ROUTE EXPLANATION

LEG 5

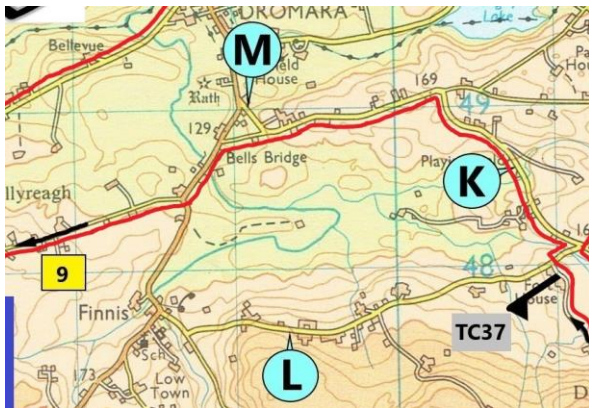# TC37 to TC38

TC37 to TC38   AR

Points and Arrows (9, 10, 11, 12 & 13)
Points – Second Shortest Route
Arrows – Second Shortest Route

SOLUTION BOARDS:

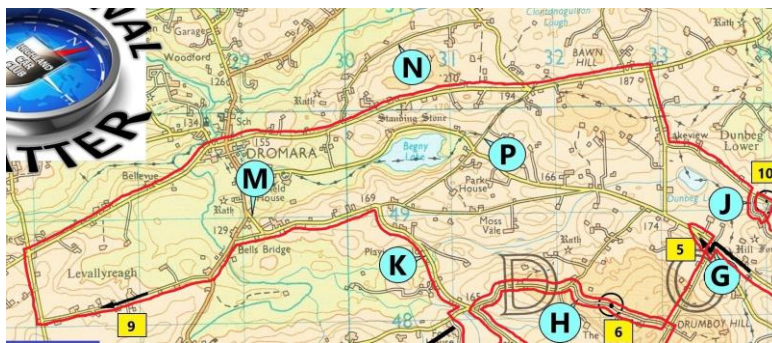| K	J	J	Q	S	U	T	U

TC37 to Arrow 9

The key to finding the second shortest route is (of course) to first of all find the shortest route. But finding the second shortest route brings other considerations too. The rules about double usage of points and arrows have increased importance.

Here, the options are the two routes via K and L. And if K is the shortest route, the addition of the short detour via M becomes an option for second shortest route.

A measure confirms that the route via L is the shortest route, so the route via codeboard K (and without the loop around M) is the second shortest route, and therefore the correct route.
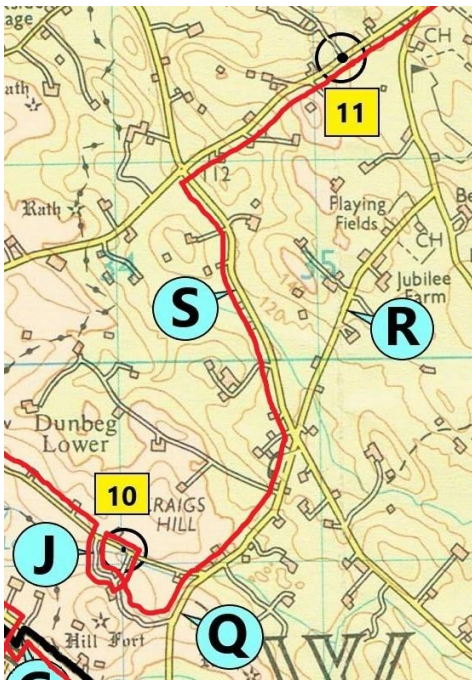

Arrow 9 to Point 10

The shortest route from 9 to 10 (and taking into account that the labels for codeboards M and P block some of the roads on the map – see regulation 9) is quite clearly TR and then XR, continue through Dromara until just after SH187 and then TR and TL to Point 10. So the second shortest route looks like a choice between loop N and loop P. You need to take care when measuring loop options like this – they can be very deceptive to the eye, and the section of the shortest route which they "cut out" is just as important as the length of the detour itself. In this case going via N adds slightly less distance than via P, so would be the preferred route.

