

## EDUCATION

lems, but most have been ironed out by now. The cost of the system will be about A\$3½ million.

One or two observations about greenkeeping in Australia, at least in W.A. could also prove interesting to my friends back in Britain. They seem to have to use a great deal more chemicals and fertilisers because of the leaching out of the sandy soil. This adds to the thatch problems of course, so maintenance is far more intensive than in the UK. It is not uncommon for whole fairways to be sprayed out and restolonised with couch grass. This gives a good cover but after a while thatches up again if not maintained properly. Courses out here are run more on American lines, the superintendents have a good association and are very professional in their approach to the job. They are mostly well paid and a car is normally part of their wage package. A four wheel drive vehicle is essential on a course of this size, as are the many trial bikes used to get around the course. Most staff carry a radio to contact each other



and it is surprising how much time this saves.

Naturally I have gained a great

deal of experience since working here and am learning new things daily.

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THE MASTERS OF FINE TURF PRODUCTION



# Improving on perfection at Shipley

John Lelean visits the Yorkshire Course where the staff rebuilt a green in thirty days

Only a few miles from the Sports Turf Research Institute at Bingley in the lovely Harden Valley, there is a golf course where the greenkeeping staff have accomplished a minor miracle. Under the direction of the head greenkeeper, they stripped, excavated and re-built their fifth green and had it ready for play in just a month!

Yes, you are reading it right, by careful pre-planning, the total commitment of the staff and the unreserved backing from club officials, the par five, re-shaped fifth green was ready for play and putting perfectly in 30 days.

It would have been less, but September if you remember was a wet month in Yorkshire.

The architect, organiser, motivator and principal workhorse for this project was Patrick Murphy, Head Greenkeeper at Shipley Beckfoot Golf Club, a parkland course with a touch of moorland on the residential outskirts of Bradford.

Shipley Beckfoot is one of two courses in the area, the other known as Shipley Northcliffe, is a little nearer Bradford and more exposed, giving extensive views towards the Yorkshire Moors.

Beckfoot has a pedigree, which in racing terms would put it into the thoroughbred class.

Because of increasing demand for membership from the affluent owners and managers of the thriving woollen industry, after the first world war, the club acquired 123 acres in the picturesque Harden Valley to build a new course and moved lock, stock and barrel from their 18 holes at nearby Moorhead in 1921, where the land proved difficult to maintain.

The controlling body at that time certainly knew what they were doing. Not only did they acquire a



Excavation starts on the fifth green. Lifted turf laid out on polythene sheeting on edge of the fairway.

superb tract of land, but capitalised on their good fortune by engaging Messrs Colt, Alison and Mackenzie with James Braid to design a course to be proud of.

Harry Colt was the master, Charles Alison and Alister Mackenzie his associates, though Alison went on to design courses in Spain and Japan, Mackenzie who has many Yorkshire courses to his credit found fame and fortune in the USA.

Colt's designs are legendary, Stoke Poges, St. George's Hill, the two courses at Wentworth and the New Course at Sunningdale as well

as the revision of both courses at Royal Portrush on the Antrim Coast.

My friend and mentor Fred Hawtree II, has said British golfers do not care who designed their course. If only those who sport designer golf wear with such pride would campaign for similar tributes for golf course architects, there would be at least a brass plaque at Shipley Beckfoot if not bronze statues at the entrance.

But to return to the subject of the exploits of Patrick Murphy, the Scotsman with the Irish name, here is a working head greenkeeper, who manages to perfection the balance

**Figure 1 Calculation table used at Shipley**

Area	6.35mm	12.7mm	25.4mm	50.8mm	76.2mm	101.6mm	152.4mm
sq.metres	.25ins	.5ins	1 inch	2 ins	3 ins	4 ins	6 ins
	cubic metres	cubic metres	cubic metres	cubic metres	cubic metres	cubic metres	cubic metres
100	0.7	1.4	2.5	5.0	7.8	10.1	15.1
200	1.4	2.5	5.0	10.1	15.1	20.1	30.6
300	2.1	3.9	7.8	15.1	22.9	30.6	45.7
500	3.2	6.4	12.8	25.6	38.4	50.8	76.4
1000	6.4	12.8	25.6	50.7	76.4	101.5	152.5
4047	25.6	51.2	102.8	205.7	308.5	411.4	617.0

*The above figures give the amounts of soil compost etc required to cover given areas to various depths (unconsolidated)*



# UP DATE

Spring 1989

ON THE GREEN

## Ransomes GT. State-of-the-art greens mowing

This low profile Greens Triple allows you to achieve as near perfect greens mowing as possible. The GT incorporates a host of unique features giving you precise control over all mowing operations.

At its heart is an electronic control box which allows the operator to pre-determine the precise working speed and cutting ratio in order to achieve the finish required. This setting can then be maintained for every green or be re-set to suit changing conditions.

Cuts per metre are displayed on a digital read-out and engine hours and cutting hours are recorded.

The GT is all hydraulic. Hydraulic drive provides instant forward and reverse, the hydraulically driven, 9 knife floating head cutting units give 1.68 metre working width and can be



quickly interchanged without tools.

