This accident report summary is collated by the BMAA from information gathered. The information sources used are the Air Accident Investigation Branch of the Department for Transport (AAIB), the Civil Aviation Authority Mandatory Occurrence Reports (CAA MOR) and reports made directly to the BMAA by members and operators.

The individual reports within the accident summary are taken from the information available to the BMAA and where the BMAA has made comment this is clearly shown.

The BMAA does not investigate accidents and incidents, this role being the responsibility of the AAIB and the CAA who have the expertise, experience and funding for investigation.

All pilots reading the reports should try to make their own assessment of underlying causes and use the experience of others to enhance their own knowledge to help them become safer pilots.
Following a standard join and circuit for Runway 19, a glide approach was set up. The instructor reported that his student pilot under instruction initiated the flare, but there was no consequent reduction in the aircraft’s rate of descent. Despite pitching up further, and applying full power, the aircraft continued to descend and made heavy contact with the ground, damaging the nose section of the trike unit.

The wind at the time was reported as east-southeast at 5 to 7 kt, which placed the touchdown point on the runway downwind of adjacent farm buildings and a small copse. The instructor attributed the heavy landing to severe turbulence at low level.

**BMAA Comment:**

Obstructions up-wind of the landing area can have a significant effect on the speed and direction of the wind at the point where the aircraft is slowed for the landing phase. A good look from the overhead on arrival at the wind indications given by the windsock and then the terrain up-wind of the landing area can help predict where turbulence might lie. If there is a chance that turbulence might be present in the area where you plan to lose speed in the round-out and hold off consider a higher approach speed, later round out, powered approach or combination of all three. In all events be prepared to use the power to help maintain airspeed, right up until the aircraft has all the wheels on the ground and never be too proud to go-around and set up another approach. If you are visiting a new airfield a call asking for a briefing on local hazards can also help.
Prior to departure the engine had been run to warm-up and then switched off. Passenger entered the aircraft. Attempt to restart the engine resulted in cabin fire, both occupants exited the a/c and the fire was extinguished.

BMAA Comment:

The AAIB were unable to determine the initiating cause of the fire. However pilot's are encouraged to adopt the starting and warm-up techniques described in the Operating Handbook. In particular, attention is drawn to the importance of adopting the correct technique when starting a warm engine to avoid overpriming with the choke which, in some engines, can potentially lead to backfires and provide an ignition source.
Whilst landing on a dry grass runway the pilot lost control as the nosewheel was lowered to the surface. The microlight tumbled, causing minor injuries to both occupants. Based upon a subsequent inspection of the aircraft, the pilot thought that the nosewheel tyre may have been under-inflated prior to landing.

### BMAA Comment:

Assuming that the aircraft was inspected and found to be airworthy before flight there is very little the pilot can do in this situation. A puncture could have occurred on take off and would not have been apparent until touchdown. As a precaution a pilot should always avoid taxiing over rough or stony ground and keep away from freshly cut field hedges where sharp objects may be lying on the ground. Tyres are often overlooked however they play a very important role in aircraft suspension/undercarriage design. It is therefore critical to regularly inspect condition and ensure that the tyre pressure is set as per the Aircraft Manual.

For more information on this subject please refer to a past article in Microlight Flying entitled ‘Tyreology’ by Rob Hill.
The aircraft was on final approach to grass Runway 33 in good weather conditions. The temperature was estimated to be 18°C and the wind was light and variable. The pilot completed a normal touchdown on the runway centreline but the left wing then lifted back into the air. The pilot was unable to maintain directional control of the aircraft and it veered to the right and departed the runway. The aircraft then struck the landing direction ‘T’ which sits on a raised tarmac and metal platform. The aircraft suffered damage to its propeller, landing gear and the leading edge of the right wing. The occupants, who were uninjured, released their harnesses and vacated the aircraft normally. There was no fire.
After takeoff, the pilot had to apply more right rudder than usual to counteract a yaw to the left. This became progressively worse until the pilot ran out of rudder authority. Following two wide and slow circuits and two rejected landings, the pilot made a successful, but firm landing. He suffered no injury. Subsequent inspection of the aircraft identified that the rudder pedal limit stops and centring mechanism were damaged, which had restricted the travel of the right rudder pedal. Prior to the accident, the aircraft had been manoeuvred on the ground using a mechanical tug. The UK type certificate holder for the aircraft stated that they did not provide, nor approve the use of, mechanical towing aids for the aircraft. The right rudder pedal tube, engine mounts and nose strut also suffered damage.

