

Appendix C : Stakeholder Post-Workshop Design Update Pack



Future Water
Mackley & Jones Bros. JV



Portsmouth Water
ROWLANDS CASTLE

Havant Thicket Reservoir

Phase 7 & 8 Reserved Matters

WARREN PARK

STAUNTON COUNTY PARK

0 50 100 150 200 250m
SCALE 1:5000 AT ORIGINAL SIZE

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What is being proposed with our application?

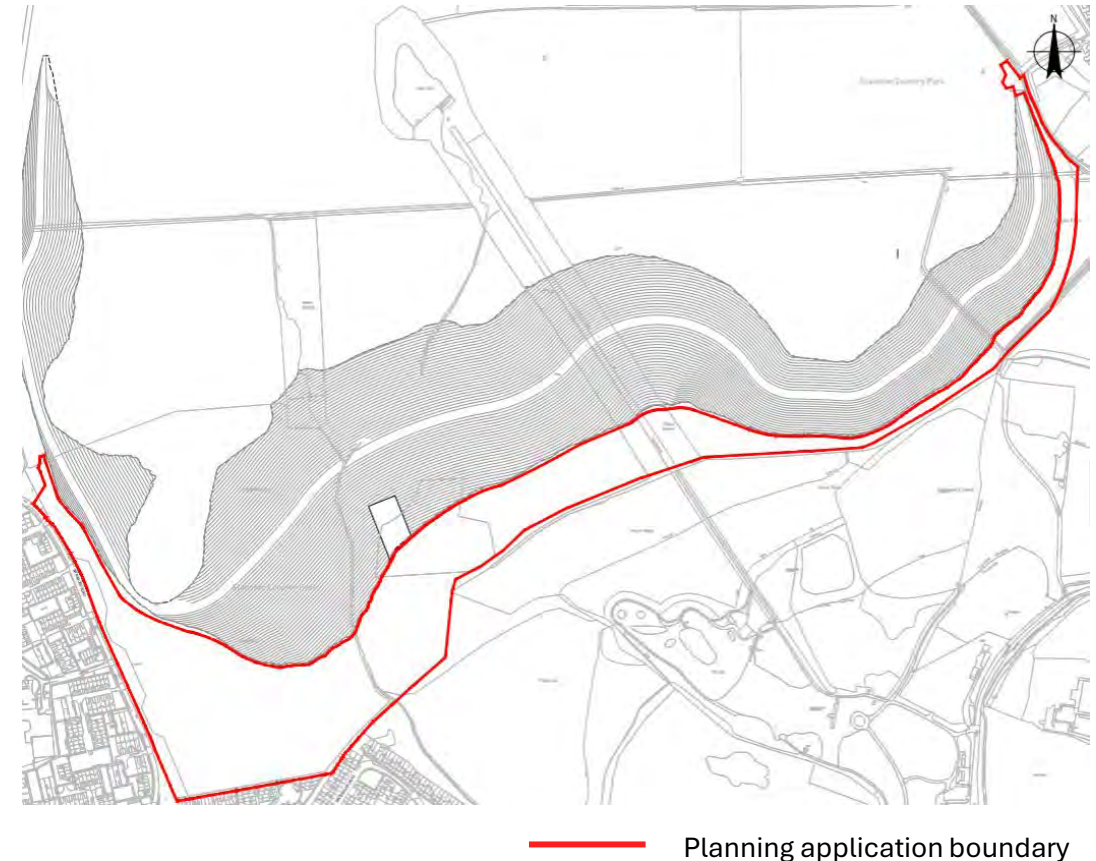
The Reserved Matters application will be submitted as a combined Phase 7 and Phase 8 application due to the interconnected nature of the elements within each application.

- **Phase 7** – Bi-directional pipe and spillway
- **Phase 8** – Remaining areas of landscaping not previously been submitted or approved

The following landscaping areas have already been submitted under Condition 28 with their respective Reserved Matters phase, and are therefore not included within the Phase 7 & 8 application:

- Northern Access Road
- Southern Access Road
- Wetlands
- Control House
- Main Embankment
- Forestry England Track
- Visitor Centre / North West Corner

Where the Phase 7 & 8 proposals interface with these areas, detail is included outside the Phase 7 & 8 application red line boundary for information only and to show interconnectivity across applications.



What has changed following your feedback?

Over the next few pages, this pack details the current Phase 7 & 8 Reserved Matters application details and design.

