



**WATER & SEWERAGE INFRASTRUCTURE**  
**WHAT DOES THE FUTURE HOLD?**

**HBF TECHNICAL CONFERENCE – 15<sup>TH</sup> SEPT 2016**  
**BIRMINGHAM**

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## What we will cover by way of a review of the last 12 months

### Surface Water Run-off inc. SuDS - update

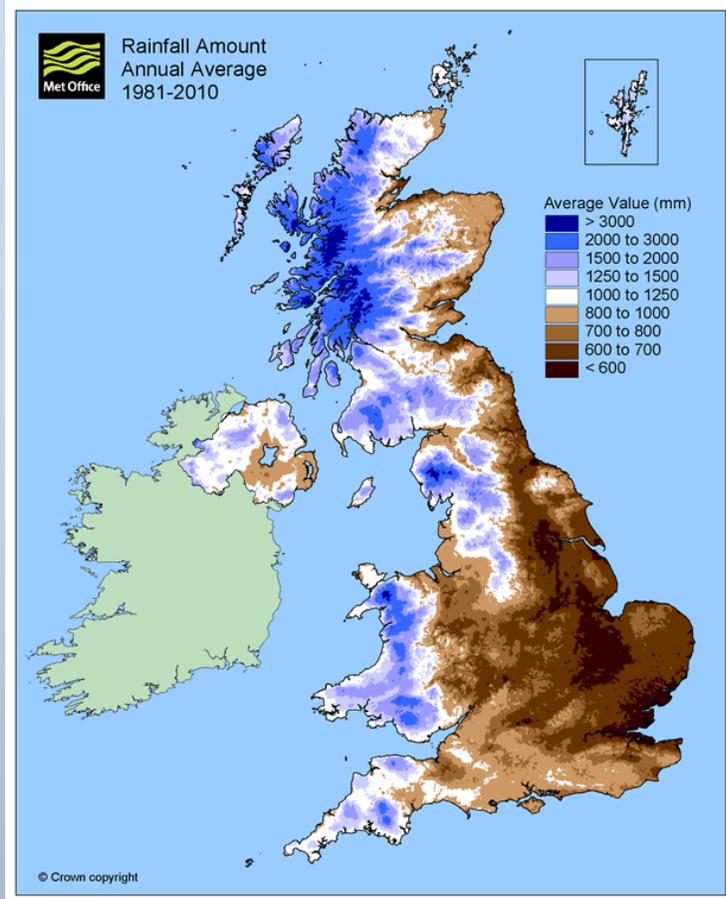
- Climate/rainfall – a few simple facts
- Groundwater response to rainfall – implications for SuDS
- Development & flood risk - more recent noteworthy events
- HBF Members – evidence based experiences since April 2015
- How are house builders responding – call for evidence

### Sewerage & Water Supply

- More recent noteworthy events
- Charging Rules – some major concerns
- Water & sewerage network capacity assessments
- Planning policies/WaSC influences – what to look out for
- New Charging Rules – current proposals

Q & A - if time permits.

