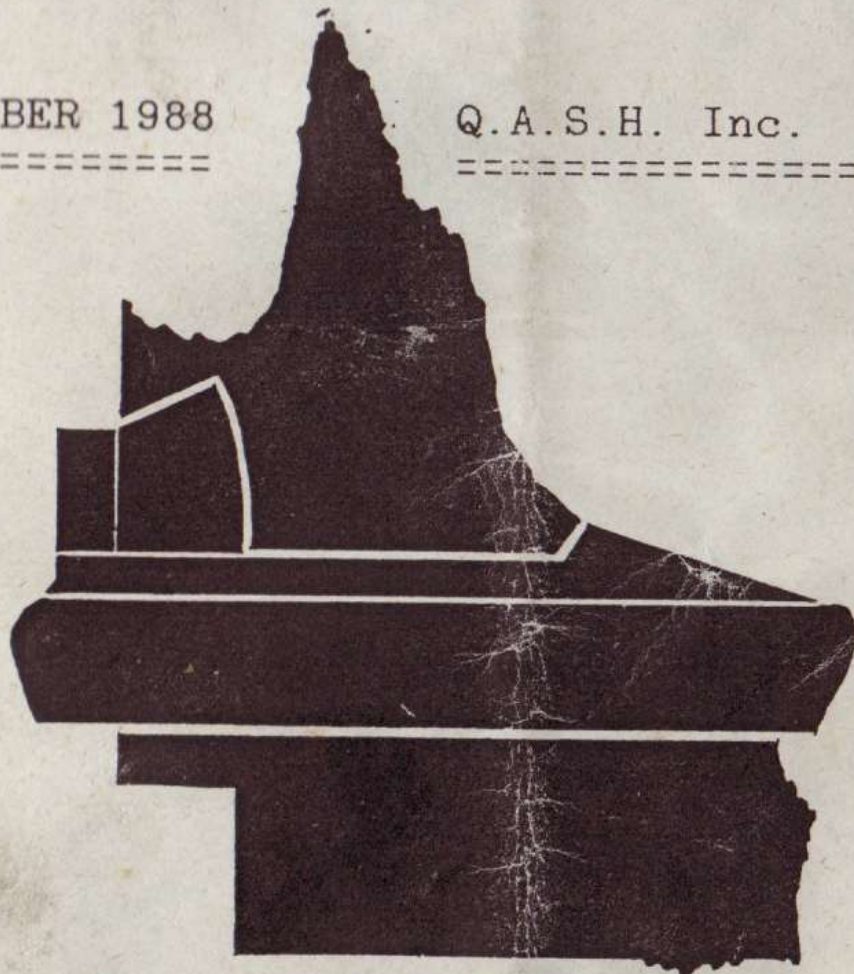


QUEENSLAND AMATEUR SPORTING HOVERCRAFT

OCTOBER 1988
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Q.A.S.H. Inc.
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18th EDITION
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Q.A.S.H.



Angus Kerr, Steve Koncz & Mark Dobson all anxious as the flag goes down.



Mark keeps his cool while Angus spins out of control.



Angus and Murray "neck & neck" and Mark and Steve hot on their heels.

QUEENSLAND AMATEUR SPORTING HOVERCRAFT Inc.

c/o 52 Utrecht St.,
LOGANHOLME Qld. 4129

Committee of management.

President : Mark Dobson 15 Daisy Hill Rd., Daisy Hill 4128
ph 8084395
Vice President : Des Goss 43 Luprena St., Mansfield 4122
ph 3499743
Secretary : Steven Odgaard 52 Utrecht St., Loganholme 4129
ph 2098498
Treasurer : John Russell 10 Brodie St., Holland Park 4121
Public Relations : Elizabeth Julian ph 3783338
Chief Race Marshal: Kyle Kerr ph 2072653

Yearly Membership \$30-00 Associate Member \$15-00

Queensland Emblem on front cover designed by John Rapley.

INSURANCE

Craft registered through the Australian Air Cushion Vehicle Federation, ie. members of H.A.V. Inc., H.C.S.A. Inc. or Q.A.S.H. Inc., can apply for insurance cover through the Victorian Association. Apply to the Victorian Treasurer; Brian Watts Ph 03 7231964 for details. Prices advertised in the H.A.V. newsletter vary between \$107 - \$250 for between \$4,000 - \$10,000 craft and trailer coverage including \$1,000,000 public liability cover.

