



Humber Nature Forum

10.00 a.m. Thursday 22nd March 2018
 Humber Room, The Ropewalk, Barton upon Humber

Minutes

1. Welcome, introductions and apologies

Present

Kevin Bayes (KB)	Humber Nature Partnership
Alison Briggs (AB)	Shire Group IDBs
Daryl Burdon (DB)	Acting Chair/ Institute of Estuarine and Coastal Studies.
Darren Clarke (DC)	Humber Nature Partnership
Mike Coverdale(MC)	Humber Nature Partnership
Olly Dawes (OD)	Institute of Estuarine and Coastal Studies
Tony Edwards (TE)	HNP Chair /Humber Environmental Managers Network
Sean Kent (SK)	Lincs County Council
Adrian Koster (AK)	Royal Geographic Society
Clare Langrick (CL)	North and East Yorkshire Environmental Data Centre
Barry Longstaff (BL)	Humber Conservation Volunteers
Sara Macias- Rodriguez (SMR)	RSPB
Lucy Marshall (LM)	Environment Agency
Eric Robinson (ER)	North Lincs and Humber Sailing Club
Pete Rogers (PR)	Xceptional Designs
David Sheppard DSD	
Dick Shillaker (DSR)	Yorkshire Dragonfly Group
Clare Sterling (CS)	Lincs Wildlife Trust
Sarah Tock (ST)	Knauf
Simon Wellock (SW)	Lincolnshire Wildlife Trust

Apologies

Phillipa Baron	Canal and River Trust
Robert Foster	Chair Upper Humber Wildfowling Committee
Kate Jones	Natural England
Lucas Mander (LM)	Institute of Estuarine and Coastal Studies
Cliff Morrison (CIM)	HNP board member
Peter Short (PS)	RSPB
Tammy Smalley	Lincs Wildlife Trust

1. Introduction

In the absence of an elected Chair, DC welcomed the group and led round table introductions.

2. Election of Chair

DC explained the requirement for Chair as in the Terms of Reference of the Forum. DB had offered to stand as Chair. A call out had been made with the circulation of the agenda to ask if anyone else was willing to stand as Chair. There were no takers. Thus DC recommended that DB be offered the Chair unopposed. The Forum attendees agreed.

3. Welcome from the Chair

DB added his welcome to attendees and explained the agenda of the rest of the meeting..

4. Humber Management Scheme (HMS) and Catchment Partnership update

The slides accompanying KBs presentation are available on the Humber Nature Partnership website www.humburnature.co.uk

KB explained the role of the Humber Management Scheme in coordinating the conservation actions of the 33 Relevant Authorities (the regulators) around the estuary.

KB showed graphs of the decline in overall bird numbers that has taken place on the estuary in recent years and explained how this related to the work programme of the HMS. The decline is currently of the order of 30%, from approximately 180,000 to approximately 120,000 (5 year running means of annual maximum counts from the BTO Wetland Bird Survey)

KB summarised the highlights from the HMS work of 2017.

These included

- Completion of a Recreation Strategy for the estuary to address negative impacts of recreational disturbance of birds. The Strategy will be made available once it has been signed off by the Humber Estuary Relevant Authorities Group (HERAG) and the Humber Nature Partnership Board.
- Working with Natural England on the development of the England Coast Path
- A joint workshop (HNP and Natural England) bringing together many local experts to consider the issue of bird declines. Science is unable to explain the drop in bird numbers but the workshop identified a number of work themes to be addressed.
- New estuary signage. 14 signs around the estuary raise awareness of the importance of the internationally designated sites and explain why the area is important. The current signs are 10 years old and are due to be replaced by a new design. KB compared the old and new.

KB then identified some of the priorities for work in 2018

Recreational Disturbance including

- Local Recreational Management Plans to attempt to alleviate problems at specific hotspots
- Revamp of Codes of Conduct for estuary users
- A programme commissioned from Estuary TV on Bird Migration and recreational disturbance
- A workshop addressing the growing use of drones around the estuary

Emergency Planning

- To assist emergency planners in taking sensitive wildlife sites into account
- To link volunteer activity on wildlife rescue to the current emergency plans

Monitoring

- Work to assess changes in monitoring effort around the estuary

Future themes

- Functionally linked land. Many birds spend much of their time away from the estuaries. Can we identify ways that farmers and land owners can build support for these species into their landuse regimes?
- Government 25 Year Environment Plan. An opportunity to ensure our workplans locally support the aspirations of this new national plan.

