



OFFICER REPORT TO LOCAL COMMITTEE (WOKING)

FLOODING REPORT

20 FEBRUARY 2008

SUMMARY

The Local Committee asked for this item to be presented at the next available Local Committee meeting to obtain a better understanding of the County Council's response to flooding within the Woking Area. This report does not try to attempt to repeat all the comprehensive information contained in the Flooding Task Group Report presented to a joint meeting of the Environment & Economy and Transportation Select Committees, which was held on the 10 January 2008, nor the Executive Report dated 29 January 2008. These reports can be found on the County Council web site www.surreycc.gov.uk/committee papers.

This report attempts to summarise the Flooding Task Group's work and how it relates to Woking, identifying 'wetspots' and what are the causes of the flooding.

This is an information item

Background

- 1.1. Following a period of relative drought, from 2003 to 2006, Surrey together with many other parts of the country, suffered a series of prolonged and heavy rainfall that resulted in flooding in a number of areas around the County. Furthermore, the period between May to July 2007 was the wettest May to July period on record (back to 1860) and river levels in some places around the country were at their highest for over 60 years.
- 1.2. Whilst not comparable with other areas in the country, the flooding in Surrey caused significant damage to a number of homes, properties and impacted on the surroundings of many residents and their neighbourhoods.
- 1.3. Surrey County Council (SCC) as the Highways Authority is responsible for maintaining gullies, highways ditches and other highway related drainage systems. The Environment Agency Review of the 2007 floods found that across the country over two thirds of properties that were flooded during this period were so because drains, sewers and ditches were overwhelmed. The Council is responsible for flooding that is the result of blocked or poorly maintained highways drainage systems and to this end has an important role to play in minimising surface water flooding in the County.
- 1.4. Some of the more significant risks of flooding (e.g. flooding from main rivers) are beyond the County's control and are the responsibility of the Environment Agency. Some areas have high flood risks because they naturally fall within a flood plain, or more randomly some areas have flooded as a result of freak storm events that have created flash floods. In such circumstances there is often little the authorities can do as from time to time the sheer volume of water will sometimes overwhelm the drainage systems in place.
- 1.5. Many of the sewage and drainage networks across Surrey and the UK are old and antiquated and were not designed to cope with the sheer volumes of water that now pass through them in heavy downpours. To compound the problem, the South East Plan identifies growth levels of 32,000 homes to be built in the South East per annum. This will have significant implications for Surrey and will mean more land paved and more water running off. It will also mean more housing developments connected to an already burdened drainage system.
- 1.6. In March 2007, the County Council Executive earmarked a package of measures, spending an additional £1 million over and above last year's expenditure which is funding work already underway in a number of problem areas. This money has been designated for highways related flooding works such as gully cleaning and jetting,

major works and localised drainage repairs such as ditching and drainage surveys.

- 1.7. The SCC Transportation Management Team established a project team led by Mark Howarth, (Geotech Environmental Engineer) and as part of this work, the Transportation and Environment and Economy Select Committee's set up a Flooding Task Group (FTG) to investigate the problems, to make recommendations and to ensure that the money was spent effectively and in the areas of highest need.
- 1.8. The County Highway Management Team had commissioned an internal report in December 2006 entitled "Highway Management of Flooding and Drainage". This report was produced in draft during February 2007 and the FTG acknowledge the importance of this report and the recommendations within it as constructive background material in identifying the best way forward.
- 1.9. The work of the service presented a good opportunity to look at the issue of flooding to see how Surrey County Council could better mitigate the problem of flooding in the future. In doing so the FTG have fulfilled their important scrutiny role as well as their role as community leader by making recommendations about services that are not directly under the control of the Council. The project led by Mark Howarth has been the in-service vehicle to bring the work of the FTG together.
- 1.10. Although sometimes difficult to isolate, it should be noted that the FTG was primarily interested in flood mitigation or prevention rather than flood response. As part of the Civil Contingencies Act, the Local Authority has an important role to play in flood response, but it was not the focus of the FTG's work in this report.
- 1.11. The report refers to the term 'wet spot'. A wet spot is a type of flooding that occurs on the highways and is defined in this report as an area on the highway where water is causing a safety hazard or an inconvenience to the public
- 1.12. The FTG's terms of reference identified three main areas for enquiry:
 - To understand the main causes of flooding in Surrey.
 - To identify where the main problem areas or 'wet spots' are in the County (defined as an area vulnerable to flooding).
 - To identify what can be done to mitigate the problem in both the short, medium and long term

