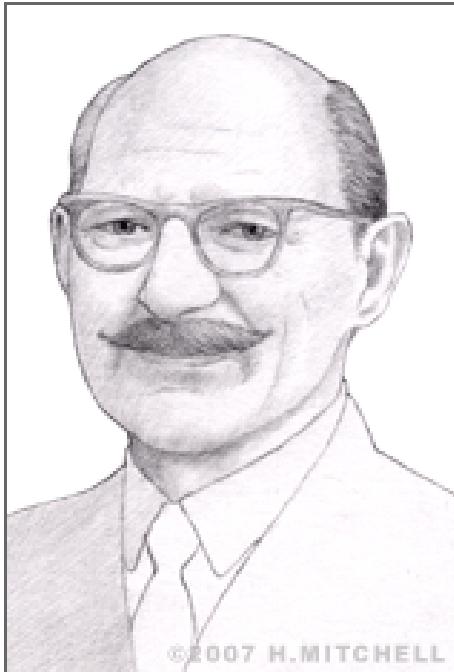


Christopher Cockerell

Born 1910. Inventor of the hovercraft.

Available online at www.livesretold.co.uk



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1. Introduction



The following chapter was archived in 2021, with acknowledgement and thanks, from Wikipedia at www.wikipedia.org.

Sir Christopher Sydney Cockerell CBE RDI FRS (4 June 1910 – 1 June 1999) was an English engineer, best known as the inventor of the hovercraft.

Cockerell was born in Cambridge, where his father, Sir Sydney Cockerell, was curator of the Fitzwilliam Museum, having previously been the secretary of William Morris. His mother was the illustrator and designer Florence Kingsford Cockerell. Christopher attended the preparatory school of St Faith's. Christopher was educated at Gresham's School, Holt, Norfolk. He matriculated at Peterhouse, Cambridge to read mechanical engineering and was tutored by William Dobson Womersley. He was later to return to Cambridge to study radio and electronics.

He began his career working for W. H. Allen & Sons of Bedford. After returning to the University of Cambridge in 1934 to study radio and electronics, he went to work at the Radio Research Company. In 1935 he went to work at the Marconi Company, and soon afterwards he married Margaret Elinor Belsham (4 September 1913 – September 1996). They lived at the now Grade II listed Gay Bowers Cottage in Danbury, Essex from 1940 to 1951. During his time in Chelmsford, he led a research team in the famous Marconi hut at Writtle and worked on many systems, including radar. After the war he contributed to the development of several

very sophisticated pieces of equipment, including radio location technology, and the first equipment used by the BBC in Alexandra Palace.

After he left the Marconi Company, he bought Ripplecraft Ltd., a small Norfolk boat and caravan hire company, with a legacy left by his father-in-law. The firm made little money, and Cockerell began to think how the craft could be made to go faster. He was led to earlier work by the Thornycroft company, in which a small vessel had been partially raised out of the water by a small engine.

Cockerell's greatest invention, the hovercraft, grew out of this work. It occurred to him that if the entire craft were lifted from the water, the craft would effectively have no drag. This, he conjectured, would give the craft the ability to attain a much higher maximum speed than could be achieved by the boats of the time.

Cockerell's theory was that instead of just pumping air under the craft, as Thornycroft had, if the air were to be instead channelled to form a narrow jet around the perimeter of the craft, the moving air would form a momentum curtain, a wall of moving air that would limit the amount of air that would leak out. This meant that the same cushion of high pressure air could be maintained by a very much smaller engine; and for the first time, a craft could be lifted completely out of the water. Cockerell tested his designs in the broadland village of Somerleyton, Suffolk

He tested his theories using a vacuum cleaner and two tin cans. His hypothesis was found to have potential, but the idea took some years to develop, and he was forced to sell personal possessions to finance his research. By 1955, he had built a working model from balsa wood and had filed his first patent for the hovercraft, No GB 854211. Cockerell had found it impossible to interest the private sector in developing his idea, as both the aircraft and the shipbuilding industries saw it as lying outside their core business.

He therefore approached the British Government with a view to interesting them in possible defence applications. The leaders of the defence groups were not interested in providing funding and put the idea of the hovercraft on the government's secret list. Being on the secret list stopped Cockerell from making his design public.

It remained classified until 1958, upon news of similar developments on the continent, it was declassified, and Cockerell was introduced to the NRDC (National Research Development Corporation). In the autumn of 1958, the NRDC placed an order with Saunders-Roe for the first full-scale hovercraft. This prototype craft was designated the SR-N1 (Saunders-Roe – Nautical One) and was manufactured under licence from the NRDC. On 11 June 1959, the SR-N1 was first shown to the public, which was capable of

carrying four men at a speed of 28 miles per hour. Weeks later, it was shipped over to France. It successfully crossed the English Channel between Calais and Dover on 25 July 1959, 50 years to the day after the historic crossing by Bleriot.

