in and out of the first bunker selected was not easy – and made deep marks.

**Jacobsen Smithco Super Rake at Salisbury & SW Wilts Golf Club**

Salisbury & SW Wilts' new Super Rake is a direct replacement of a previous machine, complete with the minor failings of that machine. However as the previous Super Rake had been on the 27 hole club for five or six years there could have been no major complaints or criticisms about it or its performance – a fact later confirmed in a phone call to Kerran Daly, Course Manager. When photographed the Super Rake had just come back from B S Mowers, the suppliers, who had re-routed the front wheel drive hoses, these chafe on the chassis and had been a problem on previous machine and so were being re-routed in the hope of solving the problem.

At Salisbury the machine is used three times a week on the bunkers of both courses, these have large lips and so only high clearance machines were considered. Kerran said that there were two machines in contention as a replacement. The Jacobsen is seen as a small neat machine which was known to fit the bunkers and it was preferred by the operators. Salisbury’s machine is diesel powered with full hydraulics for both lift and transmission. Having hydraulic lift was considered to be far less fatiguing to the operator. Other than raking bunkers the machines are used for the occasional seedbed preparation, but no ‘dozing’ nor cultivation nor scarifying – Kerran is worried that any cultivation in the bunkers would bring up the chalk base.

**Toro Sand Pro 5000 on the Oxfordshire**

The Oxfordshire has three Sand Pro 5000’s – but Course Manager Martin Jones only bought a third and not the whole company, when he found the first so good – he realised that the club was making increasing use of bunker rakes and that the older machines had put in a lot of hours work.

Maintaining the course to the highest of championship standards with professionals extremely critical of every aspect including of the sand has meant that Martin has had to get it right. The 18 hole course has worked its bunker rakes hard and for long hours, particularly because of the standards set, but in addition they have been found extra work on greens aeration and drag matting.

The first machine, bought in August 1992, had clocked up 3271 hours, had parts replaced to the value of 2400 and had consumed some 2716 worth of petrol. The second machine, BR2, was bought in May ’93, has run for 2423 hours for a 1447 parts bill and 2200 petrol, while BR3, the March ’96 acquisition, with only 206 hours has drunk 445 worth of petrol but only required 21 worth of parts.

Martin said that one reason for the high hours is that the machines have been used extensively with the Toro Pricker Aerator. This is the most undersold item on the list as far as he was concerned, yet he said that on the Oxfordshire’s sand based greens, which only need the thatch to be opened up, this implement was absolutely ideal. It bolts on the back of the Sand Pros and is a fairly heavy bit of kit with an axle with small blades – giving an aer-

...
NEW PRODUCTS

Overcoming the traditional objections of workers in low risk areas to wearing head protection provided by employers because of its perceived discomfort and inconvenience – the new First Base from Protector combines full shift comfort for the wearer with the fashion appeal of a Baseball cap. Protection against bumps and scrapes is provided by the moulded ABS inner skull cap, with the option of an additional self-adhesive, foam disk spacer if required.

The First Base’s low profile also makes it suitable for use with Protector earmuffs and the design is compatible with wearing goggles. Fully adjustable, First Base has air vents which improve comfort by allowing a cooling airflow inside the cap.

For employers who like their staff to carry a corporate identity, the branding and colour options of First Base are unlimited. Both printed and embroidered images are options and minimum production runs are surprisingly low.

For further information contact Protector Technologies Tel: 01252 342353.

You’ve all heard about “under-soil heating systems” but what about “over-soil heating systems”? Liquid Sod have come up with the inflatable, frameless Growing Dome. In essence, the Dome covers the smallest of greens or tees in order to carry out repair work to turf in bad weather conditions, establish seeds at any time of the year, or lay brand new turf at exactly the right temperature and humidity – with enough room inside to walk around and use machinery – he can do so. The Liquid Sod Growing Dome has also been used on standard sized golf greens and tees, bowling greens, cricket pitches and several other areas requiring renovation – in the UK and in Europe.

