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RE: 2023 Method Statement for reinstatement of marshy grassland
SITE: Edgar Wood Temporary School, Hopwood Hall College, Rochdale Road, Middleton,
Manchester, M24 6XH

Dear Sam,

Please find details of a Method Statement for the reinstatement of the area of marshy grassland at the site of the temporary school accommodation on land south of Hopwood Hall College, Middleton campus.

Background

On 2nd September 2020, Wardell Armstrong carried out a Preliminary Ecological Appraisal of land south of Hopwood Hall College, Middleton campus.

The land consists of an area of marshy grassland, partially surrounded by amenity grass. Between the two is a narrow strip of poor, semi-improved grassland. These are shown on the Phase 1 Habitat Map overleaf (Fig. 1).

The areas of amenity grass and poor, semi-improved grass are of low quality with poor botanical interest.

However, the marshy grassland (Figs. 2-5 overleaf) contains a more diverse floral community, including dominant Soft Rush *Juncus effusus* and Hard Rush *J. inflexus*, along with Common Reed *Phragmites australis* (F), Greater Bird's-foot Trefoil *Lotus pedunculatus* (O), Rosebay Willowherb *Chamerion angustifolium* (F), Greater Willowherb *Epilobium hirsutum* (O), Field Vetch *Vicia sativa* (O), Cow Parsley *Anthriscus sylvestris* (O), Spear Thistle *Cirsium vulgare* (O), Creeping Thistle *C. arvense* (O), Common Ragwort *Jacobaea vulgaris* (O), Tufted Hair grass *Deschampsia cespitosa* (F), and Meadow Foxtail *Alopecurus pratensis* (R). Mosses *Bryophyta spp* carpet the ground layer.

Distribution categories: F = Frequent, O = Occasional, R = Rare

Ref: 20799/E2
Date: 04 July 2023

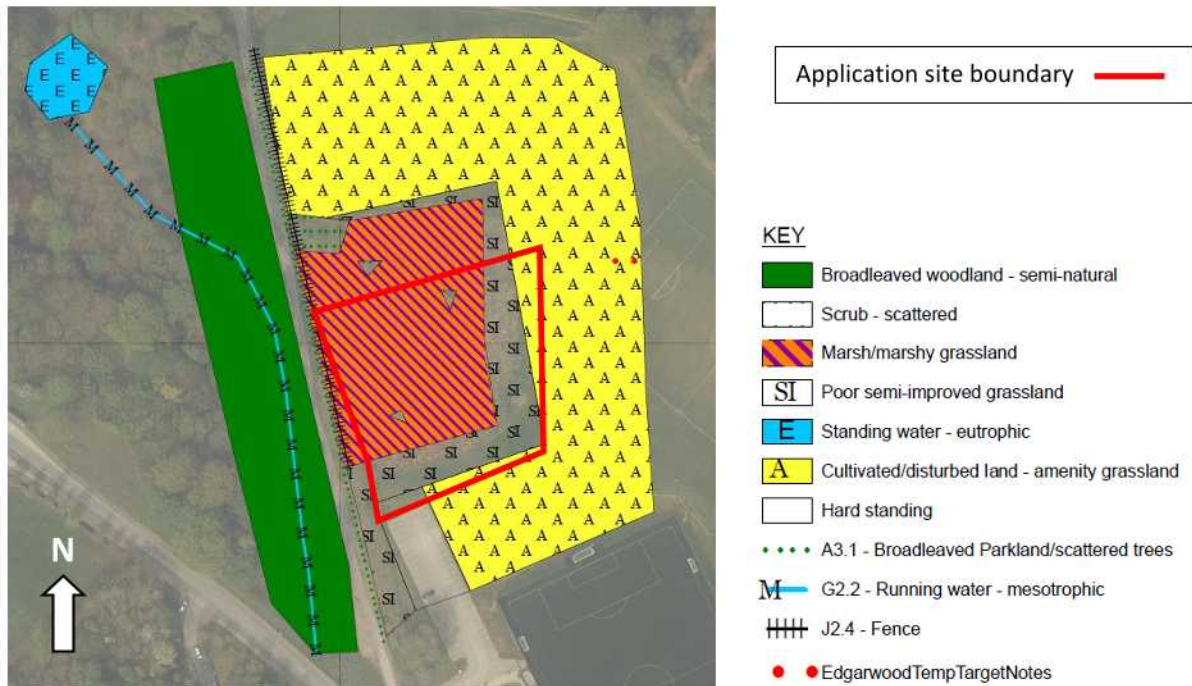


Fig. 1 Phase 1 Habitat Plan (Wardell Armstrong)



