



PITCHPOWER

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CRICKET ASSESSMENT REPORT

ATTENBOROUGH CRICKET CLUB

Nottinghamshire Cricket Board

Active Places Site ID

1208173

Report ID

11197



This report has been compiled for ATTENBOROUGH F.C. to provide information on the standard of the cricket grounds and outlines recommendations on how to improve the quality and maintenance of these grounds.

Inspection Window

1 APR 2023 / 30 SEP 2023

Inspection Reason

GENERAL MAINTENANCE ADVICE

Report Completion Date

29 JUN 2023

This report looks solely at the Cricket grounds for ATTENBOROUGH F.C. to see how support can be offered in improving the standard of Cricket grounds and level of maintenance across the area. Please note these recommendations are based on the information obtained and/or provided and are for guidance purposes only. Any works undertaken are the responsibility of the club/organisation.

Site report:

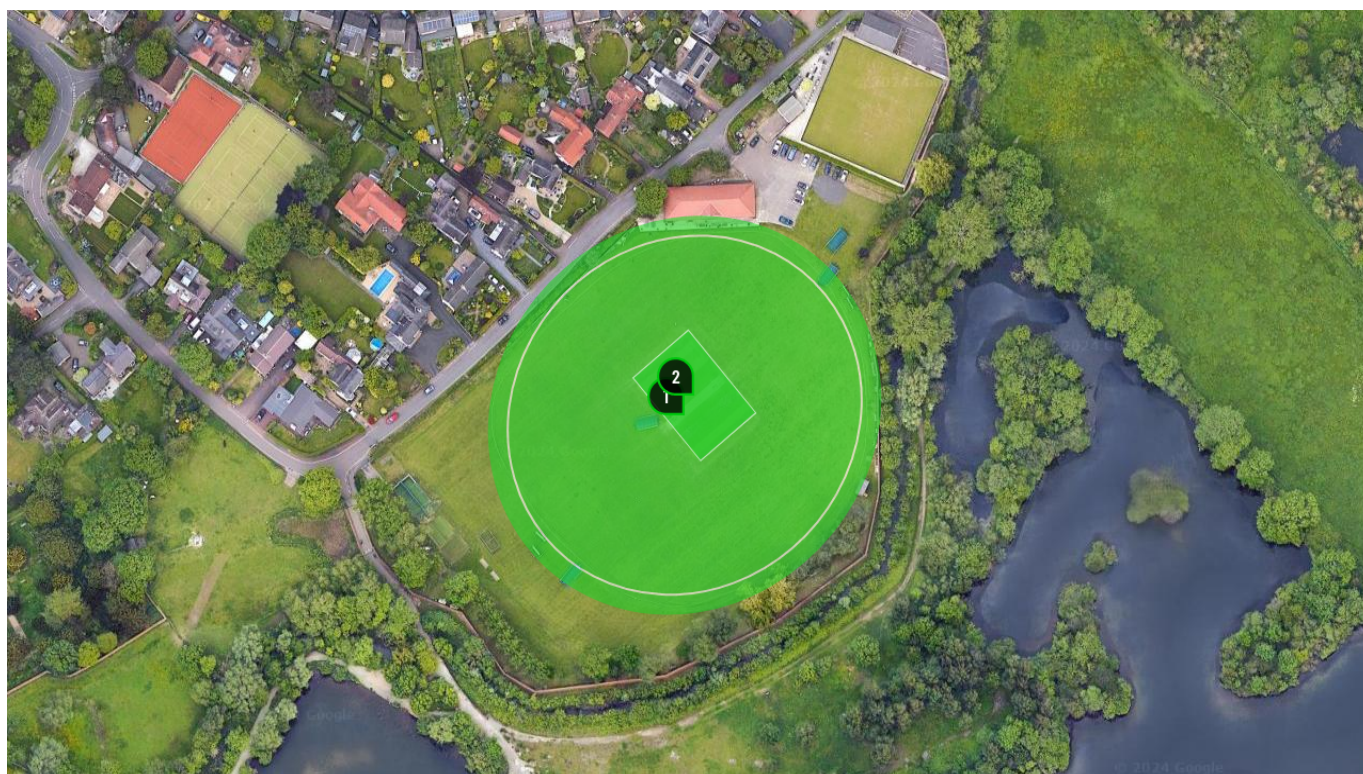
ATTENBOROUGH CRICKET CLUB





ATTENBOROUGH CRICKET CLUB

Site ID: 1208173



Map Key	Pitch Name	PQS Score
1	ATTENBOROUGH CC OUTFIELD	● Advanced - 51%
2	ATTENBOROUGH CC SQUARE	● High - 61%

Date inspection submitted
29/06/23

Inspection submitted by
mikeaplin@hotmail.com

Next available inspection window
1 Oct 2023 / 31 Mar 2024



Attenborough CC are a large club with 4 Adult Saturday league and teams 2 Sunday teams along side Woman's and Girls softball and hardball and multiple junior age group teams. The usage of the square is high with over 90 fixtures per season on a 12 wicket square. The groundsman is a County Pitch Adviser with over 25 years experience of producing quality pitches at the highest level of recreational cricket. The playing characteristics of the square are described as consistent with a tendency to be a little 'low and slow' and this is generally put down to the wet flood plain location of the ground. The square was reconstructed with Boughton County loam in 2003 and fraise mowed in 2021 so it has a clean sward with little or no thatch present. There is evidence of a root break at 20mm in some of the core samples taken although the square is deep spiked in Autumn every year to a depth of 150mm. The number of fixtures means that preparation time is limited and this could also account for some of the desired performance levels being lost. There is no NTP present 9it was removed in 2019) so all fixtures take place on natural turf including all junior matches and grass net practice.



