

Ineson Lecture Meeting – 21 October 2011

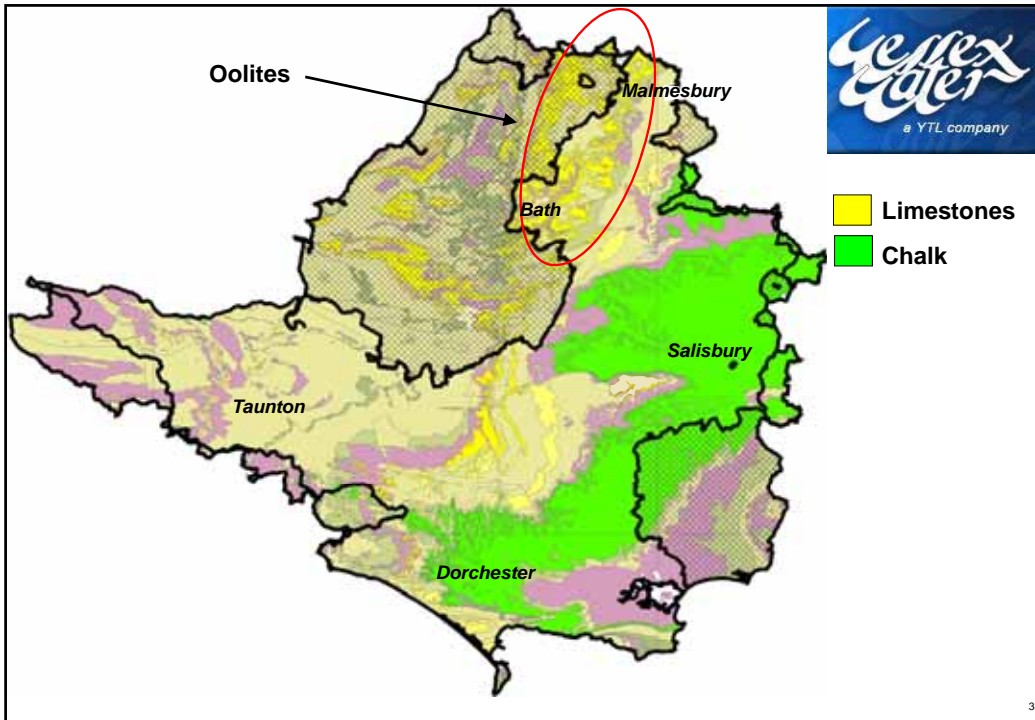
Problems with groundwater?

Luke de Vial

Head of Water Resources

Wessex Water

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- **What are the problems with groundwater?**
- **Groundwater is fine, the problem is the surface!**

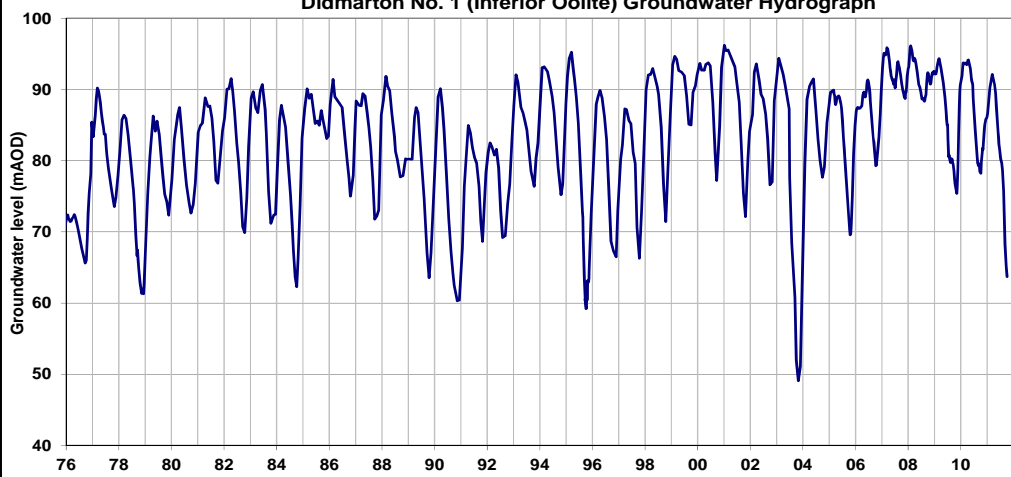
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Recharge



5

Didmarton No. 1 (Inferior Oolite) Groundwater Hydrograph



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Problems

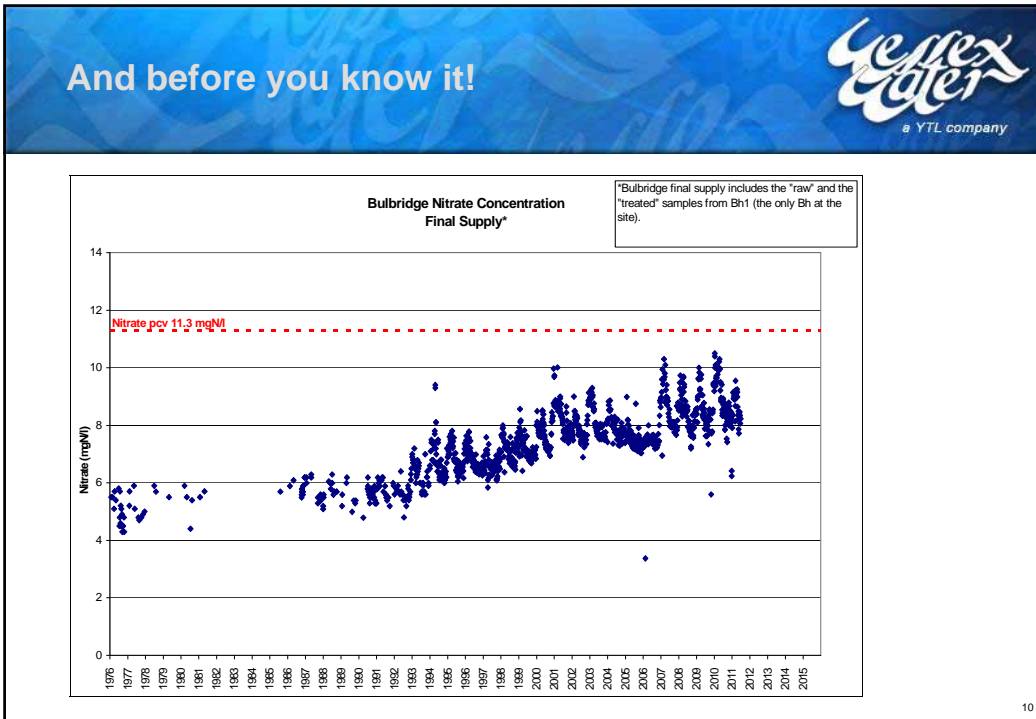
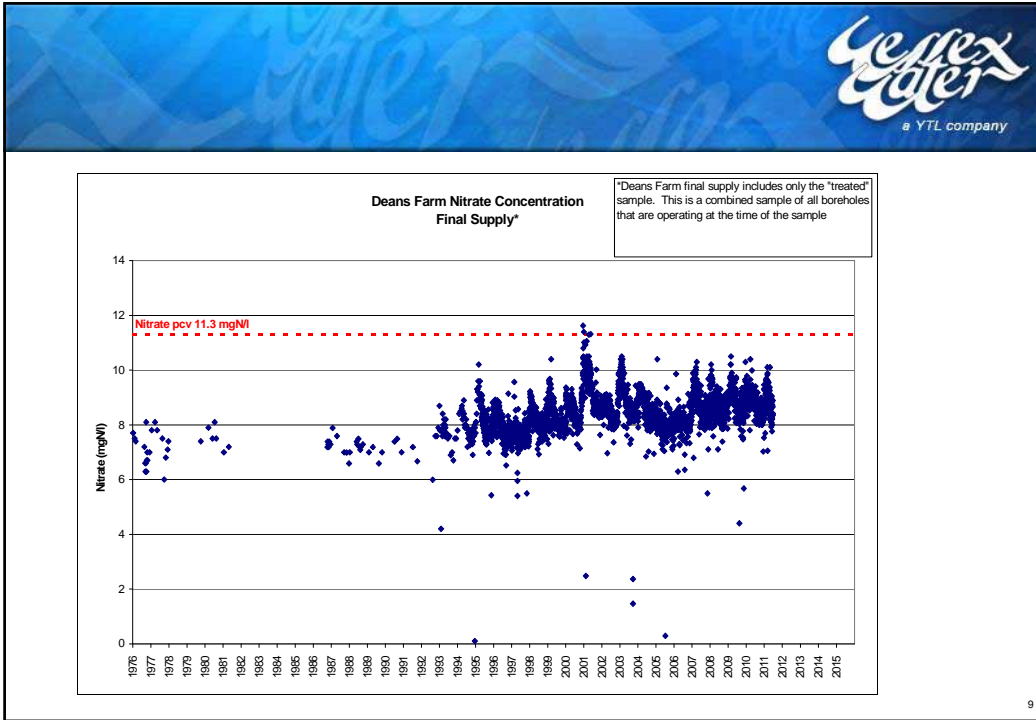


