

THAMES ROAD WETLAND

- a small but important home for nature in Bexley

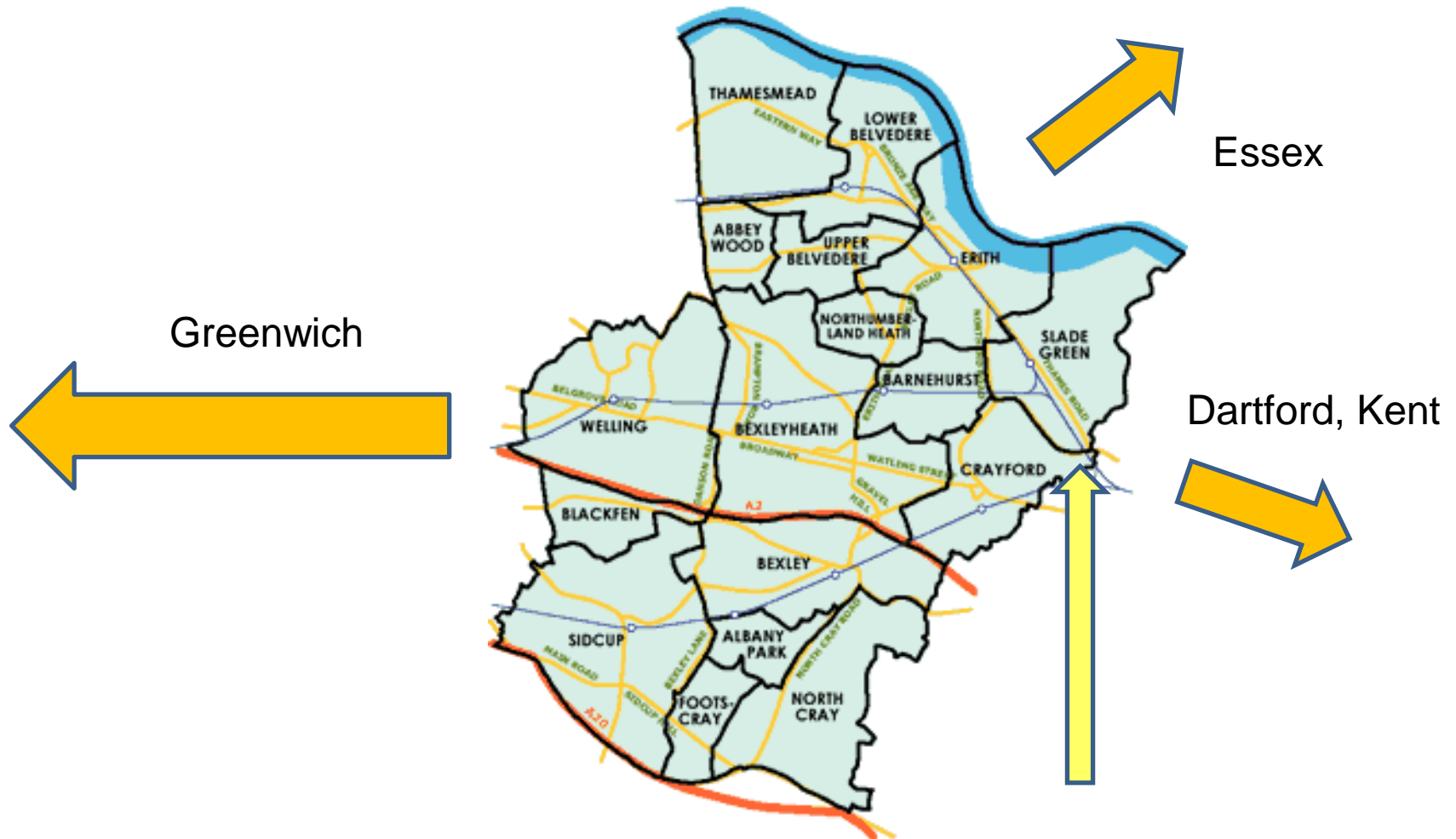
(March 2015)

- ☐ Where is it?
- ☐ History
- ☐ Physical and environmental features
- ☐ Biology
- ☐ Management and the reasons for it
- ☐ National and international connections
- ☐ Return of the Marsh Sow-thistle
- ☐ Public engagement and educational potential
- ☐ Size for size...



Main landowner : Bexley Council Management body : Thames21
Volunteer Site Manager : Chris Rose BSc (Hons), MSc

Where is it? – London/Kent border location.

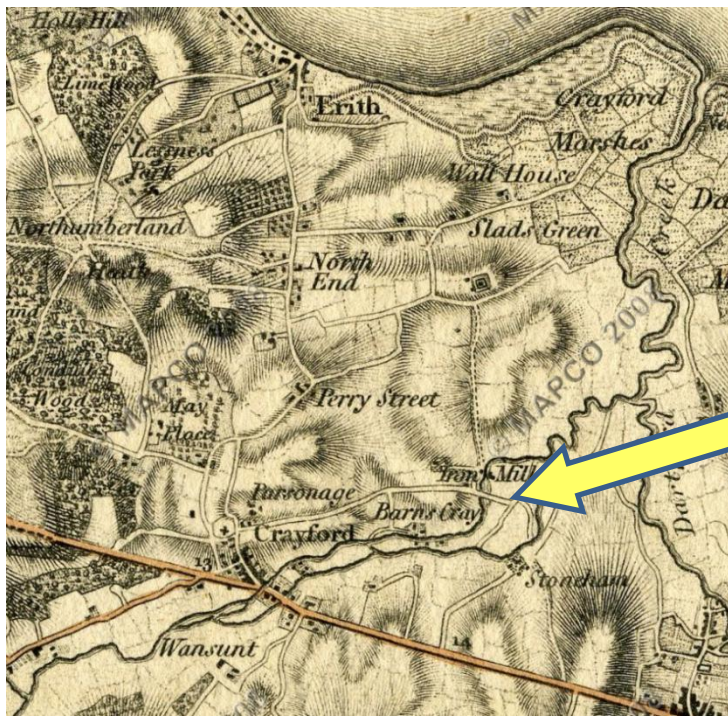




Thames Road Wetland is within the River Cray (M106) Metropolitan Site of Importance for Nature Conservation and the Green Belt