This includes the following changes which have been made during detailed design work to incorporate stakeholder feedback:

- Revised permissive path network (*as shown during the June Stakeholder Advisory Group meeting*)
- Amended hydrological features within rush pasture basins
- Updated planting areas to close existing gaps in planting and improve habitat connectivity
- Inclusion of fencing around retained goat willow and connection to proposed fencing around the rush pasture basins
- Addition of advance planting details in Gipsies Plain and along the eastern site boundary

Taking note of stakeholder requests, this pack also includes additional information on the following areas:

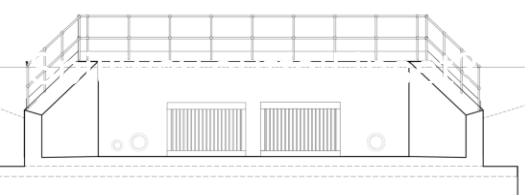
- Realigned Riders Lane channel
- Eastern wildlife corridor
- Realigned Durrants Stream corridor
- Vehicle turning heads on the eastern end of the embankment toe and crest tracks
- Reservoir discharge infrastructure



Key

- Phase 7 and 8 Reserved Matters
- Application boundary
- 39.5 contour - top water level for main reservoir
- Existing
 - Woodland
 - Permissive path - pedestrian use
 - Bridleway - pedestrian, cycle and equestrian use
- Proposed
 - Permissive path - pedestrian use
 - Bridleway - pedestrian, cycle and equestrian use
 - Viewing Point
 - Vehicle access point
 - Entrance point
 - Woodland
 - Specimen trees
 - Scrub regeneration
 - Native hedgerows
 - Wet grassland
 - Watercourse / pond feature
 - Wildflower grassland
 - Rush pasture
 - Suds Basins / low flow channel
 - Reservoir
 - Fencing

Discharge outfall structure



Key

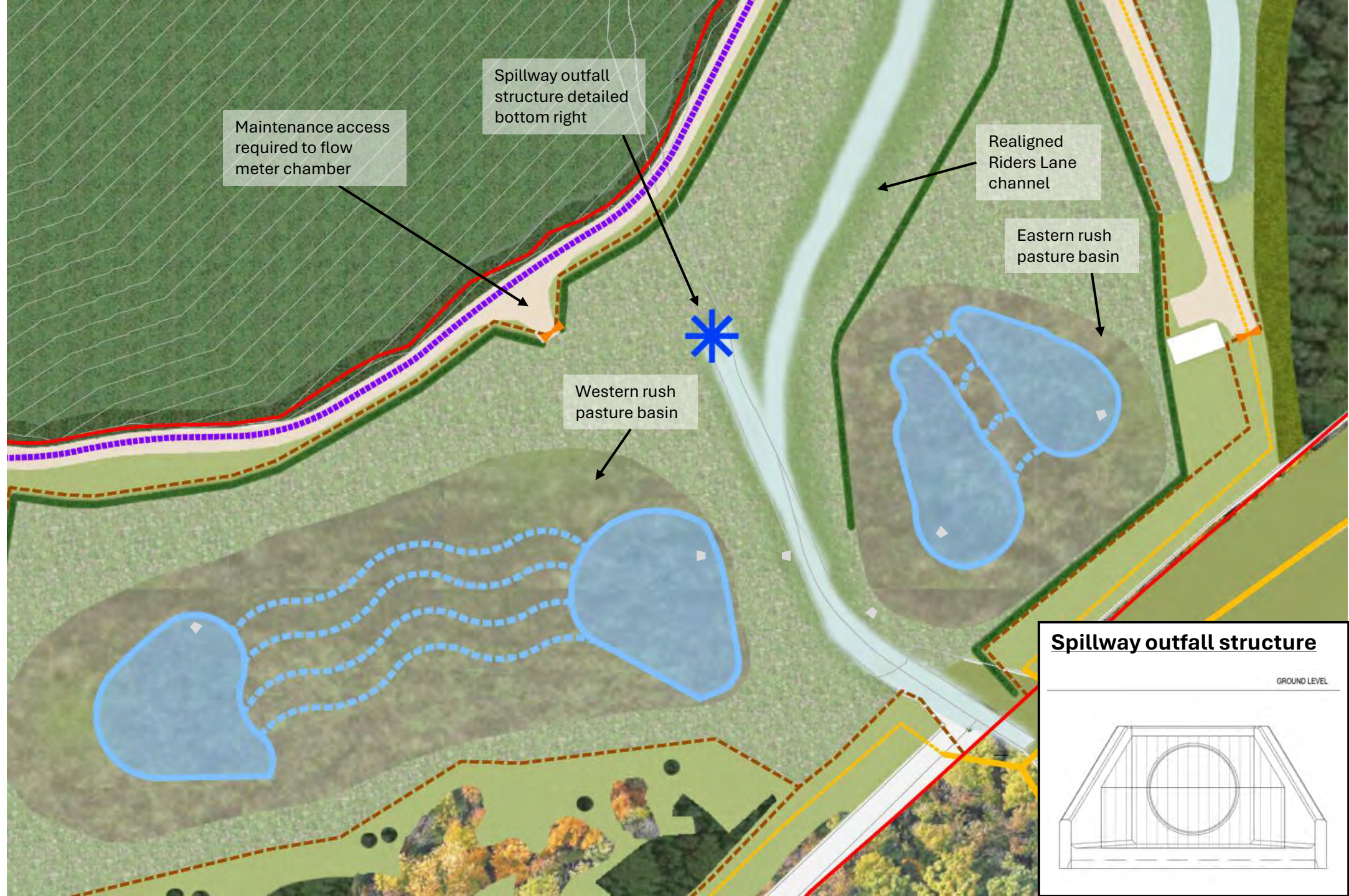
- Phase 7 and 8 Reserved Matters Application boundary
- 39.5 contour - top water level for main reservoir