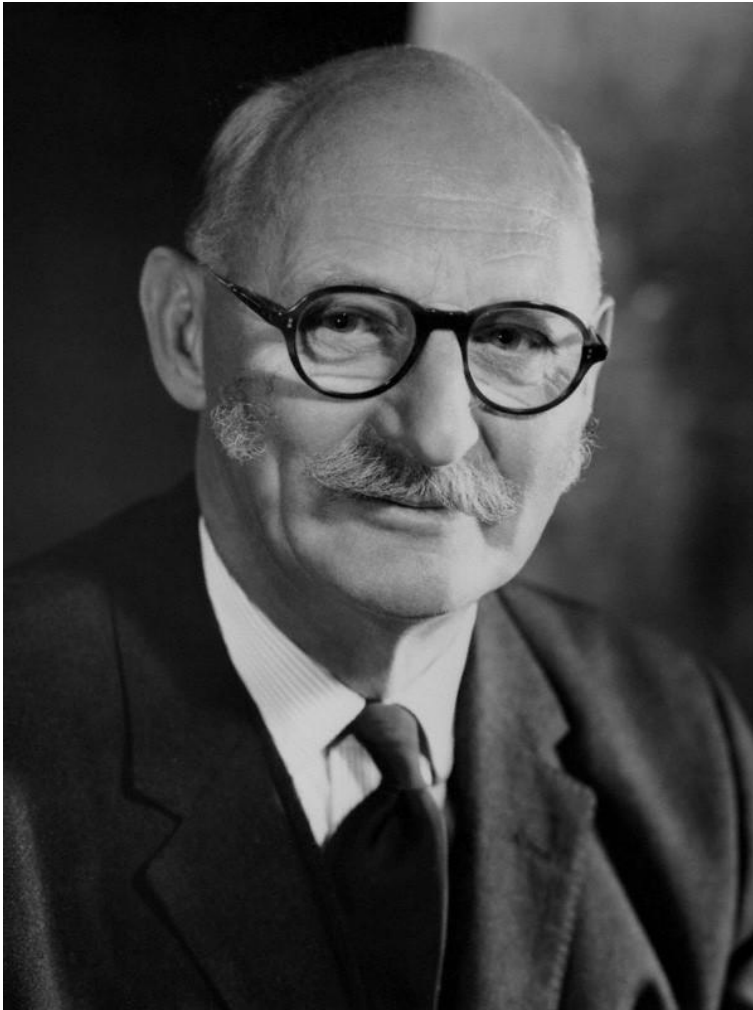
In January 1959, the NRDC formed a subsidiary called Hovercraft Development Ltd. Cockerell was the Technical Director and the company controlled the patents which it used to license several private sector firms to manufacture craft under the registered trademark of Hovercraft.

In later life, Cockerell developed many other improvements to the hovercraft, and invented various other applications for the air cushion principle, such as the hovertrain. He attended many hovercraft related events, such as the unveiling of many hoverports across the United Kingdom.

Cockerell was awarded £5,000 by the British Government of the 1960s, the only practical official recognition of the value of his work, though he was given a knighthood. The financial award would be worth perhaps £50,000 to £100,000 in the money of 2020. Cockerell received an Honorary Doctorate from Heriot-Watt University in 1971.

In later life Cockerell developed the Cockerell Raft, a wave power hydraulic device which may have implications in the future for electricity generation. After a short illness, Christopher Cockerell died at Hythe, Hampshire on 1 June 1999.

2. The Story of the Hovercraft



The following chapter was archived in 2021, with acknowledgement and thanks, from the Made Up in Britain website at www.madeupinbritain.uk.

The first working hovercraft was invented and patented by the English inventor Christopher Cockerell (1910 - 1999) in 1956.

One of the most successful inventions of the 20th century, the Hovercraft, was originally tested in 1955 using an empty KiteKat cat food tin inside a coffee tin, a vacuum cleaner and a pair of kitchen scales. This led to the first hovercraft to be produced commercially, the SRN1.

Floating on Air

Christopher Cockerell's idea was not a new one. Many men had tried to make a working 'glidable' craft but commercial backing held them back. Cockerell's design was the first to build a vehicle that could move over the ground and water, floating on a layer of air. This would reduce friction between the surface and the vehicle.

