

Full Steam Ahead

Delivering an abundance of train drivers

Lara Brown



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About the Author

Lara Brown is a Senior Research Fellow at Policy Exchange. She joined the organisation in September 2023. Previously, she worked for as a Parliamentary Researcher. She has a bachelor's degree in English Literature from the University of Cambridge where she also served as President of the Cambridge Union.

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Executive Summary

The UK is currently facing an acute shortage of train drivers, and this problem is only getting worse. According to the National Skills Academy for Rail, nearly 50,000 rail industry workers are due to retire by 2030.¹ This shortage is a direct result of the enormous costs associated with training new drivers, itself the product of the temporal and regulatory burden of the course.

It costs £100,000 to train a new driver. As such, Train Operating Companies are discouraged from recruiting new drivers to address the shortfall.²

As a result, almost all train operating companies rely heavily on overtime to run a full service - and because overtime is voluntary, not contractual, trade unions and drivers can quickly cause mayhem by withdrawing it. The current situation has significant and detrimental impacts on rail sector productivity and passenger experience, making it more difficult and more expensive to run an adequate service for passengers.

In this paper, we propose a mass recruitment campaign to train 2,000 new train drivers a year, modelled on the successful HGV programme, and make the following specific recommendations:

1. The current 18-month long driver training course should be reviewed by the Department for Transport with a goal of halving the course length through a dramatic reduction of time spent route learning, and on technical knowledge like Traction Theory.
2. The government should use the National Skills Fund to award contracts for the creation of Train Drivers Academies across the country. These contracts should be awarded to consortiums of TOCs, recruiters, and qualified drivers. Government funding must be contingent on TOCs committing to provide the practical handling training and to employ all drivers who pass.
3. The additional 2,000 drivers should be recruited on the same salaries and hours as at present, but on more flexible contracts which make running the service easier (for instance, with Sunday being part of the normal four-day week.)
4. Train Operating Companies should carry out revised risk assessments of the routes their drivers work on. They should consider the technological assistance drivers receive from tablets or control panels and edit route learning requirements as informed by this. Where a driver receives detailed information about a route from the control panel on a train, they should not be required to

1. Department for Transport, 'Lowering the minimum age requirement for train drivers from 20 to 18 years', May 2024, [link](#)

2. Rail Staff, 'Driving towards success,' 24 August 2024, [link](#)

memorise this information.

5. Competency on a route currently expires after just six months to a year of not driving it. This should be increased to two years.
6. The minimum age requirements for train drivers should be reduced from 20 to 18 years.

These changes will open the profession to a wider range of backgrounds. The training of 18-year-old drivers will address the very high average age of drivers – with over half of the current workforce predicted to reach the age of retirement in the next 15 years.

They will also reduce the amount of time, and therefore the cost, of driver training. Drivers are currently required to spend around a year ‘route learning’ after they have formally passed out of training. Route learning involves the memorisation of every potential hazard along an individual route. It is a lengthy process which sees drivers spending thousands of hours learning information which can be digitally displayed.

We also hope to reduce the financial burden on Train Operating Companies through the deployment of the National Skills Fund. The current balance of financial incentives encourages companies to operate with a shortage and pay overtime. By reducing the cost on Train Operating Companies we will create a strong financial incentive to train more drivers.

Introduction

As the Government announces a new pay deal for train drivers, our report exposes how a shortage of train drivers is driving up fares and contributing to customer delays.

A major underlying reason for the generous terms of the recent deal is the significant power given to Aslef by a serious national shortage of train drivers, a problem which the last Government recognised but did nothing about. Britain's national rail network handles 28 per cent fewer passenger kilometres than Germany's³ - but it does so with around half the number of train drivers.⁴ 12.31 per cent of train cancellations in Britain between April 2022 and March 2023, including many of the well-known failures on Avanti West Coast, were caused by problems with drivers.⁵

Officially, everyone wants to fix this. Aslef has repeatedly criticised the train operating companies (TOCs) for not recruiting enough drivers. The TOCs, for their part, should not want to cancel services. And it would be relatively easy to fix. There is unlikely to be any shortage of people willing to work a four-day week for an average salary of £60,000 (even before the latest rise), particularly since the job needs few prior qualifications and no experience.⁶ On the rare occasions when posts have been openly advertised, there have been as many as 1100 applicants for each vacancy.

In practice, however, neither side really wants to fix the problem. The fewer drivers there are, the easier it is for Aslef to weaponise them in its demands for even more pay and even fewer hours; or in its campaign against reforms to put the network on a stable footing, such as bringing Sunday within the normal four-day working week. Because of the driver shortage, almost all TOCs rely heavily on overtime to run a full service. And because overtime is voluntary, not contractual, Aslef and drivers can quickly cause mayhem by withdrawing it.

Sometimes this is done through official overtime bans, with the legally-required ballots and notice periods. But it is also done outside industrial relations law entirely, with large numbers of drivers simultaneously refusing overtime. That is how the Avanti West Coast service was reduced to chaos in the summer and autumn of 2022. The beauty of the latter approach is that the train operator, not the union, gets the blame, it avoids the legal hurdles of an official dispute, and yet the drivers are acting entirely within their rights. Whether official or unofficial, the sacrifice only of overtime pay is modest, so action can be maintained continuously for longer.

Aslef's interest in the status quo, while ignoble, is therefore understandable. Yet the TOCs have done little about it either. Avanti's

3. Britain saw 60.1bn pass km in year 2023/4, [link](#). Germany saw 82.9bn, [link](#)
4. Britain's national rail network has around 19,400 train drivers. There are 22,820 "train and tram drivers" in England and Wales according to the 2021 census, [link](#). Of these, 1162 worked on tram systems in England, [link](#), and 3500 on the London Underground, [link](#) - leaving around 18,150 on the national rail network in England and Wales. There are a further 1,250 drivers on the rail network in Scotland, [link](#). Northern Ireland is not part of the national rail network. Germany has 37,069 drivers on its national rail network, excluding tram and underground systems, [link](#)
5. The Big Issue, 'Real reason your train was cancelled at the last minute', 31 October 2023, [link](#)
6. BBC News, 'Teenagers could help fill train driver shortage', 16 May 2024, [link](#)

response to the driver disruption it suffered was not to radically set up its recruitment of drivers. It was to more than quadruple the previous bonus they paid their drivers for working overtime, from £125 to £600 per day.⁷ That may have bought industrial peace at great expense - but only, of course, in the short term; only until the unions decide they want more.

The TOCs, too, have little motive to act. The new government, with its policy of nationalisation, has made clear that it sees no future for them. Even before the transfer of power, they were essentially contractors of the Department for Transport (DfT), which pays their bills. Their main wish is for a quiet life without service problems getting in the papers. Why should they go to the expense of training more drivers, or annoy their existing ones by reducing overtime, when it's easier to ask taxpayers for another handout?

