

DHL Options for Belgium

How to combine cargo operations growth with environmental issues

The Coeur-Europe Task Force
www.coeur-europe.be

Introduction

Located at the heart of Europe, Belgium offers a strong case for becoming a major cargo hub but Brussels National proximity to Brussels city center does not allow DHL night activities.

<http://www.flightradar24.com/50.88,4.41/12>

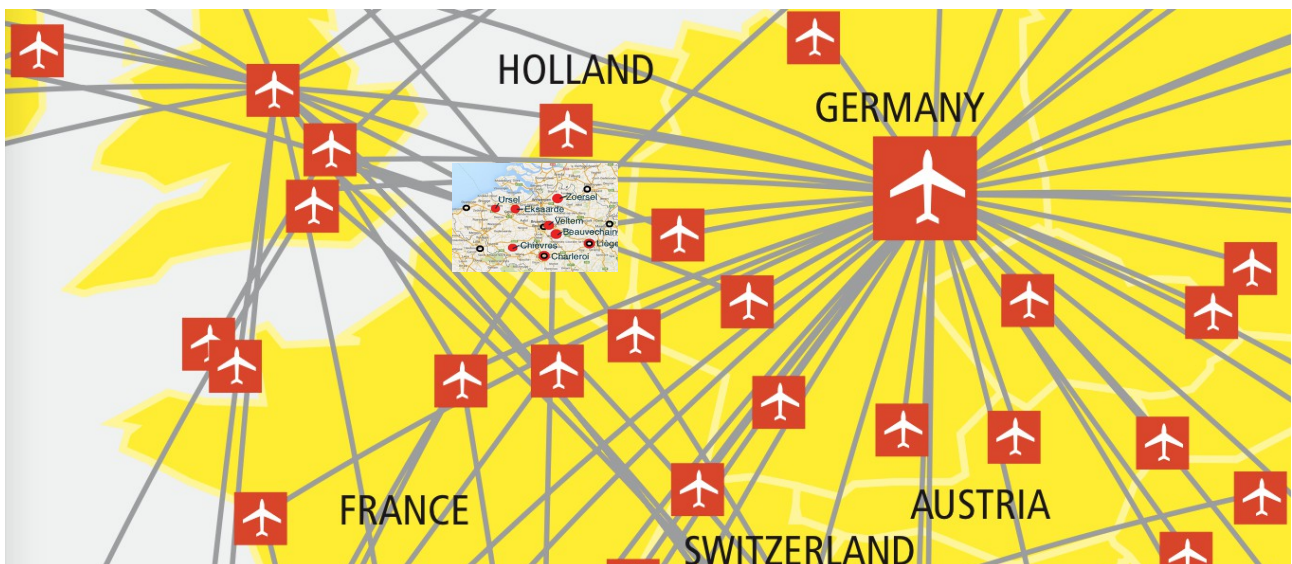
The amount of people flown over by departing flights at Brussels National is several orders of magnitude larger compared to the situation at German airports without a night curfew:

- DHL flights out of Leipzig-Halle fly over nobody during 10 km.
<http://www.flightradar24.com/51.43,12.07/11>
- DHL flights out of Frankfurt-Hahn fly over 500 people during 10 km.
<http://www.flightradar24.com/49.96,7.21/11>
- DHL flights out of Bonn/Cologne fly over less than 20,000 people on average
<http://www.flightradar24.com/50.87,7.1/11>
- Flights out of Brussels main runway fly over 100,000-400,000 people during 10 km.
<http://www.flightradar24.com/50.87,4.39/12>

We are therefore suggesting better options for DHL in Belgium:

- The airports of Zoersel/Oostmalle and Ostende in Flanders.
They are further detailed in this document.
- The airports of Beauvechain and Liège-Bierset near the linguistic frontier.
They are further detailed in this document.

DHL Hub map and fleet requirements



The four options of Zoersel, Ostende, Beauvechain and Liège are all well located inside the London-Amsterdam-Bonn-Luxembourg-Paris perimeter.

DHL European fleet is primarily composed of Airbus A300-600RF, Boeing 747-400, Boeing 757-200F and a few Boeing 767-300ERF aircrafts.

At the altitude of the options which are close to sea-level conditions, all these aircrafts may take-off on 3,000 m runways with payloads at or close to their maximum specifications.

