
Somerset Rivers Authority





HM Government



heart of the
south west
local enterprise partnership

Somerset
Rivers Authority



Environment
Agency

River Sowy and King's Sedgemoor Drain Enhancements Scheme

SRA Scrutiny

2 July 2021



Devastating flooding of 2013/2014



We must: Dredge the first 8km of the Rivers Tone and Parrett

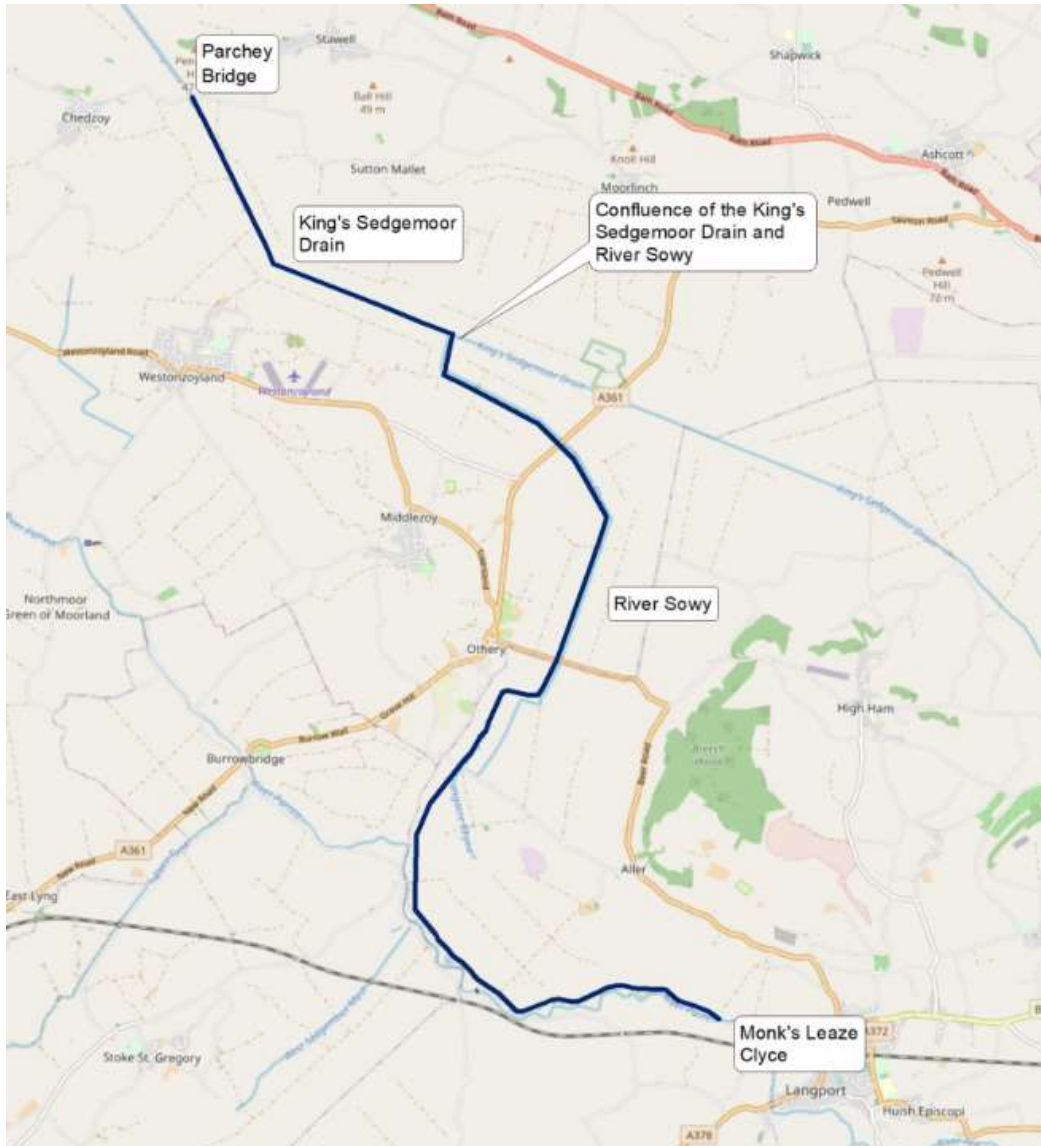
- The Environment Agency is committed to dredge 4km of the River Tone upstream of Burrowbridge, and 4km of the River Parrett below their confluence at Burrowbridge, to the 1960's river profile. This will begin as soon as it is safe and practical to do so, ideally from the end of March, and will be completed by autumn 2014, weather permitting.