AIR CUSHION CRAFT

24 COBALT DRIVE, BETHANIA, QLD. 4205

PHONE: (07) 805 1681

SKIRT FABRIC AVAILABLE

SKIRTS MADE / REPAIRED

ROTAX - ENGINES

Dear Air Cushion Vehicle enthusiast,

This month heralds good news for private air cushion vehicle operators who have wanted to obtain a legal licence, but like so many of us, have found that no such licence was available unless the craft were to be used for commercial purposes or by permit, issued by the secretary of the Harbours and Marine. On Sunday, 30th October at 10am, the club will be meeting with a department field officer; Mr. T. Ham or district officer; Mr. B. Lane at Victoria Point to be examined for their licence as a private air cushion vehicle operator. If you currently operate on a commercial ACV licence, you are exempt; but if you operate on a private pleasure vessel or speed boat licence or with no licence at all, then you are invited to attend with Des Goss, John Russell, Alan Barker, Murray Russell, Wayne Summerhayse and myself. Please note that you must make an appointment with one of the above H&M testing officers by phoning 2601633 during office hours.

Certificate of Masters

To obtain this licence you will be required to:

- be the holder of a current Motor Vehicle Driver's Licence Class (a).
- be the holder of a speed boat driver's licence.
- have a sound knowledge of the theory and practice of the operation of ACVs.
- have a sound knowledge of the regulations in force in Qld. ports and harbours and, in particular, the collision regulations and the regulations relating to signals of distress in force for the purposes of section 140 and 146 of the Queensland Marine Act 1958-1972.
- have a sound knowledge of the Uniform System of Buoyage and Beaconing in use in Queensland ports and harbours.
- have a sound knowledge of the tide and weather conditions and any hazards to navigation likely to be encountered.
- display that he / she has the ability to manoeuvre safely and competently the air cushion vehicle to the satisfaction of the testing officer.

Last month's rally at Noosa had to be cancelled, however the two members who contacted Des were not disappointed as a trip down the Bremer River from Ipswich was quickly organized for the following Sunday. For Des Goss in a Turbo 225 and Murray Russell in a fibreglass Cyclone, this was an enjoyable trip but Wayne Summerhayse in a Scarab 2 had a spot of bad luck when a fan shaft support strut fractured and was forced to limp home on only one thrust fan. Murray and Des made an attempt to tow his craft towards the last leg of the return trip and surprisingly, were successful in achieving hump speed by using a vee link.

On Wednesday evening 28/9/88, Owen Thomas helped the club with some publicity by directing us to the organizer of a Chinese Dragon Boat race. This race was held 3 days later on the river in front of Expo 88 and due to a fatal accident when a similar race was held in New Zealand last year, safety precautions were well publicized.

The organizing committee had decided that two medium sized hovercraft would be ideal as safe buoyancy platforms due to their absence of water propellers.

The big problem then arose: Did QASH have any members with suitable craft in operating order? The club rally to Noosa had recently been cancelled for this very reason. Des Goss was volunteered with his "been there done that" turbo 225 and that only left Murray Russell, but wait a second: Have you ever tried to climb into a lightweight racing Cyclone from the water?

The old aluminium Scarab was laying under the Carport with cobwebs securing it to the trailer and its engine and gearbox were scattered around the floor of the garage with most of its vital pieces soaking in trays of sticky evaporated kerosene. After burning midnight oil for three nights I managed to repair the jammed starter clutch, straighten the bent exhaust valve, reassemble the engine and remount it in the craft. At 11-30pm Friday it came back to the land of the living with a belch of smoke and a slow deep purr. I have pulled this gutsy little 4 stroke down three times since 85 but this is the first time I have had to reassemble it in my sleep. Well the big day was here and the Dragon boat race was to start at 10am that fine Saturday morning. My eyelids seemed as heavy as lead.