London / Kent border follows River Stanham

History – marshes to field and back



1801

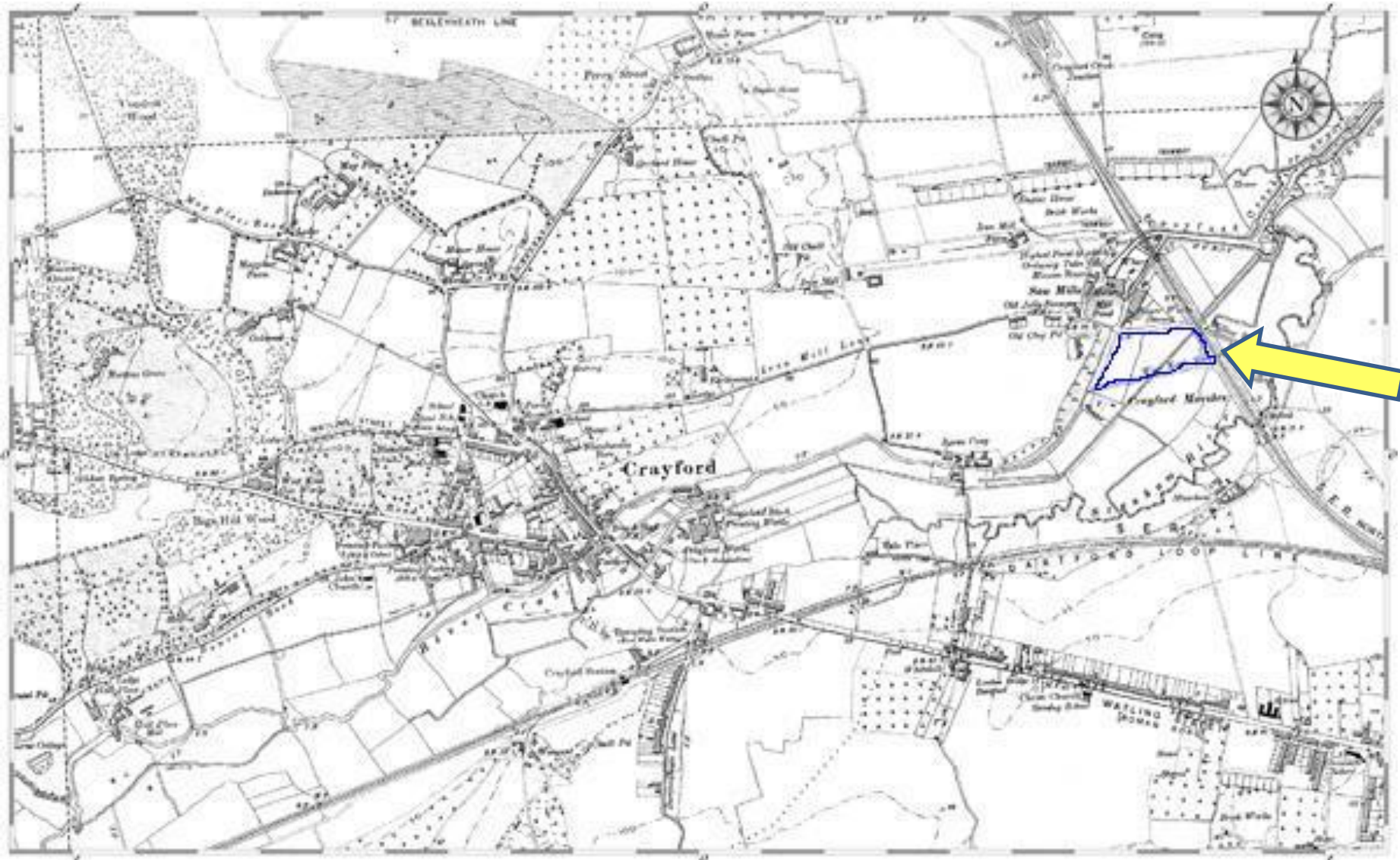


Late 2006 ?



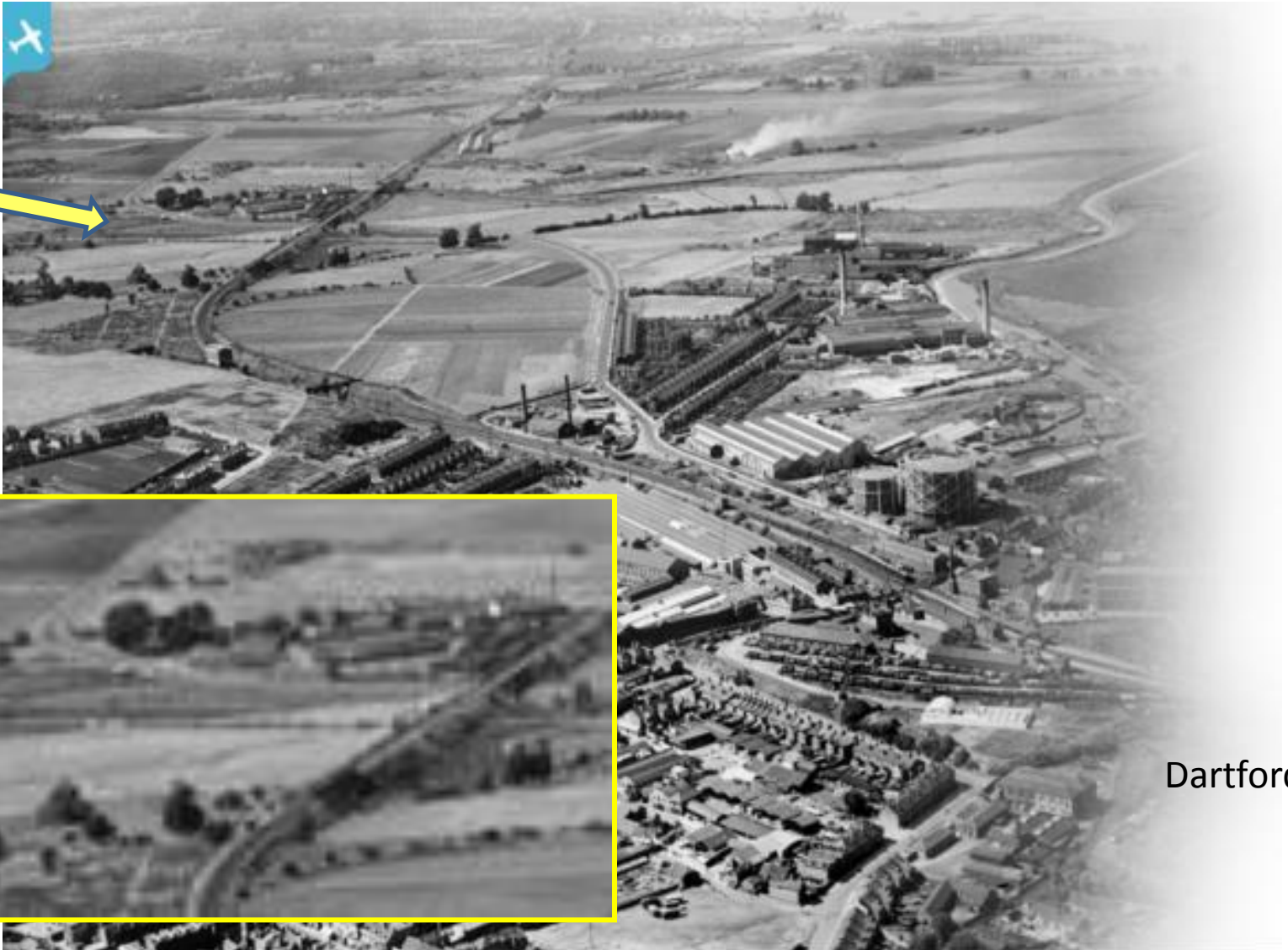
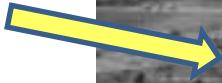
Modern
map

