



**Buck  
Consultants  
International**



Autonom  
Gemeentebedrijf  
**Lanaken**

## **A new rail freight terminal in Lanaken on the border between Belgium and the Netherlands**

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#### **Commissioned by:**

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## Chapter 1 **Introduction**

The commune of Lanaken is located in the eastern part of the Belgian province of Limburg. Lanaken counts 25,000 inhabitants, has a total surface of 5,900 ha and is located on the border with the Netherlands. The province of Limburg is called the logistics gateway of Belgium.

Due to its favourable geographic location, the municipality of Lanaken counts many industrial companies and is part of an important cross-border industrial zone. International industrial companies such as Sappi (paper products), Celanese (chemicals), Sphinx (sanitary), Rubber Resources, Silmaco (sodium products), Sabic (chemicals) and DW Plastics and several logistics service providers such as Gobo International and Kusters Transport are located in this international region.

At present, Lanaken is only accessible by road and waterways. To enhance freight intermodalism and reinforce the cross-border industrial tissue, the municipality has decided to invest in a new rail terminal, that will be operational in 2008. A call for proposals will be launched shortly, to select a terminal operator.

## Chapter 2 **Logistics and transport in Lanaken**

### 2.1 The position of Lanaken in the logistics and transport sector

Lanaken is located in a cross border economic region, encompassing both Belgian and Dutch Limburg. Lanaken, together with Maastricht, form the heart of an important international industrial cluster which is the geographic extension of the German Ruhr-area into the Netherlands and Belgium. Consequentially, the region Lanaken-Maastricht is an important generator of freight as well as an important transit region.

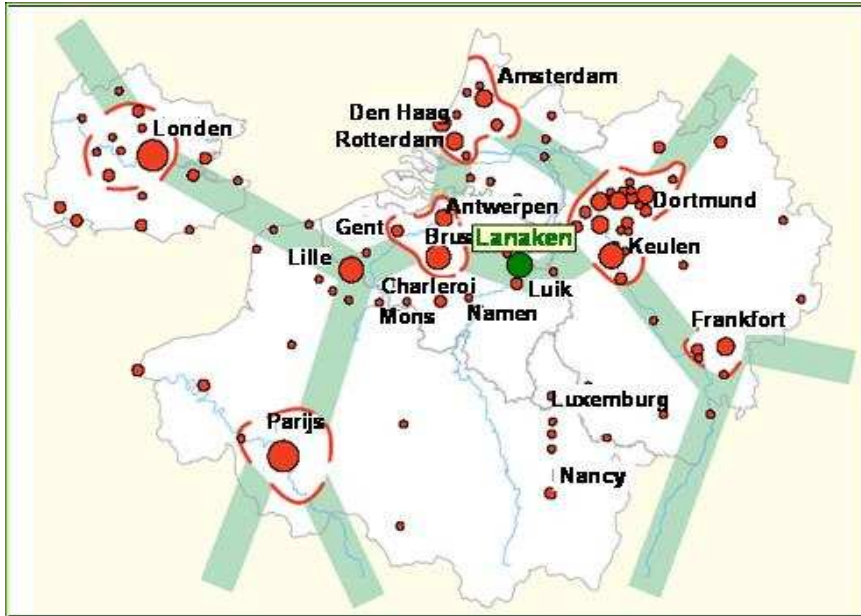
Figure 2.1 Cross-border area around the axe Lanaken-Maastricht



Source: BCI, 2007

The Belgian province of Limburg is earmarked by Cushman & Wakefield<sup>1</sup> as one of Europe's top-locations for distribution and logistics. According to the same study, the province of Limburg will maintain its pole position in the coming years. The most important European markets, where two third of the European Gross Domestic Product is generated, can be serviced in only one day from Limburg.

