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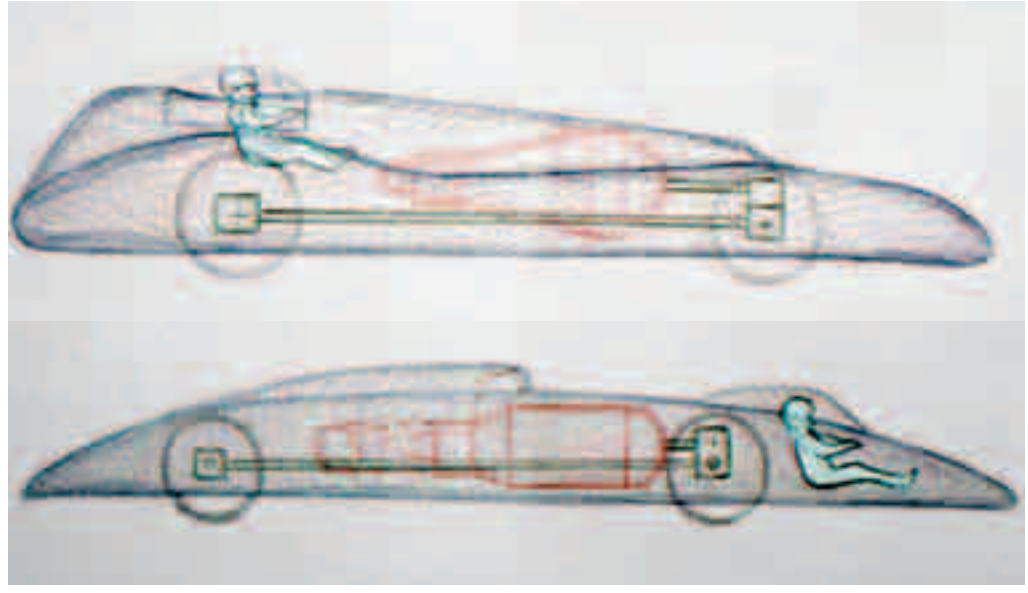
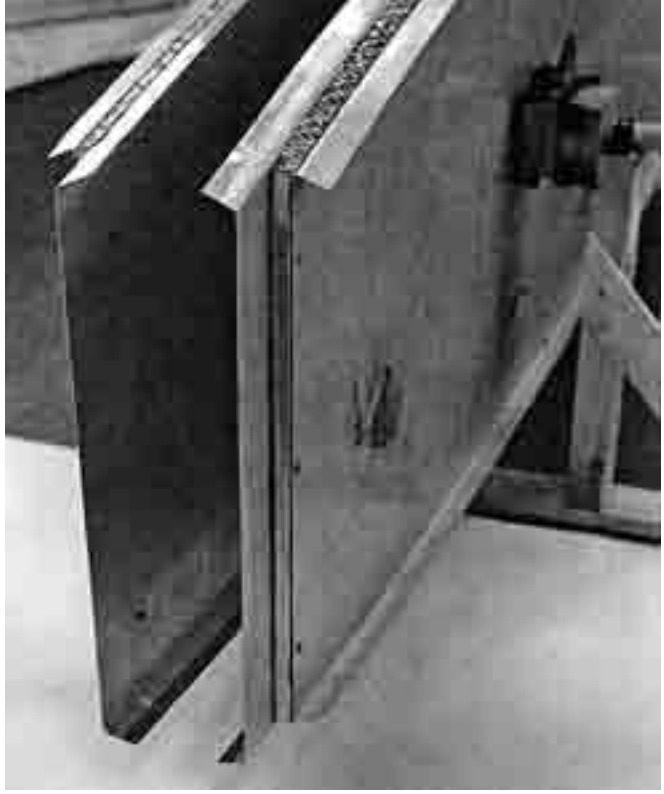
Design of the Campbell-Norris 7 (CN7)

One evening in 1955, before a record attempt with the hydroplane K7, to divert DMC's mind, Ken raised his glass and said "Here's to the Land Speed Record." DMC's response was: "Yes, you'd better start thinking." Although no contract was issued, Ken began to think about a land speed record car and sketched ideas when they occurred to him, often on paper serviettes which he then filed away. It was a habit of Ken's to sketch on paper serviettes over lunch. I wish I had collected them, but such things were not thought of at the time.