The people with the clearest interest in change are the taxpayer, the farepayer, and their representative, the government. Since the pandemic, rail has lost about a fifth of its old revenues. Fares income fell from £10.4bn in 2018 to £8.6bn in 2023.^{8,9} The network is now held together with enormously increased operational subsidy, which has almost trebled from £4.3bn before the pandemic, to £11.9bn in 2023.^{10,11} While rail will always need taxpayer support, the current levels of it are unsustainable. A reckoning looms.

To prevent service cuts and a spiral of decline, it is essential to reform working practices that cost the railway billions, harm passengers and have not changed in decades. For example, weekends are now a major growth area for rail - yet the network cannot meet demand because, under agreements dating back to the 1920s, Sundays in most operators are voluntary and must be paid as overtime. (And even the reduced Sunday services which can be provided are often cancelled when the weather is fine, or a major football match is on TV, because drivers refuse to work overtime. Hundreds of trains were cancelled, and entire towns left without service, on the day of the Euro final this year.)¹² Without increasing train driver numbers, and denying the unions the overtime weapon, any attempt at reforming such practices, as we have seen in the last two years, will stall.

Yet the prospects of a solution from government are also low. Even under the Sunak administration, the DfT agreed and will fund Avanti's capitulation to its drivers. Ministers and the rail regulator have mandated a driver training system which plays into the unions' hands by choking supply - not just of new drivers, but of existing, fully-trained ones. Some of those, as a result, have been paid full salaries to do nothing.

Labour may not want to do anything right away which harms Aslef's interests or bargaining power. That might change, though, after this month's deal expires in 2025, when the campaign of strikes and disruption may well resume. Though Haigh might hope that she has bought their friendship, Aslef has repeatedly shown that it is willing to fight Labour politicians just as much as Tory ones whenever it wants more. So she should probably keep this paper tucked away somewhere.

7. BBC News, 'Avanti to pay train drivers £600 a shift for overtime', 25 March 2024, [link](#)

8. Office of Rail and Road, 'UK Rail industry financial information 2018-19', 26 February 2020, [link](#)

9. Office of Rail and Road, 'UK Rail industry financial information 2022-2023', 23 November 2023, [link](#)

10. Office of Rail and Road, 'UK Rail industry financial information 2018-19', 26 February 2020, [link](#)

11. Office of Rail and Road, 'UK Rail industry financial information 2022-2023', 23 November 2023, [link](#)

12. The Telegraph, 'Hundreds of trains cancelled as England take on Spain in Euro 2024 Final', 14.07.2024, [link](#)

In it, we propose a mass recruitment campaign to train 2,000 new train drivers a year.¹³ We propose they should be recruited on the same salaries and hours as at present, but on more flexible contracts which make running the service easier (for instance, with Sunday being part of the normal four-day week.) We propose a series of reforms to shorten and unblock the training and recertification process, bringing it into line with Western European standards. This work will be subsidised by the National Skills Fund, thus removing the high financial training burden on TOCs.

Even with these reforms, it would no doubt be cheaper in the short term to continue using overtime than to employ more drivers. But the wider public interest in reducing the power of the overtime weapon demands that we do the latter. The other factor in the equation is drivers' age. With an average age of 48, and a partial pension available from the age of 55, many will retire shortly.¹⁴ This is a problem which will further exacerbate driver shortages, but also an opportunity.

As with all previous changes on the railways - from the removal of the "driver's mate" in the 1980s to the reduction in guards in the 1990s and electronic ticketing in the 2000s - the unions will claim that safety is at risk. That charge is as untrue now as it proved all the other times. As we explain, the changes will almost certainly make the railway safer as well as more productive.

But their real benefit is wider: to help save the railways. Increasing the number of drivers, and reducing the overtime power, is key to getting other necessary reforms through and thus to the network's long-term health. In the end, Labour is likely to realise this too. It would be better if it did so sooner rather than later.

13. As informed by estimations of the number of train drivers retiring in the next ten years and the current shortfall: The Rail Academy, 'Driver Training and Assessment', [link](#)

14. Department for Transport, 'Lowering the minimum age requirement for train drivers from 20 to 18 years', May 2024, [link](#)

The Status Quo

The UK is currently facing an acute shortage of train drivers across different operating companies.¹⁵ There are approximately 19,400 train drivers on the National Rail network.¹⁶ These numbers fall dramatically below those in other countries with developed and efficient rail networks. Germany's national rail network, which handles 38 per cent more passenger km than Britain's, has 91 per cent more drivers - 37,069.¹⁷

British train driver training takes roughly 18 months. This is up to eight months longer than in other Western countries with good safety records, such as Denmark; six times longer than training (from scratch) to drive a National Express coach - a harder job, in a much less controlled operating environment, without rails, signalling or train protection systems to help; and about the same time as qualifying (from scratch) to co-pilot a commercial passenger airliner.¹⁸

It costs TOCs £100,000 to train each driver, itself a major factor in suppressing the numbers they train.¹⁹ The course is padded with material that no driver will ever need, including how to identify specific technical faults in their locomotive's engine that an engineer would usually resolve. It can take three and a half months before a new recruit puts their hand on the controls of a live train.²⁰ After passing out, drivers must then spend up to a year under an instructor's one-on-one supervision learning in microscopic detail every feature of every route and line they will drive.

It has never been necessary that, say, a coach driver learns the position of every traffic light they will pass. But even if the equivalent is somehow thought essential on rail, the network, as so often, underuses new technology, though it would be safer. Many TOCs make little or no use of simulators for training. And for driving in service, all TOCs could use in-cab electronic aids which flag each feature of a route as it arises, reduce the need to learn every gradient sign by heart, and cut the driver's chances of forgetting one. There is already, of course, a system on every train which stops it automatically if a signal is passed at danger - rendering the need for year-long route learning still more moot.

Even for experienced drivers, the process stifles supply. Route knowledge expires – it is only valid for 6 months to 1 year depending on the TOC and the route. If a driver is inactive on a certain route for longer than this then they must re-learn it. They must also have their competency reassessed every three years and renew their “train driver licence” after ten, thus spending weeks or months on full pay doing nothing, or doing reduced duties, until a route-learning instructor becomes available. The number of instructors is limited, and route learning was suspended altogether during

15. Ibid

16. England and Wales have 22,820 train and tram drivers, according to the 2021 census, [link](#). Of these, 1162 worked on tram/light rail systems, [link](#), and 3500 on the London Underground, [link](#) - leaving around 18,150 on the National Rail network. There are a further 1250 train drivers in Scotland, [link](#). Northern Ireland is not part of the National Rail network.