2. Methodology

- 2.1. The FTG undertook a series of flood site visits around the County to learn about drainage systems and to see examples of flooding problems (culverts, ditches adjacent runoff) and the technology used to deal with the problems. (Jetters, Vactor Units etc...).
- 2.2. In order to collect information on wetspots in the County, the FTG sent out a questionnaire to all Members of the County Council, Borough, District and Parish Councils to identify flood prone areas in each of their locations in the County.
- 2.3. The information collected from this research was added to an existing database of wetspots that was compiled by Mark Howarth in conjunction with local Maintenance Engineers from around the County.
- 2.4. Although still in an early stage of development, this database has been used to produce a comprehensive map of all reported wetspots in the County together with details of weather records, flood plains, locations of soakaways and gullies.
- 2.5. Officers then developed, in conjunction with the FTG, a prioritisation process to identify the most urgent works to be completed to address surface water flooding issues in the County in 2007/08 financial year.
- 2.6. This work has identified a future programme of work to address surface water flooding in the County which the relevant Select Committees and Executive will be invited to consider when setting the budget for forthcoming financial years.
- 2.7. In addition to their work on highways related wetspots, the FTG were keen to take a more holistic approach to the issue of flooding in Surrey. The FTG invited representatives from the national Land Drainage Authority (the Environment Agency), the local Land Drainage Authorities (Borough and District Councils), Thames Water, the Highways Authority (SCC) and a housing developer (Bellway Homes) to contribute to a Flooding Workshop on the 23rd October. The objectives of the workshop were:
 - to better understand the problems and future plans and priorities of each organisation with respect to water drainage and flooding in Surrey
 - to investigate and agree areas where organisations can work in partnership to address flooding problems in Surrey for the benefit of Surrey residents and businesses.
- 2.8. In a follow up to the workshop, the FTG visited Ian Tomes, Flood Risk Manager, Environment Agency in Camberley to learn about the

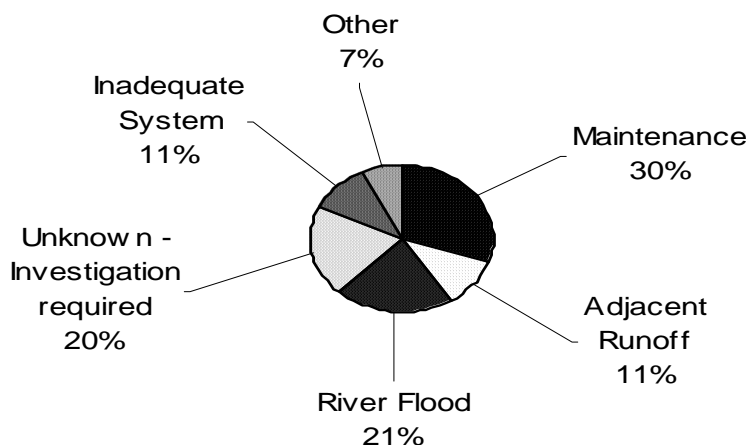
work of the Flood Risk Team, the benefits of Sustainable Urban Drainage Systems (SUDS) and to identify examples of where partnership working is already going on around the County (particularly with reference to the DEFRA Pilot: 'Hogsmill Integrated Urban Drainage Study' in which the Highways Authority is a key partner).

- 2.9. The workshop on the 23rd October identified a number of possible opportunities where organisations could work more closely together in partnership and represents the next stage of the work being taken forward by the FTG. These opportunities should be investigated and although embryonic are included in the recommendations of this report.
- 2.10. The findings and Recommendations in this report draw on the investigations carried out by the FTG as well as the work carried out by the service that has culminated in their report entitled 'Highway management of Flooding and Drainage'. Once this report has been submitted to Surrey County Council's Executive and a set of recommendations have been agreed, the Committees will liaise with stakeholders at a future date in order to evaluate progress against these recommendations.