Maintenance

Attention required in these areas:

- [Rolling \(pre-season\) - Cricket >](#)
- [Rolling \(pitch prep\) - Cricket >](#)
- [Irrigation - Cricket >](#)
- [Overseeding - Cricket >](#)
- [Outfield Renovation - Cricket >](#)
- [Application of Fertiliser - Cricket >](#)
- [Solid Tine Aeration \(post season\) - Cricket >](#)
- [Raking - Cricket >](#)
- [Brushing - Cricket >](#)
- [Verti-cutting - Cricket >](#)
- [Application of selective herbicide - Cricket >](#)
- [Mowing - Cricket >](#)
- [End Repair \(in season\) - Cricket >](#)
- [Used pitch Renovation \(in-season\) - Cricket >](#)
- [Square Renovation - Cricket >](#)
- [Pest Management - Cricket >](#)
- [Disease Management - Cricket >](#)
- [Aeration \(year round\) - Cricket >](#)
- [Scarification - Cricket >](#)
- [Top Dressing - Cricket >](#)

Equipment

Attention required in these areas:

- [Verticutter >](#)
- [Setting Out Equipment >](#)
- [Boundary Line Marker >](#)
- [Marking Out Equipment >](#)
- [Pitch Mower >](#)
- [Square Mower >](#)
- [Pitch Cover >](#)
- [Roller >](#)
- [Fertiliser spreader >](#)
- [Irrigation Equipment >](#)



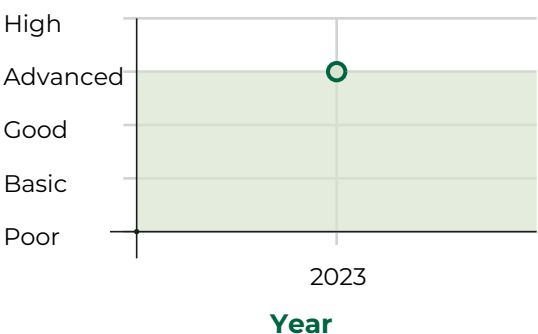
Attenborough CC Outfield

CURRENT PQS SCORE: Advanced - 51%

OUTFIELD AREA					PQS GRADE
Grass Height (outfield)	18	18	18	18	3
Grass coverage	90%	90%	90%	90%	4
Weed coverage	0%	0%	0%	2%	4
Thatch depth	4mm	5mm	10mm	4mm	4
Root Depth	150mm	150mm	149mm	150mm	4
Undesirable Grasses	50%	50%	50%	50%	1
Surface debris	Above standard	Above standard	Above standard	Above standard	4
Pests and disease % - outfield	1-3% Coverage	1-3% Coverage	1-3% Coverage	1-3% Coverage	4
Post match repairs - surface evenness	5mm				4
Outfield surface evenness	10mm				4
Pitch markings	Yes				4
Drainage Performance	Outfield can be used within 1 hour following removal of square covering after rain				3
Boundary Markings	Rope				4



Overall pitch PQS tracked over time





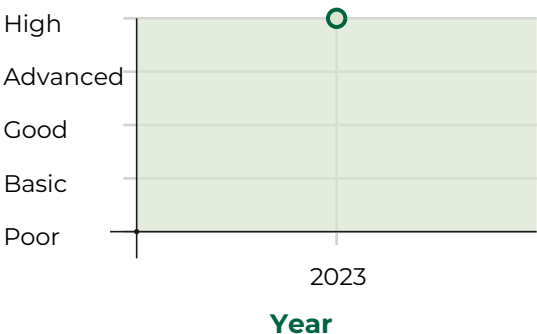
Attenborough CC Square

CURRENT PQS SCORE: High - 61%

OUTFIELD AREA							PQS GRADE
Pests and Disease %	None Present	None Present	None Present	None Present	None Present	None Present	4
Grass coverage	95%	94%	95%	95%	94%	95%	4
Grass Height (square)	6	11	6	12	6	11	4
Surface evenness	5mm	5mm	5mm	5mm	5mm	5mm	2
Weed coverage	0%	0%	0%	0%	5%	0%	4
Thatch depth	0mm	0mm	0mm	0mm	0mm	0mm	4
Core profile	99mm	100mm	99mm	100mm	100mm	100mm	3
Root break	No Root Break	No Root Break	Yes - between 0mm - 75mm	No Root Break	No Root Break	Yes - between 0mm - 75mm	4
Undesirable grasses	5%	5%	4%	5%	4%	4%	4
Worm casts	0	0	0	0	0	0	4
Post match repairs - surface evenness	5mm						4
Outfield surface evenness	10mm						4
Pitch markings	Yes						4
Drainage Performance	Outfield can be used within 1 hour following removal of square covering after rain						3
Boundary Markings	Rope						4



Overall pitch PQS tracked over time





MAINTENANCE

These recommendations are in priority order

ROLLING (PRE-SEASON) - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

Just as cricket soils shrink when they dry, they swell when they get wet. This disrupts surface levels and reduces compaction naturally over winter. This can be exacerbated further if it is a very cold winter and frost heave occurs.

For this reason, pre-season rolling is always worth doing if you have the time, but it should never be done in the wrong conditions.

If the ground is too wet, there is a risk of damaging surface levels by pushing the soil horizontally. If the weather is too wet, there is a risk of swelling continuing to affect levels. Finally, if the weather is too cold, the plant will still be in its winter dormancy and not growing actively enough to resist the stress applied by the roller which will slow growth, reduce drying, and could reduce disease resistance. This all means that you can be too early with pre-season rolling and because weather conditions vary from year to year, the date at which you should start pre-season rolling will vary. There are other factors to consider such as the date of your first use of the square (whether for matches or



ROLLING (PRE-SEASON) - CRICKET CONTINUED

practice) and the time and resources you have available.

[LEARN MORE ABOUT ROLLING \(PRE-SEASON\)
- CRICKET >](#)



ROLLING (PITCH PREP) - CRICKET

Frequency:

Weekly

Recommended for:

Whole Ground

The roller is the iconic machine in cricket grounds management – along with the colour of the grass it is one of those things that everyone in cricket talks about and has an opinion on. Rollers have been used from the very beginnings of cricket to achieve three objectives:

1. Make the pitch as smooth as possible – this helps to make ball bounce off the surface safe and predictable.
2. Compact the soil and make it as hard as possible – this helps to provide good pace and bounce for the ball.

