

HOBBIES

Our new feature, finds out what greenkeepers get up to in their spare time.

Here's something you didn't know about me...



Name: Don Clark
Club: Orsett GC
Position: Course Manager
Age: 46
Hobby: Breeding

How would you describe your hobby?

"Breeding a thoroughbred race horse - This is the first time that my mare has been put in foal. I bought her after she retired from racing, nearly five years ago. Although she never won (only placed once from five races), she is reasonably well bred. We keep her in the same village that we live in and my wife normally rides her. Based on the foal the mare produces and whether it races will be a deciding factor, on whether the mare will go to stud again."

How and when did you get introduced to breeding thoroughbreds?

"I have had an interest in flat racing for many years - to witness a top class racehorse in full flight is an incredible sight. Latterly I have enjoyed studying bloodlines and breeding of the thoroughbred. I have found it interesting to look at the large commercial bloodstock organisations and study their breeding patterns with the aim/dream of producing perfection in the racehorse. Over recent years I have had shares in racehorses and have enjoyed their lack of success - through this ownership I have been fortunate to visit several training establishments and meet with meet with owner/breeders."

What is it about breeding thoroughbreds that appeals to you?

"Last year I decided to try and breed from my Mare - rather than employ a stud to manage the whole process (as a commercial breeder, would do), I felt that the whole experience - from researching suitable stallions to the birth of the foal - would be fulfilling.

The Mare has to be accepted as being suitably bred for the Stallion. After which, I arrange and send her for her holiday at the stud where she is to be covered.

After three months research and checking bloodlines to find the type of stallion that would produce the type of foal I was looking for from my Mare, and after visiting various stud farms, the Stallion I decided to use was a group one winner at Newmarket, in the early 90s.

The most appealing thing, is how hands on I have had to be - After the Mare came back from the stud (she was there for three months) and was confirmed to be in foal, I had to be in close contact with my local equine vet, to discuss and organise a nutrition programme for the Mare with the Stable Yard Manager, and now I have had to start making plans for the foaling and the future well being of Mare and foal. Although I am a member of the thoroughbred breeders association, I am not a commercial breeder of racehorses. This is for the fun and the hands on experience that most commercial breeders would not have - their interest is purely long-term financial gain."

Have the thoroughbreds entered any competitions and/or do you have any plans to enter them into competitions?

"The mare only raced five times, three times as a two year old and twice as a three year old. Unfortunately, she did not really grow between the ages of two and three. Therefore, a decision was made to retire her from racing (fully sound).

My aim would be to keep the foal until it nears racing age. If it is able to go into training, it will be placed with a trainer and hopefully win many races. Although it would be a great thrill if a racehorse that I have bred just makes the racetrack."

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Have we got it right on Waste and Recycling?

We are all aware of our responsibilities under the latest waste regulations...or are we?

David Mears reports

The Hazardous Waste Regulations came into effect in July 2005 and required all producers of Hazardous Waste to register with the Environment Agency (EA). We will assume that all concerned will have registered and obtained their 'Premises Code' and that you are renewing registrations annually. Your waste management company, on your behalf, often does this.

If your business produces Hazardous Waste (and every greenkeeping/grounds maintenance department does), you also have a 'Duty of Care' to ensure that it is properly disposed of. This means selecting a waste management company you know you can trust, who will operate your service efficiently with trained personnel, providing correct and approved waste containers, audit trails and full certification and Consignment Notes. (Consignment Notes must accompany hazardous waste when it is removed from your premises. The responsibility for ensuring Part A and B of these notes are completed correctly, rests with you). You may prefer, as most do, to allow your waste management provider to complete the documentation for you.

categories of EEE included in Schedule 1 of this legislation, covering among others; toys, IT equipment, household appliances and lighting. The list of products under each category is huge but examples include; TV's and monitors, computers, fridges, microwaves, radios and phones, printers, and fax machines. The Act and the schedule in full can be seen at www.opsi.gov.uk/SI/si2006/uksi_20063289_en.pdf see this link for further information regarding hazardous waste: www.environment-agency.gov.uk/subjects/waste/1019330/1217981/

It may be an idea to review your current waste disposal arrangements to satisfy yourself that you are meeting your 'Duty of Care' requirements and fully complying with legal demands. The following nine-point check list may prove helpful:

