

Air for trees, air from trees

Minister Verburg, the Dutch Minister for Agriculture, Nature and Food Quality: "When answering questionnaires, people keep indicating how important a green living environment is for them. But still it is not always feasible to make an area green enough. More than half of the 31 large cities in the Netherlands have a green shortage, with urbanization being one of the reasons, and too little green areas in new housing developments. This makes me wonder if we realize enough how serious the situation is. Sometimes I think we only half realize what we have to gain. Greenery is not only fun and good for us. It is a bit like miracle oil. A remedy for many social ills. Plants and trees bring us happiness and money, now and in the future. But then we do have to make sure that they are brought in to stay."

This quote is from the preface to a publication by "Groen en de Stad" (Greenery and the city) called "De waarde van Groen" (The value of greenery), written by Marcel Brosens and Martin Woestenburg. "Greenery and the city" is an initiative of the Ministry of Agriculture, Nature and Food Quality, and set up as a knowledge network and platform to give information about the most important research and example projects in this field (www.groenendestad.nl). The information below can also be found on this website.

Greenery yields great profits

Greenery offers solutions for various social issues. Examples are health, quality of life and the environment, but greenery also has an economic value.

In short, greenery can give:

• Health

Greenery offers relaxation and lowers stress levels. Well thought-out, green neighbourhoods encourage the residents to exercise more. Especially children will play outside more if their living environment is green; it can reduce obesity by 15% and promotes their social development. Specific planting helps filter particulates and improve the air quality in urban areas, which reduces respiratory problems. A view on greenery also shortens hospital stays.

• Quality of life

Parks and recreation areas are meeting places for residents, especially children, adolescents and the elderly. When residents contribute to parks and gardens in their own area, this improves mutual contact and social cohesion in the neighbourhood. This also applies to problem areas.

• Economy

Greenery around houses improves the quality of an area and increases the value of the houses with around 5%. Greenery creates a pleasant business climate for knowledge intensive and international companies, which in turn

attract other business activity for both the higher and lower incomes.

• Environment

Trees and plants convert CO₂ (contributory to climate change) into oxygen. Greenery lowers the temperature in the city on hot days and helps improve the urban climate. A green environment increases the water storage capacity, important in times of copious rainfall. Plants on the roof improve insulation and decrease energy consumption. Greenery can decrease noise pollutions, helps against the soil drying out and filters rain water that ends up in canals and ditches.

• City and countryside

Nature makes the living environment look prettier and offers shelter for birds and other animals. A good connection with green areas close to the city improves the landscape and prevents cluttering of the environment. Walking and cycling routes pass through it and new residential areas fit in better with the existing surroundings.

Source: www.groenendestad.nl



Big trees, big value

For some time now, a large number of local councils have been seriously thinking about how to implement green areas; basing their plans on a clear idea. More and more, councils decide to plant larger sized trees. These immediately create a green setting, and it can be a decisive factor when replanting old town centres.

After all, when old trees need to be felled, the street scene can change drastically. If the decision is made to replant larger trees, councils 'buy time' and the historic character of the area will be restored more quickly. In practice, the felling of old trees will then also encounter less resistance from residents. If they know in advance that larger trees will be replanted, there is more social support for the plans and the execution is not held up unnecessarily.

Of course, bigger trees also have a bigger 'environmental revenue'. In comparison: a tree size 50-60 on average has a foliage mass which is 10 to 15 times bigger and a biomass which is around 20 times bigger than a tree size 16-18. It can roughly be said that

the environmental revenue will then also be 10 to 20 times bigger in reference to the conversion of CO₂ into oxygen. The environmental revenue with regard to binding particulates is around 10 times bigger (source: Wageningen UR/PPO). Large trees also influence the local climate. The shade the tree crown gives reduces the temperature on hot days and the evaporation through the leaves has a positive influence on the humidity.

Economic value

Bigger trees are more expensive to buy than smaller ones, but eventually can prove cheaper or even yield a profit. The fact is that the crown of a smaller tree still has a lot of growing and shaping to do. This requires proper and intensive pruning by a trained professional. This pruning incurs higher costs and, because the expertise is not always there, not always gives the desired long-term results.

The presence of large trees also influences the value of any properties in the area. The value of houses rises demonstrably when they are situated in a green area. Project developers have now discovered that larger trees give a project much more prestige and make it easier to sell property. The costs of bigger trees are relatively low compared to the total investment, but have a huge impact on the return.

Mr. Theo van Gils, supervisor of the department of Parks and Gardens of Best council: "In Best we regularly decide to plant larger trees, and then I mean trees from size 20-25 up to 40-50. We do this, for instance, to give a new housing development a bit more body or to ensure clear traffic guidance. From experience we know that the maintenance of small trees costs a lot of money; before a tree has even grown to size 20-25, it has already been pruned three times. The costs really can be justified. With road reconstructions, residents often want us to plant larger trees, to compensate for the loss of old trees.

In the case of the reconstruction of the Oirschotseweg, we decided to plant *Quercus robur* size 40-45 after consultations with the residents' association."

The 'rounds' around Best Mr. Van Gils regularly does with his colleagues are very special. "We don't always have the space, but we regularly have a good look where we can do something extra to improve parks and gardens. It sometimes does not take a lot to make an area look much more attractive."



Best Council, *Quercus robur*



Best Council, *Platanus orientalis 'Cuneata'*