Environmental Standard Operating Procedure

ESOP Name	Bankside Sediment Re-use
ESOP Number	3
Revision Date	22/02/2024
Related ESOPs	2 Biosecurity 9 Reed Rond Creation 10 Working with Water Voles 11 Reptile mitigation 13 Breeding bird mitigationy 26 Reed rond re-use

Aim

The Sediment Management Strategy outlines the principles of reuse, recycling and reduction of sediment within the Broads. However, it is inevitable that some material will need to be disposed of on the land and where this occurs, it should seek to have minimal ecological impact.

This standard operating procedure aims to ensure that, where depositing sediment to land is unavoidable, it is carried out with consideration to the terrestrial habitat and associated species to prevent undue ecological impact. Sites with low ecological impact should be prioritised while use of reed habitat should aim to be temporary to allow dewatering of sediment with plans to re-profile/re-use drawn-up before work commences.

Standard Methodology

- Works to be identified at least 18 months prior so that an ecological assessment can be undertaken in advance of the spring species survey season
- Strategic site selection process to be carried out to identify preferred re-use areas and their general ecological features; from these sites, select those with lowest expected ecological impact
- See ESOP 27 Reed Rond Re-use for specific guidance regarding rond habitat
- Carry out ecological assessment of the re-use site to identify specific habitat and species requirements, including the need for further survey
- Ecological requirements to be incorporated within re-use plans
- Test contaminant and nutrient content of sediment prior to dredging
- Work with landowner to generate suitable restoration plan
- Work in conjunction with EA, where possible, to fill in old soke dykes or strengthen flood walls as part of their program
- Work in conjunction with landowners to use material to create or restore habitats
- Deposition of sediment should occur in the most economical and sustainable way e.g. where possible, deposit sediment near to where removed

Procedure

Pre-works

- Ecologists to carry out ecological assessment, considering habitats, protected species, breeding/wintering birds and advise on mitigation required (refer to ESOPs 10-14)
- Chemically analyse dredgings to assess the level of potential contaminants in the spoil

Operational

- Work with the ecology team and landowner to devise a relevant restoration plan.
- Dispose of sediment in a manner that will cause the least impact/disturbance to terrestrial habitat.
- Monitor vegetation establishment and treat any invasive species that colonise (refer to ESOPs 16-22).

Consultation

The following must be confirmed by the Ecology team before works commence:

- Natural England assent if site is designated
- Wildlife licence application for protected species – to be determined by Ecology team through pre-works site assessment and survey.
- An Environment Agency permit **may** be required if works are within 9m of a main river and are not covered by the provision of the D1 exemption.
- Internal Drainage Board permission if works impact a main drain

Risk Assessment

Hazard	Initial Risk			Controls / Safeguards / Precautions	Revised Risk		
	S	L	R		S	L	R
Disturbance/damage/loss of habitat and disturbance or death of protected species	**4**	**5**	**C**	Pre-works protected species and breeding/wintering bird surveys, appropriate mitigation implemented; reinstatement of habitat following works	**4**	**1**	**B**
Loss of terrestrial habitat	**4**	**5**	**C**	Produce restoration plan and consider compensatory habitat creation	**4**	**2**	**B**
Raising nutrient levels	**4**	**4**	**C**	Do not dispose on areas high in plant species diversity	**4**	**2**	**B**
Raising levels, drying land & promoting tree and scrub growth	**3**	**5**	**C**	Site level recorded pre-works; agree final level; survey during works; restore site according to habitat requirements.	**3**	**3**	**B**
Elevated contaminant levels	**3**	**2**	**B**	Pre-dredge sediment survey. If contaminants exceeds the known averages for the site then works must stop and be re-evaluated.	**3**	**1**	**A**
Colonisation of invasive species	**4**	**2**	**B**	Preventative restoration plan and follow-up control actions to be undertaken	**4**	**2**	**B**

Matrix

		LIKELIHOOD				
		Very unlikely	Unlikely	Moderately likely	Likely	Very likely
SEVERITY		1	2	3	4	5
Low (minimal, short-term disturbance levels and negligible damage to native habitats.)	1	A	A	A	A	A
Medium (moderate, short-term disturbance levels, some damage to native habitats/species. Regenerates quickly.)	2	A	A	A	B	B
High (high disturbance levels over a longer period and displacement of species. Damage to native habitats. Significant time to regenerate)	3	A	B	B	C	C
Very High (Long-term disturbance with displacement/death of species. Significant damage to native habitats that takes a significant time to regenerate.	4	B	B	C	C	C

RISK	
A	OK. Work to provisions in risk assessment
B	Proceed with caution. Dynamically review risks.
C	Cancel task. Approach project in a different way.