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Gefährdungsabschätzung und Sanierung von De-  
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wasserunreinigungen*

*SACHVERSTÄNDIGEN-BÜRO  
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## **GEMEENTE HENGELO**

### **START – UP Plan**

**Hart van Zuid, Hengelo**

**Sub area Lansinkveld North**

*Reference only  
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## **1. AIMS AND PURPOSE**

Hengelo, a town with approx. 80.000 inhabitants, situated northwest of Enschede, develops an urban revitalization project, called "Hart van Zuid". It is supported by the EU program REVIT. REVIT receives funding from the European Regional Development Funding (ERDF), allocated under the European Community Initiative INTERREG III B, NWE.

This document, giving some quick information about the actual "Hart van Zuid" project (see chapter 2), concentrates mainly on the sub area Lansinkveld-North. It summarizes all relevant project data in a short, quickly readable manner. It is supposed to function as a kind of "quick overview tool" for public administration, politics, public relations, etc.

This is a preliminary version and should get continuously updated with the state of planning.

## **2. THE PROJECT "HART VAN ZUID"**

### **2.1 Location**

The project area "Hart van Zuid" is located south of Hengelo city, between Hengelo railway station in the North and Twentecanal in the South, with a surface area of 50 ha. The project area has been divided into five sub areas, which are developed separately.

### **2.2 History**

Hart van Zuid is called the cradle of Hengelo's metal working industry. The whole project area was formerly used by Stork, who started production in Hengelo in 1858. Due to this fact, there are some beautiful, historically valid buildings in the area important to be maintained.

Stork is now in the process of concentrating his production activities and thus reducing his expanse area. Due to this fact a huge surface area could be made abundant for redevelopment.

### **2.3 Vision**

The carrying vision is based on the masterplan from January 2002.

The aim is, according to political guidelines, to minimize consumption of surface area by using brownfields for redevelopment.

The whole Hart-van-Zuid area, bordered southerly by the Twente Canal, is intended to become a canal environment town on the waterfront, various green areas merging into open parkland.

An atmosphere of mixed working, living and learning is to be created in beautiful-styled, enjoyable surroundings, integrating historical building substance into nowadays architecture.

Hengelo city centre will be doubled in its extent by bringing northern and southern city areas together.

## **2.4 Organization**

According to an agreement from 2003 /1/, the project "Hart van Zuid" is realized in a PPP (private-public-partnership) between the municipality of Hengelo and the investor Van Wijnen Groep n.v. The project bureau Hart van Zuid was founded by this partnership. It has the authority to execute all assignments on behalf of Hart van Zuid development. Major decisions are taken by a steering committee formed by elected members of Hengelo's municipality and Van Wijnen's executive board.

Sites to be developed are purchased by the municipality of Hengelo, given over to the project bureau and then made ready for building on. The developed building sites are sold to van Wijnen Oost BV as a developer (85 % of the whole project area) or to other investors.

## **2.5 Public Relations**

The project bureau Hart van Zuid, situated directly near Hengelo main station, is running an exhibition centre. Photographs, plans and urbanistic schemes inform the visitor about the most important facts of the project and its development.

Furthermore the homepage ([www. Hart van Zuid. nl](http://www.HartvanZuid.nl)) is a very important forum, giving extensive information about all aspects.

In order to inspire the local population and achieve their acceptance, the project bureau founded a citizen's committee ("stichting Hart voor Zuid") in 2000. This foundation organises meetings, creates newsletters and launches press articles in order to inform the population but also let them participate in the planning process. It is supported financially by the project bureau Hart van Zuid and the municipality of Hengelo. More information can be obtained from their homepage ([www. Hart voor Zuid.nl](http://www.HartvoorZuid.nl)).

