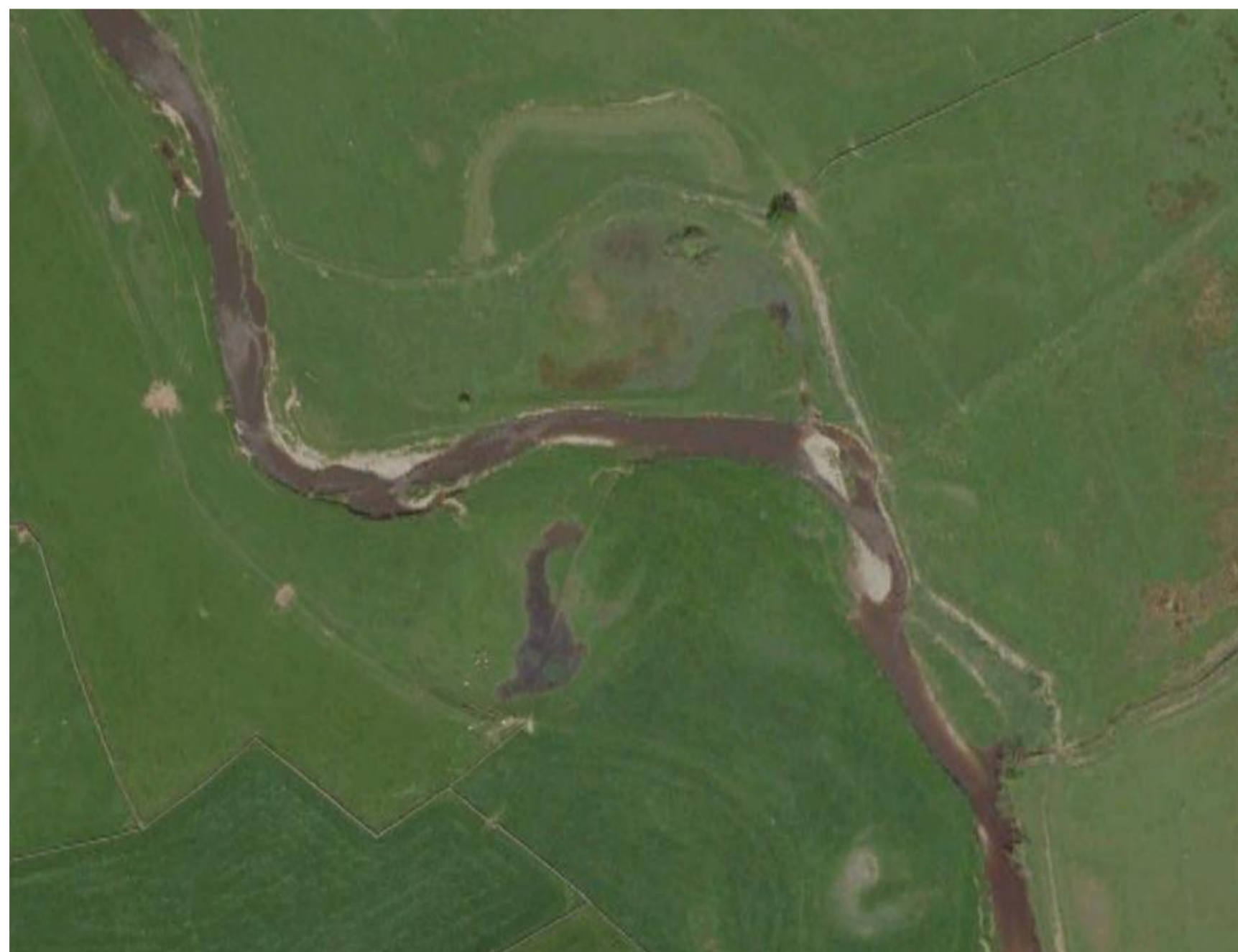


# Predicting Ecological Gains Following Assisted Natural Recovery: An Example From The River Ribble At Long Preston Deeps.

## Brief

Given the objective of the Water Framework directive to improve the ecological integrity of Europe's water bodies there is a clear requirement to understand the linkages between the geomorphology, hydrology and ecology and thereby establish a sustainable, process driven, basis for river and floodplain restoration in the UK.

