

NESTLÉ HEAD OFFICE

Front entrance planting provides year round colour

Project Team

Client and Property Developer: Tiber Property Group

Project Manager: Tiber Projects

Architects: Boogertman + Partners

Landscape Architects: Insite

Landscape Contractor: Landtech

The new Nestlé head office in Bryanston, Gauteng, reflects its original founder's firmly held belief that the company's operations should have minimal negative impact on the environment. In 1867, German born Henri Nestlé stated that

his ideals were to "positively influence the social environment in which we operate, as responsible corporate citizens, with due regard for those environmental standards and societal aspirations which enhance quality of life."

The brief to landscape architect Fritz Coetzee was therefore to create a 'green' environment and portray Nestlé's 'green' philosophy within the landscape. With this as a starting point, Coetzee stipulated a 90% indigenous plant palette and also designed an 80m long indigenous indoor garden/atrium. He describes his design philosophy as "the creation of a sustainable, low maintenance and all year round garden."

The front approach to the main entrance has distinct level changes and a terracing effect has been established here in keeping with Coetzee's 'all year round' philosophy. Shrubs leading to the main entrance doors and on the terrace include *Freylinia tropica*, *Diets grandiflora* and *Crococsmia aurea*. On a lower level, these have been interplanted with *Alyssum* 'for splashes of colour in winter' says Coetzee. For a softening effect to the building, *Syzigium guineese* have been planted in containers and all Loffelstein retaining walls are planted with *Plumbago auriculata*.

The forecourt at the main entrance has a strong focal point in the form of a planter containing a large, ex-open ground *Acacia sieberiana* tree. "It provides good shade and softens the piazza," explains Coetzee.

Attenuation pond

According to Coetzee, this is one of the most important aspects of the project, illustrating Tiber and Nestlé's commitment to the environment. The triangular shape of the pond was dictated by the site, which has a high water table, and the pond therefore has two functions: it collects all stormwater from the site and also absorbs rising groundwater which drains into it. A sump in the basement of the building pumps the groundwater into storage



Landscape as-built plan, courtesy of Insite Landscape Architects



Acacia sieberiana in the forecourt piazza. It softens this hard space and provides shade.

created a benchmark for future 'water wise' irrigation installations, and has complied with Nestle's aspirations for a 'green environment'.

Hardscaping

A water feature on the west side of the building is the most prominent aspect of the hard landscaping and spills out from the canteen area. Its shape is long and narrow, with a solid water wall creating white sound to block out the traffic noise from Main Road Bryanston. A tall screen has been erected behind the water feature to block out views of the neighbouring building and has been planted with *Jasminum multipartum* which will, once fully grown, achieve the desired screening effect.

The stone wall cladding of the water feature and mechanics of the water reticulation system were undertaken by Danie van Rooyen of Danvon Landscaping.

Green building

The following are some of the aspects of the new building that confirm Nestle's commitment and contribution to sustainability of the environment:

- a special glass to reduce glare;
- the skylight which allows natural light to filter through, thus increasing energy conservation;
- an air conditioning plant designed to use less energy consumption, thus reducing electricity usage and carbon emissions;
- solar water heating is used to supply hot water;
- light switches and air conditioning units are connected to motion sensors, ensuring that no energy is used when staff are not present in a particular area; and
- all light fittings have LED globes.

Ravi Pillay, Nestle's corporate affairs director, says the company has applied for Green Star Rating. "The awarding process takes 12 months but we are confident that we will be certified 'green' in the very near future," he states.

Judges' comments

Landtech received a silver award in this year's SALI Awards of Excellence for the atrium installation, entered in the category of Specialised Landscape Construction. The judges stated that considering the constraints – including having to import gravel and potting soil through a narrow space high up on the wall – and lighting conditions, the project looked very good and was clearly based on a good, innovative design. They also expressed the view that material may need to be replaced depending on how it stands up to the low lighting conditions. **iso**

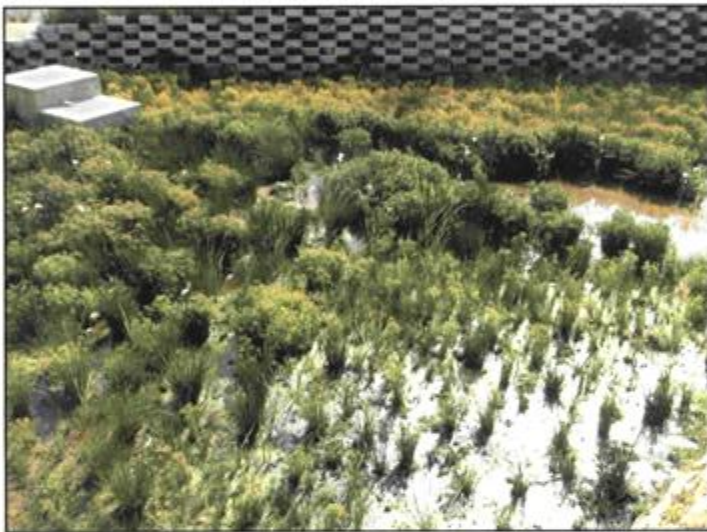
Text and photos by Karyn Richards



The water feature adjacent to the staff canteen



Retaining wall between a children's play area and a staff function area on the upper level



The attenuation pond acts as a wetland and successfully purifies the stormwater and groundwater that feeds into it.

Prior to the installation of the atrium, the light levels were measured and found to be 40 lux, way below the expected minimum of 400 lux required for low light plants to grow in. Following consultation with both Tiber and Nestle, additional lighting was installed above the atrium to bring the lighting levels up to 400 lux.