1895 – 1907 map



July 1928

Thames
Road
Wetland



Dartford

1940



2005-6: before the flood

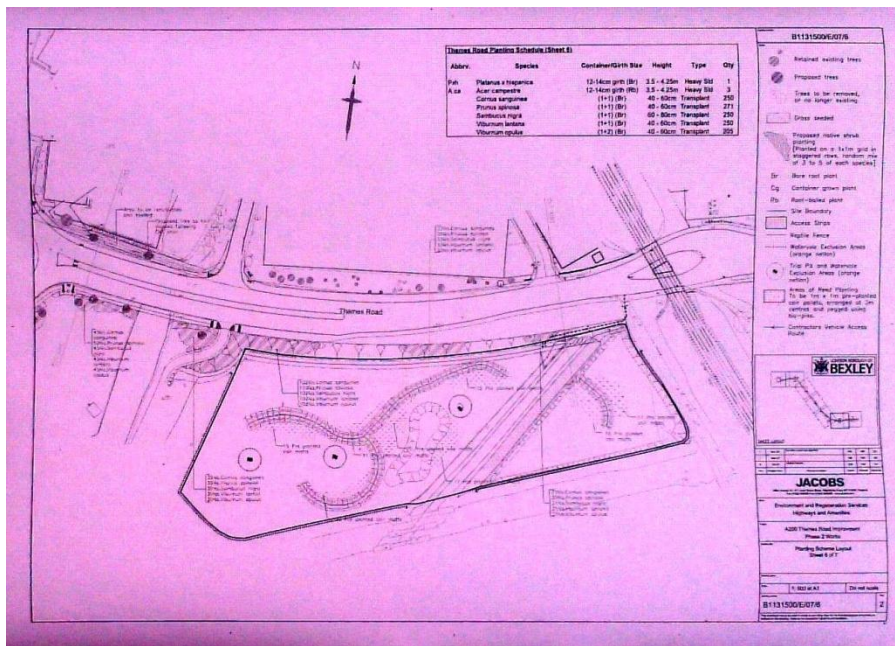
Aerial photographs taken in connection
With Thames Road widening scheme

Looking west into Bexley, London. 18/5/2006



View looking east into Dartford, Kent. 18/12/2006





Under construction
– Oct to Dec 2007

Photos courtesy
Rupert Cheeseman,
Bexley Council

Planting April 2008

Works carried out by FM Conway. Site designed by
Jacobs.



Now: wet and dry - more diversity than meets the eye

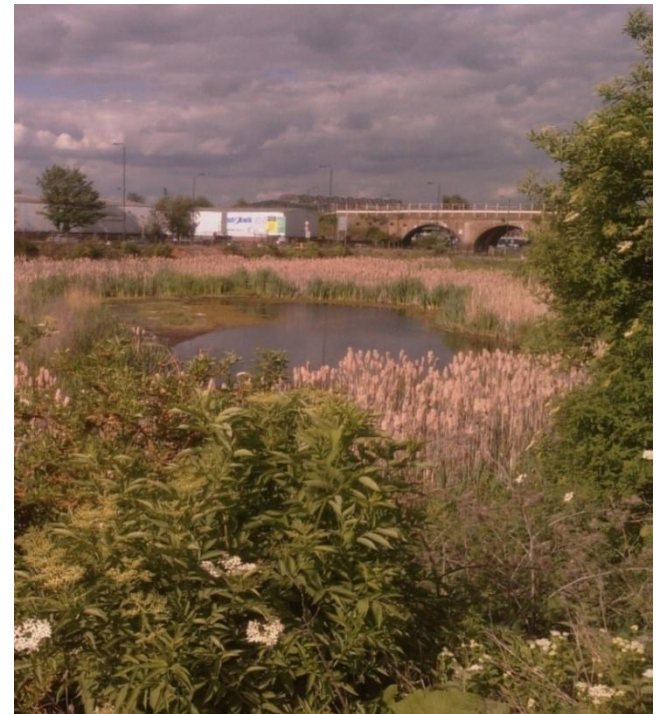


Ditches, lake and shallow Reed-swamp

Long ditches between bunds



Ditch and lake depths
preclude colonisation
by *Typha* and
Phragmites



River Wansunt



(Horse grazing / trampling effects
to right, horse exclusion to left)



Thames Road bank / Sewer Pipe Embankment / east end gravel



Gravelly nature of surrounding road, rail, sewer and river embankments, also 'hard-standing' for construction site facilities, creates strongly contrasting habitat to wetland proper



OK, job done – so what are this lot doing here?



Volunteer,
school and
corporate
assistance:
Thames21,
Goldman Sachs,
JP Morgan,
local Dept Work
+ Pensions staff



The site is actively managed. Why?

Physical and habitat features

- ❑ Resource recovery / removing historic fly-tipping, litter and blocking pollutants
- ❑ Holding back SUCCESSION to dry land, so maintaining Biodiversity Action Plan habitat features
- ❑ Creating / maintaining a variety of larger scale habitat features across the site
- ❑ Increasing variation in micro-habitats

Individual species

- ❑ More habitat variation generally = more species
- ❑ Control of invasive exotics
- ❑ Protection and nurturing of UK/London/Bexley Biodiversity Action Plan and other UK/ Kent /London /Bexley rare species
- ❑ Rare species re-introduction
- ❑ **UNDERPINNED by frequent recording of the species and their statuses on site**

Managing human impact



Historic accumulation of fly-tipped items.