"The Admiralty said it was a plane and not a boat, the Royal Air Force said it was a boat and not a plane, the Army were plain not interested."

Quote from Cockerell.

Family

The Cockerells were a talented family from Cambridgeshire. The sons of Sydney John Cockerell (right), a London coal merchant, and Alice nee Bennett, the daughter of a City watchmaker, Sir Sydney's elder brother,



Theodore, was a biologist, his younger brother, Douglas, an eminent bookbinder; while Douglas's son Sydney Maurice ("Sandy"), two years Christopher's senior and also a bookbinder, was a celebrated and innovative designer of marbled papers.

Despite an interest in the arts, Christopher read Engineering at Peterhouse, Cambridge.

After Cambridge he worked for the Radio Research company until 1935 and then for the Marconi Wireless Telegraph company from 1935 until 1951.



Cockerell Prototype Hovercraft.

Family Finance

He had an enormous capacity for invention and his father, despite reservations (he once described his son as "no better than a garage hand"), put up the money for his early patents. (When Sir Sydney died in 1962, aged 94, some obituaries of this great museum director and manuscript collector, friend of Bernard Shaw and T.E. Lawrence, literary executor of Thomas Hardy, called him simply "grandfather of the hovercraft".)

War Years

During the war years Cockerell worked with an elite team at Marconi to develop RADAR, a development which Churchill believed had a significant effect on the outcome of the Second World War, and Cockerell believed to be one of his greatest achievements. Whilst at Marconi Cockerell patented 36 of his ideas, for which he was paid just £10 each.



Cross channel ferry hovercraft.

On His Own

Cockerell left Marconi in 1950, and with a legacy left by his beloved wife Margaret's father, he and Margaret were able to purchase a small boatyard in Norfolk. This never seemed to make money and Cockerell's mind turned back to earlier ideas. He decided to use larger models on water. Initial experiments convinced Cockerell that boats could be made to float on a cushion of air, thus reducing the effect of the water drag. After many trials he successfully designed a craft which proved his ideas were correct. He

was not surprised. The modified punt he used had a special pump to blow high pressure air down under and around the rim of the craft.

Military

A strong rubber curtain regained most of the air, hence creating lift. Cockerell had set up a company, Ripplecraft, to develop his ideas further and in 1955 he eventually convinced the Ministry of Supply to back his project. He had a hard time trying to convince the military: the Admiralty said it was a plane not a boat; the RAF said it was a boat not a plane; and the Army were "plain not interested".

The irony is that it has been the Marines who have taken the hovercraft most seriously, with over 100 giant craft now in use in America and 250 in the Soviet Union, many used in recent conflicts. In these early days Cockerell's idea was patented and immediately put on the secret list. Nothing happened and Cockerell became increasingly agitated.

Eventually, in 1958, after declassification, the National Research Development Council (NRDC) funded the design and construction of SRN1 - the world's first man-carrying amphibious hovercraft. Saunders Roe, the flying boat firm at Cowes on the Isle of Wight, were given the contract, and the firm, under Cockerell's guidance, worked avidly on the 20ft craft dubbed the "flying saucer".

3. The Hovercraft that Kept on Going

The following chapter was archived in 2021, with acknowledgement and thanks, from the CNN website at www.cnn.com.

Southsea, England (CNN) — On October 1, 2000, the skirts of Princess Anne and Princess Margaret deflated for the final time. These two colossal SR.N4 hovercraft had shuttled vacationers and booze cruisers between the UK and France since the late 1960s. Now it was time to say au revoir.

What prompted their retirement? Plenty. Passenger capacity was less than a quarter of the average ferry. These "Mountbatten" class hovercraft were spendy to run; after each trip, their Rolls-Royce gas turbines -- normally used on aircraft -- had to be rinsed with distilled water.

The opening of the Channel Tunnel in 1994 didn't help. Neither did the scrapping of duty-free booze and cigarettes, which had always heavily subsidized the service between the English port of Dover and Calais and Boulogne in France.

It was the end of the British hovercraft era. Except it wasn't. Because 100 miles east of Dover, another hovercraft service refused to let go.



Hovertravel hovercraft service linking Southsea, England with Ryde on the Isle of Wight. Photo courtesy Will Noble.

On a blistering June morning in Southsea, on the south coast of England, the "Island Flyer" is puffing up like a bullfrog, fans whirring, beach shingle spewed in its wake.

It's peak time on Hovertravel's Southsea-Ryde route; every 15 minutes passengers are jetted across the sparkling waters of the Solent, slaloming sailboats before gliding up onto the Isle of Wight slipway less than 10

minutes later. Small crowds of onlookers group on a nearby footbridge -- phones poised -- to greet it, like some minor celeb.

