

Bird trends and disturbance on the Exe Estuary

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About me

- Bird-watched around the Exe for 30 years
- WeBS counter for Starcross-Dawlish Warren sector
- Counter for Low Tide and annual Gull Counts
- Commentator on Stuart Lines birdwatching cruises
- Lead guided walks around the estuary



Exe Estuary Special Protection Area

- Waterbird assemblage (>20,000)
 - Avocet
 - Black-tailed Godwit
 - Dark-bellied Brent Goose
 - Dunlin
 - Greenshank
 - Grey Plover
 - Oystercatcher
 - Ringed Plover
 - Slavonian Grebe
 - Wigeon(underlined = SPA qualifying features)
- Also nationally-important numbers of:
 - Little Egret
 - (Red-breasted Merganser)

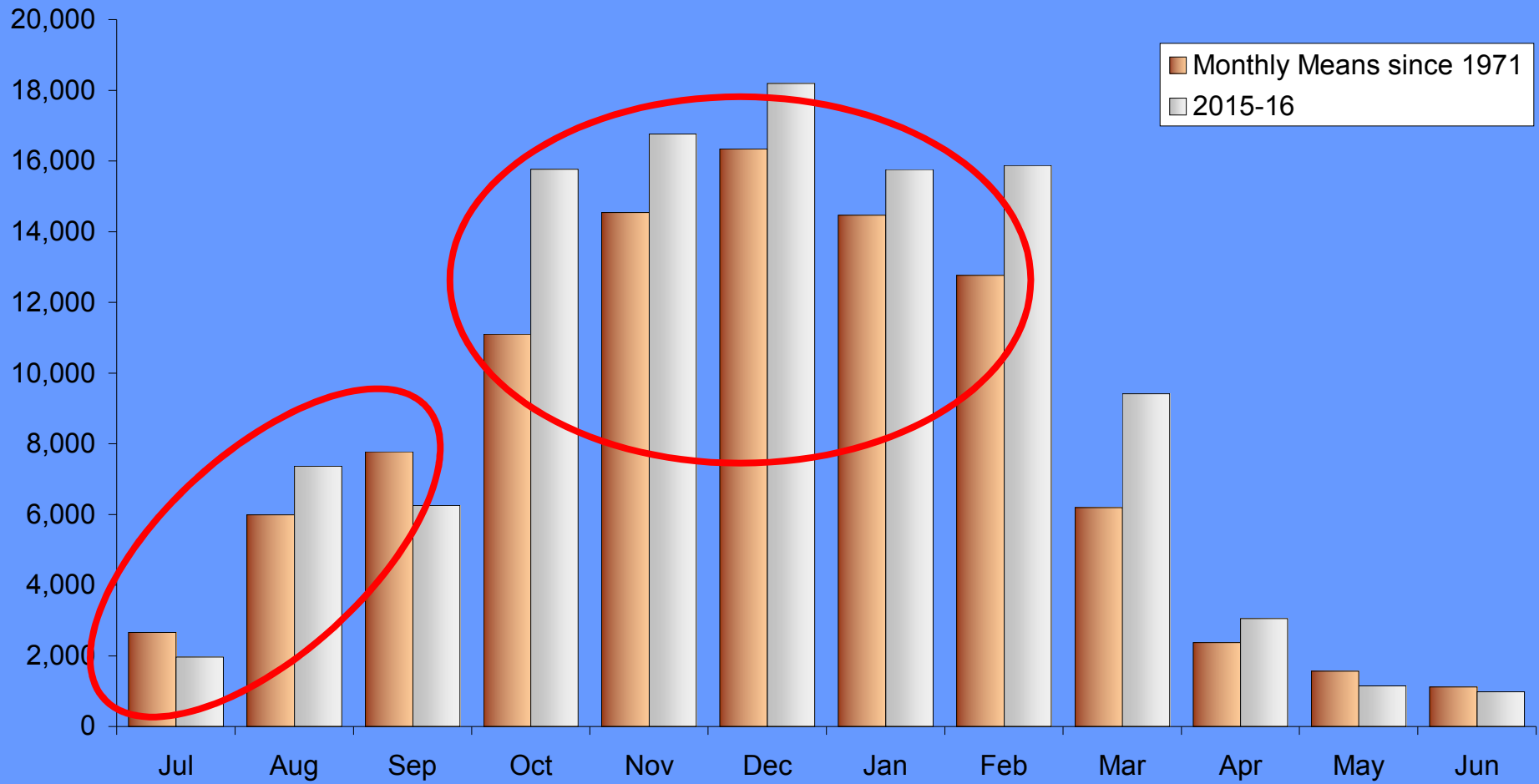
Generic SPA objectives

- Subject to natural change ...
 - integrity of the site is maintained or restored as appropriate
 - contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:
 - extent and distribution of habitats of qualifying features
 - structure and function of habitats of qualifying features
 - supporting processes on which habitats of qualifying features rely
 - the populations of qualifying features
 - the distribution of qualifying features within the site