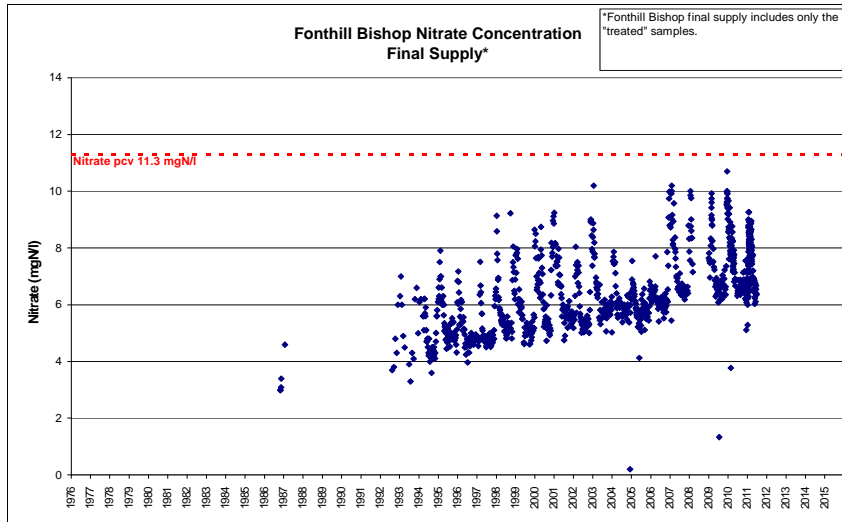
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Problems



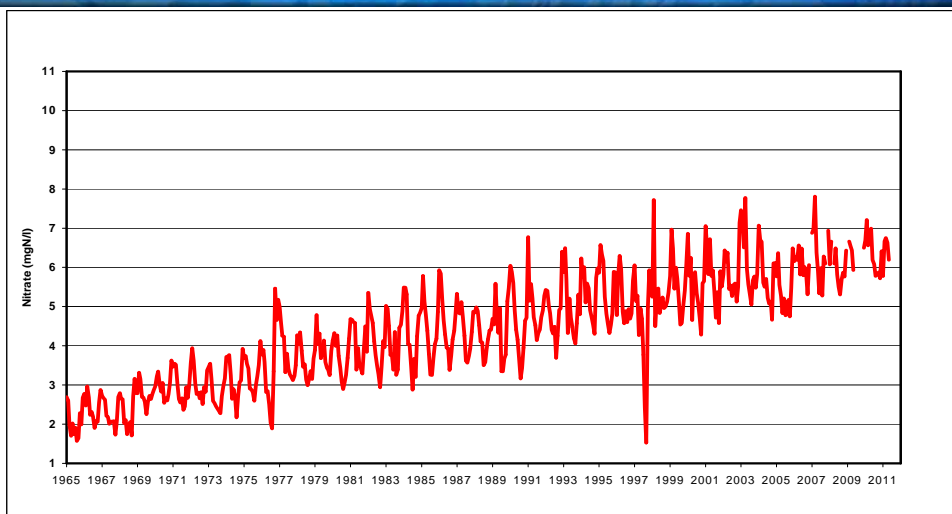
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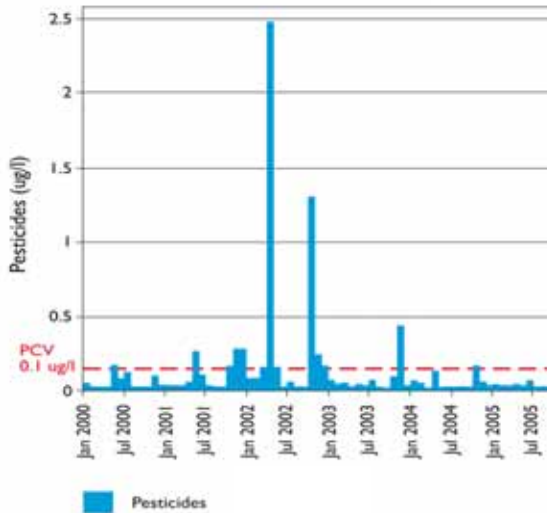
The surface gets it back!



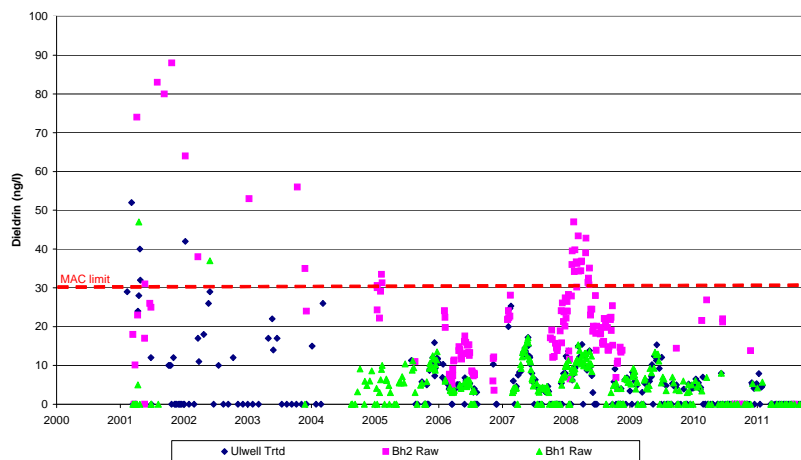
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Catchment challenge – high pesticide levels in boreholes



Ullwell Dieldrin Levels





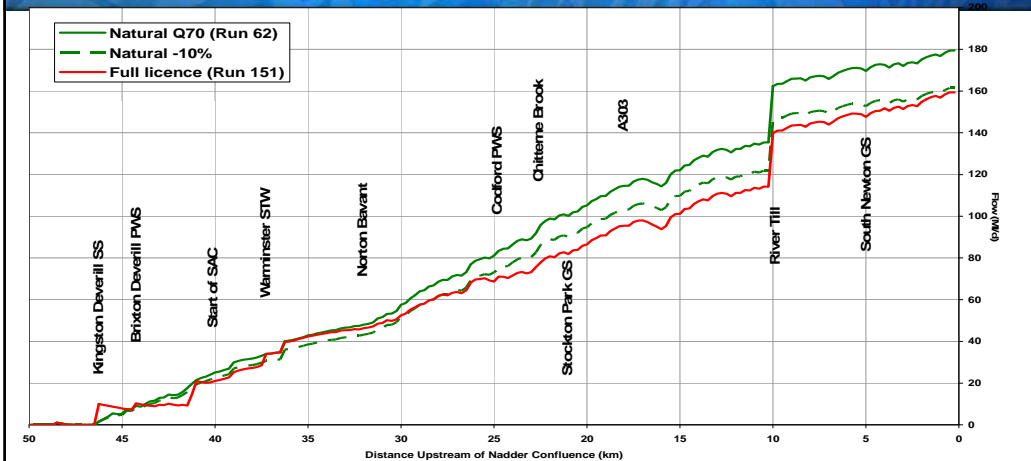
MALMESBURY AVON – RESTORING FLOWS



Sherston Avon – Luckington Branch 2 August 2003

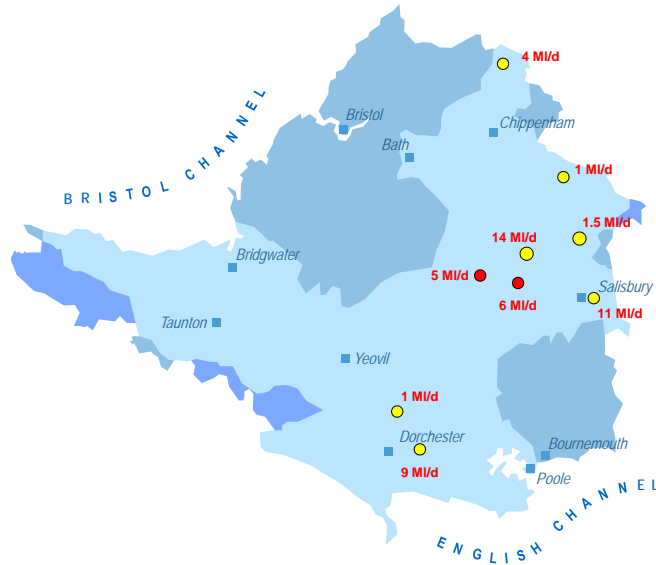
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River Wylfe



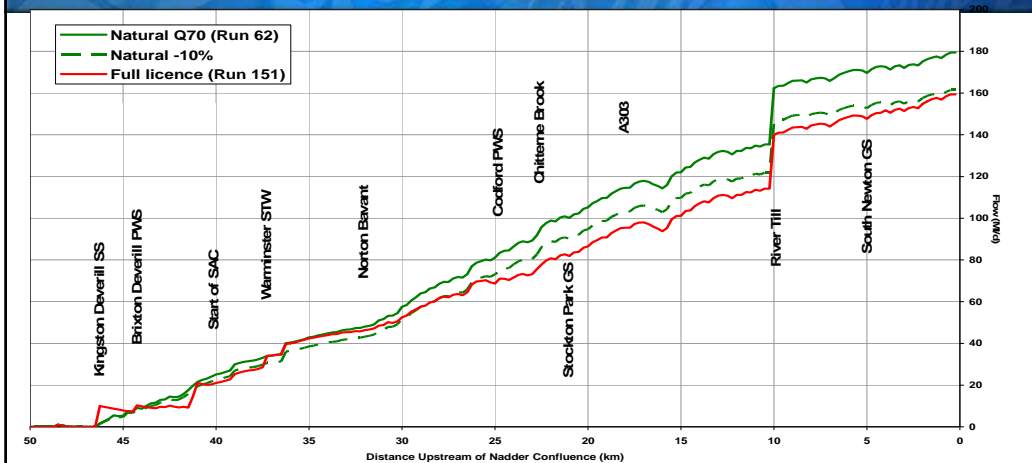
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Reductions in Groundwater Licences



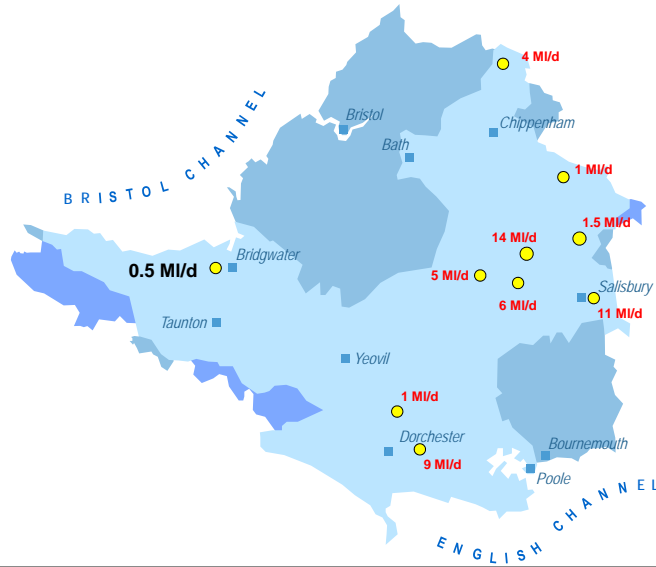
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River Wylfe



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Surface water?