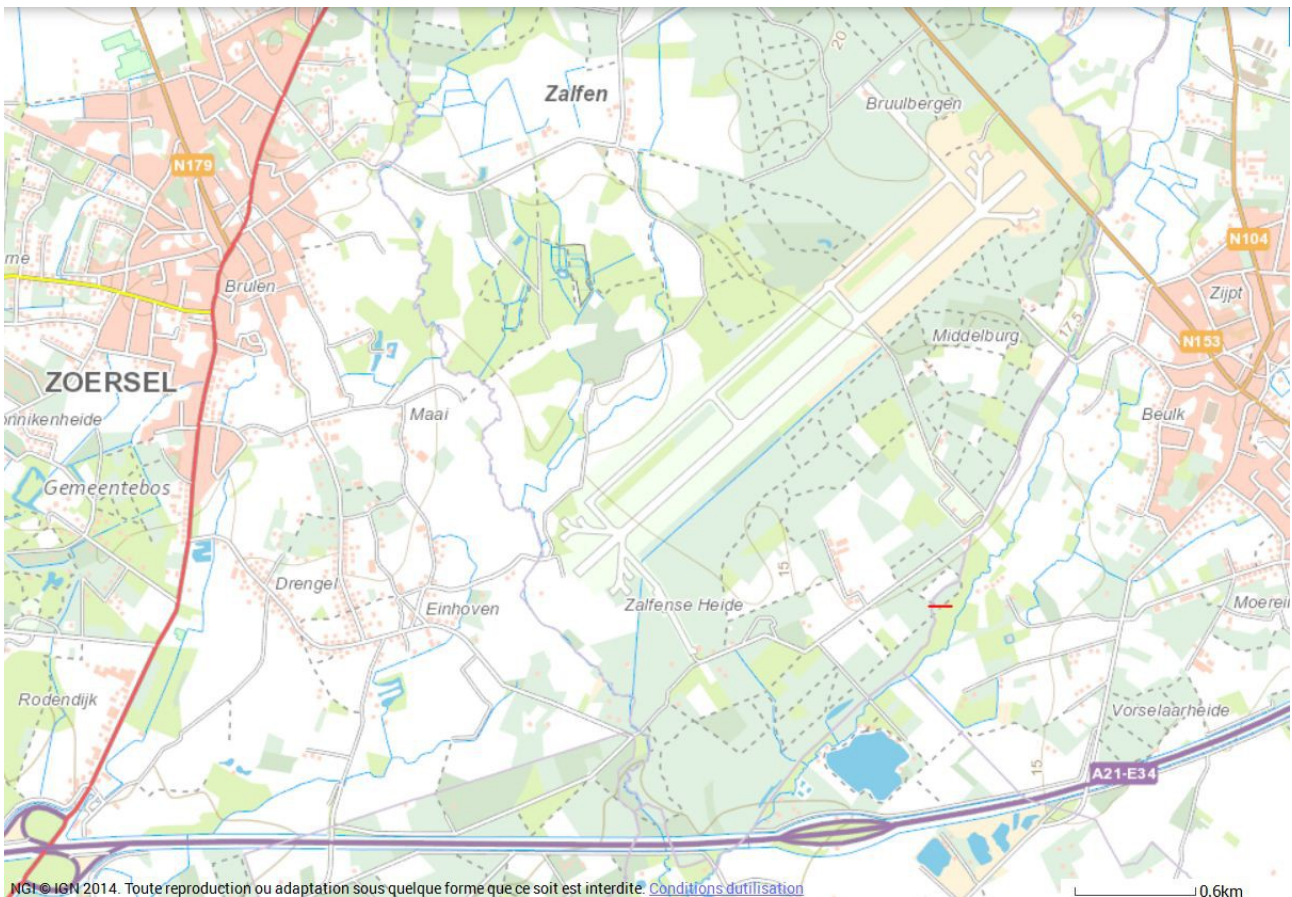
Zoersel/Oostmalle set-up

The Zoersel-Oostmalle site is located 24 km east of Antwerp and 51 km north of Brussels.

The immediate proximity to the E34 freeway with two access roads facilitates access to the Netherlands and to Germany.



The airport is an old military base currently used by a flying club. The 05/23 runway is 2 980 m long and a taxiway runs on its north side. In the future, a second 4,000 m long runway could be added.



Access from Antwerp is easy through the A13/E34 and from Ghent through the A14/E17. An access road already exists less than 2 km away from the future terminal.