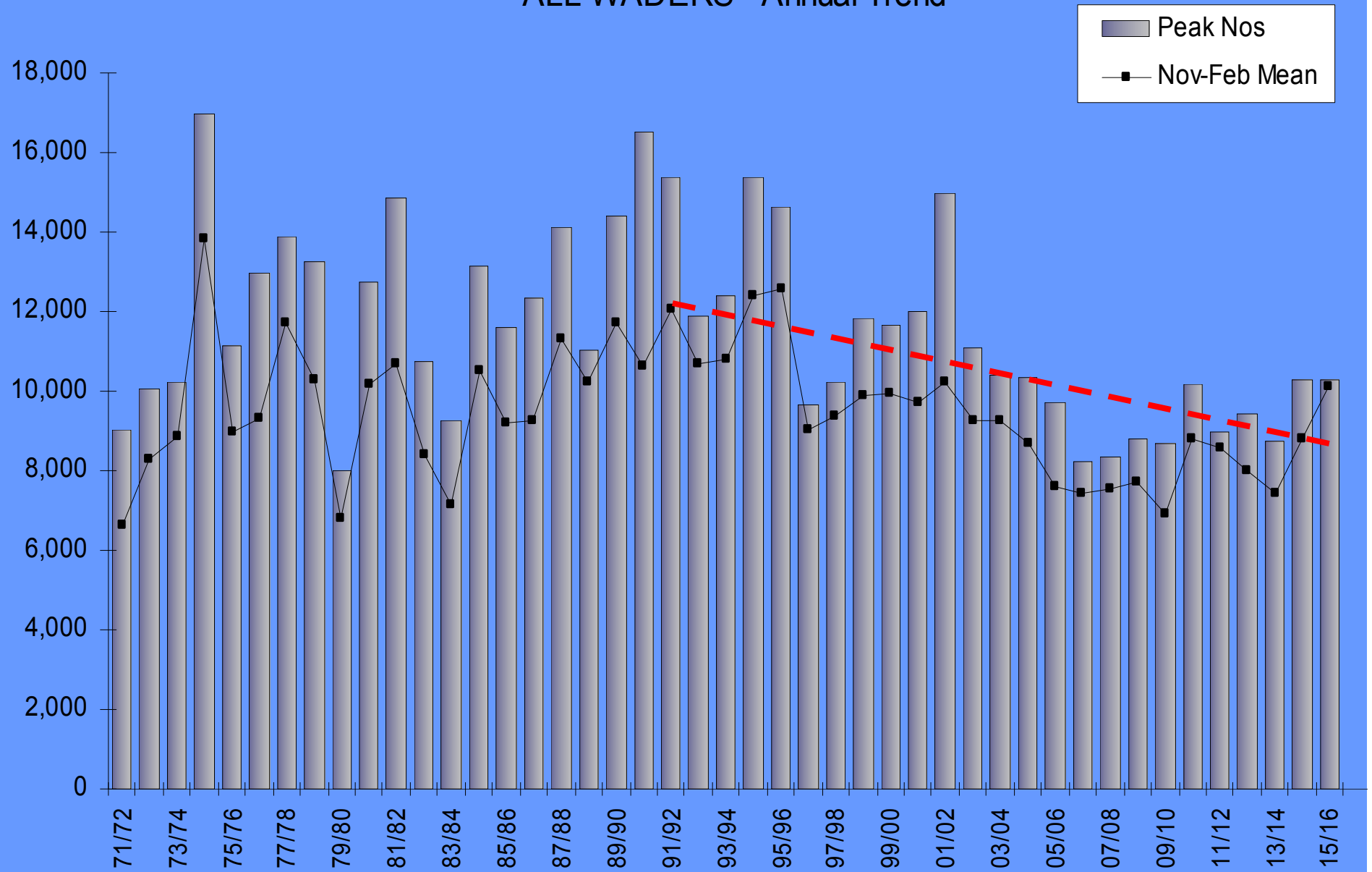
In simple terms ...

- Extent & quality of habitat are maintained
- Birds are allowed to feed in these habitats
- Secure roost sites are available

