

High-speed rail to sunny Costas

Railway investment in a happy holiday spot for British

By Peter Owen

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Plans for new and improved railway services here in Andalusia are phenomenal, but it must be noted that the existing provision is sadly inadequate for historical reasons, and current passenger usage is accordingly low.

Currently the great city of Malaga has no more than 30 trains per day in and out of the main Spanish national railways (RENFE) station, excluding the coastal local (Cercanias) line to Fuengirola.

The main reason for this is the inadequate capacity of the tortuous single-track line which enters the city from the north. It is single track because of the difficulty and expense in the 19th century of building the line through the mountains and the Chorro gorges, with the need for numerous tunnels and viaducts.

Thus all long distance, regional and local passenger services, and freight trains, have to use this single track.

There are only six trains per day each way to Madrid and six also to Sevilla, and no through trains at all to Granada, nor Algeciras, nor Cadiz.

Unfortunately the line which ran along the coast eastwards from Malaga towards Nerja was closed some years ago. Poignantly several of the characteristic station buildings still exist and have been put to other uses, and sections of the track bed can still be seen.

Marbella lost its railway years ago when it was a small and insignificant place. Now it must be the largest city in Europe and certainly the most affluent, not to have any railway access.

Unfortunately and surprisingly, after the triumphant success of the first high-speed (AVE) service from Madrid to Cordoba and Sevilla in 1992, there were no more high-speed projects started in Spain for more than 10 years.

Now at last, of all the splendid new railway projects benefiting Andalusia, the most advanced is the extension of the AVE line from Cordoba to Malaga which is well under way.

The first section as far as Bobadilla



JOINED UP: The Spanish national rail network in Andalusia. Big improvements are on the way

is expected to be in use this year in the early summer, giving a reduction in the current locomotive-hauled Talgo 200 Madrid-Malaga (310miles) timing from 4hrs 10mins to 3hr 15min. There will be a new gauge changer at Bobadilla. When the second, more difficult phase into Malaga is complete the time will be reduced to 2hr 20min, an average speed of 135mph. Note that in Spain high-speed trains now have a top cruising speed of 215mph.

The last mile or so of the route into Malaga is to be in tunnels. There will be two AVE tracks and two wide-gauge tracks, leading to nine platforms in the rebuilt RENFE station.

There is also a high-speed connection being built south west of Cordoba to allow AVE trains to run directly between Sevilla and Malaga with a predicted timing of 45 mins, compared to the fastest 2hr 20min of the current TRD trains (regional diesel multiple units) using the old slow route via Osuna. Not

to be outdone, the city of Granada lobbied successfully for a fast train service, and a high-speed line is now under construction, branching eastwards off the Malaga line at Bobadilla.

The momentum has not stopped there. The Andalusian autonomous regional government has decided that all the major cities should be connected to each other by high speed trains.

Indeed work has been going on for some time on greatly increasing line speed on the Osuna route so as to halve the time of the existing Sevilla to Malaga stopping services.

This is presumably being done by preserving the Spanish wide gauge 1668mm track, rather than the international (and AVE) gauge of 1435 mm. It will probably be operated by Talgo variable gauge trains.

It is expected that with the greatly increased track capacity and more frequent services, Malaga will see a six-fold increase in passenger numbers although this may be an under

estimate. There is also a complication with different gauges affecting the plans for new services along the Costa del Sol.

The existing mainly single-track passenger railway, approximately 20 miles long, between Malaga and Fuengirola, was opened in 1916, primarily to carry freight, mainly minerals and agricultural produce, from along the coast to Malaga and beyond.

It has had a history with many precarious moments, but has survived and was modernised and electrified in the early 1970s. It currently operates at 30-minute intervals, using class 446 emus and carries about 10million passengers per year.

It will carry far more when current works to provide double track are completed, which will allow faster and more frequent trains, probably at 15-minute intervals. RENFE wished to do this work in the early 1990s, but unfortunately did not receive approval from the central government for over 12 years. The

Expansion, but the trains keep running

The track doubling of the Malaga to Fuengirola line has been under way for over a year now, and has involved very complicated civil works, widening of rock cuttings and embankments, widening of under and over bridges,

construction of new tunnels, resiting of existing overhead line supports, and installation of new ones, new signalling, as well as the new track and new station platforms.

During all this the railway has never suspended the train

service which operates seven days a week, at 30-minute intervals from early morning to late in the evening. No "bustitution" here and no blockades either, a great contrast what happens in Britain.

need to extend this line both eastwards from Malaga and westwards from Fuengirola, has been obvious for years, and now there are aspirations for the line eventually to connect Almeria in the east with Algeciras in the south west.