Existing

- Woodland
- Permissive path - pedestrian use
- Bridleway - pedestrian, cycle and equestrian use

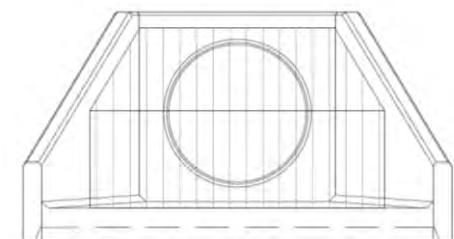
Proposed

- Permissive path - pedestrian use
- Bridleway - pedestrian, cycle and equestrian use
- Viewing Point
- Vehicle access point
- Entrance point
- Woodland
- Specimen trees
- Scrub regeneration
- Native hedgerows
- Wet grassland
- Watercourse / pond feature
- Wildflower grassland
- Rush pasture
- Suds Basins / low flow channel
- Reservoir
- Fencing



Spillway outfall structure

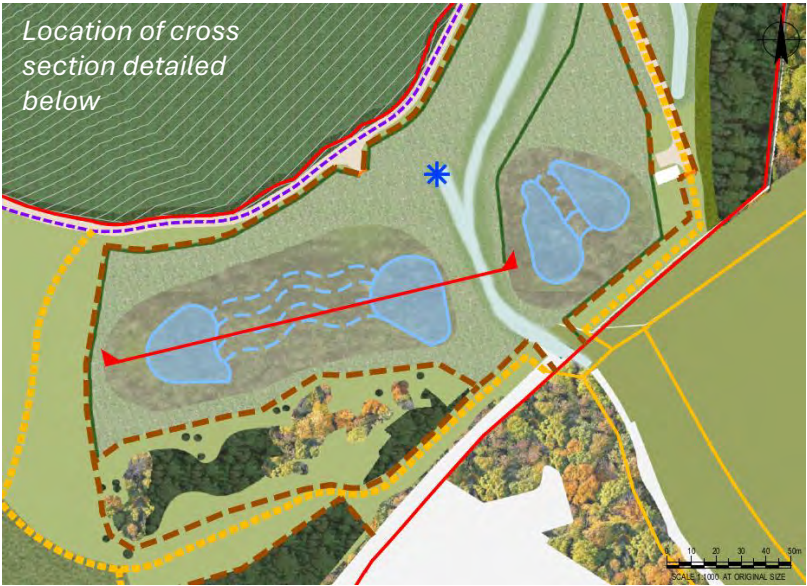
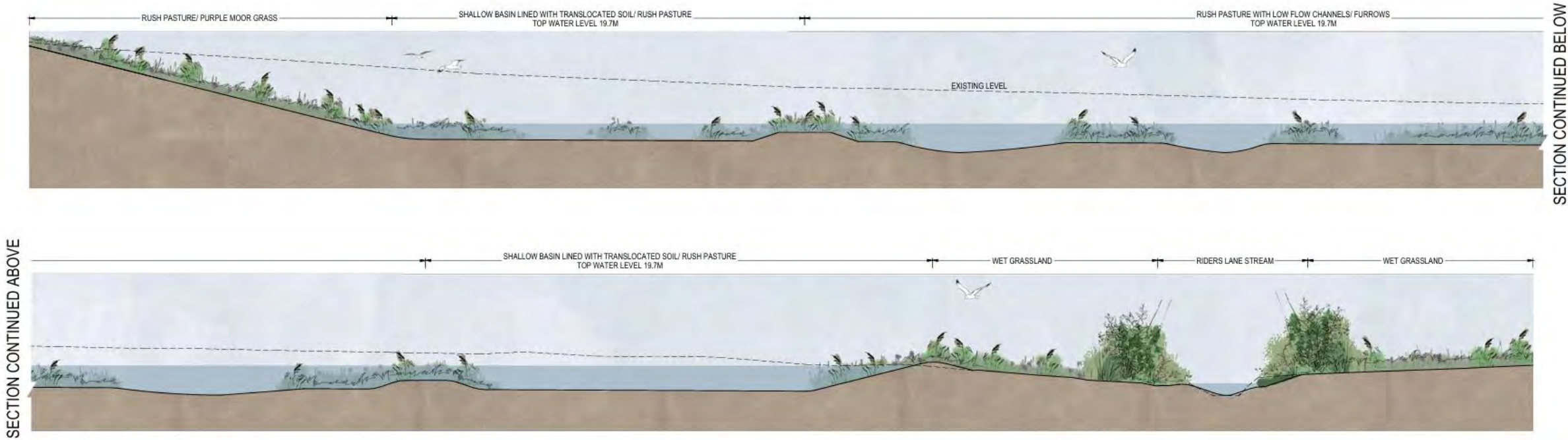
GROUND LEVEL