5. Dragonflies around the Humber – Dick Shillaker Yorkshire Dragonfly Group

DSR gave a presentation on dragonflies and their habitats from within a 5 kilometre radius of the estuary. A version of the slides from the presentation is available on the HNP website (see above)

There are 6000 species of Odonata (dragonflies and damselflies) worldwide, 114 species in Europe, 27 resident and migrant species in Yorkshire and 24 resident and migrant species around the Humber.

Dragonflies are divided into Anisoptera (unequal wings) – the ‘true’ dragonflies and Zygoptera (equal wings), the damselflies

DSR explained the basic morphology of dragonflies.

The first species to emerge in the year is the Large Red Damselfly.

At any one site, the species of dragonflies will vary throughout the year as they all have specific flying times. There tends to be a group of species for late spring and early summer a summer group and a late-summer- early autumn group.

Good dragonfly habitats tend to have

- Unpolluted water
- Floating and submerged vegetation
- Marginal vegetation
- Shelter from trees or hedgerows

Sites of importance for dragonflies can be identified, using British Dragonfly Society (BDS) criteria, if

- They hold a nationally or locally important species. There is only one n. i. species around the estuary – the Variable Damselfly found at Broomfleet on the north bank and one site on the south bank. DSR explained the characters which identify this species.
- At least 8 species (for sites in Yorkshire) have been recorded in the last 10 years
- There is proof of breeding
- There is sufficient abundance of individuals

Proof of Breeding

Probable – copulation noted

Confirmed – egg laying seen, larvae present, exuviae (the larval exoskeleton left behind when an adult emerges) present, individuals seen immediately after emergence, ie before their ‘maiden’ flight.

DSR described damselfly and dragonfly larvae

Damselfly larvae have three caudal lamellae – flattened ‘tails’ used for respiration and movement.

East Riding has its own dragonfly criteria for Local Wildlife Sites

- 10 breeding species
- 15 species noted over 5 years
- Breeding of a species rare in the East Riding e.g. Small Red-eyed Damselfly.

Small Red-eyed Damselflies are hard to identify in the field. They were first noted in the UK in 1999. By 2006 they had reached Hull.

Nick Tribe, BDS dragonfly recorder for Lincs provided information on key south bank sites.

Alkborough has 12 species recorded –including the Lesser Emperor (in 2017), a migrant from southern Europe.

Far Ings has 17 species recorded including Small Red-eyed Damselfly, Red-veined Darter (a migrant from southern Europe) and Yellow-winged Darter (an even scarcer migrant from southern Europe)

Saltfleetby- Theddlethorpe NNR has 20 species recorded including the Hairy Dragonfly, the first true dragonfly to emerge in spring.

(SW noted that Hairy Dragonfly now also breeds at Far Ings).

Red-Veined Darter occasionally breeds in the UK. It requires shallow warm water which allows the larvae to develop quickly, emerging in the same season (before the shallow water dries up).

The top sites on the north bank include

Spurn, Paull Holme Strays, Broomfleet and Oakhill near Goole

One species of note is the Migrant Hawker, which is common in Yorkshire but is rarely found breeding. In Southern Europe it breeds in temporary pools and thus has a short larval stage and a long adult stage. In the UK, it tends to be one of the last species flying in the year, during September and October.

Spurn had 9 species recorded (number corrected after meeting) between 1947 and 1953, now it has 17 species suggesting a significant movement north of many species

Paull Holme Strays has 9 common species, 6 species showing occasional records and 3 species which have changed over time, eg decrease in Black-tailed Skimmer probably due to increasing vegetation growth in the pools.

Oakhill, near Goole is an exceptional site.

The Brick Pits have 21 species recorded (20 breeding)

Sidings Drain, a newly created ditch had 18 species (11 breeding) in 2017

Tom Pudding Flash had 16 species (10 breeding) in 2017. It is a marshy area with substantial shallow flooding. The Flash is earmarked for development by Siemens, who are aware of the wildlife value of the neighbouring Brick Pits.

(AB noted that Goole and Airmyn Drainage Board worked with Friends of Oakhill to ensure adequate water supplies to the site)

Questions

DC -How will climate change affect dragonflies?

DSR – As the climate warms the Humber area should gain dragonfly species as they spread northwards from southern Britain .

6. Bees and Wasps from around the Humber – Dr David Sheppard

DSD explained that he intended to describe some of the scarcer and more important species that occur at particular sites around the estuary.

