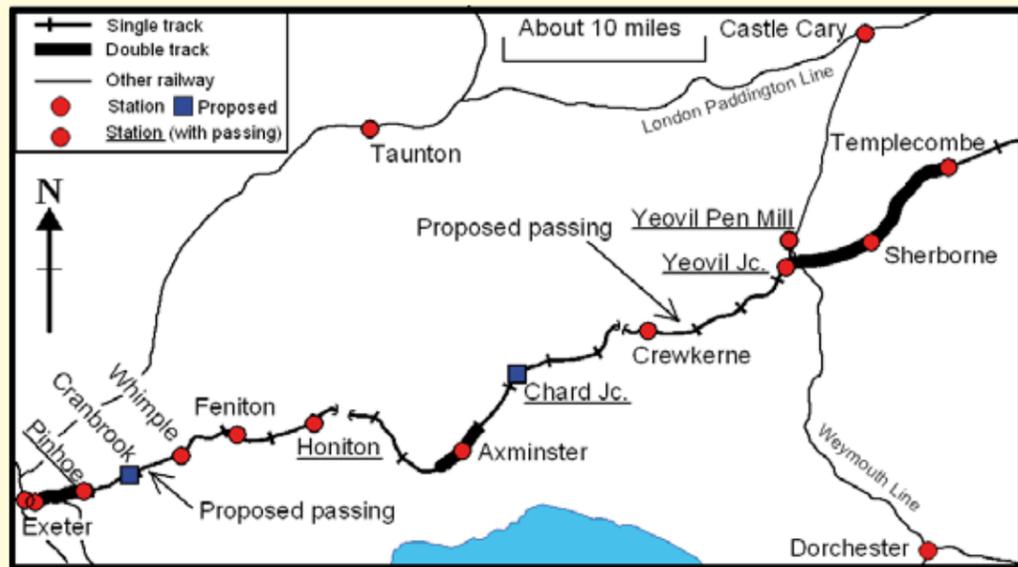
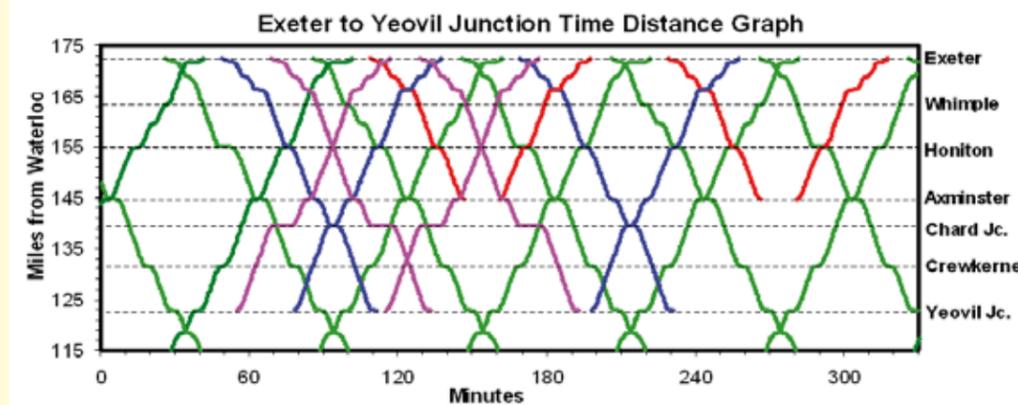


# What now for the Exeter to Salisbury line?



POTENTIAL: Map showing existing and proposed passing places on the Exeter to Yeovil line



TIME CHART: Existing and potential additional paths between Exeter and Yeovil Junction. Green lines show the existing standard hourly Exeter to Waterloo service pattern to just beyond Yeovil Junction. Red lines show available paths for a two-hourly Exeter to Axminster service through the day. Blue lines extend the Exeter to Axminster service to Yeovil, with passing at Chard Junction and then on a proposed section of double track between Crewkerne and Yeovil. A new passing loop to the west of Whimble would allow the Exeter to Axminster/Yeovil service to run hourly. It would also allow a third two-hourly path, shown in mauve, between Exeter and Yeovil. To use this hourly and avoid a delay at Chard Junction further double track would be needed. The exact double track requirements depend on whether this is to provide a fast diversionary path or another stopping path



HONITON STATION: Before December 2009, this was a regular passing point throughout the day. But no more. For two trains per hour, this would once again be an essential passing place

Map: GERARD DUDDRIDGE

Chart: GERARD DUDDRIDGE

Picture: GERARD DUDDRIDGE

By Gerard Duddridge

gerard.duddridge@railfuture.org.uk

The long-awaited hourly Exeter to London Waterloo service became a reality in 2009.