3. Causes of highways flooding

- 3.1. To understand the problem, the FTG considered the probable causes or 'sub types' of flooding in the County as recorded by officers. The chart below displays this information. The FTG felt that the chart raises a number of key points:
- Firstly, that there is scope for improving the way that the County's drainage systems are maintained.
 - Secondly, that the causes of flooding can be extremely complicated and that more work needs to be done to investigate wetspots where cause and responsibility cannot be established.
 - Lastly, that there are many examples of wetspots that the Council is relatively powerless to do anything about. (groundwater flooding, areas in a floodplain, fluvial flooding, the problem of flash flooding and so on). These points are individually addressed later in the report.

Wetspots database - probable causes of wetspots by type



** Other includes the following:

Downstream Systems
 Damaged Systems
 Groundwater floods
 No System in place
 System overwhelmed
 Soakaway blocked
 WC Carrier

4. Drainage Responsibilities

4.1. The FTG found that the roles and responsibilities of different organisations to address the problem of flooding are complicated and unclear. The Land Drainage Act, as well as other legislation, does not clearly outline the boundaries between different organisations. In a flooding incident it can be difficult to establish cause and effect and even when this is established it is often unclear how to apportion responsibility. This is further complicated by the fact that a lot of the more problematic incidents of flooding in Surrey and elsewhere are likely to involve all or some of the organisations below.

- **Environment Agency** – are the principal flood defence operating authority in England and the national Land Drainage Authority (LDA). They have permissive powers for the management of flood risk arising from designated ‘main’ rivers.
- **The Highways Authority (County Council)** – have responsibility for managing drainage from the highway on the local network, in so far as ensuring that drains, which are their responsibility, are maintained.
- **Water Companies** – are generally responsible for surface water drainage from developments via adopted sewers and in some instances SUDS (Sustainable Urban Drainage Systems). They are also responsible for reservoirs.
- **Borough and District Councils** – in Surrey the Borough and District Councils are known as the ‘local Land Drainage Authority’. They have permissive powers to undertake flood defence works under the Land Drainage Act on any watercourses that are not designated as ‘main rivers’. They can serve notice on a landowner to clear ditches or remove dams to watercourses. As a point of clarification, both the national and local land drainage authorities

only have *permissive* powers to act, but do not have an *obligation* or a *duty* to take action to resolve a specific problem.

- **‘Riparian Owners’** – Any person with property adjacent to a watercourse of any description is described as a riparian owner. It is the responsibility of the riparian owner to deal with water running through modified areas of property within his own land. The owner could do this in a number of ways e.g. by connecting to a public sewer or by maintaining ditches, but has the responsibility to pass on the flow of water without obstruction pollution or diversion affecting the rights of others.

4.2. The FTG noted that the current structure of roles and responsibilities with respect to land drainage appears to leave a gap in accountability as to who is responsible for clearing ditches or maintaining watercourses. The fact that the local and national Land Drainage Authority only has permissive powers rather than a duty or an obligation to maintain watercourses often leaves residents and authorities alike with little course for redress when problems occur. The FTG is therefore eagerly awaiting the ‘lessons learned review’ of the flooding in June and July led by Sir Michael Pitt due to be published in the summer of 2008. They note the interim report that has recently been published and particularly the interim recommendations. The FTG noted that one of the recommendations of this report is that the different organisations involved in surface water flooding (local government, water companies, the Highways Agency, Environment Agency) will need to work better together to reduce the risk of surface water flooding from drains, culverts and sewers.

FINDINGS OF THE TASK GROUP

5. Drainage Spend for 2007/08 – Schemes to be delivered this year

5.1. The overall drainage spend for 2007/8 can be found below. This table summarises the overall capital and revenue the Council spends on all drainage related schemes. Approx £1.2m has been set aside to deal with some of the major flooding problems across the County. This is approximately £800,000 more than was spent last year.

