

# On the Wrong Track

The impact of European Union legislation  
on Britain's railways

John Petley

The  
Bruges  
Group 



# On the Wrong Track

The impact of European Union  
legislation on Britain's railways

John Petley

© The Bruges Group 2009

Published in August 2009 by  
The Bruges Group, 227 Linen Hall, 162-168 Regent Street, London W1B 5TB

**[www.brugesgroup.com](http://www.brugesgroup.com)**

Bruges Group publications are not intended to represent a corporate view of European and international developments. Contributions are chosen on the basis of their intellectual rigour and their ability to open up new avenues for debate.

# Table of Contents

About the Author .....	4
Summary .....	5
Introduction .....	7
The limits of harmonisation .....	9
Directive 91/440/EC: Fact, Fiction and Follow-up .....	13
The Interoperability Directive 2008/57/EC .....	18
ERTMS .....	22
COM (2007) 608 – Freight Corridors .....	26
The European Railway Safety Directive 2004/49/EC .....	29
The European Railways Agency .....	31
Conclusion .....	32

## About the Author

John Petley was educated at Charterhouse School and read music at Oxford University. He worked for over twenty years as an IT specialist, largely in the insurance sector, working both in the UK and in Holland. In January 2006, he switched over to political research and worked for over two years in Brussels at the European Parliament, where, among other things, he attended meetings of the European Parliament's Transport Committee.

John has had a long-standing interest in railways going back to his childhood days. His previous publication in this field, *Southern Loco-Hauled Finale 1980-2005*, was very much aimed at the enthusiast market, but his concern about the European Union's unwelcome and growing interference in so many aspects of Britain's life has resulted in his returning to the subject of railways, but from a very different angle.

Currently working as a freelance researcher and writer, John is married to Katherine and lives in East Sussex.


## Summary

The European Union faces a massive challenge in trying to “harmonise” the very diverse railway networks of the European Union’s member states, with their different rail widths, clearances and electrification systems.

Nonetheless, an ever-increasing volume of legislation is emanating from Brussels regarding railway operation. From the UK’s perspective, even though several aspects of the proposals are modelled on Britain’s rail privatisation, the European Union’s increasing interference is likely to be detrimental to rail operation in this country in several areas. For example:-

- The one trial implementation of the European Rail Traffic Management System on a single route in Wales has still not been completed, in spite of costing £59 million – over 10% of the cost of implementing Train Protection Warning System over the entire network.
- A European Commission proposal on giving priority to international freight trains on a busy UK trunk route, which if implemented could add 25 minutes onto passenger journey times only a few years after a £9 billion upgrade to speed them up.
- The possible costs of the planned extension of the Interoperability Directive to cover domestic train services will be expensive. Bearing in mind an earlier directive cost the UK over £80 million in implementation costs just for the very limited number of international trains that run here.

International trains crop up repeatedly in this analysis of European Union rail legislation – the key, alongside competition, to using rail as a tool to help break down national state-run rail monopolies across the Continent. Britain’s geographical location will ensure that these trains will always be a smaller part of the picture here than elsewhere. Our history has left us with a railway network including vast numbers of bridges and tunnels too restricted in dimension for most rolling stock in use on the Continent ever to run on.

A black and white photograph of railway tracks receding into the distance, serving as a header for the page.

This study shows that European Union legislation in the area of rail transportation, while not thus far enjoying the high profile of, for instance, agricultural, fisheries or financial legislation, adds to the growing case for Britain to withdraw from the EU.


# Introduction

Britain was in the forefront of railway development from the very beginning. Our nation gave the world the waggonway, the steam locomotive, standard gauge, the first passenger-carrying railway and the first inter-city railway. Victorian Britain boasted the world's fastest trains, and the 126mph achieved by the London & North Eastern Railway's A4 Pacific No. 4468 *Mallard* in 1938 remains the world record for steam traction. In 1975, Britain launched the world's fastest diesel trains to date – the Inter City 125 trains. It is an impressive record, even if the French have now taken over the blue riband in terms of cutting-edge rail technology with their impressive LGV (high-speed line) network.

Under the first of three “pillars” in the 1992 Maastricht Treaty, establishing the European Union, can be found the heading “Trans-European Networks” or TEN's. In order to assist the creation of a single market and to reinforce economic and social cohesion, a series of Europe-wide modern infrastructure projects were to be created. Transport, energy and telecommunications were the three principal networks, and railway systems form an important part of the first of these, especially in recent years with the EU's growing enthusiasm for “green” transport.

As the first “pillar” covers areas which surrender the greatest power from the member states to the EU, this basically means that the nation that gave railways to the world is no longer master of its own network. Such control as we still have will be surrendered if and when the Lisbon Treaty comes into force, for transport is one of the areas where decisions would henceforth be made by Qualified Majority Voting.

This study looks at what all this means in practise, examining some of the principal pieces of legislation that have affected our railway network. It also looks at what benefits, if any, would result from Britain withdrawing from the European Union and thus not being bound by European legislation.



We start by an analysis of the challenges faced by the European Union in their attempts to create a cohesive rail network across the member states, including Britain.



## The limits of harmonisation

The railway networks of the 27 member states of the European Union are remarkably diverse, and present a major challenge to the prevailing mindset in Brussels that everything should be “harmonised” at a European level. This has not prevented the EU rising to the challenge, notably in the fields of safety and interoperability, as will be discussed later, but particularly in the latter, there are a number of constraints which would be prohibitively expensive, if not downright impossible, to resolve.