The Growing Dome is an “over-soil heating system” and equally, it can be an “over-soil cooling system”.

What is a Liquid Sod inflatable, frameless Growing Dome and how does it work? The Dome is made from an extremely strong, large piece of plastic which is durable, waterproof and semi-transparent. Warm or cool air is blown into the Dome by one or two (depending on the size of the Dome) relatively quietly running fans to inflate the Dome to its full capacity by way of a process very similar to the way air is blown into a hot air balloon.

Temperatures and humidity inside the Dome are gauged and maintained by a thermostatically controlled air heating/cooling system which is supplied with the Dome.

The material used is imported from the USA and is tough enough to hold a man's weight while he works on top of the Dome.

Liquid Sod make Domes to any size or shape required) The Dome is delivered in kit form and erected on-site by the Liquid Sod team and the customer is shown how to carry out the erecting and dismantling process.

If you want to know more

From the original "Picnic on the grass" by Manet 1862-3.

To stand the test of time you need a special quality.

BARENBRUG

33 Perkins Road, Rougham Industrial Estate
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Tel: 01359 270766 Fax: 01359 271021

Until you’ve had a few scorching hot summers, the odd attack from pests or plague and a chance to calculate maintenance costs, the wisdom of your seed selection will never be known.

That's why you need the Barenbrug promise of quality.

By combining the best of tradition and technology we've created some of the best varieties around - Barclay, Bargreen, Baruba and the exciting new Barkoel and Barlinda - making them available in a range of quality mixtures that takes the guesswork out of selection.
GREENMASTER® puts you in control.

Keeping turf in great condition frequently involves a battle against the elements. Put yourself in the driving seat by using Greenmaster. With ten granular and five new liquid formulations to choose from you can exactly match your sward’s requirements whether it be for a balanced feed, a high K product, added trace elements or a special tonic. And to give you maximum flexibility our liquids can all be tank mixed to provide additional ratios. Put yourself in control with Greenmaster and you’ll see the difference immediately. For more information call our Technical Services Manager on 01473 203143 or contact your local Area Sales Manager.

Always read the label. Use pesticides safely. GREENMASTER and THE LEVINGTON DIFFERENCE are registered Trade Marks of Levington Horticulture Ltd. © Levington Horticulture Ltd. 1997
NEW PRODUCTS

about the Growing Dome, you can contact Liquid Sod direct on 01963 251129.

Ransomes has introduced an updated version of its renowned Ryan GA30 self propelled ride-on aero-turfer designed for use by golf greenkeepers, groundstaff and turf maintenance professionals.

Introduced to satisfy customers' requests and the latest health and safety requirements and the principal upgrades for this season focus on the GA30's power unit and steering system. Superseding the previously-used Kohler Magnum engine is the new 18hp Kohler Command unit which delivers a smoother, quieter power output with improved fuel efficiency.

A conventional steering wheel replaces the "cow-horn" steering handles previously fitted. The new steering wheel, together with geared reduction within the steering system, provides improved operation, manoeuvrability and operator convenience. All 1997 Ryan GA30's also have full CE approval and feature additional safety cut-out switches for safer operation and use.

The Ryan GA30 costs £12,955 fitted with 16mm coring tines and twin windrowing blades.

For further information Tel: 01473 270000.

It either grows too quickly, or not at all. Two common problems for the landscaping professional. But not any more. Barenbrug has the answer to both problems.

Bar Slow Motion features the lowest short-growth varieties listed on the STRI Turf Seed Guide; contains 40% Barkoel (a new species), a crested hair grass and is ideal for any low maintenance area. Its highly compact sward has an excellent colour all year round. And with the addition of perennial ryegrass, the mixture offers even better wear tolerance and quicker establishment; yet it still reduces maintenance costs by up to half.