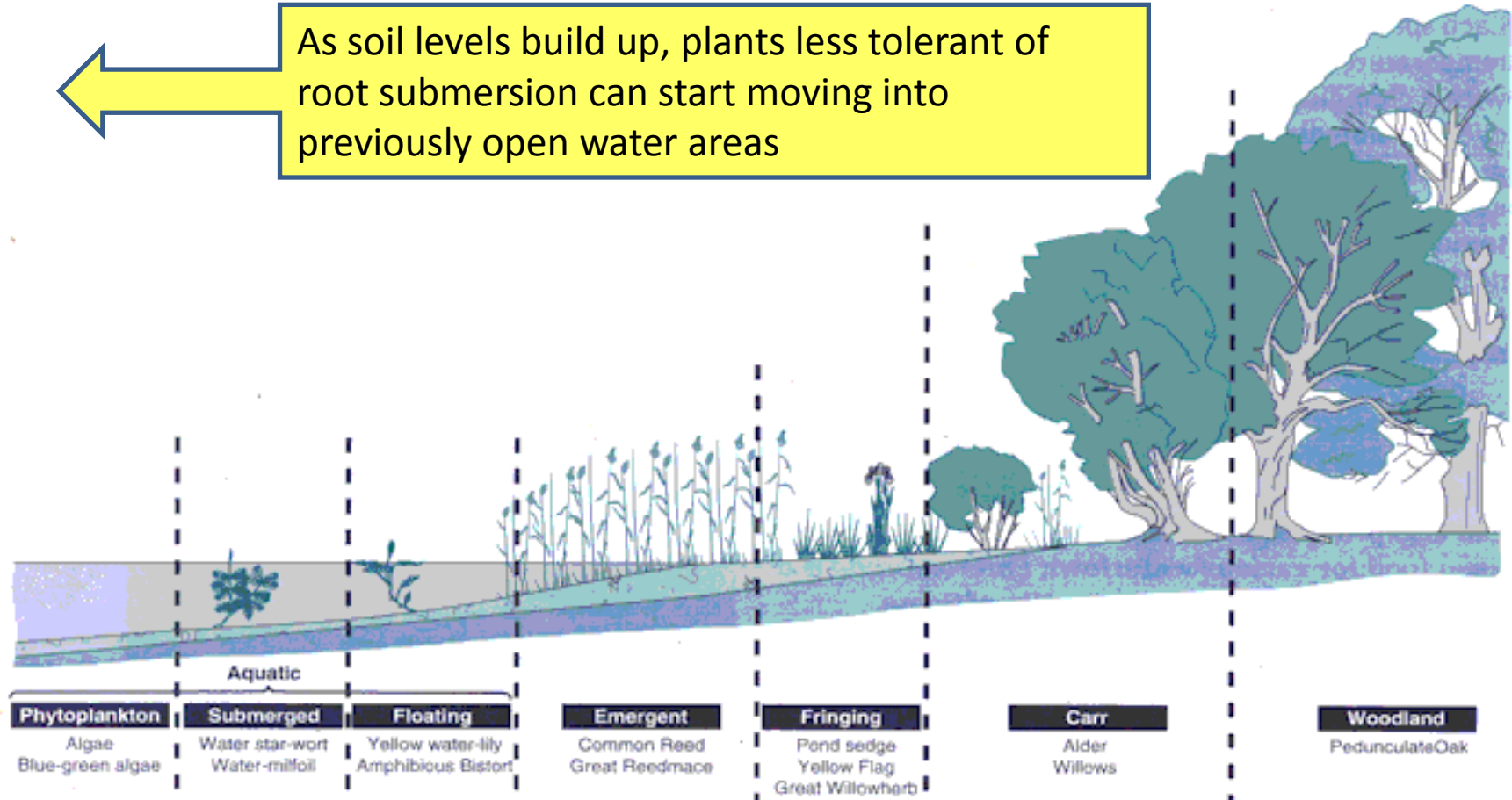
Blow-in plastic bags.
Thrown litter from pedestrians on Thames Road. Cans , glass and plastic bottles now recycled.

DIY 'trap' for polystyrene fragments, other litter and vehicle oil residue from Thames Road run-off pipe.



Managing natural change: what is 'succession'?

As soil levels build up, plants less tolerant of root submersion can start moving into previously open water areas



Soil level builds up in the wetland area because: i) emergent plants trap silt and ii) (parts of) plants in the water die, collapse and rot and their organic material gradually piles up to create new soil

Shortly before planting 10th February 2008



MANAGING SUCCESSION

We want to maintain rare wetland habitat. But the dominant lowland wetland plant species grow rapidly thanks to the mild climate and constant supply of water and nutrients

9th September 2009

About 6 months after planting – 7th September 2008



Above photos courtesy Steve Thoroughgood

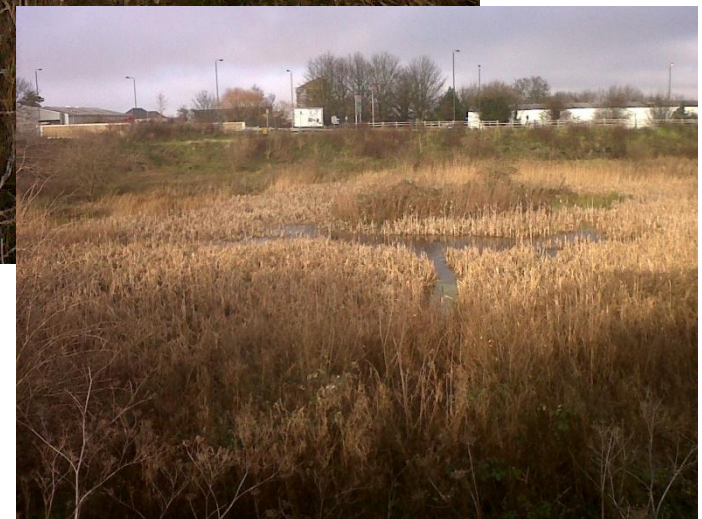
Reedbed pulling to retain open water/reduce silting,
maintain habitat diversity and favour rarer species





Autumn/winter Reedmace-pulled 'west pool'
and 'south channel', February 2013

Pool and forward channel winter 2013/14



Willows – the next stage in succession



Sedge Warbler – a recent colonist / breeder prefers drier
Reed-bed with scrub. Reed Bunting sings from the
Willows.



A helping hand from Horses

Brookweed (*Samolus valerandi*)
[extremely rare London]



Brookweed benefits from some poaching and grazing



Other plants of wet ground



Common Comfrey
(*Symphytum officinale*)

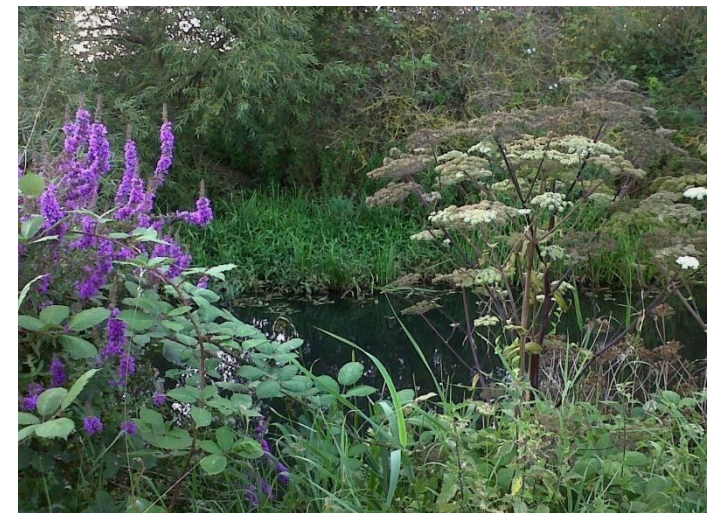
Mimulus



Square-stemmed St. John's-wort
[uncommon Bexley, notable London]