### **Gauges (Rail width)**

This analysis starts with gauges – the distance between the inside edges of the two rails. 4ft 8½in, or 1435mm, is known as Standard Gauge and is the gauge of some 60% of the world’s railways. To discover why, we need to go back to the dawn of railways and their evolution from horse-drawn waggonways in the collieries of North East England. Before the 1820’s there was no standard gauge, although most rails were between 4 and 5 feet apart. It was the growing reputation of George Stephenson (1781-1848) which resulted in the early standardisation of rail width. Stephenson favoured a gauge of 4ft 8in for the colliery systems he was associated with, and chose this gauge for the world’s first public railway to use locomotives, the Stockton & Darlington Railway of 1825, a project for which he was the engineer. He added the extra half inch by the time his next major project, the Liverpool & Manchester Railway, was opened in 1830, and while some early railway projects planned by other engineers used different gauges, Stephenson’s influence gradually led to their conversion to Standard Gauge by the mid-19th Century, with the exception of Brunel’s broad gauge (7ft 0¼in) Great Western Railway.

With British engineers and manufacturers being involved in building the earliest railways in several other countries, Stephenson’s Standard Gauge was exported to countries as far afield as Australia and the USA, besides France and Germany nearer home. However, it never became the universal gauge, even across Europe, where Spain and Portugal chose 5ft 6in

(1676mm) Russia and its neighbours went for 5ft (1524mm) and Ireland 5ft 3in (1600mm.) In recent years, the new Spanish high-speed network has been built to standard gauge, but the bulk of the country's railways still use the broader gauge.

### **Loading Gauge (Clearances)**

Besides the question of rail width, another issue militating against standardising Europe's railways is loading gauge – the maximum width and height for locomotives and rolling stock. At a conference in Berne, Switzerland, just before the First World War, a standard maximum width of 10ft 2in (3150mm) with a maximum height of 10ft 5in (3175mm) rising to 14ft 0½in (4280mm) in the centre was agreed by representatives from much of Continental Europe. These dimensions are usually referred to as “Berne Gauge” although the official name is “Gabarit passe-partout international” or PPI, meaning pass-everywhere international.

It took a while before a widening process was completed on France's railways in particular, but now trains can run from the Spanish border to the east of Poland without fear of colliding with a bridge or sideswiping a train on an adjacent track. Two important railway networks are excluded from the Berne Gauge – the Swedish and Norwegian systems, where more generous dimensions are allowed, and the British, where clearances are tighter and rolling stock dimensions are smaller.

In the early 1920's, the Southern Railway, one of the four main British private companies at the time, carried out a study of converting the lines in Kent to Berne Gauge. The cost was prohibitive even in those days, so when direct freight and passenger services to the Continent via a train ferry were introduced a few years later, the vehicles used had to be smaller than other stock used on France. Even now, passengers at the Gare du Nord in Paris seeing a Eurostar side-by-side with a French TGV will notice the contrast in sizes, an unfortunate legacy of Britain's pioneering role in railway development. A considerable rail network was already in operation before it became apparent that much larger locomotives and carriages could be built.

## **Electrification**

Electrification is another area where different member states opted for different voltages in some cases well before the European Union existed. 25Kv 50Hz AC is widely used in the UK, parts of France, Bulgaria and Romania and the new Spanish, Italian and Belgian high-speed lines, and could be regarded as the nearest there is to a European standard. Nonetheless, the substantial German network along with Austria and Sweden (plus non-EU Norway and Switzerland) all use 15Kv. The Dutch Railways use a 1500-volt DC system, as does part of the French network and some Dublin suburban lines (“DART”) – the only electrified lines on the island of Ireland. Interestingly, Europe’s 1500V network also includes one single route in both the Czech Republic and Portugal. Belgium opted for 3Kv, along with Italy, Spain and Poland and several smaller Eastern European nations. Strangely enough, although Portugal shares Spain’s unusual 5ft 6in rail gauge, it opted for 25Kv electrification.

All the systems considered so far use overhead live wires. In the South of England there is a substantial network of electrified lines that use a “third rail” energised at 750V DC. Third rail electrification the most common system for underground or “metro” networks, with 750V being the most popular voltage.

Even without EU intervention, railway companies across Europe have produced a number of ingenious solutions to the problem of different electrification systems. In the UK, a number of dual-voltage locomotives and units are in daily operation on both passenger and freight services that cross London and therefore have to switch from 25Kv overhead to 750V third rail systems in the course of their journey. In France, the quadri-current 40100 series electric locomotives, able to operate over the Belgian, Dutch and German networks as well as the French, were introduced as far back as 1964.

## **Coupling**

Europe’s railways employ a number of different methods of coupling locomotives, carriages or wagons. Some are automatic, such as the

Scharfenberg coupler, but a good many trains are still coupled manually using a chain and drawhook, with buffers preventing the vehicles colliding with each other when the brakes are applied. Although a standard automatic coupler has been chosen by the European Union, based on the Russian SA3-coupler which is also used in Finland and in parts of Sweden, there is currently no proposal to implement this standard across the EU. Britain in particular, with its fragmented privatised system, uses a variety of coupling systems.

### **Which side?**

One further question that divides Europe is on which side do trains pass? Britain drives on the left and its trains likewise pass on the left. The trains in right-hand drive Germany and Holland pass on the right, but in right-hand drive Belgium they pass on the left! Even more confusing is France, where passing on the left is the norm on much of the country's network, but in the Alsace area, which was under German control for part of the railway era, they pass on the right.

### **Summary**

In recent years, Europe is seeing the emergence of a European high-speed rail network using 25Kv AC overhead electrification, Berne Gauge clearances and Stephenson's Standard Gauge. However, domestic train services in many countries do not conform to these standards and are unlikely to do so without the expenditure of vast sums of money. In the UK, only one route, the Channel Tunnel Rail Link or High Speed 1, conforms, and even if, as seems likely, the proposed high speed line from London northwards is built to these dimensions, a significant percentage of the British rail network is likely to retain its restricted clearances. For all the conformity to Standard Gauge and both existing and proposed use of 25Kv electrification, much of our nation's railway system will therefore retain its idiosyncrasies whatever the EU may decide.