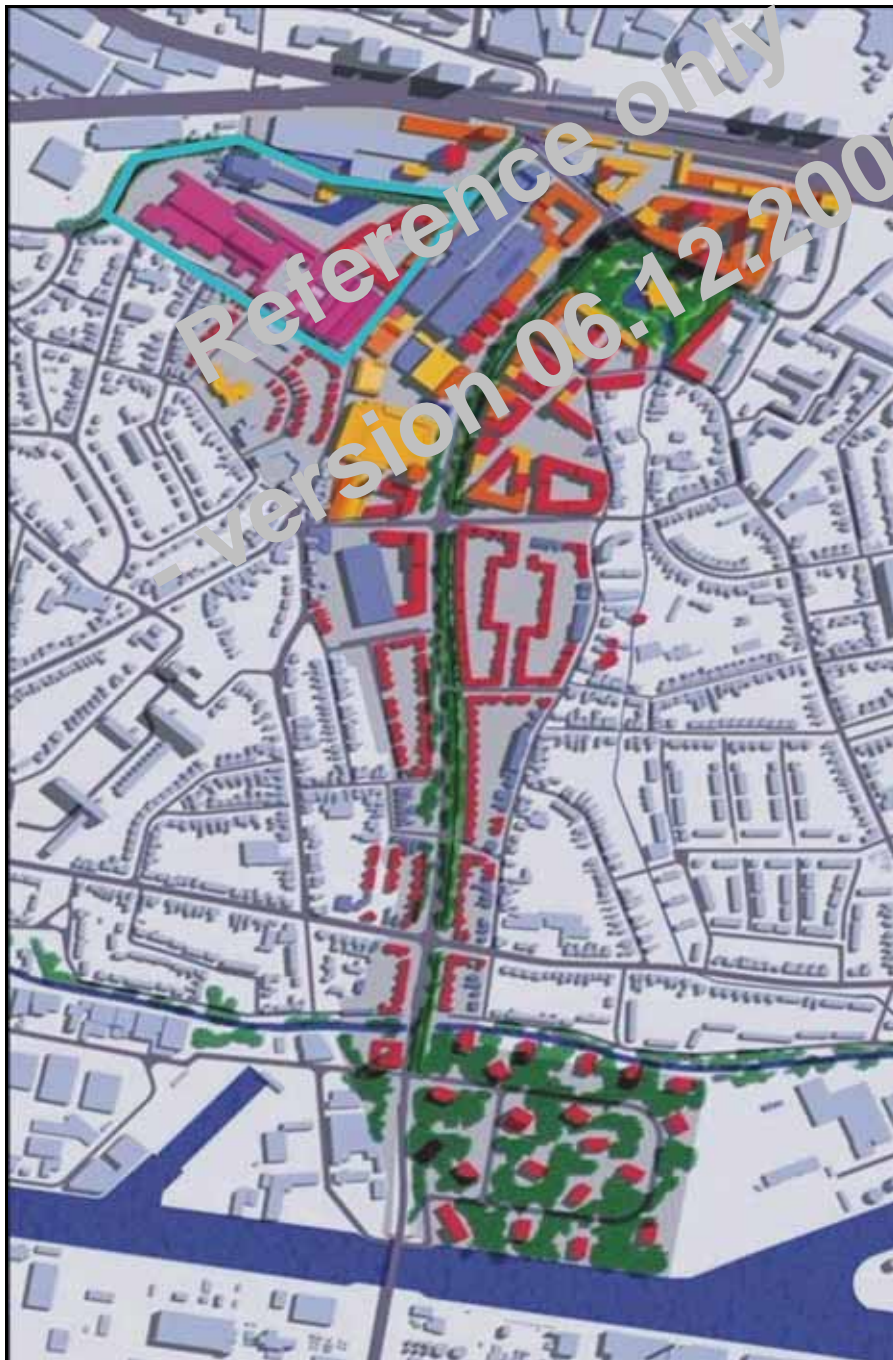
### 3. LANSINKVELD NORTH

The Lansinkveld sub area has been divided in a northern and a southern part. This document deals only with the sub area Lansinkveld north.

#### 3.1 Location

Lansinkveld North, including approximately 6,5 ha, is situated in the northwest of the big Hart-van Zuid project area (see figure 1).

Figure 1: Lansinkveld as part of the big brownfield project "Hart van Zuid"



The NN-level is about 17,0 m NN in the north-eastern part and about 19,0 m NN in the south-western part of the area.

### 3.2 Previous structures

The project area Lansinkveld North is bordered by Willem de Clercqstraat in the South, Lansinkesweg in the North and Industriestraat in the East. The area in its western and southern part is surrounded by trees. Rests of old railway structures can be found north of the old foundry.

Figure 2 shows structures existing before the foundry was closed down.

