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G. A. Taylor

DEE FOOTBRIDGE NEAR CORROUR BOTHY

NEW FOOTBRIDGES IN THE CAIRNGORMS

G. A. TAYLOR

As I write this article I recall that at this time in July ten years ago I was camping with five other men near Corrou Bothy, itself reduced to a roofless shell and surrounded by piles of material laboriously amassed for its reconstruction. No job which I have ever undertaken gave me greater pleasure and lasting satisfaction. Tragedy soon followed on that wild holiday week-end in September of the same year, when a Glasgow climber was drowned in attempting to cross the Dee to reach the shelter of the bothy and another collapsed and died of exhaustion. This accident emphasised the desirability of erecting a bridge over the river in the locality. In July 1951 Mr Jack Milne, a retired Aberdeen postal worker, erected with very little assistance two cables slung between a timber post on either bank. This at least provided a dry crossing, somewhat perilous for the aged and nervous but highly stimulating for the acrobatic. The latter challenge probably precipitated the fate of the structure, which collapsed two or three years ago. Our Club did reconsider the matter but felt financially unable to do anything immediately.

In April of 1959 I was approached by the Scottish Land Agent of the Nature Conservancy, who explained that this body proposed to erect six footbridges on the Mar Estate, and asked if I would advise on the design of the three largest at Corrou Bothy, Derry Dam, and Glas Allt, the others being smaller timber structures. It was proposed to erect the lot in the summer. I hope I did not sound too unhelpful when I pointed out that a bridge over the Dee at Corrou involved some serious thought, that it would take time to order and obtain materials for all the bridges and, from painful personal experience, not the least important item, that it was not the easiest or quickest job transporting this considerable mass of material to all the scattered sites, three of which were 5 miles or over from Derry Lodge. My interest was whetted when Mr Arbuthnott replied that it was proposed to deal with the transport problem by chartering a helicopter. Without thinking very clearly where the labour was going to come from, though one has found this a successful technique in the past, I thereupon offered to design and erect the three bridges mentioned, leaving the Conservancy to make their own arrangements about the smaller bridges, only one of which, over the Etchachan, was actually erected, due to Estate objections to the others.

The use of the helicopter made the whole project feasible with a very small labour force of four young men, two being Club members. It did pose certain other problems, as the machine was very small, its load being limited to 500 lb. weight with a maximum length of 25 feet. I felt it most desirable, in fact essential, that there should be no piers in the middle of the Dee and the Derry, the spans at which are 48 and 34 feet. As weight had to be cut to an absolute minimum, since helicopter flying time at £30 per hour is indeed money, a rather unusual design of bridge was adopted for Corroul which might technically be described as a "tied arch." The bridge is constructed of two fairly slender steel arch ribs with a joint at centre span, the thrust being taken by two steel tie-rods, as will be seen on the plate. The footway of open steel tread-plate is attached to the ribs. The other two bridges are of conventional girder construction. That at Derry Dam strikes one as being a very neat and substantial steel bridge, while aluminium was used for the shorter span over the Glas Allt.

After final approval in mid-May the designs had to be completed and materials had to be ordered, collected, and dispatched to Derry Lodge in great haste, as the helicopter was scheduled to fly out the loads on June 22, while the construction of the bridges was planned for the first fortnight of July. Thanks to the efforts of several firms, not least John M. Henderson Ltd. of Aberdeen, who fabricated the two steel bridges, everything was obtained in time, though in one case only the day before dispatch. One of the worst preliminary jobs was the drilling of the rock at Corroul for the bridge foundations. After vain attempts with hammers and jumpers which only seemed to scratch the surface, I decided that a powered rock drill must be taken up. I obtained the loan of a petrol-driven Warsop drill from Wm. Tawse Ltd. for a Sunday. It was carried up to and back from Corroul on the one day by Malcolm Douglas and three of my helpers, and the holes were successfully drilled in a downpour of rain. At 11 A.M. on the appointed day the helicopter duly appeared over Derry and subsided amongst the methodically arranged piles of material. In a few minutes, after retrieving my hat, which for the first time but not the last was blown skywards by the rotor, I found myself sitting beside a red-bearded pilot inside a perspex sphere which, apart from a few bits of slender tubing and a four-cylinder engine, seemed to constitute the helicopter. I was draped around with a strictly limited collection of old cement-encrusted pails, shovels, riddles, sand-bags, etc., and in six minutes found myself stepping