Figs. 2 & 3 Marshy grassland – April 2021



Figs. 4 & 5 Marshy grassland – May 2021

Around 30% of the marshy grassland contains Himalayan Balsam *Impatiens glandulifera*, this scattered across the grassland, in particular the wetter areas (Figs. 6 and 7).



Figs. 6 & 7 Himalayan Balsam seedlings – 11th May 2021

Removal of the marshy grassland

A large part of the marshy grassland area was lost when the vegetation and topsoil was cleared and excavated to create the foundations for the temporary school buildings (325 mm depth), car parking area (up to 650 mm depth), asphalt surfaced playground (450 mm depth) and new footway (160 mm depth) (Fig. 8 overleaf).

The turf layer, including the standing vegetation, was scraped off first to a depth of approximately 100-150 mm. This has been stored on a terram sheet in the designated temporary soil/turf storage area in the northeast corner of the site (Fig. 9 overleaf).

Although this area lies outside the red line of the construction zone, it is retained within the marshy grassland and not on any areas used for sport by the college.

Ref: 20799/E2
Date: 04 July 2023

It should be noted that the existing marshy grassland to the north of the red line area was retained.

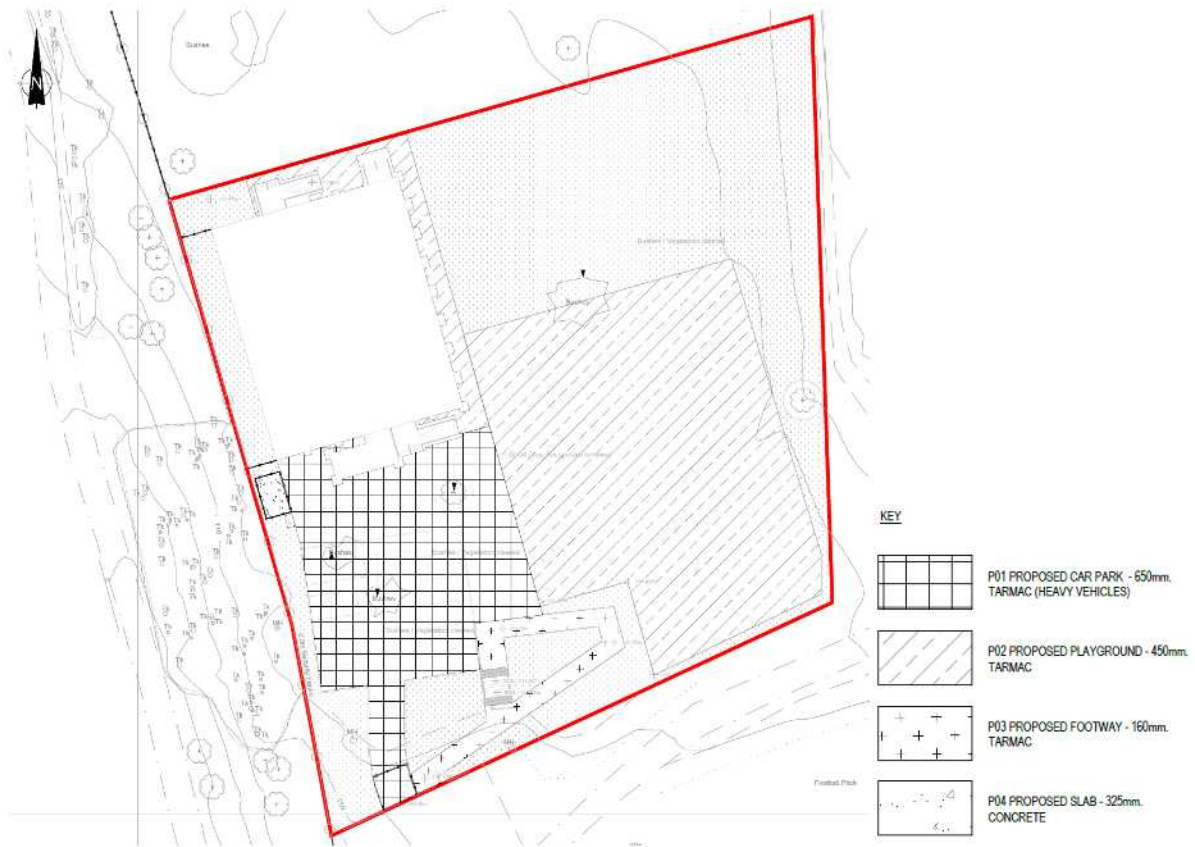


