at various points along its length resulting in small sections being culverted

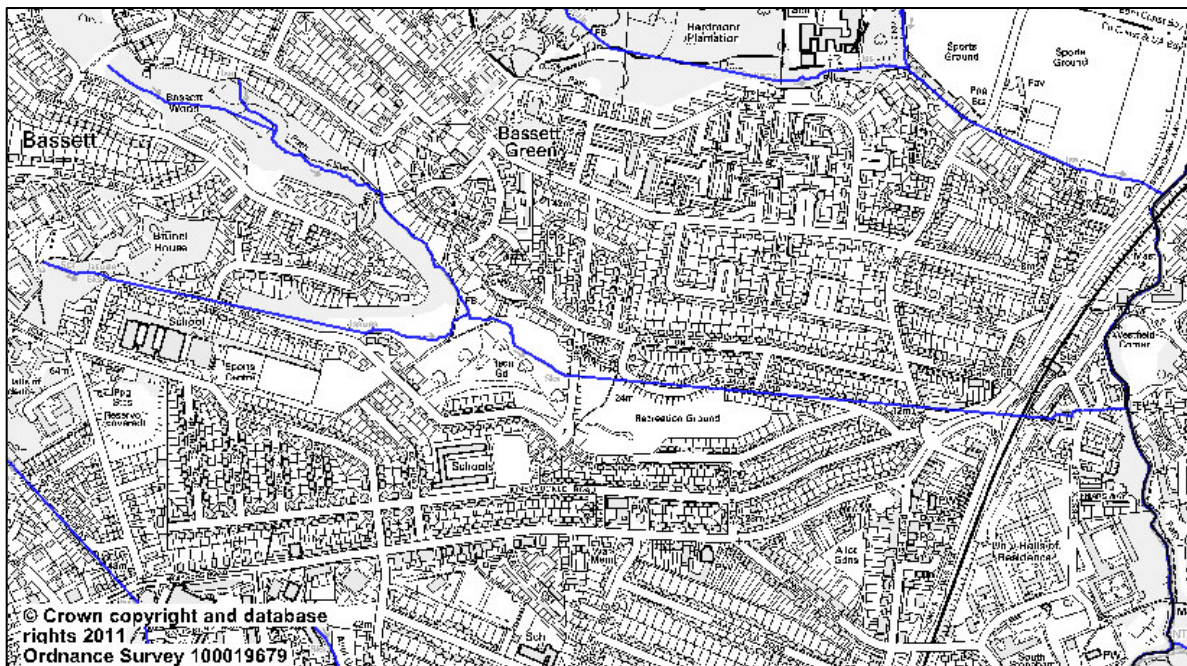
and piped.

- The second tributary extends from beyond Copperfield Road and is culverted beneath Copperfield Road until it reaches Daisy Dip.

The converged watercourse flows through Daisy Dip at its lowest point and enters a culvert, protected by a trash screen, under Lobelia Road which directs the water east and eventually enters Monks Brook.

The topography of the Bassett Wood/Daisy Dip park area provides a natural low point relative to the surrounding built up areas. This enables the drainage (natural and man-made) from the surrounding areas to be directed (largely by gravity) towards the watercourse to eventually be discharged into the River Itchen via Monks Brook.

The conveyance of water flow throughout the length of the watercourse is limited by the size of the culverts and piped sections and thus further restrictions can occur if they become blocked, either partially or fully. The natural meandering channel and vegetation helps to slow down the flow of water and the areas adjacent to the channel form the natural floodplain during extreme flows due to increased surface water discharge during heavy downpours. Runoff from Daisy Dip is slowed down by the grassed areas, particularly where the grass is allowed to grow longer.



**Figure 1: River Network through Bassett Wood/Daisy Dip**

### **Outcome of the investigation**

*Risk management authorities identified as having a relevant flood risk management function(s) in relation to the flood event.*

***Risk Management Authority:***

Southampton City Council

<b><i>Flood Risk Management Function:</i></b>	The Council is the riparian landowner <sup>1</sup> for the watercourse within Bassett Wood & Daisy Dip.
<b><i>Action/proposed action in response:</i></b>	To continue the current management of the open space which fulfils the Councils responsibilities as a riparian landowner. This includes: <ul style="list-style-type: none"> <li>• maintaining the bed and banks of the watercourse, and also the trees and shrubs growing on the banks;</li> <li>• clearing any debris (either natural or man made) obstructing the conveyance of water in the channel or blocking the culverts, trash screen and pipes.</li> </ul>
<b><i>Recommendations:</i></b>	It is recommended to allow the grass within Daisy Dip, particularly in the areas surrounding the watercourse, to remain longer as this slows down the runoff from the park into the watercourse, reducing the potential increase in water volume within the channel during and after a rainfall event.
<b><i>Additional comments:</i></b>	Due to the low priority of flood risk in this area given the limited number of assets at risk (namely the footpath/pedestrian access routes) it is not recommended that any additional action, other than to continue the current management of the site, is necessary at present. <p>However, if works to improve Daisy Dip are proposed in the future it would be recommended to consider increasing the size of the culverts and pipes under the bridges/footpaths to improve the conveyance of flows throughout the watercourse.</p>
<b><i>Date completed:</i></b>	5 <sup>th</sup> January 2012
<b><i>Completed by:</i></b>	Bernadine Maguire (Flood Risk Management Officer)
<b><i>Verified by:</i></b>	Bill Clark (Sustainability Policy Manager)

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<sup>1</sup> Riparian landowners are those who own land adjoining a watercourse.