

## Sowerby Bridge Copley Valley Development – Factsheet (1)

### Ecology

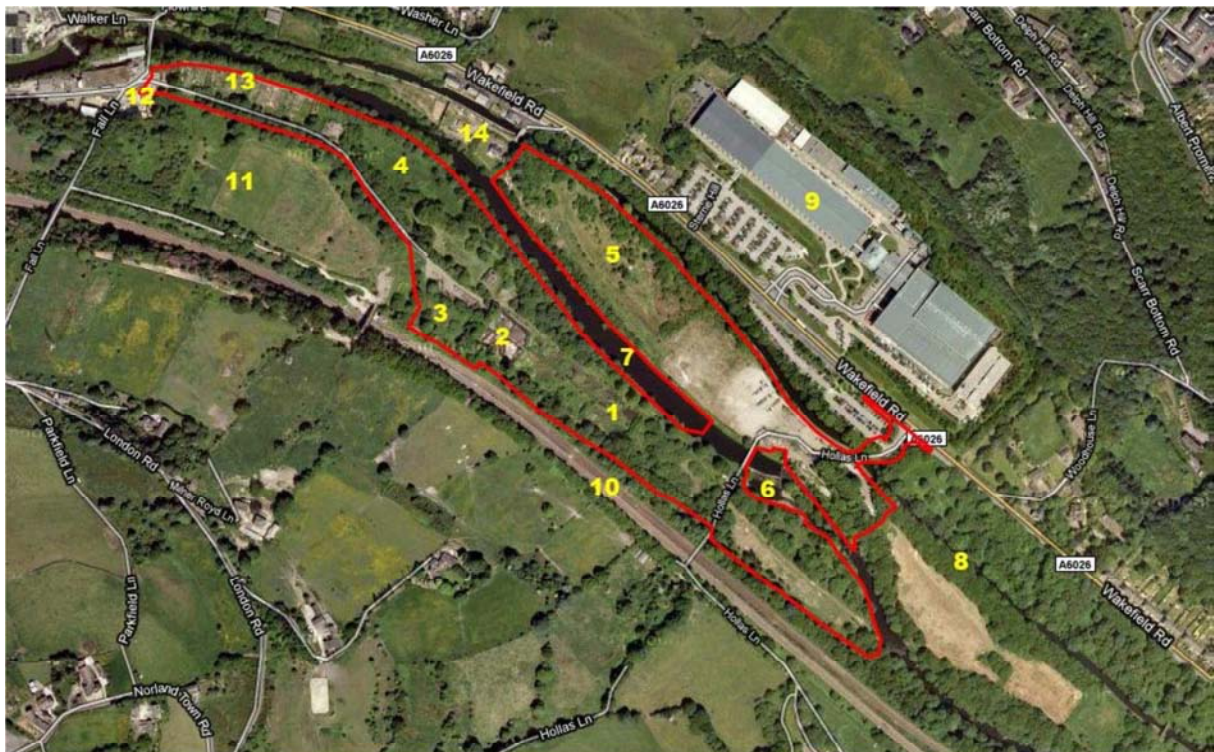
Throughout the development of the project, careful consideration has been given towards the existing biodiversity on the site and surrounding area, assessing what can be retained, how to mitigate for losses and how to enhance the quality of biodiversity on site and in the surrounding area.

The work has been governed by the following principles:

- The site is part of a wider network of habitats.
- Habitat enhancement and creation is compatible with the existing environment, maximising potential, minimising threats (particularly invasive species) and creating an inherently sustainable system.
- Ecological succession is an integral part of the work.

### A brief history of the site

The site has supported a range of uses in the past, including a sewage treatment works, a woollen mill, wire works, dye works and refuse tips / landfill. In recent years, however, the site had become mostly disused and overgrown.



#### KEY

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|---|--|----|--|
| 1 | Former sewage treatment works, now established reed beds and scrub | 8  | Calder & Hebble Navigation                   |
| 2 | Council green waste and top soil storage area                      | 9  | Lloyds Banking Group offices and data centre |
| 3 | Large reed bed surrounded by trees                                 | 10 | Calderdale rail line                         |
| 4 | Grassed area east of the Yorkshire Water Pumping Station           | 11 | Milner Royd local nature reserve             |
| 5 | Grassed area with hardstanding at eastern extent                   | 12 | Sowerby Bridge Milner Royd Recycling Site    |
| 6 | Weir on the River Calder   | 13 | Allotments                                   |
| 7 | River Calder   | 14 | Closest residential dwellings to the site    |

As part of the planning process for the proposed development scheme, an Ecological Impact Assessment was undertaken to assess the potential impact of the development on existing habitats and species. The assessment was informed by extensive field surveys undertaken during 2010, which identified that the site comprised a range of habitats including broad leaved woodland, scrub and grassland. In addition to the river and canal, swamps had established south of the river where the former sewage treatment works were located. Species found by the surveys to be present include common frog and toad, palmate and smooth newt, foraging (but not roosting) bats and breeding birds. Although not resting up at the site, it was thought likely that otter could also be moving through the area.