Podalonia affinis (Eastern sand wasp)

This is a striking solitary wasp which is associated with coastal dune systems. It is known from Donna Nook and Saltfleetby-Theddlethorpe. It is superficially similar to a number of other more common species e.g. the sand wasp (*Ammophila sabulosa*).

The female wasp hunts caterpillars of a particular size, shape and colour. On finding the ideal specimen, she stings the caterpillar, paralysing it and takes it back to an, already dug, nest hole excavated in dry sand. She then lays a single egg on the still live caterpillar and seals the hole. The egg will hatch and the wasp larva will feed on the caterpillar, eventually pupating and emerging from the hole as a new adult the following year.

To survive a population of these wasps needs an appropriate nest site, nectar sources on which the adults feed and the appropriate caterpillars with their host plants in the correct growth phase. Loss of any one of these factors would cause the loss of the wasps.

Wasps are carnivorous, bees are not. Bees collect pollen to feed their young.

Osmia spinulosa (Spined mason-bee)

This is a highly unusual species in that it makes its nests in old snail shells, particularly banded snails. As a species it is not really coastal, but all of the north Lincolnshire sites happen to be on the coast.

It collects pollen from mainly legumes and composite plants. It gathers a pollen which it builds to form a 'loaf' in an appropriate shell. It then lays an egg on the pollen and seals the shell to protect the developing bee larva.

For it to survive it needs good nectar sources, good pollen sources, the right snail species (there may be several) and therefore the right snail habitat.

Megachile maritima (a 'leaf-cutter bee')

This is quite a large bee (honey bee sized) which collects pollen, not in 'pollen baskets' on its legs, but on the underside of its abdomen. It digs a burrow in dry sand and 'wallpapers' it with strips of leaf. It builds the pollen ball in the burrow, lays an egg and then seal the burrow with a disc of leaf which it cuts from an appropriate plant nearby, using large shear-like mandibles. The male of this species has unusually modified front legs, which he uses to clasp the female during mating. .

Megachile leachella

This species was only known locally from Gibraltar Point but has now been found at Skegness, Saltfleetby-Theddlethorpe, Donna Nook and Humberston Fitties. It appears to be spreading north. Its habitat is sand dunes with bare patches. But it also requires appropriate pollen sources and nectar sources. The male is a largely brown bee, the female is greyer.

Colletes hederi (the ivy bee)

This species only collects pollen from ivy. It was new to science in 1973. It was first found in Lincolnshire in 2015. It likes big banks of ivy and is typically found in the gardens of houses on the edge of sand dunes, where ivy is allowed to grow into large banks on the garden walls. It nests nearby in compacted dune sand.

Colletes halophilus (the sea aster mining bee)

This species only collects pollen from sea aster flowers. Thus it has to have upper saltmarsh (for the sea asters) directly adjacent to sand dunes for its nest site. The total world population of this species is found around the North Sea. In the UK it only occurs from the Isle of Wight to Yorkshire. Lincolnshire has an internationally important portion of the world population of this species.

This species carries pollen on its legs. It requires flowering plants to provide large quantities of nectar, its particular pollen plant and a dry sand nest site which also serves as an overwintering hibernation site.

Questions

MC – How easy are bees to identify?

DSD – Without significant experience if the species you are likely to encounter, you will require a specimen to confirm an i.d. Photographs are rarely sufficient as the key characters tend to be spread around the body of the insect and thus are unlikely to be visible in a single view of the animal.

AK - recounted recently finding half a dozen bees inside the sleeve of a shirt placed on a washing line in the garden

DSD – suggested the bees had been drawn perhaps to the colour of the shirt and had then retreated into the sleeve communally to avoid a drop in temperature.

7. Sampling benthic intertidal invertebrates around the Humber – Olly Dawes, Institute of Estuarine and Coastal Studies

OD introduced himself as a marine invertebrate taxonomist and sedimentologist.

His talk focusses on intertidal benthic invertebrates, covering

- Sampling
- Taxonomy
- Quality control

Intertidal collecting is usually done on foot or by hovercraft. The samples are taken using a standard corer which collects samples 10cm diameter and 15cm deep. The samples are placed in plastic bags to be returned to the lab for analysis.

Sub-tidal collecting requires a boat and uses a standard 'grab'. Soft sediments are collected using a day grab which uses 'clam shells to scoop up a standard amount of sediment. For more stoney or cobbled substrates a Hammon Grab is required.

For processing intertidal samples, the bags are returned directly to the lab. For boat sampling it may be possible to do an initial sieve of the sample whilst on board the boat, depending on space and time available.