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Mike Price solution



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Wessex Solution



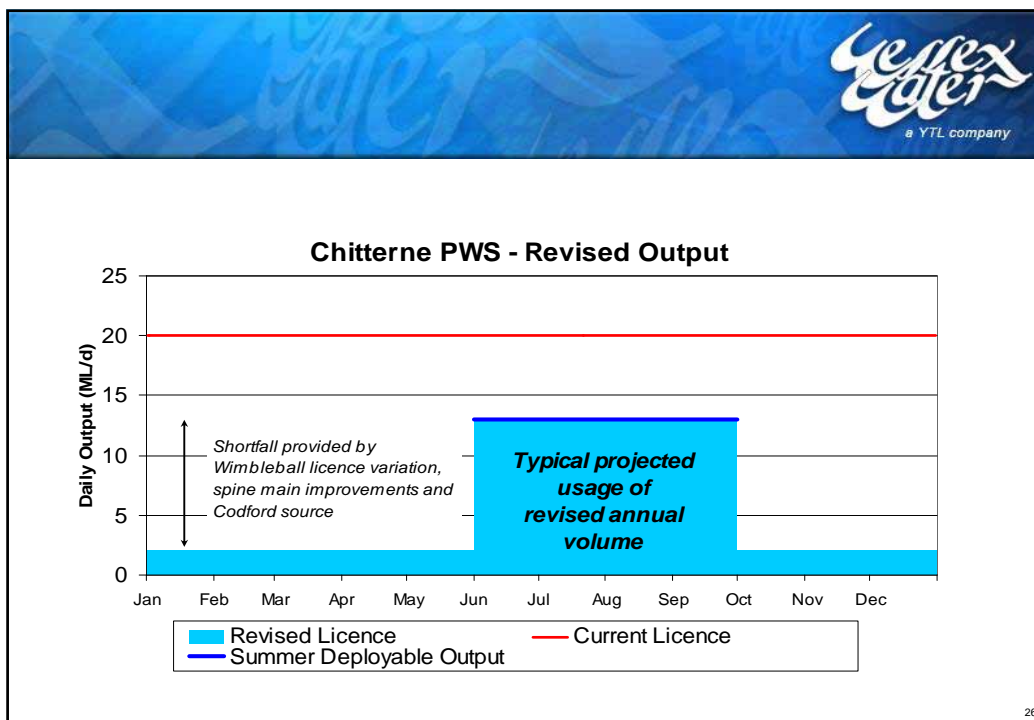
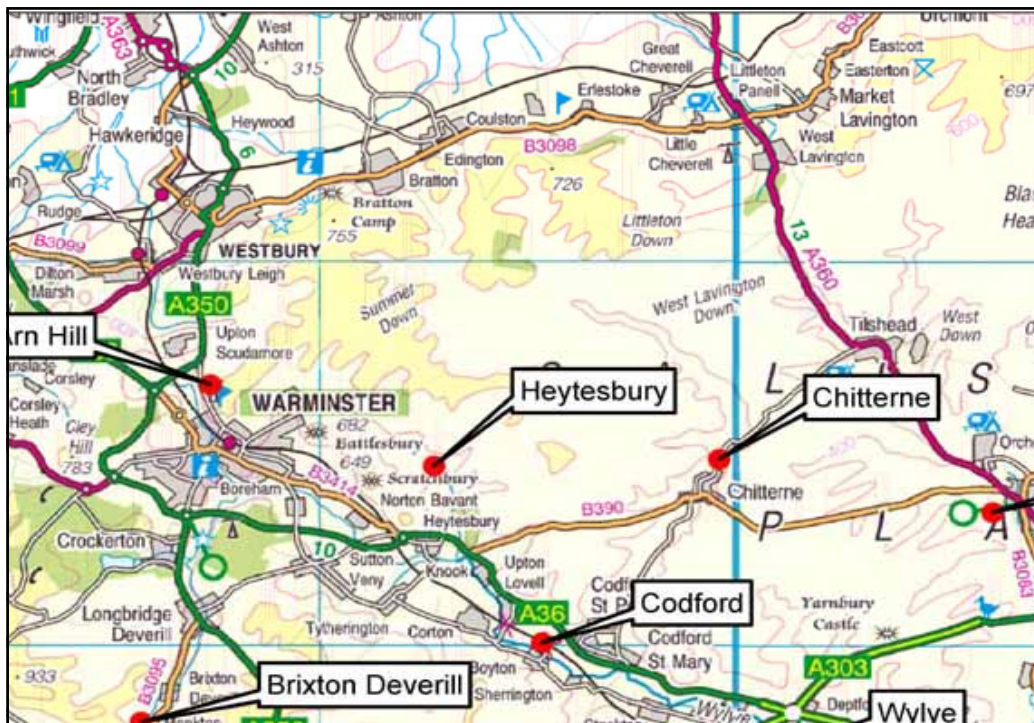
- **Make use of the geology**
 - **Seasonal abstraction**
 - **Stream support**