Figure 2: Aerial photograph of Lansinkveld North



The buildings are described as follows (see Figure 2):

No. 1 ("Ijzergieterij") is the old foundry. It was erected in 1902. Its central part, a steel-frame hall, was originally used to house wagons. It has been proposed as a municipal monument.

No. 3 ("Brandweerkazerne") is a municipal fire station. The tower, used to store fire tubes, has been restored and is a national monument. Having been connected to No. 4

("Traforuimte") in former times, it was probably used as a water supply tower for the Stork factory.

Although part of the project area, there are no alterations planned for this complex on behalf of REVIT.

No.4 ("Traforuimte") was used as a water filling station for steam trains. It has also been proposed as a municipal monument.

No. 2, No. 5 and No. 7 belonged to the company SPM (Stork Plastic machinery).

No. 2 contains two long-stretched halls with beautiful facades built in 1900/1915, called the "Stork Hijsch" (see figure 3). They have also been proposed as a municipal monument.

Building No. 5 was the SPM administration building.

No. 6 is a parking area.

Figure 3: Hijsch buildings



### 3.3 Actions taken - ROC

The ROC van Twente, a regional educational centre and polytechnic, plans to set up a Community College with about 8,000 students in Lansinkveld. The old foundry's steel-frame-hall will be its predominant structure. Opening is planned for 2008.

To accelerate realisation considering the short time schedule, this project was taken out of the usual planning procedure for Lansinkveld. This happened according to article 19 of

“Wet ruimtelike ordening”. The building permit for the ROC was granted and can be looked into at the municipality of Hengelo.

Actions at the old foundry started in December 2005. All buildings belonging to this complex (No. 1 in figure 2) were demolished, apart from the old steel frame hall with a length of 150 m. This hall, proposed as a municipal monument, was preserved.

Presently piling for the new ROC-building is already finished and foundation building is in process. Completion is scheduled for summer 2008. The floor space for the whole building complex will be 55.000 m<sup>2</sup>. The ROC building shall be open not only for the students but also for the public as a forum for cultural events. The detailed planning facts can be taken from /9/.

### **3.4 State of planning**

#### **3.3.1 Important documents**

Fundament and basis for all further planning is the Masterplan Hart van Zuid /2/. It shows aims and general idea of the whole project and reflects chances and possibilities (see chapter 2.3). The verdiepeningslag/3/ from June 2003 gives general guidelines about urbanistic design and infrastructure.

Nota van uitgangspunten/4/ from December 2004 is specific for Lansinkveld sub area and gives a detailed concept concerning environment, infrastructure, finances and communication with surrounding population.

Bestemmingsplan/5/ from 2006 contains all information necessary for the administrative decision in order to attain the legal approval for the project. The procedure is running at the moment.

Inrichtingsplan/6/ from 2006, funded on /4/, gives a more detailed plan for the public space. This concept is of preliminary character, there has not been a final decision yet.

VO en DO HIS Lansinkveld /7/ gives an elaborate concept for the infrastructural design. This plan has been finally approved; its realisation is due to get started in 2007.

#### **3.3.2 Current planning concept**

Although there are no final concepts yet, it is already a matter of fact that van Wijnen Oost BV as a developer will take over all building sites in Lansinkveld apart from the old foundry. The site of the old foundry has been bought by the ROC.

A preliminary concept for Lansinkveld public space, according to /4/ and /6/, is shown in annex 1. Northeast of the ROC, near the old fire station, a 3.000 m<sup>2</sup> pool is planned surrounded by a park and leisure area.

A preliminary concept has been done for the Hijsch-complex /8/, suggesting a leisure complex with a parking garage.

In the north-eastern part of the site (now Siemens-building), there will probably a combined use of working and living but no definite design has been done yet.

The user-specific distribution of surface areas according to /4/ is shown in table 1.