1. Are we registered with the EA as producers of Hazardous Waste and know our premises code?
2. Is my waste service provider fully licensed and do they operate the service themselves?
3. Does my waste service provider have recycling facilities or take my waste to be recycled or does my waste go mainly to landfill and/or incineration?
4. Does my waste service provider supply us with five 200 litre UN approved containers, properly labelled for:
 - Waste oil,
 - Waste chemical packaging,
 - Waste filters,
 - Waste aerosols,
 - Workshop waste. (Remember hazardous waste can no longer be mixed)
5. Are my containers changed for clean ones at each collection?
6. Do I have a dated certificate from my waste service provider showing their EA registration number?
7. Is my waste service provider happy to collect and replace any or all of my containers frequently, or am I made to wait until I have accumulated too much waste? (Some will not take away less than 600 litres of waste oil for example)
8. What annual fee am I paying and is this value for money?
9. Is my waste service provider able to collect WEEE items and arrange other "one off" special collections of tyres or fluorescent tubes for example?

Recycling? Responsible operators will recycle, as does my own company, for example, recycling over 90% of the waste we collect. One example is the many thousands of plastic containers that are processed in a huge machine that chops the product into small plastic chips that then go on



Correct disposal of chemical packaging.

to be moulded into useful rot-proof items such as fence posts, seating, sleepers etc, that can be used on golf courses and at leisure and amenity sites.

It is important to recycle as much as possible and reduce dramatically as much landfill as is possible. Metals, plastics, paper, oil and more can all be recycled. Landfill costs are rising fast and, as a result, some waste operators are reducing the number of collections and/or putting up their prices! Apart from hazardous waste, which must be handled by the experts, many items from around the course can be composted rather than treated as waste. Twigs, small branches, grass clippings, cardboard (the pro's shop has vast quantities!), leaves and green kitchen waste can be processed in an appropriate machine to produce windrows. The way forward for us all is to take environmental responsibilities seriously and actively seek ways to reduce waste and recycle, protecting our children's and grandchildren's inheritance.

David Mears is Joint Managing Director of Course Care who operate a licensed Waste Transfer Station (licence no. EAWML/65417) offering national waste management services, with recycling and a range of Compost Makers. Websites: www.course-care.co.uk & www.waste-away.org



Course Care 5 cubic metre compost maker.

With the introduction of the Hazardous Waste Regulations came the introduction of items not included in the previous regulations (Special Waste Regulations) and those incorporated in the European Waste Catalogue (Hazardous Waste is defined on the basis of this list) and these include, for example; fluorescent tubes, batteries, aerosols, paints, varnishes and solvents, waste oils (including biodegradable and synthetic) and fuels, end of life tyres, CFC's and electronic items. The Waste Electrical and Electronic Equipment Regulations 2006 (WEEE) is due for implementation on July 1 of this year and a number of responsible waste management companies have prepared for this, some already operating collection services. There are 10



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PORTSTEWART GOLF CLUB

Method used to Rebuild Old Bunkers and Build New Bunkers on Fairways and Greenside

By Bernard Findlay, Course Manager

1. It is important to have an end result in mind before starting renovation, reshaping or citing of a new bunker. In the case of Portstewart we carried out research at other Clubs such as St Andrews and Carnoustie (acknowledgement and thanks are due to the management and staff of these golf clubs). Many photographs were taken that could be shown to Greens Committee Members before work began. The end result has been a high specification bunker that is durable, repeatable in any position, easy to maintain and a pleasure to look at (from the outside at least).



2. Having decided on a particular shape, edge out the rough shape and position that you want the bunker.

3. Use a narrow gauge digger to pull out the edged material leaving a hole in which the bunker can be built. Some of this material may be required for landscaping around the bunker.

4. If drainage is required it must be carried out at this stage (how wet might this hole be in the middle of winter?).



5. Prepare a shelf inside the hole that is very firm and perfectly level all the way around



Eric O'Neill (left) and Brian McConway, Deputy Course Manager (right), two of the bunker building Greenkeepers at Portstewart.

the bunker. The shelf must roughly reflect the shape of the bunker.



