

Ashbourne Aztecs JFC



Pitch Improvement Programme

Initial Report

Supported by

**GROUNDS & NATURAL TURF
IMPROVEMENT PROGRAMME**

15/02/2019

Section One – Background/Objectives

Background and Visit Objectives

This report has been compiled at Ashbourne Recreation Ground for Derbyshire CFA & Ashbourne Aztecs JFC to see how support can be offered in improving the standard of football pitches and level of maintenance across the area. *Please note this report has been produced on the basis of evidence found during the initial visit and is for guidance purposes only.*

It will give:

- An overall appraisal of the site and maintenance
- Advice on how to improve playability of the pitches
- Advise and recommend potential improvements to maintenance practices

Overall Summary/General appearance

The site visit was carried out by myself and Liam Rooney Head of Development and Facilities at Derbyshire CFA whilst on site we met with a member for the Derbyshire Dales District Council groundsteam who was able to give us some additional information on pitch maintenance to supplement the information provided by Ashbourne Aztecs in the visit request form. A representative from Ashbourne Aztecs was not able to attend.

The pitches are maintained by Derbyshire Dales District Council, they are mown during growing season weekly or fortnightly depending on growing conditions. They are marked out weekly. The pitches are rolled back after fixtures and then aerated using a slitter following rolling. No wholesale over-seeding has taken place for 3 years although there is some remedial seeding and levelling works done in the goal mouths through the season. The pitches are deep spiked once annually.

The PQS testing was done on 3 zones across the 11v11 and 9v9 pitches. The areas assessed can be seen on the site image. The pitches as they are currently marked are clearly visible. There were line markings on the pitches and they were bright and correctly marked apart from on pitch 3 as it's not used through the winter months as its on a flood plain.

Surface levels across the pitches were generally good, but low lying to 60mm mainly in the high wear areas such as goal mouths and centre spots, these will naturally pond water. The goal mouth at the far end of pitch 1 is in a very poor condition and steps should be taken to improve the surface levels.

As labelled in the site image pitch 2 and 3 (11v11) generally had adequate grass cover given the time of year, pitch 1 (9v9) was suffering from high wear through the middle of the pitch.

There was generally an adequate percentage of desirable grasses and of the total ground cover 60% on average was Perennial Ryegrass. The length of the grass was largely suitable for the time of year varying between 36mm and 40mm providing sufficient protection from winter conditions and pitch use.

The soil was predominantly loamy/clay. According to the data on <http://www.landis.org.uk/soilscapes/> it describes the indigenous soil as being slowly permeable seasonally wet acid loamy and clayey soils. This refers to soils with a tight, compact deep subsoil that impedes downward water movement; after heavy rainfall, particularly during the winter, the subsoil becomes waterlogged. Particularly taking this into account regular use of heavy trailed rolling equipment that is likely to further contribute to compaction and drainage issues should be avoided.



The ground was compacted below 80mm, despite this the depth of the soil suitable for grass growth was good between 100-160mm. However, this was not reflected by good root depth varying between 50-100mm which could certainly be improved.

No detail on weed treatment was provided although the minimal presence of weeds indicates that the pitches may have been treated within the last few years. Thatch content was greater than would be desirable.

There was minimal presence of pests in the form of worm casts covering on average 6% of bare ground.

Although there was an excellent pair of portable box goals used by Ashbourne Town on pitch 2 the socketed goals on both pitch 1 and pitch 3 were in poor condition and require replacement. Particularly the far goal on pitch 1 appears to be almost 10 inches lower on one side to the other.

Please refer to Goal Post Safety Standards BSEN 748 (2004) and BS 8462 (2005).

<http://www.thefa.com/get-involved/goalpostsafety#maFqRpWmlkssVsyG.99> Action should be taken to make sure the goalposts are compliant. Speak to your County FA for further information.

Conclusions and Recommendations.

- The local authority should look to carry out further decompaction works on the site. The pitches would benefit from further deep spiking and/or linear aeration to alleviate the compaction and improve plant health. If this can be carried out when ground conditions are appropriate it will be an essential step in the right direction. When spiking, tines of 24mm would be recommended to penetrate the soil effectively at a depth between 180mm-220mm. Regular surface slitting and barrel spiking would help to relieve the surface compaction. Use of trailed heavy rollers is not recommended.
- Problem areas that are suffering with waterlogging such as the goal mouths or other high wear or low lying areas should be hand forked and regular applications of a suitable sport sand be applied to reinstate surface levels and aid drainage. If areas such as goal mouths are low lying come season end they can be turned over and the existing soil combined with a suitable sport sand to reinstate a level and then be re-seeded. If this is not possible re-turfing is an option.
- The pitches would benefit from over seeding with a suitable Perennial Ryegrass mix of at least 3 cultivars. The aim should be to apply between 10-15 20kg bags per full sized pitch using a disc seeder in multiple directions. Although there was some Perennial Ryegrass, improvement of the grass sward would improve the wear tolerance and uniformity of the surface. I would suggest this is carried out in early April when ground and weather conditions should better support germination and establishment of new grass.
- The advice to the local authority is that they should have a soil analysis carried out by a suitable materials provider, following this applications of a suitable controlled/slow release fertiliser should be made, two applications per season would be the minimum recommended. Some fertilisers offer 5-6months longevity and these would be ideal for bi-annual application. In conjunction with an effective aeration programme this will help to improve root depth and density.

