IDENTIFYING OPPORTUNITIES

After developing a very successful range of flail verge mowers and hedge trimmers in the 1960s and 70s, as well as diversifying into other areas, such as the Ranger utility vehicle, a mower conditioner and a diet feeder wagon, Tony Turner, sold his business, Turner International (Engineering), to the Elswick Group in 1979. Here, in the conclusion to his series of interviews with Terry Richardson, he discusses some of the later Turner products he was involved with, the sale of his business and his continued involvement in engineering.

CLASSIC TRACTOR (CT): Tony, tell us what made you decide to sell your company, Turner International (Engineering) Limited, to the Elswick Group?

Tony Turner (TT): Elswick Group was a PLC operating in a number of different industry sectors. Because of the success of my hydraulically-powered flail verge mowers for the local authority and council markets, they made me an offer to bring our products into their stable and invited me to join them as a director on their board.

I became the main board director for the agricultural division. This was back in 1979. It seemed a really good idea at the time and it allowed me to utilise my skills in identifying good business opportunities to help grow the company.

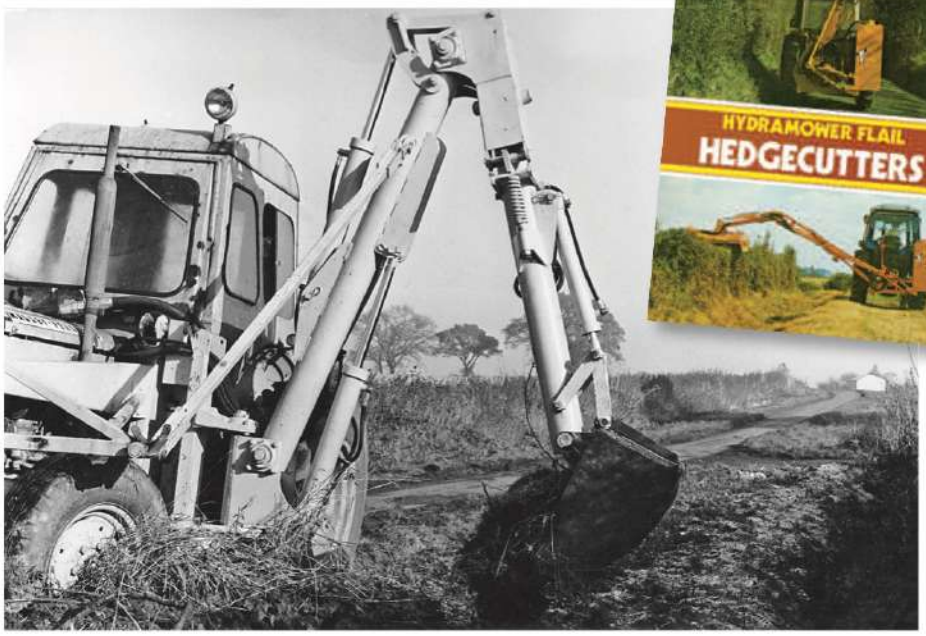
CT: What were the businesses in the agricultural sector of the Elswick Group?

TT: Part of the group included agricultural machinery dealers such as Paul Seward of York, Richardson & Calvert of Thirsk, Browns of Newcastle and Downs, a potato harvester manufacturer from Suffolk. My job was to look for companies to bring into the group to expand the portfolio. I was with the Elswick Group for around 10 years and together we grew the business into a very successful operation. For the last two years of that time, I became group business development director. I had always had my eye on acquiring Bomford & Evershed, because it was a serious competitor to Turner.

Bomford & Evershed had become very successful at selling flail hedgers to farmers and contractors; they were market leaders in that sector and were our biggest direct competitor. They had around 120 shareholders and I knew some of the directors of Bomford & Evershed. We, the Elswick Group, decided to put together an offer to buy the company. I think we bought it for around £6mn at the time. Unfortunately, after completing the deal on the Friday, the following Monday, 19 October 1987, was 'Black Monday'. The stock market crashed and as the share prices dropped dramatically we lost a lot of monetary value. But you live and learn.

Below: The Turner Hydramower S flail hedge trimmer was unusual as it had a centre-pivoting arm. This meant it could slew and cut on the left- or the right-hand side of the tractor, unlike the majority of conventional designs, which were left-hand cut only. Later versions had a reach up to 25ft. Photo: MERL.

