SURFACE WATER CONDITIONS BOROUGH OF SPELTHORNE

(Dave Horton 25/10/2006)

Introduction

1. The brief of this report was to identify the areas of Spelthorne prone to flooding by reasons other than those caused by the rivers passing through it. The intention was therefore to gather information from archived files that would give information regarding specific locations with dates when they occurred and the effects. Unfortunately in recent times all written records have been discarded. Though some mapping has been located the information gleaned is very limited. The consequence being that the report is primarily based on personal memories and for this reason dates are unclear and the report by no means comprehensive.

2. As a member of the Highways and Drainage Department of Spelthorne Borough Council for around thirty years I was heavily involved in most of the flooding events that occurred within that time to a lesser or greater degree but it should be noted that in the main these events were ones that affected the public highway. However, they should give an indication of the prevailing conditions in the areas surrounding the locations identified especially as for the most part complaints received would invariably blame highway drainage, or the lack of, for the problem whereas the problem could equally be run off from the private property being the cause.

Background

3. For the first twenty five years or so of my involvement there was very little change in circumstances with regard to the cyclic behavior of groundwater levels. Generally it was found that water table levels rarely fell beneath about 2.0m below ground level. The lowest period was during the summer months rising during the autumn to a peak during the winter before falling during the spring. Thus even during the long ‘drought’ of 1977 deeper excavations would require dewatering systems to be employed.

4. Generally the further from the River Thames the higher the water table. Therefore, in Poyle, once the most northern part of Spelthorne but now within the Borough of Slough, often at its highest the water table would virtually be at ground level. Any rain at that time would often lead to localised flooding with a long delay before dispersal. This led to the Poyle Road carriageway and footway level being raised to reduce the incidents of flooding. Further south the areas of Stanwell and Stanwell Moor though not as seriously affected as Poyle would still have very high water table during the winter months being only just below ground level. Although not as serious as Poyle, heavy rainfall would lead to localised flooding with levels falling relatively slowly.

5. The situation appeared to be compounded at times by the mechanical discharge of surface water to the surrounding area from Heathrow Airport. Though not conclusively proved it was suspected that clearing of surface water from the airport occurred at times contributing to flooding conditions.

6. As stated the further north from the river Thames the higher the underlying water table seems to be. Therefore Ashford, Staines and Shepperton on the whole are generally not noticeably affected by high water tables apart from in pockets. The affect a high water table does have is to increase the time laying water following storms takes to disperse.

7. What should be an obvious impact on drainage to the borough is the numerous gravel extraction areas that have occurred in the past and at present being undertaken in the Shepperton area with further operations likely in Sunbury. Many if not all of the older gravel pits are now filled in and were done so when control of the fill material was not

so controlled as it is now. However, from a personal point of view I am unaware of any correlation between recurring flooding incidents and the presence of old or existing pits. Equally the presence of reservoirs is not an issue I am aware of as a cause or factor with regard to flooding except with the intense rainfall over short periods that appears to happen more and more frequently. This rainfall falling on the large areas of steep banks quickly flows to the toe and depending on the reservoir's location contributes to flooding. This may be that as the construction of the reservoirs and the filling of most of the old gravel pits occurred before I became involved and therefore unaware of theprevailing conditions prior to this time.

History

8. On the whole the disposal of roof drainage has always been by means of soakaways. The major exception to this are the properties built close to or abutting the highway. In these instances rainwater down pipes either discharge directly on to footways or by means of channels onto the carriageway. By either means the rainwater is adds to the burden on the highway drainage system. Town centres have a large number buildings with drainage such as this presumably due to the necessity of locating the shops close to the highway, though there are similar instances widespread across the borough. In all the cases I am aware of they are the older type of property. There is very little evidence of properties discharging roof drainage to the foul sewer system. What examples that came to light were usually unauthorized connections made at a time when the property had major alterations carried out and the person(s) responsible were unaware that such practice was not acceptable.