- The weeds on the pitches should be treated with a broad spectrum selective herbicide during the growing season when the weeds are actively growing. This must be applied by a qualified professional with appropriate spraying licences. Please take care to use a product that will not affect the sowing of new seed if over seeding has taken place. It can be effective to mix a small amount of liquid fertiliser in with the selective herbicide to aid penetration into the weeds.
- The medium/long term recommendation for the site is that the pitches could be scarified in multiple directions to remove as much of the thatch, dead weeds and undesirable grasses as possible. Ideally 60 tonnes of a suitable sports sand dressing would then be applied (per full size pitch) followed by over seeding with a suitable Perennial Ryegrass mix using a disc seeder at a rate of 50g/sqm and followed by further deep spiking and fertiliser application.



Section Two – Site Details



Club/Organisation:	Ashbourne Aztecs JFC				
Address:	Ashbourne Recreation Ground, Cokayne Ave			Postcode:	DE6 1EJ
Active Places Site ID:	1207896				
Main contact job title / responsibility:	Julian Burton Chairman				
Tel:	07889932464	Mob:	07889932464		
Email:	Jburton07@btinternet.com				
Groundsman	DDDC	Qualified:	Yes	IOG Member:	No
Mobile:	Not provided	Email:	Not provided		
Number of groundstaff:	2	Volunteer /Professional	Professional		
Maintenance budget per season (£):	Not provided	Renovation Budget	Not provided		
In House:	No	Contractor:	No	Local Authority:	Yes
Site Owner:	DDDC	Site Size (Ha):	Pitches 4ha		
RPA	Julien Morris	Site visit	15/02/2019		

NLS Step	Charter Standard	Number of teams	
Step 7 & Below	Yes - Charter Standard	Mini Soccer	10
		Youth Male	5
		Youth Female	1

Pitch Size	Number	Initial comments
11 v 11	2	Some bare areas typical of normal wear and tear
9v9	1	Some bare areas typical of normal wear and tear

Additional Facilities e.g. Dual Sport.	Details	Initial comments
Cricket and Rugby	1	In decent condition typical of normal wear and tear

Section Three PQS – Performance Quality Standards

This report utilizes the Performance Quality Standard criteria (PQS) as endorsed by the Football Association (FA) and published by the Institute of Groundsmanship (IOG) as benchmark standards for safe, true, consistent and fit for purpose playing facilities.

IOG PQS Table - Football Pitch - Mid Season						
Ashbourne Rec Ground		Pitch Location			Grading Results	
Assessment Criteria	Unit	Goal mouth	Centre Circle	Wing	Median	PQS Grade
1 Length of grass	mm	40	36	40	40	Intermediate
2 Total ground cover	%	82	4	82	82	Upper Basic
3 Desirable grasses	%	60	3	62	60	Upper Basic
4 Weeds	%	9	4	7	7	Intermediate
5 Pests & Diseases	%	10	6	1	6	Intermediate
6 Thatch	mm	30	20	15	20	Lower Basic
7 Root depth	mm	100	60	50	60	Lower Basic
8 Growing Medium	mm	160	120	100	120	Upper Basic
9 Pitch surface levels	mm	65	40	10	40	Inadequate
10 Compaction	 NOTE- Inform Club and/or County FA ASAP as the Goal Posts may not comply with the FA Guidelines on Goalpost Safety			Below Standard		
11 Goal posts				Below Standard		
12 Line Marking				Standard		
13 Surface debris				Standard		
14 Unofficial Use				Below Standard		
Performance Quality Standard:		Upper Basic				
Pitch Advisor:		Julien Morris				
Date of Assessment:		15th February 2019				

Mowing Height*36-40mm



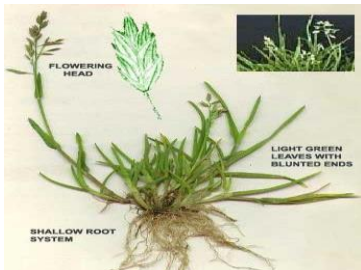
Bare areas 18-96%



Desirable grasses. 3-62%



Undesirable grasses. 1-22%



Weeds. 4-9%



Pests and disease. 1-10%



Thatch. 15-30mm. Picture for



demonstration purposes only.

