

Buying a Recreational Hovercraft...

Everything you need to know!

The report below has been written by an experienced hovercraft operator with a background in racing, recreational/cruising and manufacturing – as both a 'home builder' and professional manufacturer. Hovercraft, like all other interests and hobbies that offer alternatives, attract opinion and debate. In this document, the writer tries to keep advice as balanced as possible, fully aware that with a vehicle as versatile as a hovercraft, able to operate in 'any' environment for many different purposes, one man's ideal is another's nightmare.

Hovercraft are still, to most people, still a bit magical and barely understood. That they are the most environmentally sound powered vessel available should be a massive boon to their popularity – but this worthy fact is sadly often outweighed by unnecessarily noisy and unreliable examples which cause too much of a disturbance.

But now, in 2012, with more cruising/recreational craft operating than ever before, things are starting to change. There's more manufacturers producing good quality, affordable and safe hovercraft - some excellent plans available for home builders, and new engines which make practical small hovercraft with great performance and reliability.

In this report, we'll look at what hovercrafting is all about, where/what to buy or build and the options open to you, where to operate your craft and what the Hovercraft Club of Great Britain(HCGB) is all about!

First Off - Racing Hovercraft

I've raced hovercraft with a mixed bag of success and it's fast, fun & loud. Racing craft are a completely different beast to recreational craft and designed for blasting round a grassy field – they're extremely lightweight and overpowered (top Formula Ones are nearly 200bhp....!) making them a spectacular sport. They feature some sublime engineering but push the limits of what's possible to the maximum - so they tend to break down a lot and are usually two stroke powered. They're very noisy, don't float very well and are completely unsuitable as a cruising/recreational vehicle...but when you open the throttle on an F1 and you're doing 100km/h four seconds later?

Suddenly all the disappointments make sense!

Take a look at www.hovercraft.org.uk for more details about when and where to see these machines in action.

Recreational Hovercraft - What's it all about?

Hovercraft come in all shapes and sizes from small single seat examples, medium size commercial/passenger vehicles to the massive American LCAC naval landing craft, which can deliver a squad of Marines and an Abrams main Battle tank to a contested beach . All work on

the same basic principle of the vehicle riding on a cushion of air, generated by engine driven fans. This principle allows the hovercraft to travel over any sealed surface – grass, sand, ice and snow, water etc etc.

Personal/Recreational/Cruising hovercraft (the three terms get used and are all pretty much the same thing!) are typically 1-6 seats and used as a leisure vehicle in much the same way as a Jetski, Boat or Quad etc.

Some folks choose to build their own craft, others prefer to buy a professionally manufactured craft with the benefits of a warranty and proven design. In both cases, you have a vessel which allows you access to anywhere boat can go - in addition to its incredible shallow water/intertidal/amphibious ability. It's this unique ability that make hovercraft so appealing to a growing number of enthusiasts.

There are plenty of events organised by the club and with a capable hovercraft, solo or 'buddy' cruising is as safe as using any other marine vehicle. There's overseas events, 'hover-ins' and 'get togethers,' a great social side with lots of 'lads and dads' involved.

A 'typical' coastal cruise

As a quick example of what I was up to last weekend, four of us launched two seat integrated, professionally manufactured hovercraft into the Swale in Kent (the stretch of water separating the Isle of Sheppey from the mainland.) From there, we travelled up to the River Medway - the Medway's a hovercrafter's heaven with massive tidal sandbanks and mudflats. In no time, we were exploring the gullies and saltings which no other vehicle can access. We visited a WWI German U-Boat laying at Stoke Marshes, climbed inside a Napoleonic Fortress and took a spin around 'Deadman's Island' (a macabre yet fascinating island containing the - often exposed - graves of thousands of French Prisoners of War....) Then it was off to Upnor Castle for Sunday lunch and a pint, before returning via Bee Ness Jetty, Grain Tower and finally home via our favourite hover pub 'The Old House at Home' in Queenborough. In all we covered 65 miles, used less than three gallons of fuel and all agreed it was a fabulous day out.

I'm still grinning as I write this, amazing fun!

So where do you start?