Figure 2.2 Central location of Limburg (and Lanaken)

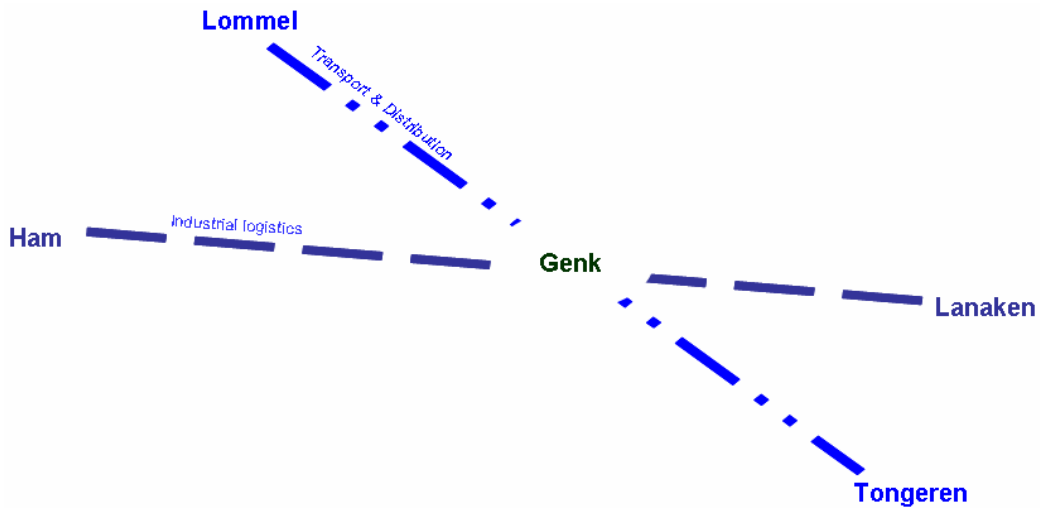


Source: SDER, adapted by BCI

In a recent study, carried out by Buck Consultants International on the logistics sector in the province of Limburg, five geographic clusters have been identified as having the largest potential to attract new logistics developments. Lanaken is one of these clusters.

<sup>1</sup> Cushman & Wakefield (2006), European Distribution Report 2006

Figure 2.3 Logistics structure of Belgian Limburg



Source: BCI, 2007

The logistics sector of the province of Belgian Limburg is gradually developing along two axes. Lanaken is located on the East-West axis, where a specialization in industrial logistics exists.

The extension of the European Union to the East has led to a growing importance of South-Germany for European logistics. This, in turn, is an opportunity for Lanaken, since it is the ideal location to set up distribution networks to Germany and East Europe. An illustration is the fact that Lanaken is used as a dry port by ship-owners calling at the mainport of Antwerp for servicing their customers in the Ruhr-area.

Moreover, the development of logistics activities is a political priority for the province of Limburg and for the communal authorities. Regional and local policymakers aim at facilitating logistics activities and investments. The creation of a rail terminal in Lanaken is one of the actions which are undertaken in this respect.

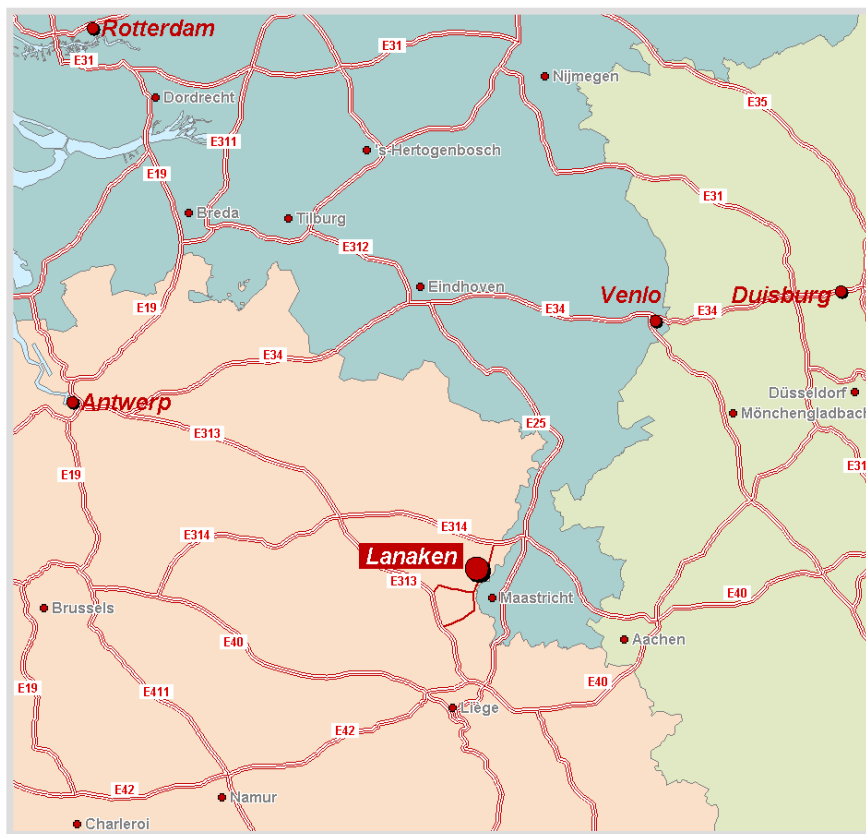
## 2.2 The intermodal accessibility of Lanaken