Below inset: Tony Turner, now aged 85, sold Turner Engineering International to the Elswick Group in 1979. He joined Elswick's board as a director and was later involved in its takeover of Bomford & Evershed in 1987. After leaving Elswick, he formed GreenMech, the UK's leading manufacturer of wood chippers, in 1993.



Right: The hydraulic arm of the Turner Hydramower proved to be very adaptable. In this instance, it is providing the basis for a mid-mounted ditcher/digger attachment.

Inset right: This sales brochure for the Turner Hydramower 15 (15ft reach) and Hydramower 18 (18ft) flail hedgecutters was published in 1978, the year before Tony Turner sold the business to the Elswick Group.

CT: With your biggest competitor in the flail hedge cutter market now in the same stable as Turner Engineering, how did you manage the amalgamation of the two businesses?

TT: The Turner flail products had continued to be manufactured in the Turner International (Engineering) plant at Alcester, Warwickshire, which by then had been part of the Elswick Group for around 10 years. After we had acquired Bomford & Evershed in 1987, as a board we decided to move the production of the Turner products to the Bomford & Evershed manufacturing facility at Salford Priors in Worcestershire. This resulted in a dedicated manufacturing facility for flail products for the entire group. We also changed the trading name of that company to Bomford Turner. But following that move, I decided to resign from the Elswick Group.

CT: So what brought about your decision to resign from the Elswick Group when you were growing the business and there were plans to expand further?

TT: By that time, I had realised that what drove me as a person was developing new products, and that passion wasn't a good fit in the Elswick Group. You see, PLCs are very much run by accountants and financial wizards and there is no room for an individual or entrepreneur to be allowed to develop new products. The business was all about acquisition.

Five years before I left Elswick, I had become interested in the emerging market of wood chippers. While I was at Elswick we had taken on the UK distributorship for the Gandini Italian wood chipper. We sold quite a few and they were good machines. After I left the group in 1989, Elswick decided that they were not interested in wood chippers, so I decided to take on the franchise myself and marketed them under the Turner label.

Right: A Calor Ranger vehicle fitted with a front-mounted topper. The Ranger was designed by Tractor Research of Toll Bar, Coventry, the former design and research company set up by Harry Ferguson, and built under license by Calor and then by Turner.

CT: Were there any operational challenges when Elswick decided to combine the manufacturing of Bomford & Evershed and Turner International (Engineering) at the former company's Salford Priors site?