Any combination of units can be locked out of work by simple toggle

switches and power-steering gives effortless control and exceptional manoeuvrability.

## Classic greens mowing from Ransomes Super Certes

The pedestrian controlled Super Certes is designed and built specifically for the professional user who demands only the best mowing machine for his greens.

The smooth running petrol engine has 'easy pull' starting and separate clutches operate the landroll and cutting cylinder.

The high quality, 10 knife cutting

cylinder ensures the finest possible finish giving 138 cuts per metre. Height of cut can be micro adjusted from 3 to 13 mm.

There are two models to choose from giving 51 or 61cm cutting width and optional extras include power driven wheels for easy transport between greens.



*The precision-engineered Super Certes.*

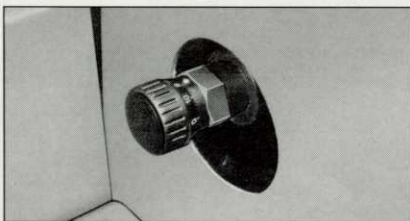


# It's quieter, it's smoother - the Motor 350D

The Motor 350D incorporates two new features for the coming season. First, a new, higher capacity Kubota water-cooled diesel engine which still produces 38 hp but at a lower speed of 2350 rpm for considerably lower noise levels.

Second, a variable speed control that lets you vary cylinder speed independently of forward and engine speed, ideal for coping with long, lush grass.

The Motor 350D is tailor made for cost-effective fairway mowing giving fast mowing and simplicity of operation plus real savings in running costs.



*The variable speed control is located within easy reach of the operator.*



*The Motor 350D with new 38hp diesel engine.*

Mowing efficiency comes from the five Sportcutter floating head cutting units giving a cutting width of 3.5 metres.

All hydraulic drive and lift, instant

forward and reverse and power steering provide outstanding manoeuvrability and ease of handling, making the Motor 350D a leader in cost-effective fairway maintenance.

## Versatile Gangs

Ransomes trailer hydraulic gang mowers – 5-unit Hydraulic 340TG and 7-unit Hydraulic 465TG – give you more flexibility in the choice of towing vehicle and all the benefits of hydraulic power gang mowing on the fairway.

These mowers are self-contained and designed for a quick hitch-up to various types of towing vehicle of suitable horse power provided it has a standard PTO shaft and towing point.



*Hydraulic 340TG*



*Mounted Hydraulic 5*

## Overcome undulations

The Mounted Hydraulic 5 is designed for fairways and semi-rough where undulations can make mowing difficult.

The five floating head cutting units give a crisp cut and excellent ground following. With hydraulic lift and lower in seconds, the Mounted Hydraulic 5 will crosscut fairways and it also folds for easy transport.

## Thatch control

The Verticut 214 controls the lateral surface growth of turf on fairways by verticutting, thereby preventing the build-up of thatch.

The floating head action of the verticut units follows undulations preventing damage to the turf.

Verticutting encourages new growth and ensures that surfaces are maintained in peak condition.

Verticut units are available as extras for the Mounted Hydraulic 5 and Motor 350D.



*Verticut 214*



## TEES & SURROUNDS

# New diesel power unit for the Motor 180D

A new 10.5 hp twin cylinder diesel engine with electric starting now makes the Motor 180D more efficient, more economical.

This most versatile ride-on triple with its 7-knife fully floating head cutting units ensures the best finish for your tees, approaches and surrounds.

Instant forward and reverse drive lets you trim close to obstructions, and the single rear wheel steering makes it easy to manoeuvre around them. All 3 cutting units are lifted and lowered hydraulically.



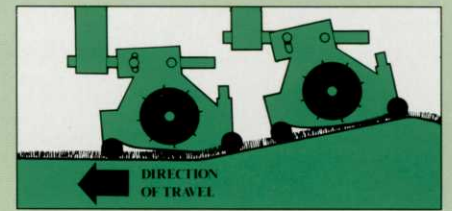
*The Motor 180D has 1.8m cutting width.*

All round the new Motor 180D represents the best in compact ride on mowers for performance and efficiency.

## 'Sportcutter' Floating Head Cutting Units

One of the principal reasons for Ransomes premier reputation at golf courses throughout the nation is the quality of the hydraulic 'Sportcutter' fully floating head cutting units.

These units pivot fore and aft as well as laterally, producing an even height-of-cut on fine, undulating turf and helping to prevent 'scalping'. The floating head units include a front roll to ensure an immaculate finish to turf all around the course.



## BUNKERS

# Super Rake gets super new engine

The Super Rake has a new 12 hp water cooled diesel engine with electric starting, all-hydraulic drive and single pedal operation. Transport speeds up to 9 mph. Mid-mounted weeder attachment with adjustable hydraulic depth control is standard equipment.

The alternative Motor Rake has an 8 hp petrol engine and mechanical drive.

*Super Rake takes the hard work out of bunker maintenance.*



## TURF MAINTENANCE

# New Top Dresser for TMV

The incredible versatility of the TMV turf maintenance vehicle, is further

extended by the introduction of a new top dresser.