I met Des at Kangaroo Pt. and when the AP1-88 came sailing up the river Des was off in a flash. I hastily threw my water bottle behind the seats and hit the starter as I watched Des catch up to the big fellow. The water bottle had landed on the delicate side of my lanyard switch and promptly cut the ignition. A few minutes later I caught up to Des outside Expo. So far so good, both engines seemed to be running well and for the first twenty minutes we both cruised behind Dragon Boats practising for the big race. This seemed to be a waste of fuel and effort so I settled down in the water half way across the channel in an approximate line with all the other rescue and patrol vessels and with both engines idling managed to remain stationary against the rather swift incoming tide. This was great, I put my legs up for a well deserved rest and a bit of a suntan and waved to Mark Dobson, Angus Kerr and Bernie Reid as they sped past with their load of Expo fun-seekers. I was just getting comfortable when the spit hit the fan; the Malcolm Sue Karate Boat had just launched and unlike most of the other boats, headed off upstream with the current. They delicately turned the long flimsy vessel and tried to paddle out between the Ski pontoon and the Fireworks Barge. They didn't count on the swiftness of the current and were swept broadside into the bough of the barge. The barge's bough struck them on the shoulders and their vessel rolled over and capsized and as I cruised over all I could see was this smiling dragon head bobbing up and down. Two rubber boats arrived before me and pulled in two drenched paddlers each.

I came within a metre of the side of the barge to which they were clinging, cut my lift engine and set the thrust to sit stationary, but being so close they all decided it would be a good idea to throw the heavy timber paddles into the hovercraft. In a frantic effort a dozen or more paddles came hurtling in my general direction: Ouch! one hit me on the forehead, then another hit me on my top lip, but I kept my cool and indicated for two to climb aboard. As each girl clumsily dragged themselves over the 5 " high free board they drenched my switch box with about 5 litres of salt water and then shut my thrust motor down with one swipe of the knee. Well that was it!, sitting like a dead duck, the current dragged us backwards but I quickly put the anchor down and attempted to restart the thrust. It was then that the corroded terminal on the battery lead decided to short out and so the rubber boats after rescuing the remaining paddlers had to collect my cargo. The excitement was over and I merely lifted the engine cover and recrimped the offending terminal until the starter came to life. Back to normal, I heaved the anchor in and set off back to see what Des was up to. As I throttled back the engine stalled and Des came up behind me and pointed to the pool of Texas Tea oozing out of my engine bay. Oh No!: Out with the anchor again. After spending three nights carefully torquing down all the critical engine bolts to the specifications in the workshop manual and painstakingly sealing every possible oil joint, I now discovered the one most important part I had forgotten - the sump plug. Angus Kerr thought this was very funny and pulled out his pocket camera to capture this very embarrassing predicament and then spray-blasted me as he took off. The Harbour patrol boat threw me a line and with my lift motor running was towed back to the boat ramp at a comfortable planning speed. Wayne Summerhayse, I know just how you feel.

MOOGERAH TRIP

On Saturday 8th October, Des Goss, Liz Julian, Murray Russell, Paul Pikelharing and I went for a trip to Moogerah Lake near Boonah which is approximately 1 1/2 hours drive from Brisbane. This time all three craft behaved perfectly and we had alot of fun exploring the lake and dam wall, swimming, diving off the waterfall in the gorge, tobogganing, water-skiing, and eating around the barby. In the morning we conducted a simple hovercraft thrust test for each craft by anchoring a 300 lb-wt spring scale to the back of Murray's Falcon on a level stripe of grass. The air temperature was 29 deg C.

The results are as follows:

Cyclone 36kW Rotax Single Fan 760mm dia integrated lift: 467 Newtons

Turbo 225 37kW Robin Single Fan 760mm dia integrated lift: 489 Newtons

Scarab 2 42kW Kwaka Twin Fans 610mm dia separate lift : 756 Newtons

467 Newtons = 3360 poundals = 105 pound-force

489 Newtons = 3520 poundals = 110 pound-force

756 Newtons = 5440 poundals = 170 pound-force

VICTORIAN ORGANIZING COMMITTEE FOR OZ HOVER 89.

Minutes from the meeting 15/9/88

Meeting opened : 9-45pm

Apologies : C. Watts

Present : G&H Dehn, P&T Maksimovic, P Djurovich, A Leask,
P Moody, K Osmond, P Streader.