Access from Brussels 51 kilometers away is made through the E34 towards the Antwerp ring and the E19 further south, or through the N14 which runs straight to Mechelen.

Investment required – Zoersel/Oostmalle

Less than 70 M€ are required to turn this former military airport into a DHL-ready platform :

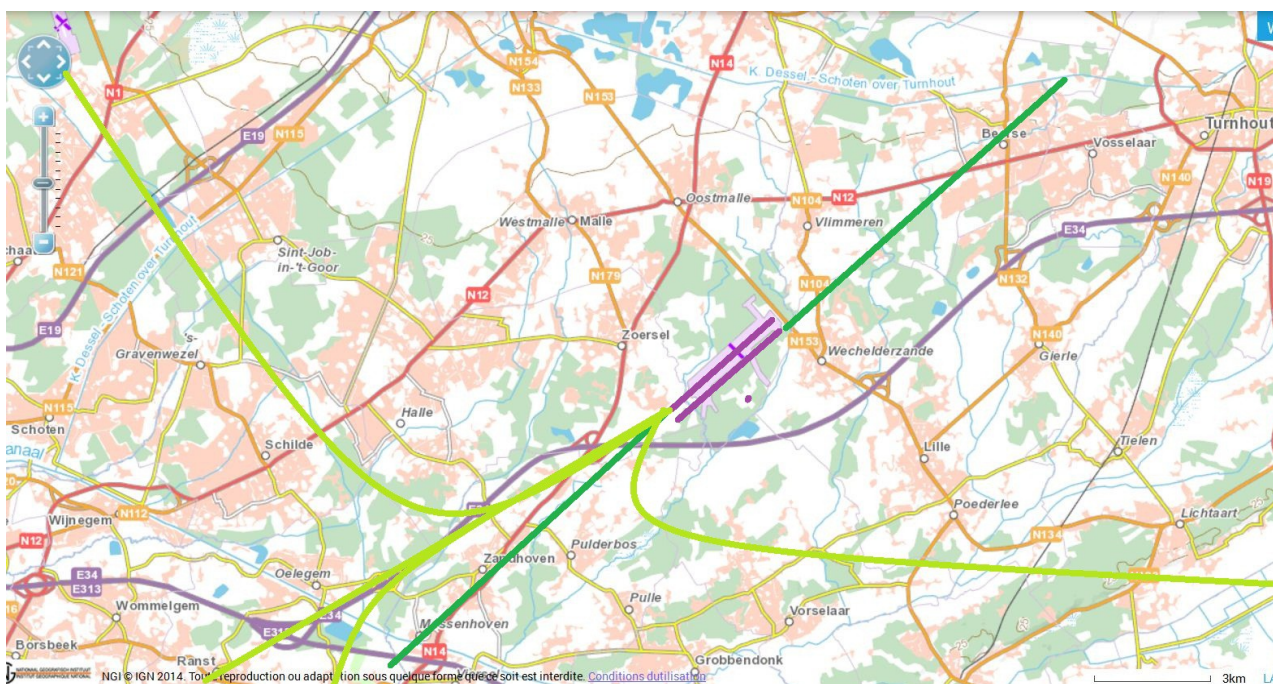
- 4 km Access road	7 M€	- Control tower & radar systems	25 M€
- 10 km Fence and frontage road	8 M€	- Technical buildings, 2,000 m2	3 M€
- Surveillance system	1 M€	- Defrost system	0.7 M€
- runway & taxiway lighting upgrade	4 M€	- Various	3 M€
- 100 m x 600 m Cargo parking area	12 M€	- Project Management (8%)	5.2 M€
- 100 truck & 500 employees parking	0,5 M€		

Transforming Zoersel/Oostmalle military airport into a cargo/commercial airport is a project similar to the transformation of Frankfurt-Hahn, Düsseldorf-Weeze, and Milan-Bergame airports to name just a few.

Flight corridors – Zoersel/Oostmalle

The main landing corridor flies over Beerse 6 km before the runway. By eastern winds Zandhoven and Broechem lie under the landing corridor 5 and 12 km before the runway. After take-off, planes may :

- towards north, follow the E34 and turn right over the N12 between Schilde and Halle.
- towards west, follow the E34 on 12 km and continue towards Mortsel.
- towards sud, follow the E34 on 12 km before heading towards Beauvechain.
- towards east, initiate a sharp left turn towards Kleine Brogel right after take-off .