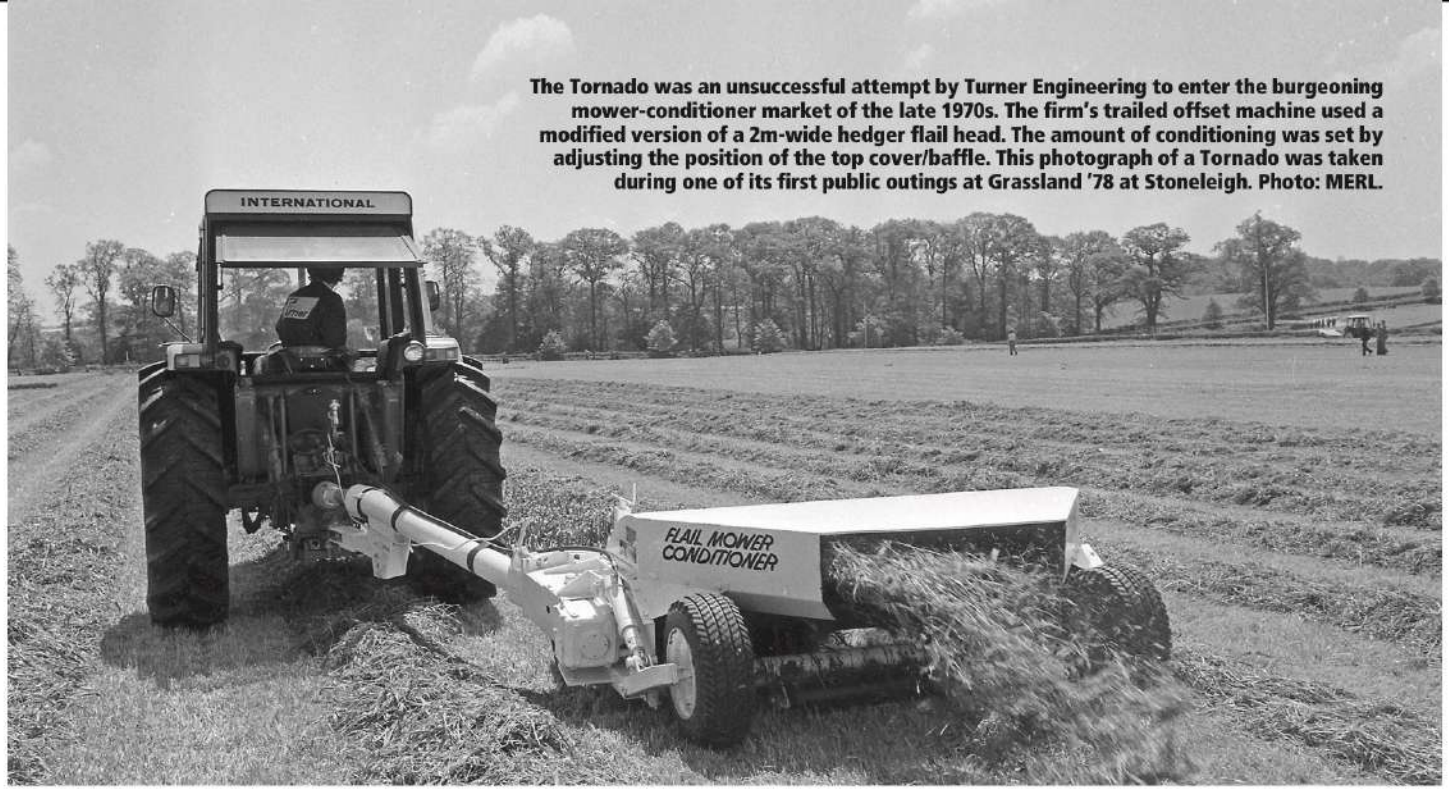
TT: With any amalgamation, there are going to be casualties. Bomford had around 200 employees in its plant and we had around 120 at the Turner factory, so there was quite a bit of duplication. One man who had worked with me since he was a teenager was Graham Satchwell, who had become my sales director. In the reshuffle, he lost out to Jock McLaren, who became UK sales director for Bomford Turner. When I took on the Gandini wood chipper franchise, I chose Graham as my sales director for that product – and he did very well. We were bringing it in from Italy and re-badging it. There wasn't much else on the market at that time, except for Timberwolf, which was producing a range of small chippers.

CT: Were there any contractual limitations on you after leaving Elswick?

TT: I had a two-year non-competing contract, which meant that I couldn't sell similar products for a minimum of two years. It didn't stop me from looking at or developing new technologies for my future designs, which I could possibly use after the contract had expired.

With Graham focussing on the wood chipper market, I spent a lot of my time developing smaller business units at the former Turner premises at Coughton, which we rented out to small, expanding manufacturing businesses. I also formed Turner World Mowers Ltd and set about developing a new design of microprocessor-controlled flail hedger with an 8m

Left: Turner Engineering modified the hydraulic flail arm from its Hydramower so it could be used for handling bulk materials. Here we see it loading road salt into a gritting lorry using a clam-shell bucket.



The Tornado was an unsuccessful attempt by Turner Engineering to enter the burgeoning mower-conditioner market of the late 1970s. The firm's trailed offset machine used a modified version of a 2m-wide hedger flail head. The amount of conditioning was set by adjusting the position of the top cover/baffle. This photograph of a Tornado was taken during one of its first public outings at Grassland '78 at Stoneleigh. Photo: MERL.

reach. It was a completely different design to what had gone before and I labelled it the ReachMaster.

CT: Was the ReachMaster hedge trimmer successful?

TT: We made some ReachMaster prototypes, then a Danish company that had sold Turner flails heard about it and approached me to buy the complete design, so I sold it to them and got out of that market.

Turner World Mowers did nothing that was in breach of the non-competing agreement. I was preparing the business for when the contract had expired. Elswick took legal action to stop me using my name, and even took me to the High Court, but I won, because of course Turner was my name.