When the possibility of an attempt on the Land Speed Record was firmed up, Ken began discussing his ideas with Lew and I. All previous record breakers had been powered by modified piston-driven aero-engines, but these were deemed to be of insufficient power/weight ratio for the speeds required to beat, by a significant margin, the existing record – set in August 1939 by John Cobb in the Railton Mobil Special on the salt flats at Utah, USA – of 394.20mph (634kph). Jet engines were still on the secret list in 1939, but by 1958 turbo-jet engines were available. A turbo-jet uses the principle of a



This and facing page: Ken Norris' early design sketches. (Author's Collecton)



Close up of ‘sandwich’ construction. (Hexell Corporation)

and carbon fibre panels, is used, 50 years on, for the ‘survival shell’ of modern Formula 1 cars.

In March 1958 the design team was enlarged to include Hugh Standing for engine modifications and power train; Fred Wooding for structure; Jerzy Orlowski for lines, bodywork and exhaust system; Alan Lucas for stress, stability and other major calculations, so that detailed work could commence. Gordon Dale-Smith, who had served his National Service as an instrument mechanic in the RAF was later to take charge of instrumentation.

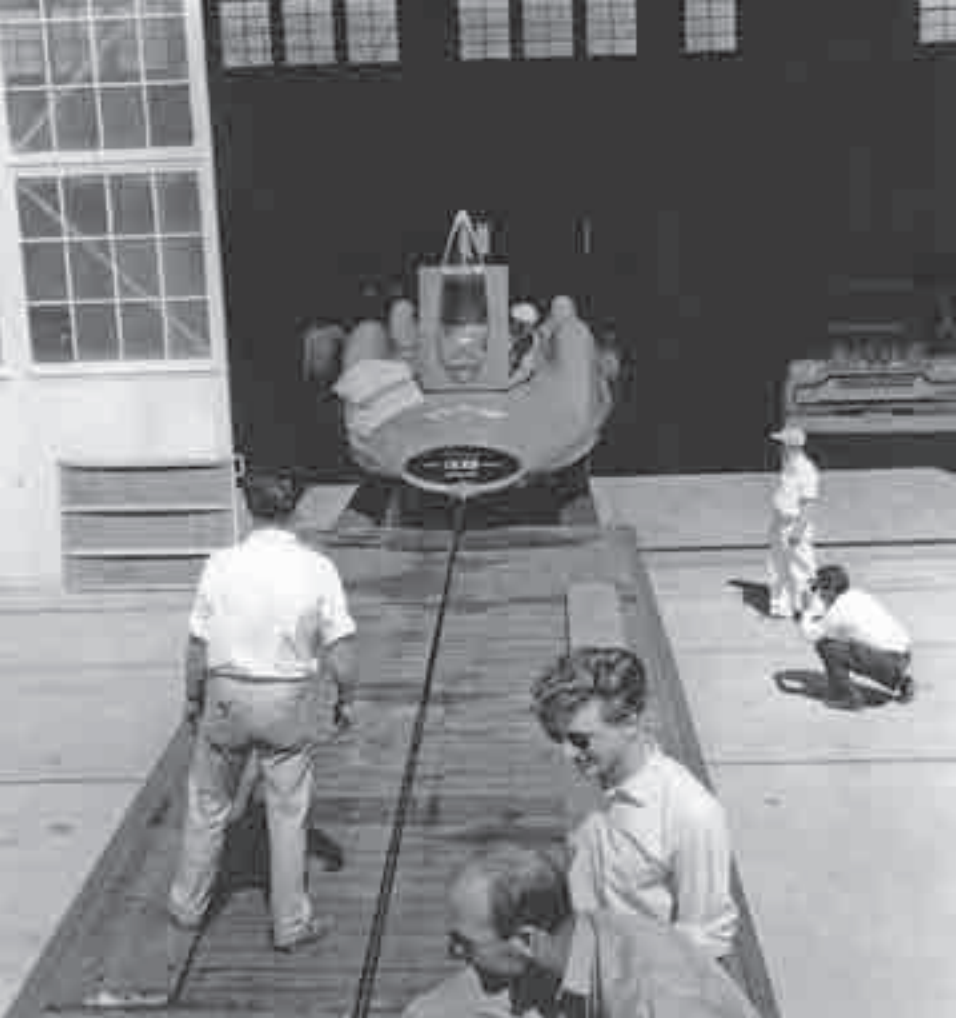
Bluebird CN7’s structure performed the dual role of supporting and housing the mechanical systems and human occupant, whilst forming the shell upon which a skin could be fixed. To provide the strength/weight ratio required and to keep corrosion to a minimum a BS NS5-1/2 hard material with zero per cent copper and

The design team. From L to R: Lew Norris, the author (seated), Ken Norris, Fred Wooding (seated), Jerzy Orlowski. Hugh Standing was away visiting Bristol-Siddeley when the photo was taken. (Norris Brothers Archive)