Common
Fleabane
[infrequent
Bexley]



Purple Loosestrife and Wild Angelica



Not just 'Reeds'

Branched Bur-reed

Sea Club-rush
(*Bolboschoenus maritimus*)

[in London largely confined to
Thames below the city]



Principal emergents, in order of abundance:

Great Reedmace
Common Reed
Reed Sweet Grass
Various Sedges and Rushes
Reed Canary Grass
Sea Club-rush
Lesser Reedmace
Branched Bur-reed

Hop Sedge (*Carex pseudocyperus*) [rare London]



Plants of dry ground



Common Stork's-bill
(*Erodium cicutarium*)
[infrequent London]



Common Centaury
[rare Bexley]



Dittander
(*Lepidium latifolium*)
[rare, possibly
increasing in London,
Kent rare plant
register]



Common Cudweed (*Filago vulgaris*)
[rare London, Kent rare plant register]

Also:

- ❑ Giant Horsetail [uncommon SE London]
- ❑ Ploughman's Spikenard [rare in Bexley, and in London off the chalk]
- ❑ Vervain [very uncommon Bexley]



Soft Comfrey (*Symphytum orientale*), an increasing non-native colonist in SE London



Mistletoe [London BAP species] on Poplar tree. Winter 2013/14 gales brought down both trunks supporting Mistletoe. Male plant surviving at present.

Star-of-Bethlehem

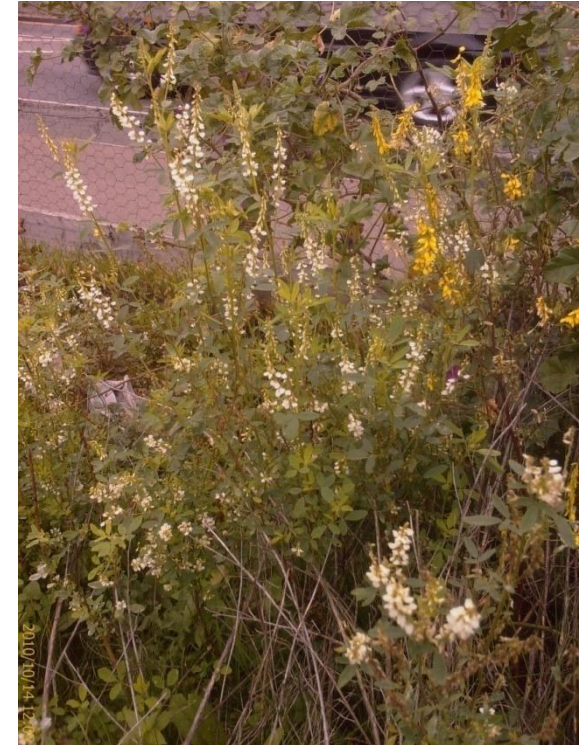
[notable London, probably a garden escape in road spoil]. Appears to have died out here.

Ruderals – plants of often poor / disturbed ground



Buddleia,
Common and
Narrow-leaved Ragworts,
Hoary Mustard, Ground Ivy

Slender Thistle
(*Carduus tenuiflorus*)
[uncommon London]



Melilots

Managing non-native plant species



Narrow-leaved Ragwort, from Southern Africa, provides a later nectar source than Common or Oxford Ragworts (this picture taken 24th October 2014) and appears not to damage native wildlife, but some is removed to favour Black Horehound – in the hope of attracting rare brownfield bees - and other plant species

Giant Hogweed, native to the Caucasus Region and Central Asia, was introduced to Britain as an ornamental in the 19th century, and is a problem



Fungi – the great recyclers



Jelly Ear
(*Auricularia auricula-judae*)
on Elder log



Shaggy Inkcap /
Lawyer's Wig
(*Coprinus comatus*)



Managing for a greater variety of micro-habitats – likely to be of particular benefit to invertebrates



Dry ditches (now vegetated) with varying orientations provide sunny and shaded faces, and cover



Creation of small, seasonal, Reedmace-free pools



Specialist visitors - invertebrate recording



Wasp Spider

Ringlet new in 2014

A London Natural History Society Ecology and Entomology section visit on July 23rd 2011 identified **81 species** of mainly small (sub 5mm) long invertebrates, not previously recorded at the site



Rarer species

Photos courtesy Tristan Bantock

RDB2

- *Philanthus triangulum*, Bee Wolf

Notable b

- *Larinus planus*, a weevil
- *Podagrica fuscicornis*, a mallow flea beetle
- *Emblethis denticollis* (right), a ground bug (family Lygaeidae)
- *Evergestis extimalis*, a moth.



Coriomeris denticulatus



Other species include:

- Small Tortoiseshell (serious decline in southern England) on several occasions
- Long-winged Conehead
- Roesel's Bush Cricket
- *Anisosticta novemdecimpunctata*, Water Ladybird
- *Formica cunicularia*, ant restricted to southern Britain

Odonata

12 or 13 species. Qualifies as a **'Possible Key Site'** in the Kent (incl. VC16) context under British Dragonfly Society criteria:

- ✓ Large Red Damselfly **
- ✓ Blue-tailed Damselfly ***
- ✓ Common Blue Damselfly [only 1, male, to date]
- ✓ Azure Damselfly ***
- ✓ Banded Demoiselle Damselfly
- ✓ Emperor Dragonfly
- ✓ Broad-bodied Chaser Dragonfly
- ✓ Black-tailed Skimmer Dragonfly **
- ✓ Hairy Dragonfly *** [2009 Dragonflies of Kent atlas east of Darent, 2011 TRW, 2013 Crossness – notable in VC16]
- ✓ Brown Hawker Dragonfly *
- ✓ Migrant Hawker Dragonfly *
- ✓ Common Darter Dragonfly **

Possible female Ruddy Darter.

* May be breeding

** Probably breeding

*** Definitely breeding - seen ovipositing



Banded Demoiselle



Hairy Dragonfly (Brachytron pratense)

Amphibians

Marsh Frog [non-native], Common Toad [UK and London BAP priority], and Smooth Newt all breed here. Occasional Common Frog.