CT: Did the Turner World Mowers Ltd business grow and expand?

TT: The wood chipper was the prime focus, as I had recognised that the wood chipper market could grow considerably. Having established the Gandini chippers under the Turner name in the UK, when I lost the franchise I decided to develop an 8in chipper. We strengthened a few weak areas and improved the performance, adding a few unique features. Within six months I had designed, developed and manufactured the prototypes of the forerunners of the wood chippers that GreenMech now supplies to customers all around the world. The formation of GreenMech Ltd in 1993 led to me producing the first large, professional, British-made wood chipper.

Left: This Calor Ranger is fitted with a Bunce rotary sweeper brush on its rear linkage and a spray or water tank, possibly for dust suppression on building sites or for road cleaning, on the front end.

Below left: One of the original Calor Gas Ranger 4 vehicles cutting a roadside embankment using a front-mounted topper. Production of the Ranger 4 commenced in November 1971. Note the LPG tank situated behind the operator (LPG was a popular fuel in the 1970s and 80s).

Below right: The 4 cu.m Turner Complete Diet Feeder was manufactured in Italy by Mutti and was brought into the UK and badged as a Turner product. It came with load cells so the operator could mix accurate amounts of feedstuffs to achieve the perfect diet. It sold well over a 10-year period, but new designs from Keenan and others gradually took over the market.

CT: What other products have you developed over the years, both in your own right and under the Elswick Group banner?

TT: In the Turner International (Engineering) days, before joining Elswick, we had developed a number of products, and some of the development continued when we joined Elswick. We often felt too exposed in focussing on just one sector of the market and always looked at diversification projects that could be developed from existing products.

The Tornado mower-conditioner that came out in around 1978 was one of the first products that used a flail cutting system – a variant of what we used for hedge cutting. It had an adjustable hood which controlled the level of conditioning. It was a 5ft 6in

Adove: The optional front or rear three-point linkage for the Ranger came from the Leyland 154. The Ranger was also available with front and/or rear PTO.

Left: This is one of the first prototype Calor Ranger vehicles, pre-the involvement of Turner International (Engineering). The operator is demonstrating how the Ranger could be used as a tug for moving aircraft or handling heavy equipment on-board ship.

Above: A sales brochure for the Turner Ranger. Based on BMC Mini car components, the 40hp Ranger was a multi-use four-wheel drive, four-wheel steer vehicle which was capable of mowing, spraying, fertiliser spreading, materials handling, road sweeping and a whole lot more.

Above right: A sales leaflet for the Turner Ranger LGP vehicle. The Ranger was powered by a 40hp Leyland 1.1-litre four-cylinder engine fuelled by either LPG or petrol.

trailed offset machine, but it wasn't particularly competitive. It seemed a good idea at the time but, in hindsight, it didn't do that well.

The diet feeder system for high-performance dairy and beef herds was becoming a popular concept at this time and we imported a machine from Italy, manufactured by Mutti, and branded it under the Turner banner. I spent a lot of time promoting this machine and we sold it for about 10 years. It had twin augers which mixed the feed material, and had a side conveyor for feeding over barriers. It had load cells to assist with ration mixing and had a capacity of around 4 cu.m. We had no involvement with the design or manufacture of this product.

The diet feeder was an excuse to upgrade my aircraft to a pressurised plane, which I used to fly customers to Italy and see the machine in action. Most of the customers were large dairy farming enterprises. We had a few dealers representing us throughout the UK. It was fairly early days for this type of machine. Keenan was just starting up when we were selling our product, but today it is probably the market leader.

CT: Did you develop any products outside the agricultural market?

TT: There was a small deviation from agricultural machinery which came about while my son Jonathan was studying at Shrewsbury School. The school entered a BP 'Build a Car' competition and focussed on creating a design of car that someone with a wheelchair could access and drive, without leaving their wheelchair. Although Jonathan wasn't directly involved in the project, I got really interested and we named it the 'InvaShrew'.