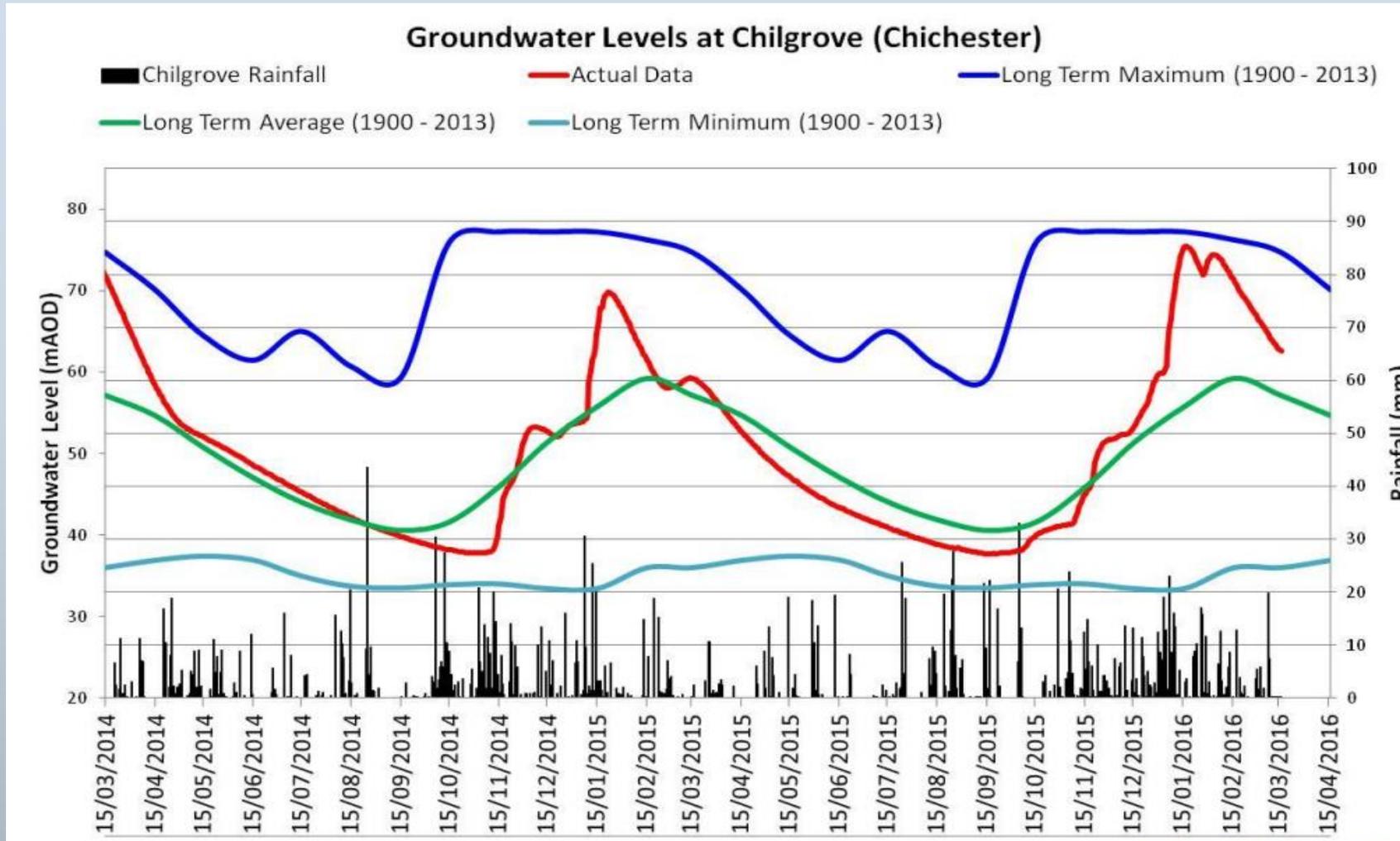
# UK Rainfall



## A FEW INTERESTING FACTS WORTH CONSIDERING

- There is significant variation in rainfall across the UK
- Ave annual rainfall - 6% increase since 1960's – Met Office records/data
- Feb '16 – EA increases climate change allowance to a minimum of 40%: greater in other parts of the UK – see HBF information note
- 2007 Floods – 1 in 300 year rainfall event
- 2015/16 Floods – Cumbria 1 in 1300 year rainfall event – unprecedented in modern times – SuDS would have made no difference to the outcome
- Rising groundwater levels – South of England and former mining areas – a potential problem for SuDS infiltration drainage infrastructure.

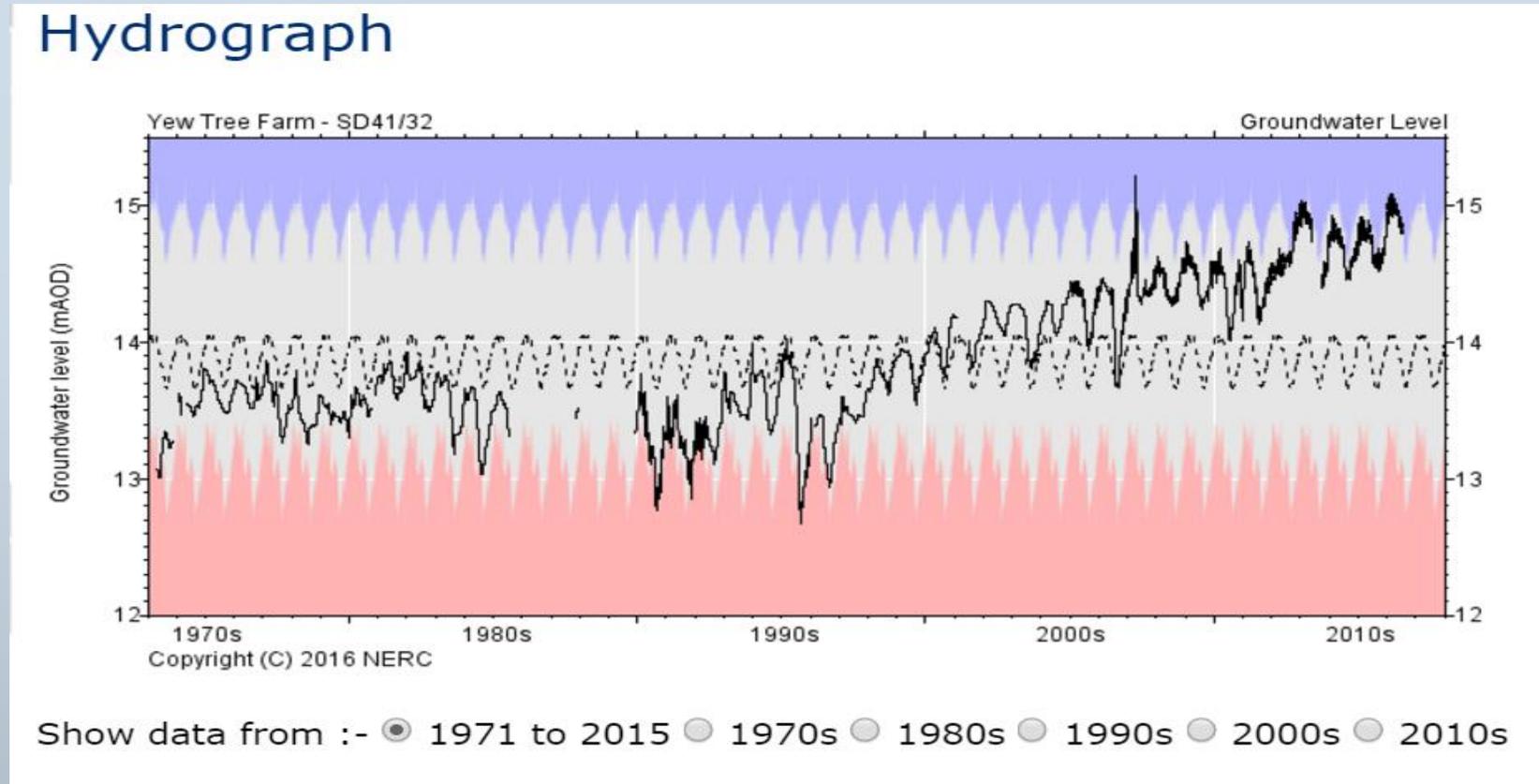
# Rainfall – response/impact on groundwater levels



