

Timetabling exercise – Swindon to Solent – request of 12.2.2018

Hear are the TransWilts team's timetable suggestions for extending the Three Rivers / Salisbury to Romsey via Southampton Central, Southampton Airport and Eastleigh to Swindon. The effect is to combine three services, all served by 2 car, 90 m.p.h. diesel units, into a single service offering additional journey opportunities to identified (and significant) markets, and allowing improved service levels through better rolling stock utilisation. Indeed there is a net reduction from around six diagrams (some made up of bits) to five complete diagrams, with resources freed up at Westbury to help resolve other issues you are looking at, such as significant gaps in services from Westbury via Frome and Yeovil. We are working very closely with Three Rivers CRP - this version still need their final sign off as it includes options added in less than a week at SWR's request.

This cover note purely concerns timetabling data for Swindon to Solent and part-route services. Total business case, and suggestions as to the positive help available elsewhere. Please feel free to ask any questions right across the board.

*** Summary of options**

Option 1 - based on extending even hours service from Solent (arriving Salisbury at xx:17) to Swindon, with incoming unit from 2 hours earlier continuing at xx:56 back to Solent. This study at request of SWR. Four units in the cycle, fifth unit provided fill in services to maintain useable peak and shoulder services on the TransWilts.

Option 2 - based on extending odd hour services rather than even hour services. Our original suggestion. Four units in the cycle, fifth unit provided fill in services to maintain useable peak and shoulder services on the TransWilts.

Third option - extend all services. All 5 units providing an hourly service all the way. Requires capacity improvement on the Trowbridge to Chippenham section. Ultimate goal if service does well / see Wiltshire Council and WSAtkins studies.

All three options leave the SWR proposed table 158A for 2019 from their December 2017 consultation unaltered.

*** General Notes**

Other services shown are based on early draft / consultation timetables for 2019, and may have changed, and we have some holes in the draft timetables available to us so are unable to check pathing, especially at the northern end of the route and against freight. There are, however, a few wriggle minutes floating around, with timings based on what'e been achieved routinely by class

153 carriages, and now (with class 158 and 166) is resulting in station waits for the timetable to catch up. Also crew rotas and fuel range not done - lack of insider data!

SWR and GWR draft timetables that we are working with include at least one conflict (request for same path) so we know that there will be changes needed somewhere

Station code RMZ used for Romsey via Chandler's Ford to allow software to handle the loopback and terminate pattern ("Romsey 6").

All services on diagrams d_1 to d_5 call at Dean, Mottisfont, Redbridge, Millbrook, St Denys, Swaythling, Eastleigh and Chandler's Ford on all services (may be an exception on 00:08 Romsey to Salisbury - may run as ECS like it does at present!)

Complete proposed service shown from Romsey to Westbury and from Trowbridge to Chippenham. Additional services operate Chippenham to Swindon, Westbury to Trowbridge, and south of Romsey.

Note that the GWR Brighton to Westbury / Bristol / Great Malvern services are shown in their proposed 2019 format. The DfT has asked for consideration of the future operator and shape of these services, and they could change in 2020.

We suggest that Saturday and Sunday services mirror the Monday to Friday service. Sundays on options (1) and (2) may not need the extra diagram, and could start one "cycle" later. Happy to run the models / timetables in due course, but data is lacking on both GWR and SWR draft timetables so at present it would be just an educated guess

Timings of diagrams d_1 to d_5 and wsb would allow a passenger stop to be made at a new intermediate station between Salisbury and Warminster, such as the proposed Wilton station.

Significant changes south of Salisbury would be required should Solent area services be remodelled (for example) to serve the Waterside line to Marchwood, Hythe and Fawley. Three Rivers are the community rail experts on this - from a TransWilts viewpoint, services that head south from Swindon and Chippenham could beneficially call at Eastleigh and Southampton Airport before Southampton Central, and then continue on to the Waterside line.

There is scope to extend the service beyond Swindon to Oxford. This is an identified flow and a natural link. Should a modified third option be taken up without capacity improvements around the Trowbridge to Chippenham line, a unit would have an extended turn around time at Swindon and could facilitate this extension.

Supplied zip file contains:

- A 'zip' file containing three folders of data and results - even (opt 1) odd (opt 2) and both (third option)
- each folder contains diagrams of services in "services", "gwr.extra" and "swr.extra"
- also text output (.txt file) from running the program to translate diagrams into timetables shown in attachment 2 (note - text file also produces departure boards for selected stations)
- and a .tsv file for the option suitable for importing into excel or an open source equivalent

Also supplied:

- Python program than does the translations in case you wish to experiment further

*** Notes on option 1 (even hour extension)**

The following are comparative points

- > Spreads out extra services north of Salisbury - TransWilts services run in different hours to the Brighton trains (+2)
- > Very late first through train from Solent to Swindon (-1)
- > Off-peak daytime arrivals into Swindon about an hour different to present times that people use (-2)
- > Final service off Swindon - goal is 22:45 but it's an hour before and an hour after (-2)
- > 15:42 off Swindon is about 30 minutes late for current significant traffic (-1)
- > Lack of Southampton arrival from N of SAL between 07:41 and 09:03 (-2) (and may be totally unacceptable!)
- > 15:24 off WMN ideal for school traffic (+3)
- > 21:26 off SOA all the way to SWI - useful (+1)
- > 50 minute peak gap a.m. into SAL where people from WM and north now make London connections (-2)

Please note that BOTH options provide huge positives such as better service levels, better use of trains, many more direct flows catered for - let's score that at +20.

*** Notes on option 2 (odd hour extension)**

- > TransWilts services run in same hour to the Brighton trains (-2)
- > Off-peak daytime arrivals into Swindon similar to present times that people use (+2)
- > Final service off Swindon - goal is 22:45, 22:42 is spot on (+2)
- > 15:15 off Swindon is spot on for current significant traffic (+2)
- > Southampton arrival from N of SAL at 08:34 (+2)

- > 15:38 off WMN is about 10 minutes late for rowdy school traffic (-1)
- > Good connections at WSB towards TAU off trains from Swindon (+1)

Please note that BOTH options provide huge positives such as better service levels, better use of trains, many more direct flows catered for - let's score that at +20.

*** Choice between these options**

My scoring clearly very subjective indeed - but works out as option 1 - 16 points, option 2 - 26 points. This rather confirms my initial work where everything except the Brighton train-in-same-hour issue just fell into place!

Bear in mind when comparing these figures that they assume an origin for counting of the current service and whilst we would like an improvement of 26, we will not reject an improvement of 16.

Mention was made earlier of doing without the fifth unit - reducing overall from 6 to 4. Gaps in Swindon departures from 16:42 to 18:42, or in arrivals from 07:30 to 09:30 would kill traffic. Score for vandalising the service like that ... -35 ... giving -39 (minus 39) for option1 reduced, and -29 (minus 29) for option 2 reduced. NO THANK YOU!

*** Third option - all services though**

General score of an hourly service all the way must be +100 ;-)

Just a couple of negatives

- > Brighton duplication (-2)
- > 15:42 off Swindon is about 30 minutes late for current significant traffic (-1)
- > 15:38 off WMN is about 10 minutes late for rowdy school traffic (-1)

Giving an unscientific score of +96

Without capacity improvements and dallying the train around Westbury for around 6 minutes each way (see earlier notes) would mean an extra unit was needed ... BUT if than continued to Oxford it would gain far more + points than would be lost by the delay. Delay could usefully let a Bristol - Weymouth service past at Westbury and give connections both ways - getting into territory for which this is much more of an enabler than the current solution we're looking at! ... +150??