*Pondlife (Sowerby Bridge Copley Valley site)*

However, the ecological impact assessment identified that a number of habitats within the site were suffering. For example, pond habitats at the site appeared to all be entering states of succession (for example, due to siltation etc.). Out of seven ponds originally surveyed in 2005, two of these ponds no longer existed in 2010. Without intervention to preserve the pond habitats present, it was thought likely almost all may be lost in time.





*Early stages of pond succession (Sowerby Bridge Copley Valley site)*



*Later stages of pond succession (Sowerby Bridge Copley Valley site)*

The ecological impact assessment also noted the spread of invasive species such as Japanese knotweed (*Fallopia japonica*) and Himalayan Balsam (*Impatiens glandulifera*), which were found to be abundant through the site.



*Himalayan Balsam (Impatiens glandulifera)*

### **Removing invasive species**

A Japanese knotweed control programme was successfully carried out on site between 2009 and 2013. Further monitoring of the site was carried out over the 2014 growing season and no additional areas of knotweed were identified, although small amounts of continued growth were identified in areas to the top of the former landfill and along the edge of the river along Hollas Field (due to the nature of these areas, regrowth was expected).

During these inspections all other areas of the site were inspected and no regrowth was noted within any of the proposed development footprint of the site.

As part of the current development phase, the earthworks to form the wetland areas are being constructed including laying of appropriate soils won from site and seeding with native wild flora mixes to protect the soils from erosion by flood waters and to limit the colonisation by Himalayan balsam. Measures to control the Himalayan balsam throughout the site are also being undertaken.

### **Creating a network of habitats**

The development of proposals is firmly based on the fact that this site is part of a network of habitats in the Copley Valley, a core part of which are the canal and river corridors. The south side of the river is a key element, linking as it does with the Milner Royd Local Nature Reserve which lies immediately to the northwest of the site. This area is known as the Green Corridor and includes continuous woodland cover from Milner Royd to the new nature reserve to be developed at the



south eastern end of the site, using the tree cover along the south bank of the River Calder and the railway line running along the south west boundary of the site. The removal of tree cover has been kept to a minimum, with the majority being the younger more scrubby vegetation growing on the old filter beds of the former sewage works, around the edges of the mill area and on the old landfill between the canal and river.

### **New nature reserve**

Green space within the development will comprise 6 hectares (43%) of the total 14-hectare site area and the creation of new habitats including wetland and reedbed will have an overall benefit to site ecology. Wetland habitats in particular have a potentially significant role in climate change adaptation.

The south bank of the river contains areas of damp ground and rough grassland where the ecological value is to be increased by developing areas of open water, marshland, reedbed and damp grassland.

The new nature reserve will contain a path system linking viewpoints of the river and down into the new nature reserve with areas where visitors can interact with habitats such as ponds, marshland or species rich grassland.



*Illustration of proposed habitats in the new nature reserve at the south-eastern end of the site*

Additional habitat creation will include grassland, woodland and wetland type habitats within the site. There are also additional benefits through the creation of new online BAP<sup>1</sup> reedbed habitats and associated wetlands, which provide an intrinsic and natural link to the River Calder.

In the remainder of the Green Corridor, habitat creation as mitigation and as enhancement will also entail:

- species rich grassland, including wet grassland;
- three additional wetland areas (wetland/reedbed mosaic, BAP ponds, ditches and ponds);
- retention and replanting of woodland habitats; and
- scrub and wet scrub plantings.

Once the earthworks have finished settlement (early 2016) the design of the wetland areas will be refined to maximise their biodiversity value. A second phase of work will then start in Spring 2016 with minor adjustments to the soils levels to create optimum conditions for habitat development followed by the planting of reedbeds, marshland plants, woodland and scrub planting, and the laying of paths, construction of boardwalks and installation of interpretative features.

### **Mitigating the impact of construction works**

Work started on the site in mid-February 2015 and has involved the removal of a number of trees. Tree clearance is being carried out in accordance with an approved Tree Removal Strategy and good practice. An ecologist is on site to check in advance of clearance that no birds have started nesting, and if nesting has started in any trees, those trees are left until the young have flown. In advance of works starting on site, potential bat roost trees were identified, checked and those where development would take place were removed in May 2014. The potential bat roosts outside the construction footprint are to be kept and have been clearly marked for protection on site in the Green Corridor.

Alongside checks for nesting birds and bats, the ecologist is undertaking a search for amphibians and moving them to the two ponds created for this purpose, and has carried out a check for any transient species such as badger.

### **Sustainable use of materials**

The materials arising as a result of the tree clearance are to be reused on site in a number of ways:

- Large sections of trunks are to be used for informal seating and habitats for fungi and insects.
- Timber too small to be used as 'furniture' is to be used to form deadwood piles in the woodland areas under the guidance of an ecologist, with any surplus able to be sold on as firewood or biomass, if there is demand.

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<sup>1</sup> Biodiversity Action Plan (BAP)