

# Alderbrook Habitat Creation Overview 05.2021

Brueton Park—SP159787





## Habitat creation proposals

### Hinged Trees & Large Wood Debris

Replicating a natural river system, up to 10 mature trees 100mm-300mm diameter will be hinged into the Alderbrook to add to the very infrequent existing in stream natural large wood. An excellent example can be seen immediately downstream of footbridge from formal park area into wildlife area SP16147864 where a large fractured trunk from upstream est. 700mm diameter has settled parallel to channel. Bed scour is occurring and a gravel bar has developed downstream of the feature. Hinged trees will encourage lateral and bed scour increasing the available habitat for all life stages of fish particularly trout. They form incredibly important niches for all manner of invertebrates and therefore have a positive impact on birds, mammals, reptiles and amphibians. Felling/coppicing bank side trees will encourage a more diverse structure and age range along the forested corridor and will increase the diversity of plant life by providing a more varied level of light penetration onto the wet margins and instream channel.

### Pool Creation

Offline scrapes will be created in the floodplain to create permanent water habitat adding to small existing feature by boardwalk. Pools will encourage waders to forage and provide habitat for all manner of fresh-water wildlife.

Pool 1—12m x 10m x 1m (est. spoil **50m<sup>3</sup>**)

Pool 2—10m x 8m x 1m (est. spoil **40m<sup>3</sup>**)

Pool 3—6m x 4m x 0.8m (est. spoil **10m<sup>3</sup>**)

Total spoil est. **100m<sup>3</sup>**

### River Re-naturalisation—Concrete and Slab Removal

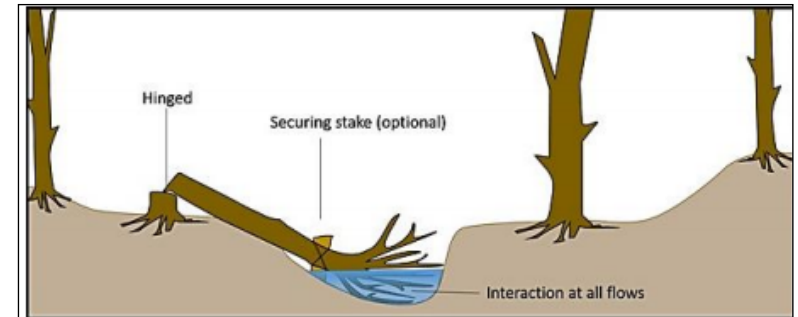
225m of engineered channel will be removed and restored allowing for natural sediment movement and a more heterogenic bed profile. This section of river will be utilised once more by spawning trout and juvenile fish. It is currently in poor condition and providing very little habitat for wildlife. Upstream of SP15502 78853 through housing is also concrete lined but it is not feasible for removal so a focus on accessible reach through to natural bed substrate at SP15695 78782 has been chosen.

225m x 2m x 0.15 (est. concrete **67.5m<sup>3</sup>**)      200m x 2m x 0.05 (est. slabs **22.5m<sup>3</sup>**)

Total for crushing to 10mm—20mm est. 30m<sup>3</sup>      Total for removal from site est. 60m<sup>3</sup>

15m<sup>3</sup> Crushed material will be used in river as substrate for spawning fish and invertebrates.

15m<sup>3</sup> Crushed material will be used as base to create flower rich meadow in designated areas within park



