

WP No. 5.4	WP Leader Prof. Colin Thorne
WP Title Source-Pathway-Receptor modelling of sediment yields and downstream morphological responses to changes in climate and land use: Lowland Catchments	
<p>Description of data generated with FRMRC funding (web link will be inserted for each data set if appropriate)</p> <p>River channel geometry (cross section) extending Halse Water by approximately 5km</p> <p>Total and specific annual sediment yield for relevant SS sampling points within the River Tone catchment</p> <p>Sediment rating curves for relevant SS sampling points within the River Tone catchment</p> <p>River substrate particle size distribution [PSD] data using integrated bulk sample, Wolman’s pebble count and re-classification to RHS categories for 16 sediment reaches through the Tone catchment</p> <p>Catchment sediment source PSD data for four different land use categories (arable, pasture, riverbank and road verge)</p> <p>River sediment deposition PSD data for one suspended sediment sample and four sediment bar deposits within study area</p> <p>Specific stream power calculations for 191 ISIS river model cross-sections within the study area (104 Halse Water & 87 Tone)</p> <p>River Habitat Survey data for 32 x 500m survey reaches on Halse Water and River Tone</p> <p>Land use sediment physico-chemical fingerprinting for Halse Water catchment identifying percentage contribution of different land use types to total sediment yield, and contribution of Halse Water vs Back Stream [tributary of HW].</p> <p>2 x HEC-RAS:SIAM models covering Halse Water and Lower Tone</p> <p>2 x ISIS-Sediment models covering Halse Water and Lower Tone</p> <p>Output data from HEC-RAS:SIAM covering approximately 90 model scenario runs encompassing sensitivity testing and management/flow scenarios, which includes:</p> <ul style="list-style-type: none"> ❖ Total bed material budget (t/yr) for each sediment reach ❖ Reach supply & balance (t/yr) for each sediment reach ❖ Wash material PSD (t/yr) for each sediment reach ❖ Bed material PSD (t/yr) for each sediment reach ❖ Normalised bed material PSD (t/ft) for each sediment reach 	
<p>Supporting data sets owned by others</p> <p>Web links or contact details to be inserted to allow others to seek permission to access third party data sets.</p>	
<p>15 minute flow gauge data (1992-2009) from Halse Water GS and Bishops Hull GS (Environment</p>	

Agency, Bridgwater)

Suspended sediment concentration data (from 1980) for all sampling sites within the River Tone catchment (Environment Agency, Bridgwater)

River ISIS-Flood hydraulic model for River Toner catchment (Environment Agency)

Barriers to making data freely available after project.

None