The Ransomes Turfco top dresser drives new soils down to the base of turf, evenly and accurately. Regular top dressing levels the turf and promotes decomposition of thatch. Special top dressing mixtures will also improve drainage and stimulate turf growth.

In addition to the TMV's standard hydraulically tipped dumpbox, there's a host of other attachments available from other suppliers including: aerator, roller, seeder, sweeper and more.



*A high-speed rotating brush drives top dressing down into the turf.*

## Contract Hire Plan cuts costs

Ransomes Contract Hire Plan offers the business user all the benefits of operating Ransomes machinery without the capital investment for outright purchase.

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- Fixed inflation-proof rates for easy budgeting.
- The confidence of dealing with the best in professional grass machinery.



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NEW

# RANSOMES TURFTRAK SYSTEM

A versatile new concept in grounds maintenance for all seasons. From the height of summer to the depths of winter the Turftrak will be kept busy on a host of work from mowing grass to clearing debris from the course.

There is a choice of three power units. The Turftrak 2, two-wheel drive with 16hp watercooled diesel engine. Turftrak 4, four wheel drive, 16 hp or the more powerful 21 hp model.

Each model provides economical

operation through the diesel power and hydrostatic drive plus positive traction and outstanding manoeuvrability. The four-wheel drive units are quite at home on rough, wet and inclined terrain.



Turftrak 2 with Triplex Reel Mower



Turftrak 4 with three blade rotary mower

## Grasscutting versatility with all the trimmings

For mowing there's the **Triplex Reel Mower**, its hydraulically driven cutting units giving a cutting width of 1.88 metres, and a perfect finish for approaches, green surrounds and backs of bunkers.

The **Rotary Mower** offers a new level of mowing performance on regularly maintained grass areas.

The choice of three cutting widths – 1.21, 1.52 or 1.82 metres – means there's a mower to suit a wide range of applications.

There's a host of further attachments

available including two sizes of **Dozer Blades**, 1.21 and 1.52 metres, ideal for moving sand, earth, aggregates, etc.

The **Slip Scoop** has a big capacity scoop bucket and a 7-position manual trip for easy dumping.

The labour-saving **Sand Trap Blade** with hydraulic 'front and rear' tilt angle is ideal for bunker maintenance.

Leaves and the most stubborn debris are quickly cleared with the **Power Blower**, it will even clear away water laying on the course without fear of damage to the turf.

## TURFTRAK QUICK CHANGE SYSTEM

All attachments are changed in minutes without the need for tools.

Simply drive forward until the hydraulically activated hitch arms engage the attachment arm pins and locking clamps.

Then install the drive belt. Simple.



Dozer Blade

Slip Scoop

Sand Trap Blade

Power Blower



No 1 in caring for courses



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## ON THE COURSE

between the administration, budgeted finance, management of staff and still performs a skilled working day out on the course.

His daily log lists all the activities performed by the greenstaff, notes the weather conditions, highlights any problems encountered and records means to overcome them.

**T**he fifth green as can be seen by referring to the log had been causing problems for some time. Thatch was building up despite regular spiking, slitting, hollow tining, verti-draining and even mole ploughing. The basic problem was bad drainage and compaction, so the decision was made to dig it up.

Patrick went to the club committee with his proposals, well armed with a plan of campaign, backed by figures of the quantity of materials required, man hours to complete the job by direct labour, together with an estimate of the total cost.

Now this was not as difficult to produce as it may seem at first sight, once Patrick revealed his secret formula for the benefit of greenkeeper colleagues.

His table of quantities closely guarded over many years first appeared in a Sutton Seed Catalogue now yellowed with age but carefully preserved and this has proved invaluable. (See Fig 1.)

Together with the experience of rebuilding four other greens at Beckfoot, in previous years, each time learning pitfalls to avoid and methods to improve, he set out in the first week of September last year completely confident of completing the task on schedule.

The major problem that had to be overcome was where to store the massive piles of material needed to re-build the 486 square yards of green and the green surround. The only place without turning the course into a motorway construction site was the club car park and here, the Green Chairman Mr Fred Wilkinson, Patrick's greatest ally, paved the way to obtain Committee support.

With such a tight schedule to complete in a month all the material had to be deposited on site, despite turning the club environs into a builders yard. To fill the base he ordered 101.5 cubic metres of single



*Hard limestone used in the re-construction of the fifth green at Shipley.*

size large hard limestone about an inch and a half across. A type obtainable locally that has proved not to break up, which was laid to a depth of about 4 inches.

On top, small stone half inch size was laid to a depth of two inches and this required 50.7 cubic metres.

A similar quantity of sharp sand was ordered for the next layer also to a depth of two inches.

**F**inally a three to one sand/soil mix was needed for the growing medium laid at a depth of



## ON THE COURSE

nine inches. For the green construction, surrounds and other projects Patrick ordered 254 cubic metres.