Root depth* 50-100mm



Growing medium* 100-160mm



Presentation/ appearance* Std



Goalposts* Not Std



Peak soil strength. Below Std



Surface levels/Evenness* 10-60mm



Post- match divoting: None



Click on the link below for more information on PQS assessment

GROUNDS & NATURAL TURF IMPROVEMENT PROGRAMME

Section Four – Useful Links

Details	Web Address
The Football Association (FA)	www.thefa.com
The Institute of Groundsmanship (IOG)	www.iog.org
Sport England/IOG Football Groundsmanship	www.groundsmanship.co.uk/
IOG Pitch training	www.iog.org/winter-pitches-training-courses
Football Stadia Improvement	http://www.fsif.co.uk/
Football Foundation	http://www.footballfoundation.org.uk/

Section Five– Current Machinery

Current machinery -summary:	The current stock of machinery is inadequate to support the recommended maintenance improvements detailed within the report. If the club were able to supplement the maintenance of the district council further investment would be required. Funding support may be available to help with the purchase of new equipment please speak to your County FA contact for further information.
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Current Machinery		
Item	Make/Model	Purchase date
DDDC Machinery: 5 Gang Cylinder Mower	Ransomes	Approx 5 years old
DDDC Machinery: Iseki compact tractor	Fleet Combi	Approx 10 years old
DDDC Machinery: Trailed Roller	Unknown	Approx 20 years old
DDDC Machinery: Slitter	Unknown	Unknown
DDDC Machinery: Ride on rotary mower	John Deere x740	Approx 12 years old
DDDC Machinery: Pedestrian line marker	Rigby Taylor Impact Glider	Unknown

Section Six – Recommendations

Maintenance

Outline maintenance guide

Maintenance Item	Timing/Frequency (PS = Playing Season)	Additional Comments
Mowing	Must be maintained between 25-40mm	Maintaining playing height between 35mm-40mm year-round may be more suitable on heavily used areas. The direction of cut should be alternated and no more than 30% of the leaf cut at one time. This will improve pitch appearance and encourage recovery and grass growth.
Line Marking	Weekly	The lines were bright and correctly marked for the most part apart from pitch 3 that was out of use due to waterlogging.
Aeration - slitting	PS	The use of a surface slitter or dimple spiking attachment every week would be beneficial to aid surface drainage and help the breakdown of thatch and other organic matter.
Decompaction	Renovation, Autumn	Deep spike decompaction should be carried out at least twice a year. Ideally end of season April/May and prior to the winter months (September-early November). Decompaction is essential to allow air, water and nutrients to pass into and through the soil profile. It will aid drainage, improve surface levels and help to breakdown thatch. Tines of 24mm should be used to breakdown the heavy compaction.
Turf Nutrition	Spring, Summer and Autumn	To encourage a strong and healthy grass cover during the course of a season a fertiliser programme is recommended following a soil analysis. A minimum of two applications per year would be desirable. Slow release fertiliser is recommended to provide a continuous nutrient level.
Weed Control	NPS	Application of an appropriate broad spectrum selective herbicide should be made to control the weeds present in the playing surfaces. This must be applied by a qualified person or contractor. Please pay attention to guidelines for the herbicide as some recommend a period of time passes between application and reseeding areas.
Seeding and Overseeding	End of season and in season	April-early May would be an ideal time to over-seed using a Perennial Ryegrass mix of at least 3 cultivars. The main component of a high quality playing surface is the amount and quality of grass coverage. A healthy grass sward accompanied by a deep root system will provide a better resistance to wear and provide a stable, uniform surface. This in turn will enable more matches to be played. As timing of seeding is key consider over-seeding just before the conclusion of the playing season as this will allow the maximum time for germination and establishment to take place. Weather conditions should also be more favourable to produce a good yield.

Worm and Pest Control	As required	Any presence of worm casts in the playing surface could be alleviated by regular brushing or drag matting of the surface this would also help with thatch build up and help to disperse any surface debris. Worm casts are unsightly and can smear and cover fine turfgrasses.
Top Dressing	End of season	Should budgets permit – ideally 30-60 tonnes per full size pitch – medium coarse sand. Remedial work should be undertaken to sand and seed the bare and undulated areas on the pitches particularly goal mouths and centre spots.
Scarification	End of Season	Again, should budgets permit scarification would greatly benefit this site. Scarification will remove thatch, reduce the population of undesirable grasses and unwanted vegetation such as weeds. Contractor recommended.

