

NATURE RESERVE OF PLOEGSTEERT

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Keywords: brick, manufacture, clay, quarry, nature, reserve, biodiversity, network

Summary

The brick manufactures of Ploegsteert extract a seven-meter deep layer of clay in the valley of the “Lys” river, in Belgium.

This case study demonstrates that the extraction of clay and the rehabilitation of exhausted clay pits can lead, through the years, to a biotope with an incomparable quality. It is undeniable that these industry-made sites have an artificial character. Nevertheless, as it becomes still more evident that the natural patrimony is being imperiled, they find all their significance as sanctuaries for fauna and flora.

The brick manufactures of Ploegsteert restore the ground with an evident increase in value for biodiversity. Moreover, the disadvantages of the short-term period of extraction of clay are absolutely negligible compared with the potential long-term benefits that our society as a whole can expect! This is a perfect example of a local industry that occurs in a harmonious relationship with the neighbored economic, social and environmental context.

1. Introduction of the Brick manufactures of Ploegsteert

At a time of omnipresence in the medias of the sustainable development, many inaccurate apriori surrounding this theme remain within public opinion. Most of them concern the industrial activities.

Most people ignore the multiple actions that have been taken for decades by the industry to deal with environmental requirements. This might be explained by a lack of communication of the industry towards society.

However many industries can be proud of their high level of sensitivity to and integration of the environmental aspects. To thwart this misinformation, they have, now more than ever, to communicate and demonstrate that industrial activities are compatible with ecology for a sustainable development!

Since the creation of the brick manufactures of Ploegsteert, the “house policy” has always been to involve the local population into their industrial activity: by providing a stable employment for the local population and by creating evident value accession of the exhausted clay pits.

The local community has welcomed this synergy between industrial and ecological interests.

1.1 Context of the Creation of the Manufacture

On an area that is directly adjoining the border with France, Ploegsteert is also at the junction between two Belgian Regions - Walloon Region and Flemish Region. Located in the valley of the “Lys” river, the ground of Ploegsteert includes a layer of alluvial clay that is mainly suitable for the production of bricks.

For centuries, bricks have been made in an artisanal way in this region, an activity that has clearly shaped the local built environment. Many prestigious buildings still attest the importance of the bricks for the local heritage and the affection of the local community for this building material.

The damages to the buildings in the region of Ploegsteert (Yper) during the Great War were significant. The after-war period was thus favourable for the development of a brick industry. In 1920, the brick manufactures of Ploegsteert were created to fulfil the demand of bricks and extend the local building traditions.

1.2 Development of the Manufacture

In the 1950-1960's, the brick manufactures of Ploegsteert largely developed their activities. New sites were built and new materials were introduced (blocks for cavity walls and beam-and-blocks floor systems). The brick manufactures of Ploegsteert remain the only Belgian manufactures to produce such clay beam-and-blocks floor systems.

The building-crisis of the early 1980's has led to the diversification of the activities of the manufacture. Ceratec, a division for the development of mechanical equipments for brick manufactures was created.

Nowadays the brick manufactures of Ploegsteert and Ceratec provide a stable employment to about 500 people.

They are permanently engaged in research, on the one hand to improve the quality of the products and, on the other hand to rationalize the consumption of energy during the process-flow. Therefore they entered into specific agreements with the regional authorities.

2. Clay as Raw Material for Bricks

2.1 Different Sorts of Clay in Belgium

The conditions of the deposit of sediments result in a great diversity of clays. Belgium is rich in varieties of clay-layers that are different in mineral composition.

The areas of abounding deposits of high quality clay have seen the growth of brick manufactures. The allocation of brick manufactures in Belgium consist nowadays approximately of 80% in the North Belgium (Flemish Region) and 20% in the south of the country (Walloon Region).

Having of a clay deposit in close proximity to the factory is undeniably for the benefit of the manufactures, but also of the whole society, in order to avoid the road-transport of raw materials. Nevertheless, the brick industry nowadays has to take into account the extended diversity in building products demanded by the market. This is the reason why many brick manufactures include other sorts of clay in addition to their local clay in order to enlarge the range of building products that they put on the market. This is mainly true for the facing bricks industry.

The products made by the manufactures of Ploegsteert do not require any additional clay, as the criteria of the end-consumers are, in this case, only technical and not esthetical.

2.2 Clay of Ploegsteert

Ploegsteert is located in the left side of the valley of the "Lys" river. The local clay is made of recent geological deposits from the Pleistocene and the Holocene – Yperian system (30 000 years). The seven meter deep layer of clay is due to alluvial sediment.

2.3 Extraction of Raw Material

Excavators extract the clay on the whole depth of the layer, in order to make homogeneous the raw material.

Once extracted, the raw material is transported to the factory some hectometres further using belt-conveyers.