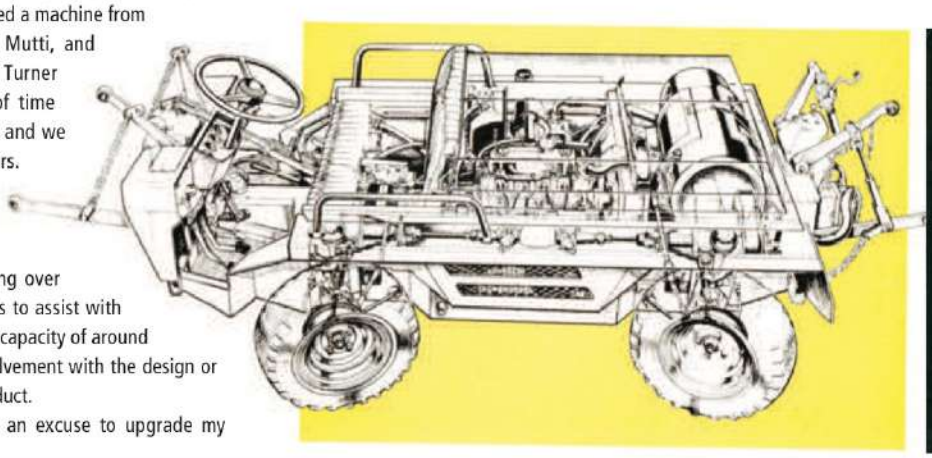
At Elswick Group, we were looking to diversify and I persuaded the board to consider this project and assess the possibility of taking on this challenge to develop something that would be unique and a commercial prospect. At the time, the National Health Service was looking for a replacement for the single-seat, three-wheel vehicle they provided at the time.

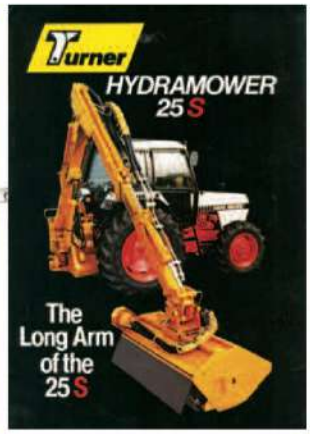
We made a public announcement that we were going to do this and within days I received a call from Tony Sheldon of Sankey Sheldon, a Midlands-based company which had also been developing a car for the disabled. Despite having spent a small fortune on getting it through the regulatory process, they had abandoned the project. Tony said to me: "Come and have a look at it and have a chat about the potential."

That meeting convinced me that getting the InvaShrew to market was beyond the resources of Elswick. However, to cut a long story short, we decided to take over the Sankey Sheldon project. It was based on BMC Mini car components, including the engine, drive-train, steering, sub-frame, etc. The rear wheel configuration allowed the back end to drop down to

Below left: A schematic drawing of the Turner Ranger showing its mid-mounted engine, front and rear steerable axles, LPG tank behind the operator and front and rear three-point linkages, the latter using parts from the Leyland 154.

Below right: Launched in the 1980s, the Turner Hydramower 25S had a reach of 25ft and an ability, virtually unique at the time, to cut on either the right- or left-hand side.





With its 8m cutting reach and microprocessor joystick controls, the ReachMaster flail hedger designed by Tony Turner was a departure from the original Turner hedge cutters.

Left: The microprocessor joystick on Tony Turner's prototype ReachMaster hedge trimmer made it simpler and more accurate to control for the operator.

Above: The flail head and arm of the ReachMaster tucked in behind the tractor during transport. Before commercial production commenced, the entire project was purchased by a Danish company in the late 1980s.

form a ramp, remotely-controlled from a handset. This allowed the wheelchair to enter or exit the vehicle. We called it the Elswick Envoy.

We built maybe 300 over a period of 5-6 years, but it wasn't sustainable. We then had a call from a company in Israel that wanted to buy the project, so we sold it to them. By that time, the NHS had moved on and decided that it wouldn't be providing a vehicle, but would provide funding for disabled drivers to use a standard vehicle that had been modified.

CT: There was a product called the Turner Ranger. Where did that come from?

TT: Back in the mid-1970s, I received a call from Tony Sheldon, who was Harry Ferguson's son-in-law. He was responsible for Harry Ferguson Research, which had previously built one of the first four-wheel drive Formula One racing cars. The technology they developed for four-wheel drive was patented and licensed to several German car manufacturers.

He invited me over to Coventry and while there I saw the Calor Ranger – Calor, as in gas. Harry Ferguson Research had developed this four-wheel-drive, four-wheel steer vehicle, again using BMC Mini parts. It was a design that Harry Ferguson had worked on and the agricultural division of the Calor Gas company had taken on the license to manufacture and market the Ranger in around 1970.