There are also two other by-products of rolling:

1. Squeeze some of the moisture and colour out of the grass plant to reduce green colour and excessive seam.
2. Drawing moisture to the surface of the soil to help with pitch drying.

Modern rollers tend to be motorised and not horse-drawn, but they are still being used for the same purposes and doing the same thing.

[LEARN MORE ABOUT ROLLING \(PITCH PREP\) - CRICKET >](#)



IRRIGATION - CRICKET

Frequency:

Monthly

Recommended for:

Whole Ground

For the Square:

The square will need to be irrigated (watered) during dry periods, or when the square has been under cover for extended periods because:

1. The grass plant needs water to grow and develop and to be resistant to wear.
2. The clay-based soils used to construct cricket squares will crack during extended dry periods (especially in bare areas) and this should be limited for safety reasons and to protect pitch quality.
3. To water in fertiliser or to nurture grass establishment on repaired pitches or renovated squares.

The challenge with irrigating a square is that normally the demand for irrigation is highest during the season when you will have pitches that need watering but also pitches that need to be kept dry because they are in preparation or use. That is why a combination of methods is usually required. Different methods have different pros and cons:

For the Outfield:

Most outfields are not irrigated in cricket in the UK. This is because:

- The infrastructure to irrigate such a large area costs a lot of money.
- A large quantity of water is required which adds to cost.
- The majority of outfields can survive with the rain that falls during summer months.

However, some clubs irrigate



IRRIGATION - CRICKET CONTINUED

their outfielders because conditions are too dry to maintain healthy grass conditions or safe soil conditions (particularly where outfielders are also used for winter sports). Having an irrigation system can increase the effectiveness of pre-cricket-season renovations of outfielders following winter sport.

Cricket outfielders have traditionally droughted during dry periods with the view that they appear to recover once it starts to rain. However this can cause problems in very dry periods because different grass species (and weeds) have different drought tolerances. Annual meadow grass (*Poa annua*) has poor drought tolerance and will die back permanently. This is an undesirable weed grass, so this might appear positive but only if the dead annual meadow grass is removed and over-sown with new desirable grass species such as perennial ryegrass (*Lolium perenne*).

[LEARN MORE ABOUT IRRIGATION - CRICKET >](#)



OVERSEEDING - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

For the Square:

If you have a dimple seeder (never use a disc or slit seeder) then you should apply an overseed rate of the same grass seed you use in end of season renovations, increasing this to a full reseed rate in bare areas.

If you do not have a dimple seeder, then broadcast seed (you can broadcast fertiliser at the same time if you wish) using a pedestrian fertiliser spreader or by hand and then brush the seed into the scarification lines – providing a second application if necessary to get even distribution.

For the Outfield:

To help to keep and restore the grass coverage and quality across the Outfield over-seeding is required using a dwarf perennial ryegrass mix of at least three cultivars. This should be applied using a drill seeder or disc seeder which sows the seed directly into the soil at a rate of 35 gsm per square metre.

Timing of application is key due to the start of the cricket playing season to give the seed the best possible chance of establishment.

Work with seed representative to identify to best seed cultivars for your requirements. Bear in mind, the highest rated seeds require a higher input, i.e., irrigation and fertiliser etc.

LEARN MORE ABOUT OVERSEEDING - CRICKET





OUTFIELD RENOVATION - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

Renovating your outfield at the end of the season can be expensive because of the areas involved but any of the following will be beneficial to your outfield:

- deep scarification to reduce thatch,
- overseeding to establish desirable grasses.
- fertiliser application to strengthen the sward.
- solid tine aeration to de-compact and aerate the soil.

Keep an eye on what is going on below the ground in your outfield using a spade to inspect your soil profile and root growth, particularly in poorly drained, bare or other problem areas. This will help you target the above renovation techniques to problem areas which could be more cost effective. Problem-solving deep thatch layers, poor surface levels or drainage problems can take more expertise so speak to your County Pitch Advisor for more information.

Note that if you play winter sports such as football, rugby or lacrosse on your outfield you should renovate and repair any damage to surface levels or grass cover before the cricket season. This might require the use of rootzone to repair goalmouth and other high wear areas. You should allow sufficient time for these areas to recover before the cricket season.

This should not be a barrier to multi-sport use of



OUTFIELD RENOVATION - CRICKET CONTINUED

cricket outfield if the wear is managed carefully through the winter. Make sure the amount of use, especially in wet periods is sustainable without excessive damage to grass cover or surface levels. You may need to restrict play during particularly wet periods. Junior use is preferred because the wear is less. A small amount of wear is actually helpful to the cricket outfield because it helps to control thatch.

You should carry out a pre-cricket-season programme of:

- Targeted goal mouth and other high wear area repair using rootzone, grass seed and fertiliser. Using germination sheeting can help to establish grass in cooler pre-season temperatures.
- Restoration of surface levels across pitch areas using harrows, drag mats and other similar tools.
- Overseeding and fertiliser application to pitch areas.
- Solid tine aeration.
- Sand or rootzone topdressing (if budgets allow).

You should factor renovation costs into your use agreements with clubs hiring your outfield.

[LEARN MORE ABOUT OUTFIELD RENOVATION -
CRICKET >](#)



APPLICATION OF FERTILISER - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

For the Square:

Fertiliser is needed to replace the nutrients removed in the clippings when the square is cut, loss through leeching from the soil and volatilisation to the air. The grass plant needs the nutrients to grow and develop, to resist and recover from wear and to prevent disease.

Without applying sufficient fertiliser it will be harder to recover pitches, maintain a good cover of the right grasses (because weeds and weed grasses are better adapted to poor nutrient conditions) and to resist disease.

But be aware that applying too much fertiliser is detrimental to the quality of the sward and pitches, as well as detrimental to the environment (causing air and water pollution and the unnecessary emission of potent greenhouse gases). Generally, it is better to slightly under feed than to over feed.

