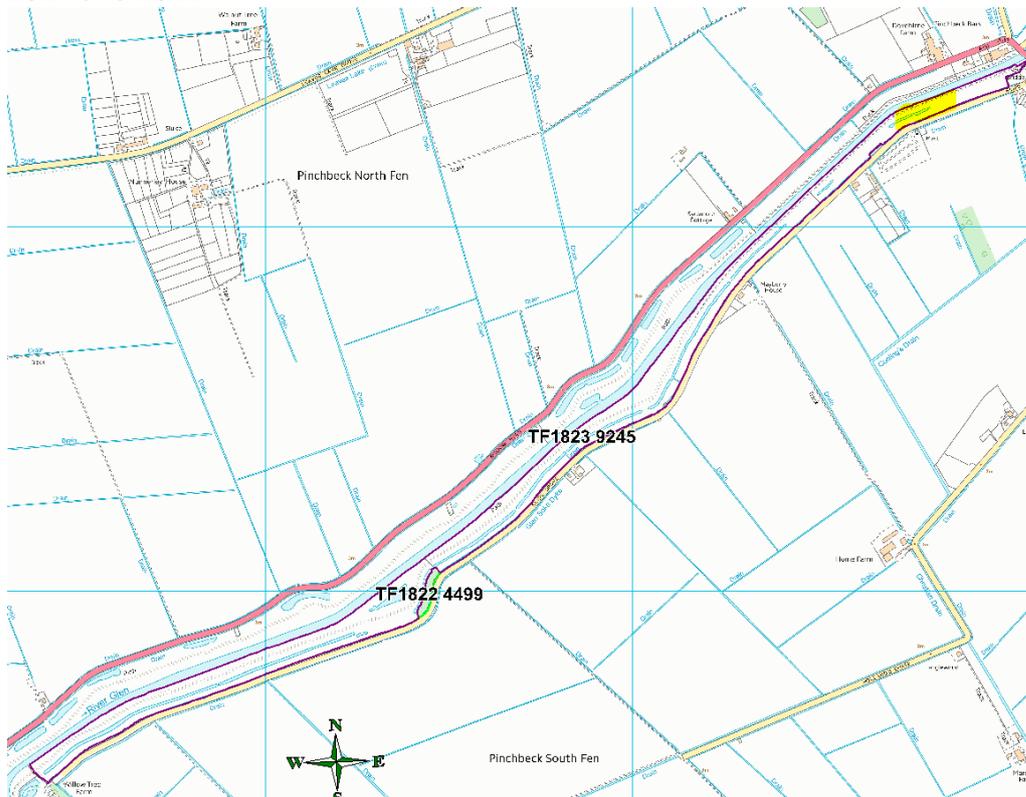
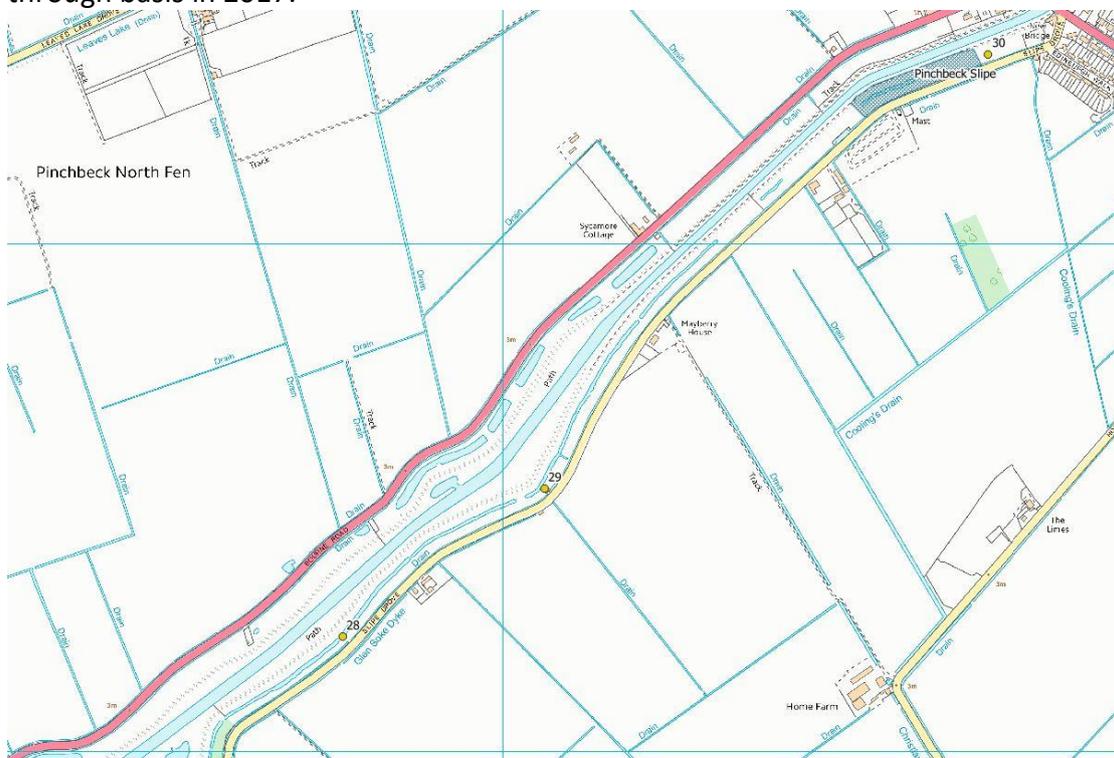


**Site Visit Assessment Form – Pinchbeck Fen Slipe, Lincolnshire
2017 and 2022**



Map 1. Area of the site (highlighted in yellow), which was surveyed on a walk-through basis in 2017.



