

# Closest Entry Point - Some Tests on the Zumo XT2

## Rat AlteSchule BC ShpVia.gpx

I Downloaded the GPX file and imported the routes into Basecamp.

- The two routes were identical except one had used all Via Points, the other used all shaping point except for the start and finish.
- The routes were identical regarding the roads that they took.
- All route points are 'ad-hoc' ie they have not been created as Waypoints first.
- Via Points were mostly shown with the flag icon. I assume that these had been set by editing the text in the GPX file, as it is not possible to set the icon in Basecamp - except for Waypoints.
- Point 06 looks like a stopping place: it visits the point and then returns the same way.
- A number of the route points are not placed on roads: 08, 11, 12, 13, 17, K462
- Both routes - the Via point version and the shaping point version were identical in the way that they were plotted on the map.
- Both routes matched the track that was in the gpx file perfectly.

I made a track of the Via Point route and then recalculated both routes. Comparing with my own track, there were no differences.

Preparation:

- I renamed the Via route: **JfhCepVia** and corrected the 6 mis-placed points. Recalculated the route and it matched the track. Duplicated the route and changed all vias to shaping - except for 01 (start) and 19 (end).
- Saved the shaping point version as **JfhCepShape**.
- I created 4 Waypoints at places which I thought would reveal CEP behaviour. Test 01 to Test 04.
- During the tests, a fifth waypoint was added to find out more about an unexpected result : Test 05.
- I created waypoints as it is then much easier to set the location:  
**WhereTo → Waypoints → Select Waypoint → Select Location.**

Commentary on the Tests follow. I have used screenshots from Basecamp rather than screenshots from the Zumo to describe the results.

## Summary

These tests are not exhaustive. I wanted to get a feel for how it was behaving.

Some route points were misplaced. I corrected them.

None of the results were surprising.

Some confirmation / indication that CEP does not head for Via or Shaping points.

Generally the tests for Via points matched the test for shaping points.

The first test did not match. This was when the point was not in the are of the route. it was well before the start. I expected it to go wrong, but with the Via Point test it worked well.

With the shaping point test, it stayed on the motorway for as long as it could - within whatever parameters it has. But the result was not good - missing out a fair chunk of the start of the route.

In all cases, from the point where CEP joined, the via points and shaping points remained in the same locations.

The route was not recalculated at the start - the XT2 accepted the route as it was. When I did force recalculation (as an afterthought, by changing avoid motorways, and then back to not avoid) the route followed the original track on the XT2 screen and the points seemed to match a visual check with the points in Basecamp.

One final note. I couldn't find many places where I could position the bike that would create the circumstances for a good quality test. Lack of alternative routes and motorways in area impact on the results.

Motorways - well- the Zumo is going to use them.

Lack of choice - it's difficult to work out what the Zumo is doing if it only has one or two alternatives. But there was enough to work with around points 15, 16 and 17.

## Via Point CEP Test - Location : Test 01

- The bike is positioned at Test 01 - Green rectangle.
- The start of the route is located ESE of the start: Orange Square.
- The route was not recalculated.  
On choosing CEP, the route to the start was calculated. The place where it intersected the route is shown with the red circle.
- I have drawn the route taken to the start onto the map as magenta line.
- The original route is shown in brown.