We must: Increase the capacity of the Sowy/King Sedgemoor Drain recognising that this solution will reduce the cost of pumping during future flooding events.

- The Environment Agency will make permanent the temporary pumping sites at Dunball by autumn 2014.
- Somerset County Council will, this year, undertake appropriate road works to allow the River Sowy channel to be widened.
- The Environment Agency, working with local partners, will identify and assess the most cost effective solution by the end of 2014 to improving the River Sowy/King Sedgemoor Drain to take more flow from the River Parrett. Based on this assessment, improvements will be delivered.

This project is a result of this plan

Scheme Location



Scheme Benefits

Increased operational flexibility
e.g., earlier pumping.

Benefits communities -
Langport, Muchelney, Thorney,
Moorland and Fordgate

Benefitting residents and
infrastructure within Parrett and
Tone Moors.

Peak flood level could decrease by
0.2 metres and reduce flood
duration up to 10 days within
these locations.

Additional capacity benefiting land
adjacent to the Kings Sedgemoor
Drain, River Sowy and River Cary.

Reducing flood duration - main
concern raised by landowners at
public events held in those areas

Key Organisations & Suppliers



The Somerset Rivers Authority (SRA)
Local government funded organisation



Funded by the Heart of the South West (HOSW)



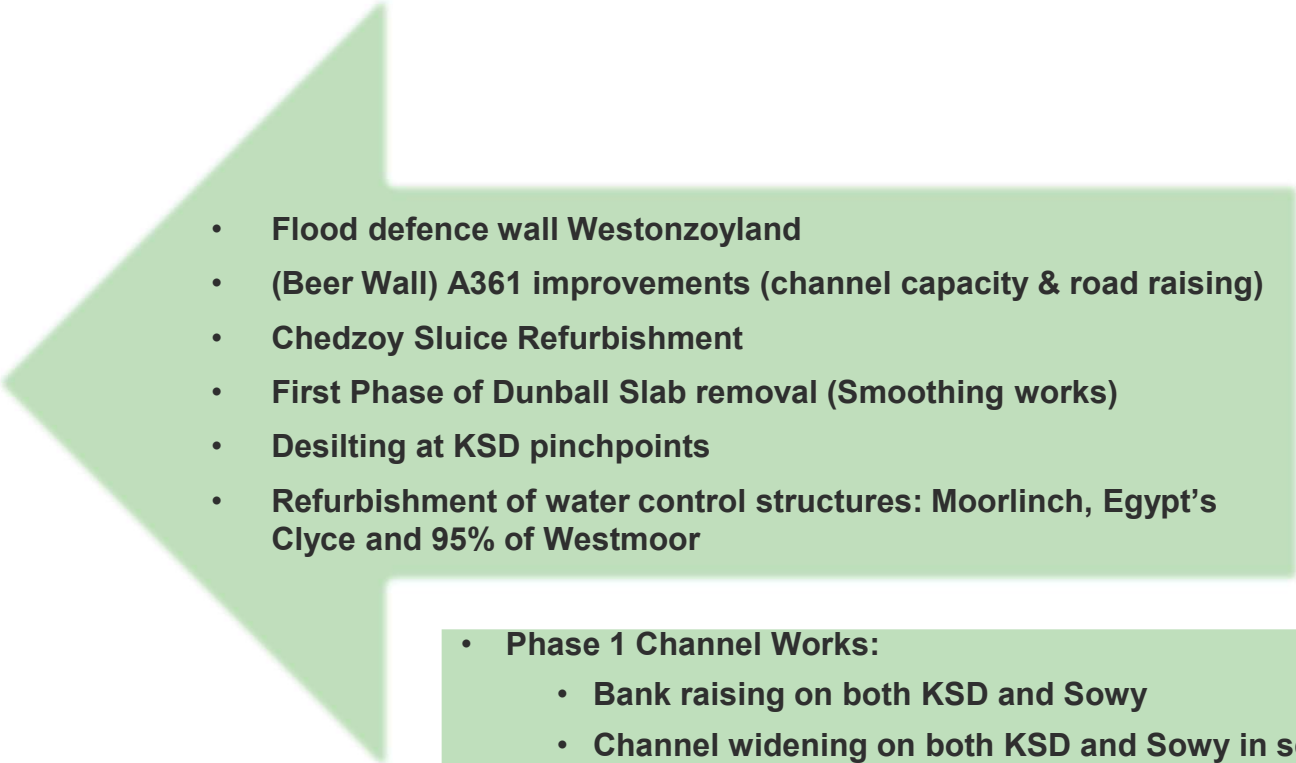
Delivering projects on behalf of Somerset Rivers Authority:

Designers



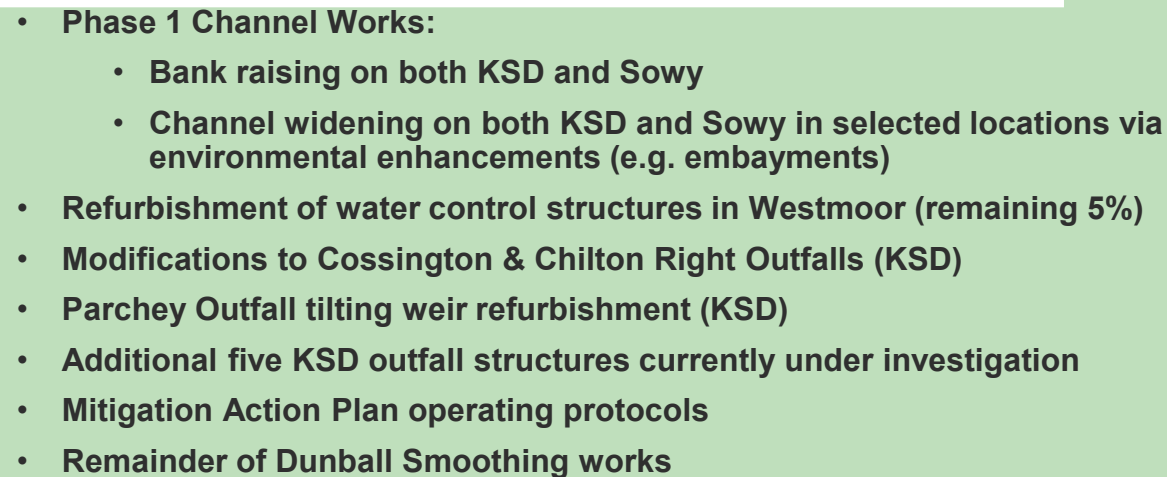
Contractors



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- Flood defence wall Westonzoyland
 - (Beer Wall) A361 improvements (channel capacity & road raising)
 - Chedzoy Sluice Refurbishment
 - First Phase of Dunball Slab removal (Smoothing works)
 - Desilting at KSD pinchpoints
 - Refurbishment of water control structures: Moorlinch, Egypt's Clyce and 95% of Westmoor

Works completed

Works planned

- 
- Phase 1 Channel Works:
 - Bank raising on both KSD and Sowey
 - Channel widening on both KSD and Sowey in selected locations via environmental enhancements (e.g. embayments)
 - Refurbishment of water control structures in Westmoor (remaining 5%)
 - Modifications to Cossington & Chilton Right Outfalls (KSD)
 - Parchey Outfall tilting weir refurbishment (KSD)
 - Additional five KSD outfall structures currently under investigation
 - Mitigation Action Plan operating protocols
 - Remainder of Dunball Smoothing works

