

Youth & Education Support

Working Together for Youth Aviation



35x known UK Youth Build-a-Plane Projects (Nov 2018)

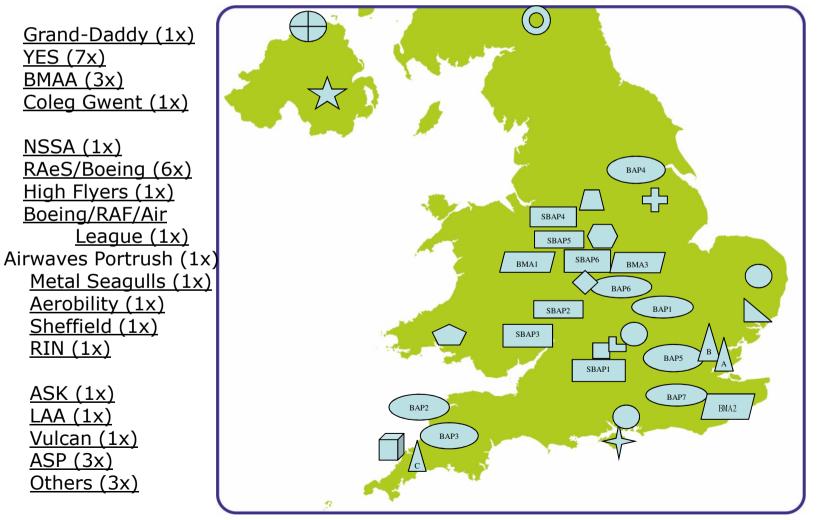
Build Breakdown

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The Grand-Daddy of all the Youth build-a-planes

<u>G-BTSC</u> Evans VP-2

The Spirit of Truro

- Built under the guidance of Design & Technology teacher Dennis Keam at Truro School, Cornwall from the summer of 1978 to 1979.
- The Truro School Flying Club was formed to oversee and fund raise for the project.
- Displayed at the Farnborough 1980 Air Show and many air shows in the South-West.
- Tested on 17th June 1980, at Deer Park, Tregavethan by Phil Irish, then to St Just and Lands End, with its CoA issued on 16th June 1981.
- Flew between Truro and its twin, Morlaix in France on 20th July & back on 23rd July 1982.
- Restored and on display at the <u>Cornwall Aviation</u> <u>Heritage Centre</u>, Newquay Cornwall Airport, St Mawgan, Cornwall. <u>Rumoured to be restored to fly once again.</u>













G-TSOB Rans S6 Coyote G-<u>The</u> <u>Spirit</u> Of <u>B</u>rooklands

- Kit purchased by LAA member Stewart Luck
- Built in 2003 to celebrate the Centenary of first powered flight and project managed by Captain Stewart Luck.
- Flew in 2005.
- Built by four Air Training Corps (ATC) units & Scouts -
 - * Fuselage by 2301 Sqn Manchester and Manchester Explorer Scouts.
 - * Left wing by 1378 Sqn Mold, Wales.
 - * Right wing by 297 Sqn Musselburgh, Scotland.
 - * The Tail by 817 Sqn Lisburn, Northern Ireland.
 - a similar system used by Airbus for their aircraft production and indeed by Boeing with their 787 Dreamliner.
- Now attends many events including RIAT, Farnborough, LAA Party in the Park, Young Aviators.
- Used to travel around in its own portable hangar.

Aircraft has now been sold to recoup project costs.







<u>G-SPDY</u> X'Air Hawk G-<u>SP</u>irit of <u>Devon Y</u>outh



- Inspired by BaP1.
- Kit purchased by LAA member Tim Gilmour-White.
- Project managed by Jim Gale in Devon.
- Built by Scouts in Barnstable & Exeter and Air Cadets from Kingsbridge & Seaton.
- First flew October 2009.
- Travels around on its own purpose made trailer.
- Takes part in Devon Strut activities and RIAT, Farnborough & The Flying Show.