Map 2. Locations 28-30, which were surveyed in 2022; One more botanical quadrat was done in highlighted area, which was surveyed as walk-through in 2017.

Site Name Pinchbeck Fen Slipe	Grid Ref TF 173225 to TF 200244	County Lincolnshire	
River Glen	Ownership Welland & Deepings IDB	Designation None	Size (ha) 21.85
Date 14/07/2017 22/06/2022	Meeting with LWT	Managed by Lincs Wildlife Trust	
Management and History			
Restoration			
Technique used/Dates			
Restoration here includes traditional management of the site and removal of hogweed and ragwort.			
Hydrology		The site flooded in the past (1990's and early 2000's from the adjacent roadside drain). River-side field on the other side of the bank floods regularly.	
Flooding regime Water management Soil-water levels (indicated by auger hole/any other data)			
Historical information			
Reserve acquired by lease in 1997. Until then it was heavily grazed with horses and cattle, fertilizers were applied to the grasslands; the borrow pits were used as a local rubbish tip.			
Current site interest		Attached excel spreadsheet for botanical data	
Plants on the site were surveyed on several occasions: in 1986, 87, 97, 99, 2002, 2003, 2010, 2012 and 2015 giving a general list of all species recorded. The survey on 14 th July 2017 covered only compartment 6 (Eastern Scrape) of the nature reserve. The walk-through list has 19 species, 9 of which were grasses. Grasses dominated the site together with hogweed <i>Heracleum sphondylium</i> (20%) and amphibious bistort <i>Persicaria amphibia</i> (30%). According to the soil profile (see below), ground water fluctuates significantly. The presence of iron at a depth of 10 cm indicates a high level of soil saturation during wetter periods of the year. The site also drains well, down to 100-110 cm, where the history of the meadow can be seen in the soil profile as peaty loam and especially, in poorly decomposed peat which is completely saturated even in dryer periods. The unusually large size of grasses like meadow foxtail <i>Alopecurus pratensis</i> and rough-stalked meadow-grass <i>Poa trivialis</i> reflect a high level of soil nutrients. The tall and dense cover of grasses suppresses the less competitive forbs, amongst which such species like meadow vetchling <i>Lathyrus pratensis</i> , ribwort plantain <i>Plantago lanceolata</i> , meadow buttercup <i>Ranunculus acris</i> , and red clover <i>Trifolium pratense</i> were recorded in small numbers.			
The botanical survey in June 2022 was carried out on four 1 x 1 m quadrats scattered along the strip (Map 2). Vegetation along the Slipe is relatively uniform, dominated			

by grasses. Tall fescue *Festuca arundinacea* dominates the sward in large patches. Some areas (for example location 28) have shorter and less dense vegetation where earlier hay cuts may have occurred with aftermath grazing from August. Under the new Countryside Stewardship hay is being taken earlier – on 1st July instead of 15th and aftermath grazed). The the percentage cover of small herbs like red clover and lesser trefoil *Trifolium dubium*, and small grasses like red fescue *Festuca rubra* and crested dog's-tail *Cynosurus cristatus* reach 10-25% in these areas. Such areas should develop more species rich patches if green hay or other sources of plant propagules are introduced. Otherwise, any increase in species diversity is limited by a lack of suitable species from which to receive seeds.

Overall, the number of plant species per 1 m² is good (18-20 sp/m²), however the functional diversity of the current vegetation is poorly balanced with strong competitive species (C) and ruderal species (R) dominating, while stress-tolerant species (S) are present in very small numbers only (ratio C:S = 1.25, ratio S:R=0.77).

The abundance of stress-tolerant species in the meadow increases over time; in ancient meadows it reaches a similar level to competitors and ruderals when all ecological niches have been exploited and occupied as happens in the most diverse, ancient ecosystems.

Ellenberg indicator values for soil moisture (F=5.6) and nutrients (N=5.7) are relatively high. In particular soil nutrients need to be decreased to achieve a target of a more species-rich meadow.

However, vegetation similarity scores to NVC types MG4b Burnet floodplain meadow Typical sub-community (*Alopecurus pratensis-Sanguisorba officinalis* grassland), and MG6d Ryegrass pasture, sweet vernal-grass sub-community (*Lolium perenne – Cynosurus cristatus* grassland *Anthoxanthum odoratum* sub-community) were 58 and 56% respectively, suggesting the community is not too far off the conservation target plant community. Having both vegetation types with similar NVC scores suggests that habitat is suitable for an MG4 type of vegetation, if it is possible to improve the species composition.

Phosphorus levels	Not known
Soil profiles	

	<p>Soil profile</p> <p><i>A horizon</i> 0 - 10 cm – sandy loam</p> <p><i>B horizon</i> 10 – 30 cm – clay loam with iron, 30 – 55 cm – clay with iron and slight gley, a layer of bricks and charcoal at 50 cm depth 55 – 100 cm – clay with a lot of iron and slight gley 100 – 110 cm – black organic-rich very peaty loam with 3% inclusion of coarse sand 110 - 120 cm – saturated, poorly decomposed peat, big pieces of sedges and grasses.</p>
<p>Site manager aspirations/objectives</p>	
<p>More species rich meadows.</p>	
<p>Management recommendations</p>	
<p>A double cut is strongly recommended (June and September) for several years in order to decrease the vigour of the grasses and provide more open spaces for forbs to germinate and spread along the field. The early cut (June) will help with controlling hogweed.</p> <p>Recommendations from the 2022 survey support those stated above. In the small areas where an earlier hay cut may have been carried out there has been a marked improvement in the species composition. A further increase in species number could be achieved by spreading green hay/seeds of meadow plants in these patches in particular.</p>	