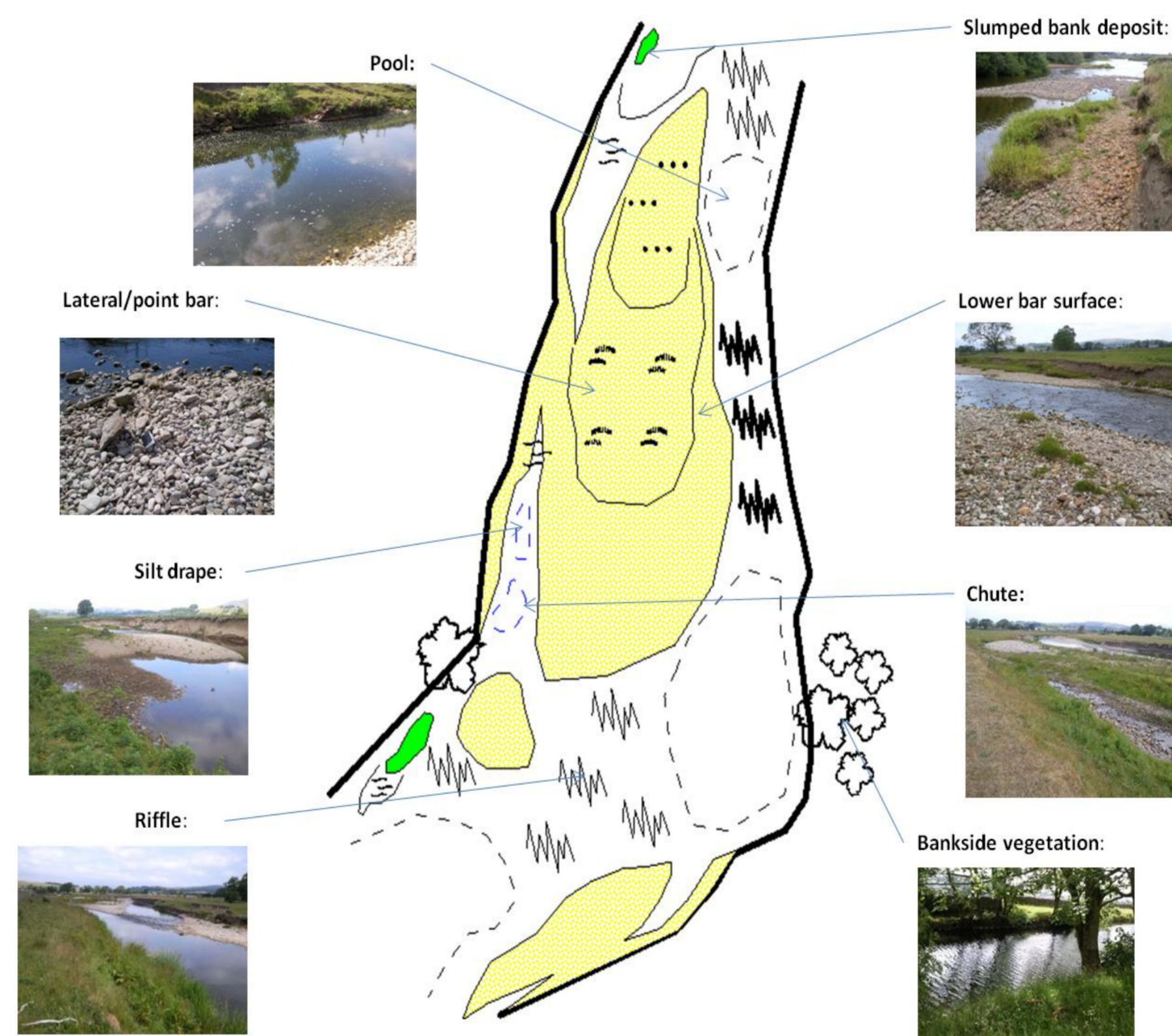


River Ribble channel & floodplain features © Google Earth 2010, Infoterra Ltd & Bluesky 2011

An understanding of these linkages will allow natural features to be restored through the re-establishment of natural morphological processes and dynamics.

## Methodology

The river restoration plan for the River Ribble at Long Preston Deeps, North Yorkshire (an SSSI), was developed through identifying key geomorphological and ecological associations, establishing the present day baseline state of the system through expert survey and defining key restoration zones. The results of this exercise permitted the prediction of the development of likely future habitats, following the implementation of restoration measures designed to re-establish river – floodplain process connectivity.



River Ribble local geomorphology & ecology © Jeremy Benn Associates Limited 2011 © Environment Agency 2011, © Natural England 2011

## Action Plan

This expert knowledge approach considered the effects of targeted palaeo-feature restoration and facilitated the selection of key locations for achieving optimum ecological improvements with minimal direct intervention. The approach will minimise disruption to the site and reduce costs, whilst reinstating natural geomorphological, hydrological and ecological links helping to ensure the long term sustainability of each planned intervention.



River Dee geomorphology © Jeremy Benn Associates Limited 2011 © Environment Agency 2011, © Natural England 2011

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