6. Choice of turf used for 'revetting' is very important. We sourced a turf that is grown on a clay soil – the clay bakes hard during the summer, does not crumble like sandier turf and offers strength and durability for maintenance and play. The turf is delivered by lorry in rolls that measure 5 meters long by 740 mm wide by 50mm thick (16 1/2ft by 29in by 2in). We then roll out the turf and using a board cut the turf into lengths that are 740mm long by 250mm by 50mm thick (a reasonable size for handling and building).



7. Place one row of turf on the prepared shelf, at this point stand outside the bunker and check that the shape is as desired.

8. The wall of the bunker is built at an angle of 65 degrees, we use a wooden frame set at this angle with a spirit level set along the edge that is on the ground and check very regularly that the angle is maintained. To ensure this angle is followed we set old flag sticks on the inside edge of the first row of turf that can then be followed all the way up.



9. Place the next row of turf on the last row maintaining the same angle throughout until the desired shape and depth is obtained. It is important to backfill behind each row of turf as you build making sure the sand/soil is well packed.



10. When we reach the point that the bunker

needs to be higher at the front than the back we use a turfing iron to 'feather' the ends of the turf so they blend in with the previous row.



11. When the revetting is finished and before turfing around the bunker starts, we put fresh sand in the bunker. The level of sand in the bunker is maintained at 4 rows 200mm from the top edge of the bunker, at the bunkers lowest point of entry and is maintained at this level all the way around the bunker. The shape of the sand in the bunker is such that a ball entering the bunker will roll away from the immediate edge and more into the middle of the bunker making it easier for a shot to be played (the golfers prefer this!).

12. The bunker is then blended into the surrounding landscape and turfed around. We start this work in October and the bunker is open for play the following spring.



13. Ongoing maintenance involves daily raking and once every week blowing sand off the face of the bunker, followed by strimming and further raking. A flymo is used to cut around the top edge because in the first season of growth the grass can grow very lush in this area. The blowing of sand off the bunker face is very important otherwise sand accumulates and grass grows through the sand, and over time the face of the bunker would become steeper than 65 degrees.



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Turf: A Growing Concern

By Tim Mudge

Picture courtesy of Norman Maitland

When it comes to choosing turf, you can't ask too many questions. Making the right selection can mean the difference between having your course in play or not. Establishing a good relationship with your turf grower is essential – after all, they want to supply you with the best turf for your course and you want nothing less than the best. Turf growers want to listen. Only by having a full understanding of the golf industry and by learning more about the issues facing greenkeepers, can they ensure that their businesses continue to produce turf that meets the needs of the people who maintain it.

A grower should have a genuine interest in understanding your turf needs and working with you – over time – to meet them. TGA member growers are committed to producing quality cultivated turf and work side by side with industry partners to ensure end-users receive the very best turf possible now, and in the future.

When considering greenkeepers' requirements for turf, climate change and changing maintenance regimes provide possibly the greatest challenge. The choice of cultivars in turf has always been critical but changing times will make it more so.

Growers have for years been aware of the need for grasses that are more tolerant of drought, flood, disease, shade, wear and, where there's a coastal location, salt. The major seed producers invest heavily in their breeding programmes and are working hard to develop cultivars which will address the issues facing greenkeepers in the future. Growers, as an end-user themselves, take a keen interest in these developments and work with seed companies in taking their developments through to the finished product. Ask your grower for a breakdown of the grass varieties in their turf, and refer to the 2007 BSPB/STRI seed listings to assess their suitability for your course.

It's important to find out how a grower maintains their turf before it's harvested. Those who produce top quality turf for golf courses invest heavily in the latest machinery and irrigation systems to ensure the turf grown on their farms is maintained in the way it would be on a golf course. Greens turf, for example, should be top-dressed regularly to prevent the accumulation of thatch and treated with fungicide to prevent disease. One of the distinct benefits of using turf rather than seed is the instant mature effect, and the maintenance of an appropriate mowing height at the turf farm is crucial. Tees turf should be maintained at

around 12-15mm, bent/fescue greens turf at around 6-8mm, and 3mm for creeping bent turf. In this way, turf should be playable within a short time of laying.

The key to successful turfing is rootzone compatibility. Problems of surface water retention will occur if the soil at the turf farm is substantially different from the golf course rootzone. It's important that you discuss with your grower the most appropriate growing medium for your course. Increasingly, greenkeepers are buying a custom grown turf using a specified rootzone.