First off, you'll need to decide what you're planning to use your hovercraft for. You might just want it as a toy for driving round a big garden/inland lake or playing field. You might be a bit more ambitious and planning maritime cruises. The usage does have a big effect on the type of craft you're looking for. Larger 3-4 seat hovercraft are often more challenging to steer in confined places, but more comfortable on long distance cruises. Small hovercraft are great for inexperienced drivers and kids and are more sporting in nature – providing bigger thrills.

Are you a builder or a buyer? Lots of people over the years have built hovercraft as much for the thrill of building it themselves as for what it can do. Lots of them built one at school and are revisiting that. We'll come onto building craft in due course, but for now it's enough to consider whether you have the time, money, skills, tools and space to invest into what is going to be a huge project building a successful hovercraft.

If you're going to buy a craft, new or used? What are the pitfalls of buying a used hovercraft (or even a new one....) and how can you avoid them?

More than ever, there's a thriving recreational hovercraft scene in the UK. There's a massive range of hovercraft out there, some good, some bad, and some plain dangerous! We'll look further into what to look for in due course.

Build or Buy?

Well, both have their advantages. There are a very few manufacturers who supply a turnkey product to buyers who want to get out there and have fun using it. Just like you'd buy a jetski or quad, you spend your money and make your choice. For your money, you get a fully warranted, reliable vehicle with – hopefully – a proven pedigree. It's that simple!

But there's another option. Companies like Sevtec and Universal Hovercraft will sell you a set of plans and you can actually build a hovercraft from scratch. You'll buy the timber, source an engine or two, sew up your own skirt, source fan assembly parts, build steel fan frames, upholster seats and decide what colour gloss it needs to be finished in. It can be a fascinating project – as long as you have the necessary space, time and (crucially) skills to complete it safely.

Unfortunately, where new owners/builders are concerned, it's probably fair to say that more *don't* get finished than do. Its demanding and time consuming and enthusiasm and cash often run out before the projects completed – especially given the price of marine quality plywood nowadays! This often means that they end up on ebay as another unfinished project.

So, if it *does* make it to completion, what do you have? Well – taking the Sevtec design, it's very much a water craft designed for the American market – much more at home on big, open areas of water than exploring creeks and gullies. Their bag skirted design and large propeller means they lack maneuverability and whilst this makes them a great long distance cruiser, they're not really a thrilling ride. Think more 'limo' than 'Lotus' and you have the idea!

Without the development that a professional manufacturer puts into their craft, homebuilds should always be inspected by a competent engineer before operation. The 2011 terrible case in New Zealand, when a man who'd built a hovercraft was killed by the propeller flying off the first time he used it just illustrates the point only too clearly. But dramatic accidents aside, (this was an unfortunate but inevitable accident) making the hovercraft work properly can be nearly as big a job as constructing it. The builder often become despondent the first time out when it doesn't work and it ends up - you guessed it - on ebay. Fine tuning the skirt, lift and thrust fans/props, matching the engine to the fan and selecting the correct speeds, getting the trim right, chasing away vibrations and making the steering safe...none of it is a five minute job and can soak up hundreds of hours of painstaking development.

And so, a year after work began, and with the homebuilder still setting-up his craft and ironing out problems, the feller who bought a professionally manufactured craft has many hours of

hovercrafting adventures behind him. Now that's not to say that the homebuilder isn't enjoying himself – but it's certainly a different type of enjoyment!

The other issue with regards building a hovercraft is the resale value. Being of (usually) a timber or aluminium construction, they usually look pretty crude, and are often seen to sport features such as (I kid you not) plastic garden chairs for seating. It's rare that a homebuilt hovercraft will fetch even a fraction of what it costs to build (especially if you price in your own time.) Sadly, it's a fact that people simply aren't prepared to pay much for your own efforts - rather like with homebuilt/converted camper vans. Some are very good, but they'll never get the same price as a coachbuilt one. On the other hand, a well maintained, three year old commercially built hovercraft can reasonably be expected to retain 75% of its value.

Second Hand / Used Hovercraft

Over the years, lots of hovercraft manufacturers have come and gone – some producing great hovercraft...some less so. There's also lots of home-built craft out there with just as variable build-quality.