	Revenue	Capital
Gully Cleaning	£946,000	
Additional gully cleans	£500,000	
Other drainage	£432,000	
Capital works		£1,200,000

- 5.2. In order to measure the scale of work that is required to be carried out on the highways drainage system, the FTG assisted officers in collecting information on wetspots across the County. At the time of writing, the current list of wetspots totals 627. Of these 120 are within Woking (**see Annex A**). As well as identifying problem areas this database also records information on flood incidents that follow exceptional rainfall and that vary from storm to storm.
- 5.3. In order to prioritise the problem areas that were identified the FTG, in conjunction with officers, devised a prioritisation process to identify the priority schemes for this financial year and ongoing years (**see Annex B**). All schemes that received a score of 80 or more were considered to be 'high priority schemes'. The FTG note that the final list of schemes to be delivered this year may appear surprising because some high priority schemes do not appear on the list. This is because some schemes that scored 80 or above required further investigation or because there is little the council could do to address the problem. For example, it is often not a good use of resources to spend a large sum of money on a drainage scheme in a flood plain as the improvement will do little to reduce the risk of flooding. The database (Woking only) in Annex A contains a column for commentary that explains when each scheme will be delivered, and if it is not being delivered, an explanation of why its not being delivered. Any schemes requiring further investigation would therefore form part of the programme for next year.
- 5.4. The FTG have worked closely with officers to decide on the final list of schemes to be delivered by the end of the financial year (March 2008). For Woking these are as follows:
- Carthouse Lane Horsell – Drainage scheme
 - Runtley Wood Lane – Ditching scheme

In addition to the above, the Local Committee had requested that urgent priority was given to the flooding that occurred in Market Square outside the Post Office in Woking. This scheme was rated at 34 points and was positioned in 300th Countywide and 23rd within Woking. Some of the Drainage allocation that the Local Committee set aside out of the £100,000 (Drainage £50,000 and Patching £50,000) has been allocated to this scheme for completion by 31 March 2008.

6. Future investment in the County Highway Drainage System

- 6.1. Whilst accepting that future risks will change over time, the FTG notes the amount of work that is facing the Council to address the wetspots throughout the County. This financial year, the council will have addressed 20 improvement schemes from a list of 627. Whilst it is fair to say that a number of the schemes towards the bottom of the

list would not be considered as even a minor flood risk, the database demonstrates the magnitude of work that is required to improve the highways drainage system in the future.

- 6.2. Given the scale of the work that is required, the *FTG recommends that the Executive commits to invest £1.2m capital for the next 3 years to address the problem of wetspots in the County*. Whilst long-term budgetary commitments are difficult over a three-year cycle, the FTG recommends that capital investment continues over a sustained period of time until the higher priority wetspots have been addressed.

SUMMARY

- a) On 26th March 2007, the Executive approved the planned programme of Capital and Revenue expenditure for the new Surrey Highways Service in 2007/8.
- b) In this programme the Executive earmarked an additional £1m on top of 2006/07 expenditure for additional drainage, gully cleaning and other areas of improvements to relieve some of the major flooding issues within the County.
- c) A joint Flooding Task Working Group (FTG) consisting of members from the Transportation Select Committee (TSC) and Environment and Economy (E&E) Select Committee was established to identify how best these additional funds could be spent to maximise “value for money”.
- d) Key objectives of the FTG were to establish and prioritise a database of “wetspots” within the County (a wetspot is defined in this report as an area or location that is vulnerable to flooding); to recommend a programme of improvements to protect the residents and businesses of Surrey from the hazardous consequences of flooding from the highway and to protect the County’s highways asset.
- e) The FTG recommended that the Executive continues to invest a sum of at least £1.2m capital each financial year over the next 3 years in order to reduce the risk of flooding to residents homes, businesses and safeguarding the highway within the County.
- f) The recommendations made by the FTG are divided between those impacting the highways for which the County Council has direct responsibility, and those broader planning and environmental issues which are largely opportunities to create improvements by actively promoting better partnership workings with key public bodies.
- g) The FTG invited the Executive to address all the recommendations outlined in the report to the Executive on the 29 January 2008 to ensure that the County Council’s approach to flooding risks is more comprehensive and robust.

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BACKGROUND PAPERS: See References above

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