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# The Hovercraft Museum Newsletter

*Merry Christmas & Happy New Year to all of our Members!*


*Gaute Hope & Yngve Kristoffersen during the FRAM 2012 expedition which is the first - and northernmost - polar expedition ever undertaken with a hovercraft*

**ISSUE 56** **December 2012**

# TRUSTEE STATEMENT

**To Our Members**

As you may have been aware, we have been restricted in our access to Building 40 on site at Daedalus. After much negotiation with the land agents, work to repair the main beam across the front of the building is being undertaken following approval by the Homes and Communities Agency (HCA). This work is being done at their expense. The repairs have since started - and access has recently been granted to Museum members only. No access has yet been granted to the general public at the time of writing.

The work will be carried out in two phases, and it will be necessary to issue hard hats for a period while the work is undertaken. After temporary work is undertaken to stabilise the situation, we shall be required to move items in the hangar away from the doors to allow access for the permanent repair. As soon as this beam is permanently fixed we can prepare our twin prop SRN6 for the move inside, undercover, as we had a successful Maritime and Coastguard Agency inspection this year.

We are told by the HCA that there is the potential for a long term lease (9 years or more) at Daedalus as well as the opportunity for more open days to the public, subject to our business plan being updated, which we are currently doing.

However, the Trustees will always investigate other potential sites, especially as there are no concrete guarantees of a future at Daedalus with the area having been designated a Government Enterprise Zone, and up for redevelopment. We have nothing in writing to specify what land we might be able to have, what buildings, what type of public access and most importantly what rent we are likely to be charged.

Thanet District Council and Kent County Council have approached the Museum with a view to us being able to take on the use of the former Pegwell Bay hoverport. The 7 acres of land with easy access to the sea would be gifted to the HMT as well as the potential of up to £3 million on offer to perform the move and prepare the site with new purpose made buildings for the collection, with further funds available. Indeed, the Hovercraft Museum Trust has already been offered a £15,000 initial grant specifically to have some architectural plans drawn up and a feasibility study undertaken.

***Site of the former Pegwell Bay Hoverport***

The HMT will continue to investigate the potential of BOTH sites, there are pros and cons to BOTH - we have not given up on Daedalus by any means but with regards to Pegwell Bay we owe this site and the potential funding the due consideration it requires. There will be no snap decisions made, as all criteria have to be very carefully considered and weighed up, and we shall seek the guidance and advice of professionals to assist us with our deliberations.

Another cause for concern is our bank account which is at an all time low - with the cost for electric and insurance soaring combined with visitor numbers down over the past year due to the recession and some much needed investment into health and safety systems on site, we really need some more fundraising ideas and initiatives. This is where we can call on members who may not be so local to the collection to get behind the project and help us at this critical time as we really need some money in before the Hovershow in May. All ideas will be given due consideration, so don't be shy! We welcome all ideas that could generate some real funds.

***New Trustee - Emma Pullen***

Some good news; the Trustees would like to formally welcome Emma Pullen on to the Board as our newest Trustee. Emma is a Director of Flying Fish Hovercraft and her keen sense of business will be a valuable asset to us.

The Trustees are therefore made up of the following individuals - Chris Potter, Warwick Jacobs, Ben Pratt, Emma Pullen and Chris Greif. The Trustees are assisted day to day by Jeff Bird, the Site Manager and Steve Henderson, Head of Health and Safety. Chris Simpson continues in his role as Editor and looks after Shop sales. To clarify, no one, singular Trustee is in Charge - the Trustees as a whole agree on the basis of a majority vote to decide how the Museum is run. Jeff is in charge on site on a Day to Day basis. The Trust will also shortly be changing its status to a Charitable Limited Company giving more protection to the Trustees themselves, amongst other benefits. Any budding Trustees out there...?

In other news, the owners of the SRN4's, The Succession Trust, and the previous land agents SEEDA are in the specialised Admiralty Courts in London some time before Christmas, which no doubt will have a bearing on their future. We have no influence on the outcome but we have registered our interest in the craft to both parties from the onset. So, watch this space....

*Cont'd*

We will be organising a Christmas outing of a Hovercraft ride and Fish n' Chips for any interested members, as well as any others you would like to invite. We have 40 seats available courtesy of Hovertravel on a first come, first served basis, with the potential for more if the demand is great. Seats will be £15 a head to help raise funds for the Museum and cover the cost of the trip and food.

We will meet for ***11:00am*** at Daedalus and will provide a coach to Southsea Hoverport. We will have an hour or so over in Ryde to enjoy our lunch before the return hovercraft crossing to Southsea and the coach back to Daedalus.

The date for the trip will be ***Saturday 29th December*** leaving from Lee at ***11:30am*** and returning back to Lee at around ***4:30pm***.

All bookings are requested to go to: ***enquiries@hovercraft-museum.org***

Looking forward, Hovershow 2013 is scheduled for 25th, 26th and 27th May so any thoughts and suggestions will be gratefully acknowledged by the Hovershow Committee. The show will hopefully provide a badly needed cash boost to our funds.

The Trustees will continue, to the best of our ability, keep all of you informed of news and events as and when we know the answers ourselves and have had the opportunity to discuss any implications.

Best Regards To You All

**The Trustees**


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## PDF NEWSLETTER DRIVE

**The Hovercraft Museum strives to save the trees and save on costs with Email Newsletters**

With ever increasing costs - and the need for us to all do our bit for the environment - we would like to promote the delivery of future newsletters in 'soft copy' format via email.

As the number of people connected to the internet continues to increase - it would appear organisations are opting to deliver newsletter type publications direct to members via the internet - with the obvious benefits that brings. We have been generating PDF files of our newsletters for some time now - and quite a number of our membership have opted to take delivery in this way. PDF (Portable Document File) is an internationally recognised file type - and is accessible across all platforms including all of the leading mobile device operating systems.


There are many advantages to an emailed soft copy of your newsletter over a hard copy. They require no physical storage space - are easily transported - stored and accessed. They require no paper (trees!) - no ink - have minimal Co2 impact - no envelopes and stamps - and they require no time for volunteers to process the collecting - packing - labelling and posting. Email is also instantaneous - no waiting for your newsletter to arrive in the post! Last but not least they save considerably on our costs which continue to increase in all areas.

For those current members who would like to opt for emailed PDF newsletters - please contact us with your request & membership details: ***newsletter@hovercraft-museum.org***

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## MEMBERSHIP DISCOUNTS

**Member discounts now available from Hovertravel & HCGB**

Some great news is the discounts which are now available to paid up Museum members. Hovertravel will discount travel on any of their services by ***10%*** - just in time for that Christmas trip to Ryde! We are also pleased to announce the Hovercraft Club of Great Britain are offering a generous ***50%*** discount on membership! Members will be required to provide their name and Museum membership number which will be cross referenced against our database in order to qualify for the discounted rates.

# HOVERSHOW 2012

**This year saw our annual Hovershow split across two dates due to inclement weather curtailing the first show**

***Trustees past & present meet with local dignitaries***

Thanks go to all of the members & volunteers who pulled out the boat (hovercraft? - Ed) to get the second event off and run with panache. A great show was staged and fortunately the weather was in complete contrast to the first event. The resulting £5000 profit was a welcome boost to funds. Thanks to Paul Hiseman who managed the small team of loyal and willing helpers that make the events happen.

