THE REIGATE SOCIETY

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LL- REPORT. No.58.3 FLOODING RISKS

Transport Committee.June 2014

PROPOSALS to BUILD & DEVELOP on the rivers Mole, Wey and Thames catchment Areas.

We appeal to all those elected and employed in the planning and development process to consider the personal distress, damage and costs to public and private property caused by the flooding of the drainage catchment areas.

NEW INFORMATION;-

Now that we have the various INSPECTORS REPORTS on the total area of land to be taken for housing, schools, transport, retail, and work places, together with the proposed density of this development and the proposed increase in the density of the existing urban areas, it is possible to calculate the storm water "run off" and reduced time of concentration of flood water in the main rivers. This information combined with the proposals for the **Gatwick and Heathrow Airports** infrastructure, supporting industries and staff housing requirements will make it possible to produce a drainage plan designed to cope with the potential storm water flooding or adjust and revise the development proposals.

THE EXISTING DRAINAGE SYSTEM;-

The River Mole drainage catchment area extends from the North Downs to the Sussex Ashdown Sand of the Wealden dome and from Tandridge in the East to Leith Hill in the West. To the North of the Pipp brook there are records of swallow holes, some capped, in the Chalk before the river passes over and drains the London Clay before joining the Thames.

The River Wey drainage catchment area extends from Leith Hill in the East to Alton in Hampshire and continues northwards form Guildford before discharging again into the Thames.

The River Eden rises within Tandridge and Sussex, Flowing East to the Medway and the Yalding flood plain in Kent.

North of the Mole Catchment area the North Downs drainage system is different in that most drains, including the Motorway drainage and housing estates discharge into soakaways within the Chalk. Some of these drainage systems were transferred to the Surrey County Council as Highway Authority in 1974. New housing and commercial developments together with increased rainfall run off has resulted in more frequent and increased volume flows of water from the **BOURN** springs rising from the Chalk strata at points where it is not covered and sealed by London clay.

OTHER DRAINAGE SYSTEMS;-

Roadside ditches have the capacity to hold large volumes of storm water, but delayed maintenance and cleansing by the adjacent land owner or Highway authority can seriously reduce this storage capacity. In rural areas and on Motorways drainage systems balancing ponds exist or have been introduced and maintained with the objective of holding,delaying and reducing the storm water flow to the main river.

Within urban areas drainage systems may be maintained by the land owner, highway authority or the water drainage company.
In an area scheduled for urban development piped drainage systems are designed to have a self cleansing velocity with little or no water storage capacity and as a result the provision of well maintained balancing ponds is essential if serious flooding of the main river and property is to be avoided.

DRAINAGE and PROPOSED NEW BUILDING DEVELOPMENT;-
Storm water in times of deluge cascades from roofs, roads and hard surfaces carrying deposits of dust, dirt, debris detritus and other matter in suspension to ditches, brooks, streams and rivers.
It is held that where the flow of water has a flow rate of less than 1m per second silt will be deposited in the ditch, brook, stream or river

INLAND DRAINAGE or RIVER BOARDS;-
The role of Boards, where they exist, is to encourage and enable agriculture and prevent so far as is possible the flooding of property this is normally achieved in river flood plains by;-

Realigning the river to remove meanders in order to increase the river flow rate and reduce the deposit of silt.
Clear obstructive vegetation.
Removal of silt that may obstructs the flow of river water.
Widen and grade the river to make provision for the passage and short term storage of flood water.
Provide reed planting on **berms** for the protection of river banks and wildlife.

SUMMARY;-
In the Reigate report the Inspector briefly discussed the building on flood plains and the Metropolitan Green Belt.
It is suggested that any development within the flood plain that is to be protected from flooding including the provision of raised and filled areas, foundations, parking areas, gardens and in the case of GATWICK the provision of raised paved areas, protective banks, dams and pumps simply transfers the flooding problem to other catchment areas down stream.
It is suggested that each drainage catchment area be subject to a review of the drainage design, flood risk costs to residents and public authorities before development takes place. That those making the decision about more hard surfaces and the control of the storm water flow, should have an independent report on the effect of development within the catchment area and the likely effects bearing in mind the prospects of a warmer climate, storms and an estimated costs of damage repair to public and private property.

It is noted that the **Gatwick** proposal now makes provision for a new route and carriageway for the A 23Road, otherwise RS Report No 50 is still valid.

J.M.Chittenden
Retiring Chairman