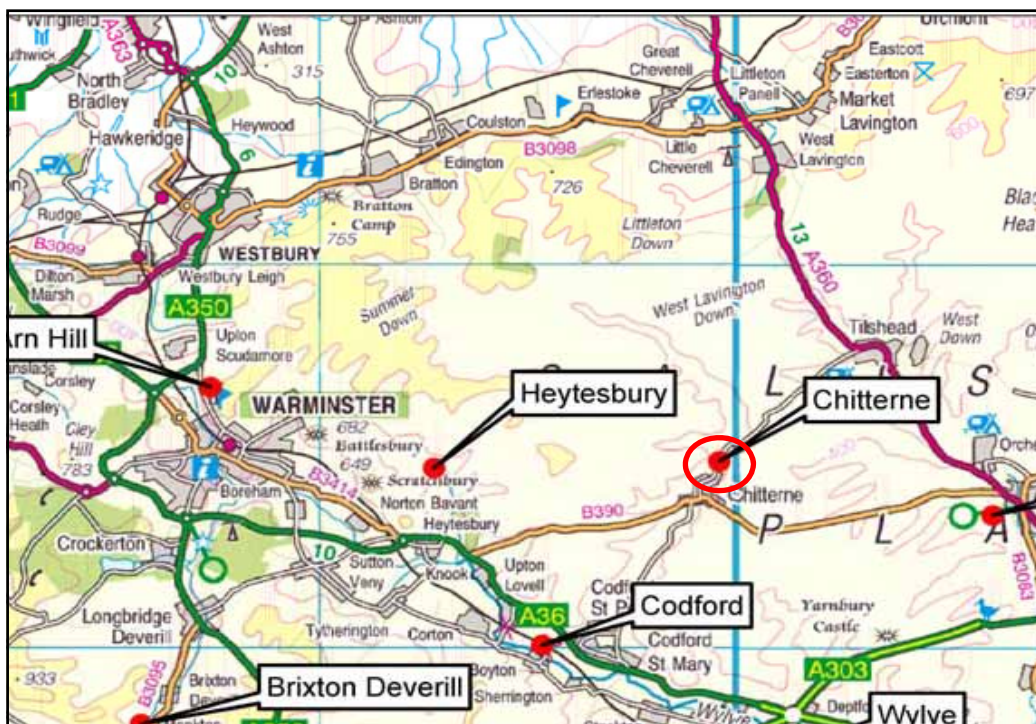
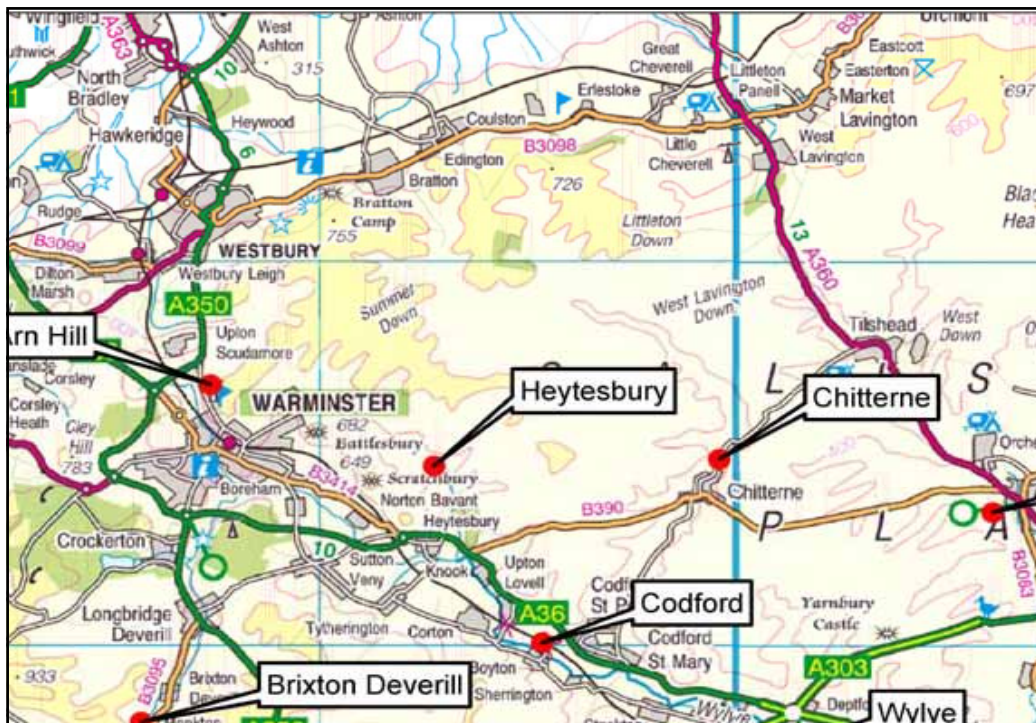
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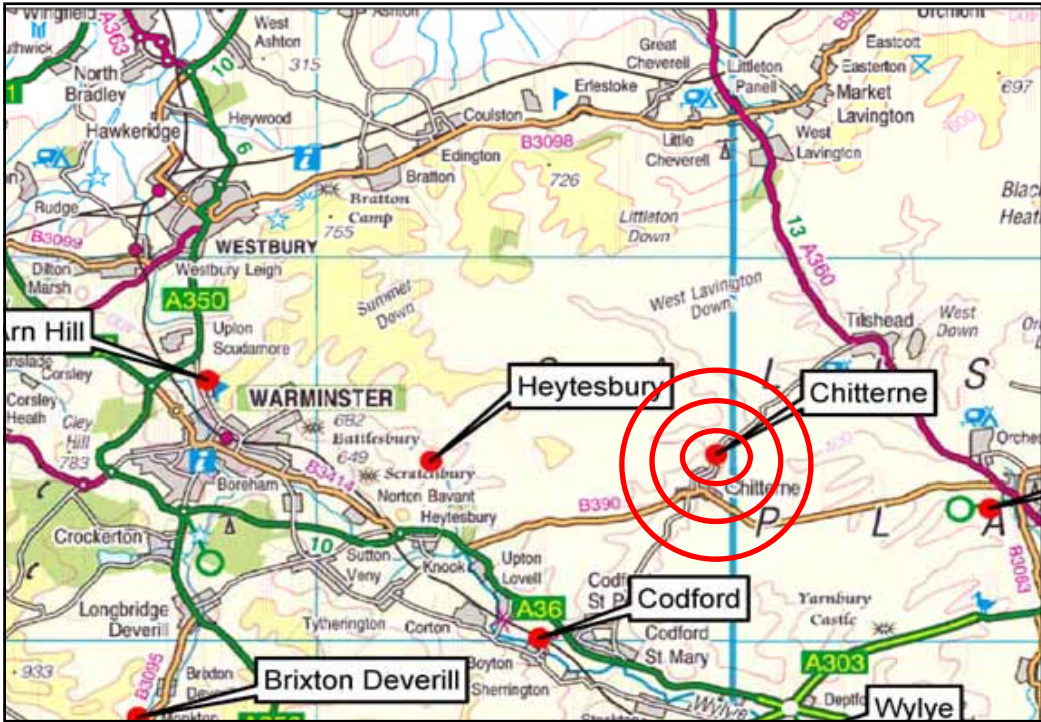
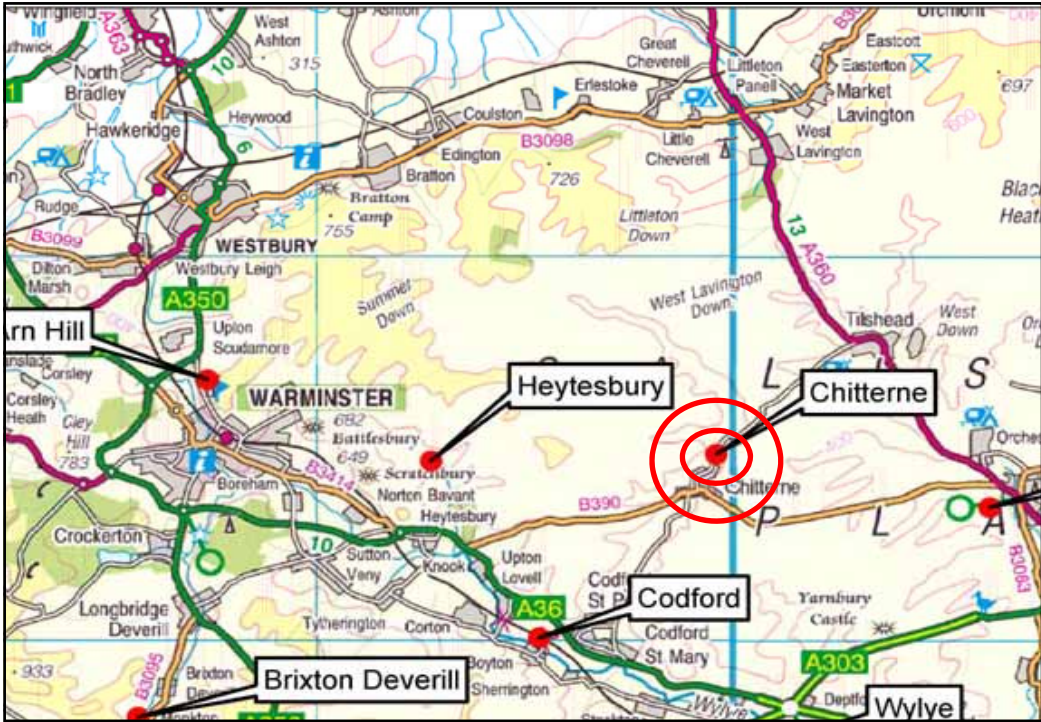
Seasonal abstraction

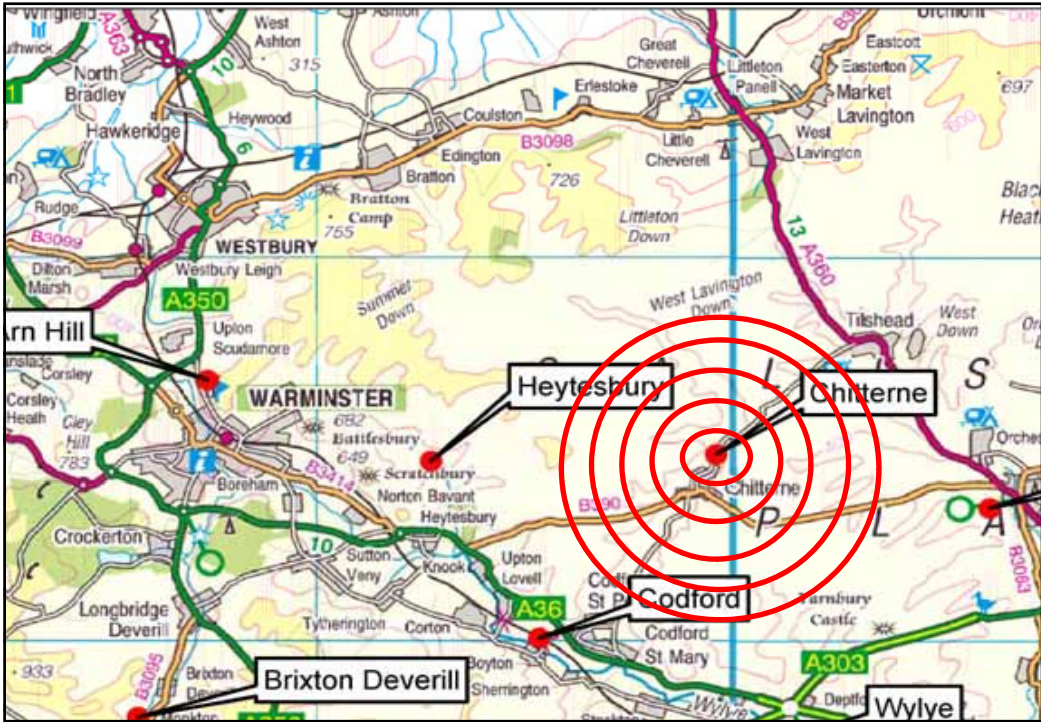
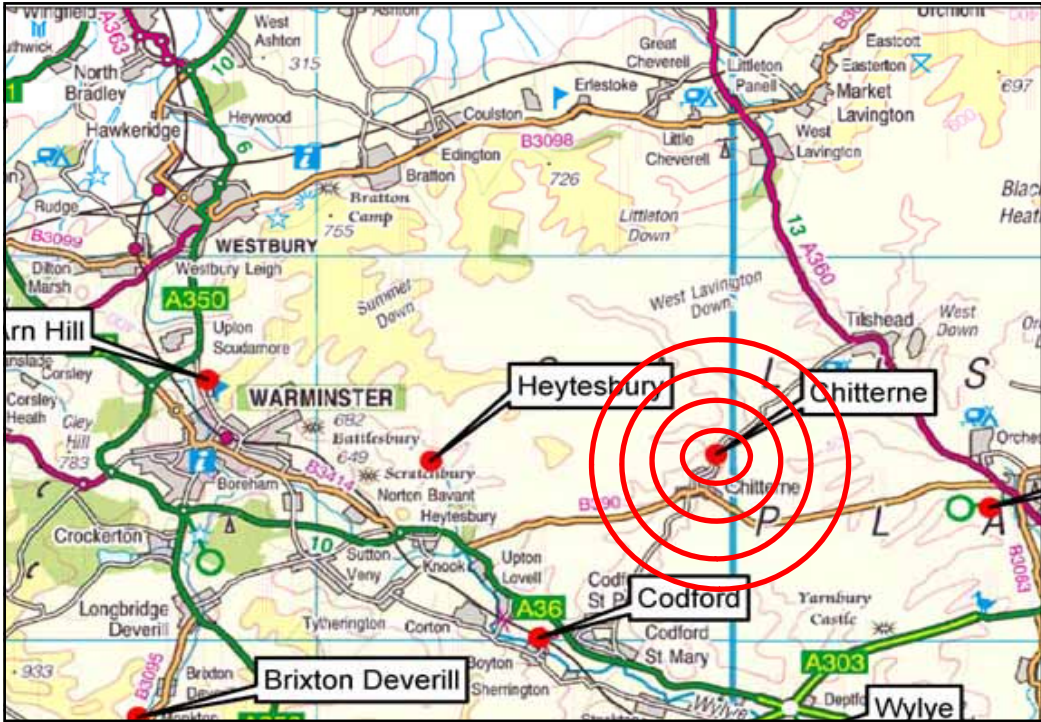