17. Allianz pro Schiene, 'Train drivers: figures, data, facts', [link](#)

18. International Railway Journal, 'Denmark streamlines course for Copenhagen S-Bane drivers', 8 February 2023, [link](#)

19. Rail Staff, 'Driving towards success', 24 August 2022, [link](#)

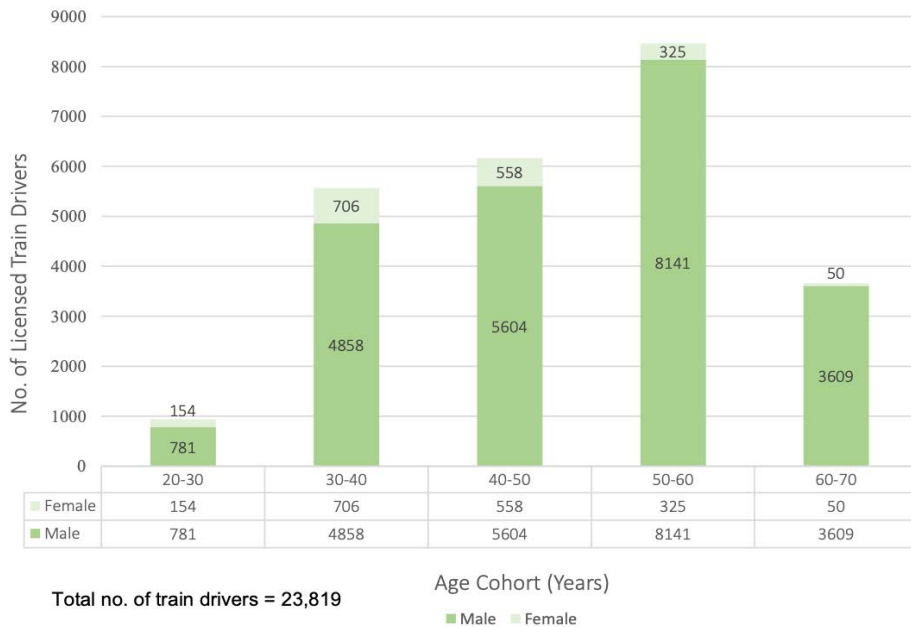
20. Train Driver, 'Training', [link](#)

covid to avoid two people in the same cab, creating a backlog that has yet to be fully cleared.

A long-term shortage of train drivers in the UK has been exacerbated by the negotiation of contracts which regularly include provisions such as a 4-day week; Sunday Rest Days wherein no drivers can be forcibly contracted; and steadily increasing pay limiting the ability of Train Operating Companies (TOC) to train new staff. While contracts differ between TOCs, these are very standard agreements which most drivers across the country enjoy.

A national shortage of drivers has been particularly impacted by the Covid-19 pandemic. Many qualified train drivers found their Train Driving Licence (TDL) expired during the pandemic (licences must be recertified every 10 years). These drivers were forced to wait until their TOC was able to schedule a recertification. Additionally, under the Train Driving Licensing and Certificates Regulations 2010 drivers must be reassessed for competency every three years. Similarly, as was the case during Covid-19 and regularly during extended maternity leave, if a driver ‘has not driven the relevant rolling stock, or over a relevant route, for more than one year’ then re-certification is required. This means that after just one year of driving different stock or routes, a driver is no longer deemed to have ‘competency’ or routes they may have driven for decades and must be sent for refresher training.

Age profile of Train Drivers in Great Britain by Sex (September 2023)²¹



Source: Department for Transport, [link](#)

21. Department for Transport, ‘Lowering the minimum age requirement for train drivers from 20 to 18 years’, May 2024, [link](#)

These regulations have created a system in which some Train Operating Companies have been forced to employ drivers on a full salary who are not legally permitted to drive using the current stock or along their routes, further exacerbating the shortage.

Driver shortages are only likely to get worse. According to the National Skills Academy for Rail, nearly 50,000 rail industry workers are due to retire by 2030. The Office for Rail and Road has identified that 12,125 train drivers are currently over 50 (51% of all licensed drivers). Drivers are eligible to receive a partial pension at 55. As such, over half of the current workforce may leave the profession in the next decade.²²

It is no secret that the UK faces a shortage of drivers. The unions have regularly criticised individual Train Operating Companies for operating with a shortage of staff. Aslef union most recently contradicted CrossCountry's claim that recent cancellations are due to staff sickness. Instead, they claim that Aslef should employ enough drivers to allow services to run as normal when staff are off sick.²³

22. Ibid

23. BBC News, 'CrossCountry: Train Operator Blamed over Shortage of Drivers', 5 December 2022, [link](#)

Key impact: poor passenger experience

The failings of Avanti West Coast, which connects the North West and West Midlands with London, and TransPennine Express, the main operator between Leeds, Manchester and Liverpool, attracted a great deal of attention in 2022-3. At one point that year TPE was said to be performing worse than the state railways of Ukraine, which had to operate in a war zone.²⁴

The companies' unreliability was typically blamed by Labour and the media on years of underinvestment, Tory incompetence and neglect of the North. While at least the first two played a part, a larger part was played by a campaign by staff and unions using the weapons of overtime and sickness as part of the wider pay dispute. Both companies were majority-owned by First Group, whose managing director for rail, Steve Montgomery, was chair of the Rail Delivery Group and chief negotiator in the dispute. TPE was also in separate dispute with some of its other staff.

In summer 2022, around 90 per cent of drivers on Avanti suddenly and simultaneously announced that they would refuse overtime. The company – which relied on drivers working overtime for 400 trains a week, more than a fifth of its total service – was obliged to immediately cut services, by as much as two-thirds between Manchester and London. It said it had suffered “a greater withdrawal of rest-day working than anyone else.”²⁵ Aslef denied that it was orchestrating the withdrawal. It said that these were simply the decisions of dozens of individual drivers – the fact that they all made the same decision simultaneously was no more than a coincidence.

By early 2023, TransPennine Express sickness rates (of all staff, not just drivers) were running at 14 per cent,²⁶ seven times higher than the national average.²⁷ The unions also prevented the absences being covered by overtime among those staff who remained healthy, despite the previous rate offered being the highest across the network. When TOCs are managing an existing shortage in tandem with high sickness rates – overtime and rest day working are their only tools to guarantee a full service.

