

# Virtual Environmental Planning system (VEPs)

## Evaluation Summary

The Virtual Environmental Planning Project (VEPs) proposed an alternative approach to planning consultation by allowing people to view and leave comments about planning developments using 3D visualisation software in a web browser, within the context of an existing landscape or cityscape.

Many people find it difficult to:

- Access and comment on planning proposals during office hours,
- Visualise what a proposed planning development will look like from looking at two-dimensional plans only,
- Understand how planning decisions are made and how their comments are taken into account during the decision-making process.

The software developed by VEPs allowed users to freely explore and interact with 3D models and make comments directly via an online system, which could be accessed from their 'home' PC over a 'normal' broadband connection at any time (Appendix 1). Anyone accessing the web applications would be able to view & share comments online.



The evaluation of the VEPs project focused on gathering information about: what users thought of the proposed approach to planning consultation; what users thought of the tools developed and the use of 3D; if and how the VEPs tools could practically benefit public participation in the planning consultation process.

Evaluation information was gathered through: small 'focussed' evaluation workshops; larger 'event-style' facilitated sessions (up to 50 attendees) and expert reviews.

### Summary findings.

The majority of users who evaluated the VEPs tools agreed that the use of web-based tools to support public participation in planning consultations are useful. As a consultation can be available on the web it allows people to take part from anywhere (and anytime) they can access a computer capable of running such tools. This can enable more people to take part in a consultation as it is not taking place at a set time at a set physical location. Allowing more people to take part in the consultation should mean more feedback being provided and a wider variety of views being received about the proposals.



*Use of 3D visualisation tools as part of public participation in the planning process:*

- There was debate during a number of evaluation sessions on how accurate people expected the 3D visualisation to be. Would 3D visualisation only be used to raise awareness of key issues within a planning consultation, with people then being referred to 2D maps and standard reports for more accurate information.

- Some planning officers stated concerns that if a 3D visualisation is too detailed it may give the impression that planning decisions have already been made and the user is viewing the 'final' plan, thereby devaluing any consultation.

- Navigation issues, the perception of how "user-friendly" a 3D tool is depends very much on the experience a user has with 3D applications. Though able to understand the 3D visualisation they were being presented with, some inexperienced users found navigating around a 3D scene quite hard, even with 'simple' user interface elements supporting the navigation.

- A key factor in gaining users trust is the accuracy, timeliness and quality of the data in the visualisation, regardless of whether it is 3D data, 2D data, text, audio / video, etc. The quality of the data will affect how much the user trusts the software, and by proxy how much they trust the consultation process itself.

- The resources required to use such tools in a consultation (set-up, administration, moderation, etc.) could be a barrier to them being used. As mentioned in other workshops, a cost vs. benefit analysis would need to be carried out. However, the VEPs tools could increase their return on investment if the tools allowed more than just local authority planning officers to use the tools for consultations – e.g. a member of the public could set up and administer their own consultation through an admin interface to the VEPs tools that the local authority resources and maintains.

*Need for facilitation:*

- It should be clearly explained to people taking part in a consultation why they are being asked for their comments at a particular time. The points at which consultation is carried can appear to be politically motivated rather than part of a formal process.

One of the main concerns found at the sessions is the lack of confidence the public have towards their involvement in planning consultation generally. If these types of tools are to succeed then they need to ensure that the users can believe that their information is important and that it will be used appropriately.

Evaluators agreed that assessing public responses to 3D visualisations and their expectations in terms of level of detail and accuracy would be an interesting topic for future research.

Individual feedback comment from a councillor at a UK workshop:

*"Planning is a three dimensional issue. It is hard to conceive how people understood these 3D issues when represented in 2D."*

**Further information**

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# Appendix 1

## Summary of VEPs Tools

### 3D Comment Tool

<http://veps3d.org/site/267.asp>

Developed by Environment Agency for England and Wales (UK).

This tool allowed the user to interact with a 3D model of a proposed planning development. The user could move through the 3D space, interact with the model by changing the location, shape and appearance of buildings in the model, leave text comments on a point of interest in the 3D model, and 'bookmark' that point for other people to comment on. Navigation through the 3D space was assisted by a synchronised 2D map.