Back at the lab, the samples are usually processed within 8 hours.; This is done quickly as the identifying features of many of the species are delicate and would degrade quite quickly. The samples are sieved to remove all organic material which is then fixed in formalin.

The size of the sieve depends on the likely size of the animals expected. Intertidal samples would usually be put through a 1mm sieve. Marine samples tend to go through a 05mm sieve as the animals tend to be smaller. 4% Formalin is used for fixing.

The sieved material is stained with Rose bengal which stains anything organic. It is then returned to a container and stored until being fully processed.

Processing beyond the first stage is done in a well ventilated room or even in a fume cupboard as breathing in formalin can be harmful. The formalin is washed off and water is used to float off any lighter material. This is decanted off and will usually have the worms and crustacea from the sample within it. Samples from a 1mm sieve are sorted in a tray. Samples from a 0.5mm sieve are sorted using a dissecting microscope. All invertebrate samples are then preserved in 70% Industrial methylated spirits. They will then be identified and counted. Only samples with a head are counted, which prevents double counting of samples which may have been damaged during processing.

IECS carried out a full intertidal biotope survey for the Humber in 2014. They assessed 230 samples taken between Spurn and Goole, covering the full length of the estuary.

The 3 main groups of species within intertidal samples are

- 1) Polychaetes – marine worms
- 2) Crustacea – crabs, prawns, shrimps, amphipods and copepods
- 3) Molluscs – bivalves and gastropods

Other species may occur such as non-segmented worms and fly larvae.

OD then described some of the key species

Polychaete Worms

- *Eteone longa*
- *Phyllodoce mucosa*
- *Hediste diversicola* (Ragworm)
- *Streptosyllis* spp.
- *Nephtys* spp.
- Spionids including *Streptospio* and *Pygospio*
- *Arenicola marina* (Lugworm) (Used for fishing, this is what bait diggers are after)
- *Capitella capitata* – an indicator of organic enrichment

Other worms include

- Oligochaetes – which tend to be tolerant of anoxic sediments
- Sibellid worms (Fan worms) These occur in the Humber but tend to be very small 2-3 mm
- Tubifex worms – which are primarily freshwater species and tend to be found near freshwater outfalls

Crustacea

- Copepods
- Amphipods – these species tend to be laterally compressed e.g. *Bathyporeia* spp found in the intertidal Humber and *Haustorium*, characterised by wide plates on its legs which tend to be found in sandy areas. There are 2 species of *Corophium* found in the intertidal areas *volutator* and *arenarium*. These are difficult to tell apart differing by just a few hairs!
- Isopods – these tend to be dorso-ventrally flattened (like a woodlouse) for example *Cyathura* and *Idotea*. There are others found subtidally too.
- Decapods including *Crangon crangon* (brown shrimp), *Carcinus maenas* (green shore crab)

Molluscs

- Gastropods such as *Peringia ulvae* (was *Hydrobia ulvae*) a major prey species for many shorebirds
- Bivalves such as tellins eg *Limecola* (was *Macoma*, the Baltic tellin) and Piddock, a boring bivalve that can bore into wood, chalk or sand

There are a number of tricky species to identify

Nephtys species need to be identified by the shape of their pre-chaetal lamellae, the acicular lobe and their post –chaetal lobes. All of these characters can vary, so multiple features have to be used in identification.

Tellin species are all superficially similar, and the juveniles can look quite different to the adults.

With experience it is possible to identify individuals as small as 1mm.

Quality Control

IECS have their own in-house quality control procedures. 10% of all samples are re-sampled to check the accuracy of results.

There are also external quality control processes eg NMBAQC. IECS pay to belong to this scheme. Some clients will only use labs which belong to the scheme. The scheme carries out a ringtest, twice a year, where the same samples are sent to all labs for analysis, to allow the results from all labs to be compared. In addition 3 samples are sent from the lab to NMBAQC for checking.

IECS are extremely proud of their results which are always of the highest quality. Whilst the NMBAQC results are confidential, IECS publish theirs each year so prospective clients can judge their high level of competence.

When tendering for work from the competent monitoring authorities EA, NE, SEPA, NRW, CEFAS, IECS will always build in a quality control element to the work.

8. Humber updates

8.1 DC Humber Nature Partnership

- Following the publication last year, of the Natural Capital of the Humber document, work is now continuing to develop the opportunities for investing in natural capital identified in the document.
- Work is progressing on the Management Plan for Alkborough.

