INTRODUCTION

HSL Zuid is a high speed rail line, 125km long, stopping at three stations: Amsterdam Zuid, Amsterdam Schiphol Airport and Rotterdam, before continuing to the Dutch/Belgian border to connect with services to Antwerp, Brussels and Paris. The Hague and Breda are linked to the high speed network by shuttle trains.

Amsterdam Zuid has been the site of major redevelopment and is now a prominent business district. HSL-Zuid has also been a catalyst for the ongoing extensive redevelopment of Amsterdam Central (where the line originally terminated, before Zuid station opened), Rotterdam Central, The Hague Central and Breda stations.

BACKGROUND

The principal objectives of the project were to connect Rotterdam, Schiphol and Amsterdam to the European High Speed Network, to encourage economic development, and to provide an alternative to air travel to European destinations. It was anticipated in the government’s 1979 structure scheme and a 1986 feasibility study, although the formal planning process started only in 1987.

The initial proposal was withdrawn as it was felt to be weak, but the revised version already included environmental impact assessments and public consultation from the first. A major concern was the impact on the rural Green Heart area, and other proposals based on adjusting and upgrading the existing infrastructure won widespread support both outside and within government.

To reach agreement with the Belgian government on the route to Antwerp, the environmental impacts of several alternatives were assessed. The preferred Dutch route, although the best environmental option with the highest transport value, traversed the Peersbos forest near Antwerp and its viability depended on finding a solution that minimised the impact.

CHARACTERISTICS

HSL Zuid is a dedicated double track infrastructure project, designed for a maximum speed of 300km/hour. The Tunnel Green Heart was one of the first tunnels drilled in the soft Dutch soil: the drilling machine was built specially.
The transport ministry remained initiator, client and main financier throughout the project, and owns the line. The project team worked under its supervision and included employees of its implementation agency, Rijkswaterstaat, and external consultants. Construction was divided into several contracts, each worth about EUR 0.4bn, awarded to different consortia. The track and signaling systems were developed by Infraspeed (a consortium of Fluor Infrastructure, Siemens Nederland, Koninklijke BAM Groep, Innisfree and HSBC Infrastructure), under a DBFM contract with a requirement that for 25 years the track must be available 99% of the time. This contract runs from 2006 till 2031, with the state paying Infraspeed for availability, depending on whether the 99% target is achieved.

Following privatisation of Dutch railways, HSL Zuid was the first rail project developed with minimal influence from the national rail operator, NS. A public tender was issued for exploitation of the track, won by Hispeed Alliance (a consortium of NS and the national airline, KLM). Since merging with Air-France, KLM has a very strong position in the travel market between Amsterdam and Paris.

**TIMELINE ISSUES**

The ministry’s withdrawal of its first proposal, subsequent public opposition to the route through the Green Heart and disagreements in government prolonged the decision-making process. Negotiations with the Belgian state over the route crossing the border were also problematic and the Dutch state eventually paid financial compensation to Belgium to break the deadlock. The choice of security system also caused delays: the specifications of the standard were confirmed late, which also delayed ordering and supply of trains. The line’s opening was subject to a four year delay overall.

**FUNDING**

Of the EUR 7bn (USD 9.79bn in 2010 prices)\(^1\) total cost, EUR 2.6bn (37%) is from the transport ministry’s SVV-budget. Slightly over EUR 1.7bn (24%) is from the FES fund (based on revenues from gas exports, dedicated to economic development). Private funding amounted to EUR 0.94bn (14%), considered to be a high proportion for a Dutch infrastructure project. However, NS overbid in an effort to keep the train line in Dutch ownership.

The ministry also pays EUR 3bn to Infraspeed for track availability, and the government paid EUR 0.4bn to the Belgian government in compensation over the route.

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\(^1\) Costs have been converted to USD at 2010 prices, using historic inflation rates and current exchange rates, to allow comparison between projects.