3. European, Belgian and Walloon Policies for the Creation of Protected Areas

3.1 Challenge of Biodiversity

Biodiversity is the basic key to achieve sustainable development. Protecting biodiversity in order to thwart the loss of species, the degradation of ecosystems and biotopes is the challenge for each of us.

3.2 European Strategy: "Natura 2000" Network

The 1979 "Birds Directive" (79/409/EEC) and the 1992 "Habitats" Directive (92/43/EEC) represent two key instruments for the conservation of wild species and their habitats in Europe. Both directives are the basis of the creation of the European Network "Natura 2000".

The main objective of this network is to contribute to the preservation of biological diversity within the European Union, taking into account socio-economic aspects. The network consists of 'Special Protection Areas' (SPAs) - to conserve the 187 birds species listed in the Annex I of the "Birds Directive", and of 'Special Areas of Conservation' (SACs) - to conserve the 253 habitat types, 200 animals and 434 plants species listed in the "Habitats Directive".

Some "Natura 2000" sites may consist in unexploited nature reserves, but most sites will be areas where significant human activities have always existed and helped to create or maintain habitats. For this reason, the designation of "Natura 2000" sites is not intended to block economic activity in and around the affected land!

3.3 Belgian Policy

The Belgian laws of 1973/07/12 and 1989/09/12 for the conservation of nature define five different protection areas, under which two whom concern the exhausted clay pits of Ploegsteert: nature reserve and humid area with great biological interest.

These areas are designated as protection areas on rural planning maps.

Regional authorities manage the designation of the sites. In 2003, the total surface of these five sorts of areas for nature conservation represented 0.5 % of the territory of the Walloon Region.

3.4 Walloon Policy

3.4.1 Rehabilitation of quarries

Diverse recent modifications of the Walloon legislation - such as environmental code and specifications for worthwhile uses of exhausted quarries – oblige quarry-owners to restore the exhausted quarries. Long before, the brick manufactures of Ploegsteert had already decided to restore the clay-pits as areas for the maintenance, the protection and the regeneration of nature. This has to be done according to a code of good practice, covering aspects such as the site appearance, the allowed plants species, the aftercare and the prevention of pollution.

3.4.2 Implementation of "Natura 2000" network in the Walloon Region

In order to fulfil the European obligations, the Walloon Region is developing its network of areas of protection and conservation of nature.

The legislation still has to be implemented at regional level. Nevertheless, a list of potential protection and conservation areas on the Walloon territory has already been established. The "Natura 2000" network would represent 13% of this territory.

4. Study case : Nature Reserve of Ploegsteert

The brick manufactures of Ploegsteert have been pioneers in the integration of the ecological requirements in their industrial activities. Regional authorities have classified the nature reserve in 1970.

Once the extraction has been ceased, the brick manufactures of Ploegsteert protect the clay pits by leaving them free of any source of pollution. Thanks to appropriate handling and aftercare, the old exhausted clay pits have been metamorphosed into a nature reserve of 200 ha that is a protected area. The exhausted clay pits colonised by marsh vegetation have been officially declared as sites of great ornithological and scientific interest, and as a humid area with great biological interest.



Figure 1 Nature reserve of Ploegsteert. Owner : brick manufactures of Ploegsteert.

The clay pits have been proposed as Special Protection and Conservation Areas for the European network "Natura 2000".

The brick manufactures of Ploegsteert contribute to the strategy for biodiversity defined in the international strategies and European directives and their implementation at national and regional levels.

By the years, clay quarries have become places where nature is omnipresent. The avoidance of any pollution has allowed an important development of fauna and flora the creation of an extraordinary biotope. This has encouraged the nesting of rare birds-species (Ixobrychus minutus/Little bittern, Anas querquedula/Garganey, Luscinia svecica/Bluethroat, Acrocephalus arundinaceus/Great reed warbler,...) or species exposed to extinction. A precious "industry-made" place for passionate bird-watchers!

So the brick manufactures of Ploegsteert restore the ground with an evident increase in value for biodiversity. Moreover, the disadvantages of the short-term period of extraction of clay are absolutely negligible in comparison with the potential long-term benefits that our society as a whole can expect!

Compatibility between ecology and economy for a sustainable development is clearly demonstrated by this nature reserve!

5. Henry Ford European Conservation Award

Henry Ford Conservation Award was founded in 1982. Its mission is to support the initiatives aimed to protect the environment and cultural heritage. Supported by the Council of Europe, World Heritage Centre of UNESCO and Conservation Fund, the Henry Ford European Conservation Award today is organised in 30 countries. An independent national jury judges national competitions. Well-known conservation specialists recognize the significance of this Award.

The "Association King Baudouin" is responsible for the organisation of the Award for Belgium.

Thanks to their consideration for ecological and environmental aspects, the brick manufactures of Ploegsteert have won in 1996 the "Henry Ford European Conservation Award".

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