Gosport's deputy Mayor John Bevis opened this second show. John was formerly based at Daedalus whilst serving in the Navy. He knew the base well and commented that it should be a prominent part of Gosport's heritage. Other VIP's included High Sheriff of the Isle of Wight Nick Hayward - and High Sherriff of Hampshire Hallam Mills. They were invited to open the new library archive which has been named in honour of Chris Richards. Chris had amassed the largest known private collection of hovercraft news pictures and articles over his lifetime. His collecting started when SR.N1 nearly ran him over at sea in 1959. We are indebted to the late Chris Richards for the donation of his wonderful collection which has swelled our archive and filled in the gaps. His collection is a legacy to his writings and work for Lloyds List and the Hovermail Collectors Club.

***Above: Chris Richards back in his pilot seat***

The Chris Richards room hosted patron Chris Bland - former MD of Hovertravel / Hoverwork and Air Vehicles Ltd. Also in attendance was the Museum founding trustee Mike Pinder with Gill Richards and family - along with the new MD of Hovertravel Neil Chapam.

The champagne reception was provided by Winchester Crown Circuit. Trustees heeded H+S requirements and limited the reception to 40 people upstairs. Thanks to Ben Pratt and Jeff Bird the fire escape was renewed and made safe in time for the event.

Mike Pinder handed over the Duke of Edinburgh's pilot certificate and manual for the SR.N1. The certificate was presented to the Duke when he became the fourth ever person to fly the craft! It will be hung in pride of place in the library.

Meanwhile the Hovershow was in full swing. Rides were very popular over the two days and were provided by Meridian Marine flying the Tiger 12. The Hovercraft club of GB was in force with small craft and small manufacturers were represented with Flying Fish & The Norfolk Hovercraft Company. The slipway was kept busy and both days were equally busy.

Many thanks to all of the members & volunteers who helped stage this years events - and managed to pull the second show out of the hat at the last minute.

***Below: Mike Pinder presents the certificate to Warwick***

***Tiger 12 gives rides & Flying Fish demonstrate the Marlin***

# PLANS FOR OUR SR.N5 & SR.N6

**The trustees have been planning to get our SR.N6 Twin Prop into hangar 40 at Lee - but events have been stacked against us**

***Above: Sea Hawk awaits passengers at Ryde***
***Below: SR.N5 006 arrives at Ryde***

Her last outing was in 2009 when '025' completed over 6 hours at sea - marking the 50th anniversary of the SRN1. The twin prop is our largest operational craft - and the oldest operating craft in the World having been built in 1965. It is also the only serviceable gas turbine powered hovercraft in Western Europe. Aside from two BH7 in Iran built in 1970 - thirty of the ninety plus LCAC Fleet in the USA - a few Russian craft and Japanese LCACs - few gas turbine hovercraft are in use - and none commercially. That makes the twin prop all the more unique.

Alas events overtook us - and the Maritime Coastguard Agency placed a prohibition notice on the vessel which has been stored outside adjacent the slipway gates ever since. After much negotiation carried out by Trustee Ben Pratt - with assistance from Southern Gas Turbines - we were eventually issued with a permit to fly her into the hangar. This will allow us to carry out the needed preservation work. Two and a half years of consultation and surveys have delivered a license to fly her the 50ft required. One proviso has been the disengagement of the two propellers - a process last performed in the 1970s with the very same craft. A trial run in September was completed smoothly - but then a land agent's inspection discovered the hangar doors of building 40 to be unsafe. As a consequence the whole building was closed down and made inaccessible to everyone - members & trustees included.

Our land agents have since secured estimates for temporary & permanent repairs - and work has begun to replace some badly corroded steel members. In the near future the twin prop will be moved into position in front of the hangar before the present permit to operate expires. To effect this move the SR.N4 cockpits, steps and bow ramps need moving to clear a space for what will be one of the last runs of the craft. The trustees believe the best long term option for the craft will be to bring her under cover - even if that means running her is unlikely to happen for her 50th anniversary.

In preparation for the move the high-rise Eurosense survey masts and equipment have been removed - these would not have cleared the hangar entrance. The removal of the craft's diesel generators has left the craft looking more like a standard SR.N6. She has only been run up twice since the removal of the masts - and once following the propeller decoupling. The craft be will be repainted and given an indoor space in 2013.

It is planned to make hangar 40 into an 'N5 & 'N6 exhibition area with SR.N5 006 - SR.N6 Sea Hawk and the SR.N6 Twin Prop sharing the space. SR.N5 is to be re painted in her IHTU military colours of dark blue / grey - along with fluorescent yellow pilot training marks given she was a dual control craft. Museum member Andy Cooper from Lymington is making the dual control panel from scratch. SR.N6 Mk1s Sea Hawk will receive new seats which will come from some 1970s trucks that were used in the latest James Bond film 'Skyfall'. These are the closest match to the original seats that we could find. The curtains which are now in place were saved from a Canadian Coastguard craft which matched those of the 1970s originals.

There is a lot to do - but the moving into position of the craft - and the incorporation of SR.N4 Swift's cockpit will bring about the completion of hangar 40.

***Above: Sea Hawk - Itchen Bridge construction***
***Below: Our SR.N5 comes ashore***

# MEDIA COVERAGE

**2012 has proven to be a good year for the Hovercraft Museum with regards to media & publicity**

Discovery broadcast a new series on Inventors which featured the trusts archives and comments. BBC's prime time 'The One Show' recently featured the Museum in a film about the hovercraft and its Inventor. 'Eureka Moments - The Tin Can Hovercraft' was broadcast on the 18th October. The huge VA-3 lift fan which is mounted centrally in our main hangar provided a great prop for the show. Our collection was shown off along with new craft at Griffon Hoverwork.


Chris Evans featured Warwick Jacobs as the mystery morning guest on his breakfast show on Radio 2 earlier this year. That was especially interesting as Chris has recently bought a hovercraft and is very much a James Bond vehicle fan. He has been invited down to view the collection whenever he's free.


***Icon Films produced a feature for The One Show***

***Jules Hudson filming for Escape To The Country***

Escape To The Country recently filmed on site for a day with presenter Jules Hudson. The Museum was featured as a site of local interest for Hampshire. The episode is due to be broadcast in the New Year.

It's all great publicity and brings in modest film rights and location fees. We tend to charge low rates as it encourages important exposure for the collection. Back in 1996 Discovery paid us £2000 for film rights usage and contributions - however the age of rich TV film companies has long gone due to channel saturation. These days we are lucky to get £200.

The 50th anniversary of the VA-3 hovercraft service also generated archive sales and interviews. The actual craft still sits 70ft under the sea near Ryde.

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# CAPTAIN ANTHONY BRINDLE

**The museum friends have recently been joined by Captain Anthony Brindle who set up and managed Seaspeed at its inception**

Anthony organised Princess Margaret's visit and was responsible for defining routes as well as choosing and appointing pilots. Hard to believe now - some of those trainees had a mere 11 hours of type rated training before co-piloting with existing crew in commercial service! In September of this year the SR.N4s were reunited with their "boss" from four decades ago.