To reduce mobility risks intermodal accessibility is rapidly becoming an important location factor for large shippers and international logistics groups alike.

### **Access to the road networks**

Lanaken is geographically positioned between three trans-European motorways. The E314 connects Brussels with the Netherlands and Germany. The E313 motorway connects Liège with Antwerp and, finally, the E25 motorway gives access to Eindhoven and Rotterdam. Lanaken is very well connected to these motorways. A truck can reach in 15 minutes the E313, E314 or E25.

Figure 2.4 Motorway infrastructure Lanaken



Source: BCI, 2007

## ***Inland navigation***

Thanks to its location at the intersection of important waterways Lanaken is also well accessible by inland navigation. The Albert Canal is the most important waterway for freight transport in Belgium. It is a large capacity waterway that connects the industrial area around Liege with the port of Antwerp. The Zuid-Willemsvaart is the interconnection of the basins of the rivers Scheldt and the Maas. The Zuid-Willemsvaart is connected on the one hand with the Albertkanaal and on the other hand with the Dutch waterway network.

Figure 2.3 Waterway Infrastructure Lanaken



Source: BCI, 2007

## Airports

Lanaken is located in the service area of several international airports for freight transport. The presence of the freight airports in Liège (Liège Airport) and Maastricht (Maastricht-Aachen Airport) reinforces the attractiveness of Lanaken as a logistics centre.

Since 2000 Liège Airport is the European freight hub of TNT. In 2006, 406.525 tons of freight were transported via Liège Airport. Liège Airport is the second Belgian airport for freight transport. Furthermore, also at Maastricht-Aachen Airport regular freight transport lines are offered.

Figure 2.4 Airports near to Lanaken



Source: BCI, 2007

## 2.3 The development of a rail freight terminal

Lanaken is situated on line 20, which is the historic connection between Maastricht, capital of the province of Dutch Limburg, and Hasselt, capital of the province of Belgian Limburg. Although, line 20 has been de-activated, it will soon (2008) be reactivated again and, especially, the part connecting Lanaken with Maastricht. ProRail, the Dutch infrastructure manager has allocated a budget for this reactivation and works will start soon, ending in 2008. The western part, connecting Lanaken with Hasselt, will be reactivated at the latest by 2015.

Figure 2.5 Railway Infrastructure Lanaken



Source: BCI, 2007

Due to the reactivation of line 20 Lanaken-Maastricht, access to the international rail network is possible

- via Liège to the Montzen-route, connecting the mainport Antwerp with the Ruhr-area, and,
- via Roermond, to the so called Iron Rhine, the second connection of the mainport Antwerp to the Ruhr-area, or to Eindhoven, Venlo and the mainport Rotterdam.

## 2.4 Lanaken: the trimodal hub of the future

Once the rail terminal has started operations, Lanaken is transformed in a trimodal hub of European importance where continental rail distribution is perfectly feasible.

The assets of Lanaken are: the availability of sufficient space at low price, a motivated and skilled workforce, an economic tissue consisting of important producing companies and dedicated contract logistics providers. Moreover, the local authorities are focused on facilitation of business and helping finding solutions.

## Chapter 3 **Rail freight potential**

To examine the market potential of the planned rail terminal, a study has been undertaken which has looked at the “theoretical” market potential on the one hand and the “identified” potential on the other hand. The latter has been determined by interviews of a sample of representative companies based in the area. The former examined the modal shift potential based on existing road freight.