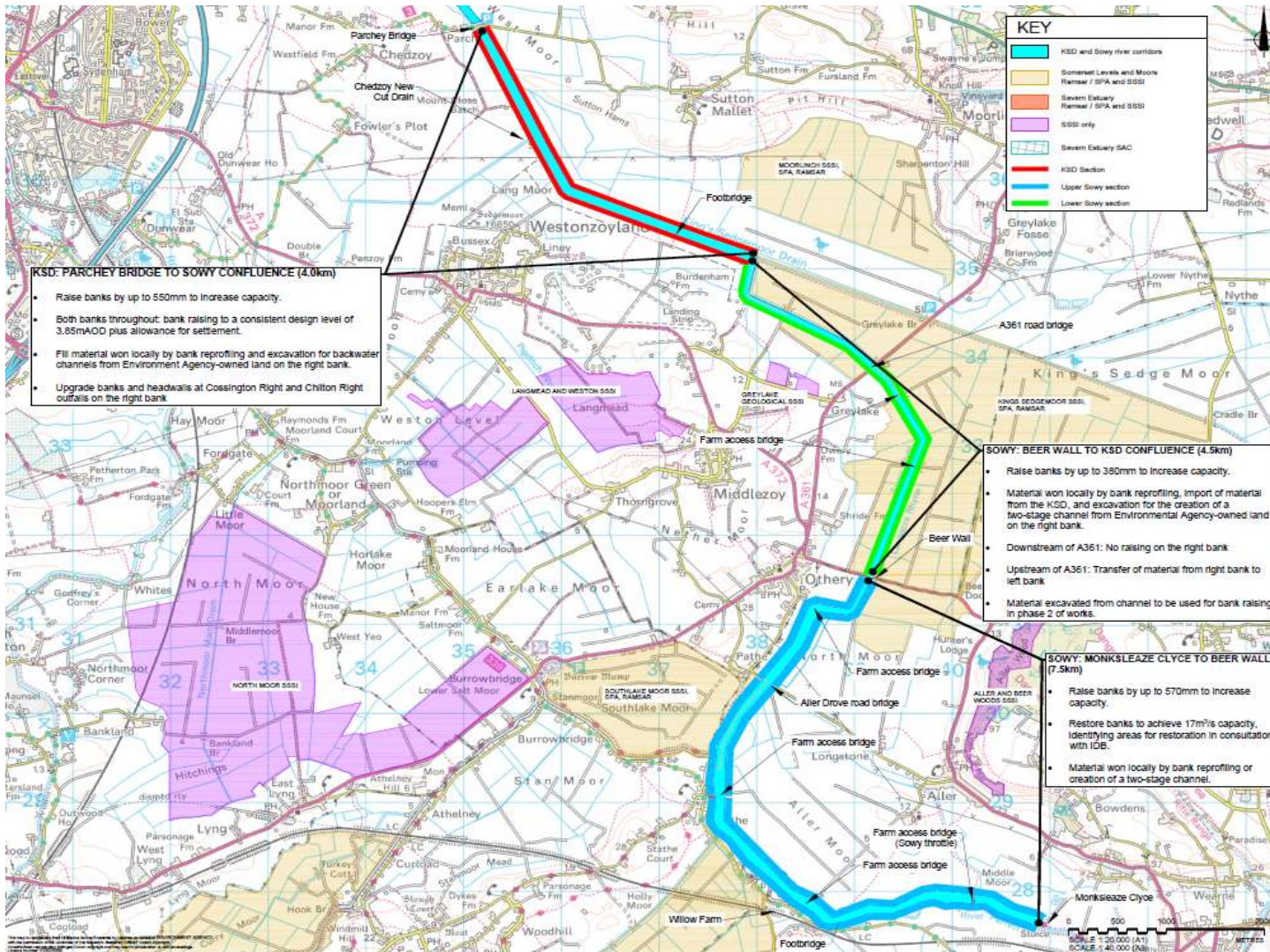
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Completed works



Phase 1 Channel Works



Key Constraints - ecology and heritage features

The table outlines how these translate into project constraints, requiring specific mitigation Method Statements in order to reduce impacts, protect wildlife and heritage.

