

# HULL, BEAM & FLOAT



# **AIMS**

Continue work undertaken in 2007 in order to complete detailed design of the entire assembly, complete construction of all components and undertake preliminary testing.

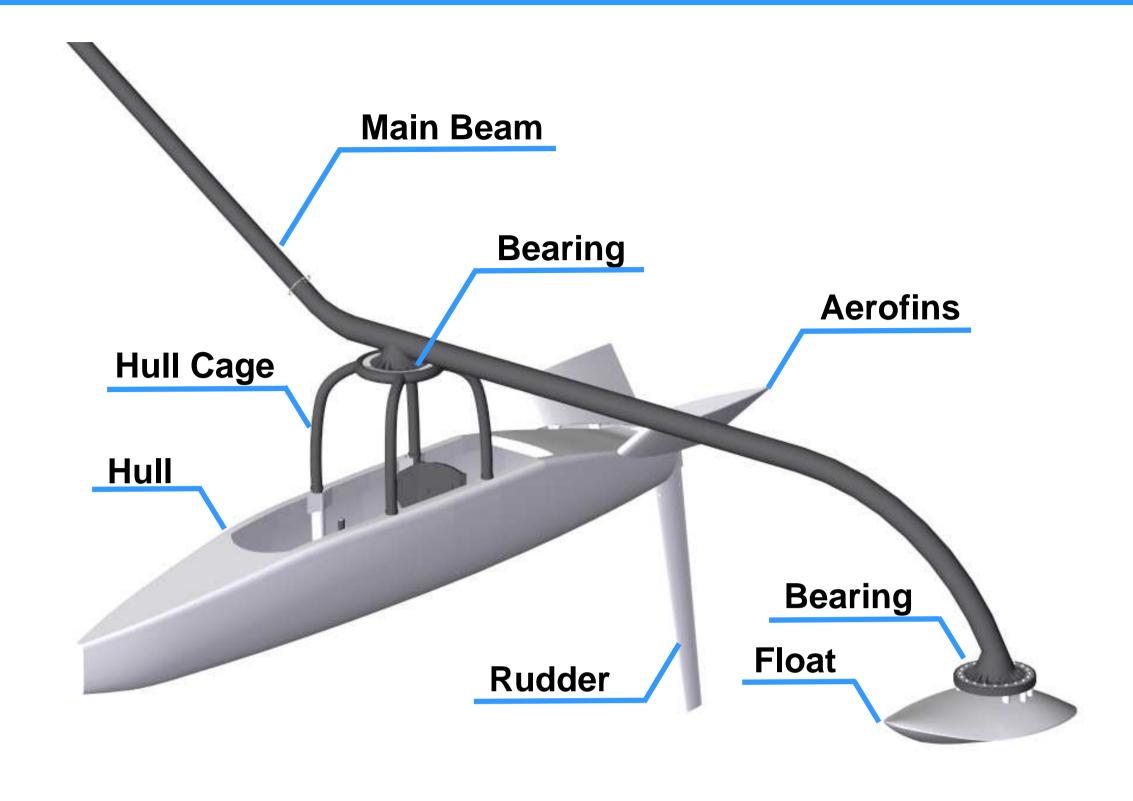
# **DESIGN GOALS**

- The hull was designed to seat two occupants; the pilot plus one passenger
- A rudder and aerofins were designed to provide directional stability to the craft about the yaw axis
- All components must be lightweight and the assembly must be easily transportable