Anthony recalls writing the cheque for £1.5 million on the day of delivery of the craft to Dover. He managed and moulded the company in its heyday - pioneering the hovercar ferry. In the early days he got to pilot a French N300 - whilst looking for suitable craft for use in the Mediterranean. Other memorable experiences include the test flying of the HoverHawk HA5 for the Government following HoverAir's receivership in 1970.

# GRIFFON ARCHIVES DONATED

**The amalgamation of Griffon Hovercraft & Hoverwork brings about the arrival of their archives to the Museum**

Given much of the two companies archives were duplicated, historic and little called upon - the Hovercraft Museum Trust has accepted them into its library giving Griffon Hoverwork access at any time. With new models in production - a lot of the paperwork for the old 1000TD and 2000TD craft from Griffon and the AP-188 from Hoverwork is now less relevant. With spares for the old Griffon range now also stored at the Museum - it is good to have the archive close to hand especially as three craft from the Griffon 2000 class rest at the Museum.

***Amongst the archives were these early photographs of the Griffon Overland***


The archive is being catalogued & inventoried by Gill Richards in the front hangar - before joining the rest of the collection in due course.

It will be good to augment the library with data covering diesel powered craft of the last 25 years - as they have been a lesser part of our archives which have instead concentrated on hovercraft from the 1950s to 1980s.

Many thanks also go to Malcolm Cox. With Hovercraft Consulting Ltd now forming a part of the Griffon Hoverwork outfit - his duplicate archive has also come to the trust. Both Malcolm and John Gifford are past trustees of the Hovercraft Museum. The archives contain many plans, photos and reports.

***John Gifford (left) with Don Robertson & Edwin Gifford beside the only straight 6 powered 1000TD***

***Griffon Mini 500 - an experimental diesel craft circa 1990***

***An aerial view of the former BHC Columbine Hangar at Cowes courtesy of Bob Wealthy from Solent Aeromarine Enterprises***

# INDUSTRY NEWS

The 4th (H-190) **Griffon Hoverwork** 8000TD bound for India has undertaken its 180 nautical mile journey from Southampton to Antwerp Docks in Belgium before being loaded as deck cargo onto a container ship - the journey taking just under 6 hours. The craft will arrive in Chennai mid December - as the 5th (H-191) craft continues its trials in the UK.

H-187 was the first new 8000 for the Indian Coast Guard - there being 6 other 8000s already in the country which were built 10 years previously. H-187 is the first of 12 new craft to be accepted by the ICG fleet and is now in service.


***H-187 is accepted into the Indian Coast Guard***

In January the company secured a contract to supply five 2000TD hovercraft to the Peruvian Navy. The craft will provide enforcement along the border between Peru & Brazil. The craft were fitted with ballistic protection and configured with gun mounts due to their area of operation.

In April an order was placed by the Venezuelan Ministry of Agriculture for an 8000TD & an AP1-88. The craft were both specified to carry passengers and cargo - each having a bow ramp allowing the carriage of vehicles. The craft will play a vital role supplying the local communities in remote areas along the Orinoco River with local produce.

A Korean bound 8000TD & Indian bound 8000TD were both out on trials in the Solent recently - leaving two Indian Coast Guard craft on the Southampton pad. A packed factory sees the two craft bound for Venezuela, the rolling Indian 8000TD production line, two 8100's for Pakistan, a BHT destined for Canada, the new Canadian Coast Guard craft and potentially a BHT-150 hull for S. Korea.

**Rolls Royce** were recently awarded the contract to supply engines for the replacement LCAC fleet. The Group will work with Textron Marine & Land Systems - an operating unit of Textron Systems - who have been selected to build the initial development craft in a programme that could extend to 73 state of the art Ship to Shore Connectors (SSC).

The SSC will replace the Navy's current fleet of Landing Craft Air Cushion (LCAC) hovercraft over the next 20 years. The new hovercraft will be used to rapidly deploy personnel and vehicles between US Navy ships and the shore. Each SSC will use multiple cutting edge Rolls-Royce MT7 gas turbines - derived from the highly successful AE1107 engine which powers the US Marine Corps' V-22 Osprey tilt-rotor aircraft.

***The proposed Ship to Shore Connector***

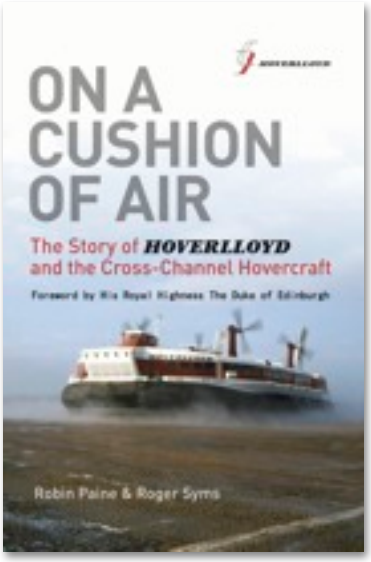
***Rolls Royce MT7 Gas Turbine***

Andrew Marsh - Rolls Royce Naval President said: 'This is an exciting and significant project for Rolls-Royce to be involved with. Our gas turbine technology will increase the power of the hovercraft by 25% compared to the previous generation - enabling each craft to transport up to 74 tons of cargo at speeds over 35 knots. At the same time our engines will improve fuel efficiency by 11%. We look forward to working with Textron and the Navy during the development and entry into service of these highly versatile craft.'

**Broome Hovercraft** in Broome - Western Australia took delivery of the first of three Pioneer MkIII hovercraft in August of this year - principally for the tourism industry for which Broome is internationally renowned. The craft is however OVID compliant (Offshore Vessel Identification Database) enabling it to conduct offshore resource projects anywhere in the world - within its envelope of operation. It is in 1C survey - which allows it to operate in open waters to a distance of 30Nm offshore from a safe haven - and the OVID compliance is based on IMO regulations. The hovercraft comfortably seats 24 passengers with some baggage and is powered by two Steyr 160Kw engines. It has two 15 man life rafts and a FLIR night vision camera along with other state-of-the-art electronics. The hovercraft was designed and manufactured by Airlift Hovercraft based in south east Queensland's Gold Coast. Broome Hovercraft are one of the longest running hovercraft tourist operations in the world - having been established in 1983.

***Pioneer MKIII 'Imperieuse' was delivered in August***

***The state of the art cockpit***




# ON A CUSHION OF AIR NOMINATION

**On a Cushion of Air reaches last 12 in top maritime literary awards**

More than 200 senior naval officers, journalists, writers, authors, celebrities and business figures including First Sea Lord Admiral Sir Mark Stanhope GCB OBE ADC, attended The Maritime Foundation's 2012 Media and Maritime Literature Awards (**www.bmcf.org.uk**). The event which took place on 14th November, was held at the Institute of Directors in London where Her Royal Highness, The Princess Royal, presented the Awards.

The Maritime Media Awards provide recognition and encouragement to journalists, writers and television programme makers, who during the past year have made the best contribution to promoting maritime awareness in the public domain. In total 10 journalists, 33 books and 28 television documentaries were nominated for awards.