Badger	a number of active Setts within the scheme boundary. Some located near to bank raising areas or trackways, risking tunnel collapse. Mitigation is required for Badger safety
Trees	introduces buffer zones for tree root protection from construction plant and excessive ground loading. 11 trees requiring felling in order to facilitate construction access in advance of works
Scheduled Monument	one access route is above a buried historic ancient trackway. This trackway must be preserved because its protected, consent is needed to agree suitable protection measures e.g. protective matting to reduce ground compaction
Bats	47 trees have bat roost potential, with 6 of those requiring felling. Best practice means all trees require a pre-felling bat visual inspection. Any trees found to have bats could cause delay to the works programme
Water Vole	in order to carry out works, mitigation required includes clearing of vegetation to encourage displacement of water vole outside of working areas and imposing a 5m 'buffer zone' between the water course (prime habitat) and construction during the works.
Birds	the works site attracts many varieties of birds, several of these are protected (Schedule 1). Works therefore need to avoid disturbance of protected overwintering birds throughout winter months (typically November to March) and avoid disturbing breeding birds between April and July.

Bank Raising



In principal:

King's Sedgemoor Drain (KSD)

Current situation: High and wide banks on both left and right banks of the KSD

Proposed works: Take surplus of material from the KSD and use to build up KSD banks, no works planned for those banks that meet the required height and width already

River Sowy

Current situation: Flat and narrow banks on both left and right banks of the Sowy

Proposed works: Majority of bank raising is required here. This will be done with site won material from Ecological features and imported material from a neighbouring local source. (No bank raising is required on the left bank between the confluence and the A361)

Environmental Enhancements

Water Framework Directive, 1999 (WFD)

Seek
opportunities
for
improvement

Must not
deteriorate
ecology

All enhancement works will be carried out on EA owned land

Enhancements will benefit wildlife including:

- Birds protected as part of the Special Protection Area (SPA) as well as others such as Kingfishers
- Water Voles
- Various fish species
- Invertebrates including Dragonflies