Good quality cruising craft don't come up for sale very often, and when they do they often sell for a very good price. A fair few unfinished projects come up for sale – either unfinished refurbishment, or unfinished self-build hovercraft kits. Many of these will be the small, motorbike engines 'Challenger' hovercraft built from Hovercraft Club plans and are little use for 'real' cruising, being more suited for use in 'controlled' environments such as a grassy field.

The other type you may come across is a home-built hovercraft built from plans provided by Universal or Sevtec. Provided the build quality is good (which can be very difficult to ascertain for a novice) these can be a pretty good buy and allow you access to proper cruising events and experiences.

Skirt

Just like the tyres on your car, hovercraft skirts are a disposable service item. A lot of hovercraft coming onto the market will feature a spectacularly well worn skirt. Material has shot up in price recently -2012- (in fact, nearly doubled in six months!) and a new skirt is often upwards of £500.00 so make sure you allow for it. If you see ragged edges or thin/de-laminating material – the segment needs replacement. An old bag skirt will be patched and repaired, and be worn on the ground contact line.

Hull

Over the years, hulls may get knocked around in minor bumps, scratched and dirty. That should all be visible, but look carefully at mounting points (fan frame/engine/steering etc) and make sure you look underneath as that can take a real hammering, especially when badly driven. Repairs add weight – hovercraft hate weight! The good news is that GRP can be repaired fairly easily – plastic/HDPE can't easily be repaired – wood and aluminium can.

Engines

Engines in hovercraft can get a hard life – many poorly designed craft need lots of power lots of the time to operate - and car engines can be spinning constantly at 5-6000rpm. Small commercial engines (Kohler, Briggs & Stratton etc) are increasingly popular and designed to run flat out for a large amount of their life. Subaru's & BMW motorbike engines (also popular) aren't and can wear badly. Look for all the obvious signs, noises, smoke and oil leaks and take a knowledgeable friend if in any doubt.

Fan/ propeller & transmission

This inspection is critical. An old fan or propeller, badly mounted can be – literally – lethal. Any sign of purple or green in a MultiWing or Hascon blade means it's in need of replacement. Any cracks or significant chips in the blade means it needs to go - a new set can run to £150.00-£200.00 or so. With propellers, check for signs of erosion on the leading edge, caused by sand and grit in the air flow literally sand blasting the edge. Check the belt (cover may need removing) and check for fraying or tears but on balance I'd always replace an unknown belt - just like cambelts, they *do* fail without any prior visible wear or damage. Check for play and roughness in bearings and cracks in the fan/engine frame or mounting points where they bolt to the hull.

Controls

Steering and elevators (if fitted) are usually controlled by bowden cables – they can corrode over time when used in a salty environment, so check they operate freely.

Guards

Check that the fan guard(s) are complete and well fitted.

Buying a new hovercraft from a manufacturer

Within Europe, there are a number of manufacturers producing 'turn-key' hovercraft. Like motor cars, bikes or boats, they set out to achieve different things, with varying levels of success.

It's fair to say that most (but not all) manufacturers tend to be small scale owner/operated businesses which came about from the proprietors love of hovercraft. Few produce more than a handful of hovercraft each year and backup and support can be variable.

You'll want to ask lots of questions and buy from a manufacturer with a proven history supplying a craft with good provenance as a capable recreational craft - not a racer! Recreational cruising craft have a different set of criteria to racing craft and success as an inland racing craft guarantees it won't be suitable as a cruising craft!

Hull construction, engine choice, (incredibly a number of manufacturers fit *used* BMW or Subaru engines to 'new' craft which they fail to mention in their literature!) warranty, backup, support and training are all areas you'll want to ask about.

Take a drive. This is best undertaken in safe surroundings such a field (preferably with at least some water) where you can get an idea of how the craft handles and performs. Don't be fobbed off with a ride. Ask to see videos of an identical one in action in more challenging surroundings. Some look great but perform really badly, won't go 'over hump' make loads of noise and steer like a supertanker.

Take a look round the factory/workshops to better gauge how professional the operation is.

Is the hovercraft CE Marked? This is an essential requirement and a good measure of how seriously the manufacturer takes their obligations. Few do....