Bar Shade, meanwhile, is a specialist mixture, containing Barcapsmia (turfed hairgrass), designed to offer the best performance in any areas shaded by trees, fences, buildings and so forth.

For further information Tel: 01359 270766.

A facility which will enhance any golf course and be readily appreciated by members and visitors is the patented Maestro Golfstream. This combines a fresh water drinking fountain with a special washer for golf balls. By placing Golfstream units in the tee areas, golfers will be able to revive themselves with a refreshing drink of water and, at the same time, ensure that their golf balls are clean before teeing off.

The drinking fountain features a stainless steel bowl and bubbler for durability and hygiene. Operation is by means of a push button.

The ball washer is behind the fountain and bowl and uses water directly from the fountain so it never runs dry. The entire unit is 960mm high. The Golfstream is easy to install and can be connected to the existing water supply.

Manufactured of mild steel, it is robust and is ideal for use close to the clubhouse or in remote tee areas.

For further information Tel: 0181 302-4035.

The Moisture Smart from Amenity Technology has been designed to replicate evapotranspiration losses based upon the Penman equation using evaporation from an enclosed container. The moisture smart is small enough to place out of the way near to the playing surface without interfering with play. The rotating gauge on the top of the unit makes it easy to record what day the reading was last taken. The unit can also be placed in the path of the sprinkler unit for those who cannot monitor precisely the quantity of water they are applying. The moisture smart also takes into account any rainfall, if we should be so lucky! The moisture smart is available at the cost of £37.50.

For further details contact Amenity Technology Tel: 0118 961 0033.


The turbo power goes straight to heavy-duty seven inch diameter reelers to tackle tough, warm season turf, wet conditions or hilly terrain. The heavy-duty lift arms are designed for tough conditions while the large, wide tyres offer a light footprint. With FlashAttach any reel can be changed in around 30 seconds without tools.

There is a hydraulic oil monitor, alarm horn and the high-back suspension seat reduces operator fatigue. Easy-to-set grass shields allow for quickly changed discharge direction.

For further information Tel: 01536 417777.

Following a thorough review of the Allen Power Equipment range of Walkover Sprayers in conjunction with TeeJet Spray Products a number of enhancements have been made.

All the diaphragm check valves (DCV) were changed to the new Patented Turbo FloodJet. An inherent problem with normal annular type nozzles is the "heavy edges" which can be seen as striping. This new nozzle from TeeJet overcomes these problems. It has a pre orifice design to produce larger droplets, to reduce the problem of drift off the target spray area, and a special turbulence chamber to create a more uniform spray pattern giving a more even distribution of chemical application. Also the large round orifice resists blocking. The polymer spray nozzles are colour coded to the proposed International Standards Organisation (ISO) colour coding system like to be introduced by all spray tip manufacturers over the next few years.

For further information Tel: 01235 515400.

The 1997 Professional Hayette was ergonomically re-designed with a reduced wheelbase and re-angled handle bars giving better balance and manoeuvrability.

The long life aluminium finned deck ensures the grass is in optimum cutting position, with the friction disc protecting the crankshaft from impact damage. Swinging blades are available as an option to the cutterbar. The height of cut is controlled by a single lever control, giving a height of cut between 13mm and 70mm, and a cutting width of 460mm.

With wheels that can be locked in a raised position to avoid movement during transportation, and powered by a Honda GX 140A engine, this machine is well suited to the varied duties of local authority and contract work, and is designed to cope with all types of grass, particularly in the rough, where access is limited by trees or shrubbery.

For further information Tel: 01273 723444.

SCH (Supplies) Limited has introduced a new powered rotary scarifier to its range of attachments for towing behind Estate and Garden tractors. The Rotary Raker 2 is designed to remove the build up of dead thatch and moss from grassed areas.

For further information Tel: 01473 328272.

Kawasaki Mules are lightweight taskmasters built to tackle the toughest utility duties. Helping you do your job with the greatest speed, ease and comfort.