Aircraft has now been sold to recoup project costs.









<u>G-OBAP</u> Zenair CH-701 G-<u>O B</u>uild <u>A P</u>lane

- This kit was purchased from Canada.
- Project managed by Jim Gale in Whimple, Devon.
- Being built by Scouts and Youth Organisations.
- Kit arrived in early 2011.
- First introduced in 1986, the STOL CH 701 aircraft was developed as an "off-airport" short take-off and landing kit aircraft to fulfil the demanding requirements of both sport pilots and first-time builders
- The aircraft features fixed leading-edge slats for high lift, full-span flaperons (both ailerons and flaps), an all-flying rudder, and durable all-metal construction.
- Winner of a 2013 RAeS Centennial Fund Award.
- Kit was 80% complete.

Kit has been sold to recoup project costs.









<u>G-TSOG</u> Sherwood Ranger G-<u>The Spirit Of G</u>oole

- Built over 24 months, youngsters from Goole High School have undertaken a really exciting and very challenging project - To build a plane that the students can use and to gain valuable experience towards their Engineering Qualifications.
- This project has been project managed by Jack Milnes in Goole, East Yorkshire.
- The aircraft designer is from Doncaster and the kit is British built, by The Light Aircraft Company (TLAC) at Little Snoring in Norfolk.
- The fuselage and tail were delivered in September 2013 and wings in June 2014.
- Fund Raising continues and the build is complete.
- Winner of a 2014 RAeS Centennial Fund Award.
- First flight was on Wednesday 31st August 2016.

Now based at North Moor, Yorkshire, the aircraft provides cheap flying for all. www.thespiritofgoole.co.uk











G-??? Rans S6 Coyote G-<u>The</u> Spirit Of <u>Tilbury</u>

- The fuselage & wing kit were delivered in mid-November 2013. Project managed by Ian Mead, with support from the YES team led by Ian Richmond, build commenced in September 2015, at The Gateway Academy, Tilbury/Chadwell-St-Marys, Essex.
- Winner of a 2016 RAeS Centennial Fund Award.
- November 2018, project was moved to Havering College, Romford, Essex under the guidance of Justin Rowley.

Aircraft in Build.

www.yesflyers.org.uk









<u>G-???</u>

VANS RV-7A

- Kit purchased by Bedford based businessman David Stubbs and it was delivered into MK College in mid-September 2014.
- The build started with 54x BTEC Level 3 students (in 2x flights) having an exciting new project to work on over the next 2 years.
- See a similar build by students at Mercury Bay Area School, Whitianga, New Zealand.

http://tvnz.co.nz/seven-sharp/school-built-planevideo-5707536

• Unfortunately the fuselage was damaged beyond repair during the build and the project has been terminated.

Project Terminated.

SSDR Build-a-Plane 7





G-???? MSN #GS-108 Fokker Eindecker (3/4 Scale)

- Kit purchased from **Grass Strip Aviation** in the Cotswolds, and delivered into Sutton Valence School, Kent working with Saint Ronan's School, Hawkhurst, Kent, at the end of September 2014.
- This build has moved to Saint Ronan's School, Hawkhurst, Kent, led by Will Bennett.
- <u>This is still the first (and only) UK primary school</u> <u>building a Build-a-Plane project</u>.
- Displayed at Brooklands Aviation Day in October 2017, Air Britain Fly-in, North Weald (30/06/18), Old Warden (01/07/18) and at the Farnborough Air Show 2018, on the LAA stand.

Fund raising and Build are on-going.

