

# Smart Cities

Session VI: DIGITAL PARTICIPATION & SOCIAL MEDIA

Lecture 11: *The Participatory City*

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## Outline of the Lecture

1. The Idea of Digital Participation: Public Participation
2. A Classification of Participation
3. The Woodberry Down Experiment
4. The Hackney Building Exploratory
5. Brickfields
6. Our Work with the Architecture Foundation
7. Many Projects and the Current Situation

## The Idea of Digital Participation: Public Participation

In the 1960s and 1970s, various land use games were proposed and some games were linked to computer based analysis.

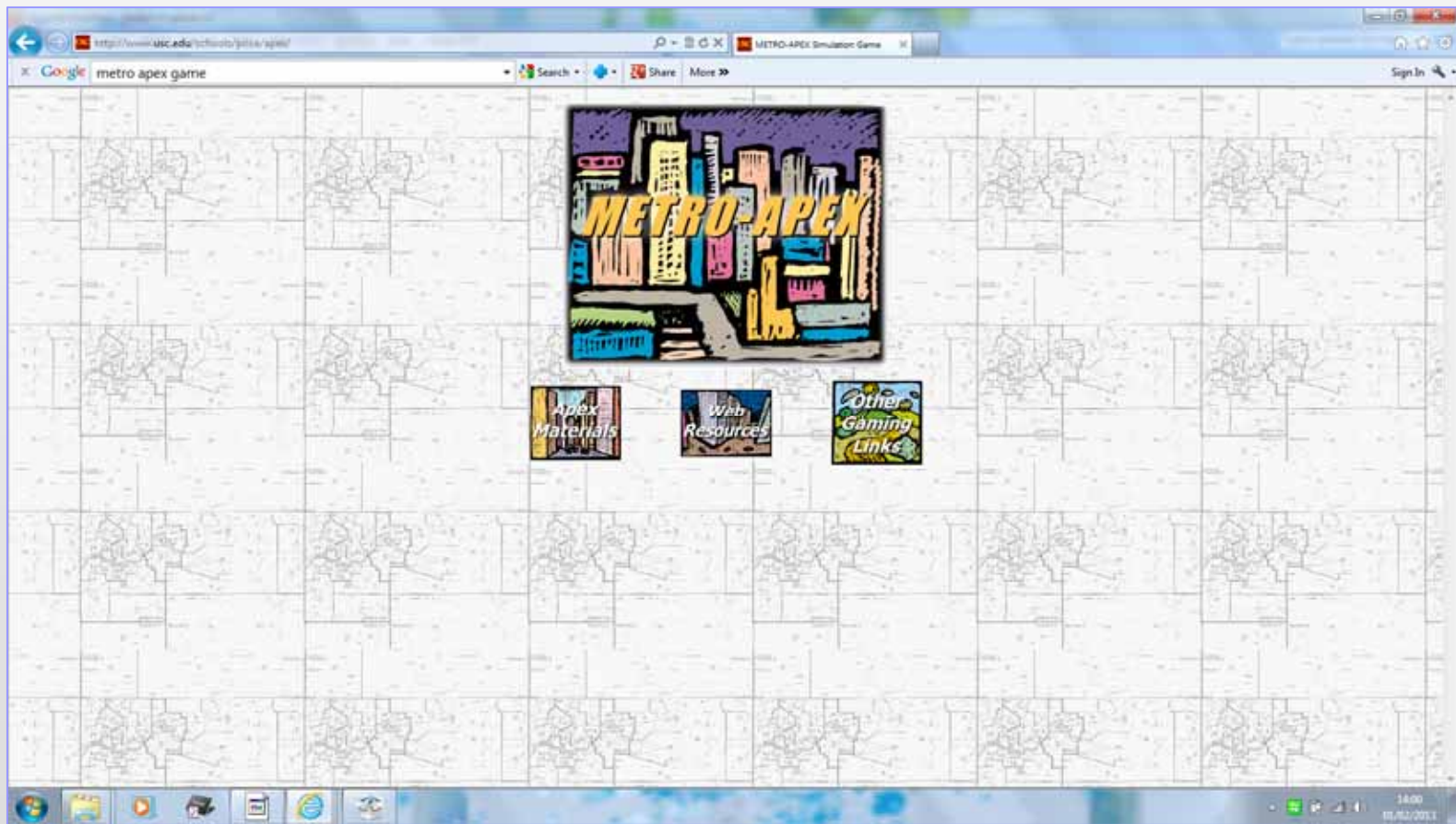
These were based on the notion that the games represented the way the city developed and different experts or stakeholders or users were given 'roles' to play out the development of the city. In some senses, modern versions of SimCity with multi-users are in the same spirit.