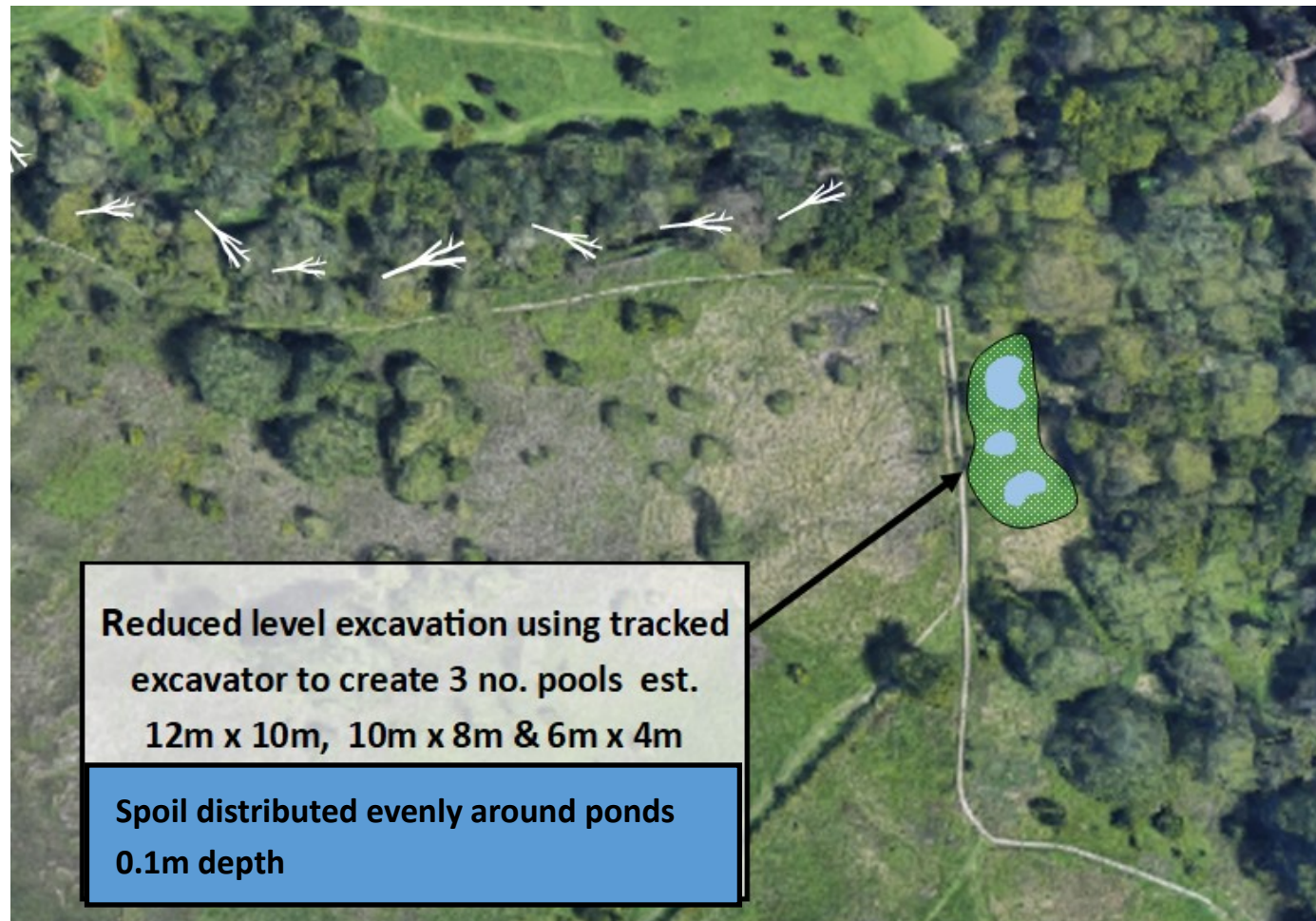
*Sussex flow initiative*



*Tim Precious-Li*



**Pool location—SP 16160 78596**





Pool location—SP 16160 78596. Spoil location—SP 15943 78462



All spoil will be lost around the pools created est.  $50\text{m}^3$  over  $500\text{m}^2$ . This will be spread to less than  $0.1\text{m}$  in height. The remaining  $50\text{m}^3$  will be spread in low value grass areas as marked along boardwalk over  $\sim 250\text{m}^2 \leq 0.2\text{m}$  in height. Areas will be sown with appropriate Emorsgate native seed mix after confirmation from SMBC team to enhance botanical diversity.