Table 1: Distribution of functions in Lansinkveld North  
(Taken from /7/, b.v.o. means gross floor area in m<sup>2</sup>)

functie	omvang
ROC	52.000 m <sup>2</sup> b.v.o.
VMBO	7.000 m <sup>2</sup> b.v.o.
Kantoren	14.000 m <sup>2</sup> b.v.o.
Bedrijfsruimte	4.000 m <sup>2</sup> b.v.o.
Wonen	14.000 m <sup>2</sup> b.v.o.
Commerciële dienstverlening	5.000 m <sup>2</sup> b.v.o.
commerciële functies	2.000 m <sup>2</sup> b.v.o.
leisure, horeca	2.250 m <sup>2</sup> b.v.o.
leisure, sport	2.250 m <sup>2</sup> b.v.o.
parkeren	810 pp
fietsparkeren	2.700 pp

## 4. PREPARATION FOR BUILDING

### 4.1 Conditions

#### 4.1.1 Geology

The geological build-up in Hengelo consists of multi-layered inhomogeneous sandy and loamy fluvial deposits. Water-bearing strata are to be found in the several permeable strata, which are extremely variable in their lateral and vertical extent.

Groundwater is confined with a phreatic level of 0,8 m to 1 m below ground level.

A high-yield groundwater aquifer, used for drinking water purposes, is found at about 60 m below ground level.

#### 4.1.2 Soil and groundwater contamination

The whole Lansinkveld area has been surveyed for underground soil contaminations.

Significant underground contaminations of soil with mineral oil, BTEX (monocyclic aromatic hydrocarbons), Heavy metals (Fe, Pb, Cu, Zn, Arsenic), PAH's (polycyclic aromatic hydrocarbons) and VOC (volatile organic compounds) have been found.

In groundwater there are strong contaminations with Oil and VOCL accumulated in a depth of ca. 30 m below surface.

In the area of the projected ROC, cleanup of soil has been done through excavation; the excavation volume was about 250 m<sup>3</sup>. There are soil clean-up concepts for the other buildings. A definite concept for groundwater remediation does not yet exist.

The project terrain of Lansinkveld does not belong to a groundwater protection area.

#### **4.1.3 Geotechnical investigation**

A geotechnical survey for the projected ROC-building has been done on behalf of the developer, details can be found in the building permit.

### **4.2 Actions**

#### **4.2.1 Demolition of buildings**

The former Stork Foundry (future ROC-building) was demolished in 2005/2006 (see chapter 3.4).

SPM-buildings No. 2 and No. 5 (see figure 2) have been given up and handed over to the project bureau. SPM resettled in another area of Hengelo.

Demolishing is scheduled for 2007/08, naturally in No. 2 (Hijsch-building) only the non-historical parts will be included.

SPM-building No. 7 (see figure 2) has been temporarily rented to Siemens until the end of 2007. It is planned to be demolished in 2007/08.

The building complex No. 8 is used by Siemens. There are plans to resettle the Siemens Company in another area. The building is probably due to be demolished around 2010.

#### **4.2.2 Infrastructure**

Stork's operation plant had its own infrastructural supplies, which are timeworn and technically overage. Water supply, sewage and electricity systems had to be renewed on behalf of the PROJECTBUREAU H.V.Z.

The sewage system will be altered completely, according to "Waterplan Lansinkveld 2005". Rainwater from the roofs will be discharged separately from the sewage water originating from toilets, kitchens etc. The new pond planned opposite the ROC will take over the function of a rainwater retention basin, collecting rainwater from roofs and drainage water from the site. From the pond, water will flow through a pipe into Berflobeek, an underground conduit.

The road net will stay, but there will be some additional land acquired for Lansinkesweg. It shall be transformed into an avenue with pedestrian and cycling paths.

Heating for ROC and probably also the other buildings will be supplied by a heating net connected to the TWENCE waste burning plant.

#### **4.2.3 Explosive ordnances**

As can be told from historical plans /10/, there is a certain danger to encounter explosive ordnances in the eastern part of the area (buildings No. 5, 6 and 8 on fig. 2) and in the road net. Investigations on this item should be done in course of building actions.

There is no danger for the southern and western parts.

The costs for removing explosive ordnances are taken by the Dutch national government.

## **5. IMPACTS OF BUILDING ACTIONS**

### **5.1 Occupational health and safety**

Taking care of occupational health and safety is part of the general obligation a contractor has to take during building activities. In case of subcontracting the leading contractor is responsible to submit the safety plan. The work was tendered and given to "Bouwcombinatie Gieterij" which is a co-operation of the construction companies "BAM Utiliteitsbouw" "Dura Vermeer" and "Heijmans".