To the calculated costs had to be added the cost of labour, 700 hours in all including overtime, plus the use of existing club equipment and fuel.

Polythene sheeting used to lay out the turf on banking above the green site was donated by one of the members, as were the stakes used for marking out.

The overall size of the existing green was 510 square yards, but it was decided to reduce this to 486 square yards (27 × 18), by taking seven yards from the front and adding four yards at the back.

A bunker on the right of the green was removed completely as it had proved difficult to maintain, the one on the left had the position changed and graded.

It was decided the new green would be built into the existing contours of the land, level from side with a 35 inch fall from the back to the front, carefully measured so the fall was five inches every 12 feet.

To overcome the previous water-logging a grid drainage system was introduced not only on the green area but extending into the green surround and then linked up to the existing fairway drains which ran on into a beck.

The bunker was also drained and drainage pipes extended well into the green approach area.

The method of operation was first to cut a temporary green in front of the work area so play could continue throughout September. Then all the turf was lifted and laid out on



Drains and stone carpet completed. Sharp sand laid to a depth of two inches, ready for the nine inches of top mix. Note the marker posts at 12 foot centres with coloured bands showing the level to be achieved. The flag post for the temporary green can be seen in front of the workings to allow play to continue throughout the month.

the polythene sheeting, grass side up on the bank overlooking the working area.

The plastic sheeting prevented roots growing down, but kept the turf moist and had it required watering it was easy to hose over.

Once the site was excavated the drains were installed covered by around half an inch of stone above and below. Marking stakes were put in exactly 12 feet apart to 12 foot centres, so working from back to front each stake was precisely 12 feet apart.

Here Patrick used another neat trick. Using coloured tape he marked each post to the depth each layer of material would be laid. The bottom mark was at 4 inches for

large stone, the second up 2 inches for small stone, the third up a further 2 inches for the sand layer and the fourth at 9 inches for the sand/soil growing medium. (Fig 2).

Each level allowing for the 5 inch fall every 12 feet, keeping the side to side measurements level. To achieve accuracy he placed the first stakes in the centre of the construction.

Once the two lateral drains were dug and laid, the method of operation was to divide the working area into four sections taking a line from the back of the green to the front. Starting at section one, the levels were built up from the drain to stone carpet, small stone, sand and then sand/soil mix. (Fig 3).

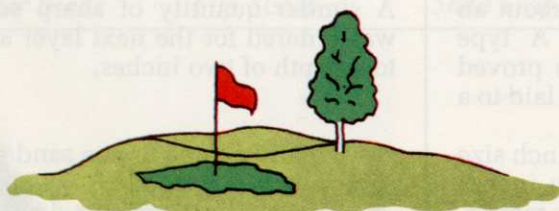
The nine inch layer of three parts sand and one part soil was mixed by

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Uses: Reseeding, golf courses, sports pitches, racecourses, bowling greens, cricket pitches, land reclamation and ecologically sensitive areas.

## farmmura green <sup>2</sup>

FARMURA GREEN is specially formulated FARMURA TURF with the addition of iron and wetting agent. Designed particularly for areas needing a high standard of presentation and a deep green colour without excessive growth. Applications of FARMURA GREEN will encourage the development of finer grasses, improve drought and disease resistance and increase soil bacteria count.

Uses: Golf greens, bowling greens, tennis courts, lawns, golf fairways and racecourses.

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A tailor made product manufactured to your specific requirements. FARMURA-N can be formulated with other major nutrients to produce a specially balanced semi-organic fertiliser to suit your planned nutritional programme. Available to your requirement by discussion and quotation FARMURA-N offers major savings in time and equipment by only making one application.

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*Natural solutions to get you growing*

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A major development in liquid iron application. FERROSOL, a unique iron-nitrogen bonded complex provides a quick green-up of the turf without over stimulation of growth and without wheelmarks or blackening. FERROSOL in liquid form can be mixed easily in water and is immediately available for spray or drench application. Ideal for use at any time when turf is in need of green-up boost throughout the year.

Uses: Turf, fine turf, golf greens, bowling greens, tennis courts, lawns, shrubs, etc.

## FARMGRAN <sup>5</sup>

An easily spreadable natural seaweed soil conditioner and improver. Applications of FARMGRAN will improve soil structure stimulating micro organisms and aiding moisture retention. FARMGRAN supplies all known trace elements in an organic chelated form for rapid assimilation by plants and fills the "fertility gap" so often present under today's high input management practices. Can also be incorporated into top dressing.

Uses: Golf courses, sports fields, landscaping, seeding, planting and land reclamation.

## farmmura pre-plant <sup>6</sup>

When trees or shrubs are lifted prior to transplanting a large proportion of the finer root structure is lost and consequently the plant is subject to much stress and re-establishment becomes more difficult. FARMURA PRE-PLANT is a creamy liquid root dip which reduces dehydration of the roots and provides a protecting semi-permeable 'skin' protecting the roots from damage yet allowing them to breathe and take in moisture.

Uses: All plant, shrub and tree transplanting situations.