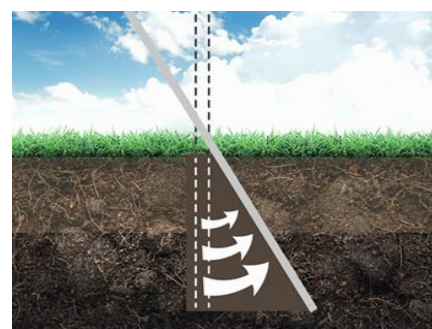
Key Priorities

Decompaction

Decompaction operations are essential for aeration to allow air, water and nutrients to pass into and through the soil profile increase drainage and improve the breakdown of organic matter (Thatch).

Introduce a programme of deep decompaction operations to be conducted at least twice annually (October & April) with a vertical action machine using 18-24mm tines at 100mm spacing's to achieve maximum heave and penetration without compromising surface integrity. If funds permit conduct further linear aeration and decompaction operations during the winter month's dependent on ground conditions. 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 dimple spiking every 2-4 weeks when conditions allow.



Over-seeding

To improve desirable grass coverage over-seeding is required using a Perennial Ryegrass mix of at least three cultivars. This should be applied using a disc seeder in at least 3 directions which discs the seed directly into the soil at a rate of 30-40gsm per square metre. No less than 12-14 20kg bags per full size pitch. Timing of application is key, as seed will struggle to germinate in dry hot weather without irrigation or cold temperatures when there is not adequate warmth for the seed to establish.

Over-seeding using a disc seeder whilst the pitches are in play is an option if weather conditions are more favorable but high wear areas such as goal mouths, penalty spots and center circles should be repaired and reseeded as early in the close season as possible and combined with a suitable sports sand raked to a tilth covered with germination sheeting and kept watered. Work with seed representative to identify the best seed mix for your requirements.



Fertilisers

To encourage recovery from winter wear and to promote strong and healthy grass cover through the summer season an application of a suitable controlled release fertilizer is recommended following a soil analysis.

A minimum of 2 applications per year would be recommended given the soil profile and level of use. Controlled release fertilizer is recommended to provide a continuous nutrient level over a greater period than compared with a conventional fertilizer. Typically whatever the preferred supplier a suitable fertilizer can be selected for spring/summer (Higher nitrogen content some phosphorus and medium potassium content) and autumn/winter (Low nitrogen content, no phosphorus and high potassium content + 2-4% Iron content) Approx. 10 x 20kg bags per full size pitch.

It should be noted that this is an essential part of improving the quality of the pitches at Ashbourne Rec, however this will lead to an increase in grass growth and a mowing regime of cutting a minimum of once per week may be necessary in the growing season.



Machinery Needs

Machinery Requirement	Size/Specification	Additional Comments
Compact tractor with turf tyres	35-45hp It is recommended machinery is replaced on a 5 year cycle where possible.	The following is based on appropriate machinery recommendations for DDDC. Were the club able or wanting to undertake additional maintenance the machinery recommendations can be reviewed.
Combination turf grooming attachment x 1	Tractor mounted	A combination turf grooming tool would enable the local authority to undertake key pitch maintenance tasks such as brushing, raking, slitting and light rolling with one machine.
Tractor mounted rear roller mower	Single unit	This would enable the local authority to have a dedicated mower for the winter pitches. The gang mowers could then be used at a lower height to maintain the cricket outfield during summer months.
Tractor mounted fertiliser spreader		A tractor mounted fertiliser spreader would be appropriate to accurately apply fertiliser to large areas.

Training

Successful sports surface management requires a committed, motivated and trained workforce to conduct operations in a timely, efficient and safe manner.

The Institute of Groundsmanship provide a full range of training and education packages, endorsed by the Football Association to suit all experience levels from volunteer to professional.

<https://www.iog.org/learning>

Training Need	Provider
IOG Level 1	Institute of Groundsmanship (IOG)
IOG Level 2	Institute of Groundsmanship (IOG)
IOG Safe Use of Equipment	Institute of Groundsmanship (IOG)

The recommendation would be that appropriate local authority staff attend some formal training to ensure that any pitch maintenance and machinery operation that is being carried out on the site is in line with latest best practice and safe use guidelines. The IOG Level 1 (Winter Pitches) 1 Day course would be a good starting point.

Please also look out for free to attend Pitch Improvement Programme Awareness Evenings that deliver machinery demonstrations, educational talks and seasonal maintenance advice.

Please speak to your regional pitch advisor or local FA representative for further information on the courses available.





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County Football Association Contact	CDM	Liam Rooney
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Football Foundation Contact	TPM:	Tom Salisbury
	Email:	Tom.Salisbury@footballfoundation.org.uk
	Tel:	07715 426064

Please note that The FA has secured two Official Suppliers to support the roll-out and implementation of the Pitch Improvement Programme. Both Official Suppliers have agreed discounted schedule of rates that are available to all FA affiliated football clubs. Details of the full product ranges and associated contact details are appended to this report.

For all funding enquiries or to discuss this report further please contact the County Football Association (CFA).