For the Outfield:

Keep an eye out for any diseases and other indicators of nutrient stress and apply fertiliser as necessary. Always apply fertilisers in accordance with the product label.

Because most outfields are over ten times bigger than the cricket square on the grounds, the cost of applying fertiliser to an outfield can be much greater than a square. It also takes longer to do. However, applying



APPLICATION OF FERTILISER - CRICKET CONTINUED

some fertiliser to an outfield is beneficial:

1. It helps to improve the strength and wear resistance of the grass plant, which helps to sustain performance.
2. It allows the grass plant to compete with weeds that can grow in lower nutrient conditions. This can reduce the cost of applying pesticides and reduce environmental impact.
3. It helps to recover outfields from winter wear, where outfields are used for winter sports such as football and rugby.
4. It can also make end of season renovations to the outfield more effective.
5. It can reduce disease pressure on the outfield, reducing the need for expensive and potentially harmful fungicides.
6. It can improve grass colour and presentation.

[LEARN MORE ABOUT APPLICATION OF
FERTILISER - CRICKET >](#)



SOLID TINE AERATION (POST SEASON) - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

If you can, aerate once, ideally before the new year. Make sure that 'heave' is minimised and try to get as deep as possible without damaging the surface, or 'plucking'. Try and achieve the maximum depth with needle or pencil tines as ground conditions allow. You should vary depth season-to-season to avoid forming a compaction pan.

- Aerate once a month if conditions are fit until the end January.
- Improves water uptake and helps to get water deep in the profile.
- Encourages exchange of oxygen with more plant-toxic gasses in the deeper soil profile such as carbon dioxide.
- Improves nutrient uptake.
- Reduces water runoff and puddling.
- Encourages stronger roots.
- Can help to reduce organic matter (including thatch) accumulation by encouraging soil microbial activity.

LEARN MORE ABOUT SOLID TINE AERATION
(POST SEASON) - CRICKET >



RAKING - CRICKET

Frequency:

Weekly

Recommended for:

Whole Ground

It is important to groom and thin some of the grass out in the early stages of pitch preparation. Thinning the grass out between the popping creases to reduce the density of grass will help to increase the drying rate of the pitch surface as well as helping to reduce large grass plants and/or too much sideways growth which may cause excessive seam or spin.

Tools for removal include verticutters, hand scarifier, brush, springbok rake or whatever is at your disposal, taking care never to disturb the soil surface (it is not uncommon at First Class grounds to see groundstaff doing this operation using scrubbing brushes or wire brushes).

Avoid thinning out the bowling ends to help wear resistance in this area and aid recovery from the damage caused by players. Reducing grass density should continue until any horizontal growth has been lifted and soil is visible between the individual grass plants.

The initial thinning should be the most aggressive and occurs before rolling to prevent undesirable horizontal growth being rolled into the pitch and to allow any slight damage to the surface in the process to be addressed in the wetting and rolling process.

[LEARN MORE ABOUT RAKING - CRICKET >](#)



BRUSHING - CRICKET

Frequency:

Weekly

Recommended for:

Whole Ground

In Season:

Use a stiff brush (push-along wheeled types are particularly suitable) to groom the grass frequently (e.g., daily) and after rolling to lift the grass, reduce its green content and to allow moisture around the base of the plant to evaporate.

Ideally you should keep returning on the same line of brushing to avoid any striping of the pitch and nap that might be difficult to remove in the final cut.

In Offseason / Winter:

Continue as above, but only as required to help the surface remain dry and reduce disease pressure, keeping the sward healthy. the benefits of this are:

- Remove dew to help prevent disease.
- Reduces debris on the surface.
- Stands the grass plant up to keep the base of the plant well oxygenated.
- Can help to reduce algae and moss formation.
- Disperse worm casts.

[LEARN MORE ABOUT BRUSHING - CRICKET >](#)



VERTI-CUTTING - CRICKET

Frequency:

Monthly

Recommended for:

Whole Ground

As the name suggests, verticutting is where the plant is cut vertically not horizontally (as with a rotary or cylinder mower) and the arisings (clippings) are collected and removed. The critical difference between verticutting and scarification is that the blade tips are set 2 mm – 3mm above the ground surface and therefore do not cut into the soil.

By cutting the grass plant this way you can:

- Trim horizontal growth helping to maintain good plant density (number of plants per square metre).
- Encourage vertical growth of the plant which will help maintain ground cover as cut height is reduced to prepare pitches.
- Lift out older leaves near the base of the plant reducing the rate at which thatch accumulates.
- Get more air to the base of the plant, improving plant health.

[LEARN MORE ABOUT VERTI-CUTTING -
CRICKET >](#)



APPLICATION OF SELECTIVE HERBICIDE - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

Selective herbicide should be applied by a fully qualified professional with the appropriate equipment and paperwork. It should not be applied any sooner than 6-8 weeks after seeding (refer to product label) Typically mowing should not take place for 3 days before and 3 days after application. (Do not apply in drought conditions it may damage the turf and will not treat weeds effectively) Selective herbicides should be sprayed in the dry with little to no wind. Most selective herbicides are rain fast within 24 hours of application. If rain falls prior to this, it could affect the success of weed control.

[LEARN MORE ABOUT APPLICATION OF
SELECTIVE HERBICIDE - CRICKET >](#)



MOWING - CRICKET

Frequency:

Weekly

Recommended for:

Whole Ground

Regular mowing is important to provide the right length of grass for good ball roll off the bat and across the outfield; to encourage good plant density and support player safety when moving and diving in the outfield. Good presentation of the square and outfield can give a good first impression and enhance the enjoyment of participants and spectators.

For the Square:

A cricket square should be mowed with a properly adjusted pedestrian cylinder mower during the playing season. Mower size is usually a question of work rate with larger 30-36" mowers allowing squares to be cut more quickly, but this can be done with 18-20" pitch mowers set to the correct height, particularly on smaller squares or where storage space and budgets are tight.