On behalf of CM, DC alerted the group to the issue of palm oil washed up on the Lincolnshire coast. These large lumps of hard fatty material come from ships. Tankers use palm oil to flush out their tanks which is legal beyond the 12 mile limit. Dog owners should be aware that these oil 'bergs' are attractive to dogs which will eat them if given the opportunity. Whilst palm oil per se is comparatively benign, the bergs tend to pick up a host of other toxic chemicals which can be highly detrimental to dogs. Over the last few days 0.75 tonnes has been picked up from a 6 km stretch of the coast between Donna Nook and Saltfleetby-Theddlethorpe. The Wildlife trusts are set to raise the issue at national level.

8.2 AK Royal Geographic Society

- RGS are visiting Spurn Point on 14 July.
- The latest edition of the magazine from the Society of Chemical industry has an informative article about microplastics in the ocean.

8.3 AB Shire Group of IDBs

- Mud collected from Ancholme and South Ferriby was tested for microplastics. In comparison with many other sites, the Humber shows one of the largest concentrations of microplastics.

8.4 DSD

- DSD requested assistance in finding suitable locations for malaise traps near the estuary.

8.5 SW Lincs Wildlife Trust

- Bittern bred last year at Far Ings for the first time since 2004
- A programme of reed cutting is continuing this year
- Continuing problems with disturbance and vandalism at Far Ings

8.7 LM Environment Agency

- The comprehensive review of the Humber Flood Risk Strategy is continuing.. A long list of options has been drawn up. These will be honed down to a short list of options by the summer.

EK asked about flood defence plans for South Ferriby. LM was unaware of the current situation but promised get information back to EK.

8.8 SK Lincs County Council

- SK has succeeded in maintaining funding to support work on the Humber
- SK suggested that a future HNF meeting could be devoted to plastics pollution

8.9 DSR

- DSR mentioned a mass killing of adult Common Toads believed to be due to otter predation. An account of two incidents has been written up in The Naturalist. DSR requested the group to pass on knowledge of any other similar incidents they may (have) come across.
- At Broomfleet, Greater Water Parsnip seems to be declining. It is subject to cattle grazing and apparent insect attack. DSR would like to know what invertebrate species might be responsible for this? It was suggested that DSR speak to Mark Tartellin of LWT who has worked with Greater Water Parsnip.
- In relation to the mass stranding of starfish following recent storms, DSR mentioned the work by Emma Shehan of Plymouth University who showed the behaviour of starfish when a stream of water is passed across them. They curl up their arms to form a ball and roll. It is called star-balling.

8.10 MC

- Preparations for little tern wardening are ongoing at Beacon Lagoons. A warden has been appointed and is ready to begin. There has been some storm damage on the site
- MC welcomed the development of the Outstrays/ Skeffling managed realignment scheme
- KInsea Wetlands will be subject to a management plan exploring new access opportunities. The site is developing spectacularly. There were 1000 brent geese on site recently.

8.11 TE

- The YWT visitor Centre opened on Tuesday of this week. There is a formal opening on Friday.
- Wed 6th June. There is a half day conference for the Humber Environmental Managers Network addressing the Clean Growth Strategy and the 25 year Environment Plan.
- TE would be interested in any views on the 25 Year plan.

8.12 PR

- A Swindon firm is currently producing fuel oil for ships from plastics
- PR has a nest camera on a tawny owl nest box. Owls have bred in PR's garden for the last 10 years.

8.13 OD Institute of Estuarine and Coastal Studies

- IECS will soon be carrying out fish surveys of Chowderness and Hedon Haven. These are annual surveys carried out for ABP.

8.14 DB IECS

- DB is about to begin a project for the MMO, assessing levels of unregulated activities within UK Marine Protected Areas.
- DB is organising a Humber workshop on Natural Capital, exploring societal benefits, based on a methodology developed for a similar piece of work in North East Scotland
- DB noted that LM has begun his work on curlew on the Humber. He has successfully radio-tagged two birds and is now receiving data from them. His work on pink-footed geese elsewhere on the east coast is also continuing. He now has 9 tags on geese.

8.15 KB Humber Nature Partnership

- KB requested assistance with the Estuary TV programme on bird migration on the Humber. HNP is looking for video footage of a range of waders and wildfowl around the estuary.

5. AOB and date of next meeting

Date of next meetings

Time and date	Presentation	Location
Thursday 26 th July 2018	HNF Site visit	Time and location TBC
Thursday 20 th September 2018	HNF Meeting	10.00am location TBC

DB thanked the speakers for interesting and informative presentations on subject not usually considered by the Forum.

Notes produced by
Kevin Bayes 23 March 2018