This is an SSDR (Single Seat De-Regulated) and is not over-seen by either the BMAA or LAA from an Engineering perspective.

www.yesflyers.org.uk



BMAA Build-a-Plane 1







"New Horizons" G-CINL Skyranger Swift

- The first BMAA youth build-a-plane project saw a Skyranger three-axis microlight aircraft built from a kit in the Midlands.
- Formally launched at The Flying Show, at the NEC on November 30th/December 1st 2013.
- Was built at CTC Kingshurst Academy, Birmingham, with support from Coventry University for the ground modules and YES.
- Build started January 2014.
- First Flight 18th May 2015 and aircraft sold 3 weeks later, to provide funding for the next BMAA Build-a-Plane projects.

Project completed and aircraft sold.

https://www.bmaa.org/information-library/new-horizons

www.kingshurst.ac.uk/the-academy

www.yesflyers.org.uk



BMAA Build-a-Plane 2 NEW HORIZONS BUILD-A-PLANE G-GRLS Skyranger Swift

- The BMAA New Horizons initiative sponsored the project, being carried out at Benenden Girls School, Benenden, Cranbrook, Kent TN17 4AA.
- The 28 girls aged between 16-18 years old constructed a Skyranger Swift and the build was completed by March 2018.
- They were responsible for all aspects of the build, from start to finish, including the airframe, fitting the engine and instruments and recording engineering tasks that they had carried out.
- To celebrate the completion of the build, the school arranged for all the girls involved to have a flight in the aircraft they built. This was to be held at Headcorn Aerodrome in Kent, on Sunday 29th April 2018.
- The Sky Ranger registered G-GRLS in July 2018, went on sale and was sold almost immediately, so delivering another very successful BMAA Build-a-Plane project.
- If you would like to see the progress of the build and how far the students have come please visit the school website: <u>http://www.benenden.kent.sch.uk/3584/co-curricular/microlight-project</u>
- The BMAA has been proud to sponsor these students to achieve the build of this microlight.

Project completed and aircraft sold.

https://www.bmaa.org/information-library/new-horizons



BMAA Build-a-Plane 3



"New Horizons"

- The BMAA confirmed a third new build-a-plane "New Horizons" projects in 2016.
- This one has gone to Aston University in Birmingham, with the kit delivered in September 2017. https://www.facebook.com/astonuniversity/
- A fourth build was due to go Coleg Gwent, but they decided to build a Piper Cub instead (see separate page).
- All 3x kits are Skyranger Swifts, which will be sold once complete, to recoup project costs.
- Thanks must go once again go to Terry Viner of the BMAA, for his time and efforts in setting these builds up. We will keep you all advised of build progress.
 Build is on-going.

https://www.bmaa.org/information-library/new-horizons

Blaenau Gwent Learning Zone Coleg Gwent, Lime Avenue, Ebbw Vale, NP23 6GL

- Originally due to get one of the Skyranger Swift kits from the BMAA "New Horizons" project.
- The school instead decided on an extended 4-year aircraft build and have opted to build a Piper Cub aircraft.
- More details for this project are being sought and this page will be updated in due course.

Build is on-going.

http://www.coleggwent.ac.uk/index.php



North Suffolk Skills Academy

- A Sherwood Ranger kit, with support from British Aerospace and RAF Marham, was brought to the North Suffolk Skills Academy, Bungay High School, North Suffolk.
- Delivered in April 2014.
- The BTEC Level 3 Aero Engineering course was very successful. The 11 students achieved
 9 double distinction* and two distinction grades, in the two cadres that undertook the course.
- Five students have begun working at BAeS on both Technician and Licensed Engineer apprenticeships, while others have used their qualifications in the Army and RAF, the water and steel fabrication industry.
- The BTEC Level 2 Engineering students also achieved commendable grades in their course and a number wished to pursue a career in engineering, one in particular was taken on by McLaren Racing.
- The Sherwood Ranger project was open to any student attending NSSA and we also had two others who lived about 35 miles away in Norfolk.
- Over the three years that the courses ran, about 25 students participated in the project assisted by staff from BAeS and service personnel from RAF Marham and ex-service personnel working at a local aircraft museum.
- When the NSSA was wound up in mid-2017, the incomplete aircraft was sold off.

