

**Other missiles**

Trials were also carried out overseas with mounting BAT (battalion anti-tank) weapons on the Ferret, and with using it as a launch platform for the Entac missile.

For details of the Mk 5 Swingfire launcher, see 'Big-wheeled Ferret', below.

**'BIG-WHEELED' FERRET**

In 1963/64, FVRDE began work on what was to become the 'big-wheeled' Ferret with a view to improving the vehicle's automotive and amphibious capabilities, and to provide increased stowage facilities.

Six prototype vehicles were converted from the standard Mk 1 configuration and seem to have been variously described as Mk 1/1 (floating), Mk 1/3 and Mk 3. The hull was unchanged but the vehicles were fitted with larger aluminium wheels and tyres (11.00x20), a permanent flotation screen (see 'Amphibious developments', page 20), larger disc brakes, and a redesigned suspension which used fabricated rather than forged wishbone components, and which provided a wider track.

**FV711, Mk 4**

Although it had originally been Mk 1 vehicles which were converted for the initial trials, there was no further development of the Mk 1 and the trials led to similar conversion work being carried out on a number of Mk 2/3 examples, with the resulting vehicle being designated Mk 4. The first prototype for the FV711 Mk 4 was based on a Mk 2/3 vehicle dating from 1961 (01DD08).

Following the usual period of trials at FVRDE, in 1964, a short trial was undertaken by the RAC Equipment Trials Wing. A number of minor criticisms were raised, the most serious of which concerned the steering where it was noted that the larger tyres had considerably increased the effort required at slow speeds, to the point where operational efficiency might be compromised. Other criticisms commented on the driver's visibility, noise levels inside the hull (again!), and the inadequacies of the braking system.

FVRDE took corrective action and confirmatory trials were carried out on a second example (01CC96) at Bovington at the end of 1966. Although the second vehicle was outwardly similar to the prototype, the wings were of a slightly different design which resulted in an increase in length of 38mm, and in width of 75mm. Apparently, the steering was still unacceptably heavy but it was felt that generally the vehicle was suitable for service, and deliveries of the Mk 4 probably began during 1967, with all of the vehicles being converted from Mk 2/3 configuration. Some vehicles were

converted by REME, with some of the work, for example, being carried out at 38 Central Workshops; some were converted by Marshalls of Cambridge, and work was still being carried out as late as 1976.

**FV712, Mk 5**

In 1967, further development work was carried out by FVRDE to produce the FV712 Mk 5 variant.

This consisted essentially of the hull of the 'big-wheeled' Mk 3 with a completely-new aluminium-armoured turret mounting four BAC Swingfire anti-tank missiles and a 7.62mm general-purpose machine gun (GPMG). Unlike the earlier Mk 2/6 variant, the missiles were completely protected by the armour; two reload missiles were also carried, one either side of the hull, and these, too, were armour protected. The turret, which was produced by Alvis, was the first example of aluminium armour to come into service with the British Army, and the same turret went on to be fitted to the Striker anti-tank variant of the CVR(T) family. Other modifications to the existing Mk 3 specification included heavy-duty rear springs, alumina spray to the surfaces of the hull adjacent to the missile efflux to minimise the risk of fire and damage in the event of a missile hang fire, a fixed fire-extinguishing system, and additional stowage to suit the role.

Like the earlier Vigilant, the Swingfire was also a wire-guided missile, relying on a trailing wire link connecting it to the controller mounted in the launch vehicle, but it offered extended range (4000m) and a larger-diameter shaped charge warhead.

The first mock-up, or prototype, for the Mk 5 was based on an elderly Mk 1 example (32BA96) which had originally been supplied in 1951. It is unlikely that further extended automotive trials were required since the vehicle was unchanged in this respect, but firing trials were conducted during March 1967, before the prototype was delivered to FVRDE in early April of that year for so-called 'trundling' trials. These were designed to determine whether any damage would result to the missiles, or the launch gear, if the vehicle were run with the turret elevated. Further firing trials were carried out by BAC during 1968 and 1969, with the final report issued in May 1969.

It was originally intended that a large number of Mk 5 vehicles would be produced, and a manufacturing specification was finalised in May of 1968 with amendments made in November 1968, and February and October 1969. However, the vehicle was quickly made obsolete by the Striker and the first batch accepted into service were actually conversions from existing stocks. In the end just 32 examples were actually produced as such by Daimler, in 1967, before production ceased.