To experience the power behind the work, call freephone 0800 500245. Or call into your nearest Kawasaki dealer.

THE COMPLETE UTILITY TASK FORCE
Don't get left behind – book your place NOW on one of BIGGA's

**1997 SUPERVisory MANAgEMENT**

"An invaluable source of management skills training"

"Much, much more of the same please!"

**ALDWARK MANOR COURSES**

**Week 1: 6 – 10 October 1997**

**MANAGING PEOPLE MODULE 1**

This course introduces a range of interpersonal skills needed in supervisory management and includes: time management, teamwork, leadership skills and computers in greenkeeping management.

**Week 2: 13 – 17 October 1997**

**MANAGING PEOPLE MODULE 2**

This course builds on the knowledge gained in Module 1 and includes: guidance skills, appraisals, grievance and discipline skills, employment protection, the use of computers in management.

**Week 3: 20 – 24 October 1997**

**MANAGING OPERATIONS AND RESOURCES**

This course looks at financial planning, project management and the effective use of resources, project management, planning and control of resources and the use of computers in greenkeeping management.

**Week 4: 3 – 7 November 1997**

**MANAGING INFORMATION**

This course looks at methods of communicating information to others and includes: writing memos and letters, writing reports, storage and retrieval of information, electronic communication, managing meetings, oral communication and the use of computers in communication.

**Week 5: 10 – 14 November 1997**

**MANAGING GOLF COURSE DEVELOPMENT**

This level 4 course is aimed mainly at those delegates who have completed Weeks 1 to 4 and looks at: golf course design, construction methods, Health and Safety considerations, ecological management, integrated management plans and the use of computers in greenkeeping management.

Cost of each course, including four nights' accommodation, food and all tuition:

- BIGGA members £399 + VAT
- Non-BIGGA members £470 + VAT

(which includes one year's BIGGA membership)

**REGIONAL COURSES**

**GOLF COURSE DESIGN, CONSTRUCTION AND ESTABLISHMENT**

This two day workshop, based on the extremely successful workshop at Harrogate, is designed to introduce delegates to the history of golf course architecture, philosophies and styles of golf course architecture, conceptual design and planning considerations. Groups of delegates then produce an outline design followed by a detailed design, including: greens, tees, irrigation and drainage and project costing and budget.

**Venues**

- The Bournemouth Moat House Hotel, Bournemouth – Monday 13 and Tuesday 14 October 1997.
- Airth Castle Hotel, Airth by Falkirk – Monday 27 and Tuesday 28 October 1997.
- West Retford Hotel, Retford – Wednesday 26 and Thursday 27 November 1997.

**RECRUITMENT, SELECTION AND INTERVIEWING**

This two day Supervisory Management Course at NSVQ Level 3 looks at the problems of staff recruitment and includes: interviewing skills, equal opportunities, employment law, sex discrimination, practical interviewing, selecting the appropriate candidate, listening skills and questioning skills, advertising.

**Venues**

- The George Hotel, Crawley, Surrey – Tuesday 21 and Wednesday 22 October 1997.
- Airth Castle Hotel, Airth by Falkirk – Wednesday 29 and Thursday 30 October 1997.
- The Manor House Hotel, Moretenhampstead – Monday 3 and Tuesday 4 November 1997.
- Finnstown Hotel, Dublin – Tuesday 18 and Wednesday 19 November 1997.
- The Dunkenhalgh Hotel, Accrington, Wednesday 26 and Thursday 27 November 1997.

**LEADERSHIP, TEAM BRIEFINGS, MOTIVATION**

This course at NSVQ Level 3 introduces greenkeepers to the basics of leadership and includes: leadership skills for every situation, training and coaching for success, the mysteries of...
motivation, team briefings, team building and team discipline.

Venue
- Old Ship Hotel, Brighton – Thursday 16 and Friday 17 October 1997.