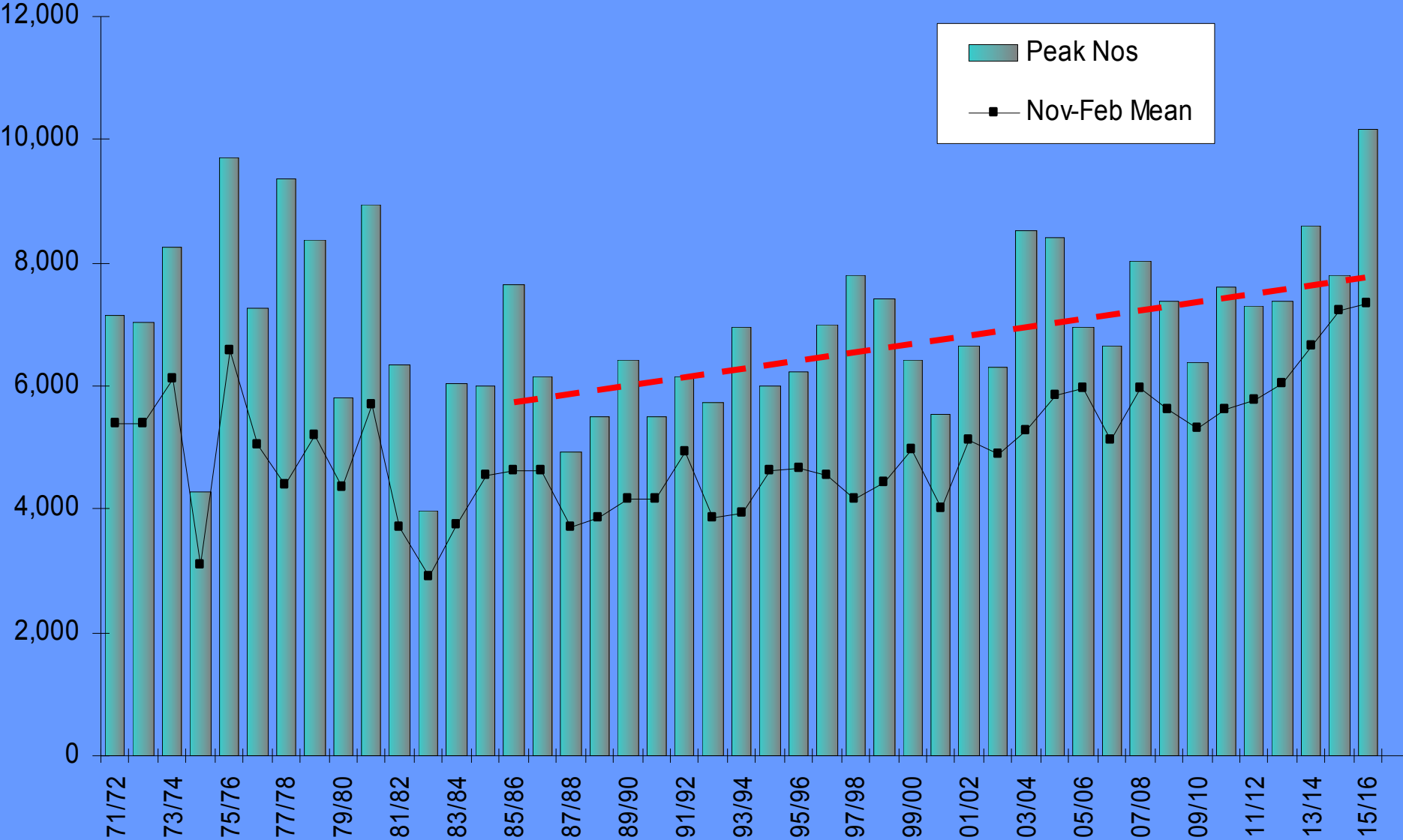
ALL WADERS & WILDFOWL - Monthly Means



ALL WADERS - Annual Trend



ALL WILDFOWL - Annual Trend



Changes in important species since SPA classification in 1992

Increasing:

	% change
– Avocet	+39
– Black-tailed Godwit	+120
– Wigeon	+128
– Little Egret	+++

Declining:

– Dunlin	-21
– Grey Plover	-25
– Brent Goose	-27
– Red-breasted Merganser	-32
– Oystercatcher	-57
– Lapwing	-70
– Slavonian Grebe	(-90)

WeBS Alerts:

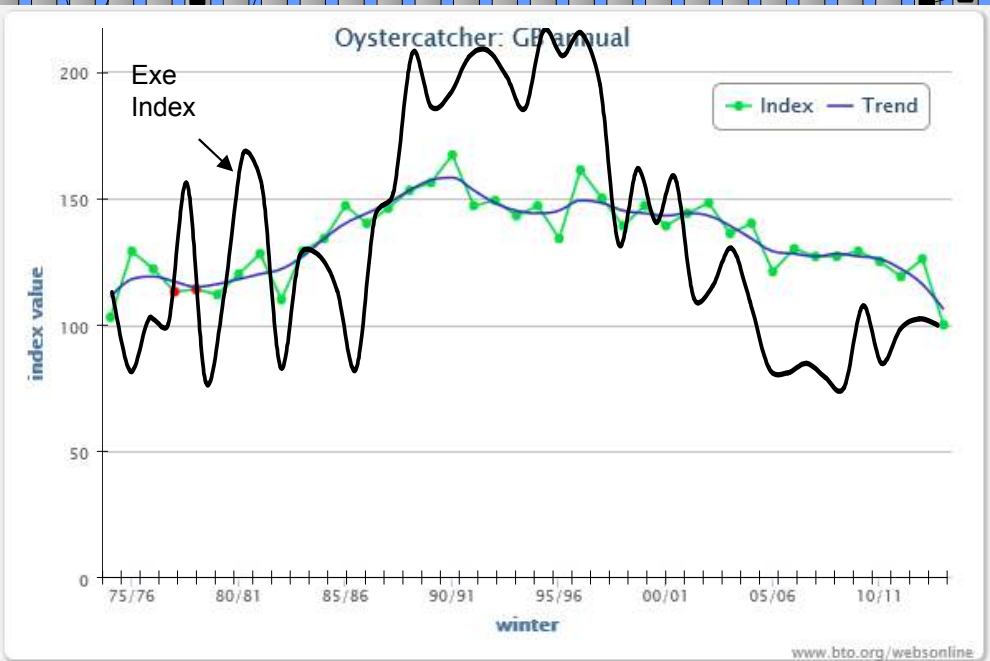
Medium

Medium

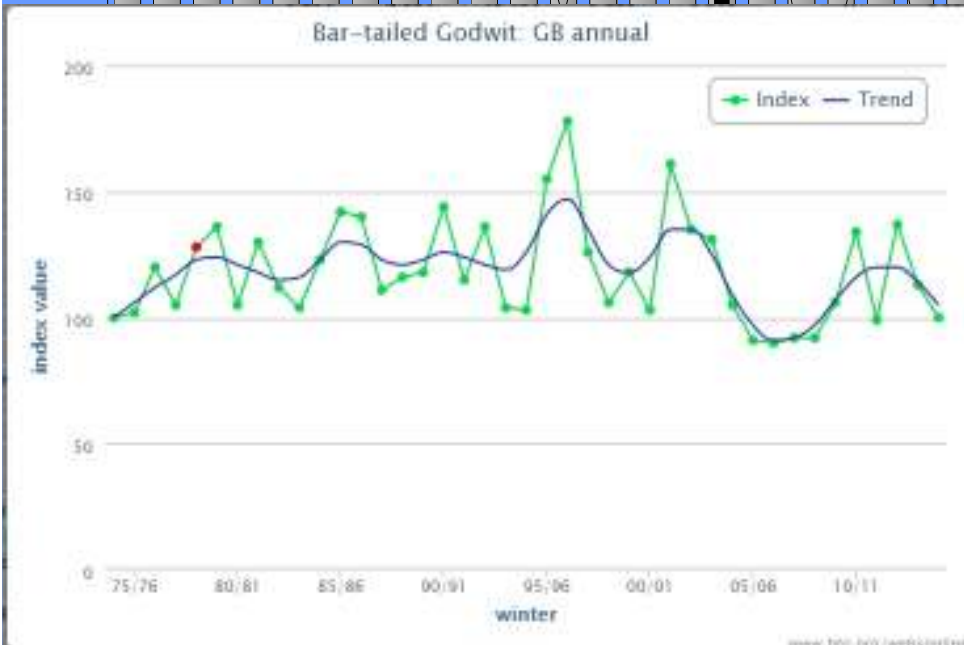
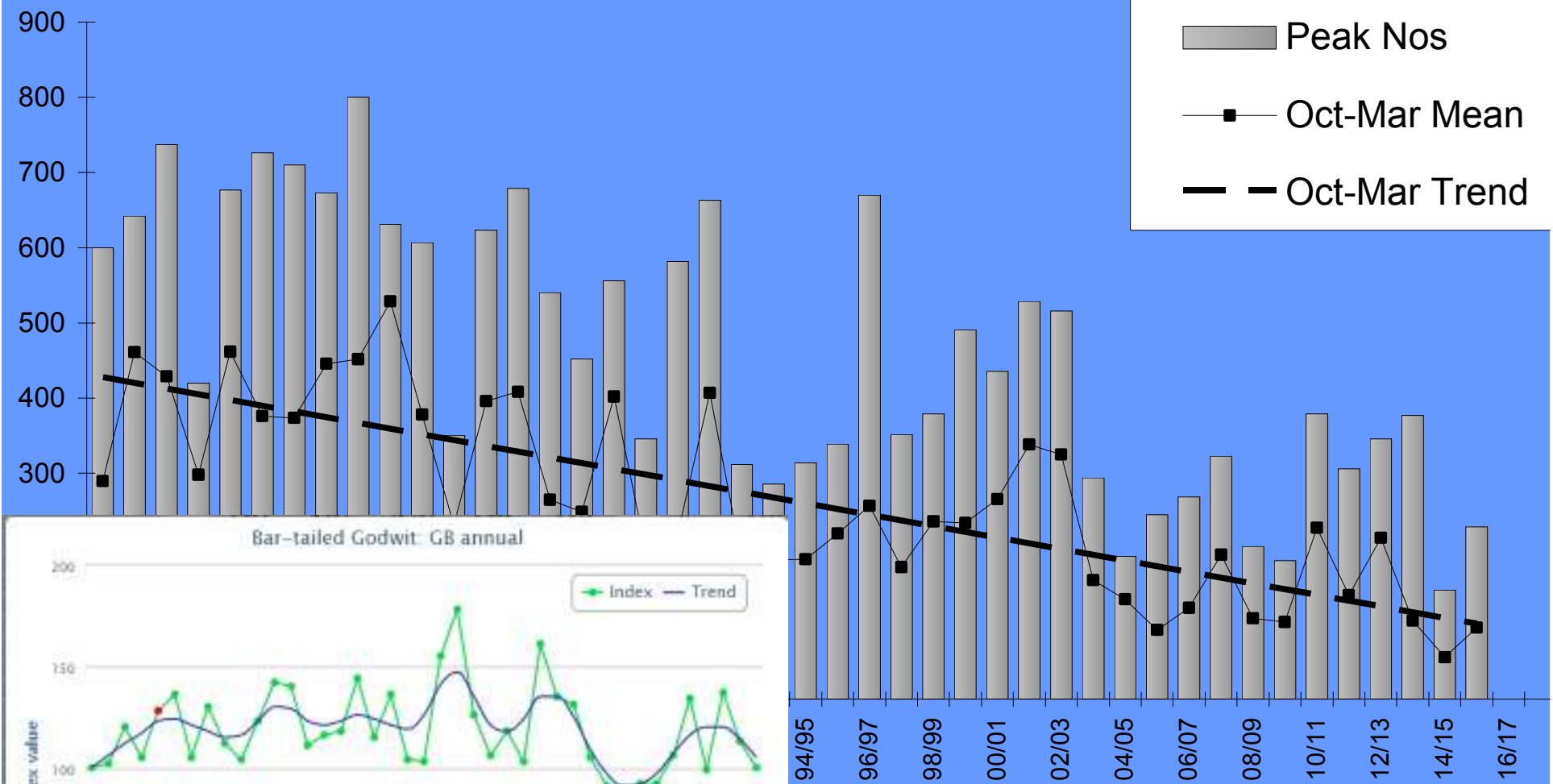
High

High

OYSTERCATCHER - Annual Trend



BAR-TAILED GODWIT - Annual Trend



Some possible causes of changes

- Climate change:
 - Milder winters
 - some birds don't come this far – 'short-stopping'
 - other species are able to survive better
 - Warmer summers
 - icecap retreat – expanding breeding areas
- Variation in habitat quality (i.e. food supply)
- More high-quality freshwater wetlands
- Disturbance ...