For the Outfield:

Cricket outfields are large areas and are mowed with a variety of equipment including:

- Large pedestrian cylinder mowers (cutting width of 32"+, usually with a seat attachment for the operator).
- Ride-on self-propelled cylinder or rotary mowers such as triple golf greens/tees mowers or even 5 to 7 cutting-unit fairway mowers.
- Trailed gang mowers mounted on a tractor or other vehicle.
- Large working width rotary deck mowers driven by a tractor power take



MOWING - CRICKET CONTINUED

off.

The cricket outfield does not need a mower with as high a clip frequency as required for pitch preparation.

[LEARN MORE ABOUT MOWING - CRICKET >](#)



END REPAIR (IN SEASON) - CRICKET

Frequency:

Monthly

Recommended for:

Whole Ground

Make an assessment on whether the ends of the pitch need repairing as this is not always the case, especially if the game was shortened. It often depends on the bowlers, the soils in your pitch and the moisture content of the soil. If you determine that a repair is required, the process is:

1. Make a semi-moist mixture of fresh loam and water - it needs to be just moist enough to stick together but not so wet that it can be deformed easily (if it is too wet it will shrink and crack as it dries)
2. Sweep out the depression, wet the base and roughen with your hand or tool to make a key for the new loam.
3. Place loam to form a mirror image of the hole above ground (the mountain as deep as the valley being filled).
4. Place a light coating of dry soil sweepings onto the surface and compress the soil using your hand or foot and then compact the soil until smooth using a tamper (e.g. an elephant's foot tamper). You may find it helps to cover the tamper with a thick plastic bag to help reduce adhesion between the soil and the tamper.
5. The level should be a smooth plane level with the surrounding pitch.
6. Repeat this process in all holes that need repair and at both ends of the pitch. Normally this is front foot (including



END REPAIR (IN SEASON) - CRICKET CONTINUED

for both right arm over and left arm over if necessary), batters guard marks and rear foot for heavier footed bowlers or bowlers that drag their rear foot in their delivery stride. It may also be necessary to repair the first landing of the back foot after the delivery stride but be careful if this is in the 'restricted area' of the pitch.

[LEARN MORE ABOUT END REPAIR \(IN SEASON\) - CRICKET >](#)



USED PITCH RENOVATION (IN- SEASON) - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

There comes a point with any pitch where it becomes 'tired' – low and slow bounce or the bounce is too variable and it cannot be used again for a fixture without going back to the start of the preparation cycle. At this point it is time to move on to the next pitch.

If the used pitch is left unrepaired – it cannot be used again that season, then ends will remain uneven and could be dangerous for play, causing the ball to deviate unexpectedly. Furthermore, bare ends become difficult to manage in wet weather because they are always slowest to dry out, become slippery when wet and extend the area that needs to be covered to prevent delays in play.

If you have a programme of repairing pitches once you have used them then you can either – reuse them (about 6-8 weeks later) or reduce the amount of work that needs to be done in end of season repairs. Late in the season it can be more cost effective to wait until the end of season renovation.

Higher performing squares will have a programme of in-season repair built into them.

The following processes should be carried out between games:

- Removal of loose soil, grass, and other detritus.
- Scarification to remove thatch and create a seed bed.
- Repair levels.
- Seeding



USED PITCH RENOVATION (IN- SEASON) - CRICKET CONTINUED

and fertiliser application.

- Light topdressing.
- Use of germination sheets.
- Watering

[LEARN MORE ABOUT USED PITCH
RENOVATION \(IN-SEASON\) - CRICKET >](#)



SQUARE RENOVATION - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

It is recognised that post-season cricket square renovation, undertaken in a correct and professional manner, forms the foundation for quality pitches throughout the following season; and all pitches used or not, should still be renovated at the end of the season. It is understood that funds can be limited but allowing thatch build-up without renovation at the end of the season can create problems and require further more costly repairs later.

The grass on unused pitches can grow strongly and produce waste plant material on the surface, known as 'Thatch'. This organic material must be removed from the square at the end of every season, even if the pitches have not been used, as it is important to prevent the organic matter from becoming integrated into the soil over the winter months. If this is allowed to happen, then it will produce a sponge-type layer on the surface of the square for the following playing season, with the potential of creating a surface which has inconsistent bounce, limited pace and carry.

Over-time thatch will become fully integrated as organic matter into the soil, making the preparation of quality playing surface difficult. Thatch is controlled to a large extent by regular pitch preparation and



SQUARE RENOVATION - CRICKET CONTINUED

players running over the square in spikes, but a renovation will still be required.

[LEARN MORE ABOUT SQUARE RENOVATION -
CRICKET >](#)



PEST MANAGEMENT - CRICKET

Frequency:

Monthly

Recommended for:

Whole Ground

Worm Control for the Square:

The most common pest on a cricket square is the earthworm. The casts left by worms become smeared when cut with roller mowers which can cause bare areas on the pitches, creating two-paced pitches.

Worm activity is highest in Spring and Autumn, in Summer it is often too dry, but they will appear following rainfall. Note that chemical control of worms is restricted. Making sure you remove clippings and thatch to remove food for the worms and also remove worm casts before mowing help with this problem.

Worm Control for the Outfield:

Worms conduct a valuable contribution to plant and soil health, breaking down excess organic matter, creating pore spaces and channels with the soil profile improving ingress of air, Water, and nutrients. Sadly, this benefit is often negated by the detrimental effect of worm castings at the surface where they are easily smeared by foot or machine traffic creating muddy conditions, an uneven playing surface, smothering grasses and providing an ideal environment for weed seeds to germinate. Eradication of the worm population is neither practical nor achievable and managing both the population and the detrimental effects of casts is the favoured



PEST MANAGEMENT - CRICKET CONTINUED

option.

Mechanical control and management are favoured through regular harrowing/drag matting/brushing of the surface when casts are in a dry enough condition to break up and spread without smearing of the turf surface.

Adjusting the soil pH and introducing more sand into the soil profile and removing leaf litter on the surface will help, not resolve the worm issues.