The Southsea-Ryde route opened in July 1965. There was no timetable back then; the old 38-seat SR.N6 craft simply fired up their engines once enough passengers were waiting. There were no dedicated slipways either; vintage film footage shows hovercrafts belly-sliding onto busy beaches, to the amusement and bemusement of sunbathers.

Even today, you might miss Southsea's unassuming hoverport; the small, pitched-roof building is part of a short parade with a fruit stall, ice cream parlor and fish and chip shop.

Yet 56 years on from its launch, this remains the only year-round commercial passenger hovercraft service in the world. A community-minded team of managers, engineers and pilots (more of which later), keep things running. Up to 78 passengers board at a time; off season, most are island commuters working on the mainland but come summer, the hovercraft is one of the area's big tourist attractions.

"The kids' faces light up," says Hovertravel duty manager Terri Frost, who oversees operations on both sides of the water. "It's just really great that you've been part of their day, even if it's just that 10-minute crossing, you've made their day."

Hovercrafts aren't just special to kids, either.

"There's a gentleman who comes for the Isle of Wight Festival," Frost says, "He comes from Australia and he only uses the hovercraft because he loves it." Japanese tourists are also known to come out of their way to marvel at these oddball amphibious craft.

Perhaps part of people's love for the hovercraft is its sense of near-sentience; the way they swell and deflate as if breathing. The "Island Flyer" and "Solent Flyer" even joined nationwide applause for UK health workers in 2020 -- the bottoms of their skirts slapping on the concrete pads at Ryde.

Altogether, Hovertravel's route clocks up just under a million passengers a year. So where did this service succeed where its bigger international cousin didn't?

Hovercrafts don't run on nostalgia and novelty alone

"He was a fairly quiet guy, not bubbly, but I would describe him like myself. A bit of an anorak," says Alan Barkley, a volunteer at the Hovercraft Museum at Lee-on-the-Solent, half an hour's drive from Southsea's hoverport.

The anorak -- British slang for someone with an obsessive interest -- he's talking about is Christopher Cockerell, inventor of the hovercraft.

The story goes that Cockerell made his prototype using a can of cat food, a coffee tin and a vacuum cleaner, before launching the real deal off the Solent in 1959. A fearless pioneer, Cockerell also took the hovercraft on its first ever Channel crossing -- bravely pacing around the outside of the SR.N1 for the duration of the voyage, acting as "dynamic ballast."

Choosing coastal Hampshire for much of the testing -- not to mention building hovercraft at Saunders-Roe in Cowes -- Cockerell essentially turned the Solent into "Hover Country," and it never really looked back.

The museum is a fascinating shrine to various iterations of Cockerell's creation: there's a craft used in the last Iraq war; one from the 2002 Bond film "Die Another Day;" a cute contraption made with the chassis of a Mini. This afternoon, one of the former Princess Anne cabin crew is celebrating her 50th birthday aboard the craft, which is now cared for by the museum.

"The hovercraft was built in the area, invented in the area, and I think that's got quite a bit of influence on why the Isle of Wight craft is still running successfully," says Barkley.

But hovercrafts don't run on nostalgia and novelty alone; there has to be a genuine need for it. In the Isle of Wight's case, Ryde's pier juts half a mile out to sea, so even once you've made the (slower) ferry trip over from Portsmouth, there's still a bit of a schlep to dry land. The dexterous hovercraft leapfrogs all this, cutting the overall journey time in half.

For that reason, the Isle of Wight service outlived not just the cross-Channel hovercraft routes, but also those closer to home, such as Southampton to Cowes.

Its nimbleness even saves lives. In 2020, Hovertravel worked with the National Health Service, trialing trips for Covid patients to the mainland for hospital treatment. It worked so well, the hovercraft now doubles up as an amphibious ambulance for various medical emergencies.

In fact, used to convey everything from Amazon packages to vital organs, the hovercraft forms a vital high-speed link between the island and the rest of the country.

'Like a Land Rover on ice'

Steve Attrill is Hovertravel's head of marine operations. As a pilot he's flown all manner of planes, and now as captain of a hovercraft his job description is... pilot. That's because you don't "sail" or "drive" a hovercraft; you "fly" it. "It stems back to the pioneering days where the

first operators of the hovercraft came from the aviation industry," says Attrill, "My predecessors, the people who set the company up, were from a flying background. Our chief pilot when I joined back in 1988, he was an ex Vulcan bomber pilot."