Definition of disturbance

- Disrupts normal behaviour and/or distribution
- Affects population through:
 - changes to feeding areas or roost sites
 - energy loss due to increased flight
 - desertion of supporting habitat
- ‘Significant disturbance’:
Action(s) impact on a species through permanently changing local **distribution** and/or **abundance**



Relating disturbance to declines

- Disturbance types vary in their effects
 - duration of activity
 - radius of influence
 - duration of influence
- Species vary in their shyness
- Larger flocks are more easily disturbed
- Most wader species can feed at night
- Effects can be cumulative

Long duration, high impact
(disturbance over 300m radius)



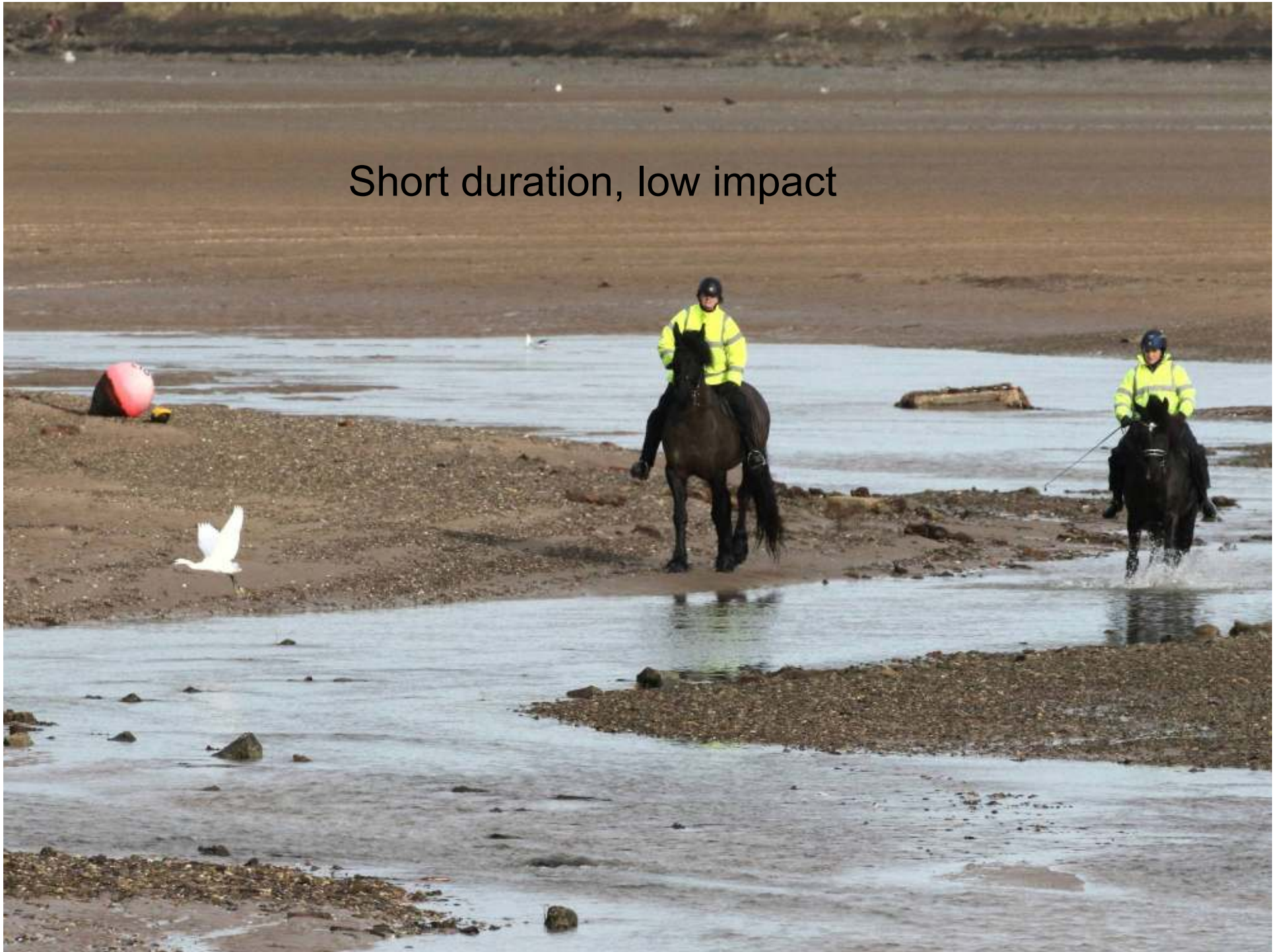
Long duration, low impact



Long duration, medium impact?