GOLF COURSE HEALTH AND SAFETY MANAGEMENT

This course is an essential requirement for anyone wanting to manage a golf course in a safe and healthy manner and stay within the law. The course includes: health and safety law, producing a policy document, COSHH assessments, hearing conservation, protective clothing, accident prevention, first aid requirements and waste management.

Venue
- Finnstown Hotel, Dublin – Tuesday 18 and Wednesday 19 November 1997.

Cost of each of the above courses, which includes all tuition, meals and accommodation:
BIGGA members £75. Non BIGGA members £145 (which also includes one year’s BIGGA membership.)

ESSENTIAL SUPERVISORY MANAGEMENT SKILLS FOR GREENKEEPERS

This course at N/SVQ Level 3 is a must for all greenkeepers who are or are about to become supervisors. It covers the basic essentials of supervisory management including: basic leadership, assertive communication, team building, listening and questioning skills, dealing with problems, grievance and discipline and warnings and reprimands.

Venues
- The Blue Boar Hotel, Maldon, Essex – Tuesday 14 and Wednesday 15 October 1997.
- The Cheltenham and Gloucester Most House Hotel, Cheltenham – Thursday 23 and Friday 24 October 1997.
- Marriott Hotel, Swansea – Wednesday 5 and Thursday 6 November 1997.
- The Chesford Grange Hotel, Kenilworth – Monday 1 and Tuesday 2 December 1997.

Cost, which includes all tuition, meals and accommodation:
BIGGA members £50. Non BIGGA members £120 (which also includes one year’s BIGGA membership.)

BIGGA courses are the best way to boost your career

Aldwark and Regional Supervisory Management Courses

The deadline for applications to attend the Aldwark Manor and/or Regional Supervisory Management Courses is fast approaching. The advertisement opposite gives full details of all courses and how to apply, however, I thought that it would be useful to describe how these courses are administered. Planning for the next series of courses commences as soon as the current series is complete. Provision bookings are made with Aldwark Manor and at hotels throughout the Regions. Lecturers are contacted and provisionally booked to run sessions later in the year and advertising material is produced. You may ask why we have everything prepared so early ie booking forms appear in May when courses do not run until October/November. The reason is that venues become booked very quickly and lecturers may be approached by other organisations if we do not contact them soon enough. We then set deadlines for entry ie 29 August for 1997 courses so that we can cancel or amalgamate courses when the response is poor. For example, we ran three out of five courses at Aldwark Manor last year. If we do not give hotels a reasonable amount of notice, they charge us for food and accommodation even though we do not use it. These course are run for your benefit and, thanks to the contributors to the BIGGA Education and Development Fund they are run at a cost which is far lower than the cost of comparable courses. For example, a two day Essential Supervisory Management Course, covering the same subject matter as the BIGGA course was advertised at £195. This price did not include accommodation. The message is simple. Use these courses or lose them.

The Learning Experience

Planning for the Learning Experience 1998, in association with Ransomes, is almost complete and the Programme should be ready for printing in August. The latest speaker to accept his invitation is Mr Jaime Ortiz Patino, owner of Valderrama, who will talk about the forthcoming Ryder Cup. A new feature of the National Education conference will be the Greenkeeper Question Time Panel. This will give you the chance to ask questions either on the day or by submitting them in advance. Watch out for further details in future editions of Greenkeeper International. Finally, the BTME Seminars are on the move again, back to the Royal Hall.

Toro Student of the Year Competition

By the time that you read this magazine, I will have completed five arduous, but enjoyable days (and nights), interviewing 32 students, to select this year’s Toro Student of the Year. I always look on this competition as being one of the ‘perks’ of this job as I get to meet the future Head Greenkeepers/Course Managers at the start of their careers, when it is gratifying to see their spirit and enthusiasm. Watch out for the results in the next issue of Greenkeeper International.
Welcome to the 1998 BTME Quiz!

Come to the show FREE!