The users played out the development process – with roles like developers, residents and so on engaging in a pre-designed process of interaction and at the end of each time period various models were run to inform the gamers of their actions. I think the game Metropolis and Metro-Apex from Michigan were run like this.

[www.simcity.com](http://www.simcity.com)



Metro Apex ran on an IBM mainframe machine in the 1970s and was ported to an IBM-PC-AT in the 1980s. I do not know if it is still running but this web site seems to imply it might be



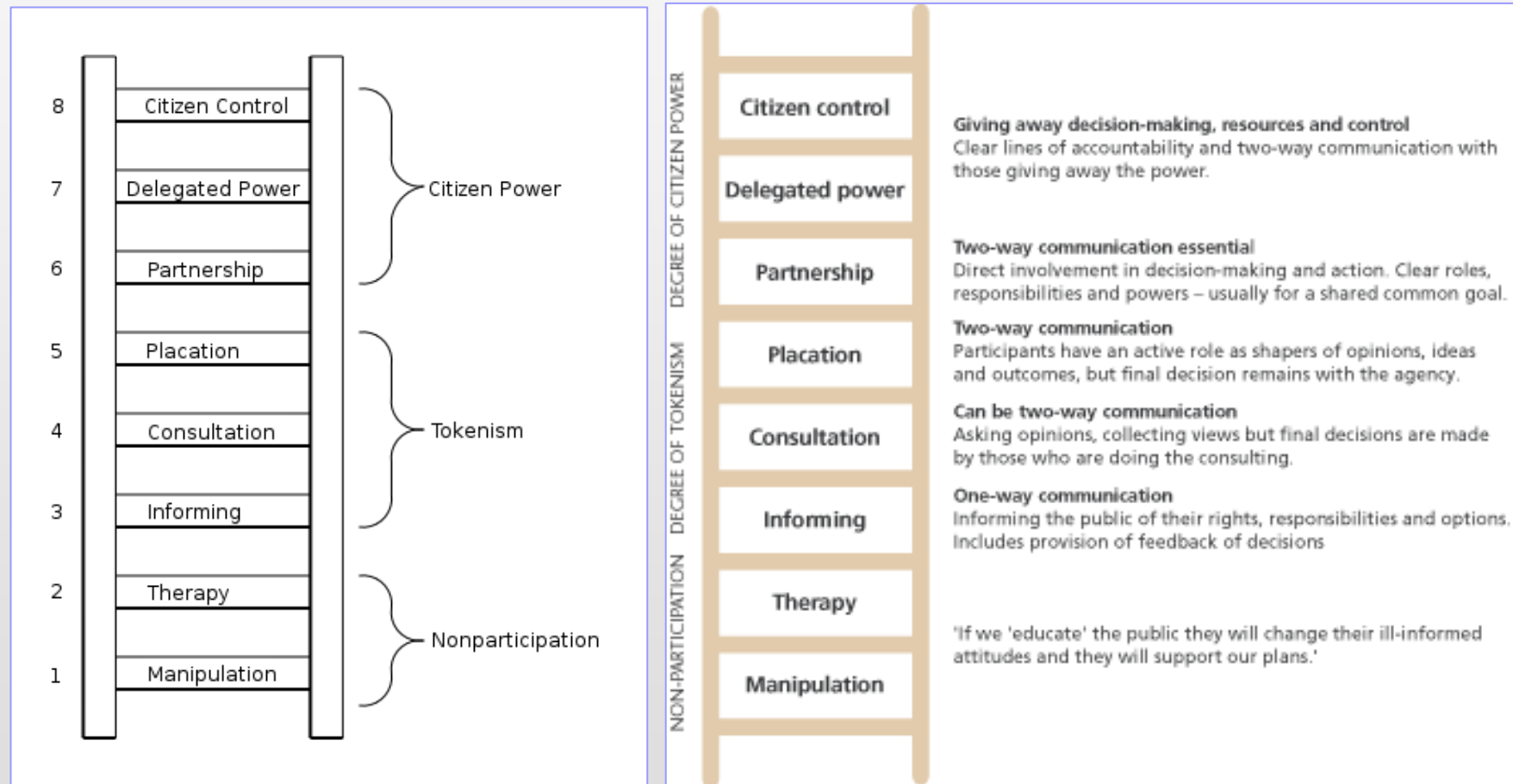
Public participation in institutionalised planning goes back a long way to the very beginnings of the planning system itself. In terms, more bottom up developments community planning began in the 1960s and developed as a grass roots movement where local community groups interacted with developers and planners.