## Directive 91/440/EC: Fact, Fiction and Follow-up

When the issue of European interference in Britain's railways is discussed, the most frequently mentioned directive is 91/440/EEC of 29<sup>th</sup> July 1991 on the development of the Community's railways. It is also the most misquoted.

### **Is it responsible for the privatisation of Britain's railways?**

Yes, say critics of Britain's privatised rail system like RMT leader Bob Crow, who recently stood for *No2EU, Yes to Democracy* in the 2009 European Parliamentary elections and said, "Many members of my union RMT have suffered as the result of EU diktats such as EU directive 91/440 which led to the privatisation of our rail network."<sup>1</sup> However, a closer look at the Directive shows that while it talks of "separating the management of railway operation and infrastructure from the provision of railway transport services", it adds that while "separation of accounts" is compulsory, "organizational or institutional separation" was optional. In other words, for those unhappy with the franchise system, the Railtrack fiasco or the vast profits made by the rolling stock leasing companies, it is John Major's Conservatives who are to blame, not this directive.

The enduring nature of the myth of this directive being behind rail privatisation is quite surprising considering that a trip across the Channel is all that is required to debunk it. In Germany where Deutsche Bahn remains Germany's last big state monopoly, privatisation has run into strong opposition, especially from the unions. Furthermore, when the privatisation was discussed in the German Parliament, the British approach was widely regarded as the model not to follow. All this would be irrelevant if this EU directive had dictated the privatisation of British railways eighteen years ago.

---

1 [www.socialistparty.org.uk/keyword/Trade\\_union\\_figures/Bob\\_Crow/7215](http://www.socialistparty.org.uk/keyword/Trade_union_figures/Bob_Crow/7215)

This directive definitely opened up the possibility of running privately-operated trains in countries where both the track and the bulk of the train services are still run by the State, as will be seen below. Here again, however, Britain had already anticipated this. The British Pullman train, which started running in 1982, was privately owned, as were the class 59 diesel locomotives introduced in 1983 to haul heavy stone carrying trains from quarries in Somerset to a number of destinations in Southern England. In Holland, where the State has owned the railways since they were built, the first privately-run rail services ran in 1996 between Amsterdam, Haarlem and Ijmuiden, but they were not a success, being unable to offer fares sufficiently competitive to attract much business from the rival NS (Dutch State Railway) services. Interestingly enough, on the subject of Holland, the separation of track and trains was widely blamed for a steep decline in punctuality on the previously highly efficient national network.<sup>2</sup>

### **Did it cause the Hatfield Crash?**

Another claim made of this Directive, this time by a colleague of Bob Crow, is that it was responsible for the Hatfield accident of 17<sup>th</sup> October 2000, caused by a broken rail.<sup>3</sup> In order to evaluate that claim, it is important to look at the nature of the company involved, in particular how its shortcomings contributed to the accident and then to evaluate whether the Directive was a factor in the shaping of the company in such an unsatisfactory way.

The conclusion of the report into Hatfield stated that Railtrack, the private company that owned the nation's tracks at the time, had divested itself of much of its engineering expertise, with the result that it had consequentially failed to keep adequate records of track maintenance, with the result that it was caught unawares by the cracking of the rails. Once again, the finger of blame cannot be pointed at the directive and the concept of separation of accounts, but rather in the way that Britain had chosen to privatise its railways, seeking to encourage private companies to compete over

---

2 See Railway's little Britons should stop preaching to Europe by Christian Wolmar in Rail magazine, lissue 526

3 This was said at a meeting of the Campaign for an Independent Britain in London on 4<sup>th</sup> April 2009


privately-owned track, with the emphasis being on making a profit, and safety being the casualty.

### **Does it place any restriction on the shape of Britain's railways?**

The Directive would most certainly stand in the way of any move to re-structure Britain's railways along the lines of "vertical separation" – in other words, a return to the pre-1948 situation where there were four geographically based, vertically-integrated railway companies, each responsible for track, rolling stock and train services. During the run-up to the privatisation of Britain's railways in the 1990's, it was widely reported that this was the preferred model of the then Prime Minister John Major, but that the franchise-based scheme which finally prevailed was chosen because it would be harder for a future Labour government to re-nationalise.

By this time, the directive had already come into force, with little coverage in the press, as is often the case with EU legislation. However, before blaming the Major government's change of tactics on submission to Brussels, it is worth pointing out that British Rail had been moving away from the old region-based structure, which was largely derived from the geographical area covered by the pre-1948 companies, towards a more horizontal approach. Although the regions were not formally wound up until 1992, they had ceased to have any significant role by the late 1980's, with the railway being managed on a sector basis – Inter City, Railfreight, Rail Express Systems (Mail and parcels traffic) Network SouthEast among others.

So this Directive cannot be proven to have played any major part in defining the rather unique structure of Britain's railways today, merely of possibly preventing a future reorganisation along pre-1948 lines. Having said this, the structure of the British network reflects better than anywhere else in Europe the ideal of the European single market, with foreign companies running some of the train operating companies in some cases in competition with each other. Britain can be said to have anticipated the aims of the Directive before it came into force, but more importantly, subsequent directives (see below) which have encouraged greater private sector involvement in Europe's railways, seem to be taking them in the direction in which Britain's



railways have already gone. Nonetheless, 91/440 is still viewed as the culprit by opponents of rail privatisation.

### **When the Private Sector really came in**

The first and second railway packages were both designed to open up the European rail freight market to competition, and specifically to privately-owned freight companies. A number of directives are included in these “packages” which need not be listed individually. Likewise, Directive 2007/58/EC, a key part of the “Third railway package” opens up international passenger services to competition from 1st January 2010.

In order to prepare the way for competition, separation of trains and track had to be pushed one stage further by bringing in European legislation on Track Access charges. Directive 2001/14/EC introduced common rules which had to be used in calculating these charges, which included not just the cost of the running of a train on a track, but of stopping at a station and the administrative costs.

