

Maintenance Overview

It is crucial that the sports pitches that are being redeveloped at The Cowplain School, are to be treated with the utmost respect and care and that maintenance should be carried out in line with this document to maintain the longevity and playability of the pitches.

Maintenance of pitches is essential to the playing performance, visual appearance and health of the grass making up the pitch surface. Effective pitch maintenance will ensure a smooth, even (level) and dense playing surface with strong resistance to wear and tear, together with a healthy and uniform green grass sward. Through the employment of sound and proven techniques and practices, the grass can be encouraged to become more vigorous, thus resisting wear and to recover quicker after being stressed through play or intensive maintenance practices.

Maintenance must be performed in a timely, skilled, professional and efficient manner. All tools and waste materials must be removed at the end of the specific task and disposed of in accordance with current waste management regulations and the maintenance specification.

Kestrel have made reference to Sport England maintenance schedule, which Kestrel recommend is adhere to. However, a competent groundman can carry the maintenance requirements how they see fit for the pitches.

Playing season for pitches are all year round, and with the drainage and secondary drainage in place this allows for winter games. Playability on the pitches is dependent on maintenance being carried out in line with this document.

Within the Sport England guidelines, they recommend adult use for the full-size pitch is between 3-6 hours per week. *Please note these figures are a general guide. The playability of pitches upon a combination of prevailing weather conditions and standard of management provided.* (Sport England Natural Turf Sport Updated Guidance for 2011)

Growing season for the pitches are predominately between April – October, but this is weather dependent.

Pitches should be inspected by the groundsman, and all debris should be cleared or disposed immediately.

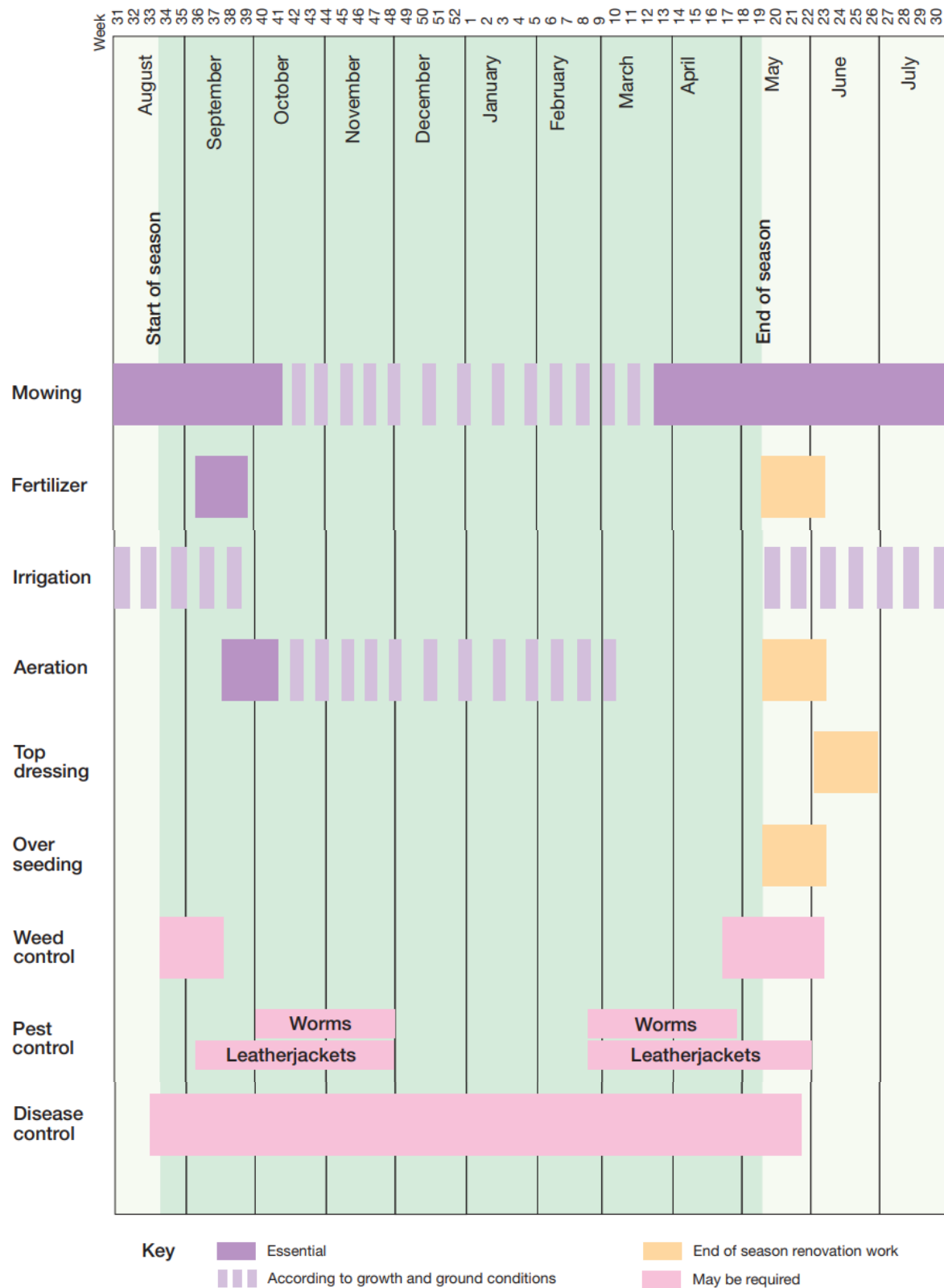
Soil should be analysed annually, to check the following:

- Organic matter content
- pH
- Salinity
- Potassium
- Phosphorous
- Micro nutrients

The soil should be sent to an independent accredited laboratory testing. Kestrel would recommend an organisation such as ETL. An example of the detail contained within such a report can be found in appendices of this document.

Maintenance Schedule

Football Pitch Schedule for Cowplain School



Reference: Sport England

Mowing

Rule of Thumb:- Mow more often, but, less at a time. Never remove more than one-third of leaf growth with any single mowing operation i.e. if the grass is 40mm tall, then, “the cut” should be less than 13mm. An allowance of approximately ten days should be made between lowering the height of cut

Mowing is the most basic of cultural practices in that it influences most other cultural operations. Mowing also encourages good turf density. Therefore, more regular mowing will increase turf grass density, which is essential for pitch playability.

The pitches should only be mown under dry and cooler conditions. When present, dew must be removed by either light brushing or by dragging a rope across the pitch to break up and disperse the dew before mowing. Midday mowing in the Summer under higher temperatures should be avoided.

During the playing it is typical of grass for football is cut between 25mm-30mm.. The sward should not be allowed to grow beyond 60 mm between cuts. If growth has been excessive between cuts then the height of cut should be gradually lowered in stages of 5 mm -10 mm until the desired height is obtained. Grass clippings should either be removed or dispersed.

Mowing should ideally be undertaken with cylinder mowers or rotary mowers either self-propelled or towed gang units. For a cylinder mower there should be at least 6 blades in each cylinder and achieve at least 100 cuts per metre. If possible, clippings should be removed. Alternatively rotary mowers can be used, either pedestrian or tractor driven, but should have a heavy roller to produce a quality stripe.

Cutting direction should be alternated through 90 degrees between each cut. Generally the direction should follow the same line as the side or base lines of the pitches. If grass clippings are not removed then the frequency of cut should be sufficient to prevent the accumulation of dense grass clippings on the surface which would be detrimental to future grass growth. To avoid the accumulation of grass cuttings on the surface, a rotary tractor mounted tractor blower can be used.

Cutting Other Areas: The areas outer of the football pitches and running tracks, should be maintained with a height of cut of no higher than 50 mm – 60 mm. Mowing should be undertaken using a suitable rotary or cylinder mower. The frequency of cut should be sufficient to prevent the accumulation of dense grass clippings on the surface which would be detrimental to future grass growth.

Height of cut must be carefully set and monitored at all times to ensure that the correct requirements are constantly being met. Failure to do so can directly result in inferior and inconsistent playing conditions. This is therefore crucial for the success of the pitch. Height of cut may be monitored with a prism gauge.



Fertiliser

Despite, the Maintenance Schedule showing two fertiliser applications, Kestrel would recommend following SAPCA guidelines of an autumn fertiliser application, spring, and summer fertiliser applications and a later summer fertiliser application. These are detailed below:

Autumn Fertiliser Applications

Apply an autumn fertiliser of no greater than 4% Nitrogen content at a rate of 35g/m². Phosphorus should be no greater than 6% and potassium 10%. Iron and Magnesium may be within the formulation. The equipment for application should be accurately calibrated and suitable to apply a uniform application. Fertiliser application should occur during late October and again in November with a low nitrogen slow release fertiliser. Cutting should not follow within two days. Ideally, fertilisation should occur prior to a forecasted period of rainfall.

Spring and Summer Fertiliser Applications

Apply a spring fertiliser of no greater than 12% Nitrogen content at a rate of 35g/m². Phosphorus should be no greater than 6% and potassium 10%. Iron and Magnesium may be within the formulation. Application should be as for Autumn application Fertiliser application should occur during late March and provisionally every six to eight weeks depending on sward health. Cutting should not follow within two days. Ideally, fertilisation should occur prior to a forecasted period of rainfall.