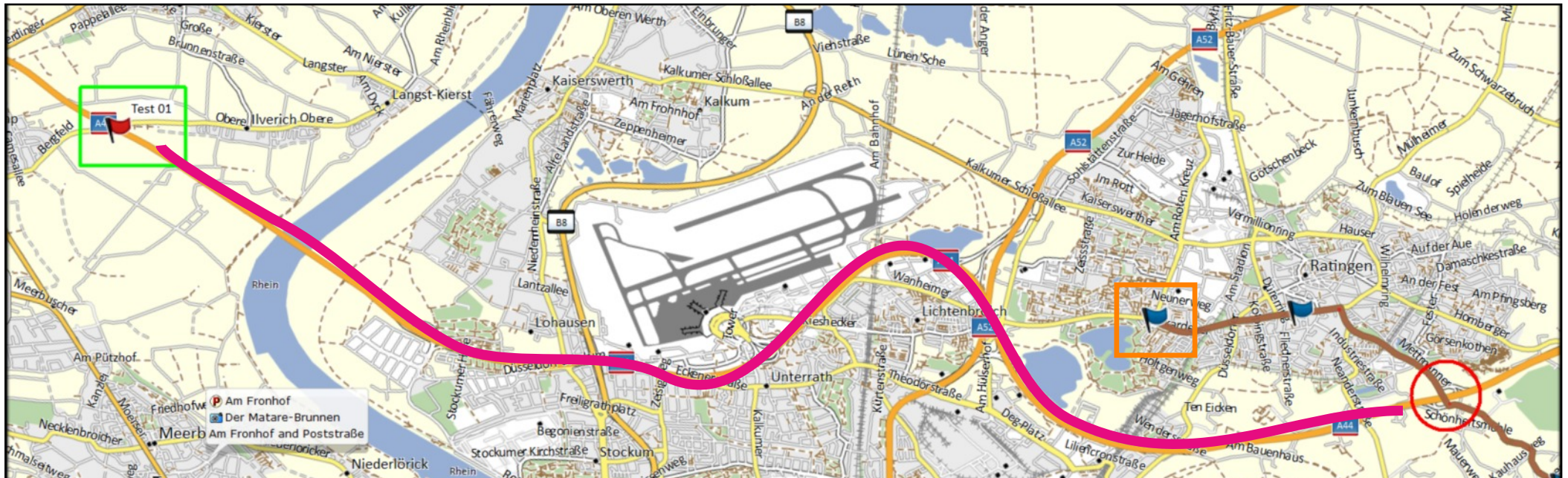
## Comment

- The red circle is NOT the closest point from Test 01. The start point of the route is closest. But it is possibly the shortest and the fastest way to reach a point on the route.
- Points 01 and 02 are ignored and no longer form part of the new route.
- It is impossible to say from this test whether the route is heading for the red circle as the CEP, or whether it is heading for point 03 further along the brown route.
- I thought that CEP would have trouble finding the start point - it sometimes does when the the current location would extend the route backwards from the start.