[LEARN MORE ABOUT PEST MANAGEMENT -
CRICKET >](#)



DISEASE MANAGEMENT - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

The management of weeds, pests and diseases is a specialist area of turf care but there are some basics you can follow. Pesticides can be harmful to operators, users, and the environment. The use of pesticides is regulated in law and requires specialist storage, application, and disposal – you should only use pesticides if you can comply with this law. For occasional use you should use a specialist contractor who will be responsible for complying with pesticide law.

This will help to reduce the risk of harm to you, the users of your facility and the environment. Always follow the label instructions and do not apply pesticides illegally. If you use pesticides on your ground (even where they are being applied by a contractor), you may need to register the site as a Plant Protection Product user with DEFRA.

[LEARN MORE ABOUT DISEASE MANAGEMENT - CRICKET >](#)



AERATION (YEAR ROUND) - CRICKET

Frequency:

Monthly

Recommended for:

Whole Ground

For the Square:

The only form of aeration carried out on a cricket square/pitch in the playing season is to a depth of 25mm and is normally carried out using a Sarrel roller, this is normally carried when a pitch is taken out of play and has been watered and is part of repairing a pitch after use.

For the Outfield:

A decompaction operation is essential for aeration to allow air, water, and nutrients to pass into and through the profile, increase drainage, improve the breakdown of organic matter (thatch), and aid vertical root growth/density. This will increase the infiltration of water through the soil profile and help the problem of slow-draining pitches.

Carry out deep decompaction operations to be conducted annually (pre-season) with a vertical action machine at using 18-24mm tines at 100mm spacing's to achieve maximum heave and penetration without compromising surface integrity. If funds permit carry out a further decompaction at the end of the season (If ground conditions are suitable). If funds are limited concentrate operations in identified areas suffering from greater levels of compaction.

An intermittent surface aeration programme would be beneficial for example slitting and/or spiking every 2-4 weeks



AERATION (YEAR ROUND) - CRICKET CONTINUED

when conditions allow, during the winter months.

[LEARN MORE ABOUT AERATION \(YEAR ROUND\) - CRICKET >](#)



SCARIFICATION - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

For the Square:

Scarification is the action of vertical blades cutting through the surface of the turfgrass sward.

In scarification the blades will slice through the grass and into the soil removing some of the thatch that may be present, it is usually carried out when thatch removal is needed.

Due to the action of the blade moving through the soil as well as the plant, most scarifying equipment needs to be heavy and powerful and even tractor driven.

This operation may also be carried out to help prepare the turfgrass surface for other operations such as overseeding.

For the Outfield:

Heavy scarification is needed as part of the end of season renovation regime to help reduce/control the amount of thatch and un-desirable grasses present,

Thatch (dead and decaying plant material at the turf surface), thatch acts like a sponge, holding water and reducing its ability to pass through the soil profile. Shallow rooting and surface compaction ensue. Compounded by the high meadow grass content.

Poor surface traction is also a result leading to grass coverage loss as foot traffic rips out the surface.

[LEARN MORE ABOUT SCARIFICATION -
CRICKET >](#)



TOP DRESSING - CRICKET

Frequency:

1 x per year

Recommended for:

Whole Ground

The top dressing should be compatible with your existing soil as incompatible materials can lead to issues with surface drainage and cause root breaks leading to an unstable surface.

Make sure any materials used are compatible with your indigenous soil, if dressing localised areas (goal mouths) using a pan shovel to apply little and often is best practice and will avoid smothering the grass. Always keep dressing dry prior to applying and apply and brush/drag matt in when dry.

Any top dressing should be obtained from a reputable source and specifically for sports turf.
Soft, builders, beach or play sand is not recommended as these types of sand do not have the correct drainage characteristics for natural turf sport areas. The recommendation is to use either medium fine or medium coarse grade sports sand. If the top dressing is of poor quality, it may change soil pH and stunt grass growth.

[LEARN MORE ABOUT TOP DRESSING -
CRICKET >](#)



EQUIPMENT

To carry out the maintenance specified above, we recommend the following equipment to carry out the activities.

VERTICUTTER

Verticutters

Verticutters are occasionally dedicated machines but are more commonly either specific verticutting reels fitted to scarifiers (whether pedestrian or tractor-mounted) or verticutting reels that can be fitted to some makes of cylinder mower. The blades on verticutting reels are typically thinner and more closely spaced than scarifying reels to reflect plant spacing and because less torque is required to cut through grass than soil.

The golden rule when verticutting is to make sure the tips of the blades are set above the soil surface. They are typically set 1-2 mm above the surface (you will need to set higher than this if your square is not smooth or you have large saddles). Verticutting too low can result in severe de-foliation.

[LEARN MORE ABOUT VERTICUTTER >](#)



SETTING OUT EQUIPMENT

The boundary of the field of play is defined in Law 19. It is determined before the toss and fixed for the duration of the match.

Please note Law 19.1.2: 'The boundary shall be determined such that no part of any sight-screen will, at any stage of the match, be within the field of play.'

In addition to the Laws of the Game, the ECB recommends that a safety margin of at least three yards (2.74 m) beyond the boundary should be maintained. This safety zone should be clear of any hard or injurious material/object (for example seating, sight screens, advertising boards, fencing etc) or any significant change of slope or ground condition that could cause a player injury whilst they are fielding near to or beyond the boundary.

Setting this safety margin is really important because players can approach boundaries at a pace and body position that means that they need this safe zone to decelerate safely. The safety margin should take precedence over boundary dimensions – it is better to have a shorter boundary than unsafe objects within the safety margin.

[LEARN MORE ABOUT SETTING OUT EQUIPMENT >](#)



BOUNDARY LINE MARKER

Line Marker (Boundary Marking)

Transfer wheel and belt driven line markers

Transfer wheel line markers (sometimes known as wheel to wheel) and belt-driven line markers contain a reservoir of paint through which either a wheel or belt rotates.

This then transfers the paint either directly on to the turf as is the case with belt-driven machines or onto a second and ultimately third wheel as pictured below which "transfers" the paint onto the grass plant.

Pros

Fairly bomb proof not much to go wrong.