Pool Transect

12m x 10m Pool (to scale)

Existing ground level



Reduce Level Excavation



1.2m

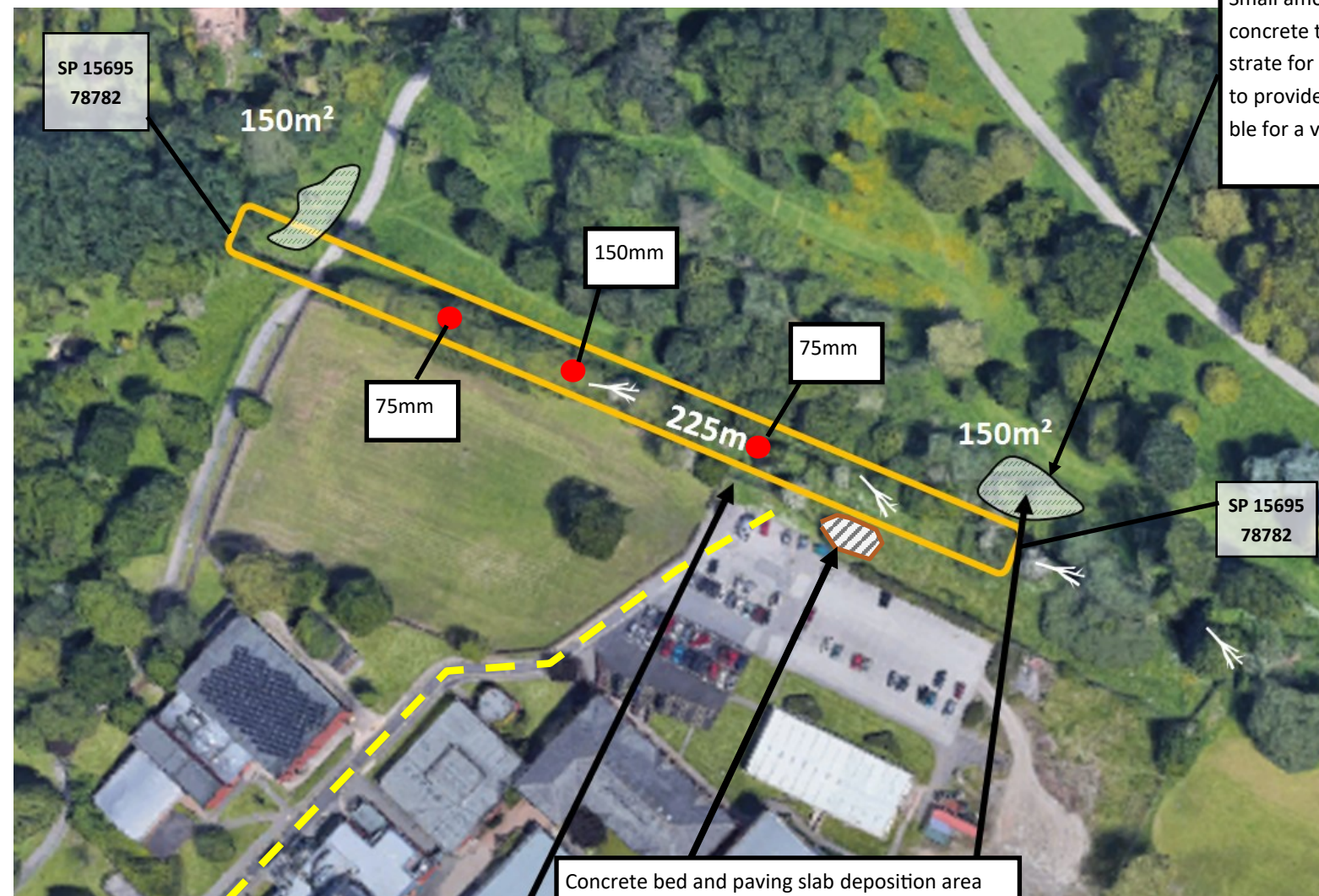


18m



## Spoil and concrete deposition areas

3 cores were drilled from the concrete bed as marked on the map in red dots. Average depth is therefore 100mm but spoil quantities have been calculated at largest depth of 150mm as a precaution.