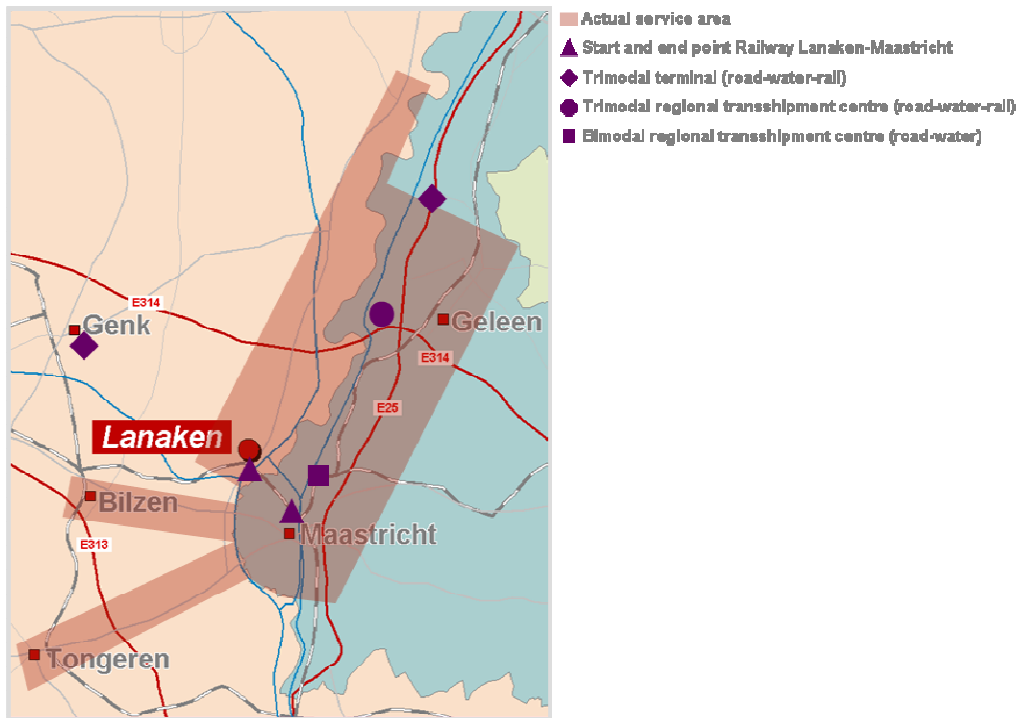
In the EU the average theoretical service area of a rail terminal is situated in a radius of 30 km.

Taking into account the existing competing rail terminals (e.g. Genk, Born) and the existing railway infrastructure, the service area of Lanaken has been determined to include:

- Axis Lanaken-Maasmechelen-Maaseik;
- Axis Bilzen-Maastricht;
- Axis Tongeren-Maastricht;
- Axis Maastricht-Stein-Sittard-Geleen

These axes follow existing road infrastructure.