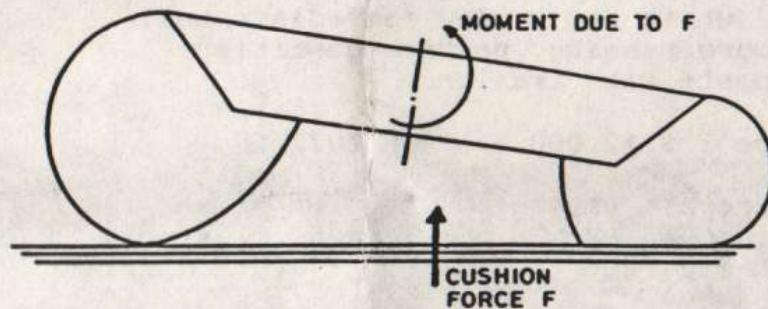
- Agenda :
- 1) Previous minutes
 - 2) Correspondence received
 - 3) Feedback from other States
 - 4) Accommodation
 - 5) Public address system
 - 6) Safety aspects
 - 7) Licence and insurance
 - 8) Application forms
 - 9) Programs
 - 10) Correspondence

- 1 Previous minutes read and accepted.
- 2 a) Paul Moody is awaiting a letter from Jeff Hands re hiring of the sail and power boat clubrooms. These are available for a nominal fee.
b) Letter received from the NSW Water Resources Board for approval to use the lake. Permission has been given subject to the NSW boating laws and conditions.
c) Maritime Services Board sent an application form for us to complete for permission to hold a rally. The fee is \$15-00.
- 3 a) The feedback seems to be very positive from all states. A recommendation to change the starting time of events, ie. start earlier and finish around 3pm leaving free time in the afternoon. It is suggested that the trials for racing start around 9-11am with cruising arranged for the afternoon.
b) As Paul Moody is in contact with both states on a regular basis he will remain as the liaison person for any problems/suggestions.
- 4 All hotels, motels and caravan parks have been notified & are expecting bookings. One motel has had new owners and prices have gone up. One hotel has been completely booked out. All members are responsible for making their own bookings as deposits are required. For all the latest information on accommodation contact T.Maksimovic.
- 5 Public address system - We hope to hire one from the sailing club. This must be confirmed and a fee will have to be paid by the federation. Paul Moody and Peter Streader to oversee.
- 6 Safety aspects - Alan Leask reports.
a) Life jackets are required to be worn for all children under 12 yrs of age as well as being carried for each person on the craft.
b) A separate meeting will be held to discuss the very detailed aspects of safety as it affects all members.
- 7 a) Licences are compulsory in NSW and the onus is on the driver of the craft to hold one. We must stress the importance of this issue as your insurance is null & void if you break any State Boating laws ie. flying a craft without a licence.
b) All craft attending the rally should be insured and all drivers should hold a current boat licence.

SERIES ON HOVERCRAFT SKIRTS No 2.

The stability of a hovercraft is dependent upon the pitch (fore & aft) and roll (side to side) stiffness of the air cushion. This stiffness is derived from two main sources:

1. The bag skirt employs an inflated bag surrounding the air cushion and it is the pressure of the bag which provides the stability.
2. All three designs use the movement of the centre of pressure on the collapse of the skirt to provide stability, ie. when the skirt crumples as the edge of the craft drops, the effective contact point where the skirt touches the ground moves. Therefore extra cushion area and thus more lift is provided at that side, moving the centre of lift pressure over and tending to raise the craft to restore it to a level position.



Design Sequence

The first action when designing a skirt is to decide upon the main use to which you will put the hovercraft and the type of terrain over which you intend to operate it. For a cruising craft that will be operated over water you will probably opt for the smooth but stable ride of the bag and finger skirt. If you fancy yourself as the driver of a racing hovercraft you may choose the full finger skirt which has very low drag characteristics or maybe a straight bag skirt if racing on terrain where hull damage would otherwise occur if a soft skirt were used. The next step is to develop a section through the side skirt geometry, deciding where to put the hull structure to pick up the skirt and remembering the hydro-dynamics of the hull form. The skirt and the hull shape must be designed together. Finger skirt hulls generally have rounded corners whereas those fitted with bag skirts usually have square or angular ones. At this point in designing a hovercraft a great deal of variation in the exact shape and size of the skirt and structure can be considered until the happy medium is found. The bow shape can now be developed in a similar way. The final stage is the development of the tailoring, splitting it into a sensible number of panels which, when sewn together, adopt the shape required. These panels should be sufficient in number to enable the skirt to look smooth and free from stress when it is inflated. There should, however, be few enough panels to make construction of the skirt fairly simple and straightforward. Finally, you must decide on the type of material.

Proposed Trips for the coming months:

Saturday 15th October 1988 Colmslie Reserve to Bishop Island.