Relevant extracts from EW/G2010/04/21:

No defects were noticed by the pilot during either the pre-flight inspection or taxi checks.

The aircraft is a monoplane having a tricycle undercarriage with nosewheel steering. The nosewheel steering mechanism and rudder are both mechanically connected to the rudder pedal assembly, which incorporates limit stops and a centring mechanism. Inspection by a representative of the UK type certificate holder identified that the right rudder pedal limit stop and pedal centring mechanism had been damaged. When tested, the rudder pedals were found to have normal full range travel to the left, but only limited travel to the right. The type certificate holder considered that the damage was consistent with the nosewheel having been turned with sufficient force to deflect it beyond its normal operating range. It was considered unlikely that a pilot would be able to apply sufficient force to the rudder pedals to damage either the limit stops or centring mechanism. The right rudder pedal tube was also found to have been distorted, as well as damage to the nosewheel strut and engine mountings. The damaged mountings resulted in the front of the engine being approximately 35 mm lower than normal.

The aircraft was normally parked in a hangar, which it shared with a number of larger aircraft that required the use of a mechanical tug. The pilot stated that he was aware that the tug was being regularly used to manoeuvre the aircraft, by connecting it to the nosewheel fairing attachment bolts. This had caused some cosmetic damage to the fairing and so the pilot had replaced the standard bolts with ones that had a slightly larger bolt head, making it easier to connect the tug. The pilot stated that damage to the right pedal limit stop and centring mechanism had most likely occurred when the aircraft had been manoeuvred using the tug. He considered that the distortion of the right pedal tube had probably occurred during the incident flight when he had attempted to apply full right rudder, and that both the nosewheel strut and engine mountings had been damaged during landing.

The UK type certificate holder for the aircraft stated that they did not provide for, nor approve the use of, mechanical towing aids for the aircraft type and that they had not issued a modification to the nosewheel fairing to enable such attachment. As a result of this event, the UK type certificate holder is considering the release of a service letter addressing the ground handling of the aircraft and the addition of an appropriate cautionary placard.
This event highlights a number of potential issues:

1. The risk that an aircraft maybe moved and subsequently damaged without the owner or operator being aware.
2. Aircraft can sustain damage that may not be visible from the exterior.
3. Modification of an aircraft can have unforeseen consequences.

For the issues stated above it is important to think about the following:

1. Always conduct thorough pre-flight checks, both externally and internally.
2. Whilst taxiing check controls are full, free and in correct sense as well as return to centre.
3. Conducting modifications to aircraft without proper approval can potentially be dangerous.
The pilot flew the approach to Runway 29 at 65 mph and the surface wind at the time was reported as 030°/6 kt. He was aware that there was a crosswind from his right and, therefore, adopted the 'wing-down' landing technique. As he began to flare the aircraft, the speed reduced to 50 mph and the right wing suddenly lifted. Despite the pilot increasing the engine speed, the aircraft landed heavily on the nosewheel, which collapsed, and the propeller struck the ground.

The pilot commented that the accident occurred because he did not carry out the correct crosswind landing technique for this aircraft type, which required him to maintain 65 mph until the aircraft had touched down.

BMAA Comment:

It is possible that, in this report, the APPROACH speed has been quoted in place of an implied TOUCHDOWN speed. In relation to crosswind landings, the SkyRanger POH states "fly a powered approach at a little higher airspeed than normal - around 55-60 knots CAS"... and later refers to “a short hold off without losing too much airspeed”.

Crosswinds are "challenging" in almost all aircraft types and need to be flown accurately.
Whilst undertaking power checks and at idle the engine back fired and stopped. Smoke started to appear from the cowling and a fire ensued. Extensive fire damage to the engine compartment, windscreen and propellor.

**BMAA Comment:**

The AAIB were unable to determine the initiating cause of the fire. Pilot's are encouraged to adopt the starting and warm-up techniques described in the Operating Handbook. In particular attention is drawn to the importance of correct engine handling during power checks to ensure the engine is up to specified temperatures and pressures before proceeding with idle and magneto/ignition checks. Wait for the engine to warm up before letting it idle.