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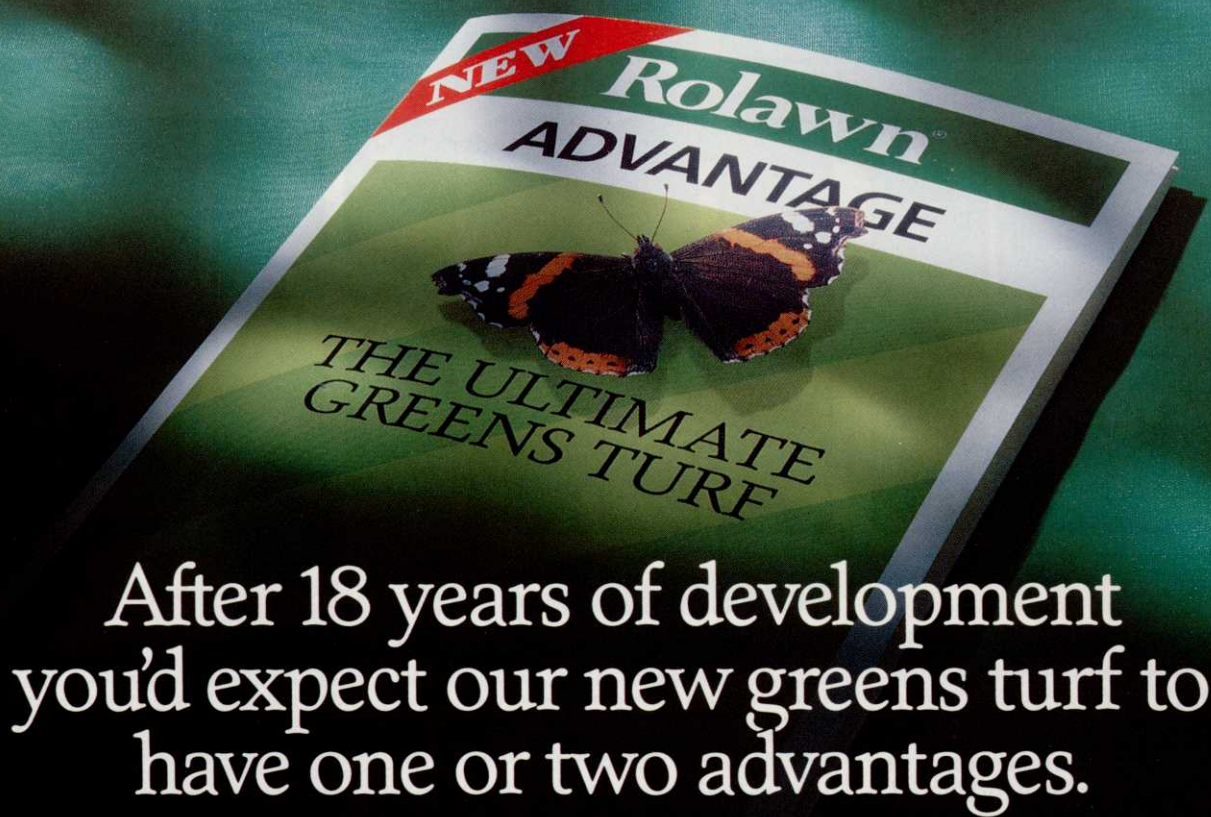
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- There's fast delivery nationwide (within 12 hours of harvesting) from Rolawn's own network of Turf Depots.
- And of most importance, there's peace of mind -

through Rolawn's fastidious reputation for quality. Quality achieved through meticulous checking of every part of every field. (Ask any top greenkeeper and he'll tell you as much).

If other turf growers promise similar advantages, just check their credentials.

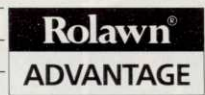
You can check ours by filling in the coupon and sending (FREEPOST) for the Rolawn Advantage Information booklet. Even better, you could book an inspection visit to see the turf for yourself. We'd be delighted to welcome you.

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Please send me without delay my copy of Rolawn Advantage - The Ultimate Greens Turf  I/we should like to inspect the growing turf  Please send details of your other turf and how I can obtain it

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# ON THE COURSE

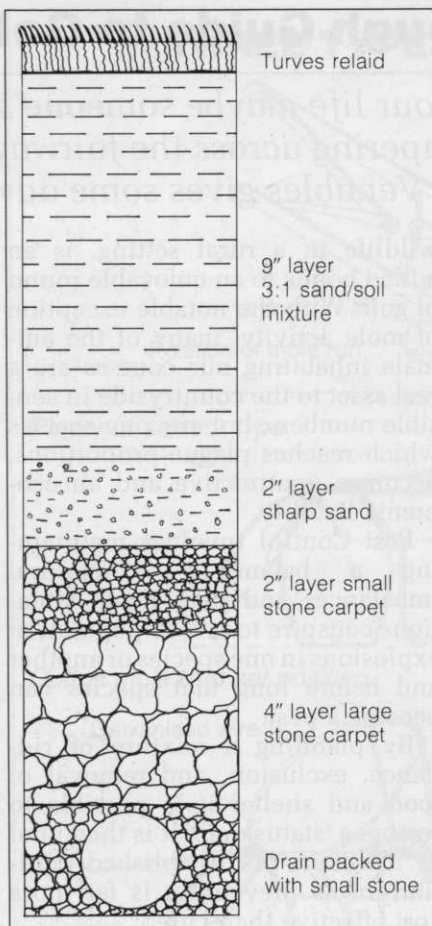
Pat Murphy using the bucket on the back of the McConnell digger. He built the mix up in layers, dropping three buckets of sand to one of soil and then turning them over until the consistency was right.

