



## New Forest Aviation Group.

website: [www.nfag.info](http://www.nfag.info)

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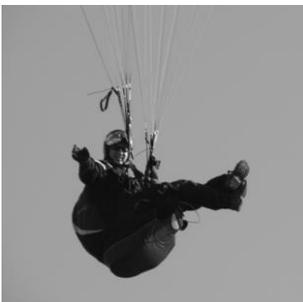
#### 2014 TALKS

13<sup>th</sup> June 'Flying the Lightning' by John Ward, a former Air Defence pilot  
11<sup>th</sup> July 'Hampshire & Isle of Wight Air Ambulance' by Ian Jeffrey  
August – No meeting  
12<sup>th</sup> September 'Early Testing of the F-35B – Lightning II' by Graham Tomlinson, former BAe Test Pilot  
10<sup>th</sup> October 'The Ordnance Survey Flying Unit' by Paul Marshall  
14<sup>th</sup> November 'Palmar – Bournemouth Airline' by Mike Phipp  
December – No meeting

#### 2015 TALKS

9<sup>th</sup> January 'Britain's Last Airliner – the BAe 146' by Steve Robson  
13<sup>th</sup> February 'London's Second Airport – Blackbushe' by Dave Ruffle

'And now for something different' might well have been the introduction to our May talk on paragliding by Neil McCain the chief coach at Wessex Hang Gliding and Paragliding Club. In fact the basic principles of flying are not dissimilar to gliding except that the controls are primarily using left hand and right hand to affect the wing to create a turn left or right, supplemented by weight shift, and climb or descent, supplemented by the speed bar.



Paragliding in Wessex started in 1980 but can be traced back to the 1960's but using a single skin rather than the double skin that we see currently. A single skin wing in the form of the Rogallo hang glider wing was researched as a possible controllable recovery system for space capsules, but when the ocean splashdown was decided on the parachute proved a simpler solution. A patent for the para-foil was granted in 1963 and this consists of a number of rectangular cells, open at the front but tapering and closed at the back. Hence in a flow of air the cell inflates due to air becoming trapped to form a longitudinal cross section resembling an aerofoil shape. A ram air parachute used by

sport parachutists uses a similar principle but the wing is straight whereas the head on view of a para-glider is an arc. Cells are partially open to each other thus allowing span-wise flow internally which aids stability so that if one cell momentarily loses air the nearby cells provide re-inflation. The pilot is suspended by suspension lines which pass via risers to the pilot's harness. The lines, with 400lb breaking strain, typically bifurcate twice before joining the wing at a cell wall. There are three or four rows from front to back and pulling down on the rear lines pulls the rear part of the wing down and causes the same effect as flaps on an aircraft – increase drag and higher angle of attack to produce a greater descent rate. Conversely, a speed bar, normally foot operated, decreases the angle of attack by pulling down on the leading edge. The pilot sits in a comfortable,

almost arm chair like, seat which contains padding for the occasional hard landing and an emergency parachute.

Soaring is the type most people see, at Barton-on-Sea or Southbourne, utilising the rising currents of air caused by a gentle Southerly wind striking the cliffs.

Cross country flights can be achieved by thermal soaring to gain height although cross country flights in the south east of England are cramped by controlled airspace.

Instruments that help in this are similar to those used in gliding such as a Variometer to detect rising air, a GPS for navigation and an altimeter. A combined GPS and altimeter can provide a record of a flight for replay on a computer. Neil brought his para glider in and all were amazed at the lightness of the material and lines although the overall weight with couch and parachute made for a heavy lift. A lively question an answer

session followed but Neil did not get a rush of applicants for his offer of a tandem ride. Overall we had a fascinating talk, well applauded, on something often seen on our coast without the knowledge of what is involved.