9. Highway drainage in the main up to the 1950/60s was predominantly piped systems discharging eventually to a local watercourse. This changed to a greater dependence on soakaways, even in cases where a piped system existed and localized flooding occurred the likely solution to the problem would be to construct a soakaway(s) in the immediate area. Presumably this was based on economic reasons set against the cost of maintaining/repairing the existing system or reprofiling the road.

10. A major exception to this is the Elmsleigh Centre and the roads and car parks surrounding it. In this area a piped system exists that falls to a pumping station in Riverside Car Park. Collected water is then pumped into the Thames. One of the few surface water drainage systems in the borough that is the responsibility of TWU.

Watercourses

11. The larger rivers, The Thames, Colne and Wraysbury obviously are main receivers of direct connections from highway drains as well as the smaller River Ash. There are also lesser watercourse that play a major part in conducting drainage to the major rivers. They are:

The Stanwell Brook, Stanwell Ditches & West Bedfont Ditches. (Stanwell & Ashford)

12. Classed as main river both start in the north of Stanwell, one to the east and one to the west. The Eastern leg starts close to Long Lane, travels beneath that road turning west at London Road to the junction at Stanwell Road. The Western leg starts near Stanwell Village runs virtually south to Town Lane near its junction with Clare Road. It then travels under Town Lane joining with the eastern leg at London Road before continuing along Stanwell Road turning into Salcombe Road then continuing south under the railway line and running behind the properties in Woodthorpe Road and Adelaide Road before discharging to the River Ash. Almost the entire length has been piped. Though classed as main river the brooks have been maintained as part of the highway system.

Sweeps Ditch (Staines)

13. Before construction of the Two Rivers Shopping Area pipe work still existed that one time fed water to the ditch from the Colne. Now the head of the ditch is at the junction of High Street and South Street. Sweeps ditch runs across the Elmsleigh Car Park under

the railway and behind Drakes Avenue and towards Knowle Green. It then travels across Staines Recreation Ground before crossing Commercial Road and running alongside Knightsbridge Crescent and Baden Close. After it crosses Laleham Road it continues across fields before joining the River Thames near The Ryde. The major length of the ditch is open after crossing under the railway near Drakes Avenue. It is maintained as a land drain by Spelthorne Borough Council up to Laleham Road at which point it is classed as main river. Though there is generally a flow in the ditch this is artificially maintained by pumping water into it from the River Thames.

Unnamed ditch leading to the Feltham Hill Brook/Portlane Brook. (Ashford & Sunbury)

14. The ditch starts near the junction of Rosary Gardens and Feltham Hill Road and travels in a southerly direction crossing Feltham Hill Road turning East at the end of Southfields Avenue. It continues east till Alexandra Road where it follows the boundary of the open space wher it turns north. The ditch continues north through the grounds of the BP offices in Chertsey Road before crossing Cadbury Road and joining the Portlane Brook. Apart from its early stages the ditch is generally piped in the built up area through to the Portlane Brook. The Brook is generally dry.

Unnamed ditch leading to The Markway Ditch. (Sunbury)

15. The ditch starts just north of Charlton Road junction with Hetherington Road and travels east behind Ashford Water Treatment Works towards the M3. It continues along Nursery Road crossing Green street and eastwards across The Avenue, along Batavia Road before turning southeast along Staines Road East then south along Markway then joining the Markway Ditch. The Markway Ditch runs southward to the River Thames. The ditch is generally piped through built up areas and the remainder open. Water from the storage lagoon at the water treatment works is often discharged into it.

16. These four watercourses form a network that is accessible by much of the surface water drainage not draining directly to the main rivers.

Site Specific Examples of Flooding

Stanwell Moor

17. The area around Hithermoor Road has been subjected to flooding on a number of occasions over the years, the most recent I believe in the winter 2001/2002. There are probably a number of reasons for this area being prone to flooding and certainly the number of ditches present in the immediate and surrounding areas suggest that historically this has always been so. On one occasion, around ten years ago, the major contributory factor to the flooding incident was an old mattress that had been dumped in one of the ditches behind houses therefore not easily seen. The mattress had effectively dammed the ditch and once removed the situation reverted to an acceptable level. The incident in 2001/2002 was primarily caused by flooding by the Colne. An added complication was the adding of foul sewage to the flood waters by a pumping station in the north in Poyle. The system normally pumps to another station located in Haws Lane. Unfortunately the pumps in Haws Lane could not cope with the volume resulting in much of the pumped sewage from the northern station overflowing into the flood waters.