With the new three-mile Axminster loop, trains now use both platforms for the first time since the 1967 singling.

Disappointingly though, line capacity has hardly increased. There are 17 up trains from Exeter to Yeovil and beyond, which is little more than the 14 running on Saturdays in 2007.

The old timetable could partially operate on a 40-minute cycle and was close to allowing three trains every two hours in both directions.

The new service blocks this pattern and effectively extends the single line from Yeovil Junction to the new Axminster loop which is a further 3¼ miles beyond Chard Junction.

An alternative to passing at Axminster would have been to build a new three-mile loop in the Whimble area where trains could have passed, as well as on the existing Chard Junction loop.

The disadvantage would have been slightly longer journeys to London, but it would have enabled both an hourly Exeter-Waterloo service and an hourly Exeter-Axminster local service from the outset at a similar cost to the Axminster loop.

A final seven miles of double track, to extend westward from Yeovil Junction and the existing loops at Chard Junction and Honiton, would have completed the two trains per hour capacity between Exeter and Yeovil.

This would have been valuable for emergency and planned diversions of Exeter to Paddington trains unable to use their normal Taunton-Castle Cary route. Developing a good diversionary route via Honiton is a major Railfuture objective.

To analyse the new situation with the Axminster loop a computer model has been used. The 88¾ mile route from Exeter to Salisbury was divided into 782 sections. For each section a speed is calculated and the time determined as a running total per section.

Within each section containing a station, setting a stop recalculates a speed based on deceleration and then acceleration. Gradients slow the train as will sharp curves using a formula based on track cant and cant deficiency. The results are used to build up a time-distance graph as shown.



VITAL LINK: The 10.20 Waterloo-Exeter St David's nearing Axminster, passing the remains of a Second World War rail block

The green lines in the graph represent the current hourly pattern of up and down trains between Exeter and Yeovil Junction.

The steeper the line the faster the train and if completely horizontal the train has stopped. From Waterloo, trains will have passed on the Tisbury loop, then just before Yeovil Junction, Axminster (144¾ miles from Waterloo) and near to Exeter Central station.

Red lines show that additional Exeter to Axminster trains could run every two hours throughout the day and would require one new train. Achieving this should be a Railfuture objective. The service would call at the

planned new town of Cranbrook and other local stations. Due to the closeness of the Axminster and Honiton loops, a two trains per hour timetable resolves with a 20/40 minute spacing rather than an even half hour.

The current timetable demonstrates one of these paths where the 17.46 from Exeter St David's to Axminster departs exactly 20 minutes after the 17.26 departure to Waterloo.

In the morning, trains from Axminster to Exeter at 06.56 and 07.36 demonstrate the 40-minute spacing. A second objective would be to create a double-track section about two miles east of Crewkerne, perhaps doubled all the way to Yeovil

Junction. This would allow the suggested two-hourly service from Exeter to Axminster to run to Yeovil Junction and Yeovil Pen Mill (blue line).

If these extra paths were used daily it would substantially improve connections between Exeter, Dorchester and Weymouth. The existing rail links between Devon and Dorset are poor at present. When a diversionary path is needed, the Exeter to Paddington trains would provide the service. The hourly Exeter-Waterloo service would be left undisturbed.

The third objective would be the Whimble area loop to allow the Exeter, Axminster and Yeovil Pen Mill service to run hourly

(red lines become blue on the graph on page 10). This starts to open up a third path per hour, although a train using it would have a long delay in the Chard Junction loop (mauve lines). The 20/40 minute spacing therefore has an advantage over a 30 minute spacing.

So new loops near Whimble and Crewkerne would greatly enhance the Exeter to Yeovil line capacity as a diversionary route and for day-to-day operation. Given that Network Rail is keen to re-signal the whole line and operate it from Basingstoke, now is the time to determine what additional track is needed for the level of service and reliability we want.



CHARD JUNCTION: A candidate for reopening, although costs may well be high in relation to identifiable benefits



AXMINSTER STATION: The 11.20 London Waterloo-Exeter St David's arriving at Axminster in January 2010



FENITON: The branch to Sidmouth could be reopened to serve one of the largest towns in the SW area without a station

Picture: PHILIP BISATT

Picture: PHILIP BISATT