Although *On a Cushion of Air* was not one of the recipients of a literary award, the 700 page book was nevertheless shortlisted to the last 12 from the 33 nominees.

Robin Paine commented, 'The competition was huge with Professor Callum Roberts walking off with the Armada Plate for his book on 'Ocean Life - How Our Seas Are Changing', and equally learned authors of erudite publications claiming the five Certificates of Merit. The Chairman said we were just pipped to the post for the last Certificate. Whether he was being kind or not, I don't know, but he did point out that the standard was amazingly high this year and the shortlist was an accolade in itself. What I do know, however, is that there are not too many professors or erudite people who drive hovercraft and write books, so I am of the view that we were jolly lucky to get as far as we did!'

*On a Cushion of Air*, with the foreword by HRH The Duke of Edinburgh, is the definitive story of the the hovercraft starting with Cockerell's discovery in 1953 to the end of the last SR.N4 cross-channel service on 1st October 2000.

Signed copies can be purchased through The Hovercraft Museum at discounted prices. See our Hovershop pages at the rear of this newsletter for further details.

More information on the book can be found on the official website: **www.onacushionofair.com**

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# SKIMA 4's FOR SALE

**Duplicate examples lead to a slimming down of our Pindair Skima 4's**

The Museum has a number of Pindar Skima 4 craft on site (six at the last count!) - so a decision has been made to retain examples of each mark / manufacturer & let a couple of duplicate craft go. We need to concentrate on our core collection & free up space for other craft!

The craft will be available shortly - and options will include either a Hirth or Rotax engine - and possibly a trailer. For further details contact either ***Ben Pratt*** on: ***07793 551353*** or ***Warwick Jacobs*** on: ***07970 986251***.

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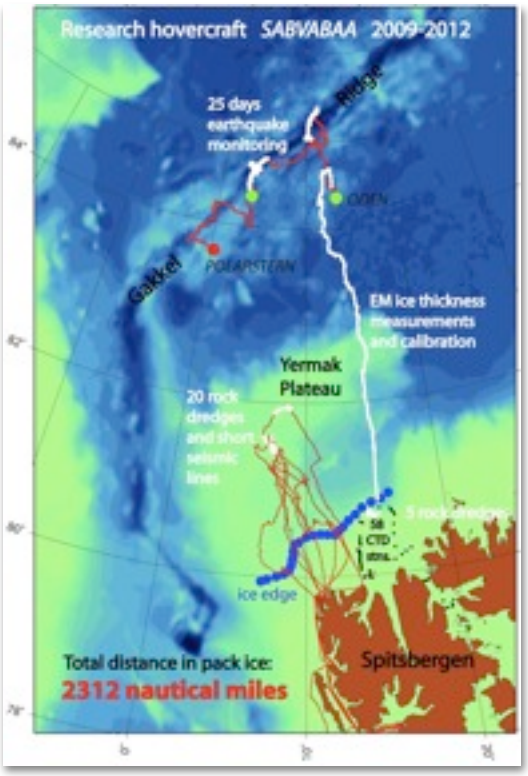
'Spice Application Systems' Hoverguard 800 displaying its new livery. Thanks to Peter King the craft will be a regular at event & displays

# AN ARCTIC AFFAIR

**Dr. John K. Hall & Prof. Yngve Kristoffersen with Griffons first 2000TD MkII in the High Arctic**

***Dr. Hall stands beside Sabvabaa in Longyearbyen***

Since 2008, our Griffon TD2000 Mk II research hovercraft, the R/H SABVABAA, has been based at 78°-14'N in Longyearbyen, Svalbard. Every summer it has operated within the permanent Arctic ice pack north of the archipelago, testing out its habitability, mobility, and an ever-growing suite of marine geophysical, geological, and oceanographic instruments. Griffon Hovercraft's first such model featuring a larger water-cooled 440 hp Deutz engine was designed specifically for polar operations, including special engine heating, double windows, 5 cm thick insulation, strengthened side decks, and gull-wing doors at diagonal ends of the cabin for Arctic fire safety. Being a craft operating far from British regulatory restrictions, it features a raised roof over the entire cabin, without the customary rear view windows for the operator.




***Above: A map of the area covered***

***Below: Sabvabaa on a small ice ridge***

SABVABAA, aptly named after the Inupiaq word for 'flows swiftly over it', is 12 m long, with a hull clearance of 73 cm and 2200 kg payload above its 5,600 kg empty weight. During sea trials in the Solent it exceeded 43 kts, and in recent years has been exceeding its payload by up to 50%. The main cabin space is designed for science. On the starboard side a small kitchenette is aft of the co-pilot's seat, equipped with hotplate, microwave oven, cabinets and sink. Then comes the main gull-wing hatch with internal stairs, a Danish Refleks diesel heating stove, and a long bench for computers with equipment racks below, and numerous LAN and laptop charging ports. On the wall above are two Iridium phones with internet capability. The port side of the cabin aft of the pilot's seat is divided in two, with a convertible settee/bunk forward and then deck to ceiling storage space with numerous clear plastic boxes for supplies. Aft there is a doorway leading to a small cabin scarcely more than a meter deep with two fold-down bunks on the firewall, a chemical head, and the port side gull-wing emergency hatch. A table top on the cabin door serves the galley area for meals when installed on a detachable pipe stand.

The craft is completely equipped as a deep sea vessel. Besides the Iridium phones there are both marine and aircraft radios as base stations and hand-held portables, and a Furuno navigator with radar and map display. Safety equipment consists of a five man survival raft, EPIRB, satellite tracker with web following, an emergency evacuation bag with polar survival gear, a Mauser rifle and various alarms and noisemakers for defense against polar bears, and survival radios and supplies. Four extra 390 liter fuel tanks on the side-decks, together with 450 liters in the two internal tanks, plus an additional bladder provided up to 2700 liters last summer. Powerful headlights, and trainable searchlights and FLIR (forward-looking infra-red) assist navigation in the boreal winter. The craft includes two large battery banks, one devoted solely to science, charged by a 130 amp alternator, as well as a large wind generator mounted on the cabin roof. A free-running hydraulic pump on the engine provides hydraulic power, and a small electric winch can be quickly attached both fore and aft for pulling the craft off obstacles or onto thicker ice.

A fair complement of tools, and spare parts are carried, which have been sufficient for making repairs of all kinds. As science is our business, the craft is presently carrying a digital library of over 18,000 pdfs of books, journal articles, maps and analog data on the Arctic, so as to allow library research by the crew over long periods. The ideal crew is two, allowing unfettered sleep periods while drifting data is collected, and a modicum of fellowship. Prof. Yngve Kristoffersen from the University of Bergen and the Nansen Centre in Bergen, Norway, has been chief scientist and pilot for all the ice work to date, and is usually accompanied by a graduate student working on a thesis.

The craft was built as a platform for long term investigations in the central Arctic Ocean where the thickest multiyear ice is concentrated. These areas, more than 300 km north of the Canadian Arctic islands, have only been visited by drifting scientific ice stations or temporary air-lifted camps. As icebreakers are presently the primary platform for polar exploration, and are incredibly expensive and incapable of dealing with extensive multiyear ice, a hovercraft was chosen for its ability to safely move over calm water and relatively flat sea-ice.