With just 10 hovercraft pilots on the route, the running joke is that they're rarer than Top Gun crew members. Despite occasionally being mistaken for bus drivers, hovercraft pilots gain a degree of respect few other careers do. "There's thousands of ships' captains," says Attrill, "There's thousands of airline pilots. There's not many hovercraft pilots."



Hovercraft are "flown" by a pilot rather than "sailed" across the water. Photo courtesy Will Noble.

You need the steady hand of "Maverick" Mitchell to fly a hovercraft, too. "The machine is very much hands-on," explains Attrill. "We don't have an autopilot. It requires constant attention, which makes it an interesting craft to fly compared to either an aircraft or a ship. The craft is very maneuverable, but it will skid like a Land Rover on ice." Despite best efforts to ensure a smooth ride, the Solent can get choppy. A select group of thrillseekers prefer it that way, studying ahead for inclement weather then piling onto the next available Hovertravel service.

Once the hovercraft had proved itself commercially viable in the 1960s, talk turned to how far Cockerell's masterpiece might go. "There was certainly an anticipation that a hovercraft would be the new form of transport that could see transatlantic travel changed," says Steve Attrill. "They were expecting that one day it would replace ocean liners."

Though not rakishly streamlined like Concorde, there was an air of glamor to these machines, which would whisk you to the continent in 35 minutes and serve you a drink en route. If there was a way to replicate that experience from the UK all the way to the USA's East Coast, travel would

never be the same again. That dream, as we know, was sunk. Expenses aside, getting across the Atlantic in a hovercraft would involve unprecedented fuel capacity and the ability to stand up to some seriously egregious waves.

But could the hovercraft have a second stab at conquering short-haul travel? "There's a great future out there for it, and I hope it will see many other operators like ourselves worldwide," says Attrill, who in 1998, headed up the team that established the first passenger hovercraft service in Canada. "I strongly believe the hovercraft will continue to develop as technology moves on with new-generation materials, new-generation power plants."



The Griffin Hoverwork 995ED hybrid electric hovercraft.

Alan Barkley agrees. "I'd like to see more money invested into the new electric hovercraft. There must be a way of getting these up and running and working," he says. Indeed, Saunders-Roe may be gone but another stalwart of the scene, Griffon Hoverwork -- which created the current models used by Hovertravel -- now manufactures the 995ED, a type of hybrid electric craft.

With environmental travel taken more seriously by the minute, and with cheerleaders like Griffon Hoverwork and Attrill, perhaps there's a second installment in the saga of this eccentric yet ingenious invention.

Just don't expect a new Dover-New York service anytime soon.

4. The Hovercraft Club of Great Britain

The following chapter was archived in 2021, with acknowledgement and thanks, from the website of the Hovercraft Club of Great Britain at www.hovercraft.org.uk.

The Hovercraft Club of Great Britain is the national organisation for racing and recreational hovercraft. It organises a national racing championship, contested over six to eight racing meetings around the country each year. Usually held over a weekend or bank holiday weekend and take place in a wide variety of locations on courses made up of both land and water sections.

Racing



The Hovercraft Club of Great Britain organises a national racing championship, contested over six to eight racing meetings spread around the country each year. These meetings are usually held over a 2 day weekend or 3 day bank holiday weekend, on special courses made up of both land and water sections.

During a racing weekend there will be a set of practices each morning and one or two blocks of racing in the afternoon. As part of the weekend members of the public will be invited into the paddock (pits) to take a look at the hovercraft and have a chat to the drivers, mechanics and families.

Hovercraft Racing is a very family friendly sport with many roles to keep all the family happy, such as Marshalling, Mechanics, Spectators and

Racers! In recent years the Junior formula has grown from strength to strength, a great sign for the future of the club.



Cruising

What is Hovercraft cruising?

It's using hovercraft to explore rivers, lakes, beaches, mudflats and coastlines. It can be as relaxing or challenging as you like, depending on the environment, or conditions you go out in. Members of the Hovercraft of Great Britain organise and participate in various group cruising events around the country these can range in length from a day to over a week and in numbers from 2 craft to 50. The longest running cruising event is the 'Rhone Raid' across France from the Med to Switzerland which has run every summer for over 20 years.

What is a cruising hovercraft?

Hovercraft are essentially zero-draft boats – they don't actually need any water at all. They can travel on land and waters into areas that boats cannot reach providing a totally unique experience for the passengers. Unlike other watercraft, when on water it "hovers" over the water surface on a cushion of air rather than being in the water. This lack of drag reduces the power needed to drive the vehicle making them efficient on petrol. Hovercraft can also launch easily from beaches and with no propeller in the water and as they produce no wake they pose significantly less threat to marine wildlife than boats. It is unlike any other craft and its capabilities, limitations and low environmental impact are little understood.