So now, like it or not, private operators can acquire a license to run freight trains in any member state of the EU, even if they are running in competition with a state-owned company and running over state-owned track. As from next year, a similar situation will apply with international passenger services. Apart from the harmonisation of safety standards (which in Britain are much higher than in many other EU member states) Britain was already compliant with the aims of this directive thanks to privatisation, and its freight companies, particularly smaller operations with experience of niche markets that they have been able to supply at a more competitive rate than larger companies, are keen to start operations on the Continent.

Whether there will be any foreign companies wishing to compete with Eurostar for high speed services to the UK remains to be seen. The peculiar nature of the Channel Tunnel requires design features not required for other international services, such as being able to split the train into two. Newspaper reports a year or two back cited both Air France and Deutsche



Bahn as interested in running services through to London, but there has been little mention of this in recent months.

### **Concluding comments**

There are many critics of Britain's railway structure, but not a great deal of political debate about it. Both Labour and the Conservatives appear committed to the current franchise-based structure, in spite of the recent failure of the East Coast Main Line franchise. The Green Party are committed to bringing the railways back into public ownership, but have not gone into detail about how they would manage the rail network. Their idea of a nationalised railway maintaining separation of trains and track would, of course, have been possible if EC/91/440 had been the EU's last word, but now taking back all the freight operations into public ownership would prove problematical if Britain remained within the EU.

It is surprising that there has been so little debate about the structure of Britain's railways among parties espousing withdrawal from the EU, and therefore not requiring to take this or any other directive into account. The BNP talk of the "Fiasco of rail privatisation" but go into very little detail. UKIP, after dallying with re-nationalisation a few years ago, are currently supporters of the franchise system. The most vocal withdrawalists calling for total re-nationalisation are a number of left-wingers found within the RMT Union.

In view of how the track/train separation led to a degree of hesitation on the part of some transport operators to apply for franchises in the early days of privatisation and how some of the train operating companies have expressed a desire to be more involved in track maintenance on the lines over which they operate, there is certainly the potential for a major debate about the organisational structure of Britain's railways on leaving the EU, but at the moment, many in the rail industry, and the freight sector in particular, seem reasonably comfortable with the very EU-compatible but not particularly EU-inspired status quo.

## **The Interoperability Directive 2008/57/EC**

This directive merged two previous directives into one – Directive 96/48/EC (July 1996) on the Interoperability of Trans-European TGV and Directive 2001/16/EC (March 2001) on the Interoperability of Trans-European Conventional Railways.

Even the most strident critic of the European Union would recognise the sense in there being some international standards when running regular international train services, especially fixed-formation trains such as the TGV or Eurostar where the entire train crosses international borders. The registration process, allowing rolling stock to operate over the rail network of an individual country, varies from member state to member state, but has become more complex as the trains themselves have become more sophisticated, particularly the high speed trains, which run at speeds undreamed of fifty years ago. Some trains like the French TGVs run over the tracks of at least six different countries, so the idea of streamlining the process by not requiring full separate registrations in every country of operation has obvious merits.

However, as the 2001 Directive highlights, it is not just the new purpose-built high speed lines that cross-national frontiers. Cross-border freight and conventional passenger trains have been part of the European scene for many years, and their numbers are growing.

The basic concept of the interoperability directives is to harmonise the registration process across the member states so that once an item of rolling stock has completed the process and is allowed to operate in one member state, the minimum additional work should be required to allow it to operate elsewhere. In 2004, the European Rail Agency was established to draw up technical specifications for interoperability (or TSIs)

Thus far, the legislation would seem to be of little relevance to most of the UK rail network. Apart from the Belfast-Dublin line in Ireland, the only

international rail services operated from the UK are those that run through the Channel Tunnel – the car, coach and lorry shuttles, the Eurostar services from London to Paris and Brussels and international freight services. Even if we left the EU, we would obviously still have to ensure that any stock used on international services would comply with European legislation, including this directive.

Thus far, so good. Where the Directive begins to cause concerns is the possibility of extending its scope by 2012 to cover domestic services as well. “The scope will be progressively extended to the whole network and all vehicles, provided that an impact assessment shows the economic benefit of so doing.” (See Introductory clause 20, also article 1:4). The “economic benefit” would seem to refer to the introduction of competition within domestic services, possibly using stock owned by a company based in and registered in a different country from that over whose rail network it is planned to be used – for instance, a French operator seeking to use French-registered stock to compete for traffic on an Italian domestic service.

Our domestic services are operated by stock designed with the restricted British loading gauge in mind, and a considerable part of the British railway network, especially the suburban and rural routes, will not see any international services whatever, not even the odd wagon that has worked across from the continent on a freight train. Most continental rolling stock, as we have noted, simply cannot operate over the vast majority of the UK rail network because of the loading gauge restrictions.

Furthermore, with international train services relatively less important as far as the UK is concerned, the aim of producing economies of scale across Europe’s railways is unlikely to be achieved in any great degree here. While it is true that the Class 66 freight diesel locomotives first ordered for freight work in the UK are now also in operation in Germany, France and Poland among other countries, even here a variant built to the broader dimensions possible across the Channel is under consideration. These would not be able to operate in the UK, and it is inconceivable that passenger stock ordered by rail operators for international or internal services within

mainland Europe would choose vehicles that would fit in the narrower confines of the UK loading gauge just for the sake of this directive.

According to a UK government consultative document,<sup>4</sup> the Directive should also improve, “the environmental performance of the entire European transport system”. It is again hard to see what benefit it would provide to the UK’s rail network in this regard.

