



Application Landscape Design

Improving landscape studies thanks to 3D

The Alain FARAGOU agency is improving quality and accuracy of its landscape planning project studies in 3D with the LandSIM3D software.



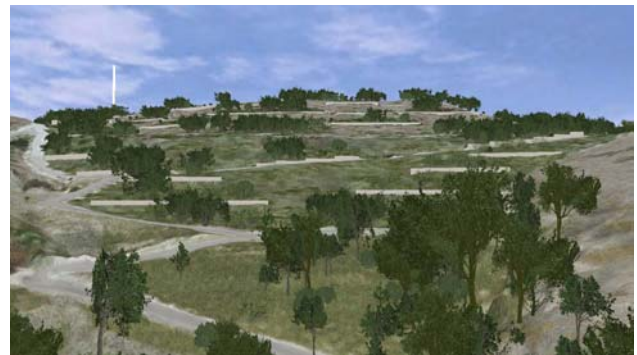
Alain **FARAGOU** passion and speciality is landscapes in the Mediterranean area. No wonder that he, 1978, decided to open his agency in Nice, south of France. The **FARAGOU** agency is a landscape and environmental workshop expert in planning, creation and control of all landscape operations, no matter if it is of the size of a country, a territory, a city, a site or a garden.

The agency anticipates and conceptualises landscapes and environments in a wide scope of urban- peri-urban- natural-, public- and private – projects, mainly in the Mediterranean area. The team is based on Landscape architects, engineers, technicians, graphists and specialists in environment and urbanism.

In 2008 the agency was contacted by **VEOLIA Environment**, a world leader in environmental services and in particular waste management, to handle a very particular landscape study. It consisted to propose a project to rework the landscape to better assist the closing, in 2010, of a waste station in the Glaciere valley situated at Villeneuve Loubet, the only waste station in the Alpes Maritimes area. This site has been hardly criticized since its opening in 2000. A mission identified to be delicate thanks to a difficult past but in an exceptional Mediterranean countryside well known by Alain **FARAGOU**.

The objective of this mission was to allow **VEOLIA Environment** to handle, in the best possible way, the closing phase of this waste station and to anticipate the impact of its final volume of waste made of 3 millions of cubic meters. An approach made to determine the best possible model and susceptible to re-insert the site into its environment. *“The prejudice for this project was mimicry”* explained Alain **FARAGOU**, *“On the level of big landscapes, this project is very visible in a region where the local economics mainly depends on tourism and therefore the quality of its landscape is fundamentally. The site is visible from far away from characteristic villages in the area as St Paul de Vence. To turn this site back into its natural context and landscape is essential, but it is a very complicated approach to realize”*.

The specific geological situation of the “la Glacieres” site, placed on a ground with volcanic origin, has over the years created specific landscape typologies with an important number of plant species.



The « La Glacière » hill simulated 30 years after transformation.

“Our objective was to get inspired by the environmental biodiversity and the structure of the landscape so that the site will evolve the same way as its close environment. We wanted also to reduce direct impact created by the embankments linked to the waste stocking to propose VEOLIA a better management of the final topology of the site so that it could be harmoniously integrated into the environmental landscape. In such a situation with this extent of the landscape, it is very difficult to work with precision using traditional methods and also to analyse reliable propositions. It is very hard to precisely verify the quality of different considered- or maintained- options. In this project, 3D simulation, with the possibility to move around in Real-time, was established as a precious support”.

So the agency purchased a first license of **LandSIM3D** after discovering the product at a tradeshow. 2 landscape architects from the agency participate at a 3 day training and geographical data BDOrtho and BDTopo needed for the modelling of the site was ordered from IGN. A 30 Km² 3D model of the site was quickly created with LandSIM3D including the township of Villeneuve Loubet its fortress, the Saint Paul de Vence village and its ramparts, the Colle-sur-Loup village. *“Already during first test, the power of 3D was revealed to be a true evolution for our trade”* says Alain **FARAGOU**. *“We realized rapidly how it will influence our project in its study phase and would allow us to evaluate our scenarios by simulating them, visualize our options and allowed us to present to our customer a strategy of reallocation in time and space both long-lasting and reliable”*. *The interactive 3d model of the site served as model to analyze the existing landscape before the agency inserted its first planning options to visualize them in its real circumstances”*.