Highly accurate

Cons

Only coat one side of the grass leaf meaning that often lines need to be double marked.

Paint will not transfer effectively if the line is worn or if the grass is wet at the time of application.

Not the most economical of machines where paint usage is concerned.

You will need another set of marking wheels or even a dedicated machine if you want to mark at different widths or cater for multiple sports.

Spray line markers

Spray line markers provide an effective, economical solution to obtaining bright, long-lasting lines.

They come in all shapes and sizes, but all generally have guide paddles or discs at either a fixed or adjustable spacing to direct the paint to provide a line at a given



BOUNDARY LINE MARKER CONTINUED

width.

There are lots of different spray nozzles across the models available claiming to provide various benefits, but the clear plus is only needing to mark in one direction due to the direct application of the paint to the given surface.

Pros

Adjustable paddles and discs mean that line width can vary to suit the width of the goal posts in use and offers flexibility for use across other sports too.

Most spray line markers have recommended paints that can be used with them, ready mix paints have the benefit of not needing to be diluted with water resulting in less mess and more consistent lines.

Some high-pressure markers utilise technology that can use a lot less paint to mark a full-size pitch as little as 2 litres per pitch. Nozzles can be swapped to vary the amount of paint applied for instance a nozzle applying more paint might be desirable for an initial mark from scratch versus an overmark.

As the marker is spraying the paint directly onto the surface, they will mark bare or worn lines effectively and do a decent job even if the grass is wet on application.

Cons

There is more to go wrong than a wheel transfer or belt driven marker, with nozzles, lines, and pumps susceptible to blockage as well as batteries

LEARN MORE ABOUT BOUNDARY LINE MARKER





BOUNDARY LINE MARKER CONTINUED

that can be subject to the usual failures or forgetting to charge after use as common examples.

Most of the above can be avoided through a post use routine that includes flushing the machine through with water or a purpose made cleaning fluid and removing and cleaning nozzles immediately after use. Batteries should be stored and charged strictly in accordance with the manufacturer's instructions.

Spray line markers and dedicated ready mix paints are typically more expensive than the alternatives.

Other forms of line marking equipment such as laser guided with reflectors or GPS guided machines are available to use if you have a higher budget and numerous pitches that make stringing out unsustainable, or you may come across them if you have contractors or local authorities mark out your pitches.

[LEARN MORE ABOUT BOUNDARY LINE MARKER](#)





MARKING OUT EQUIPMENT

Marking out frame

The marking frame is the perfect template for all the crease lines on a cricket pitch, can be used with an aerosol or with a traditional paintbrush.

The Frame must comply with the Laws of the game and should be checked before using, it is recommended to use string lines to ensure the two creases are in-line and parallel to each other.

[LEARN MORE ABOUT MARKING OUT EQUIPMENT >](#)



PITCH MOWER

A cricket pitch should be mowed with a properly adjusted pedestrian cylinder mower during the playing season.

The cricket pitch requires a fine, consistent quality of cut and this requires a pedestrian cylinder mower, not usually more than a 22" cut width and ideally with eight or more blades, capable of delivering a high clip frequency in excess of 150 cuts per metre.

The mower must be capable of cutting height ranges of 5 – 14mm.

[LEARN MORE ABOUT PITCH MOWER >](#)



SQUARE MOWER

Square Mower

A cricket square should be mowed with a properly adjusted pedestrian cylinder mower during the playing season. Mower size is usually a question of work rate with larger 30-36" mowers allowing squares to be cut more quickly, but this can be done with 18-20" pitch mowers set to the correct height, particularly on smaller squares or where storage space and budgets are tight.

The cricket square does not need a mower with a particularly high clip frequency (as is required for pitch preparation), and a pedestrian cylinder mower with five or more blades, delivering a clip frequency of around 85 cuts per meter or more is sufficient to offer reasonable presentation and ball roll.

There are times when cutting the square with a sharp rotary mower with a rear roller can help to clean up debris (rotary mowers can Hoover the surface) and remove ryegrass seed heads that sometimes 'bolt' upwards between cylinder cuts in dry conditions and can be difficult to remove with a cylinder mower.

The use of large ride on mowers, such as a triplex tees mower is not encouraged on cricket squares, because they may provide too much ground pressure and may disrupt the soil levels, although there is no reason why a ride on greens mower



SQUARE MOWER CONTINUED

with suitable tyres could not be used, or indeed a trailed seat on a large cylinder mower, so long as conditions permit it to do so without deforming the soil and/or leaving wheel marks.

[LEARN MORE ABOUT SQUARE MOWER >](#)



PITCH COVER

Pitch Covers

There are principally two types of cover:

Flat sheet covers, Mobile wheeled covers (sometimes called dome covers), There is a third – the Hover Cover – but these tend to be limited to Test Match grounds, so we will not cover them here

Flat Sheet Covers

Flat sheet covers are used as side sheets to cover the square either side of the pitch and to cover run ups. They can also be used to cover pitches. They have the advantage of being easier to deploy over larger areas if it is not windy but can be heavy, particularly when wet so need an appropriate number of people to move them.

Flat sheets are usually pegged and/or weighed down with ballast such as planks of wood, scaffold poles, sandbags, or old tyres. Pegs should be formed from a minimum of 5 mm steel to resist bending when hammered into compacted cricket surfaces or stony outfield. There should be a sufficient number to go around the whole sheet.

Mobile Covers

Mobile covers normally come in three or four sections and are wheeled into place over the match pitch. The covers are usually tarpaulin over a domed or triangular framework connected to four wheels (heavier, more durable types may be formed of corrugated plastic, steel roofing materials or



PITCH COVER CONTINUED

fibreglass). The frames carry gutters that collect the water off the sheet and divert it into hoses which can be deployed over the outfield or even into pitch drains to divert water to more freely draining areas.

Mobile covers may need to be held in place with ballast or guy ropes during windy conditions.