The result of any extension of this directive to cover domestic services is that unnecessary costs are likely to be incurred by the operators, for the exemptions are few in number – isolated rail systems such as the Isle of Wight’s Ryde-Shanklin line, light rail, heritage lines, rolling stock used only on a limited number of charter trains and a few self-contained branch lines. The possibility of applying for derogation is left open. Whether the government will do this remains to be seen. If not, it means more cost and more red tape – a particular nuisance for lines in rural areas that do not run at a profit and where the competition element is likely to remain non-existent. The earlier 2001 directive referring to international trains only cost the UK over £80 million according to a 2001 government consultation document.<sup>5</sup> Upgrades to the power supply to conform to TSI’s cost over £50 million, with rolling stock upgrades (such as European standard hot box indicators) cost over £10 million, with a further £20 million on infrastructure changes.


Closely linked to interoperability of stock is Directive 2007/59/EC, which creates a common European Licensing system for train drivers. This again seems an unnecessary extra cost for the vast majority of drivers. The aim of the directive is “above all to make it easier for train drivers to move from one Member State to another, but also to make it easier for them to move from one railway undertaking to another.”

But is this necessary? It takes 9-18 months to qualify as a driver in the UK, depending on the train operating company. Two key components of train driving are route knowledge and familiarisation with the type(s) of

---

4 [www.dft.gov.uk/consultations/closed/interoperability/annexa.pdf](http://www.dft.gov.uk/consultations/closed/interoperability/annexa.pdf)

5 [www.dft.gov.uk/consultations/archive/2001/inteugb/interoperabilityofthetransau1650?page=9](http://www.dft.gov.uk/consultations/archive/2001/inteugb/interoperabilityofthetransau1650?page=9)

A black and white photograph of railway tracks receding into the distance, with a white line on the right side of the tracks.

traction unit used by the operating company. A British driver who relocates to a different company within the UK will most likely have to acquire new route knowledge and familiarise himself with different traction units. While some basic skills learnt under the first operator in the areas of safety and signalling would not need re-learning, this is only part of the skills required to move to another company. The proposed license, valid throughout the community, would assess such abilities as language skills. All in all, a typical “sledgehammer to crack a nut” approach as far as Britain’s railways are concerned, and driven, as before, by the obsession to build up a trans-national rail network, references to which can be found at several places in the directive. According to Transport Committee Member Gilles Savary MEP in 2007, there are hopes of extending the idea of a European license to other rail staff as well by 2012.

The only conceivable benefit once again is restricted to international trains, both freight and conventional passenger services, where it has been customary to change crews when crossing national boundaries even where the locomotives are not changed.

In conclusion, the European ideal of interoperability, for all the aims or promoting rail travel, could create extra costs for train operating companies within Britain and thus achieve the opposite effect to what is intended. The obsession with international rail traffic is a millstone round the neck of the British rail network, where the vast majority of both passenger and freight services will always be domestic in nature.

# ERTMS

ERTMS, the European Rail Traffic Management System, has grown out of a desire to develop a state-of-the art signalling system for use across the European Union. Although in theory a private sector project involving six companies, Alstom Transport, Ansaldo STS, Bombardier Transportation, Invensys Rail Group, Siemens Mobility and Thales, it is being developed in close co-operation with the European Union. A glance at the website of the European Railways Agency (see page 33) will confirm this, for the agency describes itself, among other things, as the “system authority” for ERTMS, which it describes as a system which will “create unique signalling standards throughout Europe” – in other words, the format for a future EU “harmonised” signalling system.

## **What does ERTMS consist of?**

There are two main components to ERTMS: Firstly, ETCS (European Train Control System) which is a sophisticated form of automatic train control, which would intervene, for instance, if a train overran a signal at danger. Secondly, GSM-R is a radio system providing a link between the train crew and signalling centres. ERTMS has three “levels” – Level 1 consists of track to train communications only, whereas Level 2 features continuous communications between the train and the radio block centre. Level 3 is still at the conceptual phase and will feature a “moving block” technology – that is, a system that allows trains to run at a safe braking distance apart from each other using lineside sensors and computers but without any need for conventional signalling. The first level 1 implementation was the Zaragoza – Huesca high speed line in Spain, which opened in December 2004, with the Italian Rome-Naples high speed line opening a year later being the first route using level 2.

ERTMS has attracted interest from outside of the EU – being in use in China, India, Taiwan, South Korea and Saudi Arabia.

## **Current automatic train control measures in the UK**

Britain had previously installed both automatic train control systems and radio signalling. The most recent automatic train control, TPWS (Train Protection and Warning System) is a system that applies the brakes automatically on any train that passes a red signal. It was applied to over 12,000 signals, 650 buffer stops, around 1000 permanent speed restrictions as well as the entire train fleet over a period of three years at a cost of £585 million. Since its implementation, it is claimed that the number of SPAD (Signal Passed at Danger) incidents has fallen by 80%. However, if ERTMS level 2 was to be implemented across the network, much of the TPWS installation would be redundant. ETCS (part of ERTMS) was considered for the West Coast Main Line upgrade, but it was rejected, as the technology was unproven at the time.<sup>6</sup>

Radio signalling was first used on the East Suffolk line in the 1980s and is used on several lines in the Scottish Highlands. For these lightly-used routes, it was a useful way of cutting costs, reducing the need for signalling staff.

In view of the expenditure on TPWS, it is hardly surprising that the UK is dragging its feet with regards implementing ERTMS, even though TPWS is not failsafe. It would not have prevented the Southall rail crash of 1997, for instance, as one train was travelling too fast for TPWS to have stopped it in time.

