



SURREY HEATH BOROUGH COUNCIL

FLOODING IN WEST END VILLAGE

AUGUST 2006 – JULY 2007

SUMMARY OF EVENTS & FACTS

On Sunday afternoon, 13th August 2006 heavy rainfall tracked across Chobham, West End, Frimley, Mytchett, Pirbright and Aldershot. Between 50mm and 100mm of rainfall fell in a 3 or 4 hour period across the above area. This was all summarised in reports issued by the Environmental Agency and SHBC after the event. There were also public meetings and advice on measures to reduce risk to homes.

Some homes were more affected than others by the large rainfall. Some occupants reported the flooding in their homes but others did not, so remain unlisted.

Surrey Heath Borough Council Flooding Mitigation Implementation

In the early part of 2007 Surrey Heath Borough Council drainage engineer reviewed all the data and commenced developing plans to mitigate the affects of similar heavy rainfall.

West End as with other parts of the rural area, especially Chobham, has a complex pattern of water courses and man-made drainage systems – which were overloaded for various reasons – some through lack of maintenance, some through lack of capacity or a combination of both.

Given that West End has nearly doubled its homes over the last 30 years – some newer areas suffered less, due to new and improved drainage systems.

Equally existing and new homes built over the last 30 years have had external conservatories, impervious driveways etc built, which has considerably reduced the absorbent areas of the land and increased

potential run off. Some landowners have illegally diverted rainwater into other properties, drains or foul sewers.

The Nursery Green estate, developed over the last 20 years on the west side of the A322, incorporated comprehensive drainage systems, which include detention basins (balancing pond) and outflows, separate from the original east of A322 systems and Donkey Town. Most of the water flow from West End Village goes into the Trulley Brook – Lucas Green Road – to Addlestone Bourne.

There are many springs in the Chobham Ridges, which form the west side of West End from Donkey Town.

Surrey Heath Borough Council owns Turf Hill Park – North of Red Road and a bunded more storm water detention basin is being considered to control the water run off at the Lightwater/West End boundary – Blackstroud Lane – West.

Anti-clockwise from Gordons Roundabout on the A322 – there are several landowners of the SSSI land and West End Common. Surrey Heath owns about 40 hectares (Brentmoor Heath) with SCC/WEPC owning a triangular area adjacent to the A322 (opposite Gordon school Playing Fields), which contain the old sand pits.

From the west side of the Military track (west of Cuckoo Lane area) to the Maultway, the land is owned by the MOD – some is fenced for security reasons. This land is also west of Priest Lane. Some land between Lucas Green Road and Bisley is owned by SCC. Surrey Wild Life Trust manages a large amount of this land. Controlled and uncontrolled water from West End flows through Chobham to an eventual outfall at the River Thames.

Discussions with Key Landowners

Surrey Heath Borough Council drainage engineer is discussing attenuation measures with these landowners. The proposal is to introduce scrape pool areas and small bunds to reduce the rate of run off of water.

The MOD over the last 20 years, has carried out large scale tree removal and Natural England/SWT are promoting the SSSI as natural heathland. This inevitably reduces water take up from trees and natural foliage – which in turn has increased water run off – pushing original ditches, culverts and indeed the rivers to capacity or overload.

Overload of water systems in Bisley, West End, Lightwater and Bagshot causes extra strain on the ability of the 2 mains rivers – Halebourne and

Trulleys Brook/Addlestone Bourne to carry water to and through Chobham, without overflowing their banks.

The road bridges and culverts under the lanes to a point can help control the flow of water but once overloaded can form a restriction causing flooding into homes.

The open water course through the Nursery Green estate Rebus Close to Fenns Lane, emanates from New England Hill area. This water course was incorporated with detention basin areas. Another large detention basin area was created in Lucas Green Road, opposite the Doctors Surgery to take highway drainage.

Detailed work to the west of the A322 is not dealt with further in this report, save to say some mitigation work has been carried out. A schedule of completed improvement work will be issued in due course.

Problems South of High Street

From the east side of the village water flows into sewers under or adjacent to the A322 between High Street and Fellow Green roundabout from as follows:-

- i) Holly Bank
- ii) Under the footpath to Commonfields (North of BP garage). A sewer collects water from the Meadow Way/Commonfields area and connects into A322.
- iii) A ditch around BP also discharges as do additional gullies into the A322 sewer.
- iv) Gosden Road – connects to the sewer.
- v) At Fellow Green
- vi) At the roundabout, a sewer connects from the Willow Green/Fellow Green estate.