The rail industry lost-time rate as a whole is 2.3x the national ONS average.²⁸ It is very likely that the very high number of sick days taken by train drivers is in some cases another form of informal industrial action linked to the lack of financial ramifications they face – Aslef have repeatedly declared industrial action over threats to changes in sick pay. On London North Eastern Railway (LNER) 10.4% of drivers were off sick in 2022. These numbers are also a product of an ageing driver force – caused by a

24. UK Parliament, 'Transpennine Express: Operational Performance', 19 January 2023, [link](#)

25. i News, 'Avanti train services won't return to normal until December after months of timetable chaos, warns boss', 12 October 2022, [link](#)

26. UK Parliament, 'Transpennine Express: Operational Performance', 19 January 2023, [link](#)

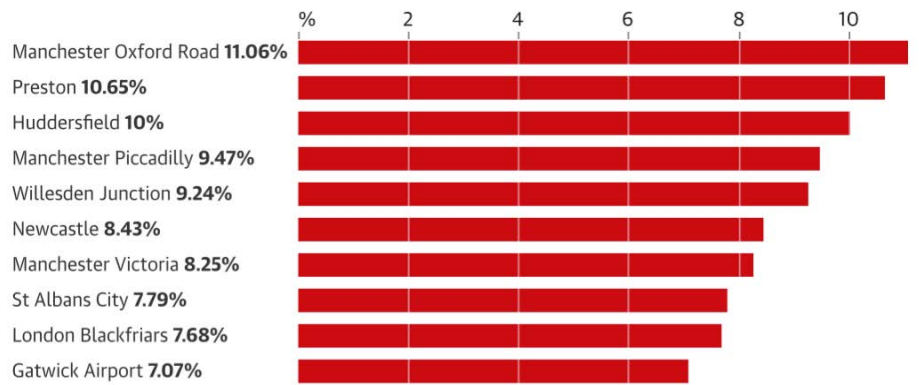
27. Ibid

28. Rail Safety and Standards Board, 'Make cost savings by improving employee health and wellbeing', 11 December 2023, [link](#)

failure to recruit enough new, young drivers.²⁹ As long as the train driving profession continues to face such high sickness rates it is vital that TOCs operate with a surplus of drivers, in order to reduce the need for overtime and ensure cover is always available when drivers are off sick.

Analysis by The Guardian found that rail passengers were delayed or disrupted on more than half of all train services departing from 15 of the UK’s busiest stations in the last year.³⁰

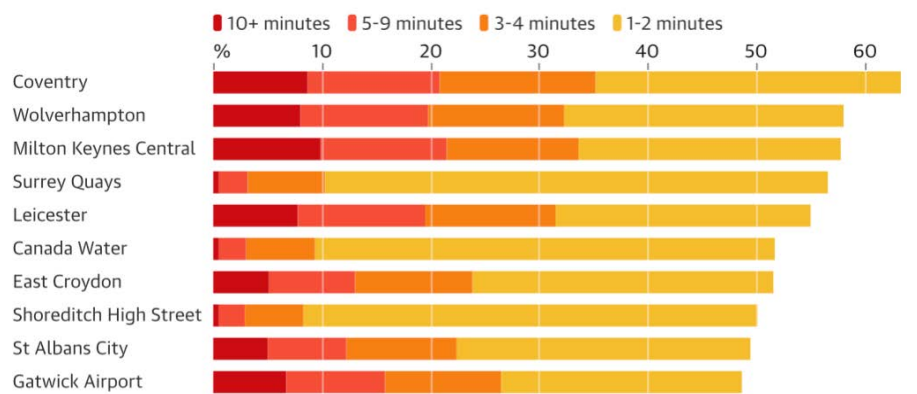
Percentage of Trains Cancelled – 1st January - 18th December 2022



Guardian graphic. Source: Guardian analysis of OnTimeTrains

Source: The Guardian, [link](#)

Average Length of Delay in 2022 by Station (%) – 1st January - 18th December 2022



Guardian graphic. Source: Guardian analysis of OnTimeTrains

Source: The Guardian, [link](#)

29. The Telegraph, 'Train Drivers up to Seven Times More Likely to Be off Sick than Other Workers', 29 January 2023, [link](#)

30. The Guardian, 'UK Rail System Described as "Broken" as 2022 Data Reveals Extent of Disruption', The Guardian, 26 December 2022, [link](#)

31. Office of Rail and Road, 'Passenger Rail Performance: July to September 2023', 7 December 2023, [link](#)

The most recent report released by the Office of Rail and Road (ORR), dealing with passenger rail performance between 1 July and 30 September 2023, found that only 69.2% of trains arrived on time during that quarter.³¹

During just that quarter, seven days were severely delayed by industrial action by RMT and ASLEF union.³²

Date	Event	Estimated daily reduction of trains planned
20 July 2023	Strike action by the RMT union	-49%
22 July 2023	Strike action by the RMT union	-47%
29 July 2023	Strike action by the RMT union	-38%
26 August 2023	Strike action by the RMT union	-47%
1 September 2023	Strike action by the RMT union	-68%
2 September 2023	Strike action by the RMT union	-47%
30 September 2023	Strike action by the RMT union	-66%

Source: ORR, [link](#)

Of the 1.8 million trains planned in the quarter, 44,952 were fully cancelled and 33,229 of these were part cancelled. These figures do not include the practice of P* - coding wherein the train timetable is reduced ahead of time in response to non-availability of staff or stock. The number of trains planned and delivered has still not recovered to pre-pandemic levels.

The 2021 Williams Rail Review found that trust in the rail sector is very low. Two of the most frequent complaints identified across focus groups and polling related to unreliability and insufficient capacity at peak times. Focus group attendees reported 'I don't take the train if I'm going to the airport or going on holiday as I don't know if I'll get there on time'.³³

Transactions at station Pret A Manger locations consistently experienced weekly falls in weeks of rail strikes³⁴



Source: ONS Index of transactions at Pret A Manger, [link](#)

32. Ibid

33. Britain Thinks, 'Williams Rail Review: Improving Passenger Trust in the Rail Sector', May 2021, [link](#)

34. ONS, 'The impact of strikes in the UK: June 2022 to February 2023', [link](#)

It is also fundamentally impossible to understand the impact of driver shortages on passenger experience without also considering the frequency and impact of industrial action. The frequency of rail strikes, deeply exacerbated by the industrial dispute beginning in 2022, has seriously negatively impacted UK productivity, particularly in cities and the reliability and perception of the rail network. Research by the ONS found that spending falls significantly during rail strikes.³⁵

Prolonged overtime bans and all out strikes, are in large part, the direct result of driver shortages.

In addition to traditional strike action, 'overtime bans' are increasingly deployed by all three major unions to maximise potential disruption. Due to the acute shortage of train drivers, and the negotiation by the unions across many Train Operating Companies of 'Sunday Rest Days', Train Operating Companies are often forced to rely on voluntary overtime in order to operate an adequate service. Overtime bans, which unlike strike action often go on for weeks, are therefore extremely devastating to the service. They come in two varieties – formal, when the legal requirements of ballots and 14-day notification are followed; and, more often, informal, when large numbers of drivers suddenly refuse to work overtime, as they are entitled to do. This tactic can be deployed almost overnight and causes even worse disruption than a formal ban, because it is harder to plan for.

Drivers working for C2C, East Midlands Railway, Grand Central, Heathrow Express, Hull Trains, London North Eastern Railway (LNER), London Overground, Southeastern and South Western Railway all have voluntary Sunday working. This means that Sunday is always paid overtime, and drivers are free to refuse work on Sunday with (generally) seven days of notice given to the Roster Clerk.

