



# Natural England's Nutrient Mitigation Scheme

# Agenda

1. Welcome & Intros
2. Setting the scene
3. Nutrient mitigation scheme overview
  - a) Habitat delivery
  - b) Credit availability
  - c) Process flow
  - d) Credit prioritisation
4. Questions for Natural England



*Algal mats resulting from nutrient pollution at Brand's Bay*

# Setting the scene



- Natural England & Government working closely with LPAs to ensure wastewater from new houses does not increase N & P pollution of our protected sites.
- Aim deliver a suite of mitigation measures that ensure this whilst unlocking housing currently blocked.
- Develop this mitigation across a maximum of 27 catchments (74 LPAs).
- Number of schemes led by LPAs, private landowners & others already operating or in development.
- NE scheme complement existing schemes, help fill the gap & increase supply of mitigation solutions.
- Defra/DLUHC investing up to £30 million over next three years.

# Setting the scene



High housing pressure*	Medium housing pressure*	Low housing pressure*
River Avon (P)	River Wensum (P)	Chesil & The Fleet (N & P)
Poole (N & P)	River Axe (P)	River Clun (N & P)
River Itchen (N & P)	River Camel (P)	Esthwaite Water (P)
The Solent (N)	R Derwent/Bassenthwaite Lake (N & P)	Oak Mere (N & P)
	Hornsea Mere (N & P)	Roman Wall Loughs (P)
Somerset Levels (P)	River Kent (P)	Rostherne Mere (N & P)
Stodmarsh (N & P)	River Lambourn (P)	West Midland Mosses (N & P)
Tees (N)	Lindisfarne (N)	
The Broads (N & P)	River Lugg (P)	*H = > 500 units/annum
River Eden (P)	River Mease (P)	*M = > 10 units/annum
	Peak District - R Wye (P)	*L = 1-10 units/annum

# Habitat delivery - overview

**Place-based delivery**



**Catchments vary:**  
Geology, soil, climate  
Land use, land tenure, culture  
and local politics –  
opportunities and challenges



**Local knowledge essential**

**Nutrient challenges**



**Nitrogen** – more straightforward, high number of credits generated from arable reversion.  
Constructed wetlands further increase potential for N credits.



**Phosphorous** – arable reversion generates low number of credits.  
Constructed wetlands generate significant P yield.



**Wetland design** different for P and N; nutrients behave differently in water cycle

**Partnerships** with local landowners to create **mitigation habitats = nutrient credits**

# Habitat delivery - partnerships

- Licencing and permitting
- Abstractions difficult
- Early engagement necessary

Environment Agency



- Professional body
- Key to constructed wetland framework contract

Constructed Wetland Association



- National collaboration
- Development of standard
- Secretariat support to CWA
- Specialist advice