Says Strang: "We love to be involved with atriums as this is our area of expertise, built up over many years of installing some of the largest ones in South Africa. It is wonderful to see companies installing atriums as they bring a great dynamic to the work environment. In the case of Nestle's atrium, considering its size, it is effectively the lungs and kidneys of the building. The 'lungs' provide oxygen and reduce carbon dioxide, and the 'kidneys' filter volatile organic compounds out of the air. They also increase and stabilise humidity levels between 30-60%. What this means to Nestle's staff is a reduction in health complaints, an increase in productivity, and an 85% increase in a sense of well-being."

Landie Clark of Landtech was responsible for the installation of the atrium as well as the exterior planting. "This is the second large atrium installation we've done, but definitely the more challenging of the two as it was a specialised due to the restricted access," she says. Gravel and potting soil was imported and had to be brought in through a hole in the wall. Initially this was done manually but a plastic slide was then 'built' for this purpose, which speeded up the process. The gravel was placed under the potting soil for drainage.

Landscaping installation and irrigation

Landtech's scope of work for the exterior landscaping included earthworks, planting, placing of stepping stones, installation of mow edges and of the irrigation system which was designed by Keith Allison, formerly of Turf-Ag.



A pebbled pathway through the atrium allows for easy maintenance

JP de Villiers of Turf Ag provided the following information pertaining to the irrigation:

In light of ongoing water shortages, it was fortunate that the site had a high water table as this allowed savings on municipal water and a sufficient supply from the high underground water table. Water storage tanks and pumps were installed in the basement of the building in order to store water extracted from a borehole.

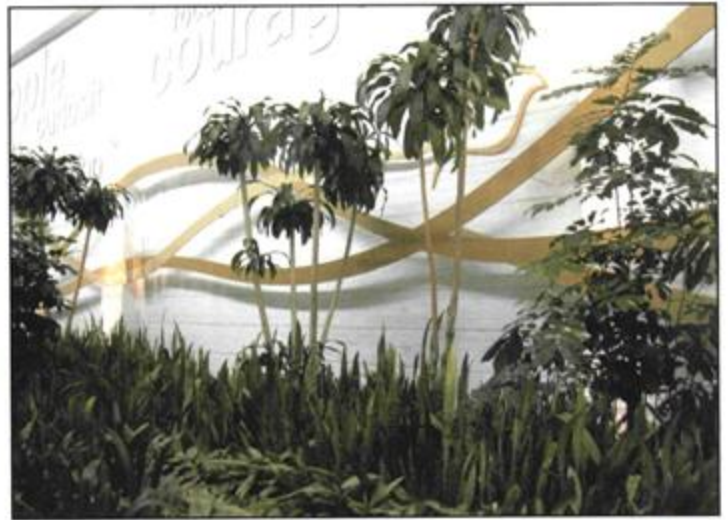
A Hunter I-Core and solar sync sensor were installed in order to improve water efficiency. The solar sync continuously gathers on-site solar and temperature data used in the calculation of evapo-transpiration and then determines accurate watering requirements. The module automatically calculates these water requirements and makes adjustments, taking into account regional weather characteristics and thereby reducing unnecessary watering.

Automatic irrigation was installed throughout the site, except around the attenuation pond where plants only need to be watered during times of drought. Turf valves were installed here. The section between the site boundary fence and Main Road were sowed with veldgrass and turf valves were installed here as well so that watering can take place until the grass is established.

Although certain measures were taken for water saving, it was still necessary to implement water saving nozzles and Hunter MP rotators were installed. Their multi-trajectory and revolving streams apply water much more slowly and uniformly than conventional sprays – especially after adjustment has been made to both the radius and the arc. On slopes and clay-like soils, this allows water to soak into the landscape instead of running off and being wasted. Additional water saving advantages include better wind resistance, less misting and the ability to handle reclaimed water. Overall, this installation



Above and below: The atrium is a superb display of different plant heights, shades of green and leaf shapes



Views of the atrium from the floor above

tanks first, and this is used for all on-site irrigation. The run-over then flows into the retention pond.

The pond is surrounded by high retaining walls and plants growing through the stabilising blocks of the wall include *Asystasia gangetica*, *Aptenia cordifolia* and *Plumbago auriculata* 'White'. Within and around the pond, plant material comprises *Kniphofia* 'Royal Strain' and 'Yellow Cheer', *Juncus kraussii*, *Cyperus prolifer*, *Zantedeschia aethiopica* and *Eucomis autumnalis*. Coetzee says the pond acts as a type of wetland and successfully purifies the on-site water.

Atrium

The interior planting forms an essential part of Nestlé's greening philosophy and Coetzee says he has seldom had the opportunity to design an atrium of this size. It is 450m² and situated in such a way that all staff members have a good view of it due to the open plan office arrangement of the building. There is also a good top-down view of it for staff working on the upper level

of the building. The long, narrow area occupied by the atrium is somewhat rigid, but this has been addressed by the introduction of small mounds as well as pebbles which create informal, curved pathways. The pathways also allow for easy maintenance. Tables and chairs close to the plants encourage staff members to use the space as a relaxing pause area.

Coetzee consulted Robbie Strang of Bidvest Execuflorea for advice on plant material choices for the atrium and due to the low light levels, Strang recommended 4m tall *Dracaena massangeana*, 2m tall *Trichelia dregeana*, *Aglaonema* 'Silver Queen', *A.pseudobracteatum*, *Shefflera arboricola*, *Clivia miniata* and *Sanseveria trifasciata*. The result is a superb effect of different heights, shades of green, textures and leaf shapes. Says Coetzee: "Robbie is really knowledgeable about indoor plants and the entire project has been enriched by the presence of the atrium." Bidvest Execuflorea has its own indoor plant pre-acclimatising facilities and supplied some of the plants to ensure as little shock as possible to them on installation.