Historically, it has been beneficial to both Train Operating Companies (TOCs) and Unions to rely on rest day working. Drivers who wish to work Sundays can earn more while TOCs do not need to bear the heavy costs of employing more people (training, national insurance, sick leave etc.). However, in recent years this state of play has been increasingly capitalised on by the unions. Aslef, TSSA, and RMT have repeatedly banned their members from accepting overtime work as part of labour negotiations. Unlike on strike days, which the public can plan around, overtime bans create an unreliable and poor service for sustained periods of time. They prevent TOCs from finding cover for sick workers, cause mass Sunday cancellations, and have brought the night tube almost to a halt. The threat of sustained overtime bans has made it nearly impossible for the government to consider solutions like mandatory minimum service levels, due to the likelihood of disruption to rail networks.

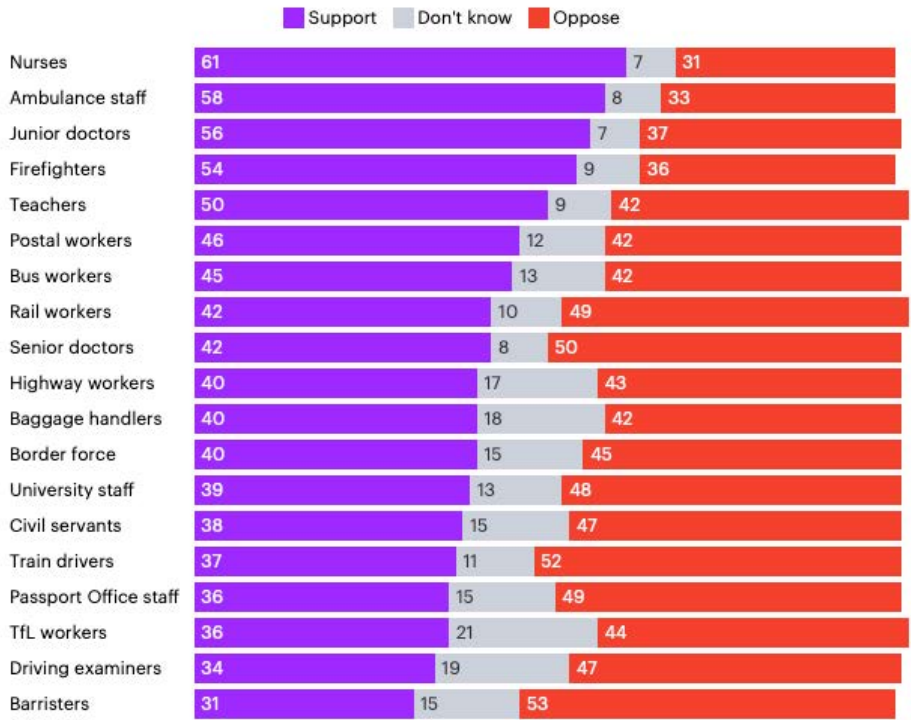
According to YouGov polling carried out in January 2020³⁶, train drivers on strike have some of the least support amongst the public. 52% of respondents reported that they opposed strike action by Train Drivers; the only profession with less public support for strike action were Barristers.

35. Ibid

36. YouGov, 'Strikes Tracker: Support Has Been Consistent since Beginning of 2023', 13 July 2023, [link](#)

What professions do Britons support taking strike action?

To what extent do you support or oppose the following groups of workers taking strike action? %



YouGov

5-6 July 2023

Source: Polling Conducted by YouGov between 5-6th July 2023, [link](#)

Strike action organised by the unions is regularly targeted at major events to maximise the disruption and financial impact. In December 2022 RMT scheduled sustained strikes in the run up to Christmas, action which seriously limited the ability of many to visit family over the festive period. RMT staff working for Network Rail scheduled a strike directly over the Christmas period beginning at 6pm on the 24th December and continuing to 6am 27th December.³⁷ Strike action was also targeted to coincide with the 2023 Eurovision Song Contest, the 2023 FA Cup Final, 2022 and 2023 Conservative Party Conference in Birmingham and Manchester, and the 2022 London Marathon.³⁸

As the strike calendar below shows, strike action by ASLEF, RMT, and TSSA has dominated passenger journeys since 2022. At least until this year, poor and unreliable service became the norm.

37. BBC News, 'December Train Strikes: Extra Walkouts Planned over Christmas', 6 December 2022, [link](#)

38. The Guardian, 'Rail Strikes: No Trains between London and Major UK Cities on Saturday', 28 September 2022, [link](#)

2022			
Month	RMT	TSSA	ASLEF
January ³⁹	Night Tube Strike: 7th-8th, 14th-16th, 21st-22nd, 28th-30th		
February ⁴⁰	Night Tube Strike: 4th-5th, 11th-12th, 18th-19th, 25th-26th		
March ⁴¹	Strike: 1st, 3rd		
	Night Tube Strike: 4th-5th, 11th-12th, 18th-19th, 25th-26th		
April ⁴²	Night Tube Strike: 1st-2nd, 8th-9th, 15th-16th, 22nd-23rd, 29th-30th		
May ⁴³	Night Tube Strike: 6th-7th, 13th-14th, 20th-21st, 27th-28th		
June ⁴⁴	Strike: 21st, 23rd, 25th		Strike: 23rd, 28th, 29th
July ⁴⁵	Strike: 18th, 20th	Strike: 27th	Strike: 13th-14th
August ⁴⁶	Strike: 18th, 20th	Strike: 18th, 20th	Strike: 13th
September ⁴⁷		Strike: 26th-27th	
October ⁴⁸	Strike: 1st, 5th-8th	Strike: 1st, 5th-8th	Strike: 1st, 5th-8th
November ⁴⁹	Suspended: 24th-25th, 30th	Suspended: 5th-9th	
December ⁵	Strike: 13th-14th, 16th-17th, 24th-27th	Strike: 13th-14th, 16th-17th, 28th-29th	
	Suspended: 12th		

39. TFL, 'Customers advised to plan ahead as strike action threatens Night Tube services,' 6 January 2022, [link](#)

40. RMT, 'Imposition of night tube duties, train operators,' 23 December 2021, [link](#)

41. East Suffolk Lines, 'Strike Details 16, 18, 30 March and 1 April,' 13 April 2024, [link](#)

42. RMT, 'Imposition of night tube duties, train operators - London Underground,' 23 December 2021, [link](#)

43. Ibid

44. ONS, 'The Impact of the Strikes in the UK June 2022 - February 2023,' 3 March 2023, [link](#)

45. Ibid

46. National World, 'Train strikes August 2022: new dates announced by unions, which travel services and routes are affected,' 27 July 2022, [link](#)