Short duration, low impact



Some birds may tolerate disturbance

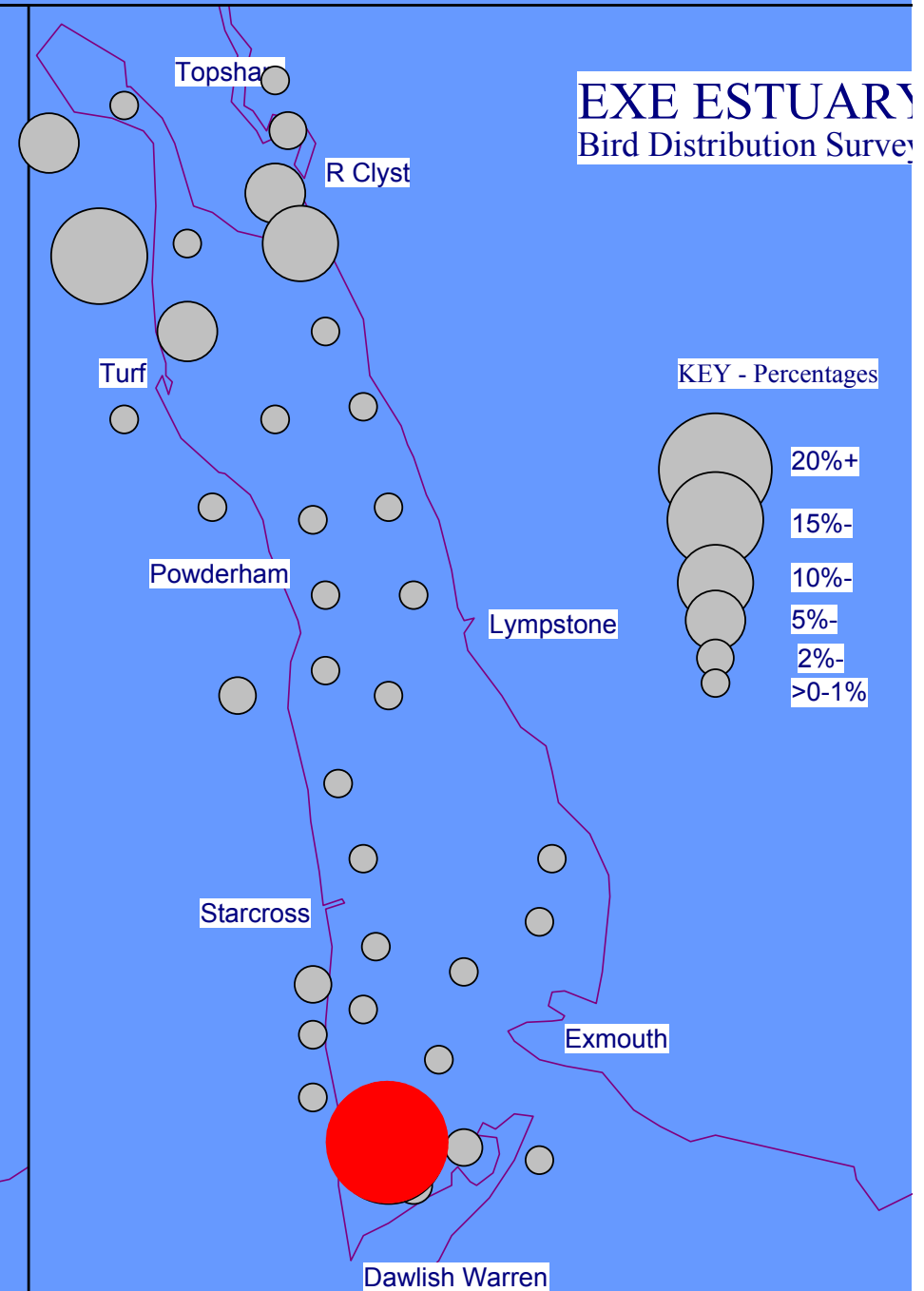
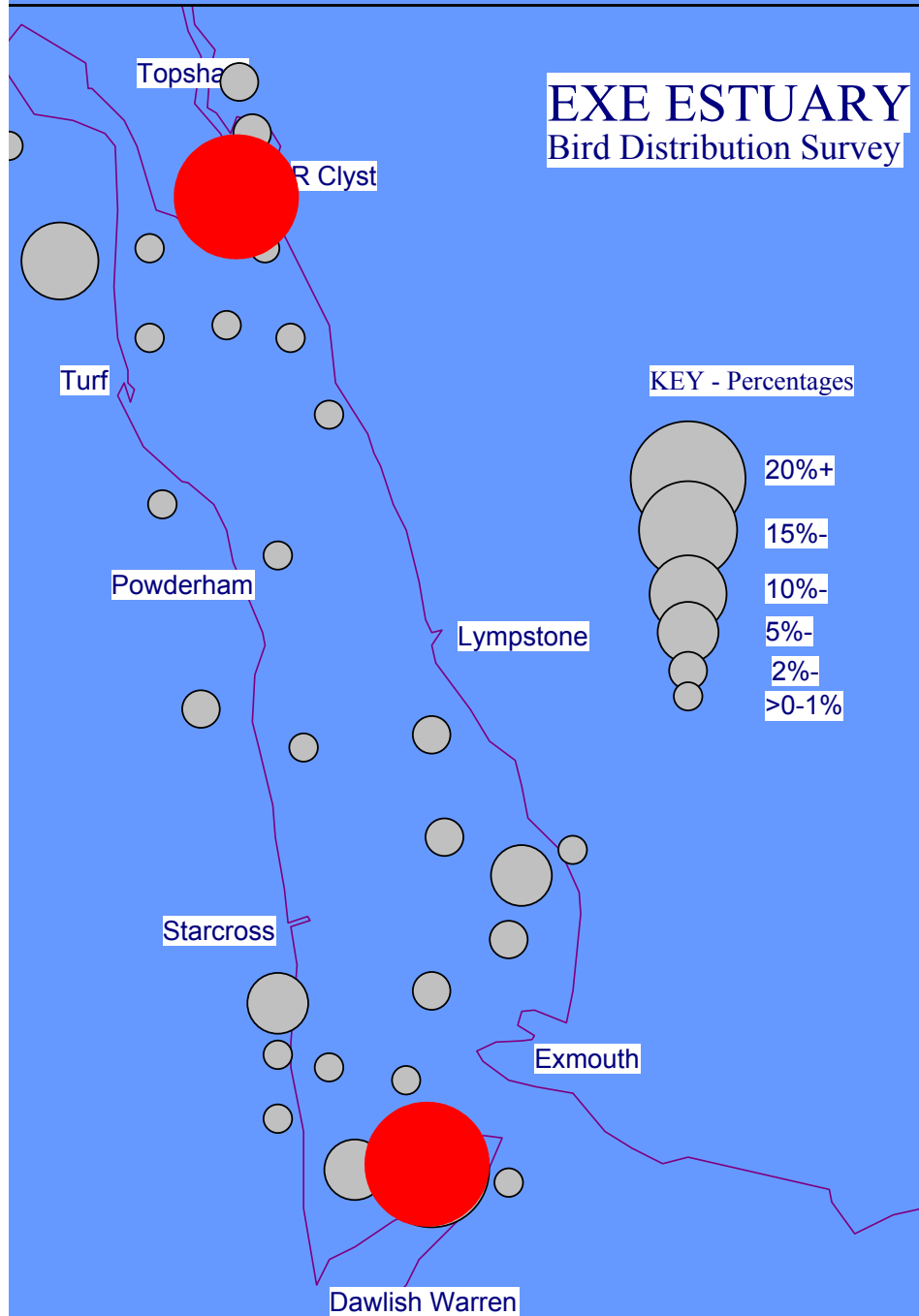