Project was sold, incomplete, once the NSSA was wound up.



YES also supported the six Schools SBAP aircraft, all are RANS S6 Coyotes, and their current status is –

Yateley School, Hampshire.
 (G-YTLY- first flew on 08/02/13).
 Aircraft has been sold.





 Marling School, Stroud, Gloucestershire.
 (G-SBAP – first flew on 30/04/13).
 Aircraft has been sold.

Both of these aircraft flew at the Farnborough Air Show in July 2014 – see the video at <u>http://www.youtube.com/watch?v=6dZHII1ilTY&feature=youtu.be</u>



 3) Ercall Wood Technology College, Telford.
 (G-GWFT- first flew on 29/06/15).
 Aircraft has been sold to <u>The Georgia Williams Trust</u> www.thegeorgiawilliamstrust.org/





4) Bridge Learning Campus, Bristol. (G-TBLC – first flew on ??/1?/18).

Aircraft has been sold.

http://www.sbapchallenge.com/



 5) Ernesford Grange Community Academy, Coventry West Midlands.
 (G-EGCA - first flew on 28/12/16).
 Aircraft has been sold.





6) North East Wolverhampton Academy (N.E.W. Academy).
(G-NEWA – first flew on 10/08/17).
Aircraft has been sold.

http://www.sbapchallenge.com/

Project "STEM High Flyers"

- The build crew at North East Wolverhampton Academy (N.E.W. Academy) have been so inspired by their Boeing/RAeS Rans S6 SBAP project (G-NEWA), that they are now forming a charity to raise funds for a new Build-a-Plane project, with type and exact build location, yet to be determined.
- Led by the former NEWA Project Manager Graham Harris, it will be good to see them continue, after their tremendous work on their very successful Boeing/RAeS SBAP project.

Project is in start-up mode.



- Boeing, the Royal Air Force and the Air League are jointly providing a Sting S4 kit, to be assembled by Air Cadets in Northern Ireland as part of their Air Cadets Learning Programme, at the Ulster Aviation Society, Lisburn, Northern Ireland.
- The programme is intended to enhance the existing RAF Air Training Corps Cadets' curriculum, with hands-on practical application of classroom theory and inspire young people to study Science, Technology, Engineering and Maths (STEM).
- It was planned that the completed aircraft would fly to RIAT 2018 and then be flown at the Farnborough International Air Show 2018, as part of the RAF's 100th anniversary celebrations, but the aircraft moved to England to complete some of the last elements of the build.

Build is on-going.

https://www.lisburntoday.co.uk/news/lisburn-cadet-builds-airplane-1-8384259

"Air Waves Portrush"

- Initially led by AVM David Niven, Mark Bowler is project lead on this the 2nd Northern Ireland Build-a-Plane project.
- The concept is to interest all children to study STEM (Science Technology Engineering Mathematics) subjects, to participate in the practical building of an aircraft, which they can all fly on completion of the build. Experience has shown, that not only the children involved in the build, but also others start to take an interest in STEM subjects.
- The project meets a number of key criteria for support including; shared education, partnership across the community divide, and collaborative working. School selection would include; post primary, an existing relationship in place, shared education programme, controlled and maintained and across socio-economic divide. Schools had been identified which met the criteria for the project. The Department for Education is aware of the project and open to a request for funding.
- This project will provide not only STEM, but transferrable skills such as teamwork, project management, communication, time management etc. All students who become involved will benefit from the experience, with students expected to go on to achieve apprenticeships, further education and employment.
- The project was soft launched at Air Waves 2018, Northern Ireland International Air Show at Portrush, Co Antrim, Northern Ireland on 1st/2nd September 2018.

Project is in start-up mode.