[LEARN MORE ABOUT PITCH COVER >](#)



ROLLER

Roller

Many different machines of different weights, widths and ages are used in cricket. If you are looking for a new roller – look for a motorised tandem (twin drum) roller of 3 – 4 foot (0.9-1.2 m) width and 1.5 to 3 tonnes (it's not all about weight, it's the weight of the roller, the width and the diameter of the roller that determines the amount of force per unit area that a roller puts on the soil). Very heavy rollers (>3 t) tend to cause grass growth problems in the long term and can actually reduce pitch performance by over-compacting the soil.

Modern rollers will include features that make them easier to use including power assisted steering, hydrostatic transmission, and electric start.

Think about how you are going to store your roller to keep it dry and secure. Make sure it fits in your shed – particularly if it is fitted with roll over protection. Think also about how you are going to store the fuel it needs.

[LEARN MORE ABOUT ROLLER >](#)



FERTILISER SPREADER

Fertiliser Spreader

There are two principal methods of application:

1. As a solid granule of fertiliser, applied most commonly with a 'spinning disc' spreader where the fertiliser falls from the hopper onto a spinning disc that impels the fertiliser through the air. You can fertilise an outfield using a pedestrian spreader, but it will take a while and you will need to think about how you get the bags to the spreader.

A tractor-mounted spreader will have a greater working width and hopper capacity than a pedestrian spreader, meaning that work rates are significantly higher. If you do not have a tractor mounted spreader, then it may be more cost effective to hire in the equipment or arrange for a contractor to spread fertiliser on your outfield.

Note that timing should be before rain is expected for the fertiliser to be dissolved and more effective.

2. As a liquid applied with a sprayer. As outlined above, plants take up nutrients in liquid form through their roots so using liquid fertilisers means that the plant can be fed quickly, however, liquid fertilisers can also allow foliar feeding, depending on the water rate being used.

Some liquid fertilisers can be mixed with other agrochemicals to be applied at the



FERTILISER SPREADER CONTINUED

same time (always read the labels of both products and speak to a qualified advisor when tank-mixing pesticides). However, it is harder to control or slow the release of the nutrient (some formulas can do this), so using liquid fertiliser can require more frequent applications. Again, larger sprayers hired-in or contracted-in can increase work rates and reduce costs if you have a number of outfields to cover.

You should always calibrate your sprayer to make sure you are applying the correct amount – this is particularly important with outfields because they are so large, and any over application can waste fertiliser and money. Over-applying fertiliser is also harmful to the environment.

For details on how to calibrate your spreader or sprayer consult the operators handbook that came with the machine or speak to your supplier.

[LEARN MORE ABOUT FERTILISER SPREADER >](#)



IRRIGATION EQUIPMENT

Irrigation Equipment

The challenge with irrigating a square is that normally the demand for irrigation is highest during the season when you will have pitches that need watering but also pitches that need to be kept dry because they are in preparation or use. That is why a combination of methods is usually required. Different methods have different pros and cons:

Hand watering

Hand watering using a hose with a sprinkler nozzle or lance is usually the most controlled method allowing precise watering of pitches close to other pitches you need to keep dry. However, it is also the most labour intensive and slowest. Without a high pressure, high flow water supply to the nozzle this can take a very long time to complete. It also means that one person is tied to completing that task over a number of hours.

Automatic 'pop-up' sprinklers

At the opposite end of work rate and labour demand is an automatic system of pop-up sprinklers which if well designed can be controlled from a computer or mobile device from the comfort of the grounds shed or pavilion.

Automatic sprinklers can provide good uniformity of application if well designed and maintained and can be used to water overnight which is the most water-efficient



IRRIGATION EQUIPMENT CONTINUED

method.

The disadvantage of automatic sprinklers for the square is that it is difficult to control which parts of the square get water (although good design of the system can allow you to split the square into halves or blocks to help with this).

Static hand-moved sprinklers

Static hand moved sprinklers are usually a single sprinkler mounted on a stand that applies water in a circular pattern (the arc can be adjusted on some models to limit this to quarter of semi circles). The radius of the sprinkler or area of coverage is partly a function of the sprinkler and the nozzle, but it also the water flow rate and pressure of the supply – which is related to the feed into your water supply to the square and the diameter of the supply pipes (narrower pipes increase friction which reduces pressure at the sprinkler nozzle).

Travelling sprinklers / water tractors

Travelling sprinklers use the flow of water through the sprinkler to drive a mechanism that moves the sprinkler back along the hose or a cable. The advantage is that some of the labour of moving the sprinkler can be reduced but this will depend on water pressure, flow rate and the application width of the device. The depth of water applied will also depend on the

[LEARN MORE ABOUT IRRIGATION EQUIPMENT >](#)



IRRIGATION EQUIPMENT CONTINUED

wind-in mechanism gearing. Most will come with an automatic shut-off so can be used unattended in secure environments. Travelling sprinklers can apply water very evenly over the length of the run and are therefore particularly useful for wetting pitches.

Sprinkler hoses

Sometimes called 'Leaky hoses' these are laid along a pitch or square and water is emitted through very small holes cut at regular spacing along the length of the hose. They are good for providing linear control of application – so good for wetting pitches or irrigating next to pitches you are trying to keep dry. They need to be moved across the square but can be plumbed in parallel depending on the pressure and flow rate of the supply. They are particularly useful when water pressure and flow are low but will need to be moved a number of times because application width is often narrow. Because of the fine jets of spray, they may be significantly affected by the wind.

[LEARN MORE ABOUT IRRIGATION EQUIPMENT >](#)



TRAINING

As well as undertaking the maintenance activities as described above, we would also recommend attending the following training courses to further develop your skills and understanding of grass pitch maintenance.

[Click here for information on training courses.](#)

[VISIT TRAINING COURSES >](#)

Recommended Training

No training courses found.



NEXT STEPS

Report ID: **11197**

For more information visit

[RESOURCES.THEGMA.ORG.UK/CRICKET](https://resources.thegma.org.uk/cricket)

Training Courses



Further information on any training courses you're recommended to complete can be found on the Grounds Management Association website.

[Visit the GMA >](#)

GMA Toolkit



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