Racing hovercraft are a different design to cruising hovercraft in terms of noise, speed and marinesafety – they are unsuitable for cruising use. Cruising craft are based on sound marine engineering and provide economic, quiet and comfortable leisure use.

Where can I use it?

Cruising hovercraft can be used any place that a boat can be used. They have the same navigation rights (and responsibilities!) as other watercraft. Tidal water is normally freely navigable, you can also use rivers (only on the tidal sections without consent) or inland waterways such as lakes (consent will probably be required). There are bylaws in certain areas that specifically ban hovercraft so check that before you take them out.

There are many hovercruising meetings held throughout the UK during the year where everyone is welcome (check the calendar for details).

What does The Hovercraft Club of Great Britain offer for Cruisers?

The HCGB has a Code of Conduct for Cruising to help hovercraft pilots operate safely and considerately.

There are various cruising meetings held throughout the UK during the year where everyone is welcome (check the for details). It's a great way of meeting other hovercraft cruisers, who will have loads of tips on great places to cruise and how to get the best out of your craft.

Our member's facebook page is an easy place to connect with other cruisers who can give advice on what craft would suit your specific requirements.

If you are a club member then you will find the How to find a Cruising Site guide will help you find suitable launch spots. In addition, we provide a UK with suggested destinations and any local navigation and safety information. Many other documents are also available to members to help with water access (Environmental Impact Report, How to Organise a Cruising event, etc.). The HCGB provide active support to members who have access problems in their area.

The Hovercraft Club of Great Britain can also provide up to date information on the various different companies that can provide insurance for cruising hovercraft.

Will it float if the engine stops?

There is little difference in sea handling capability between a hovercraft and a boat of similar size. In good conditions, a boat might be able to carry a heavier load but, as good conditions are unusual in UK waters this isn't much of an advantage!

The most common question people ask about hovercraft is “will it float if the engine stops?” – the answer is YES, cruising hovercraft have full positive buoyancy and can be safely stopped on water indefinitely (fishing and just floating around are popular activities).



Where can I get a cruising hovercraft?

You can buy a new cruising hovercraft from several UK Manufacturers – take a look at the Hovercraft Suppliers Page. Seemingly bargain craft sometimes appear on eBay but they are best avoided unless the seller can demonstrate that it IS actually a cruising hovercraft and not just a toy! Take a look at the HCGB Buyers Guide – it contains very useful information on second hand hovercraft and some of the pitfalls to avoid when buying.

An alternative is to build your own hovercraft – it’s not quite as daunting as it might sound! With good plans, components or kit it is fairly straightforward. Unless you have extensive knowledge of hovercraft we strongly recommend that you don’t try to design your own! They are more complicated than they might look!

How do I learn to drive a hovercraft?

It actually isn’t too difficult to master the basics once you get over the initial “floating around out of control” stage! Check out our Introduction to Cruising Document which will quickly get you past the first stage and also provide you with very important safety knowledge. The RYA also run many suitable safety courses – the most appropriate for hovercraft use are

“Basic Navigation and Safety” and the “Marine Radio – (Short Range Certificate)” courses.



5. The Hovercraft Museum

The following chapter was archived in 2021, with acknowledgement and thanks, from the website of The Hovercraft Museum at www.hovercraft-museum.org.

Founded 1987 as a registered charity (1003689), the Hovercraft Museum Trust is the worlds greatest collection of Hovercraft archive, film, and historic craft, dating back to John Thonycroft's 1870 air lubricated boat models and the then Dr. Cockerell's 1955 annular jet experiments. It is based at Lee on Solent in Hampshire.



Here at the Hovercraft Museum, we have lots of things to do and see. The Hovercraft Museum is a working museum and is constantly restoring, preserving and maintaining the craft in our care. Our engineering hangar is open to visitors to see the craft being worked on and many of our craft such as The Princess Anne, BH7, SRN5, and SRN6s can be boarded and experienced first hand! We have over 55 craft in the collection at present and here are just some of the highlights:

SR.N4 – “The Princess Anne”

The SR.N4 (Saunders-Roe Nautical 4), or Mountbatten class hovercraft, is the largest commercial hovercraft ever built and served for over 33 years as a fast cross-channel ferry between Dover, UK and Calais, France. After the mk3 upgrades to the craft in 1976, becoming ‘Super 4’, she was able to

carry up to 60 cars and 400+ passengers. To this day 'The Princess Anne' holds the Guinness World Record for the fastest car-carrying commercial channel crossing at an impressive time of 22 minutes, set in September 1993. Regular crossing times in the Channel were 35 minutes, with average speeds of 65kts!