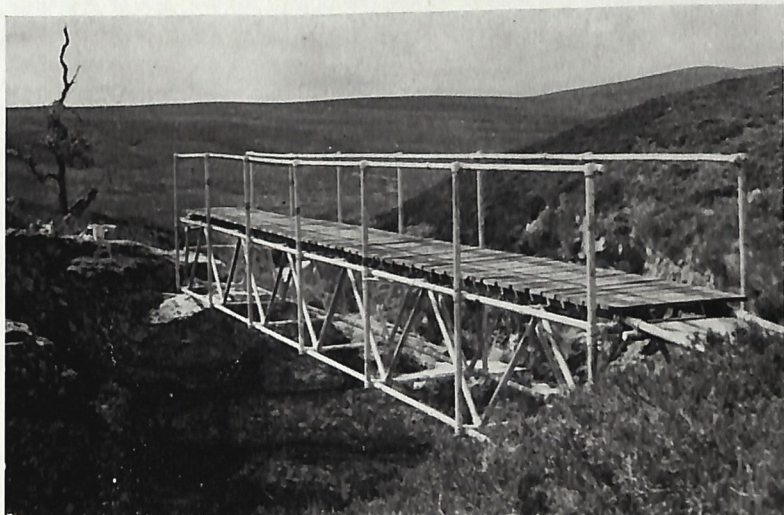
out beside Corrour Bothy. My job was to flag in the pilot as the loads came up and to indicate to him where I wanted them dropped. He did not land but released the loads by a cockpit trigger from a height of 3 or 4 feet above the softest piece of ground which I could find. That was no problem at Corrour. I noted that in most cases the helicopter was arriving at intervals of twelve minutes, that being the time for a round trip including loading. This meant that, carrying four bags of cement, the helicopter transport of one bag (costing 8s. ex-store) amounted to 30s. Previously we found that transport of one bag of cement, to Corrour was a day's work for one man and one garron. So, if the helicopter did not cost much if any less, it certainly did the job in a fraction of the time, and, of course, transported steel beams which could not otherwise have been carried up. In about thirteen trips all material was at the bothy, and Alastair, who had walked up, and myself were whipped back to Luibeg for lunch at 70 miles per hour. All day transport continued of material to Derry Dam, Glas Allt, Etchachan, and of fencing to Geusachan, and after eight hours a most successful operation was completed.

Thereafter it only remained for the five of us to erect the three bridges with all the usual digging, shuttering, concreting, etc. Apart from the first two days at Corrour, when my old tent was ripped to pieces in a gale, the weather was extremely good and work proceeded, if not quite from dawn, at least until dusk. Erection of Corrour Bridge had really been worrying me a good deal, as we had no lifting tackle and the heavy and long steel beams had to be lifted 10 feet above the river. However, the job was successfully completed by sheer brute force with the crude safety precautions which we could improvise by erecting in mid-stream a scaffolding constructed of parapet tubes, odd pieces of timber, and ropes, and weighted down with boulders. Valuable help was given by Bob Scott, Malcolm Douglas, and one or two other men who had been impressed for the great day. Work on all bridges was completed in fifteen days. I must express my thanks for help to Mr Arbuthnott, Mr Grant Roger, and Mr Malcolm Douglas of the Nature Conservancy; to Mr Robert Scott of Luibeg, to a civil engineering colleague, Mr R. G. Smith, who gave me great assistance in the rapid design of the Corrour Bridge; and finally to my enthusiastic and extremely hard-working helpers, Alexander and Alastair Davidson, William Blackett, and Ian Hird.

Before closing this article I should perhaps draw the attention of

members to two other bridging episodes. As is known, the Luibeg Bridge which we erected in July 1948 as a memorial to James A. Parker, was, along with several other bridges, swept away in the catastrophic cloudburst on August 13, 1956. When we visited the site a week later the destruction in the valley was unbelievable. Naturally I was bitterly disappointed at the fate of our bridge and, looking on the scene with the mangled remains half-buried in turf and boulders, I could not visualise that it could ever be re-erected. Certainly it was obvious that no bridge could be put up on the old site, where the landscape had simply been removed. However, after laboriously digging out the parts of the bridge, hope revived somewhat when it was seen that the main girders though bent and twisted were not damaged beyond possible repair, and the Club decided to renew broken parts and proceed with the re-erection. A new site at a rocky gorge about 200 yards upstream was selected, the girders were carried up there and, with a screw-jack prepared for the purpose, it was possible to straighten the girders. All other broken parts were renewed, and in June 1957 a Club work-party built abutments and re-erected the bridge. It will be agreed that it is now on a most secure, attractive, and picturesque site. It is rather farther away from the main path and possibly not so convenient for day-to-day use, but is still readily available for flood emergencies, and by the evidence of newly formed paths it is very regularly visited and crossed.

The other bridge to which I draw attention was not erected by the Club, nor can I recollect any members other than William Ewen and Alastair Davidson working with me on the job which was undertaken in July 1957 for the Scottish Rights of Way Society. This bridge, a tubular steel, lattice girder, crosses the Eidart, an extremely dangerous river in flood, about 300 yards above its junction with the Feshie. The bridge is in a very striking spot just above a deep chasm and most impressive waterfall. It should certainly be visited by the traveller even if the ford crossing proves safe and convenient. The story of its erection in one of the most remote spots in the Cairngorms would require too much space, and was in any case summarised in articles in the Press and other journals at the time.



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EIDART FOOTBRIDGE



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DERRY FOOTBRIDGE AT DERRY DAM