Wildfowl and Wetlands Trust



- Exploring opportunities for delivery

eNGOs



- Partnership essential to delivery of 'end of pipe' solutions

Water Companies



- Wetlands + planning permission

Local planning authorities

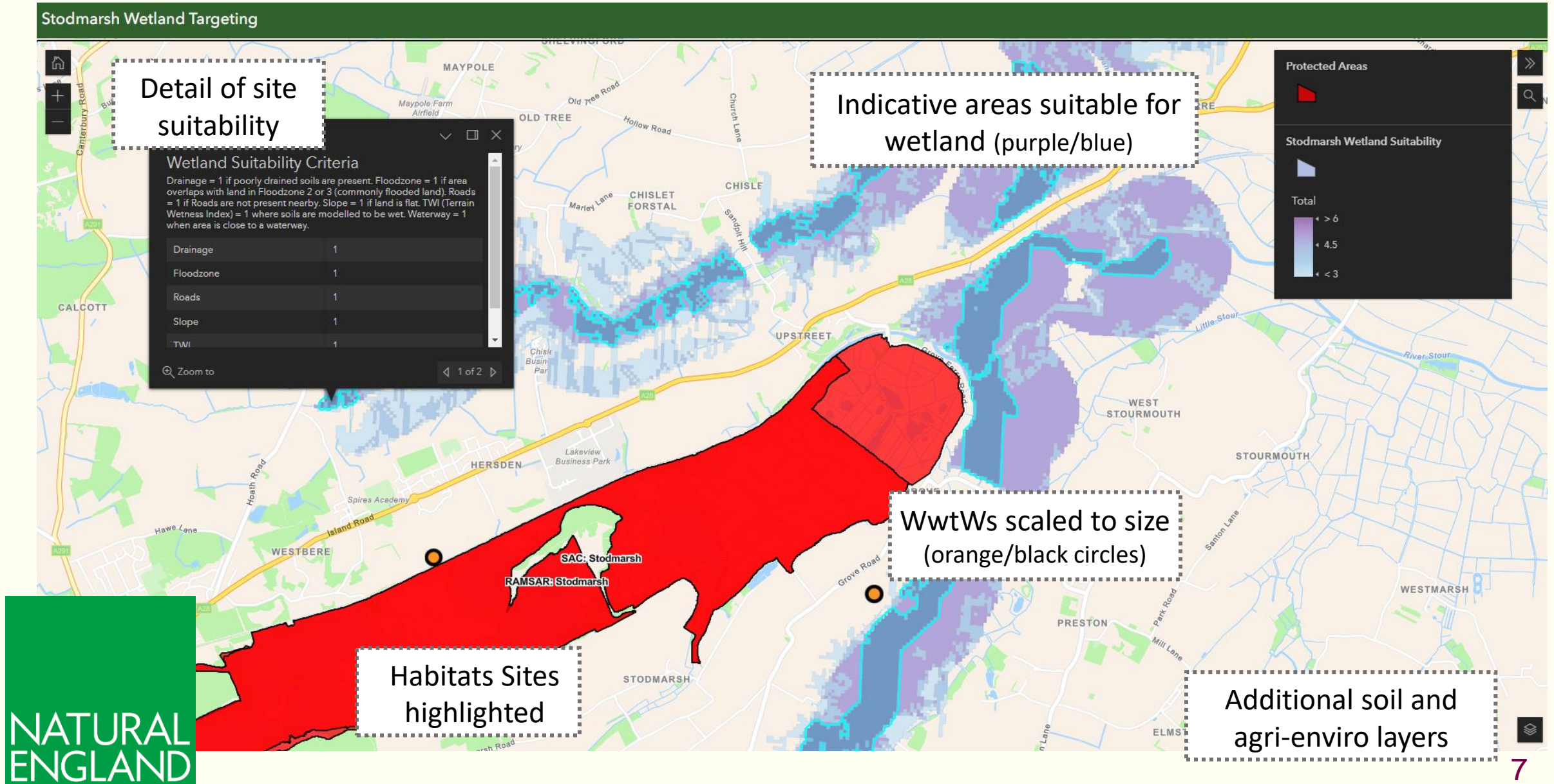


- Collaboration with landowners

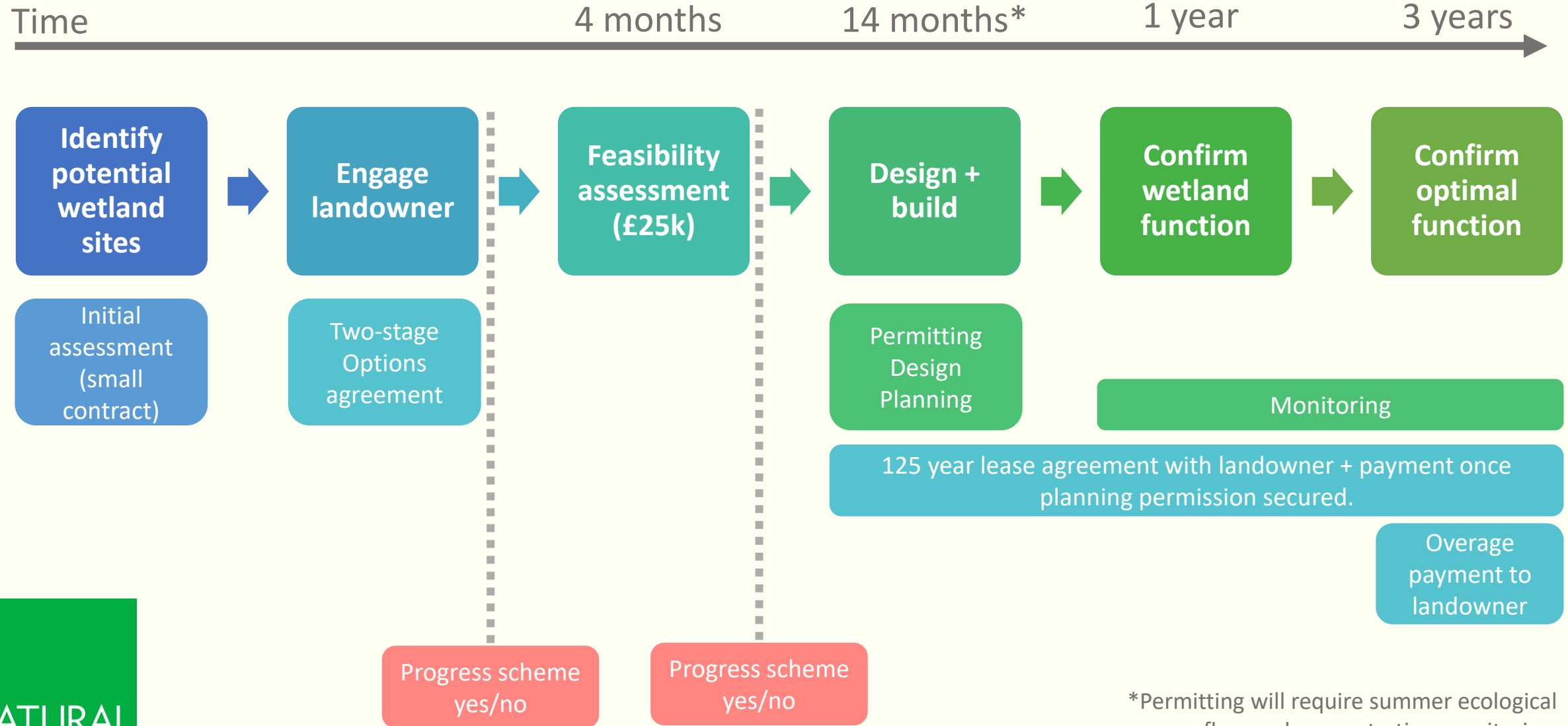
Landowners



# Wetland targetting



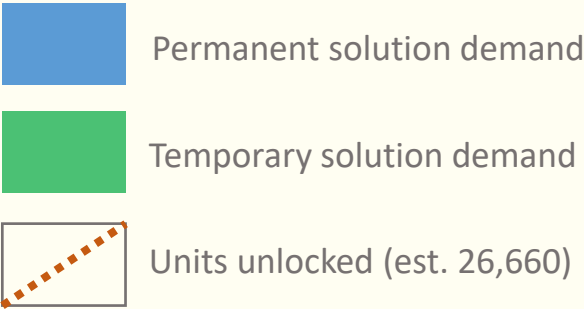
# Constructed wetland process flow



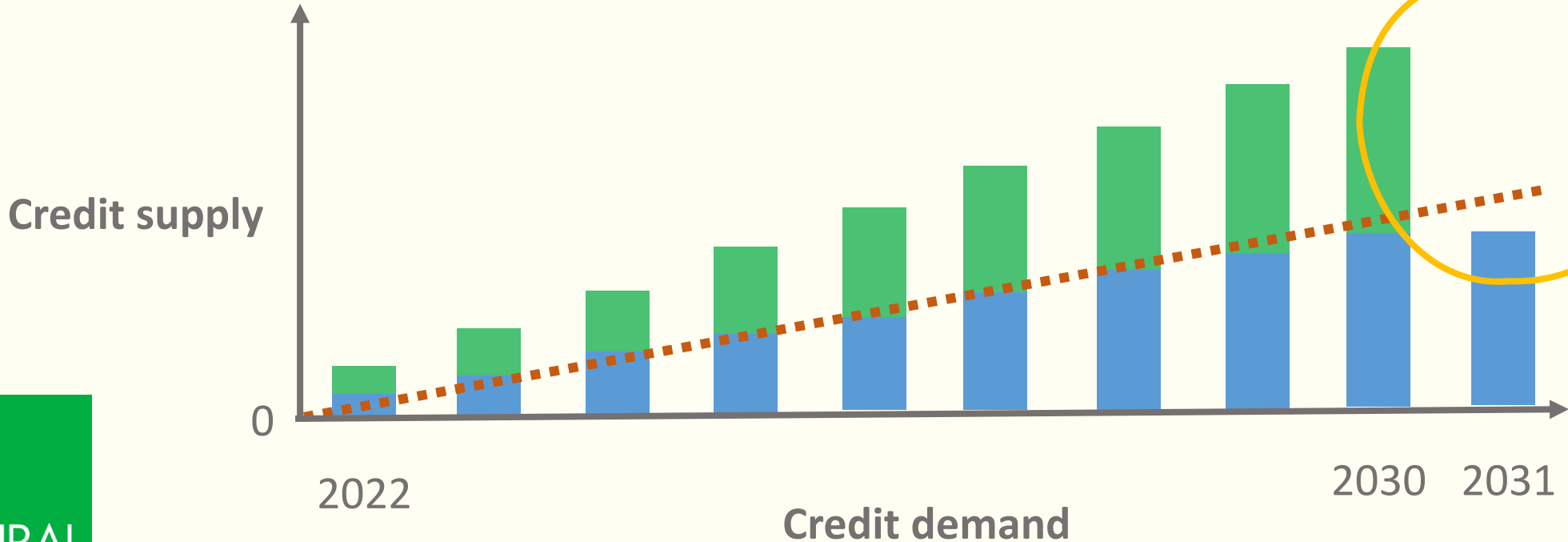
\*Permitting will require summer ecological survey, flow and concentration monitoring



# Impact of 'TAL' in the Tees



Temporary solution demand will fall away at TAL.



# Temporary mitigation solutions due to TAL

- Short-term mitigation measures are required to 'fill the gap' until a Constructed Wetland is fully functional or up until TAL when WwTW upgrades will have been completed (2030).
- A range of measures can be used, with differing levels of efficiency dependent upon whether the catchment is suffering from N, P or N and P.
- For Tees (N only) arable reversion is the single most efficient solution.
- A range of other measures are being explored including cover crops & riparian buffer strips.

# NMS - Tees Catchment Overview (OCCUPANCY RATE 0.8)

Nutrient to mitigate – Nitrogen (1 credit = 1kg / Total Nitrogen / per year)



## Housing Demand per Annum

DLUHC data	2,666 units
Non-TAL (1.73%) & TAL (98.27%) estimate	Non-TAL – 46 units TAL - 2620
Pre-TAL credit need per annum	3,039.24 Credits
Post TAL credit need per annum	1,152.84 Credits

## Catchment Sale Price

Price per Credit	£1,825
Estimated Price per Unit	£2,100
Unit unlock cost as percentage of house price	1.27%