Left: View of structure looking aft from cockpit. (Rubery Owen Archive)

Top right: Assembling the top skin. (Rubery Owen Archive)

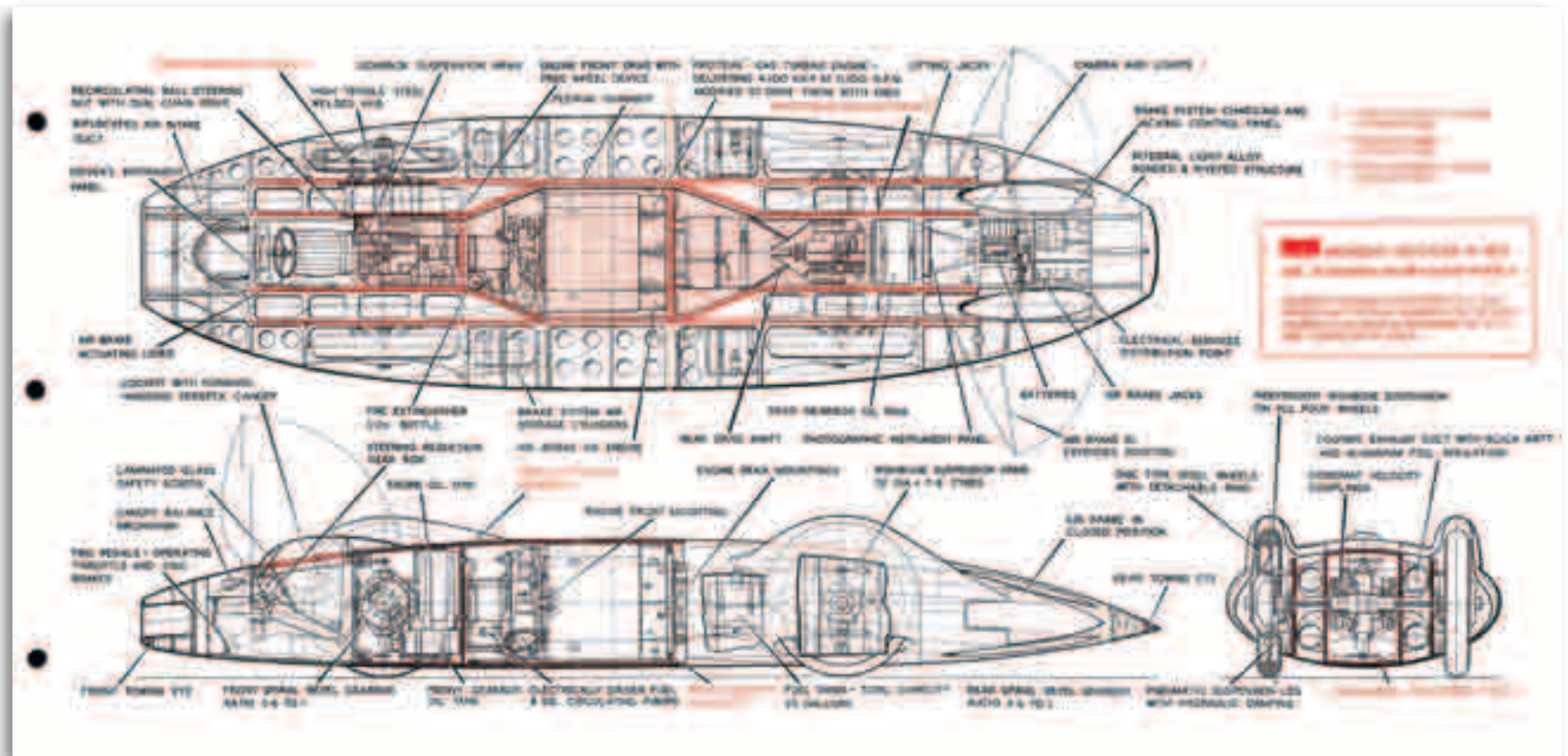
Above: Fitting front wheelarches. (Rubery Owen Archive)



Left: Loading CN7 onto its trailer at Wendover. The long ramp was necessary due to the small ground clearance of CN7. (BP Archive)

Bottom: Servicing CN7 on turnaround. The shiny cans on top are fans drawing cooling air over the brakes. DMC, Ken Norris and Peter Carr stand at the front discussing the run. (BP Archive)

Now where did I put my helmet? (BP Archive)



(Note: A larger version of this image is printed on the rear endpaper of this book.)