Fig. 8 External Works General Arrangement

This layer contains the majority of the root systems of the marshy grass sward, including the Himalayan Balsam, which is quite shallow-rooted. Indeed, one of the methods for removing Himalayan Balsam is to hand pull it.

The mound of vegetation/turf was covered over with another terram sheet to suppress the re-growth of plant material, in particular the balsam.

The topsoil was stripped next, to a depth of 250-300 mm. This was placed on another terram mat adjacent to the turf layer, but not touching it.

Some roots from the marshy grassland species were present in this layer, and un-germinated seeds from the sward. These re-generated without the presence of Himalayan Balsam, and a sward of marshy grassland species was noted during a site inspection on 2nd June 2023 (Fig. 10 and 11 overleaf).

Ref: 20799/E2
Date: 04 July 2023

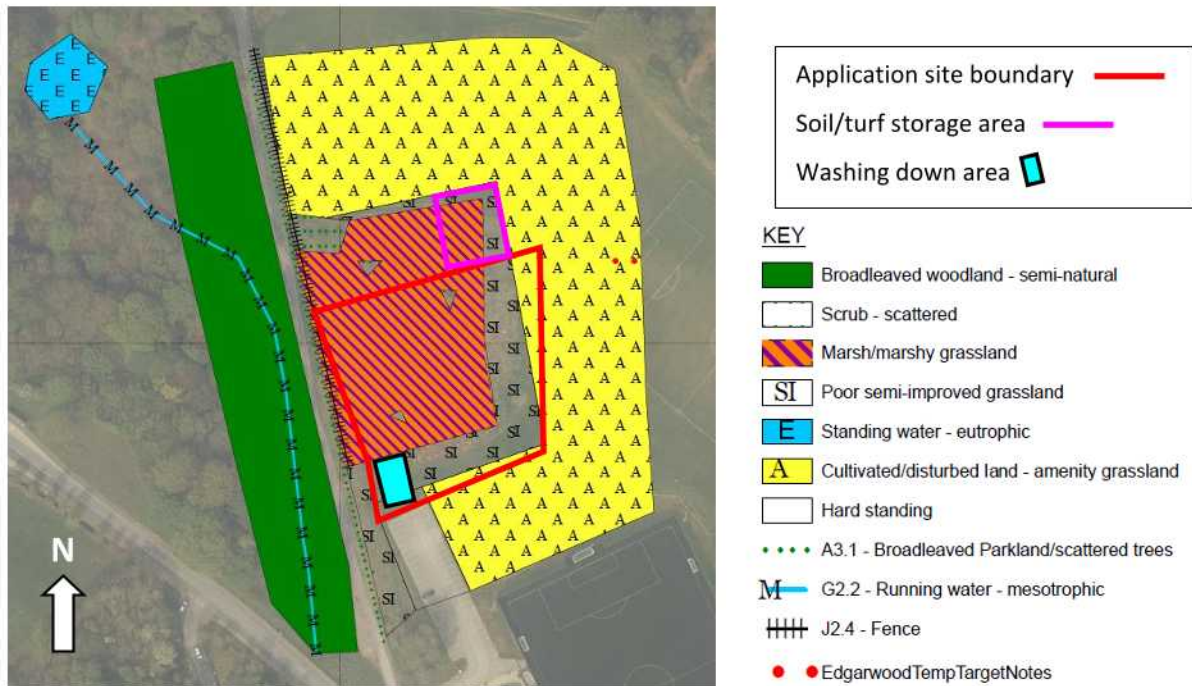


Fig. 9 Soil and turf temporary storage area

All machinery working in the marshy grassland required washing down before it left the college site to ensure that Himalayan Balsam was not transferred to another location. As such, an area just north of the existing car park was used for washing down vehicles and other equipment (Ref. Fig. 9).