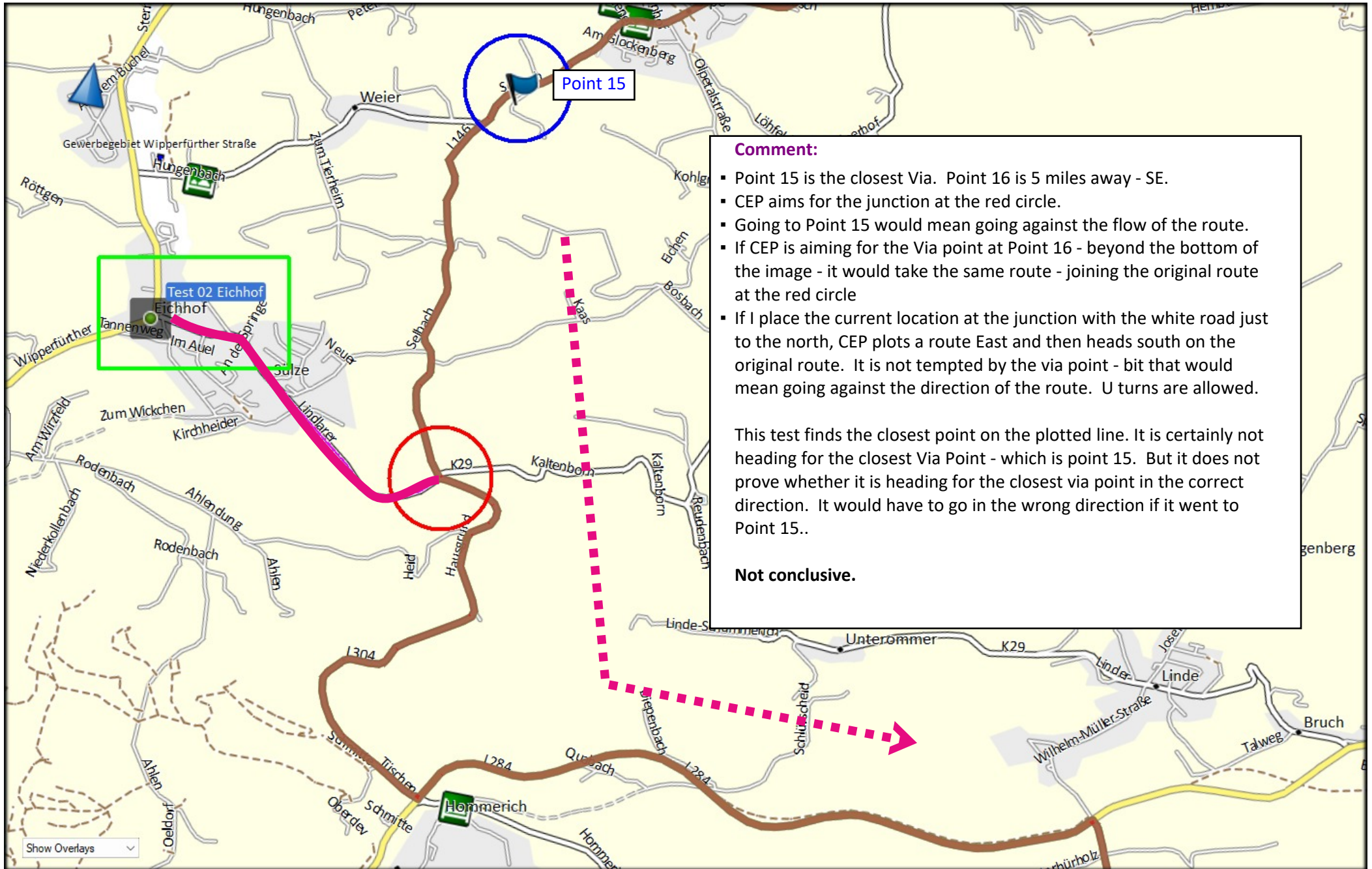
BC Distance to the start flag us 8.85 miles 13 minutes.

BC Distance to CEP (red circle) is 10.24 miles. 11 minutes.

It may have selected a faster route.



Via Point CEP Test - Location : Test 02



**Comment:**

- Point 15 is the closest Via. Point 16 is 5 miles away - SE.
- CEP aims for the junction at the red circle.
- Going to Point 15 would mean going against the flow of the route.
- If CEP is aiming for the Via point at Point 16 - beyond the bottom of the image - it would take the same route - joining the original route at the red circle
- If I place the current location at the junction with the white road just to the north, CEP plots a route East and then heads south on the original route. It is not tempted by the via point - bit that would mean going against the direction of the route. U turns are allowed.

This test finds the closest point on the plotted line. It is certainly not heading for the closest Via Point - which is point 15. But it does not prove whether it is heading for the closest via point in the correct direction. It would have to go in the wrong direction if it went to Point 15..