## Our Investment

Number of sites	3
Total Size	190ha

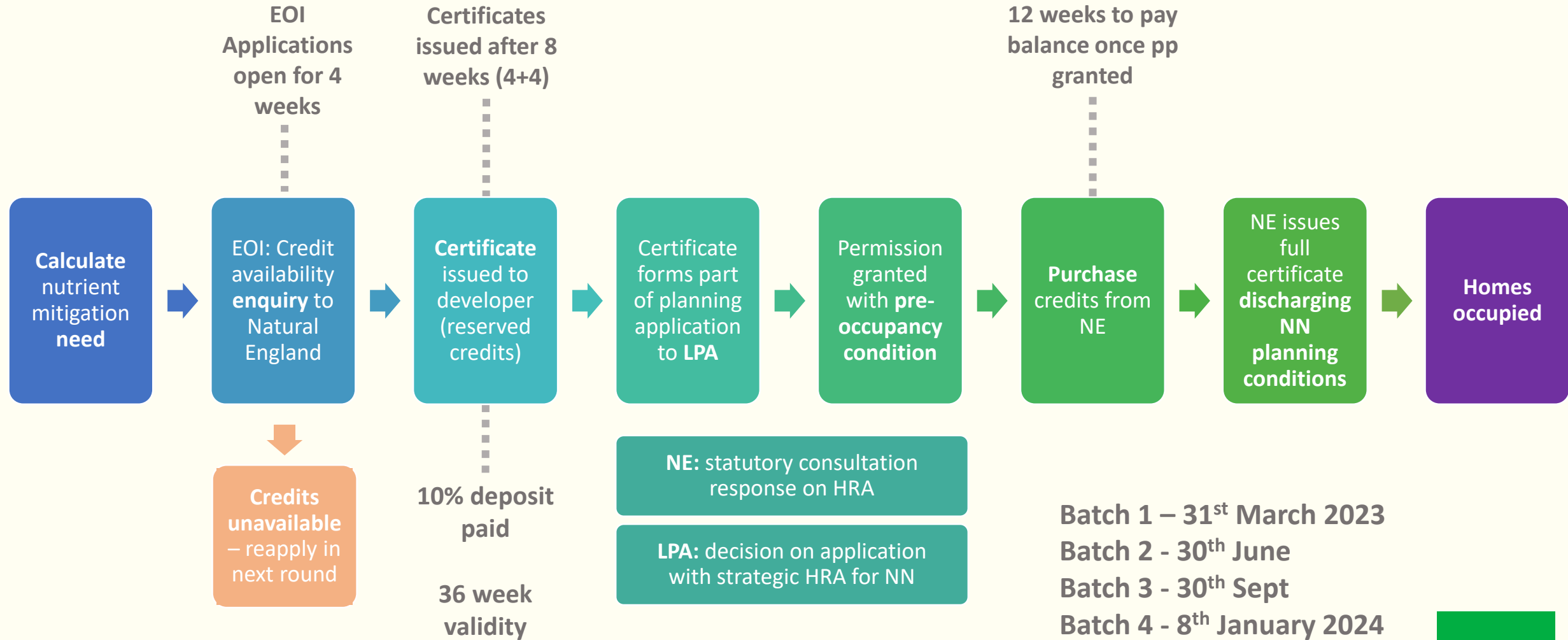
## Cost

Land Cost	£3.7m
NE Admin	£120,000
<b>Total cost</b>	<b>£3.9m</b>

## Housing

Average Credit need per Unit Post TAL (excluding dev site LUC)	0.42 Perm + 0.72 Temp =1.14 Total
Land Registry North East average	£163,800

# Credit certificate process - developer



# Digital System to track credits

The system will enable us to record and track the following:

## Mitigation Sites

- Details of each mitigation site
- The number and type of credits projected and created
- Expiry dates for temporary credits
- Track and manage credits throughout their lifecycle
- Total number of credits of each type available in each catchment

## Applications for credits

- Details of each development site
- The number and type of credits requested pre and post TAL
- Each stage of the process i.e. payment, certificates issued.
- Total number of credits required, allocated and sold in each catchment



## Credit sales

- Allocate particular credits to a development for a set length of time or permanently
- Trace credit provenance