Figure 3.1 Service area rail terminal Lanaken



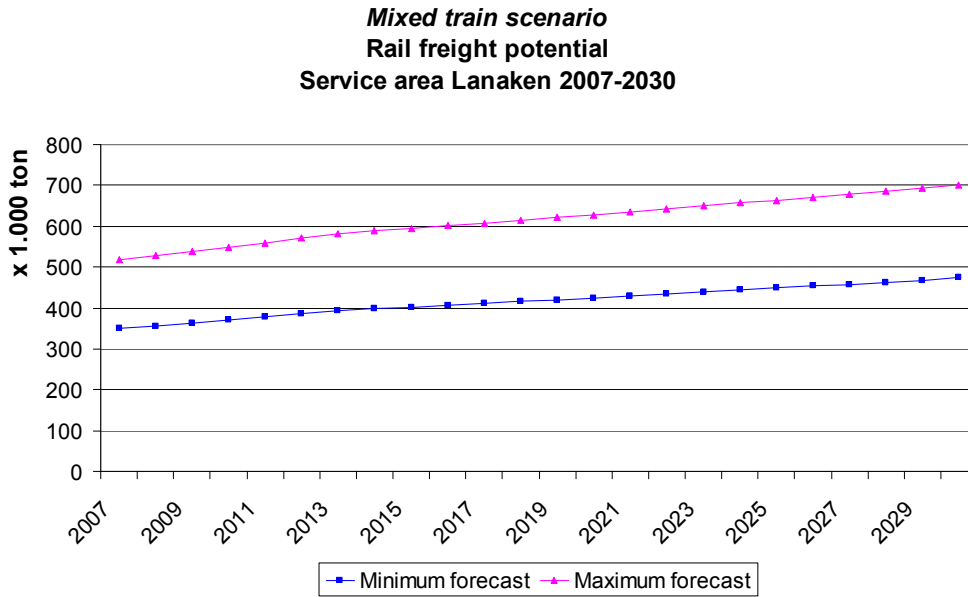
Source: BCI, based on NGI, 2005

Buck Consultants International developed two scenario's to calculate the theoretical rail freight potential of Lanaken. The first scenario is based on a "mixed train scenario" and the second on a "block/shuttle train scenario". Block/shuttle trains have a direct connection to one destination. They have shorter transit times and are in general more attractive than a mixed train. A mixed train has wagons with different destinations and needs to be shunted. In Belgium shunting operations are possible in Antwerp and Charleroi. Due to the bigger attractiveness of block trains, the block train scenario will realize a more substantial modal shift than the mixed train scenario.

For both scenario's minimum and maximum thresholds were calculated from 2007 to 2030. Calculations show extensive rail freight potential in both scenarios.

In the mixed train scenario in 2030 there is a minimum rail potential of 473.702 tons and maximum 701.152 tons. In 2007 the volumes amount to 330.000 tons and 490.000 tons.

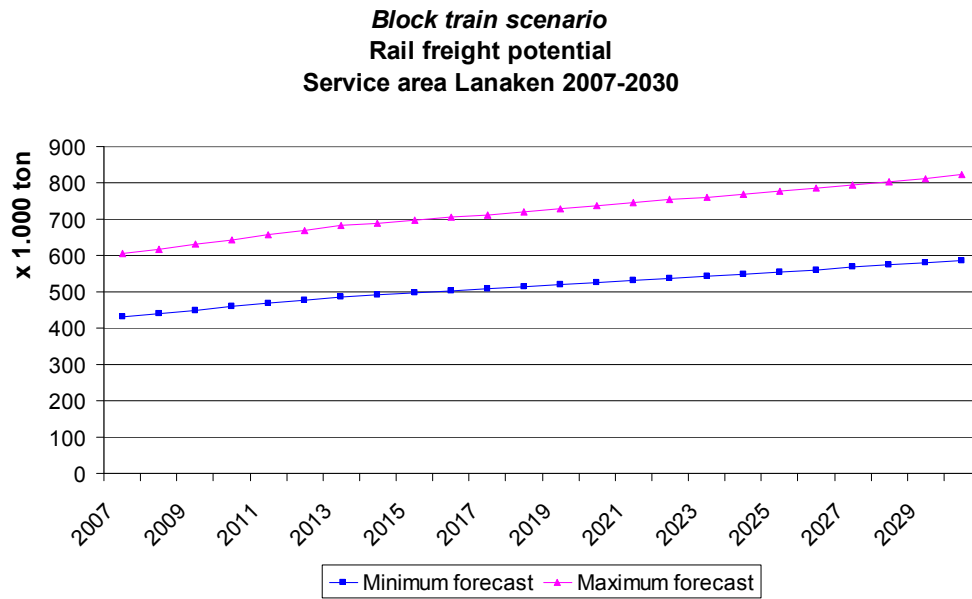
Figure 3.2 Mixed train scenario: Rail freight potential Lanaken 2007-2030



Source: BCI, based on NIS, CBS and European Commission

In the block train scenario the freight potential is bigger and amounts in 2030 to 586.280 tons in worst case and 821.763 tons in best case. In 2007 the volumes amount to 410.000 tons and 580.000 tons.