These days, turf is delivered within hours of being harvested to arrive with you fresh. You should receive strong, uniform rolls, virtually free of *Poa annua* and free from disease, with a dense sward. During particularly hot periods of the summer, heat damage within the turf roll can be a problem. This can be avoided by harvesting turf in the early hours of the morning, and by the use of temperature-controlled lorries for longer journeys.

Having been given the opportunity to write for Greenkeeper International with a turf grower's view, it would be remiss of me not to mention some of the issues associated with turfgrass production at present. Changes in Health and Safety legislation have encouraged the change

from manual to automatic turf stacking. Growers have had to invest six figure sums on bigger and more technically advanced machines imported from the States in order to improve efficiencies and to meet the new regulations. Pesticide legislation – and a general feeling that as an industry we ought to think more about our impact on the environment - has meant that turf growers have to consider how they'll treat common problems without the use of chemicals. Last summer's drought provided new challenges for greenkeepers and growers alike in the South East of England. As an association, we've been proactive in promoting the beneficial role of natural turf in replenishing aquifers, and in calling for a 28-day exemption from drought orders for newly established turf.

Turf growing continues to evolve and innovate in anticipation of such challenges. Our members are constantly looking at ways to help greenkeepers meet new demands from increased traffic, changing legislation and environmental pressures. The need for low mowing and fertiliser inputs, concerns about clippings disposal and the possible withdrawal of effective Poa control chemicals have prompted investigations into the use of different grass species, with growers exploring the possible benefits of tall fescues, hard and sheeps fescues, and velvet bents to the end-user.

Meeting these demands will depend on a close and continuing dialogue between growers and greenkeepers. The TGA exists to support growers, and our ongoing research and development programme reflects our commitment to helping them meet the future needs of the sportsturf industry.

Tim Mudge is a member of the Turfgrass Growers Association.

The TGA invites readers to see at first hand the latest techniques and innovations for establishing, growing, harvesting, handling, transporting, laying and maintaining cultivated turf by visiting its turf show on Wednesday, June 27. The one-day event will be hosted by County Turf at its turf farm at Cleatham Hall Farm, nr Kirton Lindsey, North Lincolnshire. Please visit www.turfshow2007.co.uk for more details.



Picture courtesy of Norman Maitland



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Every Drop Counts

By Adrian Mortram

The summer of 2006 has undoubtedly had shades of 30 years ago, 1976, with high temperatures, clear blue cloudless skies and constant gentle breezes. As I have little memory of those halcyon days long gone by my father points out to me that automatic irrigation then was in its infancy, far less of a science. Water bowsers, known locally as gully wagons were hired from the highways department to drench the greens, automatic irrigation consisted of movable rotary sprinklers attached to a skid, which were constantly either moved or turned off by each successive passing four ball. Only the wealthiest and most prestigious clubs had fully automated pop-up systems but although the control systems were state of the art then, they would be rudimentary now. I am reminded of a recent television programme on the Apollo 13 mission, when all the technology available then could now be handled by a simple modern laptop.

Turf was certainly parched save for the relative greenness of the deep rooting dandelions and the clearly delineated lines above the herringbone drainage systems. The interference that the deeper rooting plays a major part in the sustainability of the sward, and resistance to drought. Deep aeration, where appropriate, is a vital tool

to combat drought measures and relieve inevitable compaction, not only to encourage a deeper root system and greater root biomass but also to improve infiltration and encourage more desirable grasses. Back in the 'dark ages' even though water bowsers discharged large quantities of water over the greens, most was wasted, as run-off promptly shed the valuable life giving water to the swales, hollows and invariably provided lush approaches to most greens.

The discussions then were as now, the choice of irrigating 'little and often' or a more 'sustained and heavier application less frequently'. Both methods are successful but for differing situations and neither can be condemned in the right environment. With predominantly soil based greens of a more traditional construction a heavier application may be the norm, and it may be necessary to apply water to six greens only on a rota system irrigating once in three nights. However infiltration rates must be assessed to prevent run off. On sand based greens of a more modern construction lighter rates of application may be required but more frequently to aid infiltration in both cases it may be advantageous to programme the irrigation system to apply a single pass of the sprinkler heads to dampen the surface of the turf before the required application is given, a dampened sward being more receptive to a later more vigorous application.