47. TSSA, 'TSSA announces 24-hour September strike across railways,' 31 August 2022, [link](#)

48. ONS, 'The Impact of the Strikes in the UK June 2022 - February 2023,' 3 March 2023, [link](#)

49. Ibid

50. Ibid

51. National Rail, 'Industrial Action Previous Dates (2023),' [link](#)

2023 ⁵¹			
Month	RMT	TSSA	ASLEF
January	Strike: 3rd-4th, 6th-7th	Strike: 12th	Strike: 5th
February	Strike: 1st, 3rd		Strike: 1st, 3rd
March	Suspended: 30th		
April	Suspended: 1st		
May	Strike: 13th		Strike: 12th, 31st
			Overtime Ban: 13th, 15th-20th
June	Strike: 2nd		Strike: 3rd
July	Strike: 17th-22nd		Overtime Ban: 17th-22nd, 31st
August	Strike: 26th		Overtime Ban: 1st-5th, 7th-12th
September	Strike: 2nd, 15th-16th		Strike: 1st, 30th
			Overtime Ban: 2nd, 29th
October	Strike: 4th		Strike: 4th
	Suspended: 6th		Overtime Ban: 2nd-3rd, 5th-6th

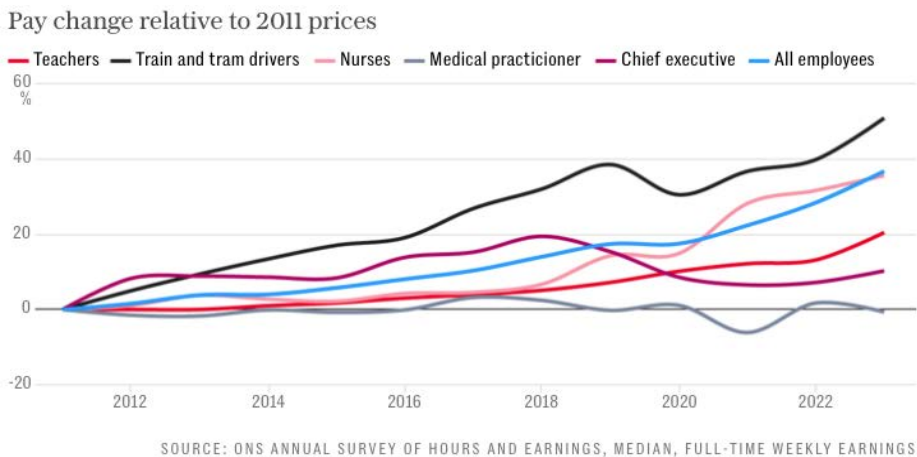
Full Steam Ahead

November	Strike: 6th-8th		
December			Strike: 1st-9th
			Overtime Ban: 1st, 4th, 9th

2024 ⁵²			
Month	RMT	TSSA	ASLEF
January	Strike: 5th-8th		Strike: 30th-31st Overtime Ban: 29th
February			Strike: 3rd, 5th, 30th-31st Overtime Ban: 1st-6th, 29th
March	Suspended: 30th		Strike: 4th-9th
April	Suspended: 1st	Strike: 26th Overtime Ban: 27th-31st	
May		Overtime Ban: 1st-5th	Strike: 6th-11th
June			
July			
August			

Continued industrial action has been a very effective tool for the unions. Over the past few years, rail workers and train drivers have received some of the largest pay rises across all sectors. The ONS Annual Survey of Hours and Earnings found that train drivers have received quicker salary increases than teachers, medical practitioners, and chief executives.⁵³

Train drivers have had quicker than average pay increases



52. National Rail, 'Industrial Action Previous Dates (2024)', [link](#)

53. The Telegraph, 'Rail Workers Receive Bumper Pay Rise after Relentless Strike Action', 1 November 2023, [link](#)

Source: The Telegraph, [link](#)

Alongside pay increases, unions have also continually secured other major concessions from different TOCs. They have managed to prevent redundancies, defeated many attempts at modernisation, and hindered attempts to update sick pay policies.⁵⁴

The chronic shortage of drivers which has forced TOCs to rely on voluntary overtime and rest day working agreements has contributed to the repeated success and use of industrial action across network rail.

A study carried out by the London Heritage Quarter found that during strike periods 20% of people tend to work from home in response to unreliability.⁵⁵ Continued unreliability will lead many UK workers with a train-based commute to choose to work from home long term. It may also push others to resort to driving to work – worsening congestion and the impact on the climate. In addition, the Night Time Industries Association warned that the February 2024 strikes planned by Aslef could cost the hospitality industry £350 million, lifting the cost to businesses to more than £4 billion since the action began.⁵⁶

Persistent strikes, overtime bans, and unreliability on the network are having profound consequences: they have undermined passenger trust and harmed the economy. These problems are all, at least in part, a product of a shortage of qualified train drivers across the rail network. It is vital that the government take rapid and immediate action to increase the number of qualified drivers and thus improve passenger experience of the service.

54. BBC News, 'Avanti West Coast: Train Drivers to Strike over Sick Pay, Aslef Says', 16 June 2023, [link](#)

55. The Telegraph, 'Rail Strikes "Worsening Work from Home Problem"', 5 January 2024, [link](#)

56. Business Matters, 'Rail Strikes Create a Further £350M Hole in Hospitality Sector with Many Tipping into Administration', 2 February 2024, [link](#)

Qualifying to become a train driver

The current course is archaic and has not been modified to reflect dramatic improvements in the technology available to drivers. Trainees are required to spend months memorising the name of every junction, the gradients of every hill, and the location of numerous signals on the routes they are driving. This is despite the fact that all this information can be digitally displayed. Similarly, drivers spend months on theory – learning detailed mechanical information about the trains they will be driving that they’re unlikely to ever use.

The means for reducing the course, and how the government can support Train Operating Companies in increasing their staff, is set out throughout the paper and in the recommendations below.

The Application Process

The supply of qualified train drivers is suppressed by the very high cost of training them – a cost individual TOCs must bear.

Individual TOCs receive a huge number of applications per place. Rail Staff report that the recruitment team at Southern Railway, one of the most competitive companies, receive 1,100 applications for each available train driver role that is advertised.⁵⁷ When Wales and Borders operator KeolisAmey advertised for 200 new train drivers they received over 10,000 applicants within a week of opening applications.⁵⁸ The last estimate for sector wide applicants per vacancy was completed over a decade ago – and put a driver’s odds at 317 applicants per place.⁵⁹ Courses are now significantly more competitive. However, this low estimate still puts an applicant’s chance of success at just 0.31%.