“From the first try with LandSIM3D, 3D simulation revealed to be a great and key evolution in our practice”.

Alain **FARAGOU** – Landscape Architect

Studies of sensible sites or infrastructures as waste stations always impacts co-operation between a number of professions, politics and associations with different cultures and competences. In this projects, the force of 3D simulation is also revealed during the communication phase allowing the **FARAGOU** agency to explain its complex approach of analyses and suggestions to firstly managers and secondly to representatives of the administration. “Such a site implies several professions and decision takers” explains Alain **FARAGOU**, “the 3D model of the site did swiftly impose is self as an unifier for all professions involved in the study of the site” .For the agency 3D has become a way to establish a common language between experts an non experts, an universal language that everybody can understand”.

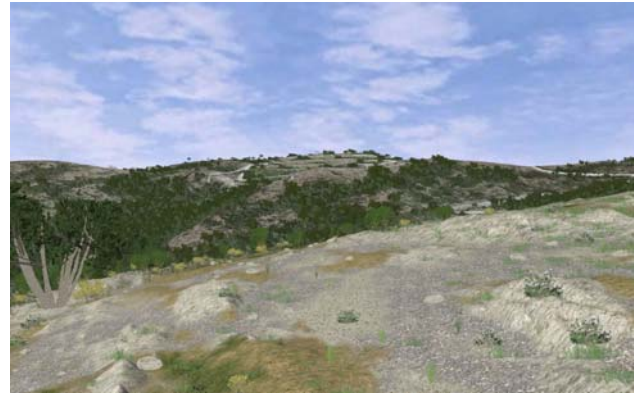


Simulation of the gabions on the Glaciere valley at 0 and 30 years.



The planning options retained combined 2 distinct typologies. The closed spaces, composed of dense areas dominated by Green Oaks, arbutus and olive trees and areas with more shrubby dominated by filarial, arbutus and cistus. Then open spaces, that are especially made of stonecrops, stipes and foxtail grass. All this vegetation was simulated in 3D thanks to **LandSIM3D** and organized in typological landscapes thanks to the creation tools and the scattering of vegetation proposed by **LandSIM3D**.

The 3D model could so be “vegetalised” on its entire surface with realism and planning proposals simulated with precision by **LandSIM3D**. The 3D model was “vegetalised” with realism on all its surface and the planning options was simulated with precision.



Visualization of the project 30 years later from the front side hill.

The final profile of the project presented by the agency, simulated in the 3D model of the site, was based on creation of a system of terraces maintained by gabions, typical in the landscape of the Mediterranean, to stratify this new area in a voluntary matter approachin it to the configuration of the close environment of the site. In this practise, the **LandSIM3D** software proved to be an excellent decision taking tool by revealing the planning impacts at all scales.

“Every decision taken, no matter the size of it, resulted in an improvement of the initial landscape. Each of them is the result of complex and subtlety associations of multiple elements” said Alain **FARAGOU**. *“Our profession is to intervene as producer of a scene in space to orchestrate its homogeneity and reciprocity. The Glaciere site is a perfect illustration of this. Our reasonability is to prepare the evolution of a living environment, to print news into its harmony by adapting to all factors controlling the site. Our creation, in its finality, takes in to consideration the memories of the site and preserves it”.*

The Glaciere project was the first experience, for the agency, with the **LandSIM3D** product and the customer, the **VEOLIA Environment** group, was also attracted by the 3D approach, the analysis method and the impact of landscape planning proposals. The model also served as support during presentations to SIREN and public administrations. Satisfied, the **VEOLIA Environment** group has entrusted the **FARAGOU** agency its second landscape planning project, this time regarding the opening of another waste centre capable of 7 million cubic meters: another challenge that the **FARAGOU** agency will take again together with its staff using their new 3D simulation tool.

The Alain **FARAGOU** agency acquired LandSIM3D in 2008.

Internet website : www.faragou-paysages.com.fr

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