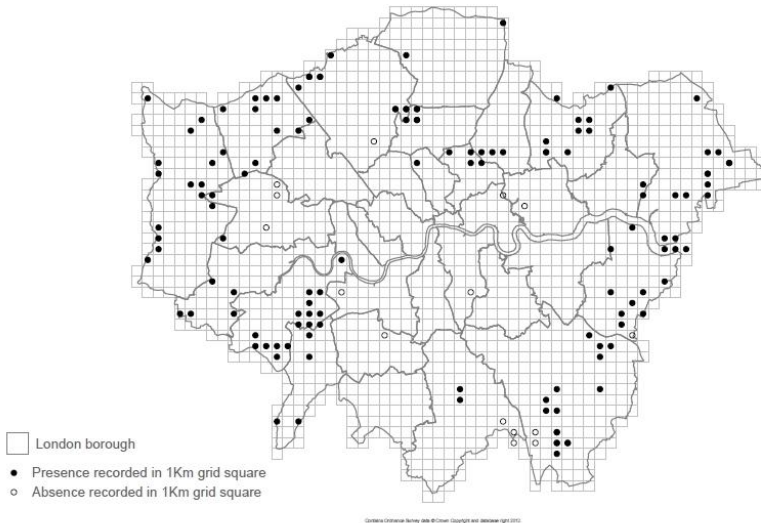
Reptiles – importance of the Cray corridor

GiGL map data generated by Amphibian
and Reptile Conservation CLARE project.
1K grid square resolution.

London Grass Snake Atlas

Connecting London's Amphibian & Reptile Environments (CLARE) Project

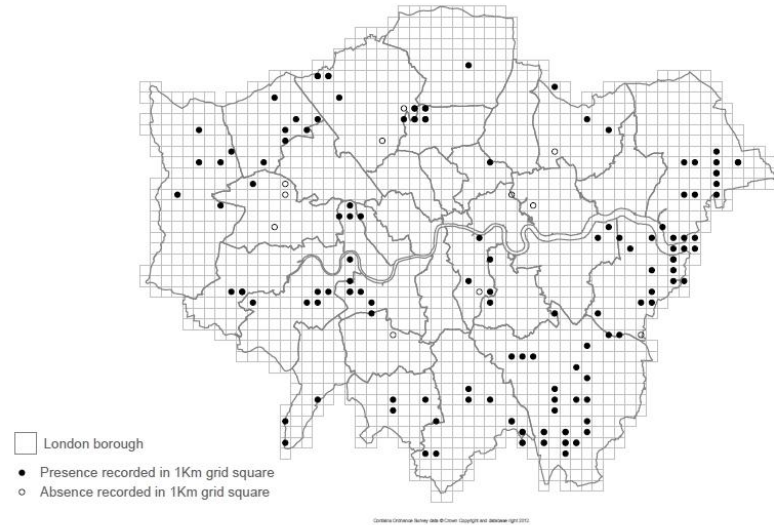
GiGL



London Common Lizard Atlas

Connecting London's Amphibian & Reptile Environments (CLARE) Project

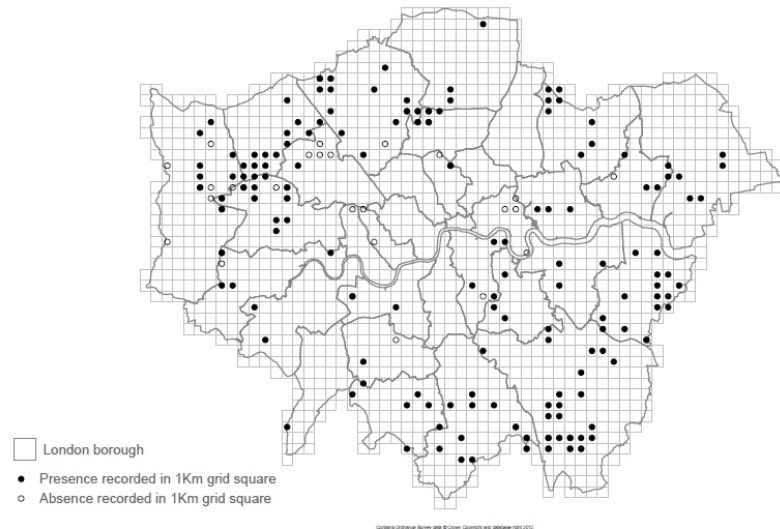
GiGL



London Slow-worm Atlas

Connecting London's Amphibian & Reptile Environments (CLARE) Project

GiGL



Management for reptiles

Common Lizard,
Slow Worm,
Grass Snake [all are
UK and London BAP
priority species]



Old fly-tipped
tyres, wood and
logs used to
create basking
sites



Pulled
Reedbed
provides
egg-laying
sites



Birds

Conservation status:

Amber listed

Red listed

Figures in [brackets]
are actual numbers
of site rarities ever
seen



Breeding - Coot, Reed Warbler,
Common Whitethroat, **Reed**
Bunting, Sedge Warbler

Resident – **Water Rail** - 2 or 3,
(probably breeding), Cetti's Warbler [1],
Mallard, Moorhen, Wren, Dunnock,
House Sparrow, Blackbird, Robin,
Wren, Great Tit, Blue Tit,
Long-tailed Tit, Wood Pigeon, Magpie
(*some of these probably breeding*)

Over-flying – Wagtails, Carrion Crow,
Jackdaw, **Starling**, Cormorant,
Ring-necked Parakeet

Summer visitors – Blackcap, Collared
Dove, **House Martin**, **Swift**

Winter visitors – **Teal**, **Snipe**,

Bittern [1], **Black-headed Gull**,
Chaffinch, Goldfinch, Greenfinch,
Goldcrest, **Lesser Redpoll** [2], **Redwing**,
Fieldfare

Occasional visitors – **Song Thrush**, **Little**
Grebe, Great Spotted Woodpecker, Green
Woodpecker [1], **Lapwing** [2], Chiffchaff,
Jay, Sparrowhawk, **Kestrel** [1], Hobby [1],
Common Buzzard [1], **Pochard** [1],
Shoveler [1], **Kingfisher** [1], Grey Heron,
Little Egret, **Shelduck**, Feral Pigeon