Recruitment to a train driving course is more competitive than an application to PPE at Oxford (where 11% of applicants are successful), Harvard Law School (9.5%), and Goldman Sachs (1.27%).⁶⁰

Applying to become a train driver involves a long process of assessments and selections. Applicants must first identify the TOC they would like to work for. They will then fill out a form online, and generally complete a situational judgement test. They may also be assessed over a telephone interview. A proportion of applicants will be invited to sit psychometric assessments – these are quite complex and difficult to pass without the

57. RailStaff, ‘Want to Be a Train Driver?’, 27 April 2020, [link](#)

58. RailStaff, ‘200 New Train Driver Jobs Attracts 10,000 Applicants’, 25 August 2020, [link](#)

59. The Economist, ‘Gravy Train’, 24 November 2012, [link](#)

60. University of Oxford, ‘Philosophy, Politics and Economics’, [link](#); Harvard Law School, ‘HLS 1L Profile and Facts’, [link](#); eFinancialCareers, ‘Goldman Sachs Has 300 Applicants per Open Position’, 28 February 2023, [link](#)

completion of several practice tests. Applicants will then be asked to travel to a test centre for a day of tests (if one passes these, they are able to use this in future applications). Around half of candidates will pass. Around 1 in 10 of the initial applicants will then be invited to interview. Prospective drivers then often must wait months for a decision from the TOC on their application. Successful applications must then pass a medical and background check before commencing training – an eighteen-month process.⁶¹

To apply to become a train driver, one must have 9 years of education, a GCSE grade 9-4 in Maths and English, to live within one hour of the depot, and to be at least 20 years of age.⁶² This is not a coherent set of requirements. It is possible to have all the requisite qualifications at 16, and yet potential drivers must wait three years after they finish school to apply. There is no need for an undergraduate degree to drive a train, and yet applicants must still wait two years after finishing school to gain a license. The minimum age of an applicant should be reduced to 18. If one can drive a Heavy Goods Vehicle, pilot a plane, and join the army at this age, then one should be permitted to drive a train. The minimum age requirements for train drivers should be reduced from 20 to 18 years.

This is clear evidence of an unhealthy relationship between supply and demand. Every year, thousands of qualified and capable people apply to join a train driving course. Despite a desperate need for more train drivers across the network, these people are rejected because TOCs cannot afford to train them.

This high rejection rate is a product of an unnaturally constrained supply of places – caused by an expensive, lengthy course with numerous unnecessary components. TOCs cannot afford to bear the cost of these courses, and instead are forced to rely on overtime and rest day work agreements – it is cheaper to continuously pay out overtime than to train new drivers. Moreover, because TOCs are compensated by the taxpayer for losses from strike action, there is simply not sufficient incentive for them to train new drivers in order to improve the service. This must be addressed.

Train Driving License (TDL) & Train Driver's Certificate of Competence

Certification to drive trains on Network Rail lines is a roughly thirty-week process at the end of which Drivers will 'pass out' following a week-long assessment.

Conditions for obtaining a licence are set out in The Train Driving Licences and Certificates Regulations 2010.⁶³ Training and safety requirements are issued by the Rail Safety and Standards Board (RSSB). The RSSB host 'The Rule Book': a long and complex series of documents setting out operational rules for application on the GB mainline railway. The training drivers complete is regulated by these standards.

61. The Train Drivers Academy, 'Ready to Apply?', [link](#)

62. National Careers Service, 'Explore Careers: Train Driver', [link](#)

63. Office of Rail and Road, 'Train Driving Licences and Certificates', [link](#)

Acquisition of a TDL requires significant classroom training. In many TOCs, students will spend their first month of training exclusively inside a classroom.

Several areas of the course are relatively archaic and could be reduced. Drivers are likely to spend a significant period learning how their train works, with relatively detailed information about the mechanics of the trains they are driving.⁶⁴

It is obviously very important that drivers have a full understanding of the control panels they will use when driving the train and are able to recognise and respond to common faults. However, since the train driving course was conceived, mechanics and technicians have gradually come to take on more responsibility for maintenance. It is highly unlikely that a driver would ever need to resolve a complex fault independently.

Traction competency is one of the major roadblocks in training qualified drivers up to operate on different stock. Traction requirements should be reduced. Instead, drivers should simply be familiarised with the mechanics of the train they are operating and the control panel they will interface with.

Route Learning

Despite passing out with a Train Driving License after the initial 30-week training period, drivers are still classed as ‘trainee’ and not qualified to drive solo on any routes.

In order to graduate from trainee driver to qualified driver, drivers must learn every single route that they wish to drive on.

‘Route knowledge’ is governed by the Rail Safety and Standards Board’s RIS-3702-TOM Rail Industry Standard for Management of Route Knowledge for Driver.⁶⁵

A route risk assessment is carried out to determine the information staff need to know to operate safely and effectively over a specific route. This information is usually rationalised as a ‘route story’ which must be memorised.

The below table identifies what information a driver must memorise as part of a ‘route story’:⁶⁶

Category	Route knowledge requirements
Stations	Details of stations and other stopping locations to be called at on the route. Includes platform lengths, stopping points, and methods of dispatch. PTI risks (where necessary). All station names.
Gradients and low adhesion areas	Significant gradients and areas of low adhesion

64. Office of Rail and Road, ‘Train Driving Licences and Certificates’, [link](#)

65. Rail Safety and Standards Board, ‘Route Knowledge’, [link](#)

66. Ibid

Lineside signage	Whistle boards
Signals	<p>Signals with significant read-across or read-through risk, late sighting, irregular distances, potential for misinterpretation, and multi-SPAD signals.</p> <p>Details of the signalling and protection systems in place throughout the route, including details of the transitions to alternate arrangements (for example changes in signal aspect). This excludes passive systems such as train protection and warning systems (TPWS).</p> <p>Signal box names.</p>
Junctions	<p>The signals, names and types of running line, and permissible speeds associated with junctions where drivers may be required to take a diverging route.</p> <p>Diverging junctions where the driver is not required to take a diverging route, particularly regarding the routes they are not supposed to take.</p>
Permissible speed increases and decreases	<p>Permissible speeds applicable to the traction being driven.</p> <p>Permissible speed reduction warning indicators.</p>
Section gaps and neutral sections	Section gaps, neutral sections.
Level crossings	Level Crossings, but not user worked and footpath crossings.
Other	Spring catch points.
	High-risk stopping points (for example viaducts, tunnels).
	Locations with special instructions which affect the driver (for example certain tunnels).
	SPAD indicators.
	Significant distractions from route cues.
	Walking routes at the commencement and termination of journeys.

As is noted in the RSSB’s own document on the Management of Route Knowledge, ‘many members of staff are provided with company phones or tablets which can be used to provide information. For example, guards may have access to an app showing the train’s live location on a map. It can show if the train is stopped at a red signal and sometimes why’.⁶⁷ Such technological advancement should gradually reduce the volume of route knowledge driver’s need. While it is ideal for them to have experience of routes they drive over, lengthy memorisation of landmarks, signal information, and gradients is becoming obsolete.

TOCs should utilise technology to reduce the amount of rote memorisation required. The need to learn the name of junctions, level crossings, and signal boards ought to be a thing of the past.

If a driver does not drive a route for six months to a year (depending on the route) they immediately go out of competency and must take refresher training. This severely limits the ability of TOCs to utilise their drivers to

67. Rail Safety and Standards Board, ‘Management of Route Knowledge’, 10 March 2020, [link](#)

compensate for shortages or cancellations, another serious problem with the system. If a TOC were to move a driver to a different set of routes for six months in response to sickness or leave on the network, the driver would have to undergo lengthy route learning on the new routes, and after six months would have to re-learn their old route. This also makes it impossible for TOCs to support each other through the trading of drivers in response to demand.