The main sewer then heads west to the Trulley Brook along the Lucas Green Road.

Fellow Green Roundabout & Newbridge

A322 Highway drainage from Fellow Green roundabout to Newbridge (over Trulley/Addlestone Bourne) and from Bisley (Church Road/Shaffesbury Road and Hen & Chickens area) to Newbridge seem to drain with purposely constructed sewers under the highway and culverted ditches.

Willow Green Area

Highway drainage from the Fellow Green/Willow Green estate (some 50 houses) is by pipework constructed under the roads in 1960s. The sewers (as the foul sewer is adjacent to the surface water) pass under private land between bungalows 4 and 5 under Fellow Green Road to the main highway sewers at Fellow Green roundabout.

On the A322 to the west of the Willow Green hammer head (house numbers 3 to 9) a recent development, Gordons Reach, has hard paved large areas on the original gardens to only 3 houses. With the A322 highway sewer full at Fellow Green roundabout (06 and 07 floods) water backed up into Fellow Green and Willow Green, affecting a dozen houses, including internal flooding to one in Willow Green and a new one in Gordons Reach.

The Old Post Office houses on the west side of A322 near Fellow Green roundabout were flooded in 2006 and due to some homeowner improvements/sandbags just avoided same in 2007. The water gradually backed up the A322 highway sewers from Lucas Green Road – preventing drainage from Willow Green area, Gosden/Commonfields area and the High Street area.

The listed building – Fellow Green House (not to be confused with the period house – Fellow Green in Willow Green) between BP and Gosden Road was severely flooded in 2006 and nearly in 2007 (garden severely affected on both occasions).

High Street Area

The A322 highway east side from Gordons roundabout drains in culverted ditches to the memorial trees (opposite The Inn at West End) where it heads east into the High Street by Number 19 and seems to connect with a drainage system in part of the High Street – travelling south in front of Lackeys Auto's past Holly Bank, Commonfields alley, Gosden to Fellow Green roundabout. We understand that Gordons School along with some houses (approx 100 years old) in the High Street have drainage rights into the highway system.

The West End Social Club has right of connection to the highway system. The main gully in the West End Social Club Car Park connects directly to the highway system by the memorial trees.

Where the High Street and A322 have been altered and made up over the years, they are at higher levels than most of the homes and Lackeys Autos. The West End Social Club car park helps drain the High

Street in heavy rainfall. Some gullies in the house drives seems to back flood (2006 and 2007).

The front garden of the homes of the High Street collected flood water and this intermixed via open waste water gullies in the house gardens with the foul water system connected to Thames Water's foul sewers. Foul and surface water intermixed on the West End Social Club site.

Lackeys Auto's – collected a lot of flood water in the front part of the site flooding the forward workshop by some 600mm (2 ft). Also through the rear of Lackey's is some form of outfall from a ditch to the rears of the High Street and Meadow Way homes – Building up the boundary to protect High Street gardens may need to be considered.

Water Flooding into the High Street Area

In 2006 water entered the High Street from Windlesham Road, West End Recreation Ground (overflowed its ditch and outfall), Gordon's School, A322 Guildford Road (traffic lights to Gordons Roundabout), back flooding from A322 highways drainage full to capacity by the memorial trees.

In 2007 – water did not overflow from the West End recreation ground but the flow from Gordons appeared to be similar.

In 2006 the ground was drier and harder, encouraging a greater run off. Whereas in 2007 the previous weather had left the general ground level more absorbent. The recreation ground has an underground drainage system installed over the last 20 years – reducing surface run off into the ditch.

West End Recreation Ground

Following 2006 – West End Parish Council part bunded along Streets Heath at the eastern end by the existing retention pond. To reduce risks of flooding in the future, Surrey Heath Borough Council has prepared a scheme to continue the bund along Streets Heath and around into the Windlesham Road to create a detention basin on the recreation ground (i.e. increasing holding capacity about the ditch) with a controllable outlet to the existing 225mm pipe outfall, which flows into the highway system. More control will mitigate flow into A322 highway system.

Windlesham Road (South)

Windlesham Road drains from either side of the Bagshot Road north to the Lightwater to Chobham water systems (Windle Brook/Halebourne)

and to the South alongside Gordons School past the end of Church Road. Surface water system flows into Windlesham Road from the Church and Bagshot Road area.

In 2006 and 2007 blocked road gullies and pipework in the Bagshot Road diverted water to the South of Bagshot Road into Windlesham Road/High Street area. It seems the gullies normally discharge in the northern part of Windlesham Road, away from the village. We understand these gullies have now been cleared by SCC.