This is your opportunity as a Greenkeeper to attend the 1998 show ABSOLUTELY FREE!

The BTME 98 will again be held in Harrogate, with the National Education Conference starting on Monday January 19 and the Exhibition and Educational Seminar Programme commencing on Wednesday January 21. The show represents the ideal forum for Greenkeepers to meet both the trade and other Greenkeepers.

All you have to do to stand a chance of winning one of the three superb prizes is to answer six questions - two in this issue, two more in September and the final two in October's issue. Then send in your answers with the entry form that will be printed in the October edition and you could be one of our lucky winners!

August Questions

1. What date does the BIGGA Turf Management Exhibition start?
2. What date does the BIGGA National Education Conference start?

Don't miss your chance to attend the largest Indoor turf management exhibition in Europe.

For more information about BTME 98 contact Amanda Mayo or James McEvoy on 01347 838581

Letters

Greenkeeper's despair at lack of sympathy by his golf club

I am writing to you in desperation as my career as a Head Greenkeeper and my whole life seems to have collapsed and my only crime is that I worked too hard.

I am a 34-year-old family man and started my career in greenkeeping on a course near home in April 1985. I really enjoyed my time there and progressed through the ranks to become Deputy Head Greenkeeper and also obtained college qualifications.

In April '94 I moved to a nine hole course in a neighbouring town as Head Greenkeeper but unfortunately this position turned out to be a lot less desirable prospect than it seemed at my initial interview and appointment. The whole club was a political battleground and I suffered three years of intense pressure on my career and had to work in a very manual fashion.

After a while I started having problems with my back which became more serious and crippling as time went on until, in January this year, after having MRT scans etc I was diagnosed as having degenerative Spondylolisthesis, a condition where the disc in the spine has worn away.

I informed the committee of my condition and that I now had to wear a lumber support while I waited for a spinal fusion operation. To my dismay they worked me even harder giving me more manual construction work etc until in April of this year I could not carry on any longer as it was literally crippling me. I am now off sick, awaiting my operation in agony.

Due to the nature of my contract my employers would only pay me four weeks' wages. I've therefore gone from a Head Greenkeeper salary to statutory sick pay of £64 per week which has devastated me and my family. It seems that I am being punished for doing no wrong.

I have made various claims such as personal accident insurance etc., but have been rejected as they all say that I suffered progressive damage and can't pin down a specific incident. The worst may be to come as I am not 100% sure that after my operation in September I will be able to return to the manual type of work involved in greenkeeping.

I would be most grateful if anyone reading this letter could offer me advice on my current situation, or perhaps be able to redirect my greenkeeping knowledge into another career linked with the sports turf industry such as a technical sales representative, for example, as I am sure there must be a pot of gold at the end of the rainbow in such a large industry.

Name and address withheld.

Please direct any correspondence through BIGGA Headquarters.

Tee markers: Rules don't make sense

I read with interest Mr Gordon Moir’s letter in the June issue of Greenkeeper International on the recent amendment by CONGU to the positioning of permanent tee markers.

Before commenting specifically on this issue, I would make a general observation and that is that the reasons for the changes to the Standard Scratch Score and Handicapping Scheme 1983 have in my opinion been poorly communicated to clubs. Also there appears to have been very little if any consultation with interested bodies such as BIGGA and AGCS. As a result some of the changes have not been well received particularly the proposed change to tee areas.

However, the proposed amendment to the positioning of permanent tee markers from a minimum distance of two yards
For old times’ sake

I wonder if any readers can help me? For 40 years I was in turn draughtsman, designer, works manager, managing director, chairman and owner of H Pattinson & Co Ltd, before we sold the family firm four years ago.

In the ‘30s, ’40s and ’50s we made hundreds of the Pattinson Golf Course Tractors at Stanmore Hill Works – big machines with wide steel spiked rear wheels (or trak grip pneumatic tyres) for pulling the gang mowers of the time for fairway cutting, carting and other jobs on the course and sports grounds, powered by Ford 24 HP engines.