The reason behind this method of operation was to avoid machinery churning up the various levels whilst working on the next. It also avoided potential damage to the drains.

Finally the top layer was raked level, the marker posts removed and the turf relaid together with the additional turf bought to replace damaged or worn pieces.

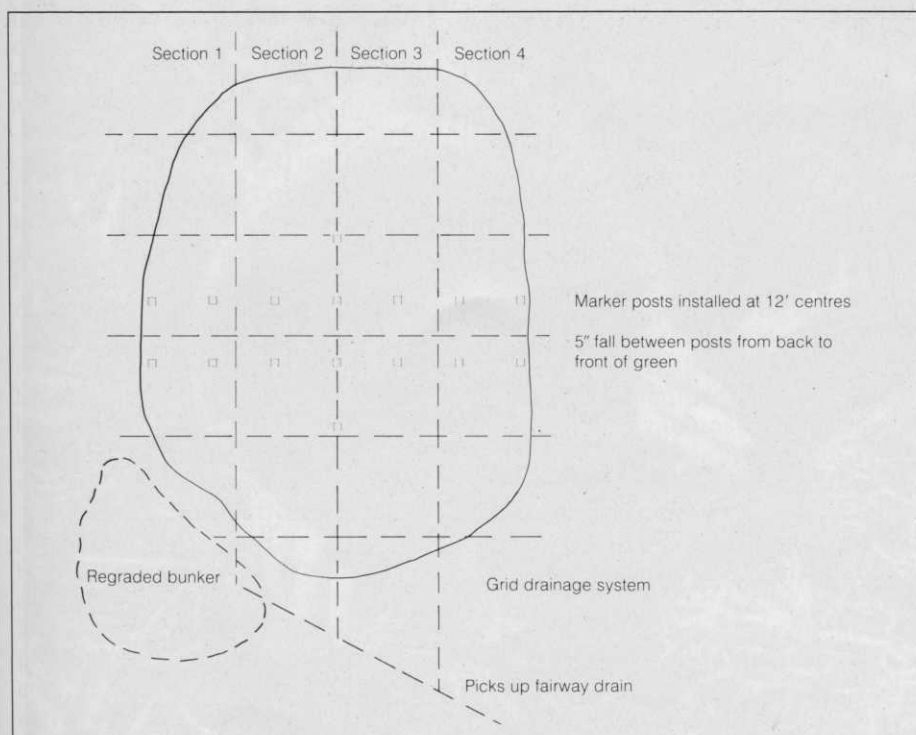
**T**he benefits have been considerable according to Green Chairman, Mr Fred Wilkin-son. He said the members now have a green playable throughout the year where in the past this original 1921 construction was wet through most of the winter and often unplayable after a heavy downpour during the Summer months.

Patrick is the first to pay tribute to his staff who were totally involved in the operation from the start. They each had a job to do in addition to maintaining the course during a busy period of play and were prepared to work through all the daylight hours, to finish the job on time.



**Fig. 2**

When completed the second section was treated in similar fashion and so on until all four areas were built up in similar fashion.



**Fig. 3**

One of his five greensmen is fully qualified with a City and Guilds Certificate, another has completed phase 2, two are on the first year course and in addition he has another assistant greenkeeper.

Facilities for the staff have been regarded as a priority at Shipley Beckfoot and when alterations to the club house were completed last year a new greenstaff complex was incorporated into the building.

Patrick has a small but adequate office, leading into a superb security chemical store. A tiled shower, with lockers for overalls and boots complete the section which has received high praise from the local environmental health inspectors.

## Figure 4 Costs for rebuilding

Sand	£2,033.00
Large stone	£639.00
Small stone	£319.00
Top soil	£350.00
Additional turf	£385.00
Drainage pipe	£150.00
Wooden sleepers	£320.00
(Required for supporting machinery on course)	
Hire of turf lifter	£100.00
Hire of JCB	£150.00

**Total £4,446.00**

The greenstaff have their own rest room at the end of the block with a microwave oven, refrigerator, radio, TV, dining table and chairs, a shower with hot and cold water, wash basins and toilet.

Down one side of the room there are built-in padded benches used by all of the staff who sleep on the premises on Friday nights so they are able to start work at crack of dawn on Saturday morning, cutting greens, raking bunkers putting out the tee markers and generally ensuring the course is in perfect condition for the weekend competitions.

The early start suits everyone. The course is ready for play when the first golfer arrives at 7.30am and the staff have finished their morning's work well before breakfast.