18. Following one occurrence of flooding an investigation was undertaken to see if the ditch along Haws Lane could be brought up to a condition to relieve the situation. However, it was thought possible that this would simply cause further problems at Shortwood Pond, the eventual discharge point. (See example under that title).

19. There is some thought that the pumping from Heathrow Airport into local watercourses may have contributed to flooding in the area in the past.

Moor Lane, Staines

20. Moor Lane has suffered from flooding in various locations along its length from near to the M25 through to its junction with Wraysbury Road. The most recent occasion following heavy rain was at the southern end. Like the Stanwell Moor area the land adjoining Moor Lane is served by a number of ditches but on the eastern side the ditch in that location does not appear to have a discharge point. It does appear that the ditch at one time did fall to the Wraysbury River but possibly at the time of the construction of the railway link from Colnbrook to Staines the ditch was cut though no trace of it could be found when the land was redeveloped for housing (Wraysbury Gardens).

Shortwood Pond

21. Approximately six years ago the office block was affected by rising water from the adjacent pond in Shortwood Common. Investigation was carried out and it appeared that there had been at one time an outfall from the pond that led to the River Ash. The line could be followed but had silted up to only a depression in the ground. At that time discussion took place to carry out works funded by the owners of the offices but nothing came to fruition.

Acacia Road, Petersfield Road, Staines

22. In 1993 the River Ash overflowed in this area causing widespread flooding of back gardens and the common. Further flooding occurred along the Ash right down to Shepperton. The Ash at its start is from the Colne where it is controlled by a sluice gate.

23. From recollection the Colne at that time was in flood and the sluice gate was opened wider to relieve some pressure. More recently flooding on the common area resulted in complaints from residents not so much by the flooding but the time it took for the water to disperse. At that time an attempt was made to reform a ditch in the area but due to the presence of trees along its length it was difficult to achieve much more than a scrape as a greater dig would have caused major damage to the tree's roots. However, some improvement was achieved.

Long Lane, Stanwell

24. Possibly due to the poor condition of the piped watercourse along Long Lane the road has flooded on a number of occasions. Again, like Stanwell Moor, there is a possibility that water pumped from Heathrow Airport may have contributed to the problem in the past.

Bedfont Road, Stanwell

25. Similar situation to Long Lane but more dependant on soakaways.

Station Crescent, Ashford

26. The piped ditch from Stanwell runs through Salcombe Road crossing Station Crescent to an open section of ditch just before passing under the railway. A possible restriction at this point may be the cause of the problem.

Beechwood Avenue, Sunbury

27. Generally confined to the junction with Ashridge Way. Although soakaways are present it is thought that they are part of a linked system with an outfall to the Feltham Hill Brook.

Laytons Lane, Sunbury

28. Similar to Beechwood Avenue but with no outfall. Could be dealt with by connecting to the piped ditch on the northern side of Nursery Road.

Charlton Road, Shepperton

29. Charlton falls within a triangle of land bounded by the Thames Water aqueduct to the north, the Queen Mary reservoir to the west and the M3 motorway to the south-east. It appears that with the building of the M3 Charlton's natural sub soil drainage was cut off with only the River Ash acting as an outlet. Run off from The Queen Mary reservoir's steep banks contribute to the amount of water the natural drainage has to deal with. There is a ditch at the base of the reservoir's banks but there does not appear to be an outlet though there is some evidence one did exist in the past crossing New Road and south across fields to the Ash.

Ashford Road, Ashford Common

30. Running along the side of the Queen Mary reservoir much of the road's drainage runs to the ditch at the base of the reservoir's banks. At times of heavy rain the ditch cannot cope with the volume of surface water run off.

Watersplash Road, Shepperton

31. Near the junction with Ford Close. No apparent reason.

Chertsey Road Ashford

32. Near the junction with Dennis Close. No apparent reason.