<u>Landings western winds</u>	<u>population</u>	<u>21,683</u>
- 5-8 km	Beerse	17,395
- 11-16 km	Edge of Merksplas (50%)	4,288
- 18 km	Weelde airport	-

<u>Landings eastern winds</u>	<u>population</u>	<u>24,900</u>
- 5 km	Zandhoven town	6,000
- 12 km	Broechem town	3,900
- 18 km	Zevenbergen/Lier	15,000

<u>Take-offs 23 towards north</u>	<u>(15%)</u>
- 7 km South of Halle	4,000
<u>Take-offs 23 towards west</u>	<u>(20%)</u>
- 10 km Oelegem	4,783
<u>Take-offs 23 towards south</u>	<u>(50%)</u>
- no village for 10 km.	0
<u>Take-offs 23 towards east</u>	<u>(15%)</u>
- 2 km Zomerbos	300
- 4-10 km Vorselaar	7,649

Take-offs average population 2,750

The DHL environmental impact at Zoersel is therefore significantly smaller compared to Brussels National.

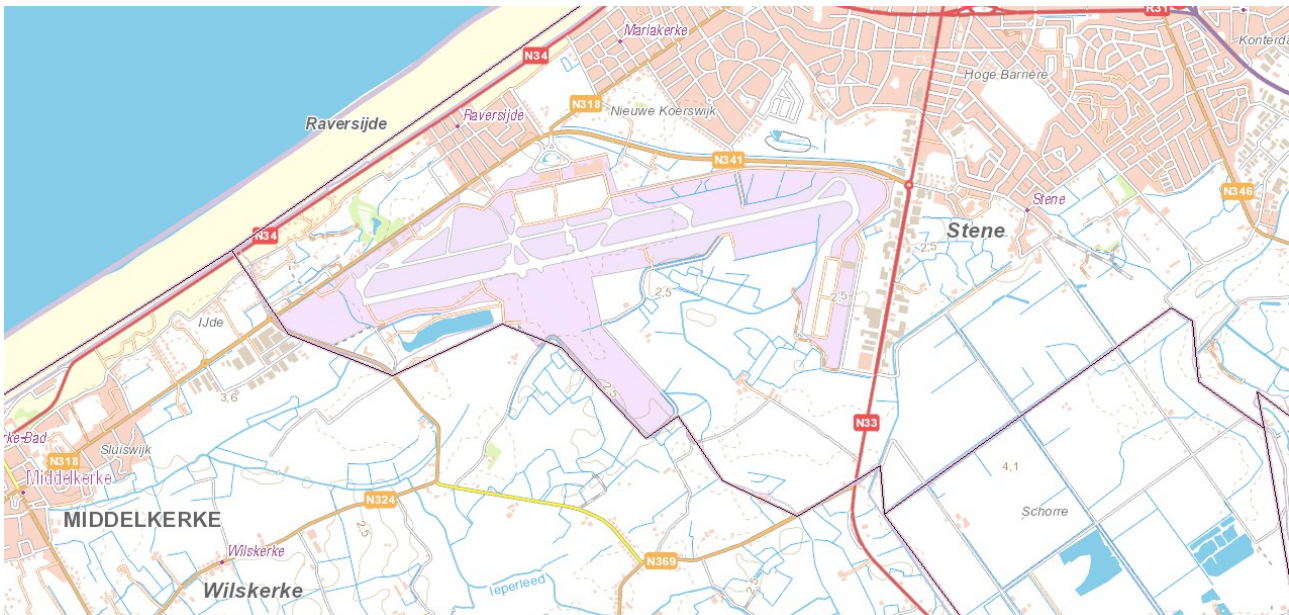
Ostende set-up

The Ostende site is located 25 km west of Bruges and 120 km west of Brussels and Antwerp through the E40 and E17 highways, a shorter distance than the 140 km from DHL's British Midland airport to London along the M1 freeway.

The airport is also located 50 km away from Dunkerque and 75 km away from Lille through the highways.



The existing 08/26 runway is 3 200 m long and a short taxiway runs on its north side. In the future, a second runway could be added on the south side.



Investment required – Ostende

Less than 22 M€ are required to turn the Ostende airport into a DHL-ready platform :

- taxiway 1 km east-side extension	5.2 M€	- Various	2 M€
- 100 m x 600 m additional cargo area	12 M€	- Project Management (8%)	1.6 M€
- 100 truck & 500 employees parking	0,5 M€		

Flight corridors – Ostende

Except for the buildings located in the immediate surroundings of the airport, no other populated areas are flown over within 20 km of the airport.