When discussing application rates and run times with both greenkeepers and turfcare professionals at both STRI courses

and BTME workshops, timing and rate of application is often confused. 'How much water do you apply', 'Oh, 10 minutes per station'. What does that mean in balancing evapo-transpiration rate and application rate? Very little, as sprinkler run times must be matched to application rate in millimetres and this can vary considerably, dependent upon pressure, nozzle size and spacing, among other factors.

Many, if not most irrigation systems are understandably not up to modern standards. Your irrigation system is often out of sight, out of mind until it is required to perform. Rather like suddenly having to run to catch a train and seeing it leave somewhere in the distance as you arrived sweating and breathless, not as fit as you thought you were.

Managing current systems and minimising water usage does not always involve selling the family silver:

- Like Thames Water, leakages within the system can be a problem, a weeping solenoid, a faulty ball valve on a tank, low head drainage at the sprinkler heads can all lose water.
- Sprinkler heads installed several years ago may have sunk, or the surrounding ground risen with continued top dressings over many years, causing the spray jets to be deflected thus creating poor and inefficient coverage.
- Loss of pressure at the pump station can result in poor head to head contact and inefficient application rates.
- Sprinkler arcs may be excessive and by reducing the arc setting and adjusting



the timings, water conservation measures can be achieved.

- The use of wetting agents or even the incorporation of water retaining polymers to aid infiltration and reduce evaporation.

However, although it is possible to wise up on the management of currently installed automated irrigation systems, fundamental changes may be needed in the future. Water will become more expensive and with more regulation will become more restricted. Water is the new political football. On the continent in Denmark for instance, some golf courses are restricted to 5000m³ per year. On most golf courses this is sufficient only for an 18 hole green and tees system. So what are the future alternatives:

- A well integrated and professionally designed irrigation system with matched performance sprinkler heads can save between 10% - 20% of your current water needs.
- Water farming, collecting and cleaning surface water and run off from roofs, car parks and roadways has to be seriously considered where appropriate.
- Abstraction by 'V' notches on ditches and when in spate streams/rivers, or wells/boreholes, and subsequent winter storage in reservoirs and lagoons has to be considered. Evidence is demonstrating that it is not the quantity of rainfall that is varying but the frequency and intensity; more like monsoon conditions.
- More research and exploration into potential use of alternative sources of water, grey water or treated effluent and even the potential of desalinated water, but perhaps,
- A fundamental rethink of design, management and maintenance strategies with the abolition of water guzzling grasses and use of more environmentally sustainable root zones and grass species.

There was good source of articles in the Drought issue of Greenkeeper International July 2006 outlining further practical measures. As I have said previously, water is a political football so let us not forget that those commentators who are against our frivolous use of water on golf courses and sports pitches will always present statistics to suit their cause. Rainfall figures for example will always be produced from the south east; average figures will



be presented over the past five, 10 or 20 years whichever furthers their cause best. Few commentators ever mention the encroachment of urbanisation on green belt with modern household aids and en suite bathrooms or that two thirds (60%) of potable water is used by industry and only 0.1% used for golf course irrigation. To put golf course irrigation into perspective:

- An acre-inch of farmed water will provide 22,000 gallons [100m³] or alternatively 25mm over a hectare 250m³.
- Two hundred and fifty [250] modern, four bed roomed houses flushing the toilet 10 times a day will use as much water

in a year as an 18 hole greens and tees system on an average golf course.

Yes, there are problems with water usage and it will probably get worse. Undoubtedly golf course usage will need to be monitored, systems updated and refined, but management systems and knowledge of water movement in the plant and root zone also needs greater understanding.

Adrian Mortram regularly presents a one-day seminar on irrigation at STRI training courses at Bingley and will be presented a two-day workshop entitled 'Using water wisely – Every Drop Counts' at this year's BTME.



In the Shed

Greenkeeper International brings you 'In the Shed', a puzzle page to keep you entertained when the weather forces you in or for when times are slow.