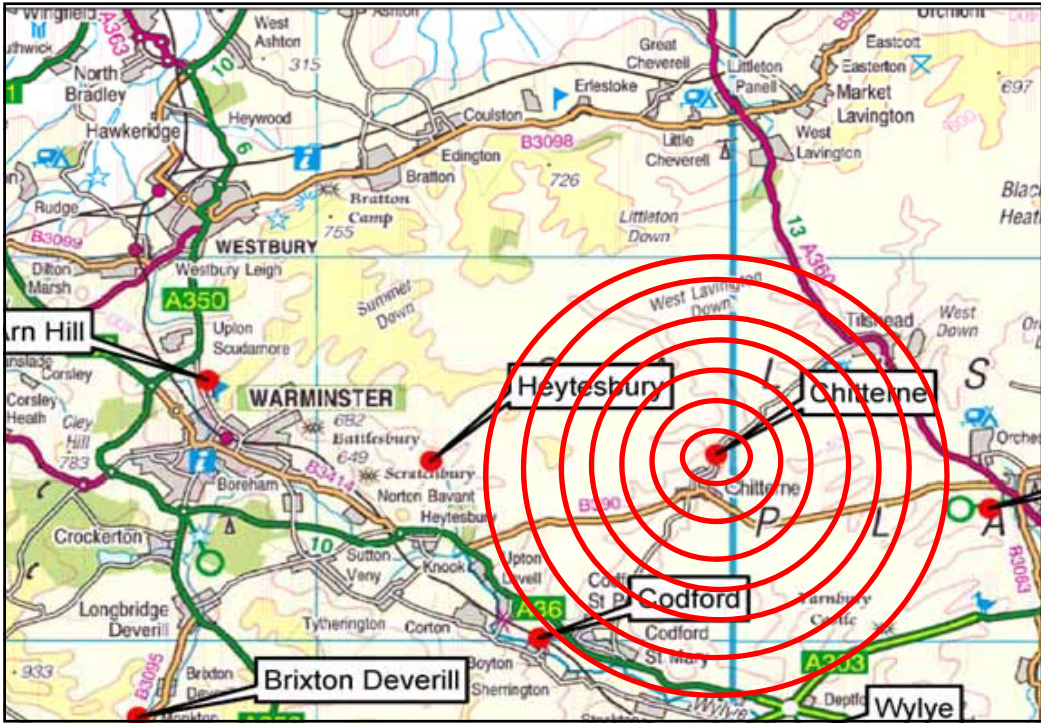
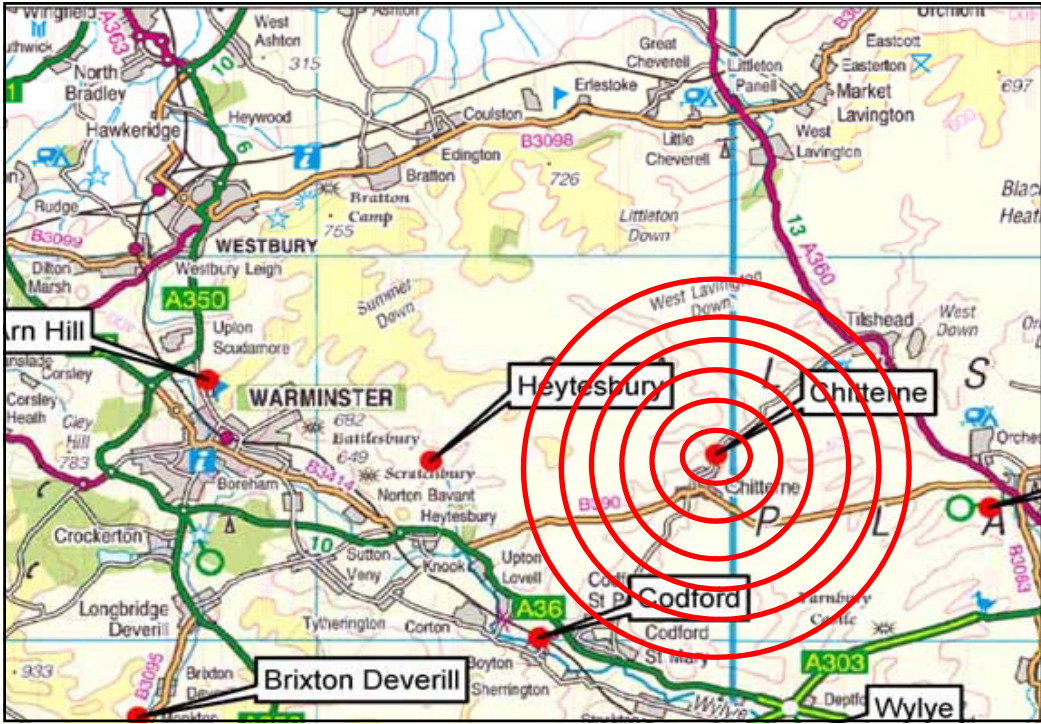
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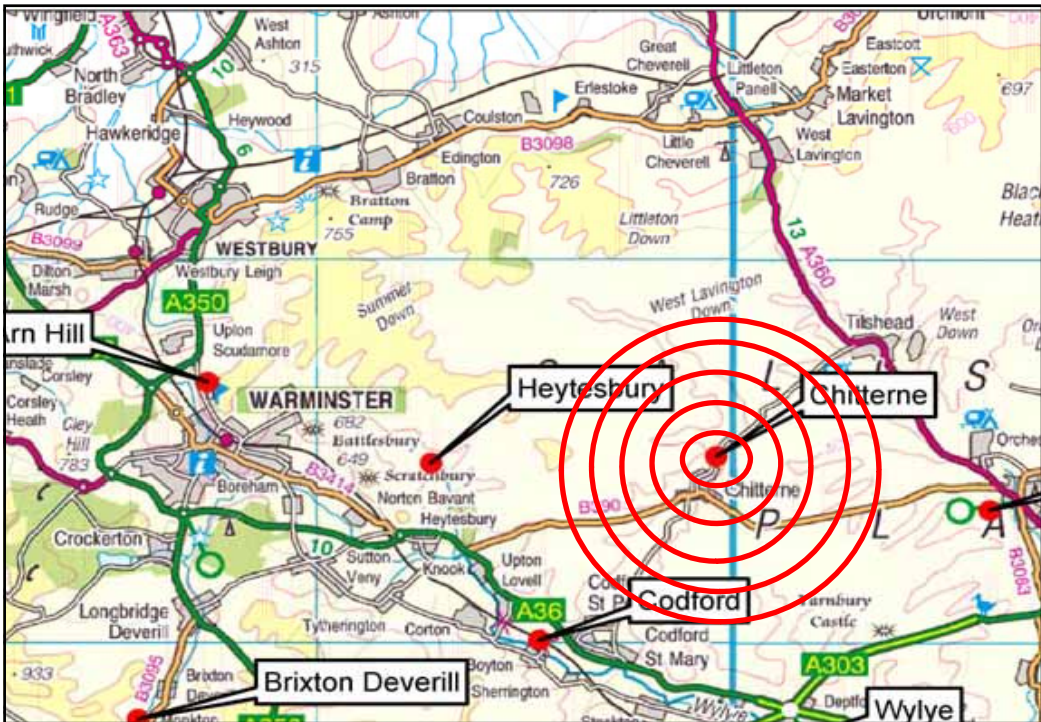
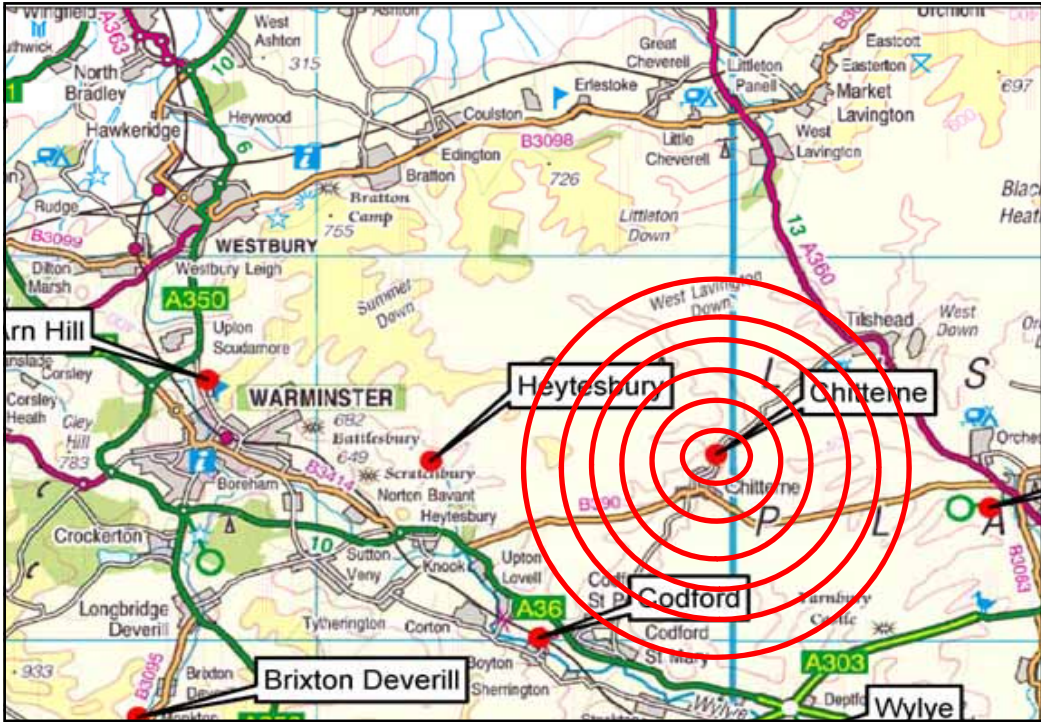