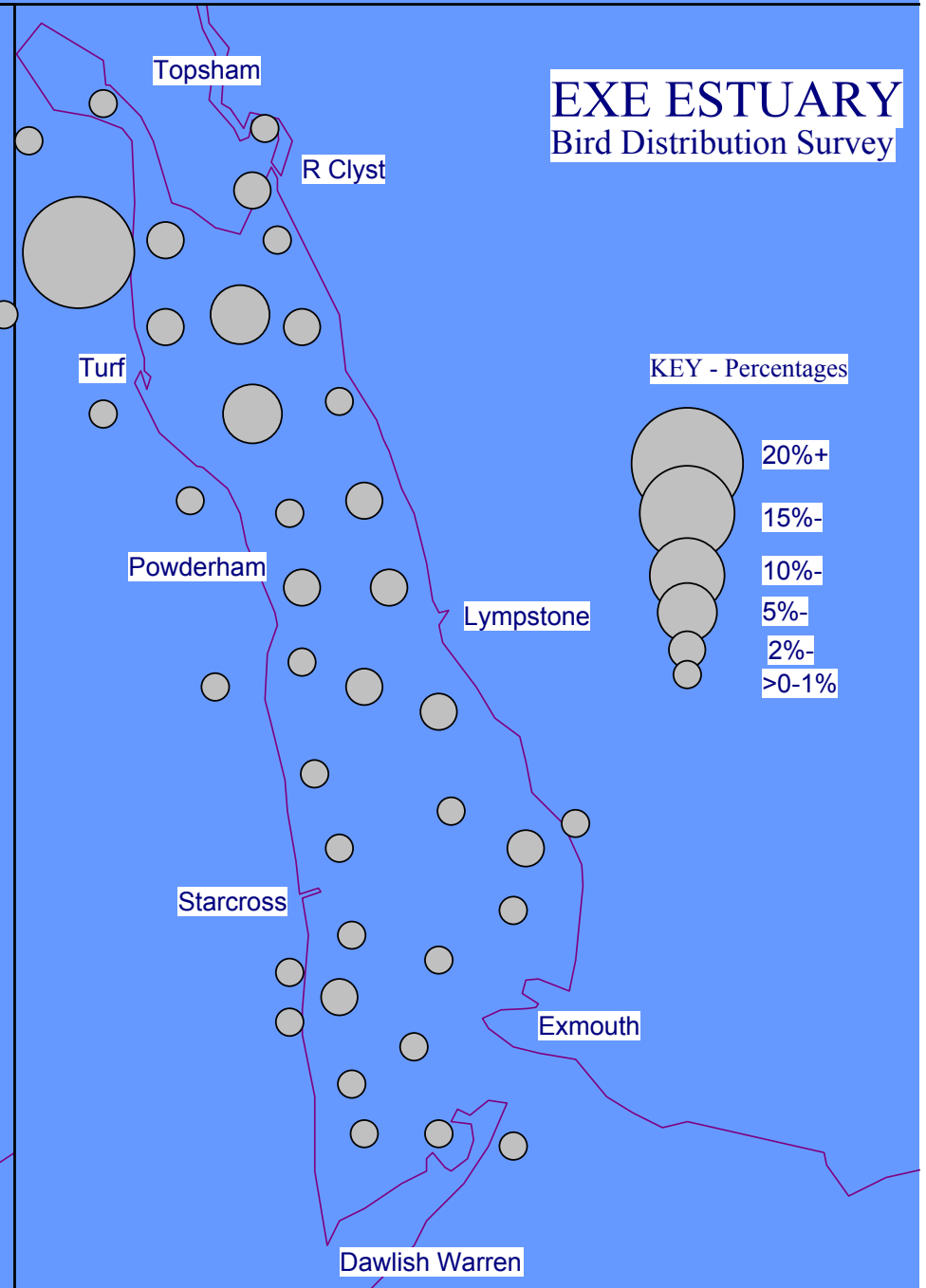
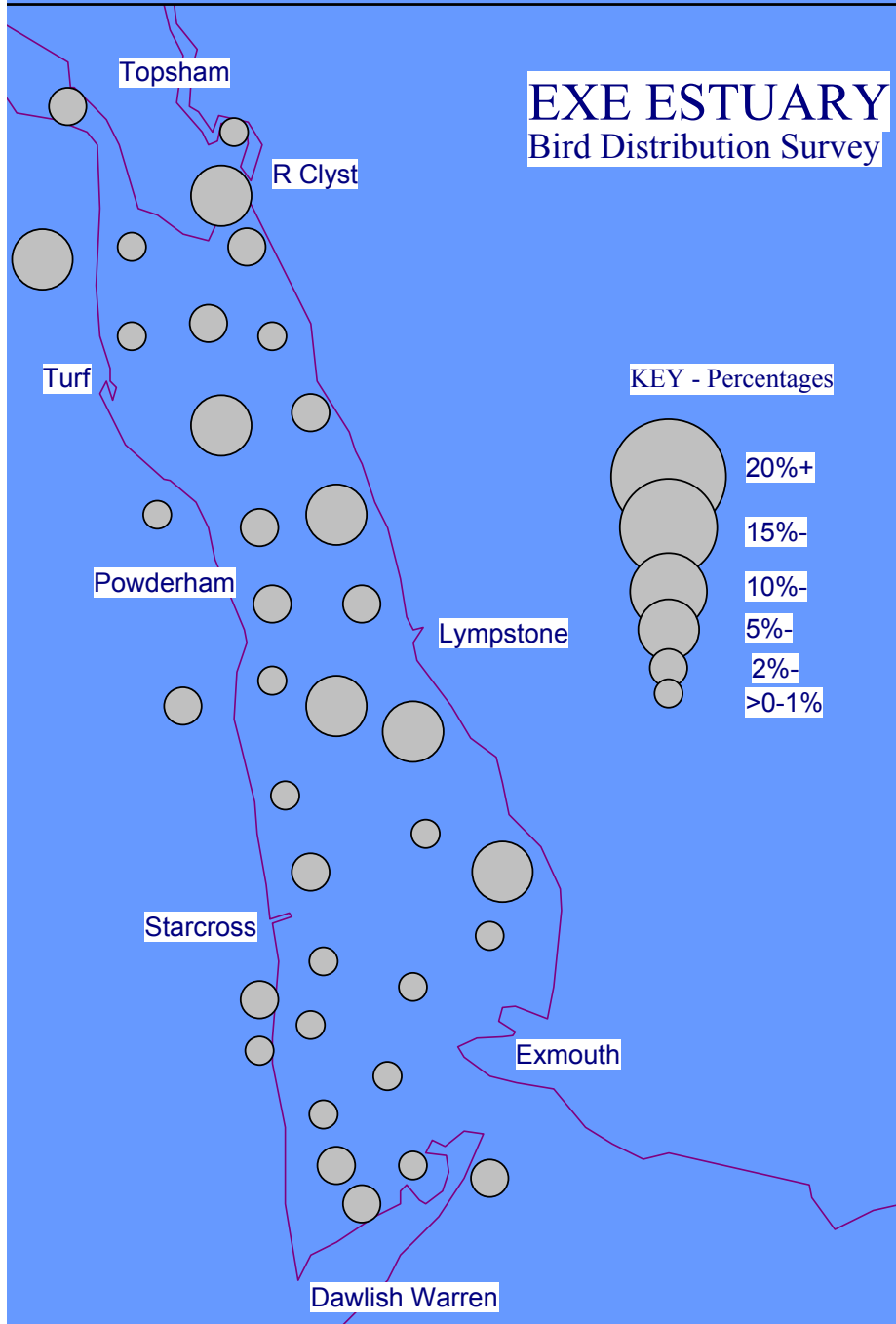
Total Birds : High Tide – Nov07 (3.0m)

Total Birds : High Tide + 2hrs



Total Birds : High Tide + 5hrs

Total Birds : Low Tide - Nov 2016



Disturbance study findings

- Evidence that disturbance is influencing distribution & behaviour
- Generally fewest birds at busiest locations and vice versa
- Exe is busier and more disturbed than other estuaries studied
- Impacts may result in the estuary being less able to support the birds for which it is protected

Final thoughts

- All areas are used by birds
- Trends are not very clear-cut
- Hard to separate possible causes of change
- Birds tolerate disturbance up to a point
- Human pressure is likely to increase
- If there is uncertainty, precautionary principle will apply