#### **METHODS**

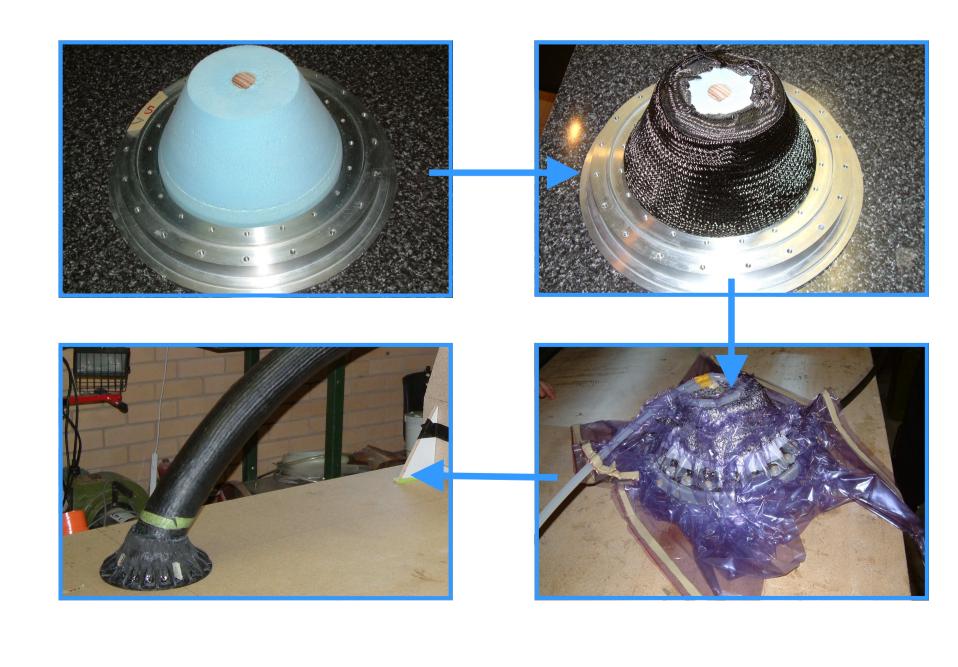
- The seating configuration was ergonomically designed to comfortably seat two occupants
- Rudder and aero fins were sized to provide the required yawing stability to the hull when in the water and in flight
- A control console was designed to assist with integrating the joysticks and foot pedals into the hull





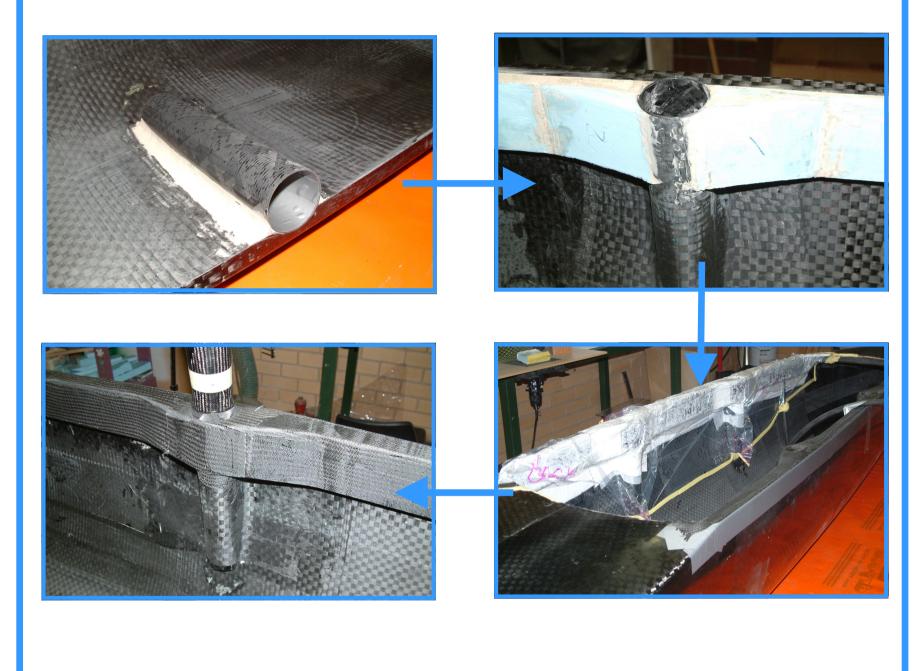
### **MANUFACTURE**

The beam to float connection piece was manufactured from carbon fibre using a Styrofoam core in conjunction with an aluminium mould in a vacuum infusion process. This piece was attached to the end of the main beam, using carbon fibre and a vacuum infusion process to strengthen the connection.



# **MANUFACTURE**

Reinforcements for the hull cage sleeves and hull opening were manufactured from carbon fibre using a vacuum bagging process.



#### **OUTCOMES**

- The hull, beam and float have been designed and construction is nearing completion.
- The beam and float detach easily for transport and storage
- The hull comfortably seats two occupants

### CONCLUSION

The detail design of the hull, beam and float assemblies is complete and construction is well underway. Once all components have been constructed the assembly will be statically and dynamically tested.