Does anyone know the whereabouts of one that I could buy for old times sake as a memento of my past? I am sure that there is a Club somewhere with one at the back of the shed kept in reserve or even working still. The enclosed photo will be recognised by any of the old school of greenkeepers although sadly most of them will have retired by now, like me!

I would like to give it pride of place on my small estate here working or not.

Ken Hemingway
Coles
Higher Hulham Rd
Exmouth, Devon EX8 5DZ
Why setting up your own workshop at your club could be the best move you'll make, writes ROLAND TAYLOR.

The transition of golf from a relatively exclusive sport to one that is now enjoyed by increasing numbers has, for most clubs led to a complete appraisal of course management.

All the media hype the game now receives has meant players are seeking higher standards. This places pressure on course managers and greenkeepers to meet these requirements.

The combination of this and the number of golfers using the courses has created a situation where keeping equipment in tip top condition and working is of paramount importance.

As a result, more clubs are now taking the decision to set up their own service department. While each club has its reasons for deciding this action, a number of external influences also play a major part.

Over recent years we have seen the demise of many professional outdoor power equipment specialist service departments.

This in turn has placed greater pressure on those remaining. Also, manufacturers and suppliers have increased their distributors' areas. While one is sure that every effort is made to provide service back-up, often available resources can be severely stretched, especially at the height of the mowing season.

For a greenkeeper with a machine down and a club tournament in the offing, time is of the essence. In this situation those clubs with in-house facilities can deal with the problem quickly and efficiently and have the equipment back in operation with the minimum loss of time.

One major aspect that could have an important bearing on the decision to install workshop facilities is the Health & Safety Provision and Use of Work Equipment Regulations.

Under section 6 Maintenance it states the following:
1. Every employer shall ensure that work equipment is maintained in an efficient state, working order and good repair.
2. Every employer shall ensure that where any machinery has a maintenance log it is kept up to date.

In addition, the regulations cover routine and planned preventive maintenance.

Another factor that could influence the decision to go for a workshop is the size and range of machinery the club operates. With what is available in today’s market it is easy to have a fleet valued well into six figures and more. In these cases there is every justification to insure this investment is maintained to the highest of standards.

Setting up a workshop facility is a big step, so where does one start? First the management has to be convinced of the viability of the exercise and the expense is justified.

Presentation is all important and on laying out the reasons there are a number of areas that need to be covered. It should be remembered that this is not a short term investment, so many of the costs can be spread over a period of years and the equipment can be depreciated against profit.

As part of the case, the cost of maintaining the fleet needs to be analysed.

Invoices for the last five years will supply much of this information. As a very rough guide when predicting future expenditure the hourly rate charged by specialists is between £30 and £40 per hour, depending on the location.

The objectives also need to be set out and these should include:
- Keeping equipment working with minimum of downtime.
- Maintaining machinery in tip top and safe condition.
- Taking care of the investment.
- Having greater control on day-to-day course management.

These are just some suggestions of areas to cover. In addition each course manager or greenkeeper will have their reasons and requirements for putting forward the proposal.

Getting a workshop operational will also need to be included in the plan. A location will be required. It is not just a question of setting-up in an old shed or barn. An area within the existing machinery storage facility could be suitable or a purpose built building might be necessary. Where ever it is sited there are some basic requirements if one is to get achieve the maximum benefit.

These include concrete floor, plenty of light, heating, good ventilation, weather proof, security; easy access for all machinery and a hard surface area outside for cleaning. It does not have to be a massive structure, just big enough to take the largest machine in the fleet. There should be with enough additional space to work comfortably plus space for benches, grinders and other workshop equipment.

Equipment
Initially there are some essential pieces of equipment that will be needed.

Apart from wall benches, the installation of a hydraulic bench is highly recommended. It eliminates lifting and thus reduces the chances of back injury as well as making for easier access which in