The line chosen for the first British installation of ERTMS was the Cambrian Coast line to Pwllheli in North Wales. So far, the installation of the necessary masts is behind schedule, and the implementation of the £59 million scheme has been put back to October 2009. One interesting beneficiary of this delay is the series of regular steam-hauled excursions that have run along the line during the summer season since 2005. At first, it was believed that steam would simply not fit into the ERTMS scheme, as the on-train equipment required must be carried “in the leading vehicle” and cannot be accommodated on a steam locomotive. However, as the West Coast

---

6 <http://www.railway-technology.com/projects/virgin/>

Railway Company, the operator of these trains pointed out, the equipment is only to be installed in one coach of the two-car diesel unit trains which provide the regular service trains, it follows that this rule cannot apply when the train is running “backwards”. After negotiation with Network Rail, an agreement was reached on 3<sup>rd</sup> July whereby portable ERTMS signaling kits will be provided for use with steam locomotives. This deal only applies to the Cambrian route, but if ERTMS is deployed on other lines at a later date, it does look as if this solution or something similar may prevent ERTMS killing off steam-hailed excursions on the national network.<sup>7</sup>

### **Would it be money well spent?**

Steam trains apart, the cost of ERTMS rings some very serious warning bells. Its installation on one line in Wales alone has cost more than 10% of the entire cost of equipping the nation’s railways with TPWS. It must be stated that Network Rail are enthusiastic supporters of the ERTMS project, even though no European directive has set any binding timescale for the implementation of ERTMS across the networks of the member states, although it is clearly their goal.

But at what cost? An article in the June 2004 issue of *Modern Railways* called *ERTMS: can it be made cost-effective?* answered the question by saying, “Quite simply, as it stands ERTMS is unaffordable.” Other critics claim that it would actually reduce capacity on lines where it was introduced.<sup>8</sup> In a time of recession, it does seem a most excessive item of expenditure when a combination of TPWS, other automatic train protection measures and conventional signalling has delivered a network with good safety and reliability records. Indeed, three of the last four years have seen no fatalities whatsoever from train accidents.


The official ERTMS website, [www.ertms.com](http://www.ertms.com), under the heading “Why does Europe need ERTMS?” points to the complexity of running international

---

7 See articles in *Steam Railway* magazine, Issue 364, page 66 and *Railway Magazine*, September 2009, page 66

8 See, for example, [http://www.mastsanity.org/index.php?option=com\\_content&task=view&id=20&Itemid=30](http://www.mastsanity.org/index.php?option=com_content&task=view&id=20&Itemid=30)





trains due to the incompatibility of train control systems across the EU as its main selling point. In other words, there is a political dimension. As has been discussed in earlier chapters, international trains are always going to be a small part of Britain's rail services, and concentrated on a small handful of routes. A politically-inspired drive to implement ERTMS right across our country's network could be taxpayers' money very poorly spent. British supporters of ERTMS will rightly point that TPWS is not the last word in automatic train control, but other less expensive and sophisticated forms of automatic train control could well be better suited to the vast majority of Britain's rail network.

## COM (2007) 608 – Freight Corridors

This proposal is a most alarming development, although it purports to have the laudable aim of boosting rail's share of the European freight market, which stood at a mere 10% in 2005.

The Commission White Paper on European transport policy for 2010 on which this document is based envisaged the creation of “multimodal corridors giving priority to freight.” Every member state, apart from rail-less Cyprus and Malta, must be participating in at least one freight corridor by 2012. Included in these “corridors” are both the East and West Coast Main Lines, linking London to Scotland.<sup>9</sup> Some 40% of UK freight services run along some part of the West Coast route, which has also recently undergone a £9 billion upgrade allowing tilting passenger trains to operate at 125mph for much of the way from London to Glasgow. The better-aligned East Coast Main Line operates conventional trains at speeds of up to 125mph.

Most freight trains operate at a maximum speed on 75mph. The most recent intermodal freight stock is capable of running at 90mph, although very few trains currently do so. Accommodation of these slower-moving trains is easier on the southern section of both East and West Coast main lines where there are long stretches of quadruple track, allowing the frequent 125mph expresses to use separate tracks from slower trains. Further north on double track sections, it is necessary to “loop” slower trains – that is, stop the train on a short section of quadruple track to allow the faster 125mph train to pass. Under the Commission's proposals, international freight trains would have priority in the allocation of train paths, which would seem on the face of it to be incompatible with looping, which gives priority to the passenger trains.

The result of this is estimated to be a 10% increase in passenger journey times – an absurd situation considering the time and money spent in upgrading the West Coast Main Line to allow a London-Glasgow journey

---


<sup>9</sup> The map can be found on <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2007:0608:FIN:EN:PDF> page 6

time of only just over 4 hours. The Commission's proposals, if the estimates are correct, could add another 25 minutes to the London-Glasgow journey time, thereby undoing much of the benefit of the costly and disruptive upgrade.

Although the Commission Document is a strategy document rather than a piece of legislation, the phrase "The Commission will propose additional legislation on the international allocation of train paths and on the priority accorded to international freight" is an ominous declaration of intent and a classic example of political interference. On what grounds should international freight trains be given this priority? It makes neither operational nor economic sense. Why should one freight train bound for France or Belgium be regarded as *de facto* more important than another train using similar stock, similar motive power and running at a similar maximum speed but conveying, for instance, goods for a supermarket chain from one part of the UK to another? Having sought a "non-discriminatory" level playing field for access paths in the 2001 directive, the Commission is seeking to introduce politically-inspired positive discrimination in contradiction to its earlier thinking.

It would also be interesting to see how "international freight trains" are defined. The frequent services of container trains that run to ports like Felixstowe and Southampton could be regarded as "international" inasmuch as their cargo is destined for another country, even if the cargo in question will complete part of its journey by ship. One suspects that the introverted focus of Europe's legislators will come up with a definition which restricts the term to those trains that cross Europe's national frontiers by rail – in other words, in the case of the UK, only freight trains running through the Channel Tunnel.

One other interesting international freight corridor features in the map – Cork-Dublin-Belfast. While few would quarrel with the aim of boosting freight traffic on the Irish rail network, there are currently no regular freight trains whatsoever that cross the Irish border at the moment – the infrequent fertiliser traffic that used to run being a victim of a general downturn in Irish



rail-borne freight over the last decade. Priority in this instance, if we are to take the document at face value, must be given to non-existent trains! Whoever drew the lines to mark out this particular freight corridor was clearly living in a fantasy world – as indeed, so it seems, was the author of the entire document.