But that is to ignore the shorter loop options at Point 10. You could pass straight through Point 10, then TR three times to come in to 10 again. But the shorter option is to TR just before Point 10, pick up the J board and then TL twice to Point 10. This is quite counter-intuitive for UK navigators as it appears to be leading up a blind alley, but it is a shorter loop than all the other options to add mileage for the second shortest route, and is therefore the correct route.
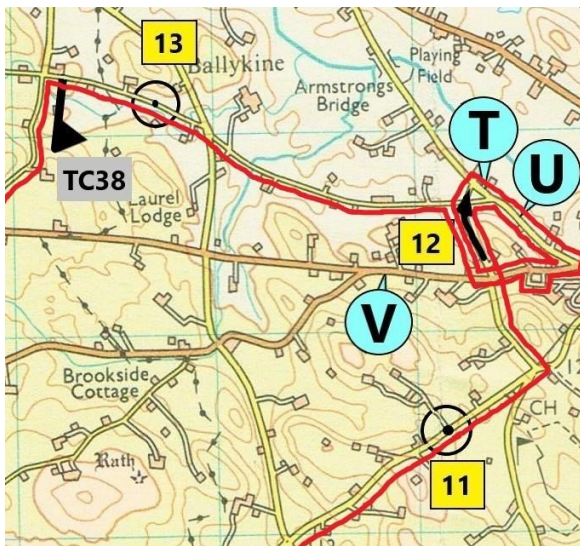
Point 10 to Point 11

From Point 10 (heading NW) you have to turn left and pass codeboard J again, as to continue straight on would be to travel against the previous direction of travel on that road. The shortest route (ignoring dead-end whites) is then TL, TR, TL, XL and XR to Point 11, via codeboard S.

The options for the second shortest route are (a) another loop around 10 and J, (b) to go via Q, or (c) going to Point 11 via codeboard R. Which of these options adds the least additional distance to the shortest route?

A measure confirms that the Q loop adds surprisingly little to the overall distance, and certainly shorter than the other options. So the correct (second shortest) route here is via J, Q and S.

Point 11 to Arrow 12 to Point 13 to TC38

Once again, these Objectives are grouped together here only because they are close together on the map, and each should be worked out in the correct order, on its own, and without reference to any later sections. This is where it gets tricky! The shortest route from Point 11 to the tail of Arrow 12 (per regulation 7) is clear, but there are not any obvious options for an easy second shortest route.

The loop around V and 11 (again) looks quite long but may nevertheless be the shortest option, and certainly shorter than the loop via R, S and 11 (or maybe R, S and V).

But once you remember that you can use part or all of Arrow 12 to form a loop (see Regulation 10) that opens up a shorter option by turning XL on the arrowhead and coming round to the tail of the arrow again via V. And if you have spotted that, you should also spot the options for a loop via T and/or U, which would be even shorter. Having got on to the arrow directly from 11, you are now simply trying to get back to the tail of the arrow by the shortest route, so you have to XR on the arrowhead and come round to the tail via U (but not T). Then you travel the whole arrow to its head.

From there, you are trying to get to Point 13 by the second shortest route. You TR to pick up the codeboard T, and you may be tempted to loop around by the T again (to add some mileage for the second shortest route) before crossing the arrowhead and speeding off to Point 13. But you can't do that because you have already used the link road to the arrowhead in the opposite direction. So you have to go via U again.

From codeboard U, the shortest route to 13 would be along the brown, up arrow 12, and XL before the end of the arrow. So a second shortest route to 13 (remember that is what you are now looking for) could be via board V before TR up the yellow and XL to Point 13. That is unless you also spot the lay-by off the brown road. Loop round that and you can go via the rest of the shortest route to Point 13 and TC38, avoiding the V.