Clinton Devon Estates

Position Statement: The River Otter Restoration Project

Key aims:

- **Managed realignment and naturalising of an iconic river through reconnection to its floodplain**
- **Meeting UK *Biodiversity 2020 Strategy* targets through coastal habitat creation**
- **Meeting *EU Water Framework Directive* targets through improved health of an estuary**
- **Protection of local businesses, residential properties and public access from flooding**
- **Allowing natural resilience in the Otter valley to the impacts of climate change**

Background

The River Otter is a County Wildlife Site with 33 hectares of the estuary and the cliffs of Otterton Point designated as a site of Special Scientific Interest (SSSI) on account of the fine saltmarsh habitat supported and adjacent Triassic sandstone rocks of considerable paleontological interest. The river is highly altered by human hand. Below Newton Poppleford the once meandering river was directed in monastic times to run along the edge of its natural floodplain to power mills. Since those times the creation of a number of artificial structures have further hindered the ability of the river and estuary to equilibrate and respond naturally to flooding events and changing climatic conditions. They also constrain the development of high quality natural habitats. Structures include flood embankments (e.g. Big Bank and Little Bank) built in the early 19th century to reclaim agricultural land from the estuary, and a railway embankment between Budleigh Salterton and Newton Poppleford built in the early 20th century. The old railway line now acts as the primary access route for farming in the area. Additional structures include an old municipal dump sited within the floodplain, south of White Bridge. The floodplain is now agricultural, with a significant area below Newton Poppleford supporting Clinton Devon Estates' organic dairy herd. Tenant farmers and other landowners manage additional areas of land.

The issue

The River Otter is now largely disconnected from its floodplain. In recent decades there have been many severe flooding events with 21 recorded since 1959. These have included the embankment adjacent to the estuary over-topping through tidal in-wash in 1959, and nine separate incidences of the river itself overtopping the embankment. In 2012 alone there were three severe flooding events in July and November. There is fear that with sea level rise and the warmer wetter winters predicted for East Devon due to global warming, that these events will become more frequent. Should this happen, their impacts on residential properties, rural businesses and public footpaths will likely be severe. The popular public footpath between White Bridge and Otterton, for example, was closed in November 2012 for four months after a flooding event drastically eroded the river bank. Recent years have also seen the severe erosion of the primary flood embankments. There is now a distinct chance that in a severe flooding and/or tidal surge event, the embankments might collapse altogether, allowing the sea to pour unchecked into the previously reclaimed part of the floodplain. This could have severe environmental and social impact through, for example, the erosion of an old dump site. Rather than for this to happen in a potentially catastrophic manner there is a strong argument for the process to be managed for wildlife and public benefit through 'controlled retreat'. This will also build natural resilience to future climate change and reduce the need for expensive and usually short-term human interventions.

The River Otter Restoration Project: In 2009 Clinton Devon Estates commissioned a report from Haycock Associates to understand local flood dynamics, how the river might be reconnected to its floodplain and what options might be available to improve habitats and flood management in the river. Ten options were suggested at this time. Some related to specific, small interventions that might reduce the frequency of flooding at certain locations, such as Otterton, for example. Others looked at what potential there might be to relocate key impacted sites such as the cricket club elsewhere within the valley. However, the one ambitious option which received the greatest publicity at this time was the potential creation of a lake to the west of the embankment below White Bridge. The rationale behind the lake was for this to act as a sediment lagoon over a 50 to 100 year period to try and equalise the height of the floodplain on both sides of the embankment, after which time it was envisaged that breaches could potentially be made in the embankment to return this western 'grassland marsh' portion of the floodplain to natural saltmarsh or mudflats of higher wildlife value.

Recent developments: In February 2012, a meeting was held at Clinton Devon Estates' Rolle Office to discuss the Restoration Project. It was attended by many organisations including the Environment Agency, Natural England, South West Water, East Devon District Council, the Otter Valley Association, the AONB, the Westcountry Rivers Trust and the Devon Wildlife Trust. At this time it was agreed that reconnecting the river to its floodplain was conceptually desirable and if undertaken soon would indeed assist England to meet its Biodiversity 2020 targets through habitat creation, and the UK to meet EU Water Framework Directive targets through improving the health of the estuary. However, it was agreed that a shallow lake was not the best means of quickly attaining the vision of a more natural, healthy and resilient river/estuarine system. A case was made to accelerate the naturalisation process through more immediate embankment breaching without the need for an intermediate 'lagoon step'. At present (as of May 2013), the River Otter Restoration Project is still a concept. Many feasibility studies and much consultation need to be undertaken to understand if the project is socially, economically and environmentally worthwhile. In particular the benefits and disbenefits resulting from the project to all stakeholders need to be clarified and quantified and suitable partnerships and governance developed. **The next step is the appointment of a Project Officer to help build necessary partnerships, further define the vision and clarify the project framework, including what the outputs/outcomes are. The current focus of effort is to fund such a position.**

Motivations of Clinton Devon Estate:

- To help to deliver UK and EU Biodiversity and Water Framework Directive targets
- To evolve and protect its own land management interests by adapting to climate change
- To assist Otter Valley communities and other business interests including those involved with tourism to adapt and thrive in the face of climate change
- To be seen as a leader in forward-thinking land management that is socially and environmentally responsible

All queries relating to this project should be directed to Dr. Sam Bridgewater, Nature Conservation Manager, Clinton Devon Estates (01395 441143). Additional Reading: Haycock, N. E. 2009. *Lower River Otter: Long term options for drainage and flood management*. Report for Clinton Devon Estates. **Available online from:** (http://www.clintondevon.com/conservation/riverotterlongtermoptions.ashx)

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