

## Environmental and Social Data Sheet

### Overview

Project Name:	AVE MADRID-SEVILLE RENEWAL AND ERTMS DEPLOYMENT
Project Number:	2020-0385
Country:	Spain
Project Description:	The project consists of the renewal of the high-speed railway line Madrid-Seville (471 km), including renewal of civil works, tracks, electrification, signalling and telecoms, as well as deployment on the line of ERTMS and construction of a new bypass near Cordoba to allow direct connections between Seville and Malaga/Granada.
EIA required:	Multi-scheme project, requirements vary
Project included in Carbon Footprint Exercise <sup>1</sup> :	Yes

(details for projects included are provided in section: "EIB Carbon Footprint Exercise")

### Environmental and Social Assessment

#### Environmental Assessment

The project is composed of several schemes and the requirements concerning the EIA vary.

##### New railway in Almodovar del Río (Cordoba)

The only component of the project that is on new alignment is a 1.74 km long by-pass connecting the Cordoba - Seville branch of the Madrid – Seville line and the line Cordoba – Malaga. The by-pass is located in Almodovar del Río (few km south of Cordoba). This scheme falls within the scope of Annex I of the Environmental Impact Assessment (EIA) Directive (Directive 2011/92/EU as amended by 2014/52/EU). The EIA was carried out in 2015 – 2017 and the environmental consent (*Declaración de Impacto Ambiental, DIA*) was published in the State Official Bulletin (*Boletín Oficial del Estado, BOE*) in May 2017.

<sup>1</sup> Only projects that meet the scope of the Carbon Footprint Exercise, as defined in the EIB Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: 20,000 tonnes CO2e/year absolute (gross) or 20,000 tonnes CO2e/year relative (net) – both increases and savings.

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Considering the size, characteristics and location of the project, the impacts are considered to be minor and do not require any particular mitigation measures besides the usual ones, such as limiting dust generation and noise during construction, appropriate location of the works base, restoration of the vegetation in the affected areas, use of culverts as fauna crossings, and monitoring.

The by-pass is located in the vicinity of a Natura 2000 site ES6130015 “Río Guadalquivir-Tramo Medio” (approx. 100 m from the line). The second closest site is ES6130007 “Guadiato-Bembézar” at nearly 3 km from the line. An appropriate assessment of the potential impacts of the scheme on Natura 2000 sites was carried out as part of the EIA. The assessment includes the definition of appropriate impact mitigation measures, such as establishment of the limits of the works outside the boundaries of the site, limitation of dust and construction of sediment barriers. The assessment concludes that with these measures in place the scheme will have no significant impact on the sites.

*Renewal of the existing Madrid – Seville high speed line*

Other schemes included in the project correspond to the renewal and modernisation of the existing infrastructure, such as repairs of civil engineering structures, earthworks (embankment and cuttings) and drainage, renewal of some track superstructure elements (turnouts, expansion joints, selective renewal of sleepers and ballast), modernisation of signalling, telecoms and energy supply installations. These works will mostly be carried out within the existing right of way of the Madrid – Seville line.

Due to their nature, most of these works are not likely to have any significant impact on the environment. However, a limited number of engineering schemes may require EIA or screening procedure. Each scheme will be analysed by the promoter separately, in particular, in relation to potential effects on Natura 2000 sites. This concerns the deployment of a second layer of GSM-R (mobile telecommunications system for railways) on the line. The design of this system and definition of the position of the transmission stations has not been carried out yet. Some of these stations and their masts may need to be installed within the boundaries or in the vicinity of Natura 2000 sites. Also some existing civil engineering structures and earthworks are located within the boundaries of Natura 2000 sites or next to them. If necessary for these schemes, EIA or screening procedure will be carried.

The Natura 2000 sites crossed by the line or adjacent to it are the following.