Gordons School (Southside Bagshot Road)

Water enters the Gordons school from crossovers in Bagshot Road, A322 Guildford Road, Windlesham Road (Gordon Houses). Water flows through the site southwards when it rains heavily – partly from the highways and partly from overloaded systems on site – which drain into the A322 highway systems. Some flows out the Windlesham Road exit opposite West End Recreation Ground towards High Street.

Gordon school owned Meax House corner of Bagshot Road and Windlesham Road is well below road level and water flows into this property.

In 2006 and 2007 water built up on the south side of Gordons playing fields and flowed into Streets Heath, across the path in front of West End Social Club into High Street and along the back of the club into its car park.

The ditch to the Gordon playing fields along the Windlesham Road was piped and made up as footpath by SCC in last 5 years.

Notwithstanding, given this pipework has weir kerb drains and may be blocked, it does not seem to have the capacity and inherent attenuation of the previous ditch. Footpath water and extra discharge from Gordons flows onto Windlesham Road.

Similarly the culverted ditch on the A322 has reduced attenuation on the West side of Gordons. The infill is above the Gordons field in places and below the carriageway. Surrey Heath Borough Council drainage engineer is discussing a detention basin in the lower part of the field, with Gordons School, but this will only be effective in conjunction with improvements around the site in conjunction with SCC.

A322 – Guildford Road – West Side

SCC owns the land on this part of the common, south of No.16 towards Brentmoor traffic lights – this contains old sand pits. SCC need to consider if this will be useful as a detention basin to mitigate under

capacity in the main A322 drainage system. This would have to be reviewed with Brentmoor Road to the south.

Brentmoor Road

The area of Brentmoor Heath on north side of Brentmoor Road between A322 traffic lights to the Hare & Hounds Public House, contains a sunken field area, below the road level. This seems to act as a detention basin for this area, albeit there may be some seepage under Brentmoor Road. Surrey Heath Borough Council upgraded drainage behind homes and Hare & Hounds a couple of years ago.

High Street

The footpath from about number 7 High Street to Lackeys Autos needs to be fully surveyed. In places the crossovers slope back from the highway crown into the front gardens. This needs re-engineering and re-modelling to reduce water flowing into properties. This flow was increased in 2006 and 2007 from bow waves created by cars – some moving unnecessarily fast down the High Street. Some gullies are within front gardens below road crown levels.

Lackeys Autos – Guildford Road A322, West End

The workshop nearest the road is very vulnerable to flooding. The footpath levels need to be re-engineered to reduce rainwater entry from A322. A cycle path is due to be constructed here and thus an opportunity to adjust levels.

However, some water will enter from the cottage gardens and to hold this back from Lackeys will cause further internal flooding of at least 2 houses. Moving back the workshop to a higher level will allow an effective water storage/retention area to be created. This needs further investigation.

Lightwater Bypass

Flooding of the Lightwater bypass and Guildford Road into Lightwater (see earlier comment on Turf Hill Park) affects the main access to West End, Bisley and beyond. This will be the subject of more detailed review.

All Landowners

All landowners in West End need to review protection of their own properties, efficiency of drainage and mitigation measures to reduce passing flooding risk to neighbours. Water butts, water

harvesting/recycling needs to be considered to attenuate flows from roofs into the ground. All hard surfaces should be drained on site, where possible. Stored rainwater can save money and is especially useful when drinking water restrictions are in place. Soakaways may need cleaning out or constructed differently to accommodate more water.

General Conclusion

The above has outlined in general the effects of the 2006 and 2007 flooding. Some houses are vulnerable after sudden down pours. Traffic forces water into gardens below road level. The highways drainage system needs to be regularly cleaned to ensure the maximum water is cleared off the carriageway and away from properties. Homeowners will have to take precautions and where possible reduce flooding risk to their neighbours through gardens. SHBC drainage engineer will advise land owners on proper maintenance of existing systems and proposed alterations necessitated by flooding.

SHBC issues information notes and updates on the web sites. Before any alteration to existing drainage system on land is carried out, SHBC must be notified to comply with the the Land Drainage Act. SHBC has powers of enforcement under the Land Drainage Act. Some breaches of Land Drainage and other water acts are a criminal offence, dealt with in the Magistrates Court.

The works in hand, together with these proposed with the full co-operation of landowners and residents will reduce the risk of future flooding. However, some homes because of their location will still be at a higher risk of flooding than others nearby.