These were often ad hoc responses and in the UK were referred to as the Community Action movement. Various attempts were made to classify these attempts and Arnstein's Ladder of Participation was widely referred to. This divides participation into 8 steps

*Arnstein, Sherry R. "A Ladder of Citizen Participation," **JAIP**, Vol. 35, No. 4, July 1969, pp. 216-224.*



# A Classification of Participation (from Arnstein, 1969)



Visualisation is essential to PP. Our work began on Virtual London in 1996. The development of imagery to help visualize more than the 2D map – photorealism, digital panoramas, fast CAD, 3D GIS, remotely sensed imagery, LiDAR, and so on

These were originally designed to help us acquire expertise in this kind of media as a complement to our mathematical models of cities and as an extension of GIS into the third dimension

These gave us the tools to begin to think about using VR and visualisation in general as a tool in participation – visualisation has proved to be as essential as any hands on real material in helping people participate in planning type decisions. Worth noting that there are many more participatory issues which are not planning but more generally governance



And the development of PP-GIS began where GIS was used as the set of tools to inform stakeholders and involve them as participants in the design process.

Internet GIS first came on stream, the idea of relaying this technology in decision theatres as here at ASU – these were key and still are to an extent although much has moved to individual machines that people own – desktop, hand held. In fact the whole crowd-sourcing movement is like PP-GIS to an extent

Computation is now so all pervasive that participation digitally mirrors all participation in society and in so far as it is different this is because of the immediacy of the technology and the power of networking. Here are some early examples.