Figure 3.3 Block train scenario: Rail freight potential Lanaken 2007-2030



Source: BCI, based on NIS, CBS and European Commission

As already mentioned, the “identified” freight potential has been determined by interviews of a sample of representative companies based in the area. The table below gives an overview of the companies interviewed:

Table 3.1 Overview of interviews

<b>Company</b>	<b>Activity</b>	<b>Location</b>
Celanese	Producer of synthetic fibres	Lanaken
DW Plastics	Producer of plastics	Bilzen
Flat Container Logistics	Logistics service provider	Veghel
Heylen Steenfabriek	Producer of bricks	Lanaken
Janssen Holding	Logistics service provider	Venlo
Koninklijke Sphinx	Producer of sanitary	Maastricht
Kusters Transport	Logistics service provider	Lanaken
Nelissen Industries	Producer of bricks	Lanaken
Rubber Resources	Producer of rubber products	Maastricht
Sabic	Producer of chemical products	Sittard-Geleen
Sappi Lanaken	Producer of paper products	Lanaken
Silmaco	producer of sodium products	Lanaken
Gobo International	Logistics service provider	Lanaken

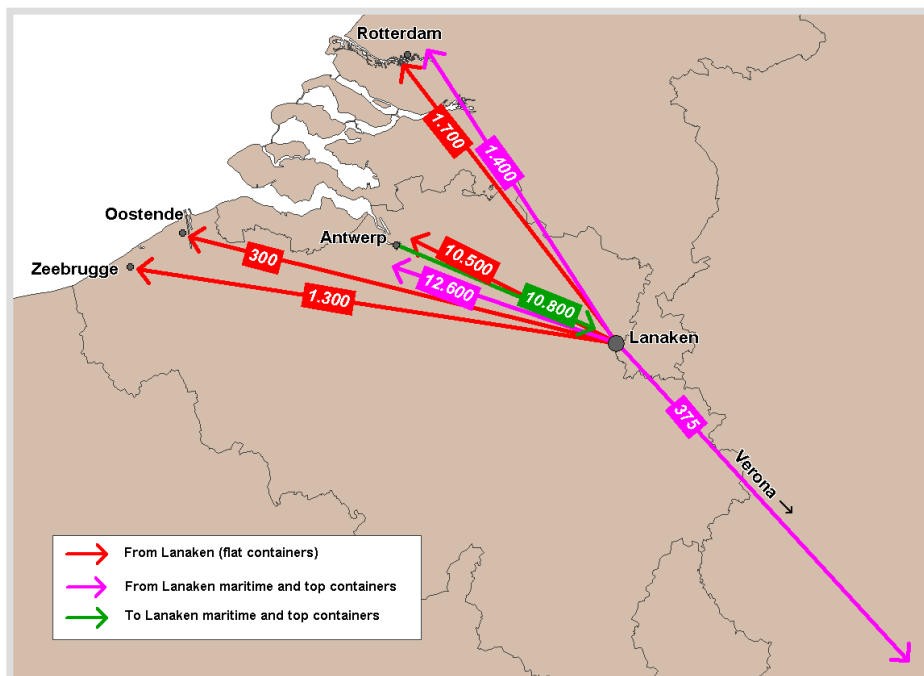
<b>Company</b>	<b>Activity</b>	<b>Location</b>
Withofs Vervoerbedrijf	Logistics service provider	Lanaken
Wijnands Bulk Care	Logistics service provider	Lanaken

Source: BCI, 2006

Important to note is that the inbound flows could only partially be mapped. In many cases the inbound flows are organized by the supplier. Nevertheless the interviews confirm unambiguously the theoretical calculations and indicate substantial rail freight potential.

The next figure shows the containerised freight flows from and to Lanaken. The figure gives an indication of volumes and destinations.