Does the craft come with a manual? Instruction session? Servicing information? SSR Registration?

These are all valid and important questions that you need answers to - before parting with your hard earned cash!

Hovercraft Types

There are several types of recreational craft in common use today. A knowledge of these is vital if you are to choose a craft that will not disappoint you.

Integrated

This is the simplest type of craft which are simple, light and easy to drive. In this design there is one engine and one fan which is located in a duct for protection and efficiency. A portion of the fan air is directed under the craft to provide lift, whilst the rest is directed for thrust.

The integrated design is a compromise between lift and thrust requirements but overall, where small craft are concerned, they genuinely represent the best option. What is important is that the craft has adequate lift at all speeds and revs, something that should be carefully ascertained.

Twin fan craft.

The twin fan craft uses a small fan to provide the lift air to the cushion, and a large fan or aircraft propeller to provide thrust air - with or without a duct. The fans will be powered from a single engine via an arrangement of belts or gearboxes, which is of course, more weight and more to go wrong. These tend to be larger craft, although there are successful small craft using this design.

Twin engine

The twin engine is similar to the twin fan, except that each fan has its own engine. The transmission is simpler than the twin fan type, but there are now two engines to go wrong and of course, the bane of hovercraft - loads more weight. This design provides independent control of lift, which can be useful but is more difficult to control, more expensive and complex. It's largely unnecessary for smaller craft and really comes into its own at 5-6 seats plus where the weight penalty is acceptable.

Construction

Hovercraft, both professionally built and home built, use a number of methods of hull construction, each with advantages and disadvantages.

Aluminium

The first hovercraft were constructed from aluminium using aircraft methods. It can be pretty heavy, and it's expensive, but it's strong, easy to use and repair.

GRP

Glass reinforce plastic, or glassfibre, is the most common hull material for professionally built craft. Overall, it offers the best combination of cost, finish and strength. It can be made to look great, with nicely curved corners and angles to give a pleasing design. The downside is that you need a set of moulds which is slow, time consuming and expensive to produce. In use, GRP is lightweight (if laid up properly) very robust, doesn't corrode, can be repaired and crucially, mud - or muddy water - can be washed straight off the gel coat so it ends up looking like new.

GRP-Foam composite

This is an excellent construction technique making for a strong yet light hull. It's formed by using a layer of high density foam with GRP bonded on both sides. It's very stiff and strong, but expensive and slow to produce. Good impact resistance, can be mended and finished well with curves and radiuses incorporated.

Wood

This is the traditional home-build material. Even though marine ply has got very expensive lately, it's still probably the cheapest (and certainly the simplest) material for a home-build hovercraft. However, there are numerous downsides too. It can be very heavy, and being absorbant it *will* gain weight as you use it and rot away over time. It's fair to say that most wooden craft are very crude looking as wood isn't very suitable for bending into shapes and designs. Don't rule it out but if you can afford a better alternative... use it.

Polystyrene foam – Epoxy resin

Large blocks of polystyrene foam are carved into the required shape and covered with glass fibre cloth and epoxy resin. Great for one off shapes (and therefore for homebuilding) it's light and strong and whilst quite labour intensive, it's reasonably cheap to produce relative to the fact that it works well and looks good.

HDPE

High Density Polyethylene is a plastic used to build everything from crash barriers to portaloos. Very strong, but way too heavy for hovercraft usage. (A 200kg craft made from GRP will weigh nearer 400kg made from HDPE!) meaning performance will be marginal at best. Also, it's 'orange peel' finish won't ever clean up well if you get it muddy! Finally, it's near impossible to repair without leaving a nasty scar - avoid!

Skirt types

There are two main skirt types, ie segmented and bag, but there are many variations and hybrids. Slight changes in design can make a big difference and manufacturers are constantly to both types seem to be successful in cruisers, so it seems to come down to personal choice in the end.

Segmented skirts

This type of skirt consists of many individual segments, often 70 or more to make the complete skirt. Usually the segments will be the same around the front and sides of the craft, and different at the rear. The advantages of the segment skirt is that is that they are stable and damage tolerant - should a segment be damaged, the neighbouring segments expand to fill the space and in any case, changing a segment should only be a few seconds work. Should the skirt catch on something, the skirt attachment ties are often designed as the weak-point, so you'll simply replace a cheap cable tie - no major dramas.