Late Summer Fertiliser Application

Apply a late summer fertiliser of no greater than 4% Nitrogen content at a rate of 35g/m². Phosphorus should be no greater than 6% and potassium 10%. Iron and Magnesium may be within the formulation. Application should be as for autumn application. Fertiliser application should occur during September and cutting should not follow within two days. Ideally, fertilisation should occur prior to a forecasted period of rainfall. End of Season Pitch Renovations During the end of season renovation period the following works should be undertaken sequentially.

Irrigation

Rule of Thumb: -Irrigate less often, but more at a time.

If required, The Cowplain School could look to irrigate the pitch to enhance growth of the seed in the summer month. This aspect may only be required if we experience non/very little rainfall over the summer months of 2023.

Aeration:

Rule of Thumb: Aerate and alleviate compaction if required.

Kestrel would recommend that The Cowplain School undertake two aeration operations per year as shown in the maintenance schedule.

Aeration (the introduction of oxygen and removal of carbon dioxide) in pitch is a vital cultivation practice to ensure correct soil water-to-air ratios which largely determine the proper growth and recuperative capacity of the turf. Aeration, amongst other benefits, also alleviates compaction which prevails on all heavily trafficked surfaces.

Compacted soils (usually related to poor drainage) is deficient of air /oxygen; limits the penetration of water and nutrients; discourages soil microbial activity; inhibits root growth; induces excessive thatching; and, ultimately influences pitch surface characteristics, playability and player injuries.

SAPCA recommend the surface should be verti-drained using 19 mm solid tines set to penetrate at least 200 mm. The amount of heave should be as great as possible to prevent surface disruption. The site should be in a suitable condition to accept the level of tine penetration as above but not too soft that the equipment causes surface disruption from wheel marks. The verti-drain should be used to reduce hardness of the playing surface which should be between 35 g and 200 g when measured by the STRI method of test using a 0.5 kg Clegg Impact Hammer from a drop height of 0.55 m.

Please note within the maintenance package for the first year posting seeding, Kestrel have allowed for aeration of the football pitches at The Cowplain School.

Topdressing

Topdressing is the practice whereby thin layers of sand are applied annually during active grass growth and worked into the turf surface by means of brushing or drag matting. The purpose and benefits of topdressing include:

- Thatch control
- The smoothing and levelling of surface low spots and ruts due to wear
- Promoting recovery from injury or disease
- Increasing turf grass density when conducted together with vertical mowing.

It is essential that the texture, particle size diameter of the material is never less than that of the soil/growing medium onto/into which the topdressing is to be applied. Similar hydraulic values of material must be used for each application of topdressing.

Kestrel recommend one 8mm top dressing per year to be carried. The dressings should be applied in dry weather and ground conditions from a suitable top-dressing equipment. Any drain lines showing subsidence should be top-dressed level with a suitable approved top-dressing sand. Please note within the maintenance package for the first year posting seeding, Kestrel have allowed for a topdressing for the football pitches at The Cowplain School.

Overseed

The playing surface should be over-seeded at a rate of 20 g/m² using suitable equipment. This should be carried out once a year in dry conditions. Please note within the maintenance package for the first year posting seeding, Kestrel have allowed for an overseed of the football pitches at The Cowplain School.

Weed, Pest & Disease Control

The need for weed control should be assessed and a selective turf herbicide applied to the surface if required. Ideally the playing surface should be maintained so that broadleaved weed does not exceed 10 %. Application should use suitable low drift equipment and by a certified operator. A risk assessment and spray records should be made. Application should be undertaken only in ideal conditions and once a threshold level of weeds has been identified. Application should only be made

during active weed growth and at time to prevent exposure to the site users and general public to the herbicide.

The need for pest control should also be assessed and if required the appropriate pesticide applied. The use, supply, storage and advertisement of pesticides are regulated by a number of pieces of legislation including, for Great Britain, the Control of Pesticides Regulations (COPR) and Plant Protection Products Regulations (PPPR). PPPR is the newer legislation and implements a European Directive (91/414/EEC) which regulates 'Plant Protection Products', these include agricultural pesticides and growth regulators. The use of pesticides is also regulated by COSHH (the Control of Substances Hazardous to Health).

The need for disease control is monitored throughout the year. If disease is detected, then the appropriate action can be taken. The appropriate action varies/depends on what disease is detected.

Please note within the maintenance package for the first year post seeding, Kestrel have allowed for an overseed of the football pitches at The Cowplain School.