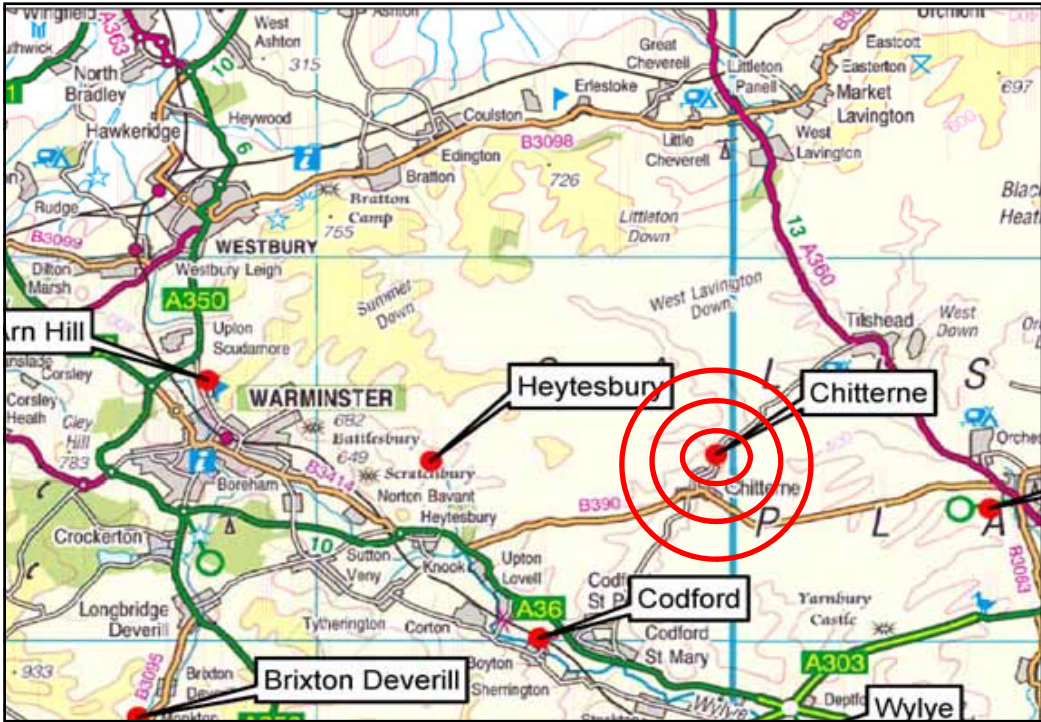
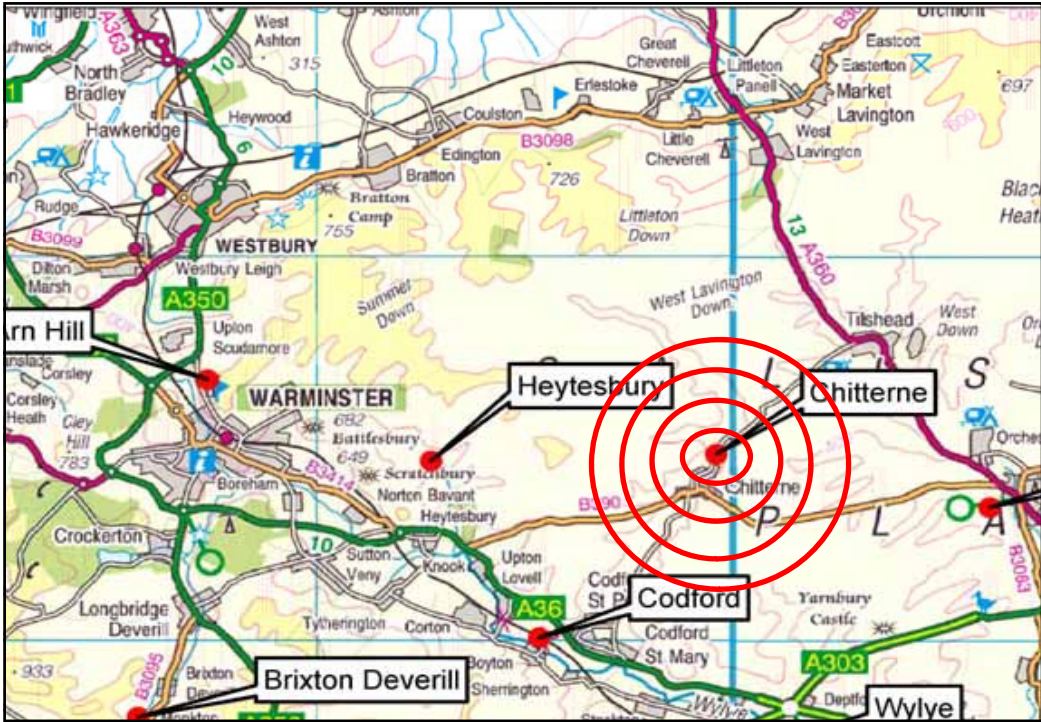


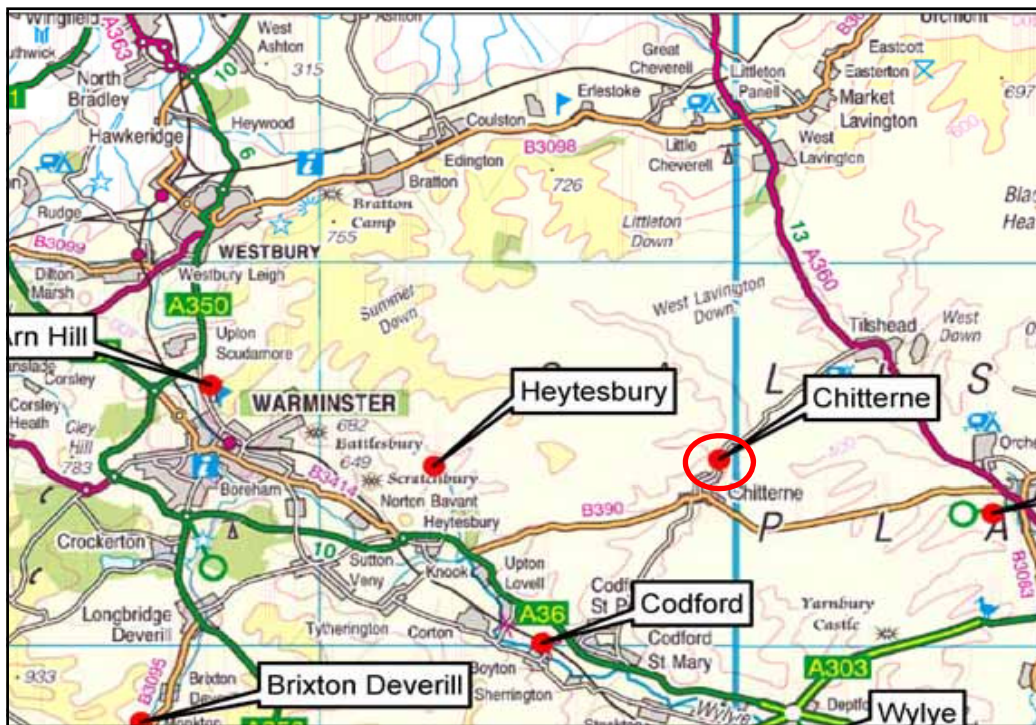
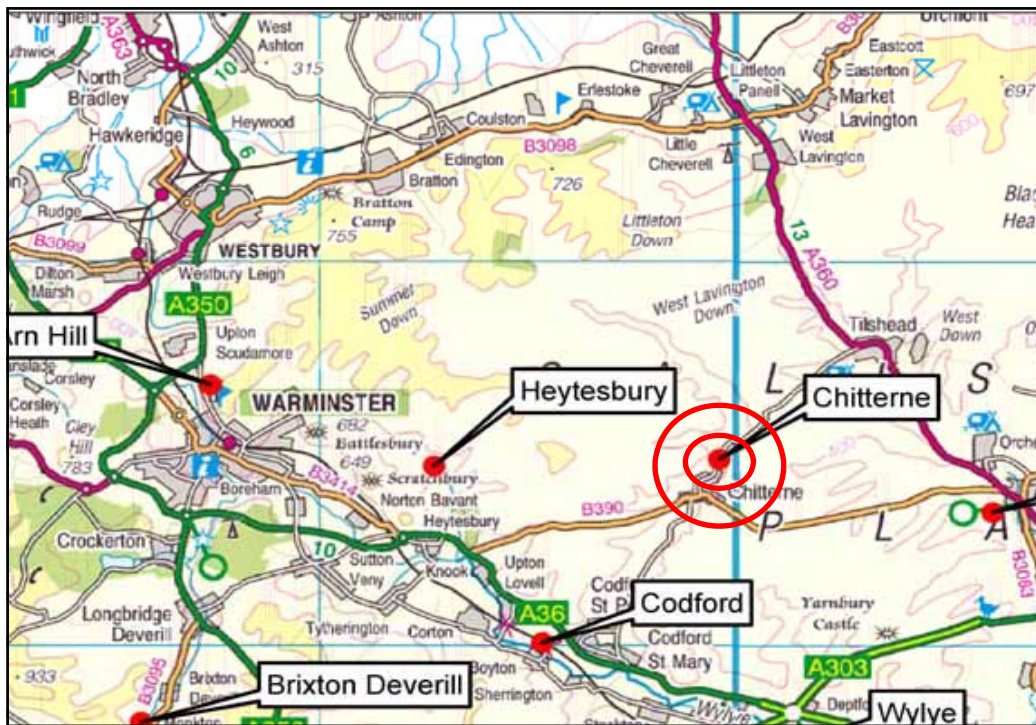




