



# Case Study Infrastructure



## Sustainable highway design in Northern Ireland

### Scott Wilson improved the environmental integration of the new Belfast-Londonderry A6 highway thanks to LandSIM3D®



**Paul Wilson** is managing the Digital Media Team of **Scott Wilson**, an international multi-disciplinary consultancy group with a global network of over 6,000 staff covering various markets such as transportation, property, environment and natural resources.

Scott Wilson focuses on providing clients with a local service delivered by locally based staff. Their reputation is

based on sound design skills and an ability to cope with complex projects, demanding deadlines and challenging budgets.

In this exclusive interview, **Paul Wilson** shares with us his experience with LandSIM3D used on a strategic project for Northern Ireland and explains at the same time the reasons behind choosing LandSIM3D at Scott Wilson.

The A6 highway links Belfast to Londonderry. The section simulated with LandSIM3D covers 12 Km of key strategic and economic importance for Northern Ireland. The project was to propose a new single and dual carriageway between Randalstown and Castledawson. It includes new grade-separated junctions, roundabouts, bridges and pedestrian footbridges and has environmental implications to current landscape, commercial property and residential land as well as special ecological and heritage sites.

#### What role or importance has the 3D visualisation at Scott Wilson?

The role of 3D visualisation is fundamental to the design process within Scott Wilson, says Paul Wilson. The Digital Media team aim to enhance the communication between design consultants and clients. Today it is becoming a necessity for all stakeholders involved in the design process, be it a road, building or public realm scheme, to easily visualise the end result rather than a complex mass of lines on A0 paper. This is what our Digital Media Team specialise in.



View of the 12 x 3 Km 3D landscape model developed with LandSIM3D

#### What were your main concerns before having adopted LandSIM3D?

As with any new development in emerging technologies that will stretch the limits of possibilities, there is always a concern. However, we believed in what we were striving to achieve and knew we were working with the best software developers to deliver a product second to none so this reduced any apprehension. The key elements in any good creation are good communication and organisation abilities to ensure all angles, areas and workflows are considered and catered for.

#### What did you do beforehand to solve these problems?

Previously we used a number of solutions for our workflow which limited our ambitions for our clients. We found it extremely difficult to deliver solutions incorporating large landscapes with complex amounts of real world planting and using the technology as a design tool at the same time. We found that other solutions did not recreate existing environments as nature had intended.

#### What other solutions or options did you evaluate to make your choice and what were the criteria?

Over the past 5-6 years we have evaluated at least twenty different options to deliver a world class solution for our

*“LandSIM3D has been a product we have desired for a number of years ...”*

*Paul WILSON – Digital Media Team Manager*

workflow. Nothing provided a similar solution to LandSIM3D with its unique, all-in-one design approach. We evaluated each solution on its workflow, compatibility with Autodesk software, ease of use, realism of landscape environments and exceptional real world planting. We required a real time viewer that everyone could use and easily understand but which displayed a rich real world, accurate output.

**What gains did you make in productivity using LandSIM3D as opposed to before using it?**

The gains in productivity are enormous in all fronts. LandSIM3D has helped us design better solutions throughout all our Multi Disciplinary teams. It has allowed us to better explain and engage with people affected by the proposed scheme in the consultation process with the local community, landowners, planning authority, roads service and other stakeholders.



**What about your A6 project, was LandSIM3D purchased especially for that specific project?**

LandSIM3D has been a product we have desired for a number of years now. We have used Real Time in road schemes previously but we didn't have the power to output and deliver such real world solutions in a quick, accurate and simple manner. We can easily amend the design of any road, structure, light column, sign or plant and the real time file will be instantly updated and output. This can then be sent straight to all stakeholders for review with the most up to date design solution.

**What workflow or method do you use in conjunction with LandSIM3D?**

With our experience working in a Multi Disciplinary environment we have quickly created a workflow using the different software packages as such as AutoCAD Map and AutoCAD Civil3D that are required to deliver this type of large project, especially when working with numerous

different consultants. We have also the development team at Bionatics to thank for the support, testing and design of specific features and tools which have made it possible to integrate this large amount of existing and proposed data into the software. Without Bionatics' dedication and passion this would not have been achievable.

**What were the key benefits of LandSIM3D on this project?**

The software creates landscape 3D databases the way designers think. It allows to design in real world coordinate systems simplifying the design process and improving accuracy. We like its flexibility allowing us to generate different scenarios and options to be reviewed instantly. We are also able to easily change and update the core model to test new or amended designs so that the design being presented is always the most up to date one.

**Does LandSIM3D serve other teams at Scott Wilson?**

LandSIM3D is now being utilised throughout the Scott Wilson group worldwide and LandSIM3D is now in the process to be deployed in multiple licences. We have found the interest from our existing and potential client base in the software and workflow to be exceptional to date. We have vast array of upcoming opportunities in our 4 key sectors – transport, property, natural resources and environment.

**Additional Information**

**Scott Wilson** (Belfast) purchased LandSIM3D in 2006 as part of the LandSIM3D Early Adopter Program, 1 year before its official release date in United Kingdom. During that 12 months period time, the Scott Wilson Digital Media Team and the Bionatics LandSIM3D Product Development Team worked hard together to deliver Scott Wilson the best production workflow for highway design and landscape integration. The teams today continue to work in close relationship on the future releases of LandSIM3D and to address LandSIM3D with new project types in Urban and Landscape planning and design.

Website: [www.scottwilson.com](http://www.scottwilson.com)

For more information about LandSIM3D, visit the Bionatics website [www.bionatics.com](http://www.bionatics.com).

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