- The WXYZ plane is a project led by Patricia Mawuli Porter to encourage more women and young people into aviation, through exposure to a bit of hands on time in assisting with the build of her Zenair CH750 STOL (Short Take Off and Landing) aircraft. She hopes to get more than 200 women and youngsters to at least understand a bit about aircraft building and to pull a Rivet in the construction of her aircraft. The plane, once complete, will fly around the UK to various events where Patricia will be pleased to chat about all things engineering and aviation with those who are interested.
- Through this web-site you will be able to track progress, number of helpers, and some other statistics including participants age (average, median and mode), profession, etc. The main build will begin in January 2017, and we hope that you will both track the progress here and contact us about getting involved too!.

Build is almost complete, with first flight imminent.

(e-mail <u>info@metalseagulls.co.uk</u>).

http://metalseagulls.co.uk/the-wxyz-plane

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One Rivet at a Time

Aerobility's "New Frontier"



- 12/09/17 Aerobility is well known for its training of pilots with disabilities, providing access to aircraft using hoists, and equipping aircraft with hand controls for use by persons unable to use their legs. Now it is about to expand its philosphy of being fully inclusive by building and maintaining aircraft.
- We are the UK centre of excellence when it comes to all matters related to disability flying," said Brian Catchpole of Aerobility. "All of this has been achieved with a user-led organisation. Many of our key personnel and volunteers have impairments.
- "We believe that the next goal naturally falls to broadening our involvement with the actual aircraft, and to this end we intend to build our own aeroplane".
- The aircraft Aerobility is planning to build is a Zenith CH750, provided by UK agent Metal Seagulls.
- "On completion, the aircraft built will join the Aerobility fleet, providing low-cost flying for our licensed disabled flyers and, if regulation allows, training."
- Anyone wishing to become involved in the project can register interest by emailing: info@aerobility.com

Build is on-going.

www.metalseagulls.co.uk www.aerobility.com



Project Phoenix – Yes We Can

- The University of Sheffield Project Phoenix, started in May 2016, is a ground-breaking and unique student-led project challenging its team to aspire and achieve in both managerial and technical aspects.
- Ultimately, the aim is to construct and pilot their very own 1920s, single engine, two seater Pietenpol Air Camper aircraft, to be piloted by our own licensed student pilot.
- Throughout the duration of Project Phoenix the teams will develop the technical and business skills required to undertake and succeed in their ambitions, with access to current Pietenpol Air Camper operators and restorers, overseen by the Light Aircraft Association (LAA).

Build is on-going.

www.facebook.com/projectphoenix2016





Spirit of Vectis

(Vectis is the Roman name for the Isle of Wight) Organisers: Mark Batin and John Cairns (Royal Institute of Navigators) Location: Bembridge Airfield. Aircraft: Sherwood Ranger XP. Commencing: Autumn 2017.

- The youngsters will come from various schools, including a special needs school in Ventnor. From all backgrounds and consist of able bodied and disabled youngsters.
- Mark Batin and John Cairns are both Fellows of the RIN and the group will be a "Youth Group" of the RIN, but we will be a recognised charity in our own rights.
- The Isle of Wight is an area of deprivation within which there is a reasonable number of "well off" families, Spirit of Vectis will welcome both.
- We are receiving considerable assistance from the Rotary Club of Ventnor and the owner of Bembridge Airfield.
- Work will start with preparation of the workshop (on the airfield next to the Hangar) followed by construction of the wing jig and then the wings. Estimate start of build mid-October.
- Fund raising and registration with government bodies is under way.