**Not conclusive.**

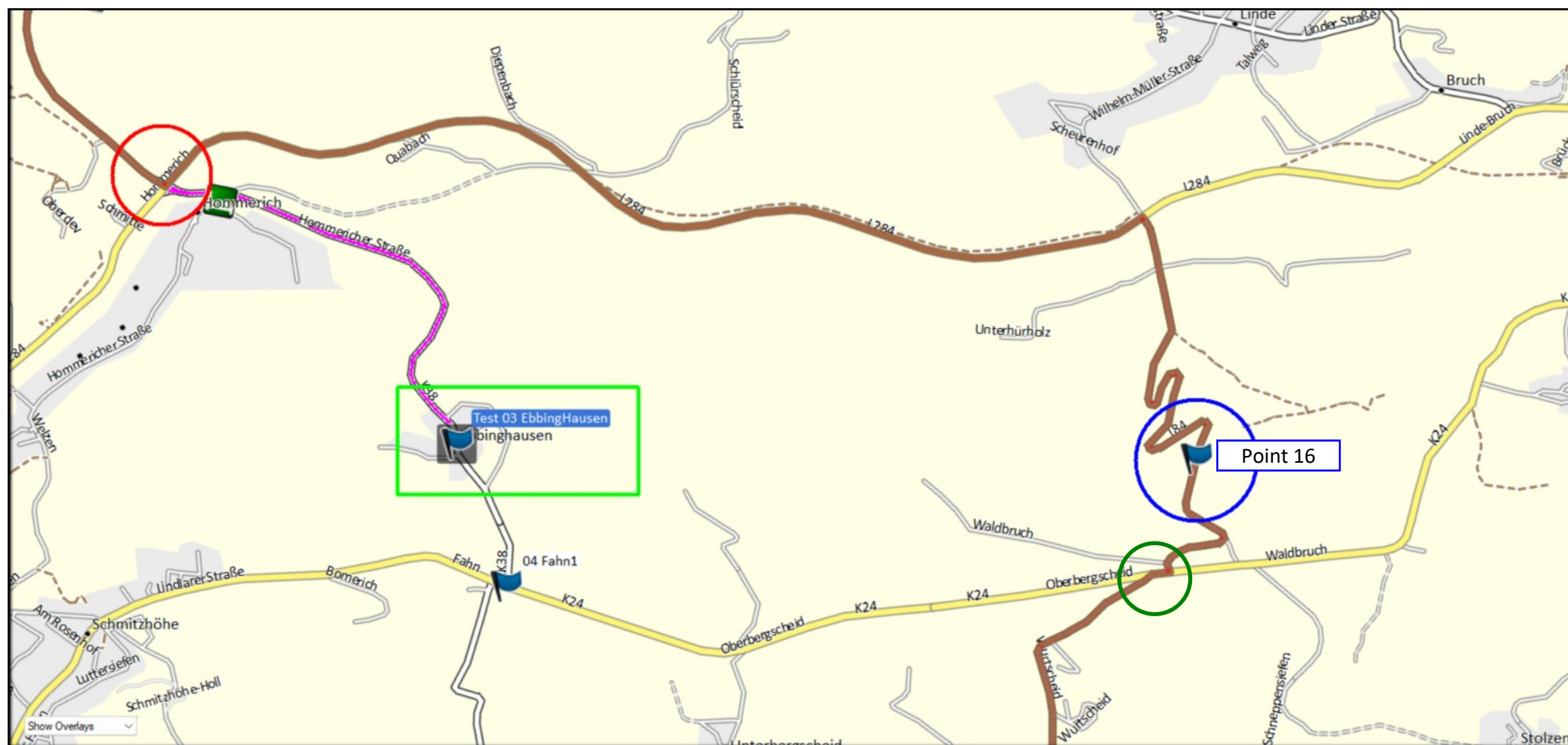
### Via Point CEP Test - Location: Test 03 and Test 04

- There are two options in this test:
  - NW to reach the route at the red circle.
  - S and E to reach the route at the green circle
- CEP chooses the route that heads north to the red circle.

I set the location to be at Point 04 and tried again. The green circle is closer - but only just and the bike was facing NW. Even when I managed to make the bike face towards the green circle, It still selected the route to the red circle from point 04.