Western Rush Pasture Basin

Stakeholder feedback provided on the interface between the rush pasture basins and realigned Riders Lane Channel indicated a preference not to have a bund between the basins and the channel or for the height of this to be reduced.

A bund was placed between the rush pasture basins and Riders Lane Channel to retain water in the basins and provide optimal conditions for the development of wet grassland. However, following feedback provided, this has been lowered in height and smoothed out to create a more natural transition and opportunity for the establishment of wet grassland habitat on its gentler slopes.

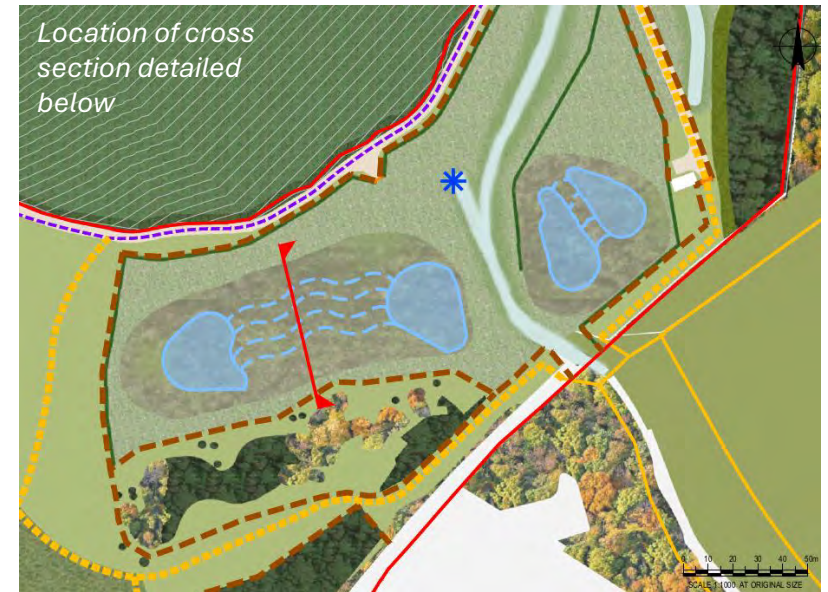
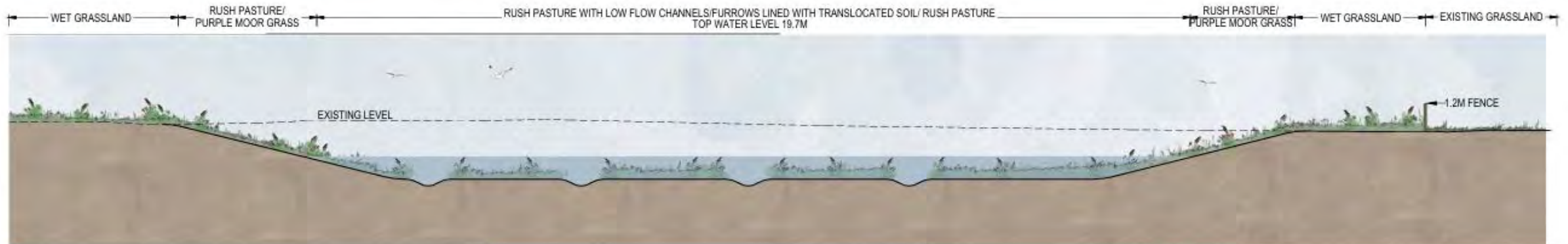


Western Rush Pasture Basin

Stakeholder feedback provided on the low flow channels within the swale basins queried whether bunds would be utilised between channels.

Low flow channels will be achieved in the rush pasture basin by a series of furrows as depicted in the below cross section taken from across the centre of the western rush pasture basin. This will allow seasonal variation in moisture levels across the basin, supporting establishment of translocated soils and creating habitat diversity.

