

### Grass Maintenance Practices at Sandroyd

The majority of the Sandroyd site is clay over chalk - which makes for ground that is easily compacted, becomes muddy if poached, and dries unevenly with cracking. To try and encourage good grass growth throughout the year, when pretty much every area is used almost every day, does require compromise with some cutting practices, and some use of clever chemical technology.



#### Grass growth

As the growing periods extend, timings of particular jobs need to be dynamic. Normally turf weed control is carried out using selective sprayable herbicides in the autumn to reduce competition on the grass plant over the cooler months when they are most vulnerable. This helps reduce the grass plant's competition for soil borne nutrients.

Feeding regimes begin in February with a slow release fertiliser that is temperature controlled not moisture dependent. This means we can apply the fertilizer before the growth flushes start in the spring, and the nutrition is there for the plant when it calls for it (sports turf dwarf rye grass cultivars will germinate and grow generally over 8C, although there are specific cultivars that will germinate at 3C which can be used on winter pitch repairs).



### Grass cutting

Cutting is undertaken when the weather is open, but at a height of at least 40mm. This is high but it encourages good root structure and minimises damage to the grass plant's crown while encouraging tillering to fill any turf spaces. A larger grass leaf surface area will also aid photosynthesis and transepiration to help dry the upper soil profile hopefully reducing the mud factor created from high footfall.

As the soil temperature rises above 8C we start to reduce cutting heights while keeping sufficient length to aid grass resilience. The school elevation and topography keep the soil temperature suppressed for longer compared to lower, less contoured and thus windy sites. This forces us to be more subtle with the cutting regime changes, where we keep grass longer for longer. Longer grass also has the ability to sustain itself more readily with lower fertiliser inputs and less susceptibility to fungal disease attack.

### Fertilisers

Apart from the financial cost of chemical inputs in the form of fertiliser, herbicides, fungicides, and insecticides there is an environmental cost to each product. For this reason we don't use any insecticides or fungicides which are particularly damaging to the soil biota, and we only use zero salt fertiliser to kick-start the grass plant in the spring.

### Cultural practices

After that, cultural practices are used to encourage good root structures.

This includes:

- Verticutting - to reduce long tillers
- Aerating - to reduce compaction and to provide good soil crumb structure for the soil biota to thrive in, to provide ease of plant root passage, and to allow the plant roots to respire efficiently
- Scarifying - to reduce thatch and therefore blanketing in the upper root zone
- Topdressing - to improve soil percolation rates and to aid good crumb structure in the root zone.

To support all of these cultural techniques we use a plant growth regulator that redirects plant energy pathways that reduces grass plant leaf height and stimulates root growth. This helps reduce the lost plant energies by minimising what is cut off of the plant in mowing and maximising the plant's natural uptake by stimulating its input mechanism.

### Cutting schedule

At the height of the main summer cutting season during term time we aim to cut each grass area a minimum of twice a week with some areas, specifically the cricket playing surfaces, four times a week. Cutting heights vary from 40mm to 3mm depending on the grass surface purpose and time of year.