Bag skirts

There are a range of types of bag skirt, but all share a similar bag-like appearance. The skirt can be thought of as a large inner-tube that is formed around into the shape of the craft

Bag skirts are often cheaper and quicker to make and replace. Minor damage can be tolerated, but field repair is pretty much impossible and severe damage can make for a stranded hovercraft, so they're less safe and definitely less reliable. The bag may be subject to 'grab' on sticky mud and can drum like Phil Collins on flat calm water. Steering is less accurate as well as body shifting doesn't collapse the skirt to assist with directional control.

Bag and segment skirt

This is a hybrid, designed to have the best of both worlds. A bag skirt is mounted to the craft, and a set of segments are attached to the bottom of the bag. This is the most successful but most expensive type of skirt, and is found on most large craft but few small craft.

Features & Factors to Consider

Safety

Safety is the most important aspect of any hovercraft operation of course. You will need to look for the obvious things, like properly guarded rotating assemblies, adequate buoyancy in case the engine fails on water and good 'freeboard' (the height of the sides above the water surface.)

There are many other factors in the performance that contribute to a 'safe' cruising craft in real life, and these are covered in the sections below, such as 'plough-in', 'hump' etc. On top of the specifics of hovercraft, when operating a hovercraft in an uncontrolled environment, all relevant maritime best practice is necessary.

Reliability

When you are out, miles from anywhere, the last thing you need is to breakdown. There's no recovery service on the mudflats! Recovering a stricken craft can be more than a little challenging, so reliability is a big issue!

Professionally built craft may be more reliable than homebuilt – but not necessarily so, if they are old and neglected. You may need to look very carefully and judge for yourself.

Things to look for are low stress engines – small industrial engines, car engines or some motorbike engines can be reliable. 2 stroke engines can be unreliable – the exception to this is the Rotax microlight engines, so long as they are unmodified, well protected and in good condition.

Any craft that has been used in a marine environment (most cruisers have) may well suffer from salt corrosion – often all the controls will require overhaul before reliability can be assured. Likewise, bearings and transmission belts may need replacing.

The good news is that an unreliable craft can be made reliable, but it will take considerable effort and plenty of money to do so. So if in doubt, join the HCGB and ask for advice via the internet forum or, ideally, go along to a local branch meeting.

Flotation & Freeboard

One of the most common questions you'll get asked about your hovercraft is along the lines of "So...what happens if the engine stops? Does it float?" My answer is a confident 'of course' but this is a huge safety issue and the reason that you must not use a racing hovercraft for recreational hovercrafting! You'll sometimes simply want to switch off the motor and throw a line down or come alongside a jetty. Do make sure your hovercraft can float! In simple terms, freeboard is the height of the lowest part of the hull above the water when you are floating with the engine stopped. If you don't have enough freeboard, the craft will flood very easily. A cruising craft should have at least 6 inches. If it hasn't then it won't be much use as a cruiser! Look for high sides and front bodywork

Plough-in

A plough-in occurs when the front (usually, but it can happen to the side) of the craft suddenly dips down into the water, causing the craft to decelerate quickly. In extreme cases, the passengers can be thrown out. A well designed skirt and gentle hull planing surface are essential to minimise the severity. Some manufacturers will claim that their craft do not plough in. This is nonsense. All hovercraft can plough in, even large cross-channel SRN4's did on occasion! However, a very slow, heavy craft (making for high skirt pressure) may be very resistant to it, so maybe the manufacturer is telling you more than they wanted you to know! (See? Aren't you glad you read this!) However, good driving and a well sorted craft means you'll never have to get used to it! In most cases, the effect is minimal and the craft simply slows up a bit.

Hump performance

When a hovercraft is at rest on water, it floats like a boat – that is, it is in 'displacement mode'. When the craft goes to move off, it must transition from displacement mode to non-

displacement (hovering) mode. The transition occurs, for a small craft, at about 8mph, and is known as 'going over the hump', because the craft must ride over a wave that forms in front of the hump speed.