By utilising a system of furrows no bunds are required within the basin as the furrows will naturally create a variety of create wetter channels and drier raised areas seasonally.



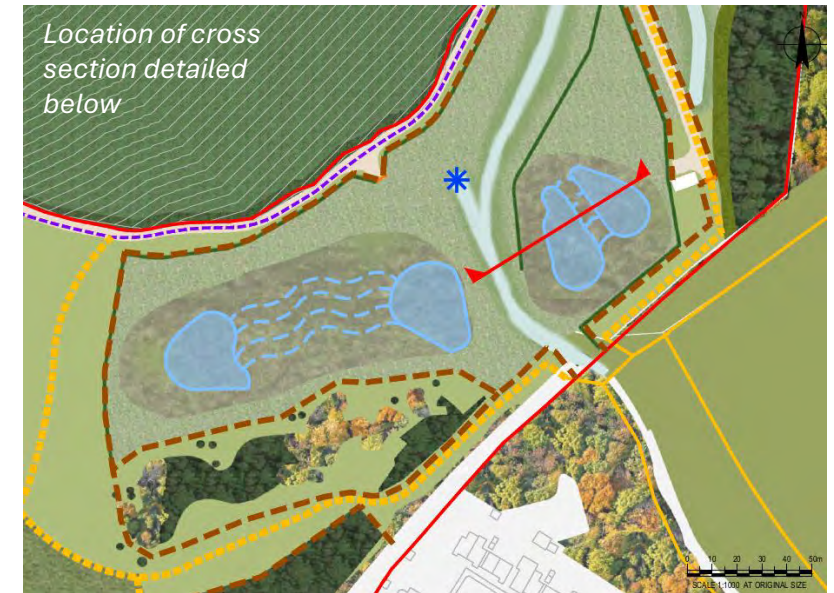
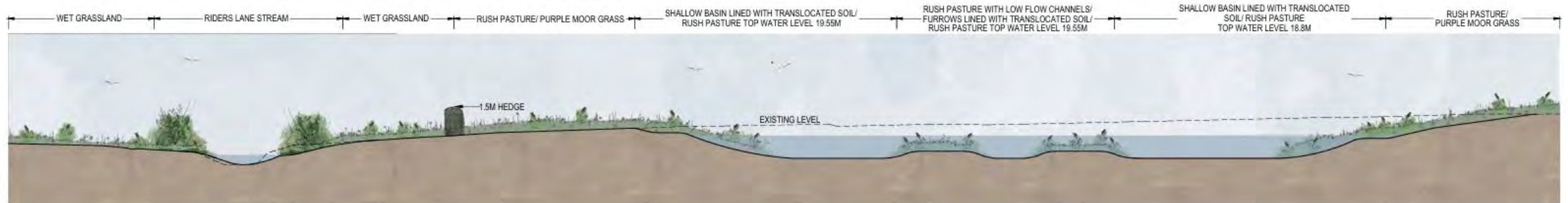
Eastern Rush Pasture Basin

Stakeholder feedback suggested directing embankment toe drainage and surface water drainage into the rush pasture basins to help keep the areas wetter and optimise biodiversity potential.

An additional suggestion was also made to connect the drainage channel east of the eastern basin directly to the basin.

Both the western and eastern rush pasture basins will receive water from the drainage systems (which combine embankment toe drainage and surface water drainage) on their respective sides of the reservoir site.

Although the eastern drainage system runs into the drainage channel east of the eastern basin, it is not possible to directly connect this to the basin due to the implementation of a requested footpath route. The water will therefore flow from the eastern drainage system into the drainage channel to slow down flow rates and then be culverted under the footpath into the rush pasture basin.