**Note:**  
 Data provided by BGS who provide, FOC, monthly hydrological summaries covering Rainfall, River Flow and Groundwater level data. This information is quite useful when considering SuDS infiltration design solutions.

# Rainfall – response/impact on groundwater levels

## Hydrograph



Yew Tree Farm Lancashire – BGS Groundwater monitoring borehole (mining area) – Curtesy of BGS

## **Development & flood risk – noteworthy events over last year**

- Water Act 2014 – Introduced a requirement for homeowners to have easier and affordable access to flood risk insurance in defined flood risk areas. This came into effect on **4<sup>th</sup> April 2016 - but dwellings built after 1<sup>st</sup> January 2009 are excluded** – therefore, fundamental for house builders to undertake rigorous technical due diligence at the land acquisition stage.
- Following the floods of 2015/16 development & flood risk has moved rapidly up the Government's agenda – several bodies/organisations are approaching Government for legislative change, e.g. flood resistant(exclusion)/resilient(wet-proofing) construction as part of the Building Regulations
- **February 2016** – HBF provided written evidence to the EFRA Select Committee tasked with looking at Future Flood Risk – **further verbal evidence given by HBF on 25<sup>th</sup> May 2016**
- **April 2016** – A House of Lords amendment to the Housing & Planning Bill and which sought to remove the S106 right to connect to the public sewerage system for surface water sewers was temporarily successful. However, in **May 2016** HBF provided robust rebuttal evidence that was accepted by Government but it nonetheless resulted in a commitment in the subsequent Housing & Planning Act 2016 to review the effectiveness of SuDS delivered through the planning process.

### **HBF Members – ‘SuDS’ experiences/evidence since April 2015**

- **Experience, performance & attitude amongst all 152 Lead Local Flood Authorities (LLFAs) is generally mixed and at times, quite poor:**
  - i. **Many are ex-highway authority personnel – with limited experience**
  - ii. **Little experience/understanding of their limited statutory role & responsibility as a LLFA**
  - iii. **Knowledge of Planning, Hydro-geology, Hydraulics, Soils and Geo-chemistry limited in many cases**
  - iv. **Other than responding to planning applications – no other performance KPIs**
  - v. **No means of challenging LLFAs demands directly – planning appeal only – not helpful**
  
- **Several LLFAs are still attempting to introduce their own standards in excess of the non-statutory national standards – e.g. Cumbria, Lancashire, Gloucestershire, Shropshire.**
  
- **Certain LLFAs are seeking to impose lower restrictions on discharges to public surface water sewers, despite criteria having been agreed with WaSCs as part of the right to connect under §106 WIA 1991 – the LLFA’s remit does not extend to dictating how another statutory body (WaSC) discharges its statutory function.**
  