Measuring 54 meters in length and registered at 311GT, the craft was powered by 4 x Rolls Royce Proteus gas turbine engines, developing 3400HP each. These turned the worlds largest air-screw propellers, a massive 21 feet in diameter.

After retirement from service in October 2000, she was stored at Lee-on-the Solent alongside her sister, 'The Princess Margaret' and put up for sale. Both craft were bought by a private individual in 2005 and sat deteriorating on our site for over a decade. It was 16 frustrating years for the Museum before we were finally able to secure a lease on the craft from her new owners, Homes England (formerly the Homes & Communities Agency) who own our site. 'The Princess Margaret' was removed from site in 2016 for recycling but this enabled the Museum to secure many spares to make 'Anne' a complete looking craft.

In 2016 the Museum secured the 'Anne' onto the National Historic Ships register and in 2019 HRH The Princess Royal visited her namesake to commemorate 50 years since the craft was in service.



AP1-88 'Falcon'

Designed by British Hovercraft Corporation and built by Westland Aerospace at East Cowes on the Isle of Wight, this was the last BHC/Westland hovercraft to be built in 1991 (AP1-88 production then moved to Hoverwork Ltd). The craft, then named 'Siverko', was moved to

St Helens and fitted out internally by Hoverwork as 68 passengers seats for a service in Russia that ran a 2-3 day route from Arkhangelsk. After being sold to Hoverlines International Ltd (*HIL*) she had modifications made to the forward cabin and saw service in the Bahamas and South America before returning to the UK.

The Museum acquired 'Falcon' in 2019 when she was arrived by sea under tow from Southampton as a kind donation from HIL and with support from Griffon Hoverwork Ltd. She is 1 of 14 AP1-88 type craft built (the designation AP stands for 'Advanced Project'). These craft also saw service on the Solent at Hovertravel Ltd and are still in service with the Canadian Coastguard. 'Falcon' can still be hovered, although is not currently seaworthy. More details can be found on her Facebook page [ap188preservation](#)



BH7

The BH7, or Wellington class hovercraft, was designed for military applications. Built by British Hovercraft Corporation at their Woolston works, the first flew in 1969 and was used in many trials with the Royal Navy and as a part of the Interservice Hovercraft Trials Unit, that was based at HMS Daedalus, lee-on-the-Solent (home of the Hovercraft Museum now).

During the 13 years of tests, it was evaluated for many different roles including, anti-submarine warfare and mine countermeasures. Most notably, one winter, our BH7 successfully completed a round trip to The Arctic Circle leaving from Lee-on-the-Solent when it served with the Royal Navy. The craft also travelled (by ship) to the USA and was demonstrated all along the Eastern seaboard including in New York harbour.

BH7 arrived at the Museum after being donated by Westlands in 1989 and was included onto the National Historic Ships register in 2019.



James Bond Craft

The 2002 James Bond film “Die Another Day” featuring Pierce Brosnan and Halle Berry had hovercraft in the opening chase sequence as James Bond escapes through a North Korean minefield (also known as Aldershot!). Several Osprey 5’s and a Slingsby SAH 2200 were used, with Griffon Hovercraft Ltd providing pilots and pilot instructors. One of each craft used in the film can be found on display here at the museum, alongside a multimedia presentation about the filming of the hovercraft chase.



Hover Mini

A home-built craft by members of The Hover Club of Great Britain, 'Hover Mini' is a great fun craft! Thrust power is from a Citroen 2CV engine, while lift power is from a Briggs & Stratton 15HP lawnmower engine.



SR.N5

This vessel is an SRN5 or Warden Class Hovercraft that was built in 1963 and launched on 17 November 1964. It There were only 14 such craft built,

and they were the very first production hovercraft in the world. This particular one (006) is the last remaining British built SRN5 in the UK. She had 18 seats and the most powerful power-to-weight ratio of any hovercraft. Her design led directly to the larger SRN6 with the same engine but with 38 seats. This was the first of the ‘modern’ hovercraft. SRN5 (006) was used extensively to showcase the hovercraft in numerous countries and even to NATO. In 1966, whilst carrying out a demonstration at Auckland airport in New Zealand, she interrupted the demonstration to rescue a parachutist who had landed in the sea. In the same year she appeared in British Hovercraft Corporation (BHC) colours at the Hovershow at Browdown.

