# Making sense of Climate Change Impacts in 3D

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**ARUP Water - Leeds** 

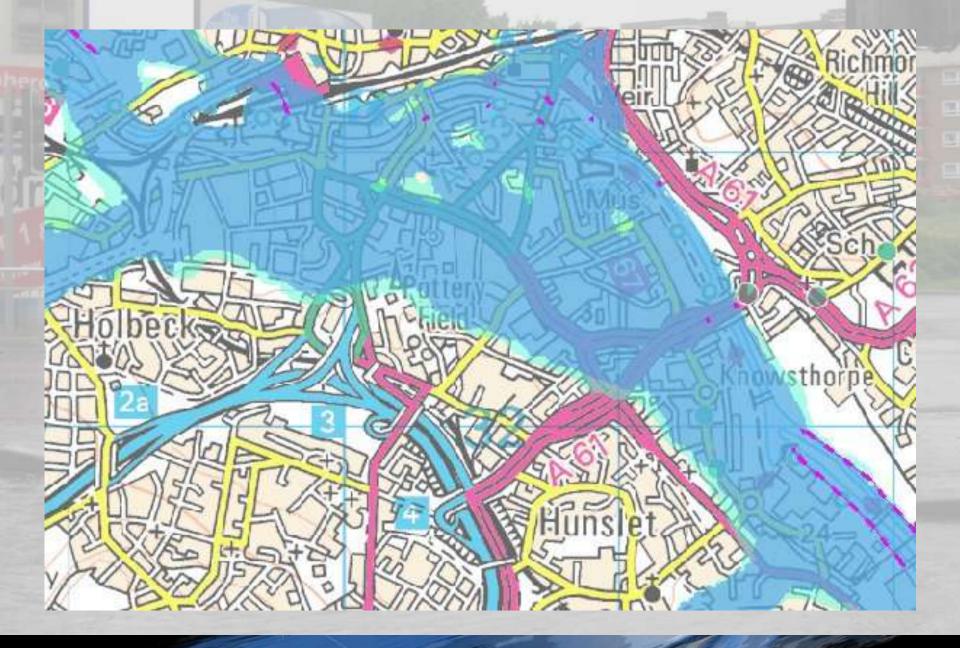
Thursday the 18th March 2010

## **Climate Change Impacts**

- Extreme weather
- More Intense Rainfall (shift in spatial distribution)
- More Droughts
- Sea Level Rise
- Thermal Stresses
- Ecological Impacts
- Economic Impacts
- PPS 22 Carbon and Climate Change

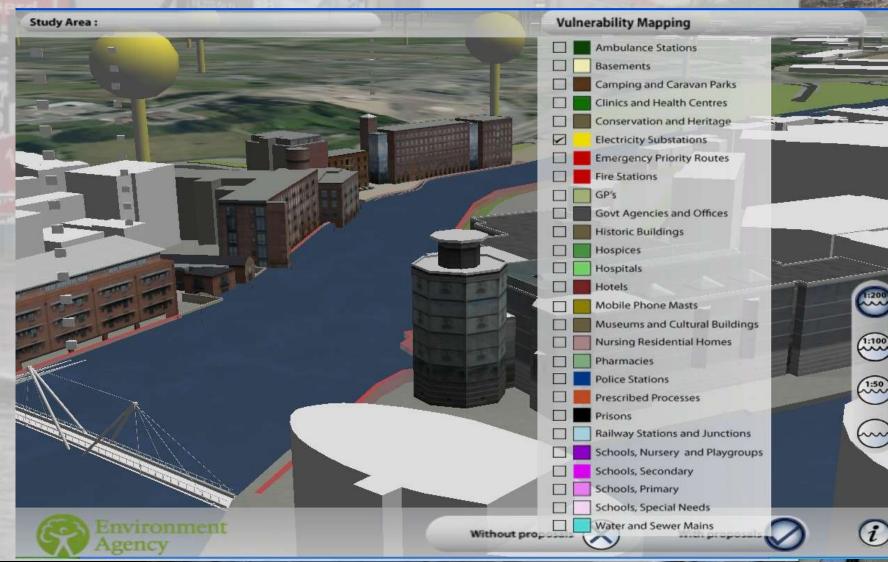
### **Flooding and Resilience**

- Flood Risk Management is needed to make urban areas resilient
- Consultation is key
- 3D City Modelling is a powerful alternative to mapping
- Future scenarios easily visualised and modelled
- Can be used to display various data types, and present in a high-impact, relatable manner.
- Risks currently conveyed using maps (EA)





#### Leeds City Model



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### **Leeds Model - Demonstration**

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#### **Conclusions and future Development**

- Very useful in persuading stakeholders of the benefits of FAS, and thus helps to improve the resilience of Cities.
- Shows direct and indirect impacts of floods.
- Optioneering
- Useful for other types of data display (traffic, emissions, temperature).
- Potential to view all flood risks, and combined source flood risks.
- Next stages view interactions between people, traffic, flooding, infrastructure failure etc.



#### Thanks for listening. Questions ...

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