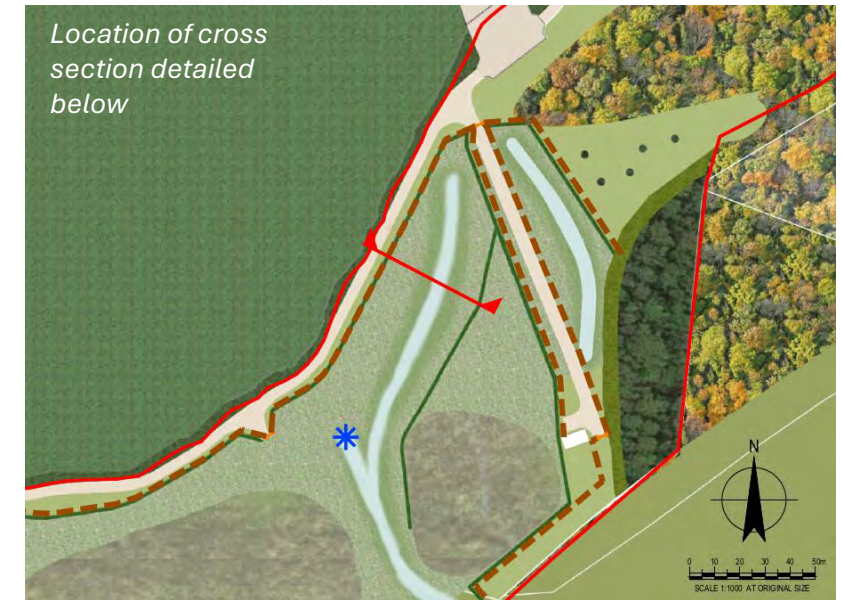
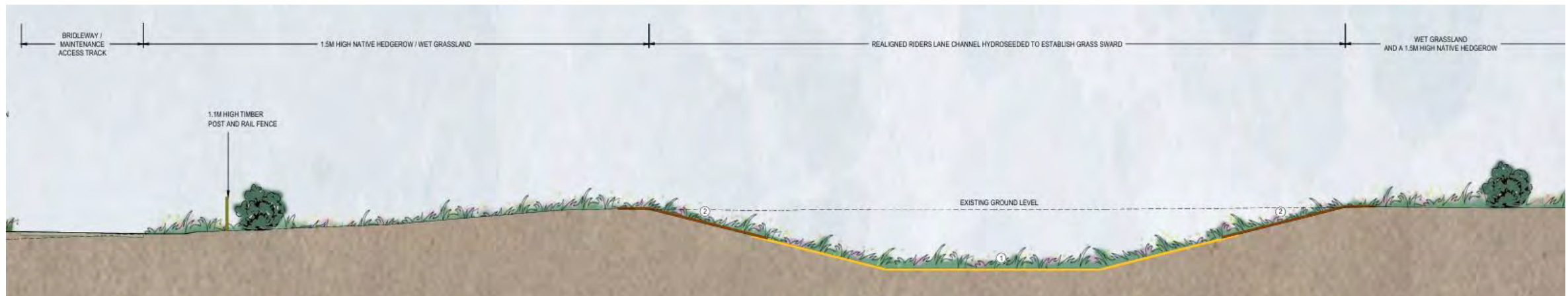
Realigned Riders Lane Channel

Stakeholders feedback requested more information be provided about planting within the realigned Riders Lane channel.

The realigned Riders Lane channel provides required compensation flows for Riders Lane stream but must also be able to be used as one of the routes for water to leave the reservoir during an emergency draw down scenario. It therefore needs be able to withstand high velocity flows and wave action against its slopes without eroding.

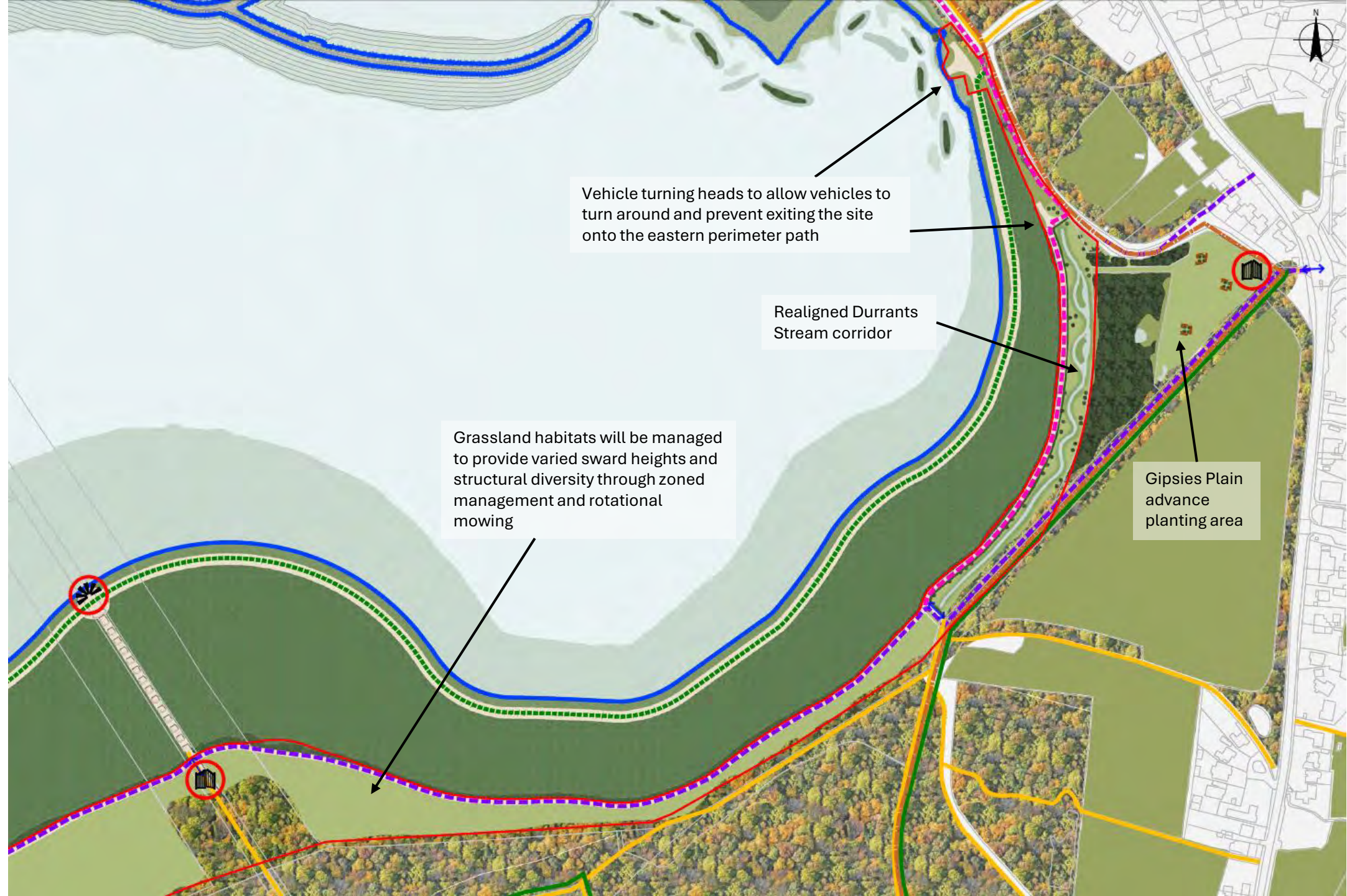
The design of the channel is as follows (see below cross section for detail):