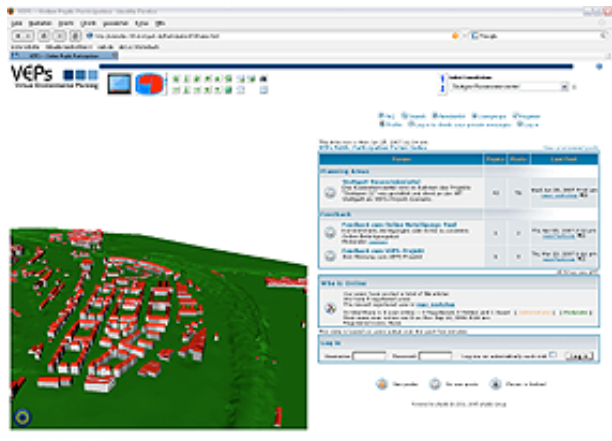


### 3D Participation Tool

<http://veps3d.org/site/266.asp>

Developed by University of Applied Science, Stuttgart (D) with University of Salford (UK).

This tool allowed users to move around an area of Stuttgart in 2D and choose to view specific planning development areas in 3D. Users could then explore the 3D model in more detail, and choose between different planning options, leave comments about the planning options by using discussion forum software, which had been developed to integrate with the 2D / 3D viewer. Users could also use the discussion forum to search for, read and respond to other people's comments.



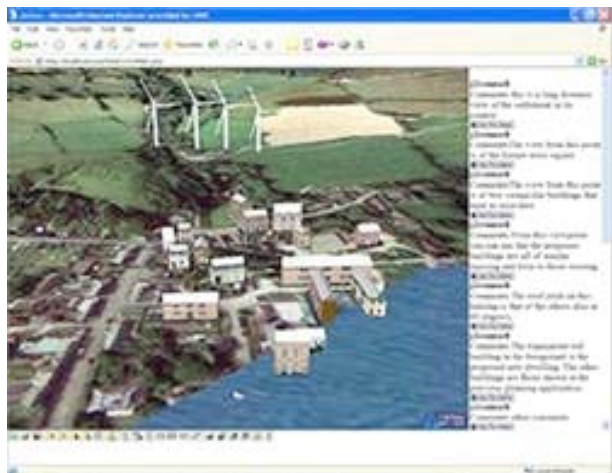
### 3D Masterplanner Tool

<http://veps3d.org/site/256.asp>

Developed by University of West England (UK).

This tool allowed users to move around a 3D scene and use interactive modelling tools to add preset objects to the scene, such as buildings or wind turbines. Use interactive 3D modelling tools to create new objects in the scene, and edit the shape and texture of existing objects.

These modelling tools allowed users to create completely different planning options from those being proposed. Comments could be left by taking a 'snapshot' of the current point of view in the 3D scene and leave a text comment with that snapshot. Other users could then be taken to that viewpoint and leave their comments about what they see.



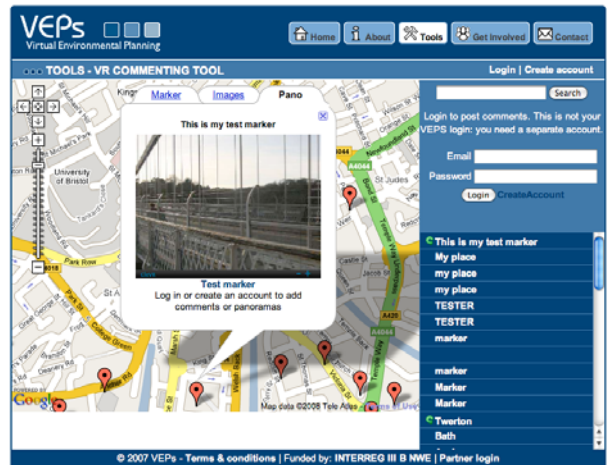
**2D Virtual Reality Commenting Tool**

<http://veps3d.org/site/255.asp>

Development by Clementine Media (UK).

This tool allows users to move around a 2D map, and view information about places of interest on the map using 2D 'bubbles'.

Users could leave comments about a place of interest by adding text, uploading still images, or by uploading panoramic images on which the user could create 'hot spots' that displayed text information when the user hovered the mouse over them. The tool also allows users to stitch together a series of still images to create their own 360 degree panoramic images.



**Urban Planning Participation Tools**

<http://veps3d.org/site/254.asp>

Developed by University of Salford (UK).

These are two separate but related tools. The first shows users a 2D map of an area scheduled for redevelopment. By clicking on icons users can view photographs of key points in the area, read comments left by others, and leave their own comments. The second tool uses a 2D map linked to a discussion forum where users can leave comments about a specific topic related to the development area.