Route learning varies across different drivers and TOCs. However, many report spending 6 months to a year learning all of the routes on their card (during this time drivers will begin to drive solo on routes learned). Rail Staff advise that it takes between 12 and 18 months to become a qualified train driver. This is consistent with 6-12 months of route learning. Route learning may also be slowed down due to the lack of availability of drivers to lead training.

Post implementation review of the Train Driving Licences and Certificates Regulations 2010

In May 2023 the Department of Transport carried out a full Post Implementation Review of the Train Driving Licences and Certificate Regulations.

They found that:

“The prescriptive training content and requirements for the recognition of trainers and examiners were also highlighted as problematic by industry bodies and operators. The training content does not always reflect the modern context for train driving; for example, the need for route knowledge may be reduced in a situation where automatic systems provide this information. As currently drafted, TDLCR provides no flexibility for training content to be tailored to suit the circumstances. It was also argued by many operators and by industry bodies that the rigid requirement for an examiner to have acquired 4 years’ experience to qualify for ORR recognition did not allow for competent individuals with less experience to be recognised. This was restricting the pool of examiners based on timeserved rather than evidence of competence for the role.”⁶⁸

Train driving has become much safer since the requirements in the TDLCR were developed. As a recent government consultation on the topic found:

“The network has seen investment and a significant roll-out in automatic train protection (ATP), train protection warning systems (TPWS), selective door operation and protection against wrong side door enabling, which adds another level of assurance to support train drivers in their role and mitigate risks that could occur while in service. These additional safeguards provide an extra level of protection from the consequences of human error. On-train data recorders (OTDRs) are also widely used by train operators now, which provides a means to assess whether a train driver has responded to an incident correctly and provide a way for them

68. Rail Safety and Standards Board, ‘Management of Route Knowledge’, 10 March 2020, [link](#)

to learn from their experience and make improvements.”⁶⁹

In light of recent safety developments, and the Post Implementation Review of the TDLCR, the Department for Transport should commission a review of which lengthy aspects of the train driving course can be reduced. By significantly reducing the amount of time currently spent on route learning, it would be very feasible to halve the time spent training drivers to 9 months.

69. Department for Transport, 'Lowering the minimum age requirement for train drivers from 20 to 18 years', May 2024, [link](#)

Case Studies: Shortened Courses

The UK's 18-month training course is not necessary. Countries around the world, operating efficient rail networks, train their drivers in far less time.

Case Study - Denmark Train Driver Programme

- Denmark's standard train driver programme is run by Danish State Railways (DSB) and takes 11 months (up to eight months less than the UK). However, in response to a driver shortage, a new directive shortened training for Copenhagen S-Bane drivers to just three months.
- Trafikstyrelsen (Denmark's examiner and training authority) have introduced Communications Based Train Control across the system (CBTC). This is a more effective signalling system which uses telecommunications between the train and track in order to manage traffic. It is far more accurate than traditional signalling.⁷⁰
- Training courses must be modified to reflect improvements in rail technology. It is right that technological improvements reduce reliance on drivers' memories.

Case Study: The HGV Bootcamp⁷¹

In the summer of 2021 it became clear that the UK was facing a profound skills shortage – far too few people were qualified to drive HGV lorries. In response, the government established HGV driver skills bootcamps to quickly get lorry drivers trained and on the road. The initial target was for 3,000 new drivers, this was later extended to 11,000.

In order to establish these much-needed bootcamps, the UK government offered contracts worth £34.5 million to consortiums of training providers, employers, and recruitment agencies.

The success of these bootcamps was a product of their 'end to end' nature. Drivers were recruited onto the programme, tested at the end, and then immediately placed with a company. This allowed over 10,000 lorry drivers to attain both a qualification and employment in just three months.

70. Railway Journal, 'Denmark Streamlines Course for Copenhagen S-Bane Drivers,' 8 February 2023, [link](#)

71. GOV.UK, 'Training to become a HGV driver,' [link](#)

It is clearly not feasible to train new train drivers through just a skills bootcamp. It is vital drivers spend much of their time with a TOC practicing on the routes they will drive when qualified. Driving training also takes much longer than the sixteen week maximum.

Currently, in most cases, training is completed and fully funded by a driver's TOC. The government have a major opportunity to leverage the National Skills Fund to provide the initial, theoretical, part of driver training.

The government should award contracts to consortiums of Train Operating Companies, Recruiters, and qualified trainers for an approximately 10-week classroom-based introduction to theory. This should be set up in centres across the country, named Train Drivers Academies. TOCs which bid for these contracts must commit to taking on the drivers who pass the written assessment at the end of their 10 week course for practical training at a depot and to awarding newly qualified drivers with a job providing they pass out successfully.

Case Study: Bus Driving⁷²

- It takes 4-6 weeks to learn to drive a TFL London Bus. To qualify to drive a bus, lorry, or coach one must apply for a provisional bus driving license – this requires a driving license and a medical examination. Drivers must then prepare for an examination of Driver Certifications of Professional Competence which does involve a minimum of 35 practical handling hours.
- Most bus training – including for the two largest companies: National Express and Stagecoach, is completed in one month. There is no route learning involved with driving a bus, and very little practical engineering knowledge expected of the vehicle. Bus drivers are free to drive new routes for the first time with no expectation of rote memorisation.

It would not be possible to learn to drive a train in such a short period of time. However, UK bus driving regulations provide a stark comparison to those which govern the railway. Bus drivers receive less digital information that train drivers about potential hazards and signals and yet are required to do less.

The safety of the UK bus and coach network is evidence that route learning is not crucial in the training of drivers.

72. City and Guilds, 'Level 2 Certificate in Professional Bus Driving London,' [link](#)

Conclusion

This paper has sought to demonstrate that much of the disruption and poor passenger experience common across Britain's railways is a product of a serious shortage of qualified train drivers. Other countries with far more qualified drivers than Britain have already declared a shortage and taken rapid action to train more drivers in response.

The shortage of drivers is a product of an unnecessarily long and overly regulated course. Drivers are still learning, by rote, routes which can be fully digitised and traction information which is dealt with by a mechanic. By compressing the training into an intensive six-month course, we can train drivers in one year less for a far smaller cost.

Every year thousands of people apply to become train drivers. They are not taken on because Train Operating Companies cannot afford to train them for eighteen months before they begin to drive solo. There will be huge demand for a government subsidised course.

Until we increase the number of train drivers we will continue to see poor performance on the railways. It is likely overtime bans will become even more common as a negotiation tactic by the unions, and it is therefore vital that TOCs are not reliant on driver overtime to deliver a standard service.



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Policy Exchange
1 Old Queen Street
Westminster
London SW1H 9JA

www.policyexchange.org.uk