- Hydroseeded geotextile layer with 100% coconut fibre
- Hydroseeded Enkamat geotextile supplemented with plug planting to create a naturalised channel in accordance with LEMP requirements



Key

- Phase 7 and 8 Reserved Matters Application boundary
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 - Woodland
 - Permissive path - pedestrian use
 - Bridleway - pedestrian, cycle and equestrian use
- Proposed
 - Permissive path - pedestrian use
 - Bridleway - pedestrian, cycle and equestrian use
 - Path - pedestrian and cycle use
 - Temporary bridleway diversion (will be reinstated to permissive path access)
- Viewing Point
- Entrance point
- Woodland
- Specimen trees
- Scrub regeneration
- Native hedgerows
- Wet grassland
- Watercourse / pond feature
- Wildflower grassland
- Reservoir
- Fencing



Vehicle turning heads to allow vehicles to turn around and prevent exiting the site onto the eastern perimeter path

Realigned Durrants Stream corridor

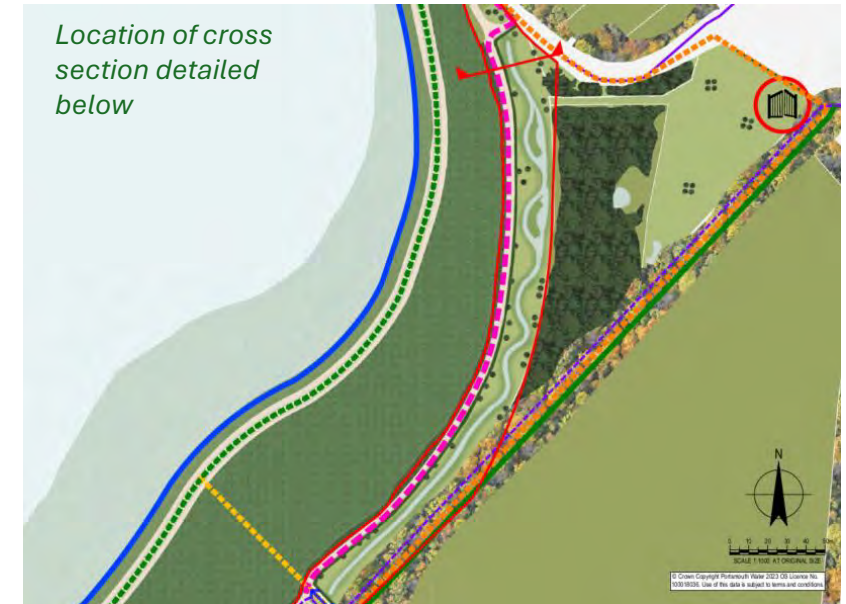
Grassland habitats will be managed to provide varied sward heights and structural diversity through zoned management and rotational mowing