***Listening for earthquakes on the Gakkel Ridge***

The most exciting of Sabvabaa's future primary goals are seismic investigations and recovery of bottom sediments that can be dated from a 200 by 600 km area of the sea bed where 40+ year old seismic profiles from drifting US Ice Station T-3 indicated that up to 500 m of the uppermost sedimentary cover was blown away in some places. This is assumed to be from asteroid fragments that impacted the central Arctic Ocean within the past one or two million years.

To accomplish this the craft has a full suite of acoustic equipment, from a 12/200 kHz full ocean depth echo sounder, a powerful CHIRP high resolution sub-bottom profiler for the uppermost 50 m of the bottom sediments, and low frequency seismic profiler, with 20 in³ air-gun and six channel hydrophone streamer capable of penetrating kilometers below the seafloor. This gear will pinpoint various sub-bottom sediment layers that can be sampled with a 6 m long dart-corer suspended below 3000 m of 3/8" kevlar rope with 3 ton breaking strength. This rope is handled by a lightweight hydraulically-powered capstan winch. There is also a lightweight dredge which has been used successfully dozens of times to break off rocks from steep underwater cliffs and bring them to the surface. There is also equipment for oceanographic work, consisting of an electromagnetic sounder forward of the prow to determine ice thickness, and a hydraulically-operated CTD winch with 500 m of single conductor wire for making profiles of salinity, temperature and density, as well as studying water currents with an ADCP (Acoustic Doppler Current Profiler).

***First rendevouz with ODEN in 2012***

Our main Alpha Ridge target area is some 1,500 km from the Longyearbyen base. Since our first expedition to that area (planned for 2014 with a lift from the German icebreaker Polarstern) will likely see a campaign up to a year in length, the last five summers have been spent proving the craft's capabilities and learning what it can and cannot do. The first two years we also participated in the 2007-9 International Polar Year, taking eight pairs of Norwegian high-school students interested in polar science to the ice pack on trips of a week or more. Altogether the craft has traveled some 20,000 km north of the Arctic Circle, and spent a total of a half year on the pack, traveling over 4,200 km on ice.

Last summer the SABVABAA spent 10 weeks on the ice for the Norwegian FRAM-2012 expedition. The two part trip was to consist of two weeks over the spreading Gakkel Mid-Ocean Ridge to acoustically monitor earthquakes, and then a run to the Lomonosov Ridge past the North Pole, refueled by the Swedish icebreaker ODEN's LOMROG III cruise. Unfortunately summer 2012 was the year that the ice cover shrank to a new minimum, and a severe Arctic storm put the thinner pack into compression, producing vast fields of rubble ice and pressure ridges, with fog and white-out conditions for up to 22 hours a day. Unable to rendevous after the first refueling some 500 km into the ice pack, the SABVABAA spent more than five weeks monitoring some 300 earthquakes with triangular arrays of WiFi-linked hydrophones which were relocated whenever the drift took the ice away from the seismically active rift valley 5 km below. As ODEN returned, SABVABAA was refueled and left to proceed south with Yngve aboard alone. Further bad weather pushed the ice west and prevented further progress south, so that the craft had a lift of opportunity from the German icebreaker POLARSTERN, returning safely to Svalbard in early October.

***Above: Sabvabaa aside ODEN***

***Below: Hoisted aboard POLARSTERN***

The take-away lesson from the past five years is that the hovercraft can spend lengthy and useful mobile periods on the ice, provided that sufficient food, fuel (1-1.5 tons/month), equipment and spares are stored with trackers on the drifting ice. However the rapidly changing ice conditions accompanying global warming mandate that the craft not attempt long trips to and from the area of study, but rather take a ride on icebreakers of opportunity, where it can be stored atop a 20 or 40 foot container. It is worthwhile noting that the average icebreaker consumes 60 tons of diesel fuel per day, sufficient for the hovercraft to operate for well over one year.

R/H SABVABAA is dedicated solely to Arctic research and belongs to Blodgett-Hall Polar Presence LLC, based in Delaware, USA.
A website with further information and videos can be accessed at **www.polarhovercraft.no**

**Dr. John K. Hall, Geological Survey of Israel (Retired), and Prof. Yngve Kristoffersen, University of Bergen and Nansen Centre.**

# HOVERAID VISIT - MADAGASCAR

**In September Trustee Warwick Jacobs visited HoverAid to volunteer his services & see them in operation**

***HoverAids nine seat River Rover***

The visit took place toward the end of the 2012 season - given the rains were due in October. The two petrol fueled craft based at Beroroha are a River Rover nine seater and a six seater Vortex. The craft are able to provide medical cover for 60 kilometers up and down the river from their central village base - a journey which can take up to three hours.

During Warwick's short stay a young lady was recovered after being crushed by a Zebu buffalo - and a man who had crushed his hand received attention. HoverAid operate in one of the poorest regions of Madagascar where if you are lucky you might have solar electricity and water from a hand pumped well.

***Pilot José demonstrates his skills***

The craft are flown, maintained and managed by Madagascans - and they provide an impressive and skilled service where nothing else can respond. The MAF aircraft cannot reach most of the flooded river area and there are fewer covered roads in Madagascar than in Cornwall. The hovercraft is an ideal vehicle as the river levels can rapidly fluctuate from a few inches to a few feet and harbor fast currents. The base camp is very basic but manages the best it can. At the end of Warwick's stay with the camp - he accompanied the Vortex which was towed 700 kilometers back to Antananarivo for some modifications. The uncomfortable journey took two days along rough roads.

The visit was made even more poignant as the team had just received news that Squadron Leader Mike Cole - the father figure for hovering Doctor services worldwide had passed away. With expeditions to Nepal, China & Papua New Guinea, Mikes work paved the way for HoverAid and proved Tim Longleys River Rover was an ideal craft for the aid work.

Mike taught leadership to officer cadets at RAF Cranwell college and took hovercraft on expeditions Worldwide with Nicaragua being the last. He was a regular speaker at the Royal Geographical Society.

HoverAid have committed to Mozambique next year and have recently purchased the retired Griffon 375 from Dundee airport in Scotland. This craft has operated for relatively few hours due to it being a rescue standby craft during its career from 1999. They will also be acquiring a Vortex 7 - the first of its kind.

Warwick painted a few pictures on the spot during his visit. He is selling a limited run of prints which will be signed and numbered to raise funds for both HoverAid and the Hovercraft Museum. The four different images are priced at £10 each + P&P with all income shared equally between the charities. Details can be found in our HoverShop pages at the rear of this newsletter.

Many thanks to the team in Southern Madagascar, manager Fidy, pilot José and the rest of the crew.