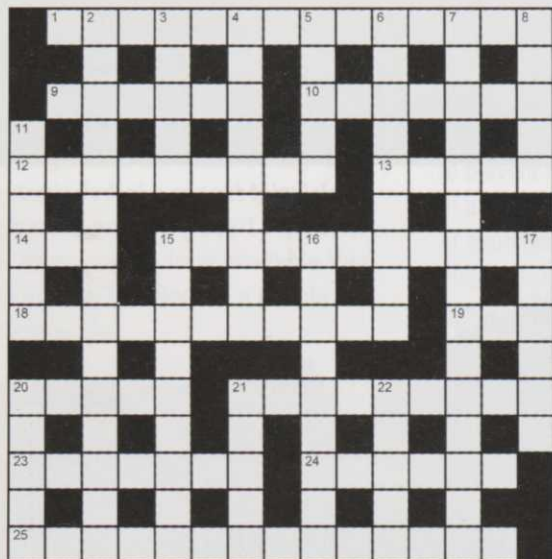
CROSSWORD - Compiled by Anax

ACROSS

- 1 Associated with the Christian Church (14)
- 9 Vitiate, weaken (6)
- 10 Peter —, actor who twice played Dr Who in film (7)
- 12 Events observed through senses rather than reasoning (9)
- 13 Sphere of activity often called the "fourth estate" (5)
- 14 Abbreviated name for large, metal-cased container, usually 1000 litres capacity (3)
- 15 Cheshire site of Nuffield Radio Astronomy Laboratories (7,4)
- 18 Bowl over, astound (11)
- 19 Title associated with knight or baronet (3)
- 20 Direction indicator (5)
- 21 Easily irritated or unpredictable (9)
- 23 "Union" - pertaining to northern US during its Civil War (7)
- 24 Essex market town north of the M25, its associated forest to the south (6)
- 25 Exhibit exaggerated changes of mood (4,3,3,4)

DOWN

- 2 Broadcasting which earns revenue through on-air advertising (10,5)
- 3 Name given to a mostly treeless plain, especially in Latin America (5)
- 4 Antonym of "resist" (9)
- 5 The capital of Ghana (5)
- 6 Flier of aircraft under development (4,5)
- 7 Wrongdoing caused by intense emotional upset (5,10)
- 8 Port on the Gulf of Guinea in Nigeria, formerly its capital (5)
- 11 Joint, reefer (6)
- 15 Uncooperative minor official (9)
- 16 Egyptian site of major WWII Allied victory over Rommel (2,7)
- 17 South African cloak made from animal hide (6)
- 20 Shortened name of Saunders/Lumley comedy series (2,3)
- 21 Boneless steak cut from beef tenderloin (5)
- 22 Subject under discussion (5)



QUICK 'NINE HOLE' QUIZ

1. Which sport uses a piece of equipment that is five foot wide and nine foot long?
2. Who played Basil Fawlty in 'Fawlty Towers'?
3. In which sport do players take long and short corners?
4. Who wrote the novel 'Fantastic Mr Fox'?
5. In which sport are competitors forbidden to play left-handed?
6. Who had a hit single in 1981 with 'Romeo and Juliet'?
7. Which Olympic sport needs a planting box?
8. Which band released the 1983 album 'Sports'?
9. What kind of sport is the game of futsal?

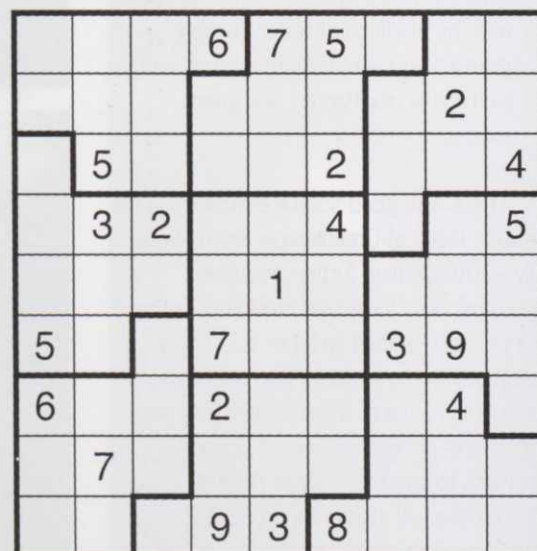
MONSTER SUDOKU

Fill in the grid so that every row, every column and every 3x4 box contains the numbers 1 to 9 and the letters A, B and C.



SQUIGGLY SUDOKU

Fill in the grid so that every row, every column and every 12 box shape contains the numbers 1 to 9.



ANSWERS TO ALL THE PUZZLES ARE SHOWN ON PAGE 58

Supplied by www.dailysudoku.com