### **5.2 Neighbourhood**

The neighbourhood and surrounding population have been informed and kept in touch with the project right from the start (see chapter 2.5).

During the building measures the direct neighbourhood is kept free from additional traffic, dust, noise, etc. as far as possible. The valid legal instructions and restrictions for this item are regarded.

### **5.3 Nature conservation**

A survey of the project area has been done in summer 2003 /11/. An approval according to the Flora-en-Fauna-Wet has been obtained for disturbing rabbits and hedgehogs.

## 6. ECONOMIC ASPECTS

### 6.1 Marketing concept

A marketing concept has not been done for Lansinkveld. There is no need for it, because all the building sites has been sold or will still be sold either to ROC or to the investor van Wijnen Oost BV.

### 6.2 Risk analysis

An analysis of chances and risks for the whole Hart-von Zuid-project was done by the municipality of Hengelo und is updated yearly.

### 6.3 Project costs

Table 1 gives an overview of estimated costs, as they arise on behalf of the project bureau Hart van Zuid.

Table 1: estimated costs for Lansinkveld

		estimated value (approx.)	scheduled to be spent till 01/01/2006
0100	Acquisitions	15.257.197	10.870.162
0200	Temporary control	4.480	4.480
0300	Demolishing costs	1.061.183	190.378
0400	Remediation soil contaminations	2.376.150	2.456
0500	prepare constructable land	1.102.770	31.308
0600	prepare liveable land	1.071.462	-
0700	public utilities	145.675	
0800	tax costs	53.015	53.015
0900	payments	310.563	-
0109	planning costs	3.577.604	2.491.856
0110	infrastructure	3.310.290	
0111	unforeseen costs	771.560	-
0112	interest	1.300.000	68.437
	<b>total costs</b>	<b>30.341.949</b>	<b>13.712.092</b>

No. 0200 means costs for temporary maintenance measures at buildings and infrastructural supplies as long as they belong to the project bureau Hart van Zuid.

No. 0500 means all measures necessary to give conditions for a new building to be founded which means: remove old infrastructural components, remove old foundations,

flatten the ground surface, provide house service connections, prepare the drainage system, etc...

No. 0600 means all measures concerning the realisation of the public space design according to /6/.

No. 0700 means public utilities like fountains, benches and public toilets.

No. 0800: there is an agreement that the project bureau H.v.Z. takes over the sales tax for the ROC.

No. 0900: contribution from the new owners for infrastructure (included in the selling price)

#### 6.4 Financing and Revenues

The financing of Lansinkveld North is based on the following funds:

		estimated value (approx.)
0100	Selling building ground	15.800.000
0200	funding from municipality of Hengelo	6.800.000
0300	funding from regional department of Overijssel	4.000.000
0400	funding from dutch national government	2.000.000
0500	funding from REVIT	1.924.000
	<b>total income</b>	<b>30.524.000</b>

0100 includes already the income from selling the ROC of 4.500.000 €

0500 means funding from REVIT concerning industrial heritage and innovative underground structures. The sum has been used to cover mainly investment costs but also personnel costs for external experts and own staff.

#### 8. LITERATURE

/1/ „De Samenwerkingsovereenkomst H.v.Z.” (SOK), 2003

/2/ Masterplan Hart van Zuid, 29.01.2002

/3/ Verdiepingslag Hart van Zuid, 26.06.2003

/4/ Nota van Uitgangspunten, Lansinkveld, December 2004

/5/ Bestemmingsplan Lansinkveld, 2006

- /6/ Hoofdlijnen Inrichting Openbare Ruimte Lansinkveld, 15.12.2005
- /7/ VO en DO HIS Lansinkveld, definitief ontwerp, Ingenieursbureau Hart van Zuid, 20.03.2006
- /8/ Beoordeling uitgaans – en leisureconcept. Factory on the Move in het Hijschgebouw in Hengelo, Leisure & Arts Consulting 19.10.2006
- /9/ “Van Gieterij tot Community College” Nieuwbouw ROC van Twente, definitief ontwerp, mei 2005
- /10/ Landmacht Explosieven Opruimingscommando – Rapport van vooronderzoek, 20021718 d.d. 16-06-2003
- /11/ Ecologisch Onderzoek, Arcadis, 14.10.2003

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