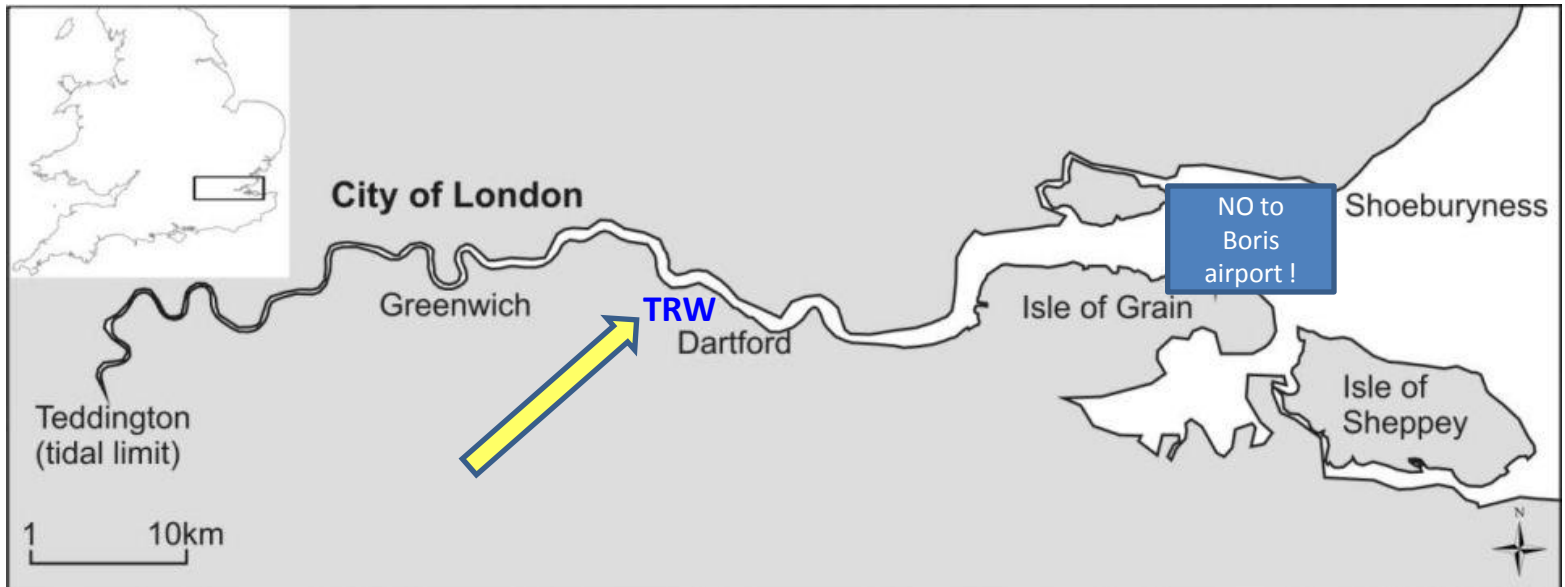


Global connections

ARRIVALS AND DEPARTURES LOUNGE

Thames Road Wetland's domestic
and international visitors

Map –British Geological Survey



Arriving spring /
early summer,
departing autumn

Wintering in sub-Saharan
Africa:

Common Whitethroat

Reed Warbler

Sedge Warbler

House Martin (still not
known exactly where)

Swift – central and
southern Africa

Painted Lady – tropical
Africa to Arctic circle over 6
generations. Late summer
bred UK individuals head
back south in autumn, as
do Silver 'Y' moths



Arriving autumn,
departing late winter
/ early spring

Wintering in (southern)
Britain

Starlings – influx of
additional birds from
northern Europe

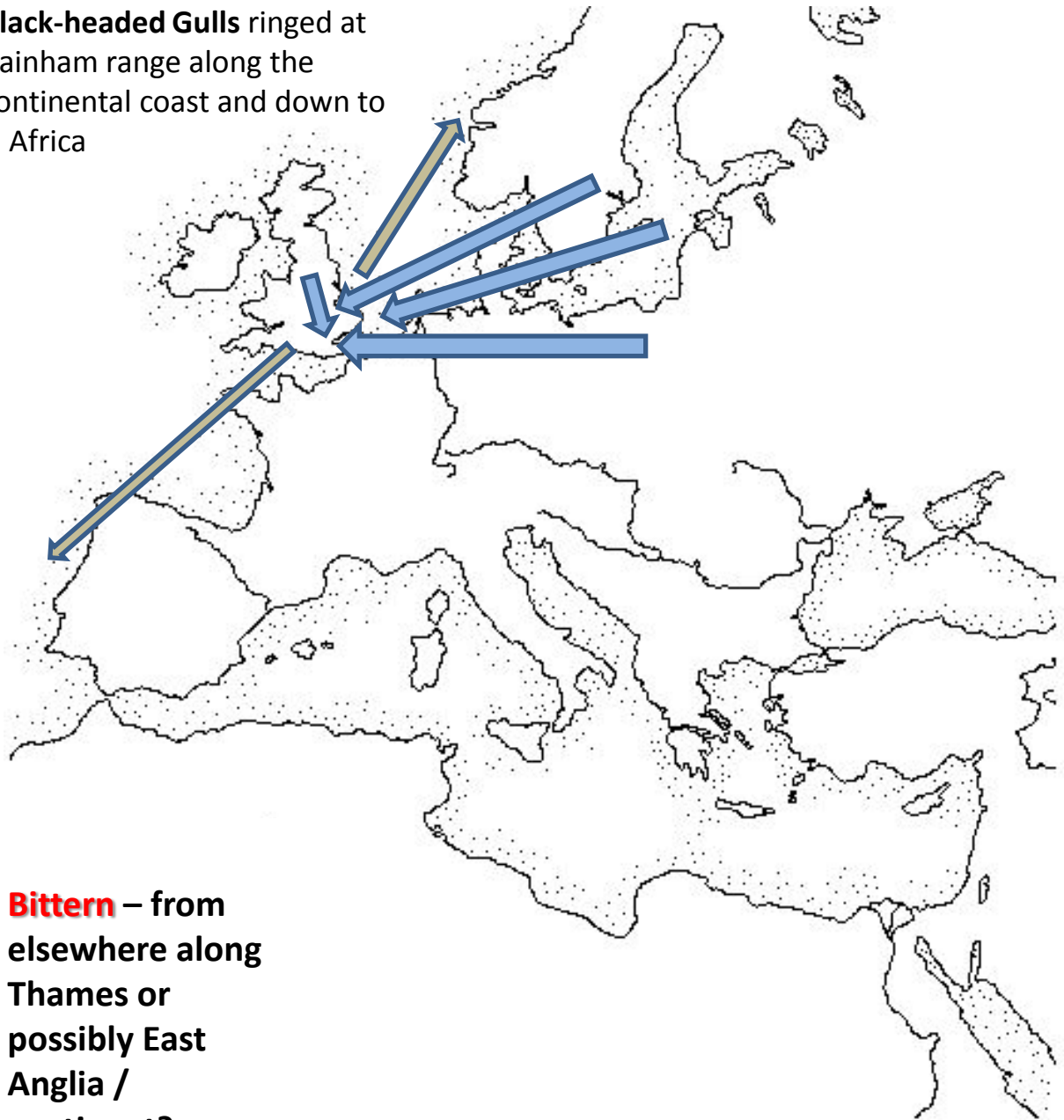
Blackbirds – some from
northern Europe /
Scandinavia

Redwing and
Fieldfare from Scandinavia

Teal – some from north of
UK, many from Baltic and
Siberia

Snipe – possibly from
northern UK uplands,
otherwise northern Europe

Black-headed Gulls ringed at
Rainham range along the
continental coast and down to
N Africa



Bittern – from
elsewhere along
Thames or
possibly East
Anglia /
continent?

Mammals

Water Vole [UK, London and Bexley BAP species], **Harvest Mouse** [UK BAP species] – new in 2014, Brown Rat, Rabbit, Fox, Horse



Rabbit colony / Horses

Motion-sensor 'trail camera' photographs, 2012



Rare species re-introduction

The Marsh Sow-thistle returns

TRW

Former Marsh Sow-thistle (*Sonchus palustris*) site



Nationally scarce.
Regionally declining.
Kent rare plant register. Had become extinct in London.

