

Ripplevale School

Remedial Works Statement_REV 1

Introduction

Following NTS reporting of NTS190_Ripplevale School_Playing Field PQS and further consultation and comments from Sport England on 31/05/23 LXA appointed NTS on 29/06/23 to a statement in response to the three points raised:

1. Provide a scheme to flatten the central plateau to mitigate against localised pooling of surface water (including a timetable for the implementation of the works) to satisfy the requirements of Condition 3.
2. Provide an estimated cost for the works.

1. Remedial Works

Within NTS reporting of NTS190_Ripplevale School_Playing Field PQS a specific area was picked up within the topographical survey showing an undulation detailed within NTS190 01 - Existing and Proposed Layout and highlighted within figure 1. It should be noted that the topographical survey was passed on to NTS by other parties and has a wide 10m grid that was placed through PDS volumetrics to calculate the variances in gradients and it may well be that the area is less severe and smaller than the data records.

For this works and reporting an estimated area of 15m x 10m has been proposed.



Figure 1 – area of localised undulation

To rectify the 10m x 15m undulation a few options could be sought. The works for such a small element would be prudent to be proposed to minimise any disturbance to the access on to the area over the existing sports pitch. The works would have to be done during dry weather and prior to a germination season of either September or April. The work in itself should take up to 3 workings days with germination and taking dependent on weather conditions but a minimum of 6 weeks and up to 6 months to fully bed in and develop good solid root growth. Given the undulation is not severe and is at a maximum of 120mm and the need to minimise disturbance and impact to the surrounding elements and the current topsoil depth 200-300mm it would be suitable to:

- Spray off the existing vegetation in the working area with an approved, systemic, non-residual total herbicide in accordance with the manufacturer's instructions and an appropriate COSHH assessment by qualified personnel. A period of 14 days shall elapse between spraying and undertaking cultivations to allow sufficient time for the vegetation to senesce. A second application of total herbicide may be required just prior to cultivation to ensure complete vegetation control. Extreme care should be taken to avoid spraying hedgerows on site.
- Once the vegetation has senesced and ground conditions are suitable (topsoil in a dry and friable state), the working area (150sqm) shall be rotary cultivated to incorporate any remaining organic matter residue and to provide a suitable tilth for stripping.
- To ensure consistency of the playing area existing site worn topsoil could be used from other areas and developments provided this material is stripped and treated correctly and not contaminated with subsoil or shows signs of poor quality, contaminants or other concerns. If such material is not available then topsoil would need to be imported. NTS have worked on the worse case basis of importing topsoil of the below specification:

Imported Topsoil Layer

To the location supply and install a ranging depth of topsoil layer up to 150mm including a suitable application of fertiliser to enable correct potassium and phosphorus levels.

Stone-pick as required to remove all material >10mm from the top 100mm.

Submission of topsoil specification is required as part of the tender submission and should be greater or equivalent to: comply with the following grading:

- Very coarse sand (2.00-1.00mm) 5-9%

- Coarse sand (1.00-0.50mm) 22-28%
- Medium sand (0.50-0.25mm) 28-35%
- Fine sand (0.25-0.15mm) <10%
- Very fine sand (0.15-0.05mm) <5%
- Silt / Clay (<0.002mm -0.05mm) <20%
 - have a saturated hydraulic conductivity of at least 80mm h-1 when compact.
 - have a pH in the range of 5.8-7.0 (after necessary treatment)
 - be non-saline (<0.70 dS m-1), and
 - contain less than 0.50% (w/w) CaCO₃

A sample must be approved by prior to being imported to site.

The topsoil shall be graded and then lightly consolidated to achieve a dry bulk density of approximately 1.2 – 1.3 Mg m-3.

Surface level uniformity of the placed topsoil shall achieve a tolerance of no more than a 25mm deviation beneath a 3m straight edge.

- Any stones greater than 20mm in any dimension shall be removed from the top 100mm of the topsoil by stone raking and picking or in-situ stone separation techniques. No sharp stones shall be present in the upper 100mm of the topsoil. The arisings from this operation shall be disposed on site. The contractor will allow for all operations to achieve the outlined specifications and where it is felt it cannot be achieved mechanically will make the pitch consultant aware.

- **Cultivations**

Upon completion of the topsoil works the area shall be cultivated to produce a tilth suitable for the cultivation of fine-leaved perennial ryegrass species.

Any stones greater than 12mm in any dimension shall be removed from the top 100mm of the topsoil by stone picking or in-situ stone separation techniques.

No sharp stones shall be present in the upper 75mm of the topsoil on the pitch areas.

Surface level uniformity of the finished surfaces shall achieve a tolerance of no more than a 25mm deviation beneath a 3m straight edge on the playing surfaces.

- **Fertilisation**

To the pitch locations undertake necessary fertilizer applications with an appropriate pre-germination fertiliser of 10:15:10 formulation at a rate of 50 g m⁻² at least three days prior to seeding. This should be lightly worked into the seedbed during final cultivations.

- **Seeding**

To the area undertake necessary apply a suitable 100% dwarf – rye seed mix shall be drilled @ 50 g m⁻² in at least three directions. The seed mix shall be made up from at least three varieties from the top 10 varieties as listed in the latest Turfgrass Seed Book. ***BSPB Turfgrass Seed Book, Table S1: Perennial Ryegrass, Sports Uses.***

The seed shall have a certified germination of not less than 80% and a certified purity of not less than 90%. Total weed seed content shall not be more than 0.5% and the total content of other crop seeds shall not exceed 1%.

The seeded area shall be lightly rolled using a roller to settle and firm the surface

- **Reinstatement of damage**

All damage caused by plant and vehicle movement to the playing fields and identified / agreed with the Employer shall be made good by cultivating the affected area to below the depth of damage using a rotary cultivator or similar equipment. Care must be taken with the timing of this operation to avoid smearing on the base of the cultivation. Any weeds, rubbish and stones over 20mm gauge must be removed and disposed of on site as directed by the Contract Administrator.

A seedbed should then be prepared using a power harrow.

Pre-seeding fertiliser (10:15:10) to be applied @ 70 g m⁻² over the reinstated area a minimum of 5 days prior to seeding.

A suitable dwarf – rye dominated seed mix shall be drilled at a rate of 35 g m⁻² in two directions. The seed mix should be made up from at least three varieties from the top 10 varieties as listed in the latest Turfgrass Seed Book.

The seed shall have a certified germination of not less than 80% and a certified purity of not less than 90%. Total weed seed content shall not be more than 0.5% and the total content of other crop seeds shall not exceed 1%.

The finished levels for seeding shall, unless otherwise indicated on the drawings, be perfect to the surrounding contours and 25mm above any adjacent hard surfaces.

- **Over seeding**

The area shall be over seeded using the same seed mixture as that used in the original establishment of the site at a rate of 25 g/m².

2. Budget Cost

Given the significantly small scale of works involved it is difficult to understand workmanship and logistical methods and costs but the cost would be approximately £4k.