- **Surface water run-off quality is still an issue for some LLFAs/LPAs despite EA comments that this is not a problem for residential developments. There is very little if indeed any robust evidence to support LLFA/LPA demands. In some instances 4 to 5 levels of surface water treatment have been imposed.**

## Water & sewerage infrastructure – further noteworthy events

- Water Act 2014 – Allows Ofwat to introduce new Charging Rules and Charging Arrangements for the provision of water & sewerage infrastructure for new developments – significant concerns in this regard raised by HBF during the last 18 months.
- **January 2016** – Saw the first in a series of Defra/Ofwat Task & Finish Group Meetings tasked with evaluating the new Charging Rules - at present, these are ongoing.
- **January 2016** – Defra issued high level ‘guidance’ to Ofwat to inform the Charging Rules.
- **April 2016** – HBF responded to an initial Ofwat Charging Rules ‘Discussion Paper’ – a number of concerns were again raised by HBF.
- **18<sup>th</sup> July ‘16** – HBF responded to a formal Defra consultation on Charging Rule Guidance – closing date **22<sup>nd</sup> July**.
- **26<sup>th</sup> July ‘16** Ofwat issue their consultation on the Charging Rules – HBF formally responded by the closing date of **26<sup>th</sup> Aug ‘16**. (Available on the HBF web-site).
- *Prior to submitting its response to the Ofwat consultation, HBF concerns were such that they were brought to the attention of the No.10 Policy Unit.*

## **Charging Rules – our major concerns**

- **No confirmation of the statutory obligations placed on all WaSCs & WoCs under S37 et al, S94 and S185 of the Water Industry Act 1991. Similarly, the right to connect to the public sewerage system under S106 of the same ‘Act’.**
- **Certain WaSCs continue to demand developer funding for network capacity assessments, in particular for foul sewers – we now have several examples of delays in housing provision whilst ‘modelling’ is undertaken – a 6 month delay not uncommon.**
- **The input parameters that are being used for foul sewer modelling but more importantly, how the results are being used to justify demands for developer funding for off-site foul sewer network reinforcement not specific to new development.**
- **5 out of 10 WaSCs (mostly southern-based) are relying on an inappropriate use of the planning system to secure developer funding for off-site foul sewer network reinforcement through the imposition of S106 planning obligations and planning conditions, including Grampian conditions. There is clear evidence of compromised project viability and development being seriously delayed.**
- **Ofwat’s current proposals have the propensity to undermine project viability and lead to delays in the provision of new housing.**

# Water & Sewer network capacity assessments

## HBF Research Findings

- Excessive levels of surface water entering public foul sewers – by comparison, foul drainage discharges are much smaller.
- High levels of infiltration (groundwater and illicit connections) are being relied upon by 5 WaSCs to justify developer funded off-site foul sewer reinforcement/improvement. Also - refusal by WaSCs to disclose actual modelling information.
- The degree of infiltration is such that foul only sewers are being modelled as surface water sewers using 1 in 20 and 1 in 30 year return periods – in our view, this is unacceptable and continues to be challenged.
- Recent FOI evidence disclosure has identified: 9 sites, in 3 WaSC operating areas with \$106 planning agreement demands for off-site network foul sewer improvements totalling £5.3 million.
- Off-site water main capacity assessments: Water usage figures being applied that are far in excess of Part G of the Building Regulations - range: 150 litres/person/day to in excess of 1500 litres/person/day. HBF is continuing to question the methodology.

## Planning polices –v- WaSC influences: What to look out for

- Excessive levels of infiltration in public foul sewers is accepted as a pre-existing problem, but .....
- Planning law is quite clear that pre-existing problems that are the complete responsibility of another statutory body to both fund and deal with cannot be resolved through planning, i.e. such an approach is in effect *ultra vires* and open to challenge at appeal.
- Demands for funding for off-site network reinforcement/improvement that is not in consequence of new development, or is unfair, inequitable, disproportionate and which fails the test of transparency should always be challenged.

## Ofwat: New Charging Rules for Water & Sewerage infrastructure provision

- Many of the issues raised in this presentation have informed the HBF response to respective consultations – see HBF web-site for our response to Ofwat.
- The new Charging Rules are meant to resolve a number of key issues – in reality, it will be business as usual for WaSCs with a greater propensity for increased costs and delays for developers.
- Part of the Ofwat proposal will allow WaSCs & WoCs to have even greater freedom to set their own Charging Arrangements. A light touch, almost non-interventionist approach by the Regulator is being advocated. HBF has advocated a more direct and prescriptive approach.
- In addition, there is likely to be a single charge that will be a combination of the infrastructure charge and a charge to cover off-site network reinforcement. Under current proposals, this charge could be imposed without first being robustly assessed by Ofwat. In addition, we have no assurances that WaSCs & WoCs will not apply ‘worst case scenario’ criteria.

**Many thanks for listening  
Q & A Session**