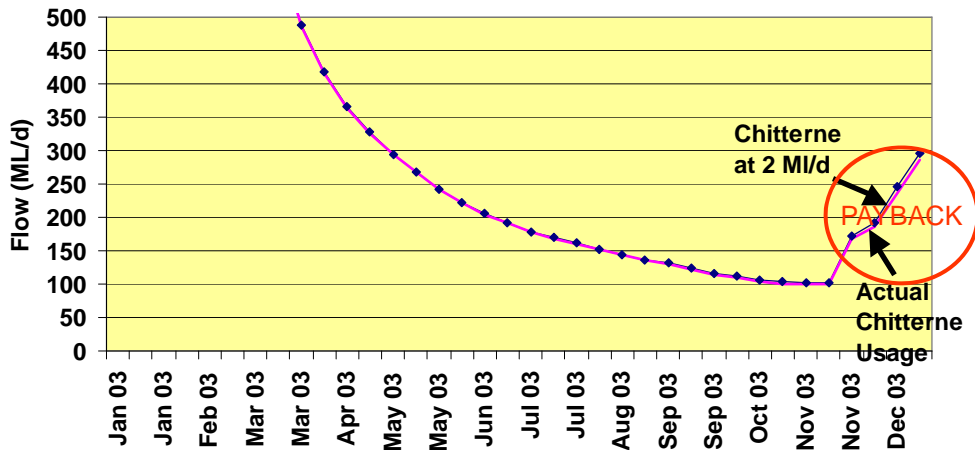








Simulated River Flow at South Newton



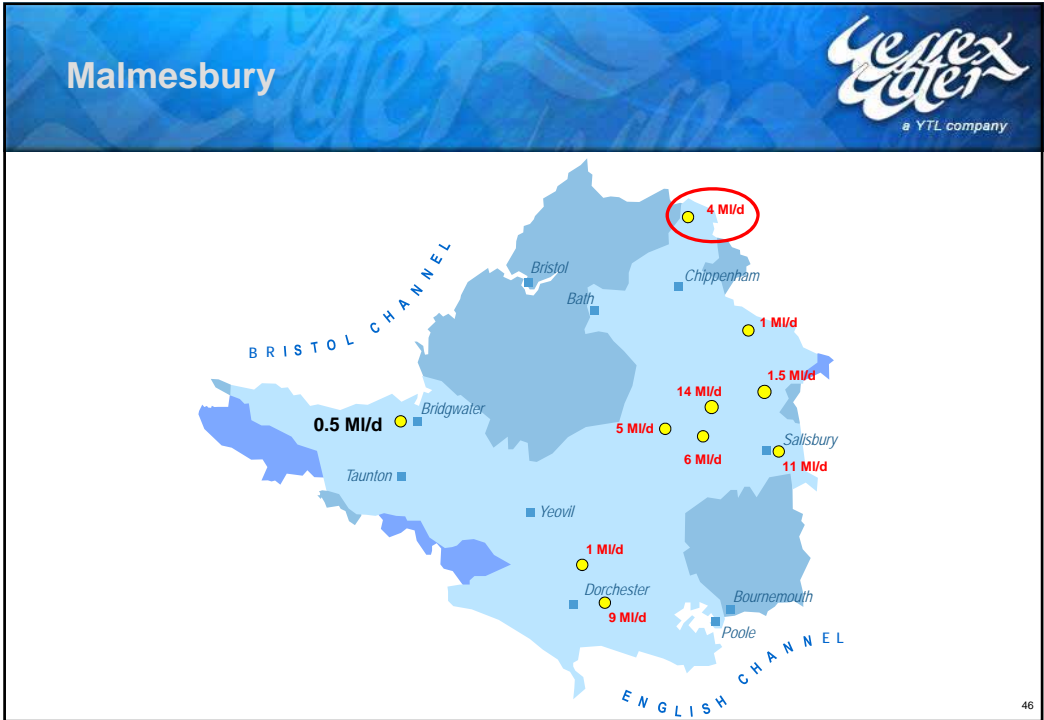
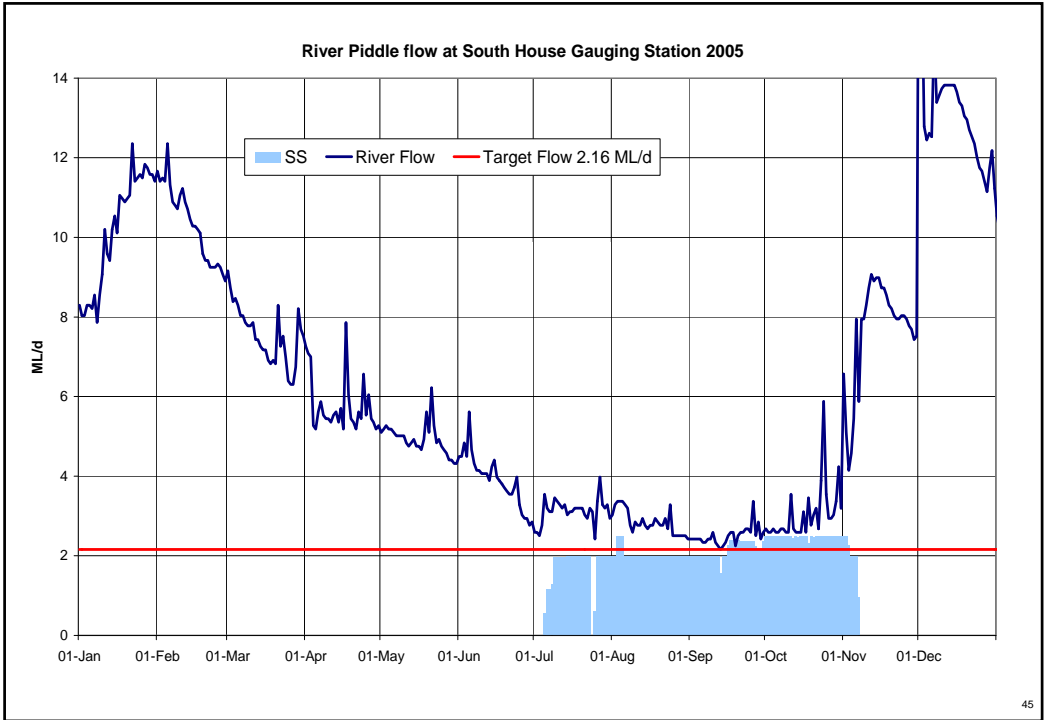
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Stream support



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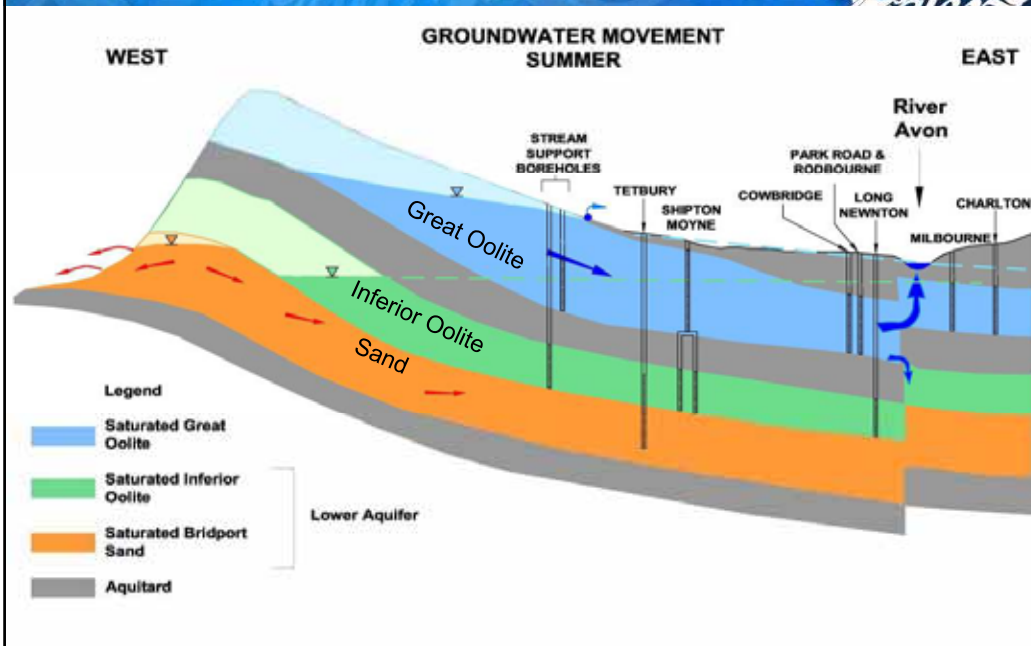