***Right: Trustee Warwick Jacobs at base camp***
***Below: A patient is transported aboard the River Rover***

# THE HOVERGEM G6

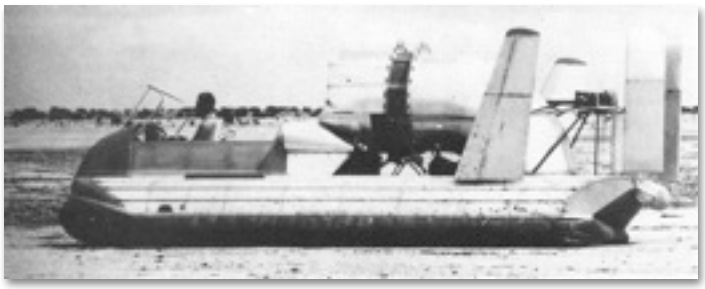
**The survival of a 43 year old pioneering hovercraft with one owner from new**

The editor was recently tipped off about a long forgotten craft which members may have thought was scrapped many years ago. Armed with the information contact was made - and a reply came back confirming the survival of a pioneering machine. It turns out the first commercially produced hovercraft in Australia remains in the ownership of the same family who commissioned its construction some 43 years ago in 1969. The unorthodox looking Hovergem G6 lies silent in a purpose built shed on Mundoo Island - a cattle station 1 1/2 hours drive south of Adelaide in Southern Australia.

***The Hovergem G6 was a cattle carrying wonder in 1970***

***Above: Mundoo - the ideal location for a hovercraft***
***Below: Artists impression of the Lycoming powered G6***

Colin & Sally Grundy are the fourth generation of their family to farm the idyllic 6000 acre estate which sits on the mouth of the River Murray on the Fleurieu Peninsula. Celebrated today for their Angus cattle & Dorper sheep - the Grundys also welcome visitors and campers in a bid to sustain their business - and maintain the stations presence through what have been testing times over the years. The family gives tours of this beautiful and fascinating location - and the hovercraft is included as a somewhat unexpected attraction! The cattle station extends over several neighbouring islands and it's clear to see why a hovercraft was considered the ideal tool to cover the challenging and ever changing terrain.



***Above: Hovergems first craft - the 45hp Gemcraft***
***Below: The twin engine GX-2d demonstrated in 1968***


***240 Covers were carried on the G6***

It was Colin's father Peter Grundy who commissioned Hovergem Australasia / Asia Pty. Ltd. to construct the G6 - which was to be the largest craft built in the country to date. The company had previously built two prototype craft to test the concept. The Volkswagen powered Gemcraft was constructed in 1967. It was followed by the twin engine GX-2d in 1968 - a craft which formed the basis from which the G6 was developed. Once completed - trials of the G6 took place on 2nd September 1970 at the small beachside town of St. Kilda which is 20km north of Adelaide. The shallow beach & mudflats provided an ideal testing ground for pilot Maurie Hoy - with Peter as crew member and observer. The craft had a 1 ton payload capacity which was provided for by a Ford Escort car! The powerful Lycoming engines thrust the craft to speeds of over 60mph - and thrilled the large crowd that had gathered to view this historic event. Some 240 covers were carried, signed and stamped on this inaugural trial. Further outings were to prove the crafts abilities - and Peter took delivery of the G6 to start work shortly after.

Sally has written a book '*Mundoo Island Memories*' and within are a few paragraphs and details of the craft written with contributions from Peter:

*The hovercraft was built in 1969 (in Port Adelaide, SA) and when it arrived in 1970 we were able to zap all over the areas that were gradually improving. We sprayed tons of seed all over the place with a little gadget we had. It was a blower gadget that we mounted on the front of the hovercraft. I am sure most of the seed was wasted! You couldn't seem to get it planted at the right time. The best way for planting the grasses was with clods of the actual growing plant.*

*We had an aircraft at this stage which helped to keep everything well under control. We could go up in the plane and have a look around to see what needed to be done or whether there were any cattle down or heifers having trouble calving.*

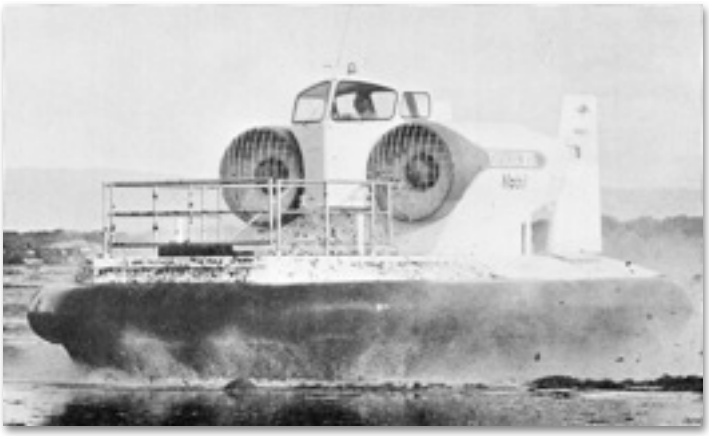
*If something was spotted from the air we would land the plane and jump in the hovercraft and attend to the problem immediately. We were able to pick up sick or injured cattle in the hovercraft and bring them home for attention. The hovercraft was also very useful for carting material and equipment to the islands to build stockyards. Anything that was difficult or impossible to do before was just a piece of cake with the hovercraft.*

Many thanks to Sally who's been most helpful in providing information about the craft & its history - she writes:

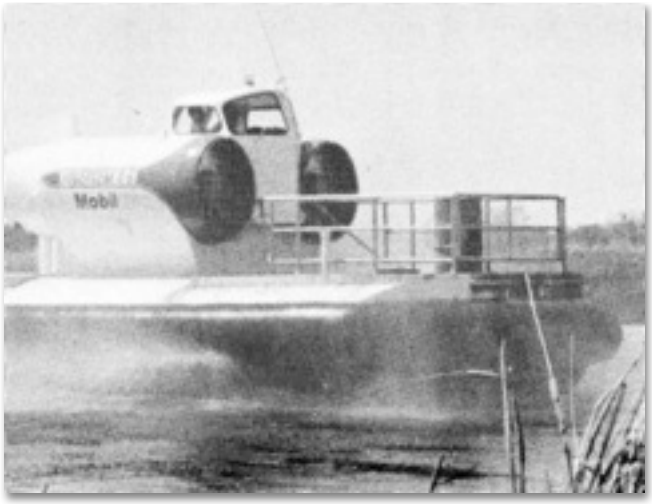
'*The hovercraft was used for many years to access our islands in the mouth of the River Murray in the Coorong, South Australia. In the late 1970's cattle prices dropped to an all time low and fuel prices rose. It was not viable to use the hovercraft at that time so she was put in a shed and there she stayed until 1997 when my late father-in-law became ill with prostate cancer and wanted to teach my husband how to 'fly' her. He spent weeks repairing the skirt to get it up & running.*

*She is currently sitting in the same spot on Mundoo Island but does now require a new skirt. The skirt is all-rubber and has perished over the years. A new skirt and some work on the fuel system would have her up and running again.*'

***Above: The hovercraft with equipment installed***
***Below: An original advert features the craft in action***

***Peter Grundy found the hovercraft was the ideal vehicle for completing numerous tasks across the cattle station***



Also extracted from Sallys book are the following details:

***Entering the shed for the last time in 1997***

- *This hovercraft is the first commercial hovercraft to be designed and manufactured in Australia.*
- *It was built in 1969 and delivered to Peter Grundy in 1970.*
- *It has done approximately 150 hours of work in fresh water in South Australia.*
- *It has been used on our cattle station for transportation of stock and various farming equipment, seeding, spraying, fertilizer spreading and general property maintenance work.*
- *Because of its unique ability to operate at speed over land, sea, river and swamp the G6 enables the economic development of previously inaccessible areas.*
- *The centrally placed pilot's cabin is fully instrumented and raised above the deck area to provide maximum all round vision.*
- *Routine inspection and corrective maintenance tasks are simplified by the inclusion of an inbuilt hydraulic jacking system.*
- *The Hovergem G6 is powered by two 250hp Lycoming 0-540 engines.*
- *Each engine drives a controllable pitch airscrew capable of both forward and reverse thrust and a fixed pitch axial flow fan for lift. These fans each absorb between 60 and 70hp of the available engine output. The remaining power (360hp) is available for propulsion.*
- *Directional control is achieved in two ways; through a fin and rudder assembly carried directly behind each airscrew and by independently controlling the pitch of the airscrews.*
- *The craft has a maximum speed of 80mph and a cruising speed of between 35 wand 50mph, dependent upon prevailing conditions and payload.*
- *The hull and superstructure of the G6 are constructed from marine Grade quality aluminium alloy sheet and reinforced glass fibre.*
- *All aluminium parts are etch primed prior to assembly to provide complete protection against corrosion.*
- *It has an endurance of 3 hours at cruising speed.*
- *Fuel for the engines is provided from a pair of 25 gallon tanks, centrally located to ensure vehicle stability and maximum endurance.*
- *The windscreen and side windows are provided with specially toughened glass to afford maximum protection against accidental damage by birds and flying debris.*
- *Deck size: 140 square feet*
- *Carrying capacity: 1 ton*
- *Overall length: 32 feet*
- *Overall width: 18 feet*
- *Height (static): 9 feet*
- *Height (on cushion): 12 feet*
- *Unladen weight: 5,500lbs*
- *Payload: 2,000lbs*

Sally sent a number of pictures of the craft as it is now. Husband Colin & son Jack give some scale to this unique hovercraft. Although somewhat dusty - the Hovergem G6 survives in excellent condition given its age. It is a popular feature of the island tours - and a piece of family history. Mundoo Island have their own website which also features the craft: **www.mundooisland.com.au**

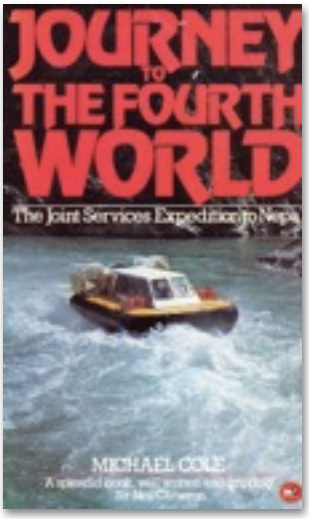
# Michael Cole 1935 - 2012

**Christian explorer who pioneered the use of hovercraft in the aid role**

A challenge set to Mike in 1974 to take a water drilling rig to the famine ridden Wollo Province of Ethiopia was to combine his craving for adventure - and his desire to help the poorest of the poor. For the next four decades Mike pursued adventure with a purpose to the world's most remote communities. He led five major expeditions using hovercraft on previously un-navigable rivers to connect isolated people to medical services and community development.

Mike trained as a PE and Geography teacher and taught briefly in schools in Edmonton - but spurred on by his earlier National Service with the RAF - he was commissioned as a Flying Officer in 1962.

In 1974 Rev. Pat Goodland of Stanmore Baptist - who was the chaplain on the RAF base where Mike was working - challenged him to help deliver a water drilling rig donated by Tearfund to the famine area of Ethiopia. Subsequently he met missionary surgeon Dr Bill Gould at a Tearfund Conference - who invited him to visit Nepal and deliver a telephone exchange to the mission hospital in Tansen. Bill shared his vision for using hovercraft to navigate the Himalayan rivers to enable medics and patients to travel rapidly and safely. Mike began planning an expedition to Nepal to test whether the revolutionary design of the highly manoeuvrable six-seater River Rover hovercraft could provide a 'hover doctor' service. This was the beginning of his involvement with hovercraft.




In 1979 he led the British Joint Services Hovercraft Expedition to Nepal with 26 team members - many of whom were Christians - and recounted this in his book - *Journey to the Fourth World*. The Museum has copies of this & other books covering Mike's expeditions - see our Hovershop pages at the rear of this newsletter for details.

In 1982 he led the Joint Services Hovercraft Expedition to Peru in the aftermath of the Falklands war between Britain and Argentina. Peru sided with Argentina. Exploring the headwaters of the Amazon and demonstrating effective medical services - helped restore goodwill between the UK and Peru. President Belaúnde rode the rapids in the hovercraft and hosted a reception for the team in the presidential palace in Lima. As a result and for his other services to humanity - Mike was awarded the OBE in 1983.

Mike went on to plan and lead another major hovercraft project - this time to China. In 1990 a child vaccination programme sponsored by UNICEF - and innovative material science research were carried out. The upper reaches of the River Yangtze in the provinces of Sichuan, Qinghai and Tibet were explored by hovercraft - reaching the navigable source of the river. Along the way the team was privileged to meet and encourage isolated Christian believers on the Tibetan plateau.

In 1993 he co-led a fourth hovercraft project - developing 'hover doctor' services for Australian missionaries on the Fly River Delta of Papua New Guinea. In the same year President Violeta Chamorro of Nicaragua invited Mike to prepare a Hovercraft Communications Project to connect isolated communities of the Caribbean coast - and along the Rio San Juan to medical services and community development. A unique hovercraft journey across the Central American isthmus from Bluefields to Managua was completed in May 1995.

In recent years - brushing aside his own deteriorating health - Mike continued to visit Nicaragua several times a year with characteristic resilience to initiate new areas of service - including experimental farming - most notably the 'moringa' miracle plant. The 'Michael Cole' eco-lodge training facility was opened by his son Nick in Matagalpa, central Nicaragua on 31 July 2012 as Mike watched on from the UK via a web cam.

***Mike (far right) with a Griffon 2000TD on the Yangtze River***

His real legacy is the lives of thousands of young people in the UK and Latin America whom he inspired and guided into humanitarian service, resourceful leadership and to realise their potential.

Mike passed away at his home in Hertfordshire on 25th September. He leaves behind his wife & two children.

# Terry Guyte 1939 - 2012

**Long term Museum member & prolific hovercraft restorer passes away**

This year sadly saw longterm original member Terry Guyte pass away. Terry moved to Wales following his retirement - and was previously a resident of the Isle of Wight. Terry brilliantly restored so many of our craft at the very beginning in the early 1990s - and went on to apply his talents to many craft in our collection over the years.

Terry was a repair man for Black & Decker and could turn his hand to almost anything. He restored GP Too, two HoverHawks - No's 036 & 120 - and our Hoverlark back to working order. He also restored a Skima 4 and in recent years despite his health deteriorating - built his long term favourite hovercraft - a Peter Gooch J4 from the original plans which were drawn up in 1969. His family kindly donated this wonderful machine which Terry got to see hover. We are very proud to display one of his wonderful masterpieces.