Sunday 20th November 1988 Thorneside, Mooroondu Park (last for 88)

Sat, Sun, Mon 28th-30th January 1989 Lake Cargelligo NSW. (OZ HOVER 89)

The 17th general meeting is convened for 7-30pm Wed. 19th October 1988 at Archerfield Airport in the S.A.A.A. building.

Steven Odgaard
sec.

FOR SALE

1. Turbo 240
Red, white and yellow fibreglass hull.
5 hours running, perfect condition.
Complete with trailer.

Price : \$ 12,000 Ph 2072759.

2. Hovercraft engine
Robin EC44 PM Twin cylinder, 2 stroke
with 2:1 reduction gearbox, electric start.
Brand new

Price : \$ 1,800 ono Ph 8121136

3. Black fibreglass Cyclone
Single cylinder 18hp Robin
New skirt, 60 kph maximum speed
Good condition

Price : \$ 3,000 Ph 8121136

4. Turbo 240 Hull
3 tone blue fibreglass
Good condition

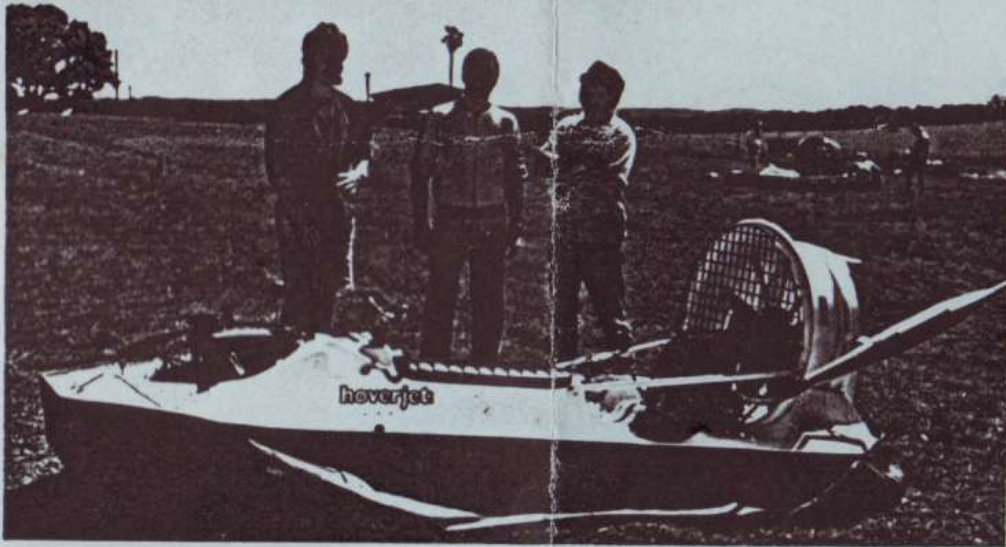
Price : On application Ph 8084395

5. Hovercraft engine
Yamaha PE483 2 cylinder 2 stroke
Good condition

Price : On application Ph 8084395

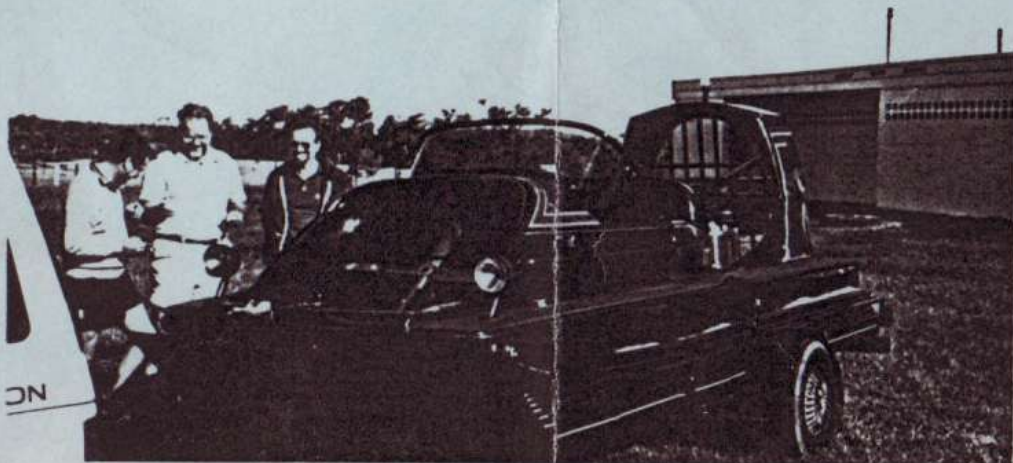


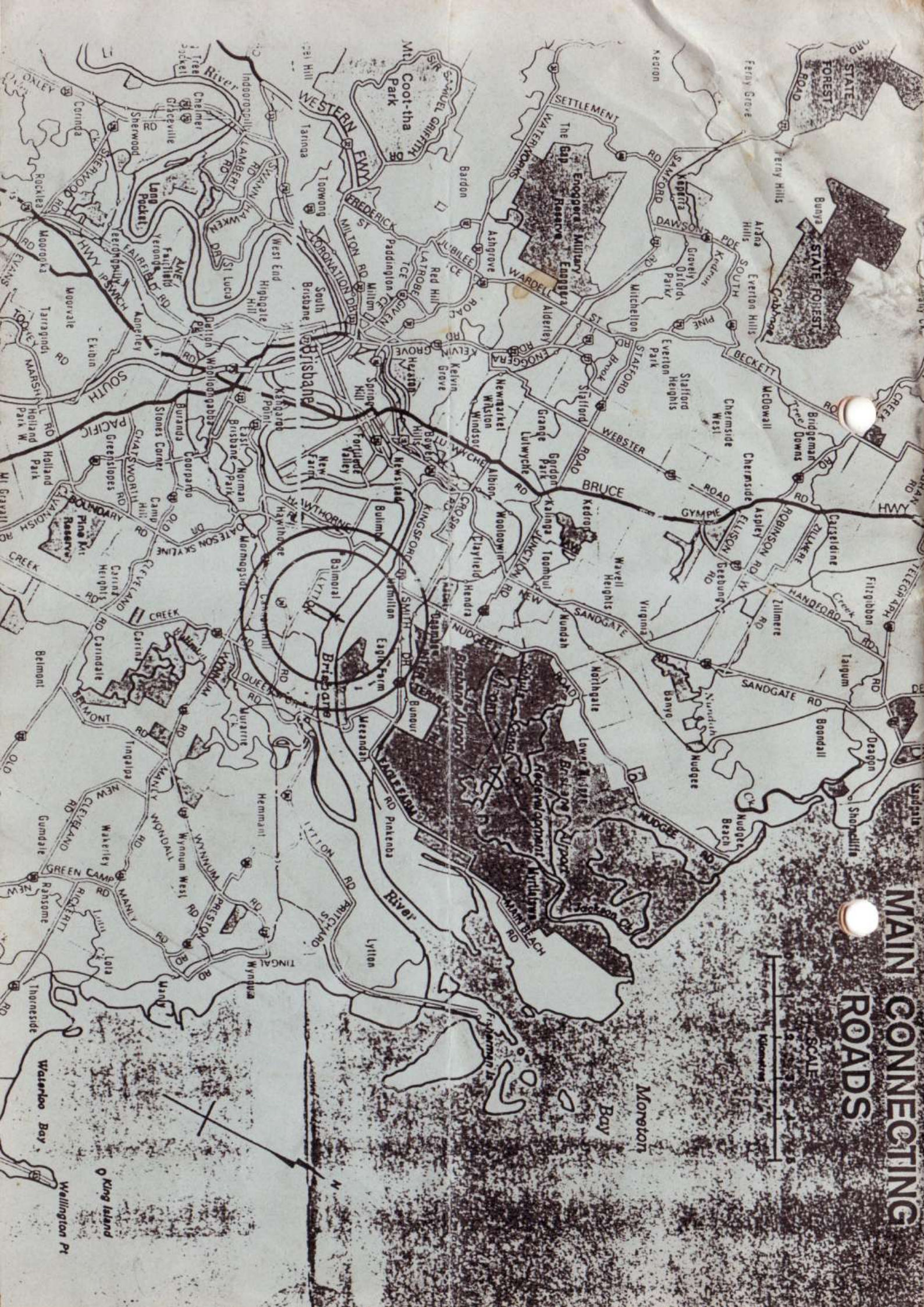
Steve Koncz literally flies over the terrace.



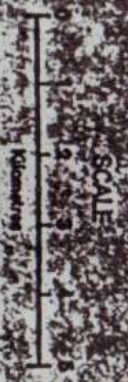
Brad Thatcher, Steve Koncz & Tony Thatcher stand proud behind their hoverjet.

Allen Jensen's Cushion-Flight hovercraft on display at Lakeside.





MAIN CONNECTING ROADS



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