The design turned the Mini car engine sideways, mid-mounting it, driving the front and rear axles through two Triumph Spitfire differential assemblies. This gave the drive-reduction and allowed four-wheel-steer and four-wheel-drive. LPG was quite popular at this period and was part of the trend to move away from petrol and diesel. Calor only built 12 units before abandoning the project.

We took on the Ranger in the spring of 1975 and began to manufacture it at Coughton later in the year. We eventually went on to make about 300 machines. We didn't make any major changes, but developed a triple-cylinder mower and a front-mounted flail mower to fit the Ranger and fitted low-ground pressure wheels and a front-mounted sprayer. It became a multi-purpose vehicle, one that was used for fertiliser spreading, spraying, mowing and a whole lot more. We utilised the Leyland 154 tractor's small three-point linkage and front and rear PTOs.

For certain customers the Ranger proved remarkably successful. We sold quite a few to the Royal Navy for use on board ships as equipment movers; they were ideal because of the four-wheel-drive and four-wheel steer capabilities. They were only about 40hp, but ideal for these kinds of applications.

We hired out two Turner Rangers to the producers of the James Bond movie, The Spy Who Loved Me. In the finale of the film, Roger Moore escaped in a glass-topped submersible from a big super tanker. We were invited down to the final part of filming with the Turner Ranger and sat for an hour having coffee with Kurt Jurgens and Roger Moore. The Turner Ranger can be seen during a shoot-out inside the ship before it exploded.

CT: So what ultimately happened to the Turner Ranger?

TT: We had a lot of issues getting components at OEM prices and also at the same time compact tractors became more readily available and very popular. The Turner Ranger died of natural causes and market pressure. However, they have become something of an iconic machine. Recently, I received a call from a man in Australia who had originally been involved in the LPG conversion for Calor, and he wanted to acquire a Turner Ranger for posterity. We have two here at the Turner factory at Coughton that will eventually be refurbished to as-new condition.

We also have an Elswick Envoy that one day will also get restored and form part of our heritage. On that subject, if any readers know the whereabouts of one of our original Turner County Hydramowers, please let me know.

Another project was a special loading arm for a slurry tanker, which was based on a flail mower arm, similar to the Turner Hydramower design, with a hydraulically-driven slurry pump mounted on the end of the arm. We used someone else's tanker and added our hydraulic arm which was controlled from the tractor cab, and would extend into the slurry lagoon. This managed the filling of the slurry tanker remotely, avoiding the need for the operator to become contaminated with slurry. It just made everything easier and more comfortable for the operator. Likewise, we did a similar conversion that was used for loading gritting lorries with salt in the winter. There were endless possibilities and applications for the hydraulic arm.

CT: What became of the Elswick Group?

TT: Not long after I left Elswick, the group was acquired by another PLC, that wasn't really interested in the agricultural portfolio. The Bomford Turner part of the group was sold off to the Alamo Group in 1993, which is where it still is today. They continue to manufacture world class products, many of which came from my ideas and my team of designers and engineers. That's something of which I'm extremely proud.

CT: You seem to have a unique attitude to design, particularly concepts, and an ability to make minor changes to a design that makes a major difference to the efficiency of the operation. Where does that come from?

TT: My entire design ethos has evolved to offer machinery that is reliable, easy to operate and provides long-term reliability. For example, the current GreenMech wood chipper range has some of the best-selling products in their class in the global market. What gives me satisfaction is that in listening to the end user, we develop and manufacture machines that meet the needs and expectations of the operator. That's an important part of what I stand for. It's no good just producing a machine that works: it has to be easy to use, reliable and cost-effective.

You asked at the beginning of these interviews if I considered myself an inventor. Well, I'm not an inventor, but if I can see a way of doing something differently that could make the operation better, easier or more efficient, that's where I come from; those are my skills.

If I want to annoy the designers in the office – and we have four or five very capable designers in our company – I tell them that 80 per cent of my design ideas come from people I have met using our machines. Our job is to engineer those ideas into production reality. It's the final 20 per cent that is going to make all the difference – the difference between good and average, the difference between maybe and perfect.