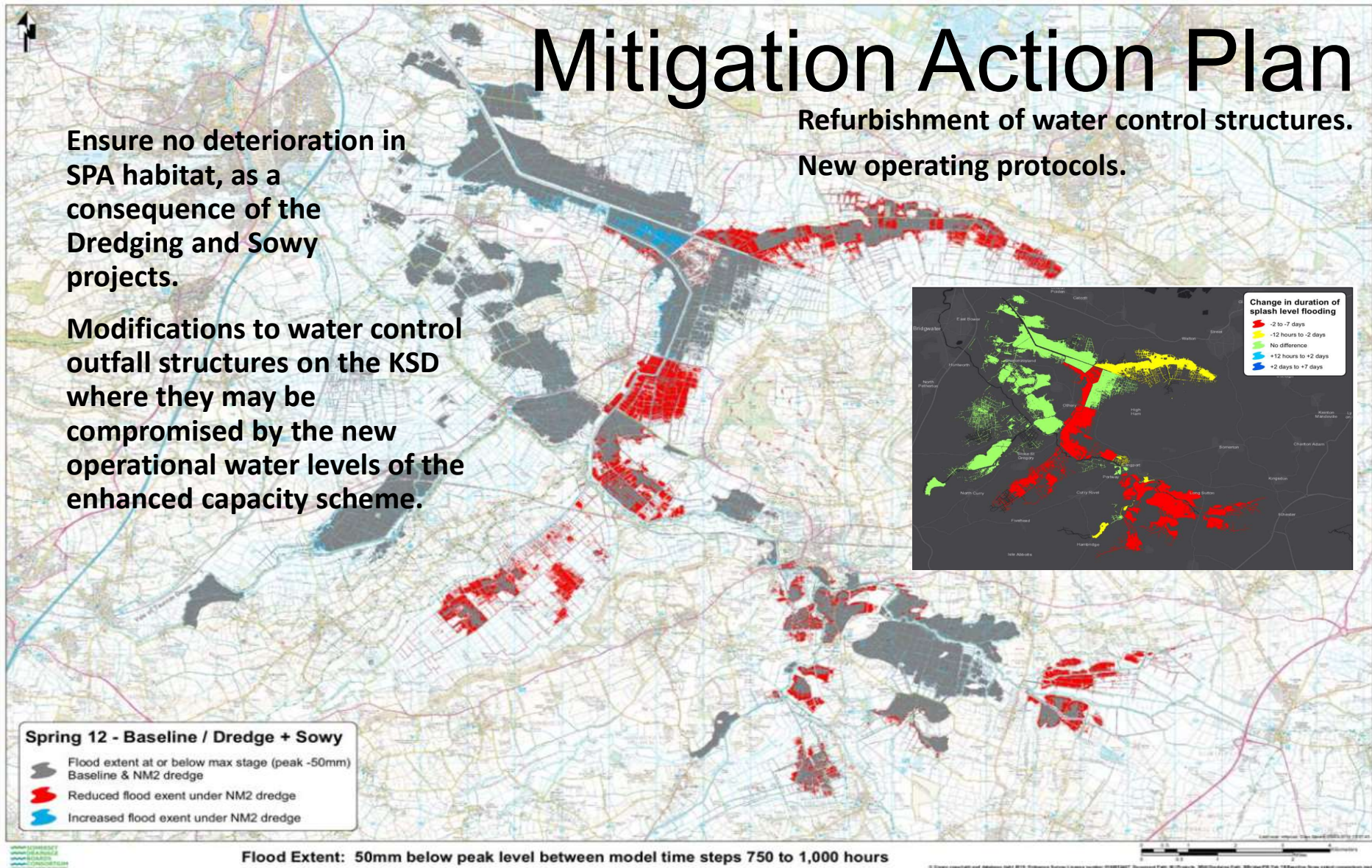
Sowy	KSD
<ul style="list-style-type: none">• Embayments = 2• Two stage channels = 2	<ul style="list-style-type: none">• Two stage channel = 1• Embayment = 1• Backwaters = 1

Mitigation Action Plan

Refurbishment of water control structures.
New operating protocols.

Ensure no deterioration in SPA habitat, as a consequence of the Dredging and Soway projects.

Modifications to water control outfall structures on the KSD where they may be compromised by the new operational water levels of the enhanced capacity scheme.



Map 3. Indicative change in flood extent for a typical annual winter flood determined from hydraulic modelling of the Parrett Dredging and Soway projects

Forecast Project Timeline

Activites	May-21	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21
Pre-construction ecology surveys							
Vegetation clearance to facilitate construction access							
ES Addendum public consultation							
Site set up e.g compound							
Channel works construction							
Demobilisation							

Remaining works programmed to be confirmed:

- Parchey Tilting Weir
- Dunball Smoothing design
- Additional five KSD outfall structures currently under investigation – TBC subject to scope agreement

Latest Position

- Contracts for main project works signed last week
 - to be followed by pre start meeting imminently
- “On the ground” works start today (Friday 2 July)
 - Investigating lengths of steel piles at outfalls.
 - Vegetation management
- Environmental Statement and appendices are open for consultation from 3rd July for 1 month
 - Publicised in local papers as well as one London paper.
 - They can be viewed and commented on at
 - <https://consult.environment-agency.gov.uk/wessex/river-sowy-ksd-phase-1-es-addendum/>

Finances

- **River Sowy/King's Sedgemoor Drain Enhancement Scheme** (includes all previously highlighted completed work)
 - **HotSWLEP Funding Allocation - 8,211,821K**
 - **Match Funding Total - 4,328,452K**
 - **Funding spent up to end 2020-21 - 7,472,967K**
 - **Funding spent during 2020-21 - 1,721,119k**

DAVID WILL EXPLAIN THE INTRICACIES OF BALANCING LEP FUNDING WITH SRA FUNDING (IF NEEDED)