<b>Sites</b>	<b>Distance to the project</b>
Vegas, cuevas y páramos del sureste de Madrid (ES3110006)	Adjacent to the line for approx. 1.2 km
Montes de Toledo (ES0000093) and Montes de Toledo (ES4250005)	Crossed by the line twice over approx. 4 km and 1.5 km and adjacent to the line for approx. 2.9 km
Lagunas volcánicas del Campo de Calatrava (ES4220005)	Adjacent to the line for approx. 1.3 km
Campo de Calatrava (ES0000157)	Adjacent to the line for approx. 5.5 km
Sierra Morena (ES0000090)	Crossed by the line four times over approx. 0.3 km, 8.5 km, 0.1 km and 1.4 km.
Suroeste de La Sierra de Cardeña y Montoro (ES6130005)	Crossed by the line four times over approx. 17.5 km

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Sites	Distance to the project
Guadalmellato (ES6130006)	Crossed by the line four times over approx. 9.5 km
Río Guadalquivir - Tramo Medio (ES6130015)	Adjacent to the line for approx. 0.4 km

During construction, the impacts are largely minor, temporary and localised, such as some disruption during construction because of noise, vibration, dust, etc. Without prejudice to the conclusions of any additional assessment that may be necessary, the usual good practice mitigation measures, such as limitation of dust and noise, water management, and avoiding works during the birds or fish breeding seasons, are likely to be sufficient.

In the operation phase, no substantial additional impacts comparing to the current situation are expected.

Overall, the project will have some positive environmental effects in comparison with the without project scenario, as it will contribute to at least maintaining and most likely increasing the modal share of rail versus road and air transport in the corridor, with environmentally favourable impact related to energy consumption, pollutants and green-house gas emissions.

### **EIB Carbon Footprint Exercise**

The project is included on the following basis:

Estimated annual third party greenhouse gas emissions (vehicular use, from existing and induced demand) from the use of the project in an average year of operation over a 25-year assessment period:

- Forecast absolute (gross) emissions are 72,000 tonnes of CO<sub>2</sub> equivalent; and
- Forecast emissions savings are 8,000 tonnes of CO<sub>2</sub> equivalent.

The project assessment boundaries are:

- In the absolute case:
  - the high speed railway line Madrid - Seville, totalling 470 km on the existing renovated rail infrastructure;
  - the high speed by-bass in Almodovar del Río allowing direct trains from Seville to Malaga and Granada.
- In the baseline case:
  - the existing railway infrastructure, and road network from Seville to Malaga and Granada

The forecasts in the baseline and absolute cases are based on Services' project specific assumptions about the workload of rail services (freight and passenger trains) and fuel efficiency of rail operations. In the baseline case, a portion of emissions from cars, buses and trucks is included using project specific emission factors, equivalent to those passenger or freight trips expected to shift from road to rail in the "with project" case.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

These forecasts may differ from those of the Promoter due to different assumptions, boundaries and baselines.

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### **Social Assessment, where applicable**

The construction of the by-pass in Almodovar del Río requires approximately 13.9 ha of additional land take. Some of the schemes included in the modernisation of the existing infrastructure require some 130 ha of additional land take adjacent to the existing right of way.

The expropriation of this mostly agricultural land is carried out in accordance with the national legislation. No residential properties are affected and no resettlement is required.

### **Public Consultation and Stakeholder Engagement**

For the components that are subject to EIA, the consultation of the relevant stakeholders and public consultation takes place as part of the EIA. For the components that are screened out, consultation of the relevant stakeholders is carried out as part of the screening procedure.

### **Other Environmental and Social Aspects**

The Promoter, ADIF Alta Velocidad, has an established environmental policy and operates an Environmental Management System in accordance with ISO 14001:2015.

## **Conclusions and Recommendations**

The EIA procedure, including public consultation, has been carried out for the only section of the infrastructure on new alignment and the environmental consent sets out appropriate mitigation measures for environmental impacts during construction and operations. The potential impacts on Natura 2000 sites have been analysed as part of the EIA and the Competent Authority concluded that the scheme will have no significant impact on these sites.

The majority of works related to the renewal and modernisation schemes of the existing infrastructure are not likely to have any significant impact on the environment. The Promoter will undertake to inform the Bank concerning the screening or EIA in the case it is necessary for any of these schemes; and submit to the Bank the screening out decision or the EIA report and the environmental consent, as applicable.

The project is expected to contribute to modal shift from road and air to rail. The project is expected to have positive environmental impact in terms of safety, accessibility of transport, energy savings, air pollution and CO<sub>2</sub> emissions. The project's minor residual negative impacts during construction and operation, considering the planned mitigation measures, are acceptable. There are no substantial impacts during the operation phase.

Under the conditions indicated above the project is acceptable for EIB financing in environmental and social terms.