The Problem – St Johns Bridge June 1995 – a trickle



Water Public Supply development (4) 1970-80's



MALMESBURY AVON – RESTORING FLOWS



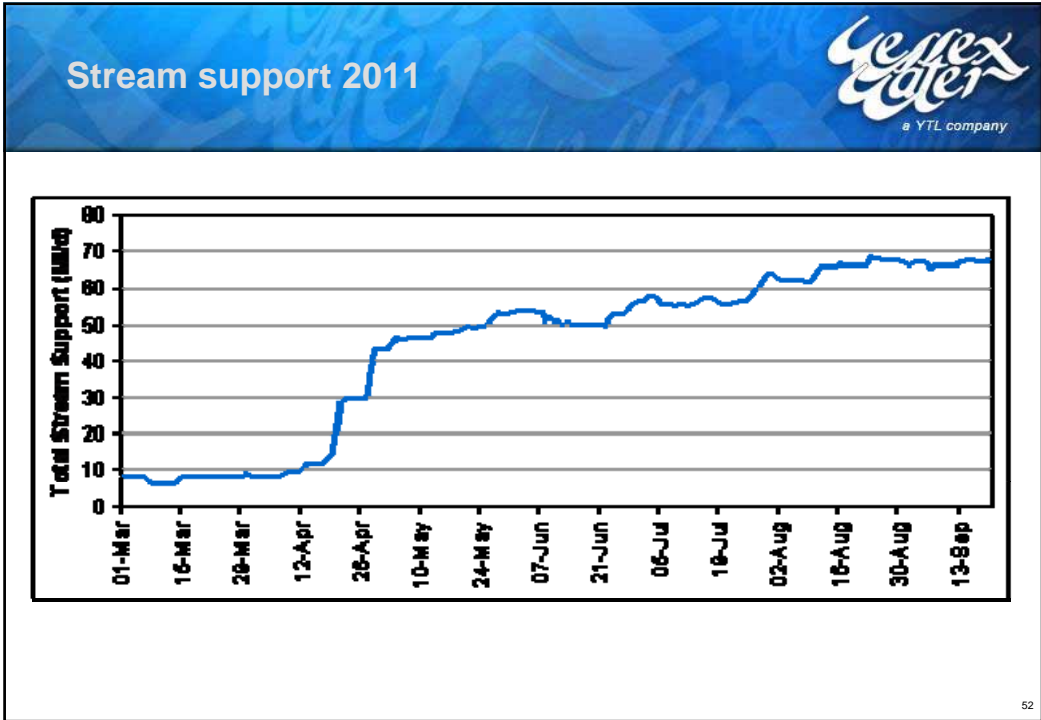
Sherston Avon – Luckington Branch 2 August 2003

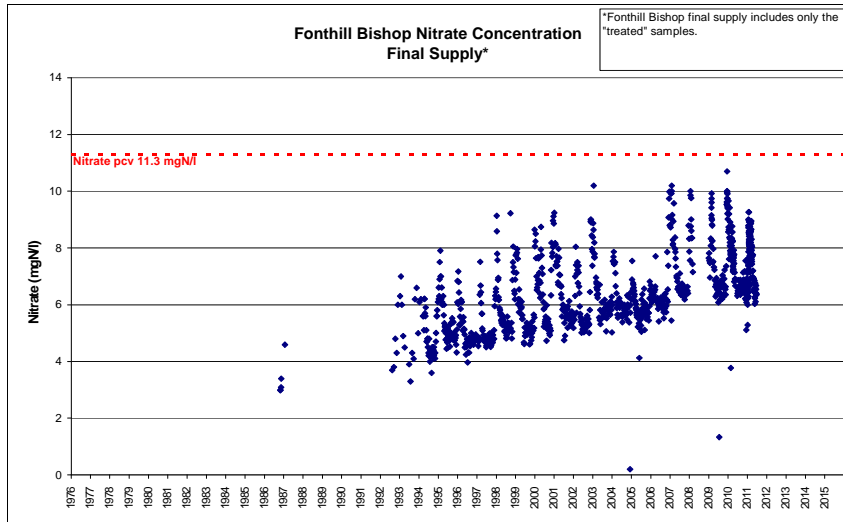
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The Problem – St Johns Bridge June 1995 – a trickle



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Traditional solutions

£12m



£6m



£3m



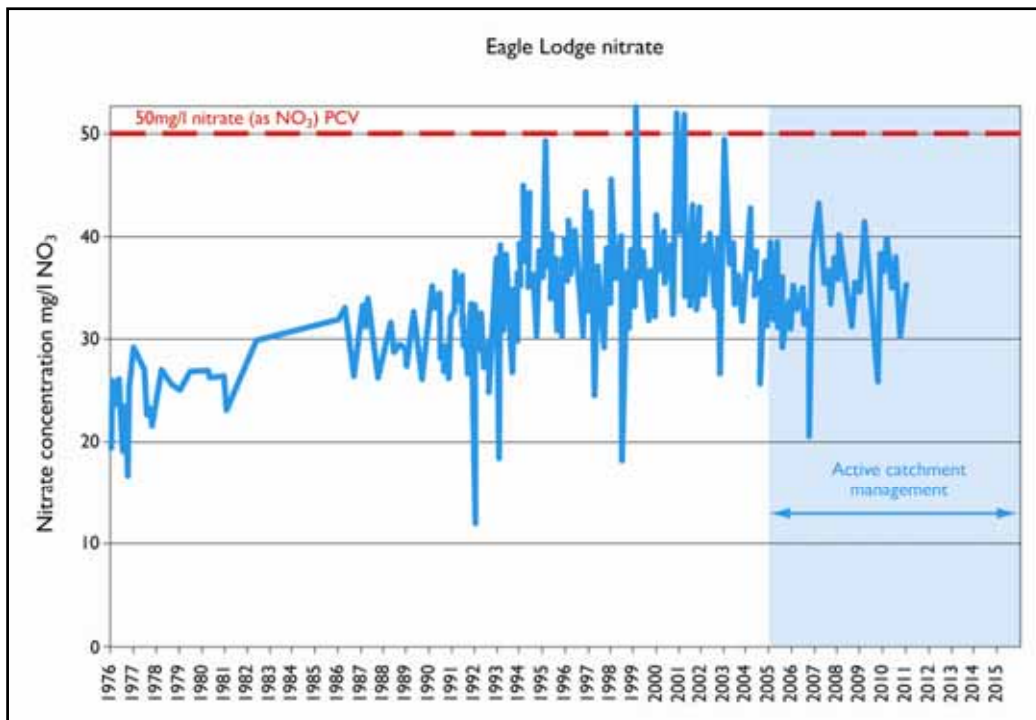
£2m

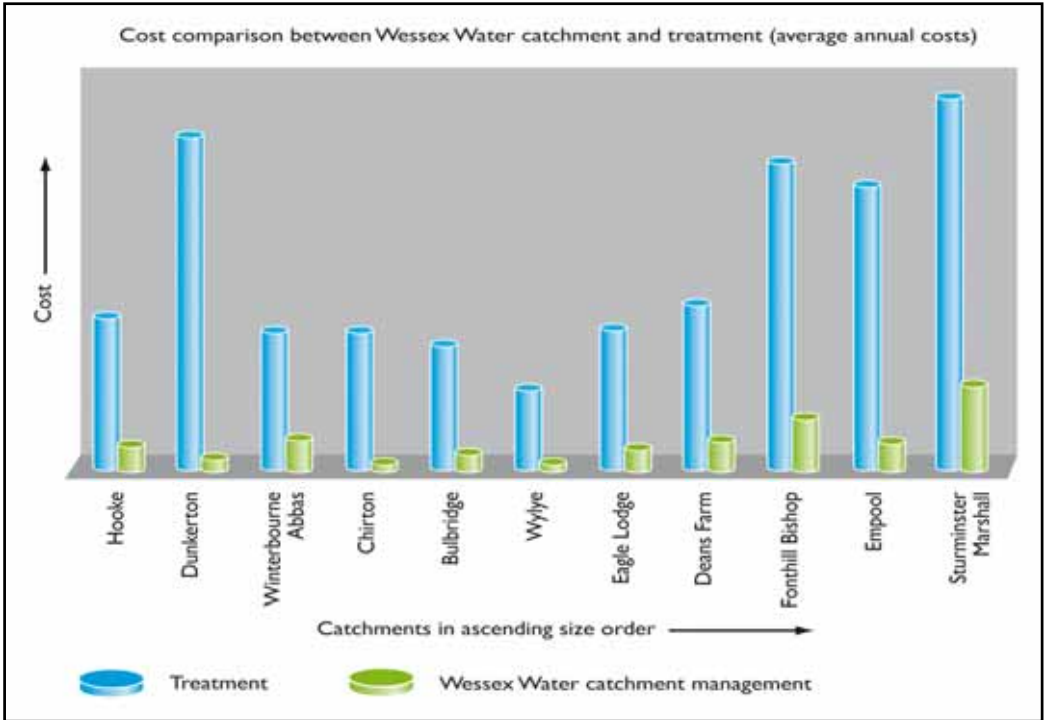


A low tech approach



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But



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