In 1968 she was purchased by the Interservice Hovercraft Unit (IHU) based at HMS Daedalus, and she stayed there until 1974 doing experimental work. She had dual controls fitted, and over 50 pilots were trained in her, many from the Army Hovercraft Unit based at Browdown. She was used to survey landing sites to be used in the event of a major collision or fire at sea. She also played an important role in the evaluation of the Optical Navigation Aid, which assisted the navigator to identify navigation marks. In 1969 she was deployed to investigate refuelling techniques from a ship. In 1971 she took part in an exercise with the assault ship HMS Fearless to assess docking manoeuvres. In 1974 she was purchased by Hoverwork for use on the Wash in the building of a reservoir. In 2013 she received a Engineering Heritage Award from the Institute of Mechanical Engineers.



SR.N6 “Super 6” (Twin Prop)

The craft was first launched in 1966 as a single propeller Mark 1 SRN6 hovercraft, built by Saunders Roe at East Cowes. The craft is powered by a

single Rolls Royce 'Gnome' Gas Turbine engine, developing 1400HP. She was originally used as part of Hoverlloyd's operations. Initially named 'SURE', she lost that name to the SRN4 which replaced her. In 1968 she collided with SRN6 (016) at low tide at Cowes, but sustained only minor damage. At the end of 1968 she was sold to Pacific Hovercraft in Canada, and worked on the new passenger service from Vancouver to Vancouver Island. This service ceased in 1969, and she then carried out a seismic survey in the Beaufort Sea.

After Pacific Hovercraft went into receivership in 1971 she returned to British Hovercraft Corporation (BHC) at Cowes in 1972. She was stretched and converted into the first SRN6 Mark 6 Twin Prop hovercraft, with an added length of 9ft 8in. The single 9ft propeller was removed and replaced with 2 x 10ft propellers. The tail unit was modified and the top elevator extended. This created the 'Super 6' model as she is today. In September 1973 was officially launched as the SRN6 Mark 6. In 1976 she travelled under her own power to Amsterdam and back. Later in 1976 she was used by Seaspeed on the Cowes to Southampton passenger service (later Solent Seaspeed).



In 1981 she was involved in a mines counter measure trial at Portland. In 1989 she was sold to Belfatop in Belgium, and converted to carry out hydrographic survey work off Zeebrugge and was renamed 'BEASAC III' before being retired from service in 2002. In 2004 she was purchased by the Museum and travelled from Belgium to Lee-on-the-Solent under her own power. 2009 was her last trip to sea for the 50th Anniversary of the Hovercraft.

Royal Marines LCAC "C22"

'C 22' is a Griffon 2000TDX(M) built in 1993 for the Royal Marines 539 Assault Squadron. 1 of 4 craft built, it saw service in Iraq in 2003 before

being retired in 2009 to make way for the newer generation of craft. The LCAC (Landing Craft Air Cushion) was also used on aid missions and on regular training exercises in Norway. Powered by a single v8 air-cooled Deutz diesel engine, the craft can maintain 30kts with a 2 tonne payload and is transportable on a lorry, in a 40ft shipping container or by Hercules C-130 aircraft!



SRN6 Sea Hawk

SEA HAWK was launched in March, 1965. She was the original prototype SRN6 Mk 1, the very first passenger SRN6 in the world, and the first hovercraft built for commercial operation. She was also the first SRN6 to be 'stretched', and she is the only remaining SRN6 Mk 1S left in the world. She took part in the film 'Murderer's Row' starring Dean Martin before joining the Solent service to the Isle of Wight. In 1971 she became the first hovercraft to be converted to an SRN6 Mk 1S, and in 1972 she was relaunched and became the first SRN6 Mk1S to be used in commercial service, for Seaspeed.

On conversion, she became 4 bays longer (9ft 8inches or 2.9m) than the standard SRN6, and she could carry 58 passengers, as opposed to 38 on the standard SRN6. In 1975 she operated a service between St Andrews and Carnoustie during the British Open Golf Championships, and in 1976 she took part in the Algiers Trade Fair. After 36,000 running hours she became the most used hovercraft in the world at the time. At the end of her service life she was initially donated to Southampton City Council before being passed to the Hovercraft Museum Trust, where she is now on display.



HD-2

HD-2 was built in 1966 at Hythe, Hampshire by a company co-founded by Sir Christopher Cockerell, Hovercraft Development Ltd in association with the National Physical Laboratory and the National Research and Development Corporation. It was made to further evaluate hovercraft controls and skirt technology on hovercraft. This paved the way for a much more simpler and efficient skirt system that is still used on hovercraft today, the Open Loop and Segment skirt.