Patrick Murphy has been the Head Greenkeeper at Shipley Beckfoot Golf Club for 19 years. He moved down from Scotland to take the job in February 1970, relinquishing a similar position at West Linton Golf Club in Peebleshire.



## MANAGEMENT

### A Greenkeeper's Rough Guide to Golf Course Pests

*What is a pest? The bane of your life maybe someone's affectionate pet or the delightful fluffy bunnies scampering across the fairways or playfully digging holes in the bunkers. Andrew Venables gives some advice on pest control.*

**T**he dictionary definition of a pest is 'a troublesome or destructive person or creature'. Some greenkeepers have been heard to include golfers under this first category, but the law of the land forbids the ultimate solution, so this leaves us to consider the second category of creatures.

The average golfer seeks an interesting test of his ability in attractive surroundings where both the fairways and greens comprise top quality turf.

For the purpose of this article I will confine most of my observations to the damage caused by two pest creatures, rabbits and moles, ignoring the sometimes greater pest, Mr Average Golfer, who can cause havoc on fine turf through his uncontrolled wielding of a lump of metal at the end of a long handle.

For many the opportunity to see

wildlife in a rural setting, is an added bonus to an enjoyable round of golf. With the notable exception of mole activity, many of the animals inhabiting our courses are a real asset to the countryside in sensible numbers, but any one species which reaches plague proportions, becomes unattractive and an economic liability.

Pest Control involves maintaining a balance - unnatural imbalances and man made situations conspire to favour population explosions in one species or another and before long that species can become a pest.

By planning a mixture of riddance, exclusion, and removal of food and shelter it is possible to restore a 'status quo'. It is then vital to maintain the established equilibrium as prevention is far more cost effective than cure.

So much of the work of pest control is 'fire fighting' and very much more expensive than anticipating the problem with a 'fire prevention' programme.

The scope of the whole subject of pest control is infinite due to the variation in sites, circumstances, conditions and personal opinion of the degree of damage one is prepared to accept, but I will expand on the control of some of our native mammals and insects which commonly cause grassland problems and suggest some suitable remedies.

**T**he mole was mentioned earlier and is an ideal subject to begin.

Native to England and Scotland and Wales, there are no moles in Ireland other than the 'informing variety'. Their main runs follow the





# MANAGEMENT

line of hedges, streams and ditches, fanning out into a maze of feeding tunnels like the veins of a leaf.

Their shovel shaped front feet dig quickly into fresh ground where they seek out a staple diet of earthworms and grubs. Soft moist soil in large quantities is then thrown up, completely disproportionate to the number and size operating in a given area.

Moles are solitary creatures meeting only to breed in the Spring. The observant mole watcher can spot the signs when the long straight surface runs become visible sometime between February and June.

Just one litter a year is normal, raised in a nest of grass or dry leaves in an enlarged part of a deep tunnel. Gestation lasts about four weeks and the litter of between two and seven off-spring are ready to leave the nest at five weeks old.

Appalling mole problems when the hills appear thick and fast overnight, seldom yield more than five or six to the acre.

The village trapper, his methods wrapped in mystic and family folklore can keep the population in check, but little more.

To eradicate mole damage entirely there are just two commercially effective methods and maybe a couple of 'also rans'.

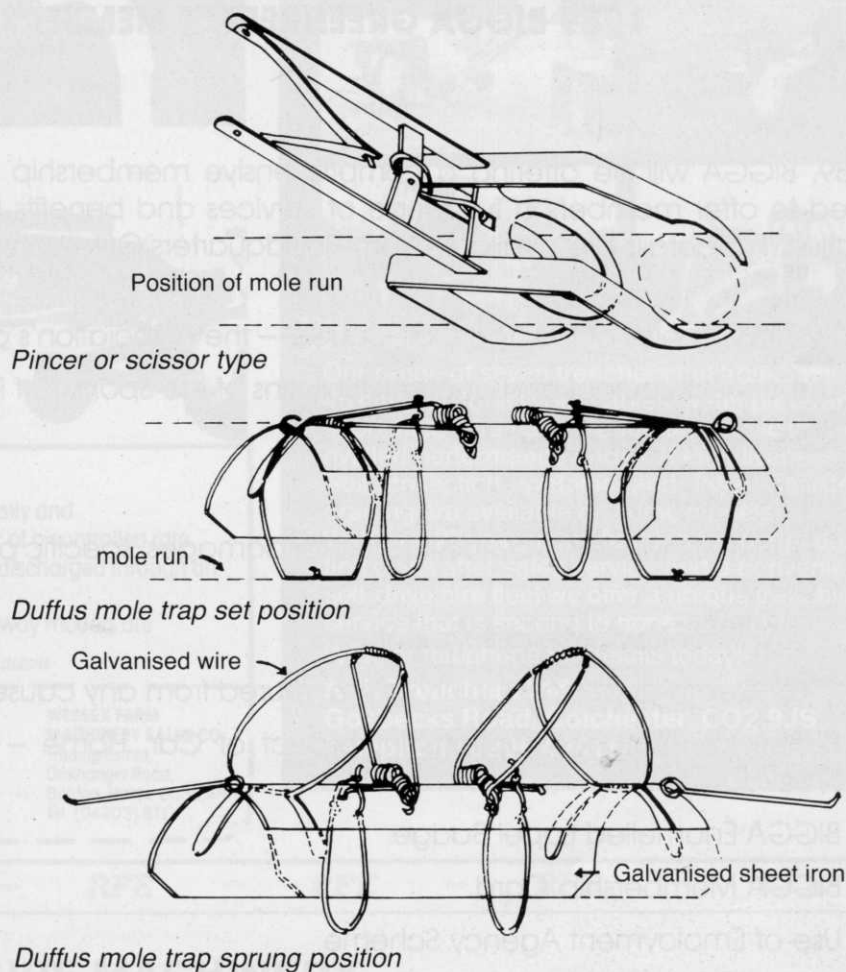
The most cost effective is poison baiting, requiring far less time and labour than trapping and when done correctly is a perfectly safe method both for humans and other animals.