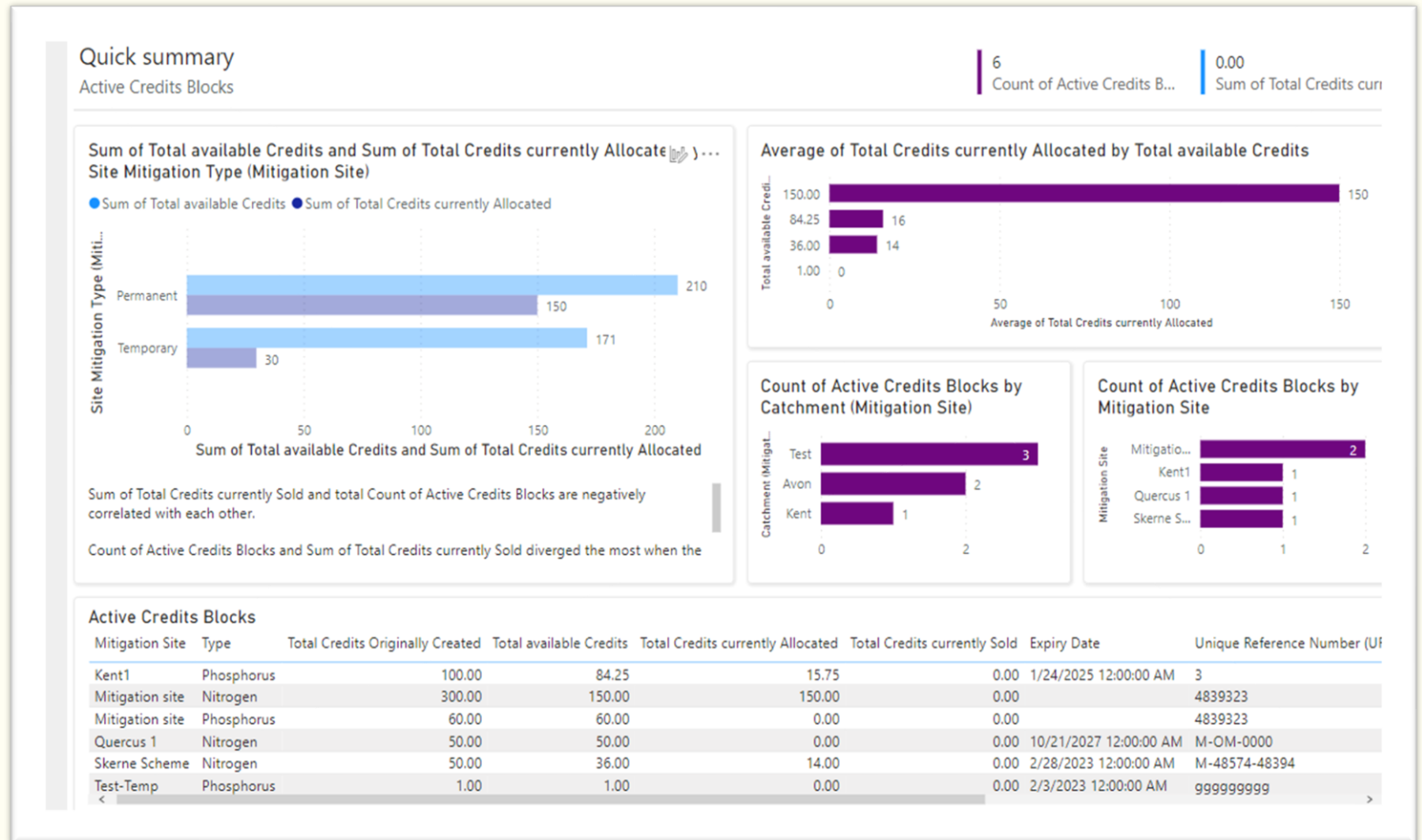
# The Credit Ledger

- NE have commissioned experts to design and build an electronic credit ledger to track credits as they are created, allocated and redeemed
- This will also aid NE in developing catchment strategies for mitigation site creation

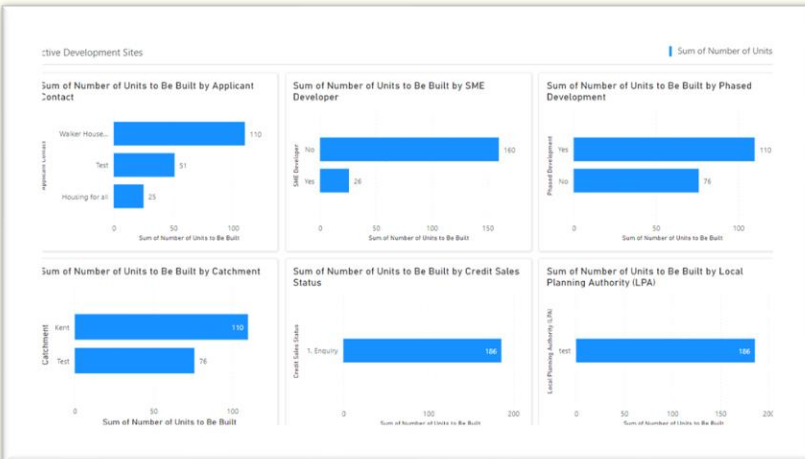
## Mitigation Summary



## Credit Summary



## Development Summary



## Access to credits - Developer prioritisation process Two reserves/caches

Excess credits remaining after all credit demand in a round has been met will be carried into the next application round