Fig. 10 & 11 Regenerated marshy grassland topsoil storage area 2nd June 2023

The temporary soil/turf storage area and retained marshy grassland was enclosed by Heras fencing for the duration of the school's occupation of the land, to prevent users of the site, including the college campus, from inadvertently mixing the layers if they use the mounds for play.

Reinstatement of the marshy grassland

When it comes to reinstatement, this is anticipated to commence in autumn 2023, after the temporary units and hard surfaced areas have been removed towards the end of July or early August 2023.

The drainage pipes which were installed to prevent the temporary classroom site from becoming waterlogged will be left in situ, but will be blocked off to stop the site draining. Manholes and the attenuation feature will also be left in place, as these will not affect the restoration of the site.

Once all removal works have been completed, the site will effectively be returned to fully permeable bare soil. To prevent tall ruderal seed blowing in from surrounding areas and germinating, the stored turf will be replaced first, and then the regenerated topsoil on top to form the surface layer, as this is largely weed-free.

The replaced turf and topsoil will be spread across the site to cover the bare ground. Although this will damage the regenerated plant stems and re-fracture the root systems, this will be a reverse process of topsoil stripping, and the roots will quickly regenerate for a second time.

An Ecological Clerk of Works (ECOW) will supervise the turf and topsoil spreading to ensure it covers the site.

If the Himalayan Balsam starts to grow in the re-surfaced area, this will be hand pulled and spread out to dry on another terram mat next to the site. Once dried out, the balsam is no longer viable.

It is presumed the area will return to being damp post-works, partly through the prevention of drainage away from the site, and partly through rainfall.

However, this will be monitored to ensure the replaced topsoil does not dry out and all plant material dies off before it can regenerate. If there is little rainfall, and/or the waterlogging is slow to return, and drying is occurring, a bowser or tanker will be brought in to provide a supply of water to wet the site.

As a back-up, in case the above approach fails or the marshy grassland only partially regenerates, the site or bare areas will be sown with an appropriate wetland wildflower/grass mix.

The recommended seed mix is EM8F Wild Flowers for Wetlands produced by Emorsgate Seeds:

Wildflowers

%	Latin name	Common name
5	<i>Achillea millefolium</i>	Yarrow
1	<i>Agrimonia eupatoria</i>	Agrimony
1.5	<i>Angelica sylvestris</i>	Wild Angelica

Ref: 20799/E2

Date: 04 July 2023

%	Latin name	Common name
7.5	<i>Betonica officinalis</i>	Betony
15	<i>Centaurea nigra</i>	Common Knapweed
10	<i>Cruciata laevipes</i>	Crosswort
5	<i>Daucus carota</i>	Wild Carrot
10	<i>Filipendula ulmaria</i>	Meadowsweet
7.5	<i>Galium verum</i>	Lady's Bedstraw
1	<i>Leontodon hispidus</i>	Rough Hawkbit
15	<i>Leucanthemum vulgare</i>	Oxeye Daisy
15	<i>Malva moschata</i>	Musk Mallow
2.5	<i>Plantago lanceolata</i>	Ribwort Plantain
1	<i>Ranunculus acris</i>	Meadow Buttercup
1	<i>Rhinanthus minor</i>	Yellow Rattle
0.5	<i>Rumex acetosa</i>	Common Sorrel
1	<i>Silaum silaus</i>	Pepper Saxifrage
0.5	<i>Taraxacum officinale</i>	Dandelion
100		

This will quickly form a sward, and natural regeneration through seed dispersal from the retained marshy grassland just outside the red line area will also occur.

As the turf and topsoil storage areas have been in use for some time, the amenity grass under the soil piles will have died off. This will be re-seeded with a hard-wearing grass mix, preferably as soon as the terram liners have been lifted, to prevent weeds taking over the bare ground.

I am contactable with any queries.

Yours sincerely,

Andy



Andy Warren **BSc (Hons), MA (LM), Tech Cert (Arbor A), MCIEEM, TechArborA**
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