Some craft (even manufactured ones) will not go over the hump which is a real problem and potentially dangerous. It means you can't risk stopping on water, because cannot get back into hovering mode. You will have to go back to land at 8mph, enclosed in your own personal rainstorm. You should, if possible, have the hump performance demonstrated to you before you buy.

So what are you looking for in a successful cruising hovercraft?

Recreational hovercraft are at their best in shallow water, intertidal areas, coastal exploring and inland waterways such as estuaries, rivers and lakes. The vast majority of personal hovercraft are used in this environment for recreational hovercrafting. You might aim to travel to a pub for lunch, fish somewhere specific, explore somewhere new or take photos of an old wreck or inaccessible beach for instance. Of course, they also get used as tenders for yachts (so what if the tide goes out whilst you're on the beach?) crossing frozen lakes or running into town via a shallow river.

Size

Like boats, a small increase in the size of the 'vessel' has a big effect on its character. A 2.7m single seat hovercraft feels absolutely tiny compared to a 4.0m one. Just because a craft is bigger, doesn't necessarily make it any more seaworthy or safer - fan, skirt, power, reliability and hull design all play a massive part too.

Engine

There's lots to be said for lots of different engine options but in this writers opinion one thing you can immediately do is this.

Forget two-strokes!

In trying to make this document as impartial and valuable as possible, this is one area that I have to encourage you to listen to the advice of many years. Let's look at the pro's and con's of both types of engine. And here, I'm more or less dismissing diesels and rotaries. Rotaries are loud, hot and uneconomical, and largely forgotten nowadays. Diesels are starting to get there on power to weight ratios, but realistically, at the size of craft we're discussing - there isn't much available yet which will serve. However, when the technology *is* there, hovercrafters will be all over it!

Four stroke engines

Pros

Economy
Reliability
Electric Start
Lower revs, lower noise.
Longer service intervals.
Lower cost

Cons

(Generally) heavier than a two stroke.

Two Stroke Engines

Pros

Power to weight ratio

Cons

Unreliable/hate salt-water.
High frequency annoying noise
Hugely thirsty
Needs two-stroke oil.
Cost a lot new
Servicing usually includes internal work.
Limited range
Mostly pull-start

So, a bit of a no-brainer that one! It's actually fair to say that two strokes do hovercraft no favours at all. The noise annoys people and the inevitable breakdowns just perpetrate the fallacy that all hovercraft are unreliable.

So, hopefully, in order to actually enjoy yourself, you'll be ignoring any hovercraft that sports such outmoded technology and stick with a four stroke.

What's the choices?

The current favourite for smaller integrated craft is the range of '**Commercial engines**' from Briggs, Kohler, Honda etc in the range 22bhp to 35bhp. Lightweight, low revving (3800rpm or so,) economical and pretty cheap, they tick all the boxes with electric start and amazing reliability. They also work well as thrust engines in twin engine craft and are quite capable of being tuned to 50bhp without any loss of reliability.

BMW Motorbike engines are pretty popular for larger craft, usually seen in twin-engine craft with a Briggs etc for lift. They're a beautifully built engine, and pretty bullet proof if installed and maintained correctly, but even the ones used by manufacturers in 'new' craft are second hand.

Car Engines - Some larger craft (large in 'our' category being 6+ seats) use car engines - Subaru, K-Series etc) most of which are second hand. Now - whereas it may have lasted another 50,000 miles in a car being driven carefully, when installed in a hovercraft (some of which require bags of power to work properly), their life expectancy can approach 'critical' quite quickly. I'd advise against fitting any used engine of unknown history. And as a word of caution, 'reconditioned' is one of those overused words so be very sure what you're buying....

Basically, second hand engines aren't a happy match for hovercraft.

Fan/Prop

Fans in small hovercraft are usually plastic 'air conditioning' fans and most hovercraft exceed the manufacturers specifications in terms of rotation speed. However, it's very much accepted practice and not in itself dangerous (up to about 150%) unless installed badly. All integrated craft will have fans, as props cannot generate the pressure necessary for lift. Fans are cheap, flexible in their installation, and give good acceleration. However, as a rule of thumb - the smaller the duct, the noisier the hovercraft. Avoid ducts below 800mm, and ideally go for a duct of 900mm or more as this allows for a slower (and therefore quieter) fan.