Even the property developers' federation is asking for an early start on the line. The first phase is likely to be the 20 miles from Fuengirola to Marbella, much of it in tunnel because of the huge amount of building development which has been allowed in recent years all along the coast.

Marbella to San Pedro, Estepona and Algeciras would follow in subsequent phases. This coast is a classic example of a long linear "urban" settlement with horrendous road traffic problems, which cries out for a high capacity inter-urban railway.

There is also a proposal, supported by the regional government, that Marbella should be connected with Madrid by a high-speed line, and that this should include a stop at Malaga airport.

The proposed route for this is not known, and the gauge complication arises again. Probably joint running on the "suburban" tracks, with gauge-changeable trains will be the answer.

Meanwhile work will soon start on the construction of the first two lines of the Malaga underground light metro, which are to run from Teatinos and Martin Carpena on the western and south western outskirts of the city to a station at La Malagueta near the bull ring on the eastern edge of the city centre, serving the main RENFE station, the long-distance bus station, and the busiest areas of the city centre on the way.

Design work is also now advanced on line three, which will extend the metro four miles eastwards to El Palo, entirely underground.

When the eastern extension of the coastal Cercanias line is implemented, its trains will be able to connect with those of the Metro at El Palo, perhaps using the same tunnels from Malaga city centre.

It is interesting to note that there has been no serious public opposition to any of these projects, and generally good co-operation between the various public bodies involved.

Some concern has been shown about the disruptive effects of work on commercial interests and on road traffic flows, but not in an obstructive way. The mayor of Malaga city has been arguing about some of the sites proposed for stations and particularly which should be transport interchanges. Design decisions and the last word in disputes seem to remain with the regional junta.



EXCELLENT SERVICE: This Egyptian Railways train leaving Luxor en route to Cairo was smooth, fast and cheap, reports Railfuture's Paul Krebs. His 50-mile inter-city journey to Qena cost just over £1, first class. Paul's travelling companion, who does not normally travel by train, was impressed both by the service and the numbers of people using the train. Egypt's thriving railway network forms the "backbone of the nation", carrying some 2.3 million passengers every day

Picture: PAUL KREBS

Is this the way for Britain?

A rolling programme of expansion more than doubled Madrid's metro network in 10 years.

The metro's president Professor Manuel J Melis was determined to build the extra lines at reasonable cost.

He refused to accept that building a seven-mile long line with a five-mile tunnel should cost £217million per mile and take seven years.

He proved that any metro could be built and commissioned in just over three years at a cost of no more than £54million per mile.

Yet most of the metros built around the world cost £163million.

He argues that the linear nature of a metro makes it easy to divide a project into manageable parts - with about £100million per contract.

He said project managers must cut their estimates because politicians are unwilling to invest huge

amounts into projects their administrations will not see through to completion. Cities need metros but they can't afford to pay the prices being asked, he said.

In one Madrid project, the professor boasted, 34 miles of metro and 41 stations were built at an overall cost of £30million per mile. The underground sections cost £45million per mile. The project took three years and seven months.

The costs included the civil, architectural, electrical and mechanical costs as well as new rolling stock.

In a second project, 46 route miles of the Metro-sur, 47 stations, three depots and 18 sub-stations were planned, built and commissioned for £46million per mile.

The project took three years and eight months.

Professor Melis said colleagues from other metros around the world could not believe that the fig-

ures took in all the costs, including utility diversion and land acquisition. Since Madrid's first metro extension opened, he estimates that the number of journeys has increased by 170million per year, saving Madrid residents 23million hours.

The estimated social benefit (in saved time) is around £188million.

He said spending more than eight months on design is a waste of time but Madrid benefited from the regional governor making decisions quickly.

He added: "We do not think it is necessary to hire consultants as general project managers in order to achieve completion on time and on budget."

He said tunnelling was the most expensive undertaking but they used "earth-pressure balance techniques in soft ground" because it is cheaper, faster and safer than the New Austrian Tunnelling Method.

Professor Melis said the authority's in-house architect created a functional, beautiful and low-cost design for the stations.

Madrid Metro contracted signalling, tracklaying, communications, power supply, sub-stations, and overhead line equipment separately and installed them at the appropriate time.

He said that using a systems-integration company to manage this process merely increased the price and time taken.

Professor Melis and Madrid is in the middle of the next phase of an expansion plan for 2003-2007. It includes metro, light rail and heavy rail projects.

For more details:

<http://www.reed.edu/~reyn/Madrid.2003.2007.html>

Seville metro:

<http://www.metrodesevilla.net/> and <http://www.urbanrail.net/eu/sev/sevilla.htm>