### Some Distances/Times from Basecamp miles/minutes

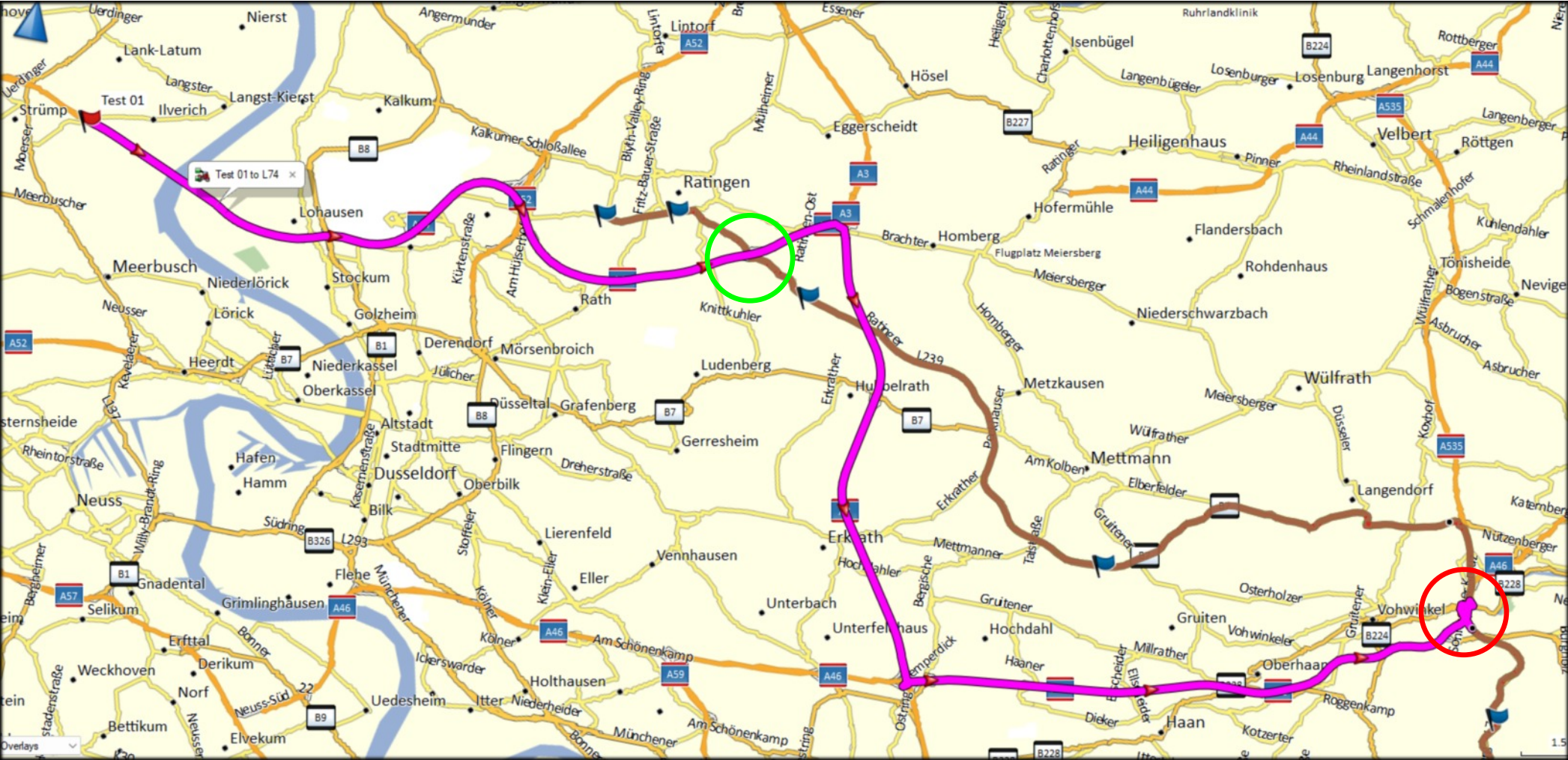
03 to Red circle	0.86 mi,	2 mins
03 to Green circle :	1.45 mi,	3 mins
03 to Point 16 (N):	3.56mi,	6 mins
03 to 16 (S) :	1.8mi,	5 mins
03 to Point 17:	5.6mi	13 mins
04 to Red circle	1.2mi,	2 mins
04 to Green circle	1.2 mi,	2 mins





**Shaping Point CEP Test - Location : Test 01**

Significant difference. The route takes the motorway to meet the route between shaping points 04 and 05 (red circle)  
With Via Points, It took the motorway until it crossed the original route (green circle)





## Shaping Point CEP Test - Location : Test 03 & 04

No surprises here either. Very similar to the Via Point Test.

Test 03 took the green route north-west, to meet the original route (red circle) to get to point 16 from the North.

Test 04 took the road East to meet the route (green circle) after Point 16.