London status:
BAP Priority
Crayford Marshes was the last site in the capital for it. Introduced to TRW using plants raised from seed of that colony. Seeds of TRW plants harvested for ex-situ sowing and distribution of seedlings to other London sites.



First
flowering
– summer
2011

October 2012
8' 3 5/8" (2.53m)
September 2013
9' 1/8" (2.74m)



Planting May 27th 2011 (Photos John Archer)



Dr. Mark Spencer (BMNH) saved and grew seed from
since extirpated Crayford Marshes plants





2011 planted specimens
in September 2013



Pot-grown seedlings from
TRW parents for further
planting out

Currently 60 survivors at
TRW. Some now at Thames
Water's Crossness nature
reserve, Creekside
(Deptford) and WWT
Barnes



Public engagement and educational potential

Promotion / hands-on work

- ☐ T21 volunteers
- ☐ Schoolchildren
- ☐ Corporate groups
- ☐ Talks – BNEF, Sidcup Nat Hist Soc, Friends of Crossness NR, QWAG, Bexley RSPB
- ☐ Visits – LNHS, SNHS, individual experts, FoCNR , (pending) QWAG
- ☐ Articles and reports
- ☐ Web presence
- ☐ Submission of records to GiGL, London Flora Project, London Amphibian and Reptile Atlas, Bexley/London Bird Report, national Odonata Atlas

Learning opportunities

- ☐ Species identification
- ☐ Ecology
- ☐ Succession, carbon sequestration
- ☐ Habitat creation and the values and politics of ‘mitigation’ and ‘biodiversity off-setting’
- ☐ Habitat management and conservation (incl. role of BAPs)
- ☐ Human impact on the natural environment in urban areas
- ☐ Sustainable Urban Drainage Systems and floodplain geography/hydrology



But still plenty we don't know

- ☐ Algae
- ☐ Fungi
- ☐ Lichens
- ☐ Mosses
- ☐ Terrestrial grasses

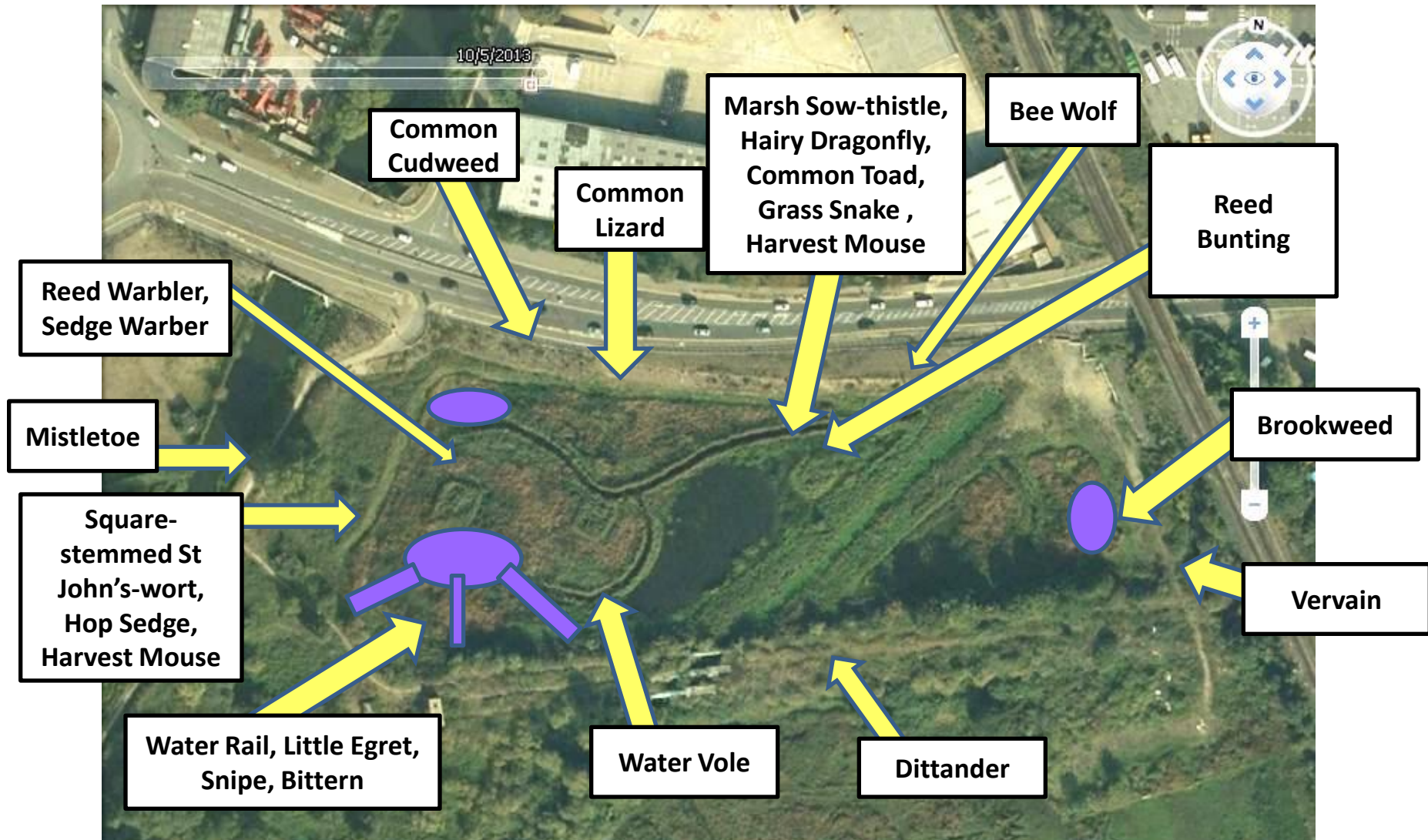


- ☐ Molluscs, Woodlice, Centipedes, Millipedes, Water Boatmen
- ☐ Beetles
- ☐ Flies
- ☐ Bees, Wasps
- ☐ Moths
- ☐ Spiders
- ☐ Fish
- ☐ Other small Mammals



Lichens nearly 800 species in UK, Mosses >600,
Beetles >4,000, Flies c7,000, Moths >2,400, Spiders >600

A reminder of what we do know about the wildlife here



Highlights the importance of plugging away and building a pan-species list for your 'patch'

In perspective: London wetland wildlife reserves - comparative sizes

RSPB Rainham

353 – 362 ha

Thames Water Crossness

50 ha (incl. southern marsh)

WWT Barnes

42 ha

Bexley/T21 Thames Road Wetland 2.4 ha / 6 acres



Thames Road Wetland - small site - Top-Rate for Wildlife

Could you help with management work or specialist recording?