Figure 3.4 Potential containerised freight flows from/to Lanaken



Source: BCI, 2006

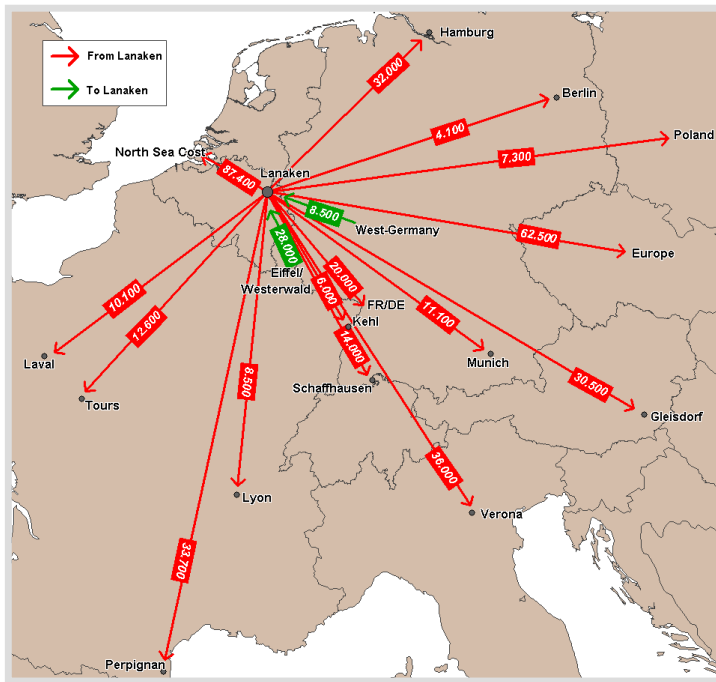
Table 3.2 Specification of potential containerised freight flows from/to Lanaken

Freight flow	Units per year	Type of goods
Antwerp-Lanaken	404	rubber products
Antwerp-Lanaken	8750	different
Antwerp-Lanaken	1500-1750	flakes
Europe-Lanaken	859	rubber products
Lanaken-Antwerp	505	rubber products
Lanaken-Antwerp	3378	paper products
Lanaken-Antwerp	8750	different
Lanaken-Antwerp	10480	bricks on pallets
Lanaken-Europe	859	rubber products
Lanaken-Ostend	300	bricks on pallets
Lanaken-Rotterdam	1310	bricks on pallets
Lanaken-Rotterdam	1430	bricks on pallets
Lanaken-Rotterdam	300-450	bricks on pallets
Lanaken-Verona	250-500	dry bulk
Lanaken-Zeebruges	1310	bricks on pallets

Source: BCI, 2006

The figure and table below show the other favourable freight flows. These flows concern dry and liquid bulk and packed goods. Extensive freight flows can be noticed to different destinations.

Figure 3.5 Potential non-containerised freight flows from/to Lanaken



Source: BCI, 2006

Table 3.3 Specification of potential non-containerised freight flows from/to Lanaken

Freight flow	Tons per year	Type of goods
Lanaken-Kehl	6000	paper (rolls or pallets)
Lanaken-Berlin	4107	paper (rolls or pallets)
Lanaken-Europe	60000-65000	ropes in bales on pallets
Lanaken-France/Germany	20000	liquid end products
Lanaken-Gleisdorf	30524	paper (rolls or pallets)
Lanaken-Hamburg	31989	paper (rolls or pallets)
Lanaken-Lavalle	10103	paper (rolls or pallets)
Lanaken-Lyon	8508	paper (rolls or pallets)
Lanaken-Munich	11101	paper (rolls or pallets)
Lanaken-North Sea Coast	87386	paper (rolls or pallets)
Lanaken-Perpignan	33696	paper (rolls or pallets)
Lanaken-Poland	7314	paper (rolls or pallets)
Lanaken-Schaffhausen	13884	paper (rolls or pallets)
Lanaken-Tours	12620	paper (rolls or pallets)
Lanaken-Verona	35914	paper (rolls or pallets)
Eiffe/Westerwald-Lanaken	28000	clay and lava (bulk)
West-Germany-Lanaken	8000-9000	clay (bulk)

Source: BCI, 2006

The identified freight potential for rail transport in Lanaken amounts to at least 800.000 tons.  
In conclusion, the identified freight flows clearly show perspectives for Lanaken.

## Chapter 4 **Specifications of the terminal infrastructure**

Figure 4.1 represents a draft lay out of the terminal infrastructure.

The rail infrastructure consists of 4 parallel tracks. Each track is 500 m long. These tracks are connected with railway line 20 (Lanaken-Maastricht) by means of switches and two connecting bends.

A loading platform of 500m by 35m is equally foreseen. In addition room for a storage yard of +/- 1 ha is available.

Figure 4.1 Draft terminal infrastructure