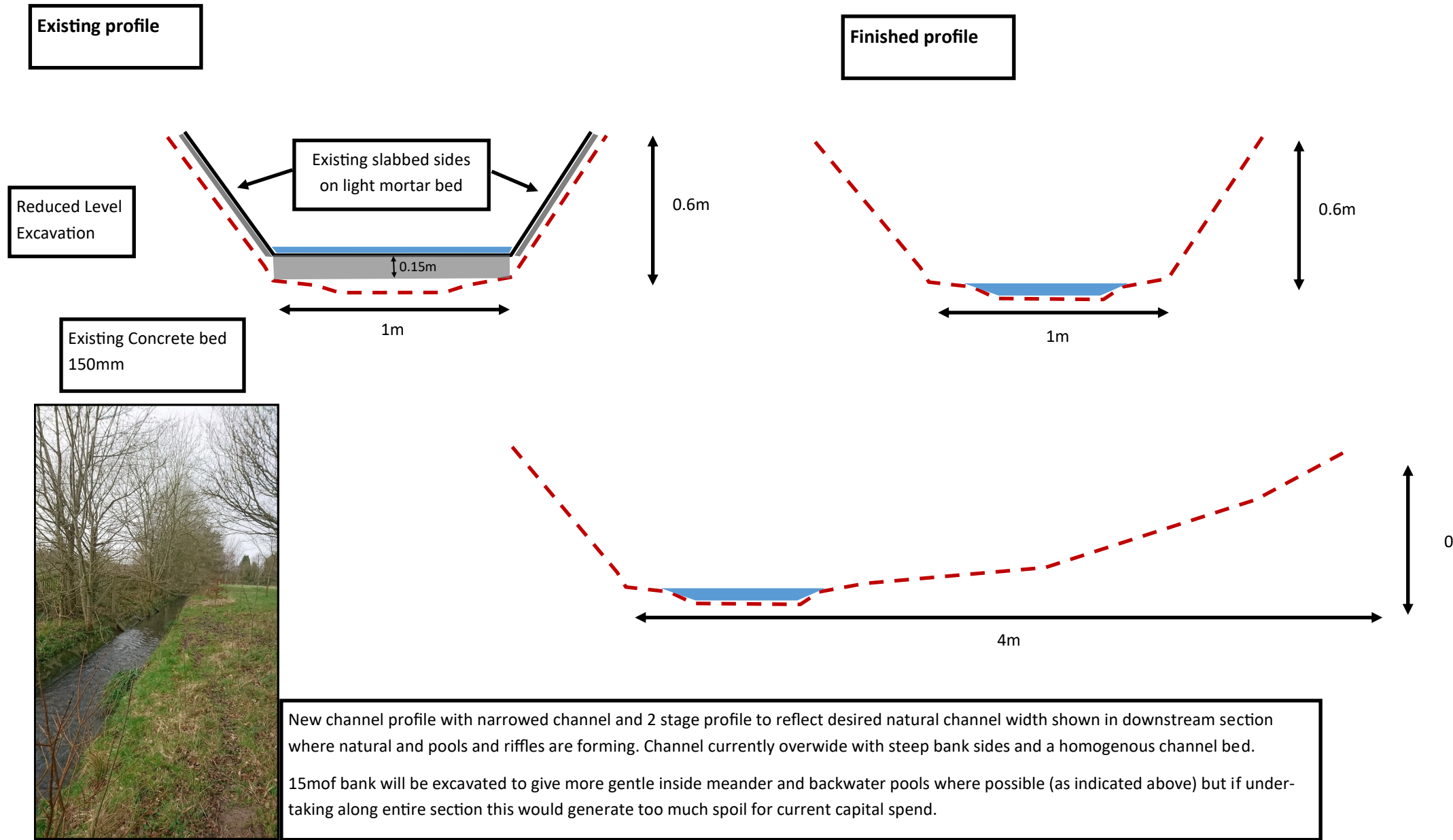


Small amount of crushed concrete to be used as substrate for meadow creation to provide conditions suitable for a very diverse flora

Access from 6th Form Entrance off  
Widney Lane

Concrete bed and paving slab deposition area before removal from site. Access to river from 6th form car park through security fencing

# Concrete Channel Removal Schematics



# Concrete Channel Removal Schematics

Channel slope profile from start of concrete removal to end of concrete bed

