



The electric-powered mower has yet to grab the imagination of the UK and European greenkeeping fraternity. Chris Squires, Head Greenkeeper at Rutland County Golf Club, shares his experiences as he enters the third season using this alternative technology.

A positive charge



Above: The bearings of the powered roller brushes are packed with a special lubricant to reduce friction

Rutland County Golf Club is set in 169 acres of gently undulating countryside, just north of Stamford, adjacent to the main A1 trunk road. It is owned by a group of private investors and construction began in spring 1991 on the site of a former mixed arable and sheep farm. Not long after that I joined the team to oversee the final construction phase and the subsequent growing-in period.

Cameron Sinclair was retained as the course architect and specified that

the greens and the tees should be constructed to USGA standards using a 70/30 sand and soil mix. The 18-hole course is a par 71 and we also have a 9-hole pitch and putt course and a 20 bay driving range. The main soil type is a heavy loam sitting on limestone, which is very free draining, although there is a small acreage of heavy clay that can cause minor water-logging problems.

We operate a mixed fleet of turf maintenance equipment with no par-

ticular allegiance to any one manufacturer, but select specialist machinery that best suits our needs and, importantly, our budget.

Therefore my greenkeeping facility houses a range of equipment from John Deere, Massey Ferguson, Deutz, Saxon, Kawasaki, Amazone and Textron. We also run a small fleet of E-Z-GO golf buggies, available for hire from the Pro Shop.

For turf maintenance around the complex we use two Ransomes Super

A positive charge

Name _____
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Certes 61 pedestrian mowers and a GT Classic for the greens, a nine-year old Fairway 350D that's still performing faultlessly, a Ransomes 180 for the tees, and a set of Ransomes trailed gangs with Magna reels for the semi-rough and Sportcutter reels for the driving range and pitch and putt course.

Our final piece of turf maintenance kit, used exclusively for mowing the greens, is the Ransomes E-Plex II purchased in March 1999. It cost around £17,500 then, although I'm reliably informed that it now costs just over £1,000 less. I'm a great believer in keeping equipment simple whenever possible so we opted for the version without power steering, but we included as an optional extra a set of powered roller brushes. 11-knife cutting units completed the specification.

Many greenkeeping professionals reading this piece will be highly sceptical when it comes to using electric greens mowers, but from my experience over the past two years I can honestly say, from the outset, that I'd certainly buy another one.

Legislation, pressure groups and technology, not to mention the recent fuel crisis in the UK, are just some of the factors that will result in our profession looking a lot more closely at the use of alternative fuels – and in the not too distant future.

America is already leading the way with stricter laws on noise pollution and California in particular, one of the most environmentally-aware states in America, is introducing legislation

Above right: The battery pack provides enough power to cut 22-23 greens per charge. Initial conditioning is crucial for optimum performance

Below: "The machine is almost silent", says Chris Squires. "Mind you, this does mean that you can hear what the golfers are saying about the condition of the course!"



restricting the use of petrol/diesel-powered equipment within 250 feet of residential property between 9am and 5pm, Monday to Saturday and banning all use on Sundays and holidays.

Here, in the UK, with increased pressure on our green spaces for housing development, more and more golf courses will have residential properties adjacent to their borders.

So, even ignoring prospective legislation, what has convinced me that the electric greens mower is here to stay? Well, the key reasons are its utmost simplicity and operator comfort. Maintenance is absolutely minimal. There's no engine oil, so there's no need to check the oil filter, oil levels or carry out oil changes; there's no hydraulic oil, so there's no threat of leaks and ruined greens; there's no fuel, so there's no need for in-line filters or the possibility of fuel contamination; there's no radiator so there's no water level checks to worry about.

All we have to do when we've run out of charge is park up in the bay, loosen the cell caps on top of the batteries, check the electrolyte level and plug in. Next morning we unplug, tighten the battery caps and off we go. No routine checks or maintenance procedures; just drive out onto the course and begin work. Installation of the recharging unit presented no prob-

lems, all we had to do was select the position in the shed for the machine, install a standard 3-pin plug socket and plug in the charger unit. Recharging takes approximately 7 hours and there's an automatic cutout when recharging is complete.

Best of all, there's the absence of noise. In transport mode the machine is virtually silent and in mowing mode the only noise is from the cylinders, so operator fatigue is almost non-existent. The roar of a high revving diesel or petrol engine is a thing of the past and you can actually hear the cylinders rotating and can be aware of any potential problems simply by listening to the reels. Mind you, this does have its drawbacks as you can also hear what the golfers are saying about the condition of the course!

If proof is needed to support the argument about operator comfort this can be seen on any morning when all my team try to get in early so that they can have first option to use the machine.

I also believe that you get a better cut with the E-Plex. The reel speed is faster and constant because there are no losses due to any inefficiencies in the hydraulic system or reduction in engine output. Therefore, you get more cuts per metre and a consistent number of cuts per metre.

So, what's the downside?

Well, you can't verticut or scarify





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with this machine. That's because you can't put too much load on the cylinders. The resistance generated by soil penetration will cause added drain on the power output. That's why it's vital that the machine is set to its optimum operating level at all times. We use a special lubricant; a very liquid grease for the bearings in the powered rear roller and brushes to lessen friction and the bottom blade to cylinder clearance is crucial, again to prevent too much load. However, this is best practice and helps prolong the life of the cutting units, whether you're running electric or diesel-powered equipment, so it's not really any different.

You'll find that you also have to plan more. You need to introduce a regime that ensures you run the batteries down to a minimum, every time. Here at Rutland, we cut all 18 greens and then use the remaining battery life to cut the pitch and putt greens.

Another aspect that requires thought, and indeed guidance from your dealer, is the initial conditioning of the batteries, and this should never be underestimated. It took us a month to condition ours from new, where we were able to cut just nine greens per charge before reaching our average of 22-23 per charge.

The machine now has over 590 hours on the clock and in the main has performed very well. There's been

the odd problem with a burnt out cylinder drive motor and a lift arm motor, but Textron's local dealer, Lawn Mower Services, has replaced these speedily and efficiently, under warranty.

After sales support was an important ingredient when we negotiated the purchase. We were entering into an area of new technology and it was vital that we had confidence in both the manufacturer and their dealer. Dave Hampshire fronts the sales operation for Lawn Mower Services and fully appreciated our wariness. He has provided advice and on-site support of the highest order supported by his team back at Wellingore, near Lincoln. My advice to any greenkeeper contemplating the purchase of an electric mower is be confident that your dealer can provide the service, back-up and moral support for your investment.

I'll conclude by restating what I said earlier and that is that I would definitely buy another E-Plex, especially with the advances in battery technology that will come on stream in the next five years. The benefits of effortless operation and operator comfort far outweigh any negatives and I'm sure that many more course owners and greenkeepers will be embracing this technology during the next decade, be it by choice or because of new legislation.