Propellers are mainly used in larger craft, and require a separate lift system. They rotate much slower, and are very quiet in comparison with fans. They do however, raise the centre of gravity considerably which can be a problem for stability, especially in smaller craft. Because you'll need a second fan and/or engine for lift, it also adds weight and complexity.

Conclusion

Whatever your choice, Hovercraft are (to quote Jeremy Clarkson) "THE most fun you can have with an engine!"

This document is pretty much general advice and doesn't take into account the finer points of different models and manufacturers offerings. Read through it, have a plan and join the Hovercraft Club of Great Britain www.hovercraft.org.uk to access a very useful internet forum, find out about upcoming events and cruises, and to meet possible 'cruising buddies.'

Get a yourself along to some cruising events (even racing events will teach you lots and it's a great day out watching the crazy fools!) chat to owners and drives and find out all you can. Ask some folks who've built their own if they'd recommend it as a course of action.

Why not book into somewhere like Ride Leisure in Milton Keynes? They'll teach you to drive hovercraft and you'll get to belt around to your hearts content.

Look over some manufacturers websites, call or mail them with any questions. Arrange some demo's and ask to look round the factory. They should be happy enough to oblige you!

There's a huge amount of fun to be had with hovercraft (30 years playing with them and I'm still not bored!) so we don't want to lose you to a bad decision which turns you off hovercraft and towards something silly like a jetski!

Finally - The Top Ten Mistakes buyers make when getting started in hovercrafting

1. **Buying the wrong hovercraft** - Make sure you know what you want to use it for, and choose accordingly. For instance, don't buy a racer if you're planning to use it in a marine environment. Don't buy a craft which won't go in your driveway. How many people will you realistically want to carry? Is your choice of craft big enough? Or too big?
2. **Buying a hovercraft with a two-stroke engine** - Simply, avoid them unless you're planning to re-engine your craft or you're going racing. Noisy, unreliable, uneconomical, pull start, limited range...the list goes on!
3. **Trying to build your first hovercraft without knowing anything about hovercraft!** I've seen it dozens of times over the years. Folks who know nothing about hovercraft decide to build something in their garage. They've never driven or owned a hovercraft, yet think they have the knowledge to build something successfully. 90% either never get finished or end up on ebay. My advice is to buy something first - new or used, to learn from. Armed with the knowledge of how they work and what you'd do differently, if you're the home-builder type, that's the time to consider future plans.
4. **Not getting advice / Not joining the HCGB** There's a ton of free information out there which will stop you from getting it all wrong! Join the club, meet some folks!
5. **Being too ambitious** Don't try to cross the channel the first time you go out! Try it out in a grassy field and learn to drive it. Go along to an organised meeting and start your adventure with the support of a group around you. Don't bite off more than you can handle!
6. **Not taking the sea seriously** The sea will bite you if you get it wrong, whatever type of vessel you're in. Go and get some qualifications, learn the rules of the road and buoyage, equip yourself and your craft properly for the conditions, let somebody know where you're going and what time you're expected back.
7. **Trusting what you're told** Whether it's the seller of a used hovercraft, or even a manufacturer, *try before you buy!*
8. **Buying it because it's pretty** Over the years there's been some great looking hovercraft...which don't work! Just because it looks great doesn't mean it performs well.
9. **Trying to re-invent the wheel (figuratively speaking!)** Some say that hovercraft design hasn't moved on much, and to a degree they're right. But new materials, engines and innovations mean that hovercraft work and look a lot better than even 10 years ago - even though the basic design has changed little. Learn lots before you try to incorporate all your own ideas into a craft you're building or modifying. don't presume it hasn't been tried before, it probably has!
10. **Not checking with the wife first.** Possibly the most dangerous aspect of this otherwise very safe hobby is your wife (or husband of course!) coming home from Tesco's and finding your new pride and joy in the driveway without any previous discussion. This can lead to cessation of tea rations and in extreme cases, expensive consultations with lawyers.