Build is on-going.

www.rin.org.uk/





- Aero Space Kinross (ASK) will be a uniquely themed, Aviation, Astronomy and Space Flight Science Centre based in the heart of Scotland. ASK will create an interactive, fun, educational and inspirational experience that will touch individuals from every generation and will attract people from all over the UK and beyond, to this must-see visitor destination. It will inspire future generations into flight themed STEM related careers and leisure pursuits. In doing so, ASK will act as a feeder for both the aerospace industry and educational/training establishments.
- This share offer isn't just about planning for the future. We're serious about the reason for this; its about inspiring young minds and we plan to start to do that from the get go. For that reason we'll buy a full-scale kit plane which will be assembled by pupils at Kinross High School under our supervision. Once the finished plane has been duly certified, we'll give the students free flights.
- By 31/07/17 some £57,750 had been raised with 84 investors.
 Project is in start up mode.

www.crowdfunder.co.uk/aero-space-kinross







The Light Aircraft Association have teamed up with the Heathrow Aviation Engineering UTC (University Technical College) in an exciting project –

"Our students are putting their engineering skills to the test by building their own two-seater Sherwood Ranger bi-plane.

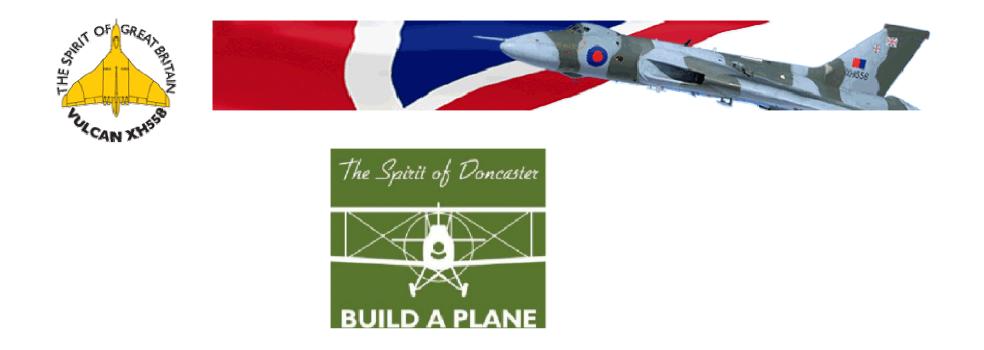
- Heathrow UTC sign up for their own Build a Plane project, "The Spirit Of Heathrow" (G-TSOH).
- This project, a Sherwood Ranger XP from The Light Aircraft Company... kids building real aeroplanes... how cool is that.



- We will be recording the progress of the project to build our own plane you can follow our story on Twitter <u>@heathrowUTC.</u>" February 28th 2018.
- For more details of this exciting project please see their web-site;

Build is on-going.

http://www.heathrow-utc.org/heathrow-utc-build-plane-project/



The Vulcan to the Sky Trust's 'Build-a-Plane' project with a Sherwood Ranger aircraft developed by <u>The Light Aircraft Company</u> at Little Snoring Airfield, the construction of which is governed by the controls and procedures established by the <u>Light Aircraft Association</u>.

Project manager is Sam Evans, and information can be found at;

http://www.vulcantotheskystore.co.uk/the-spirit-ofdoncaster---build-a-plane-2559-p.asp

Build is suspended, pending the new Education Centre being built.



The National Youth Engineering and Aviation Scheme

Aviation Skills Partnership have launched The National Youth Engineering and Aviation Scheme.

Designed for all young people aged 13+ please go to - <u>http://www.aviationskillspartnership.com/</u> to join in the fun and activities.

With their partners, Aviation Skills Partnership, has a number of build-a-plane projects around the country, and details of these will be added here as and when they are announced.

Known ASP Build-a-Plane projects to be in the pipe-line include -

- Cemast (Fareham, Hampshire)
- Space Studio West, London

and

Norwich amongst others.

All builds are under way.

Other known Youth Build-a-Plane projects as of November 2018

In the planning stages

- A) Southend sponsored by the local Council. More details soon.
- B) Stow Maries under discussion. More details soon.
- C) The Kernow Chough (The Cornish name for Cornwall and the Chough is their 'national' bird and features on the county coat of arms), to be based at Bodmin, Cornwall.

If you are aware of any other youth Build-a-Plane projects, or can give any update on any of the current projects, then please contact andre.faehndrich@ntlworld.com to update this summary.