## **The European Railway Safety Directive 2004/49/EC**

This Directive was designed to ensure that safety does not present a barrier to the establishment of a single market for railways. It required member states to agree to a set of common safety indicators (in other words, what are the hazards involved in rail operation, such as broken rails or SPADs), common safety methods (how these sorts of hazards are to be avoided) and common safety targets (a definition of minimum safety levels).


One requirement of this directive was the establishment of an independent rail investigation body. Britain had anticipated this directive by the setting up in 2003 of the Rail Accident Investigation Branch, which superseded HMRI (Her Majesty's Railway Inspectorate) as the main body dealing with railway accidents in 2005. The RMT union claims that the effect of European interference in our railways will actually compromise safety.<sup>10</sup>

The biggest problem to emerge with the transposition of this directive into British Law was the replacement of HMRI by a different procedure for verification of safety standards in new rail projects. This was accomplished by the ROGS (Rail and Other Guided Transport Systems) Safety regulations of 2006, which placed the responsibility for safety at the door of the railway operators themselves. While not a major problem for the big train operating companies, this caused a major concern for heritage railways, who operate with smaller cost margins and rely mainly on volunteer labour and who may struggle with the costs involved in training up suitable people to acquire the skills needed.

In this instance, it appears that this extra burden is a case of "gold plating" of EU legislation by those who transposed it into British law, and the blame cannot be entirely laid at the door of the EU. It could also be argued that the provision of Railway Inspectorate staff to assess safety on heritage railways

---

<sup>10</sup> <http://www.spectrezine.org/europe/gordon.htm>



was an unwarranted luxury, but even so, without European interference, a system which has worked well for many years could have continued to operate.

## The European Railways Agency

This organisation was established by Directive EC/881/2004 and its mandate, according to its website, was “to help create this integrated railway area by reinforcing safety and interoperability”. A subsequent directive, EC/1335/2008 has superseded the original directive and increased the powers of this body.

Its mandate revolves around the three areas previously studied – interoperability, ERTMS and safety. It is based in the North of France and employs approximately 100 staff. It could be seen as the hub that directs all areas of the harmonisation process so beloved of the EU. It has a budget of €21 million for the current year.

As its staffing level grows, so will its interference in our nation’s railways as it pushes forward the implementation of EU legislation. Part of its current mandate is the working out of Technical specifications for Interoperability (TSI’s) for freight wagons, which, as has been noted, may result in extra red tape for the vast majority of such vehicles that will only ever operate in the UK.

Although this body does the bidding of the European Union rather than initiating legislation, its very existence and its potential to interfere with our national network underlines just how far we have fallen by joining the EU. Yes, we need to co-operate with overseas bodies when running international train services, but this apart, should not the nation that gave railways to the world be capable of managing its own railway network?

## Conclusion

Any student of European legislation will observe a familiar pattern in this study of the EU's effect on our rail network – ideological confusion, poorly thought-out proposals and an end result that is bad for Britain.

Britain's privatisation agenda has in many ways anticipated recent EU models for not just the railways but other areas as well, such as energy and communications, whereby large operations are split up and private sector competition is encouraged from companies operating across different member states but within a regulatory framework. Separation of trains from track has its parallels with the EU's enthusiasm for "unbundling" in the energy and telecommunications sectors.

What differentiates the EU's approach from the Thatcher privatisations of the 1980s is the emphasis on the European single market – breaking down Europe's frontiers. This leads to an in-built tension between on the one hand, strong support for the market in areas where the State formerly had a monopoly and, on the other, a constant political interference that goes way beyond the regulatory bodies set up under the Thatcher privatisations.

One thing is clear – the promotion of this model for so many sectors of the economy by the EU is going to be very difficult to reverse at EU level. The EU is too cumbersome and slow-moving to change direction quickly. This means that as far as the railways are concerned, with the exception of the franchise system, which is peculiar to Britain and thus far neither copied or encouraged elsewhere, Britain is stuck with private sector involvement, competition and the separation of train from track as long as it remains within the EU. Many in the industry see this structure as the best way forward. But is this actually the case?

Supporters point to how few rail networks in the developed world remain vertically-integrated. Amtrak in America and Japan's railway system are two such examples. Both are heavily subsidised by the state and the former carries remarkably few passengers considering the large track mileage in



the USA – hardly a success story. Non-EU Norway and Switzerland have both introduced measures that, particularly in Norway have moved away from vertical integration. Are advocates of a vertically-integrated network misty-eyed romantics looking back to a bygone age? They are certainly on the back foot within the railway industry at the moment, even though they enjoy considerable support among the population at large.

At the moment, whether vertically integrated or separated, rail networks worldwide with very few exceptions are either very run down or receive substantial hand-outs from national and regional governments, and this raises a more fundamental question: what is the purpose of the rail network? Since the arrival of mass car ownership in the 1950s and 60s, the large subsidy paid to the railways has been defended both on social and environmental grounds – they provide a lifeline to some isolated areas and take passengers off the roads, thus reducing pollution and congestion.

Are these ideals now being replaced by a business-driven approach where profit at all costs is the new orthodoxy? The EU's approach is a mixture of both, just as the railways and train services in Britain are divided into those that can be run at a profit and those that are likely to need subsidy for years to come.

These questions are not being widely debated at the moment, but a number of ingredients including the high-profile failure of the East Coast Main Line franchise to the recent pronouncements of Bob Crow and his colleagues in the RMT union point to the potential for widespread discussion about the shape and function of Britain's railways in the not too distant future. What can be said with the EU pushing through more and more legislation in relation to the rail network is that any serious debate about the relative merits of private sector involvement versus state control, horizontal separation versus vertical integration or social service versus for-profit business can only be possible outside of the EU.

