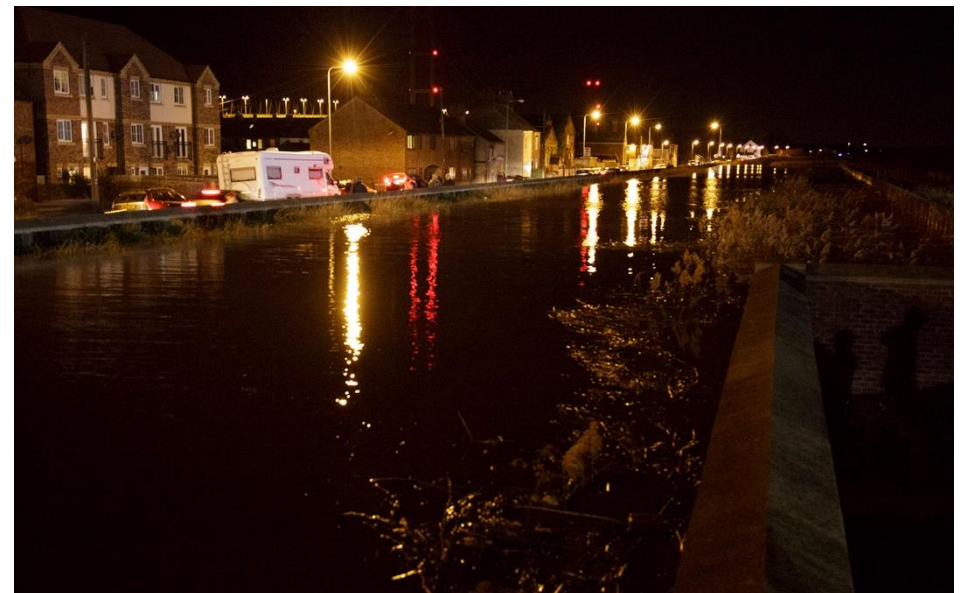


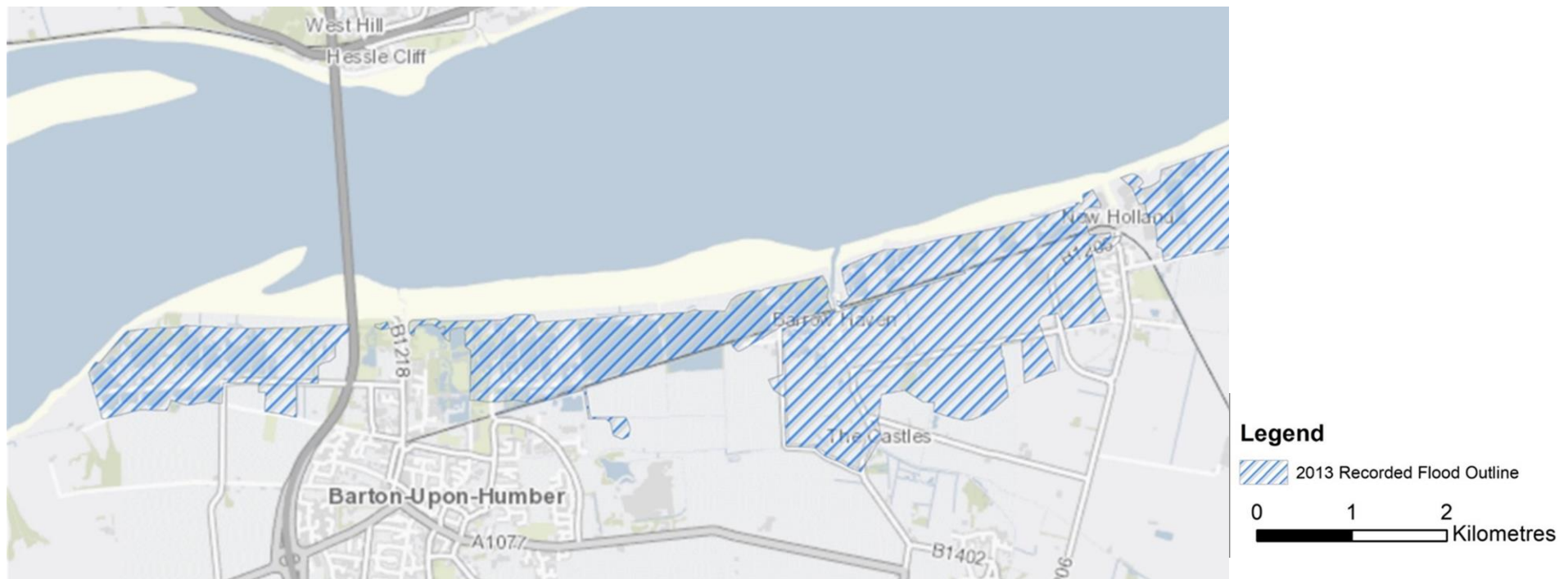
Barton to New Holland Tidal Flood Alleviation Scheme

Current and Future Tidal Flood Risk



Current Flood Risk

Tidal Flood incidents such as the December 2013 incident, have highlighted the need for improved resilience for the communities of Barton, Barrow and New Holland. During this incident some defences were over topped causing localised flooding, with other defences being left weakened or damaged. Immediate repairs were carried out in early 2014, but a wider spread long-term approach to improving defences and improving communities' resilience was needed. The Barton to New Holland Tidal Flood Alleviation Scheme aims to address this issue through the development of a long-term sustainable solution which reduces flood risk and improves resilience to future tidal incidents.