The DHL environmental impact at Ostende is therefore much, much smaller compared to Brussels National.

Beauvechain set-up

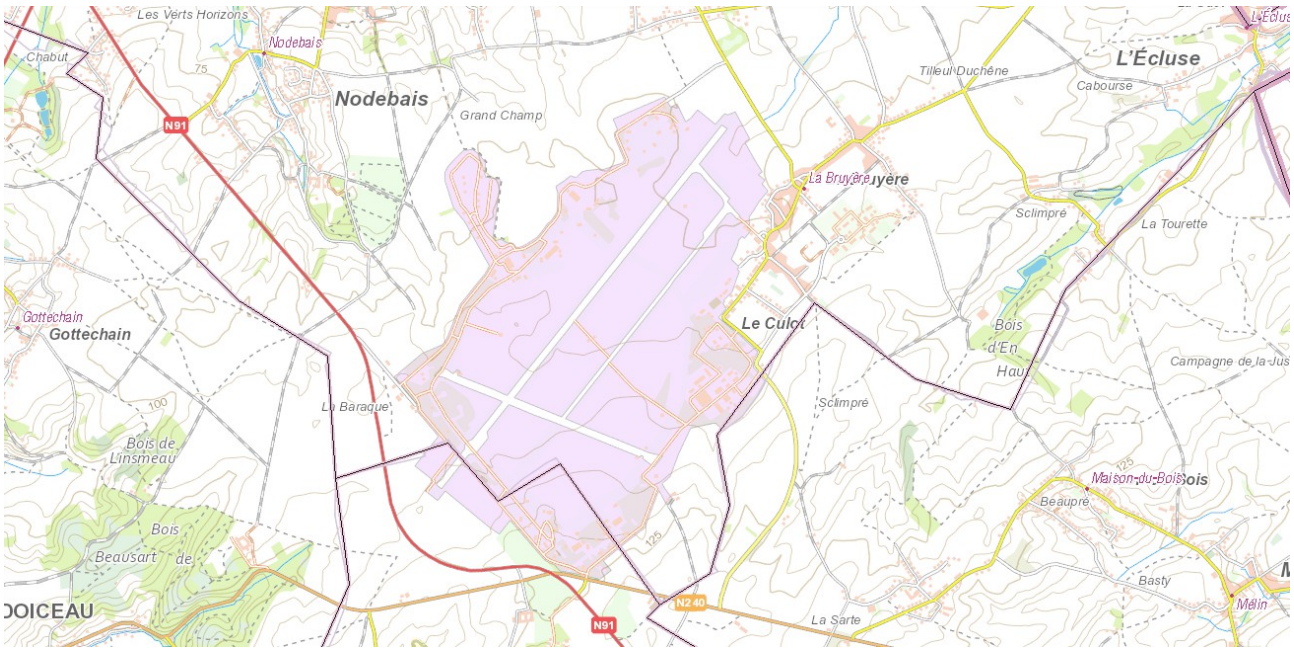
The Beauvechain site is located 30 km away from Brussels near the E40 freeway. It is 58 km away from Antwerp and 60 km away from Liège.

The linguistic divide runs two km further north and the main employment basin is Leuven in Flanders.



Beauvechain is a military base with limited activity today. Its full closing has been discussed since November 2014 at the federal level, along with the opportunity to turn the base into the home for the military cargo planes recently ordered by the Belgian government.

The existing 04/22 runway is 3 079 m long and has a shorter taxiway on its south side. The runway could be extended up to 3,800 m if required.