Poison baiting using strychnine can be carried out on all agricultural land including golf courses subject to MAFF and ADAS controls and guidelines. It should be done by a fully trained commercial operative not only to eliminate the risks that this deadly poison can create, but it is sound business practice to give the job to someone who knows what he is doing and who can complete the work in the most cost effective way.

The cost of eradicating severe mole problems can vary according to the site, severity of infestation and neighbouring land. It can be as low as £1.00 an acre with a small problem on a large acreage to £5 an acre where the concentration of activity is confined.

A 'one-off' blitz is the most efficient method of removing moles,

## THREE TYPES OF MOLE TRAP



but a follow-up treatment to mop up the inevitable survivors is vital for the long term control.

This can be easily achieved by site training your own staff in the use of gas pellets and mechanical trapping.

Where poisons cannot be used by the professionals, trapping is the next best method, but it is an art which has to be taught.

The correct use of the scissor and Druffus mole traps is best shown on the course with practical demonstrations. It requires a high degree of skill not only in positioning the trap so the wary mole is caught, but in locating the main run used as the mole's motorway to the feeding area.

Traps placed out near the mole hills or haphazardly by the uninformed is depressingly ineffective. Considerable care must be taken to excavate the trap site ensuring nothing will give the mole a clue to the presence of danger.

The hands that set the trap dare

not carry traces of nicotine, oil, or other noxious substances or the foraging mole will perform a smart about turn and find another route.

Once the area is cleared, watch out for a further invasion. Moles from neighbouring land not under your own control will start reinfestation as soon as the boundaries and tunnel systems are empty. Kill on entry is the only answer, otherwise within weeks it is back to square one.

And now to the other methods! Poison gas tablets can be useful but they are not very reliable particularly on sandy or well drained soil as most golf courses are.

You can shoot them with a 12 bore as long as someone can spare the time to sit in the field and wait for a soil heave.

Mole smokes will move them on to dig a whole new set of tunnels and hills once the old runs become too smelly for comfort.

Sprinkled broken glass, white-thorn branches, old exhaust pipes,



## 1989 BIGGA GREENKEEPER MEMBERSHIP PACKAGE

For 1989, BIGGA will be offering a comprehensive membership package for greenkeeper members designed to offer members a full range of services and benefits in line with a progressive professional Association. Full details are available from Headquarters Office on request, but the package will include:

- (i) Monthly copies of the 'The Golf Course' – the Association's official publication.
- (ii) The annual Journal and quarterly Bulletins of the Sports Turf Research Institute.
- (iv) Full Employment cover.\*
- (v) Full Personal Injury Cover.\*
  - \* Pursuit of civil claims by the Insured for damages, specific performance or injunction arising from or out of:
    - (a) A contract of employment.
    - (b) Death or personal injury of the Insured from any cause.
- (vi) Beneficial Insurance Options in respect of Car, Home – Building and contents, and Vehicle Breakdown.
- (vii) BIGGA Enamelled Lapel Badge.
- (viii) BIGGA Membership Card.
- (ix) Use of Employment Agency Scheme.
- (x) Personal Accident Cover.

This cover will provide capital sums under the following headings:

1. Death. £5,000.
2. Loss of use of one or more limbs and eyes. £5,000.
3. Permanent total disablement lasting 104 weeks at the end of which being beyond hope of improvement. £5,000.

However, a most attractive feature of the negotiated scheme will enable members suffering temporary total disablement in excess of seven days to receive a weekly income of £25 for a maximum of 104 weeks.

Also, it will be possible for members to purchase additional units at their own cost within the scheme and a pamphlet incorporating an application form will be made available upon payment of subscription.

**NEW** Members will also receive a BIGGA car badge sticker and golf bag tag.

**NB. Existing legal and insurance covers terminate at 31st December 1988 and it is essential that *current* members renew with effect from 1st January, 1989.**

**Accordingly, they will be separately invoiced during early December and should *not* therefore complete the application form in this edition of 'The Golf Course'**