Gipsies Plain advance planting area

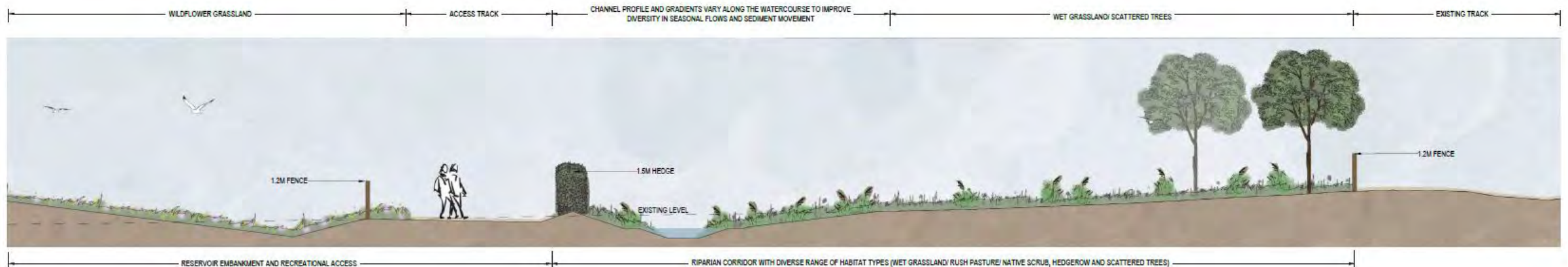
Eastern Wildlife Corridor

Stakeholders feedback requested information be provided relating to enhancement of the eastern wildlife corridor.

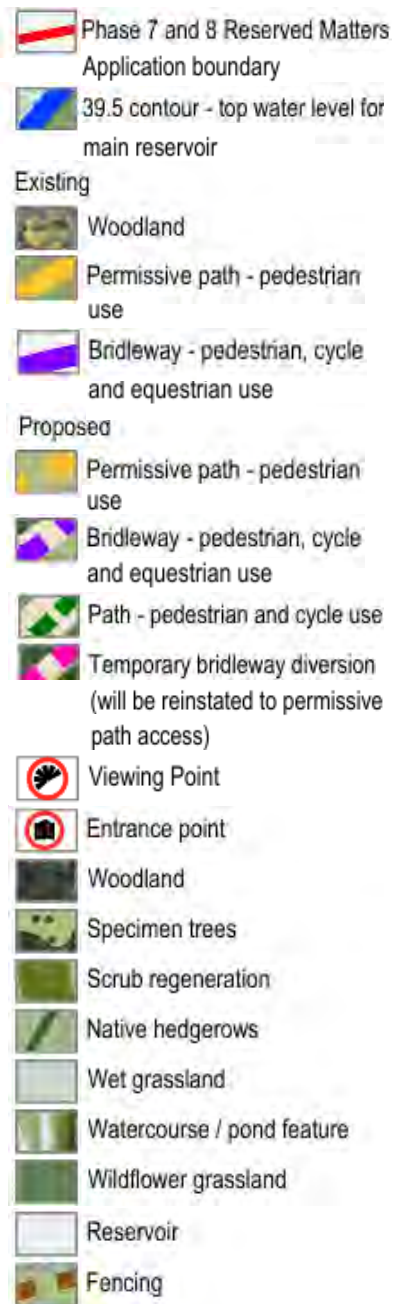
Proposals for planting and connectivity along the eastern wildlife corridor are now fully detailed on drawings, including a mixture of native hedgerow and scrub, wet grassland and tree planting. Plans also detail all advance planting already undertaken along the eastern site boundary and within Gipsies Plain (which is outside of the Phase 7 & 8 Reserved Matters Application boundary) in order to clearly show the bolstered connectivity along this route.



Included below is a cross section of the eastern wildlife corridor depicting the embankment toe track, realigned Durrants Stream corridor (covered further on page 13) and planting designed to promote a diverse range of habitat types.



Key



Native hedgerow planting to be undertaken adjacent to the maintenance track. Tree planting along the realigned Durrants Stream corridor to be a mix of:

- Sweet Chestnut
- Common Maple
- Common Oak
- Small-leaved Lime
- Downy Birch
- Common Hornbeam

Backwater features

Channel to be planted with wet and water edge seed mix

Realigned Durrants Stream Corridor

Stakeholder feedback suggested implementing low level flat shelves within new stream channels.

The watercourse improvements connecting the eastern side of the site to Durrants Stream have been designed to wind like a natural river, with backwater features and banks of varying shapes and gradients, including low level flat shelves.

The corridor incorporates habitat enhancement measures, intended to strengthen ecological/hydrological connectivity, improve habitat diversity and provide opportunities for the establishment of more diverse marginal and riparian vegetation.