Our very best wishes to his wife Pat and family.

***Restored & operational GP Too***

***Above: Terry inspecting Hoverhawk 120***

***Below: The donated Peter Gooch J4***

***Hoverhawk 036 & 120***

***Restored Hoverlark***

# Dr. John French 1936 - 2012

**Official biographer of Sir Christopher Cockerell**

You can truthfully say that John French regarded Sir Christopher as his hero - he really did. As an electronic engineer himself - he had enormous admiration for Cockerell's very important electronic work at our hour of need during the war - and the 36 patents which he was in the process of describing for Sir Christopher's biography.

John was writing the much needed biography for the last twelve years chronicling Sir Christopher's patents and inventions.

John passed away in November leaving the unfinished tome which we hope can be finished to honour both Johns efforts and Sir Christopher's achievements - as he had set out to do so splendidly. He was also a keen supporter of the Museum - and instrumental in the process and fundraising for the Hovercraft Column dedicated to Sir Christopher in Somerleyton village. John attended the unveiling of the public memorial in 2010. He also attended the funeral of Lord Somerleyton this year.

John will be missed and we very much hope his book will see completion and publication.

***The Hovercraft Column at Somerleyton***

# MUSEUM HOVERSHOP

**Here are some great Christmas gift ideas for the hovercraft enthusiast. We have lots of new lines in stock that would make super presents!**

****NEW****
**Wind up toy Hovers!**
Choice of Red - White & Blue
**£2.99 each!**

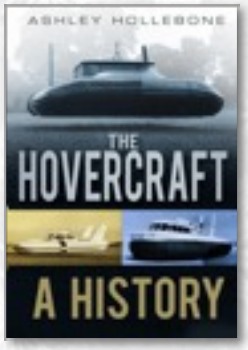

****NEW** Four Limited Edition Prints!** Painted by Warwick Jacobs during his time with HoverAid in Madagascar - Only 25 of each available
**A4 Gloss Prints - Signed & Dated**
**£10 each or all four for £30!**

**Polo Shirts** - most sizes in Light Blue or Orange - **£12**

**T-Shirts** - Most sizes available in Light blue - **£5**

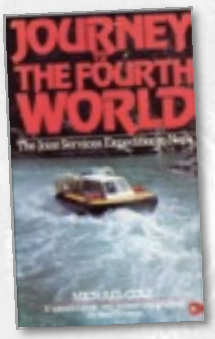


****NEW** Two Limited Edition Prints!**
Painted by Warwick Jacobs as a thank you to the Canadian Coast Guard
**Only 25 of each - A3 Prints - Signed & Dated**
**£25 each or two for £40!**

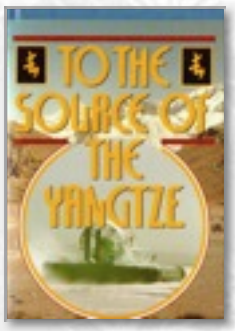

****NEW** Four great books!**
***Ladybird*** have reprinted their original **'How it Works - The Hovercraft'** book for 2012! Featuring SR.N6 on the cover - **£5**
***'On a Cushion of Air'*** is an absolute must for any hovercraft enthusiast. We have a limited number of ***Signed*** copies at **£30**
Finally we have ***'The Hovercraft Story'*** and ***'The Hovercraft - a History'*** from Ashley Hollebone. We have ***Signed*** copies and they are priced at **£6.95 & £15** respectively

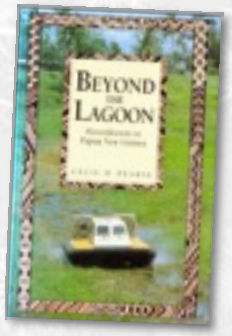






****MIKE COLE BOOKS****
We have a handful of copies left of four books written by or relating to Mike Cole who passed away recently. The books cover his pioneering work with hovercraft in the aid role
**£6 each**

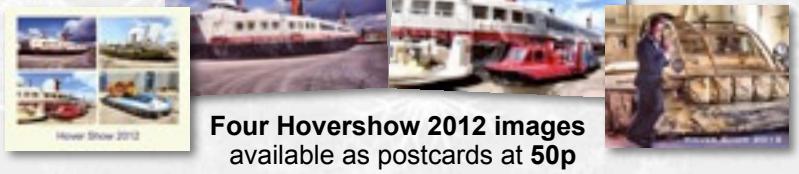


**A3 Posters - £5**
**SR.N2 -** original 1962 stock from Saunders Roe!
**Twin Prop -** at BHC
**SR.N4 & Museum -** elevated views of Seaplane Square & SR.N4 hovercraft



****NEW** 3D VA-3 Poster + Specs!**
Super 3D image of the VA-3
Includes a pair of anaglyph specs
**A4 Gloss - £2**



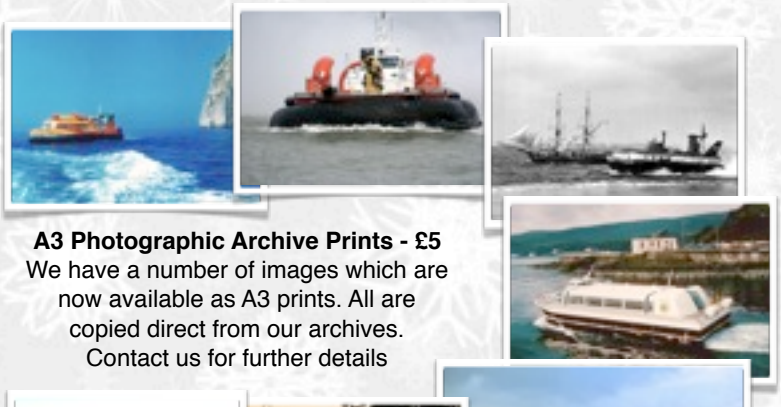
**Four Hovershow 2012 images**
available as postcards at **50p**
Fridge Magnets - SR.N4 & James Bond - **£1**
Greetings Cards - **£1**

****NEW****
Pegwell Bay Hoverport
Ramsgate - Calais
Original cloth badges - **£2**


**AP-188 Gloss Photo Print**
SAS Craft on ice - B&W
**10" x 8" - £1**


**Double DVD Offer!**
Griffons Propelling the Future &
Hovercraft Museum Unseen Archives
**Pair for £10**


**Limited Edition Signed Prints**
Griffon 2000TD in the Arctic
Hoverlloyd SR.N4 Swift - **£6**



**A3 Photographic Archive Prints - £5**
We have a number of images which are now available as A3 prints. All are copied direct from our archives.
Contact us for further details



Original Vospers
VT1 Stickers - **£2**


****NEW**** KEEP CALM
A5 stickers - **£2**



Please contact us to check availability and for postage costs: ***shop@hovercraft-museum.org***
Payment can be made with card via our PayPal account: ***swift@hovercraft-museum.org***
Payment can also be made by chq payable to '***The Hovercraft Museum Trust***'