Investment required – Beauvechain

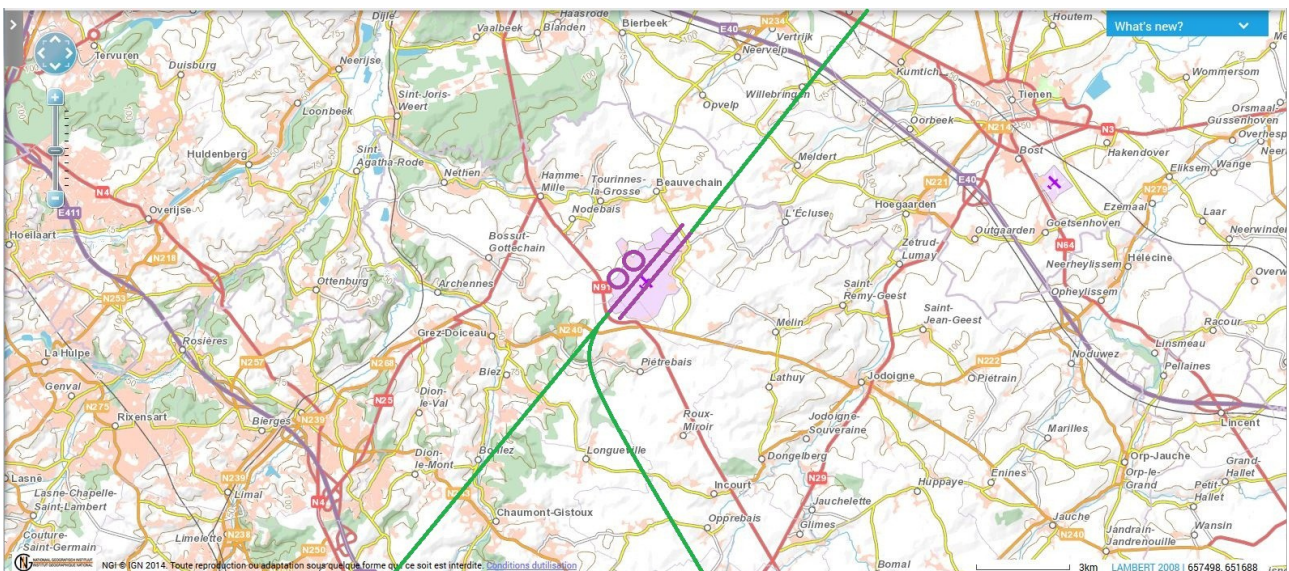
About 52 M€ are required to turn this military airport into a DHL-ready platform :

- 2 km Access road	3.6 M€	- Control tower	15 M€
- 4 km frontage road extension	2.4 M€	- Technical buildings 1,000 m2	1,5 M€
- Surveillance system	1 M€	- Defrost system	0.7 M€
- taxiway 1 km extension	5.2 M€	- Various	2 M€
- runway & taxiway lighting upgrade	4 M€	- Project Management (8%)	4 M€
- 100 m x 600 m Cargo parking area	12 M€		
- 100 truck & 500 employees parking	0,5 M€		

Transforming Beauvechain into a mixed cargo/military airport is a project similar to Eindhoven's airport.

Flight corridors - Beauvechain

The main flight corridors run over scarcely inhabited areas. The village of Chaumont Gistoux on the south side may be avoided through an appropriate turn after take-off.



Landings western winds population :	6,362	Take-off Western winds	5,162
- 4 km	Meldert	- 1 km	Pietrebais
- 6 km	Willebringen	- 3 km	Biez
- 8 km	Roosbeek	- 6 km	Bonlez
- 9 km	Breisem	- 8 km	Gistoux
- 12 km	Groenendries		
- 13 km	Wever		
- 15 km	Attenrode/rode		
	1,000		2,061

Liège Bierset

The Liège-Bierset airport is located about 80 km east of Brussels and 95 km east of Antwerp near a freeway node and only 8 km from the linguistic divide.

The Liège airport offers excellent freeway connections with the E25, E40, E42, and E313: Cologne is 130 km away through the E40 and Eindhoven 125 km away through the E25.



Set in the north-west suburbs of Liège, the airport features two parallel runways of 3,690 and 2,340 meters. There is plenty of space for building additional buildings. Both runways could easily be lengthened to 3 800 m on their northern tip, if ever required.

Investment required – Liège

Liège is already a cargo airport. A maximum of 15 M€ is required to adapt to DHL requirements:

- | | | | |
|------------------------------------------|--------|---------------------------|--------|
| - 100 m x 600 m cargo area extension (?) | 12 M€ | - Various | 2 M€ |
| - 100 truck & 500 employees parking | 0,5 M€ | - Project Management (8%) | 1.2 M€ |

In addition, m2 and manpower in Liège are significantly cheaper than in Brussels area.

Flight corridors – Liège

Not only do flight corridors avoid Liège most densely populated areas, Liège is with Charleroi the only airport in Belgium where house buy-back and noise-insulation programs have been conducted, just like in all neighbouring countries.