In the meantime, whatever the overall structure of Britain's railways, we have observed that EU legislation is likely already proving detrimental to


the network, and this is likely to get worse over the coming years. In many ways, there is a degree of logic to many of the proposals studied as far as other member states are concerned, particularly in view of the growth of international rail traffic, both passenger and freight. Germany has rail links to eight other countries and Austria to seven, and in some instances, there are several different international rail routes between two given countries. In these circumstances, Europe-wide agreements make sense, even if the agenda of “ever closer union” and a Europe without frontiers may result in politics overriding economic and operational factors.

For Britain, our position as an island combined in particular with the restrictions of the loading gauge determines that our rail system will inevitably be more self-contained and less able to be “harmonised.” International trains will always have a far less important role than elsewhere. In consequence, many of the measures studied in this survey are likely to lead to unnecessary extra expenditure, deterioration in the performance in some areas or an unnecessary rise in administrative procedures in others. An independent Britain would have to comply with EU law with regards the operation of international train services, particularly on the Channel Tunnel Rail Link and through the Tunnel itself, but would otherwise be free to repeal the legislation studied in this document, and in so doing would gain far more than would be lost.

This study has already proved that Britain’s railways would benefit from our withdrawing from the EU without dwelling on every single aspect of EU legislation – in force or proposed. A brief look at a couple of further issues only serves to confirm the main points. One minor, but irritating feature of modern train travel – the plethora of announcements – has turned out to be EU-related. When Conservative MP David Willetts complained to South West Trains about this, he was told by the company that EU regulations state that all trains have to display and announce information regarding the destination and upcoming stops.<sup>11</sup> The culprit on this occasion is Regulation (EC) No 1371/2007 on rail passengers’ rights and obligations. Then there is

---

11 Open Europe Bulletin, 21<sup>st</sup> August 2009



the possible effect of changes to EU's emission charges rules from 2012. Although nothing has yet been decided, it is possible that diesel-hauled trains may become more expensive in consequence – a particularly bitter pill for residents in the East Midlands, whose main line to London was recently passed over for electrification in favour of the Paddington-Bristol and Paddington-Swansea routes.

This negative picture of the European Union's effect on our railway network is sadly mirrored by studies into its effect in other areas as diverse as fishing and banking. It is so utterly bizarre that considering so many analyses from so many different angles of the benefit or Britain's membership of the EU reach the same conclusion – that we are better off out – that the present Labour Government has dragged us deeper into the European mire by signing the Lisbon Treaty. As if that were not enough, both Labour and the Liberal Democrats still seek to stifle any debate about withdrawal on the grounds that it would be a catastrophe, and to label all proponents of withdrawal as madcap extremists.

It is to be hoped that this study may find its place in the ever-increasing volume of literature proving that the real extremists are those who refuse to have an honest and open debate about the true cost of Britain's membership of the EU, and that it will provide some additional ammunition for all who seek the noble cause of the independence of our nation.

## THE BRUGES GROUP

The Bruges Group is an independent all-party think tank. Set up in February 1989, its aim was to promote the idea of a less centralised European structure than that emerging in Brussels. Its inspiration was Margaret Thatcher's Bruges speech in September 1988, in which she remarked that "We have not successfully rolled back the frontiers of the state in Britain, only to see them re-imposed at a European level...". The Bruges Group has had a major effect on public opinion and forged links with Members of Parliament as well as with similarly minded groups in other countries. The Bruges Group spearheads the intellectual battle against the notion of "ever-closer Union" in Europe. Through its ground-breaking publications and wide-ranging discussions it will continue its fight against further integration and, above all, against British involvement in a single European state.

## WHO WE ARE

**Honorary President:** The Rt. Hon the Baroness Thatcher of Kesteven, LG OM FRS

**Vice-President:** The Rt. Hon the Lord Lamont of Lerwick

**Co-Chairmen:** Dr Brian Hindley & Barry Legg

**Director:** Robert Oulds MA

**Head of Research:** Dr Helen Szamuely

**Washington D.C. Representative:** John O'Sullivan, CBE

**Founder Chairman:** Lord Harris of High Cross

**Former Chairmen:** Dr Martin Holmes & Professor Kenneth Minogue

### Academic Advisory Council:

Professor Tim Congdon  
Professor Kenneth Minogue  
Professor Christie Davies  
Professor Norman Stone  
Dr Richard Howarth  
Professor Patrick Minford  
Ruth Lea  
Andrew Roberts  
Martin Howe, QC  
John O'Sullivan, CBE

### Sponsors and Patrons:

E P Gardner  
Dryden Gilling-Smith  
Lord Kalms  
David Caldwell  
Andrew Cook  
Lord Howard  
Brian Kingham  
Lord Pearson of Rannoch  
Eddie Addison  
Ian Butler  
Thomas Griffin  
Lord Young of Graffham  
Michael Fisher  
Oliver Marriott  
Hon. Sir Rocco Forte  
Graham Hale  
W J Edwards  
Michael Freeman  
Richard E.L. Smith

## BRUGES GROUP MEETINGS

The Bruges Group holds regular high-profile public meetings, seminars, debates and conferences. These enable influential speakers to contribute to the European debate. Speakers are selected purely by the contribution they can make to enhance the debate.

For further information about the Bruges Group, to attend our meetings, or join and receive our publications, please see the membership form at the end of this paper. Alternatively, you can visit our website [www.brugesgroup.com](http://www.brugesgroup.com) or contact us at [info@brugesgroup.com](mailto:info@brugesgroup.com).

### Contact us

For more information about the Bruges Group please contact:

Robert Oulds, Director

**The Bruges Group**, 227 Linen Hall, 162-168 Regent Street, London W1B 5TB

**Tel:** +44 (0)20 7287 4414

**Email:** [info@brugesgroup.com](mailto:info@brugesgroup.com)



[www.brugesgroup.com](http://www.brugesgroup.com)