Map showing the recorded flood outline of the December 2013 Tidal incident.

Future Flood Risk

To understand how flood risk may change in the future our team have carried out tidal flood modelling (also known as hydraulic modelling). This modelling allows us to understand the estuary wide and local changes to flood risk in multiple scenarios. The below map shows how flood risk changes between 2022 and 2121 if there are no improvement to the current defences and they are simply maintained.

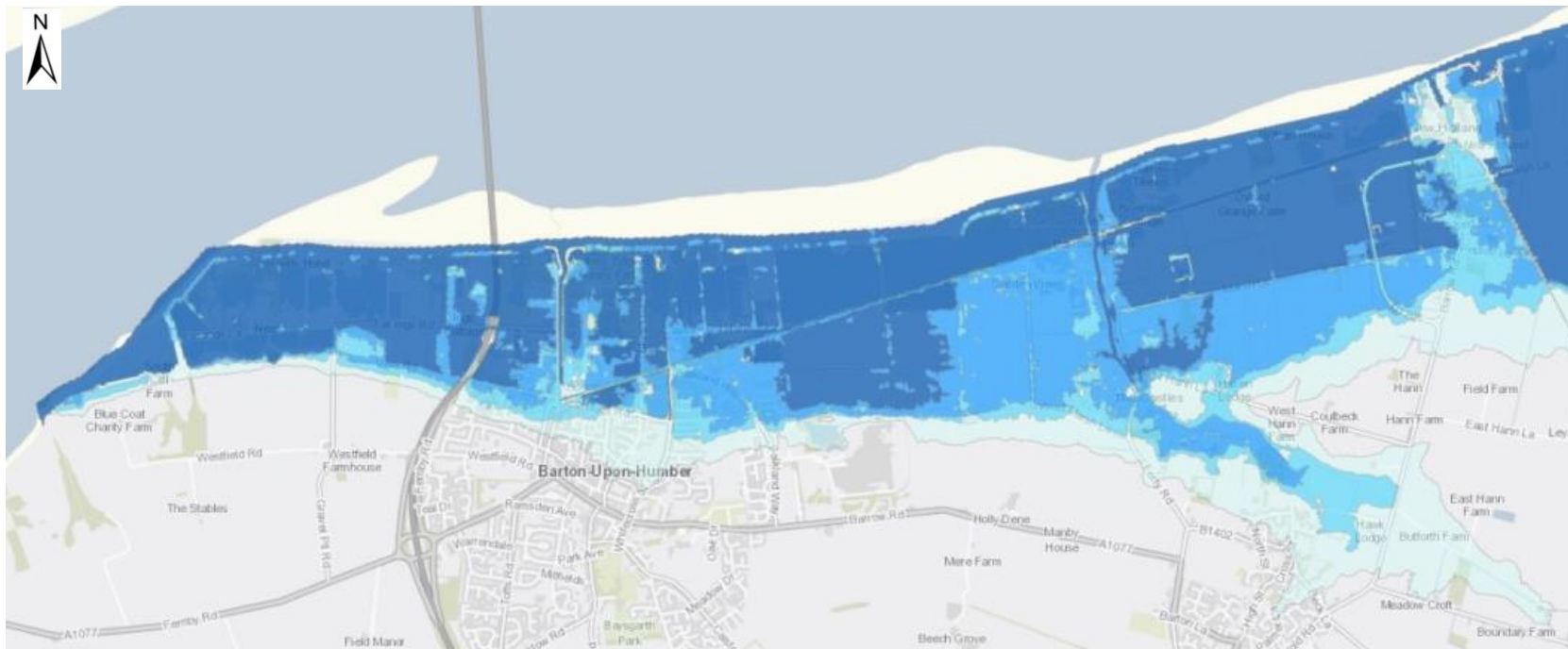


Figure 1. Baseline Tidal Flood Risk Map

Legend

- Baseline Flood Risk 2022 - 0.5% (Annual Exceedance Probability)
- Baseline Flood Risk 2056 - 0.5% (Annual Exceedance Probability)
- Baseline Flood Risk 2071 - 0.5% (Annual Exceedance Probability)
- Baseline Flood Risk 2121 - 0.5% (Annual Exceedance Probability)

What is Annual Exceedance Probability?
Annual Exceedance Probability (AEP) is the annual likelihood of flooding.

December 2013 Impacts and Repairs



In New Holland 6 homes were flooded and many businesses too including timber workshops and warehouses, industrial units, grain sheds, school grounds and railway lines. Nearly 600 hectares of land was inundated between Far Ings and New Holland



Widespread damages to embankments and footpaths towards New Holland



South Humber Bank Repairs (Between Barrow Haven and New Holland):

- £2.0 Million repair programme between December 2013 to September 2014
- Extensive repairs to Barrow Haven embankments were undertaken up to Spring 2015 (Left Image)
- Repairs completed on risk-based priority order
- 19km of overtopping with 3.5km of sever scouring
- 13,000 tonnes of clay were used to bolster flood banks