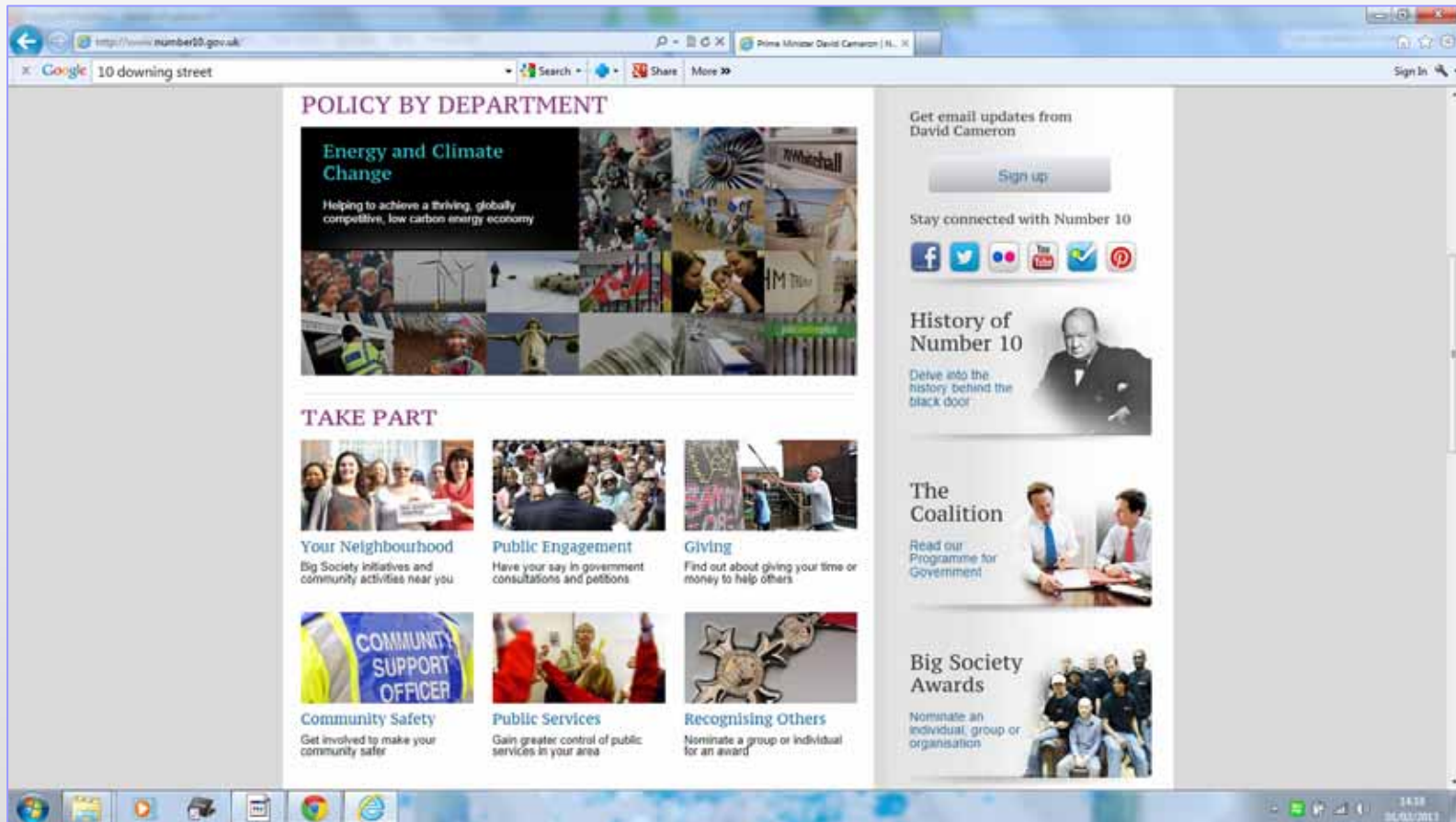


Let us look at a modern rendition of this site

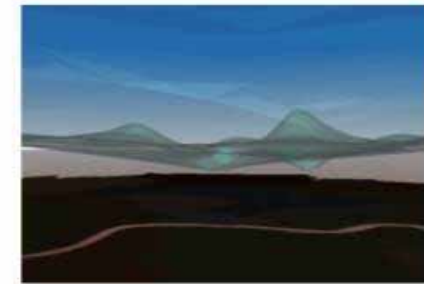
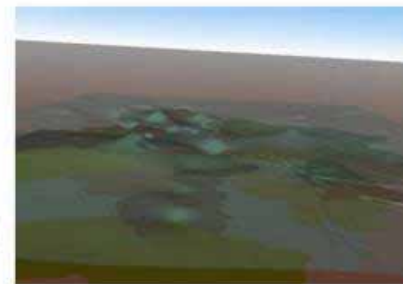
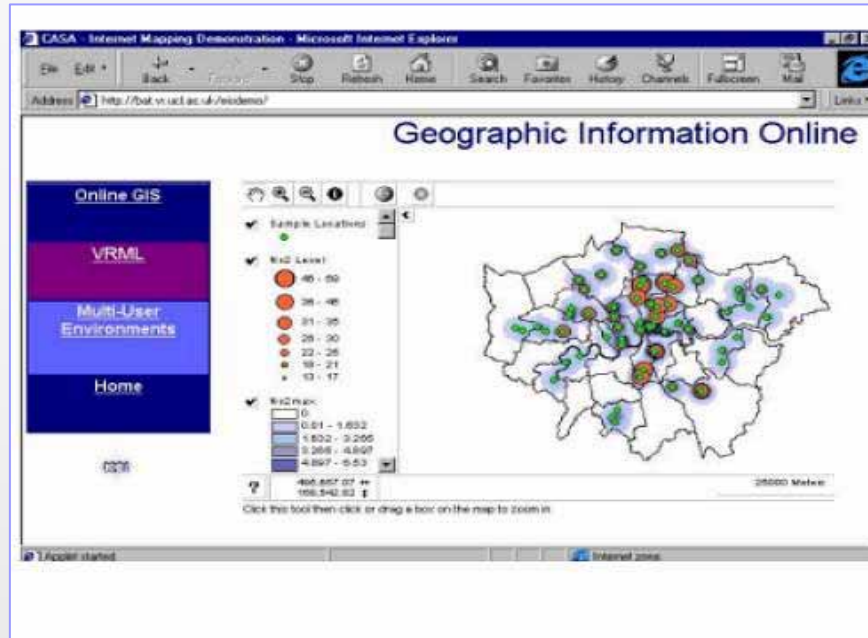
10 Downing Street

<http://www.number10.gov.uk/>

This is a portion of the front page of Number10 – passive media but you can sign petitions on the site an element of web 2

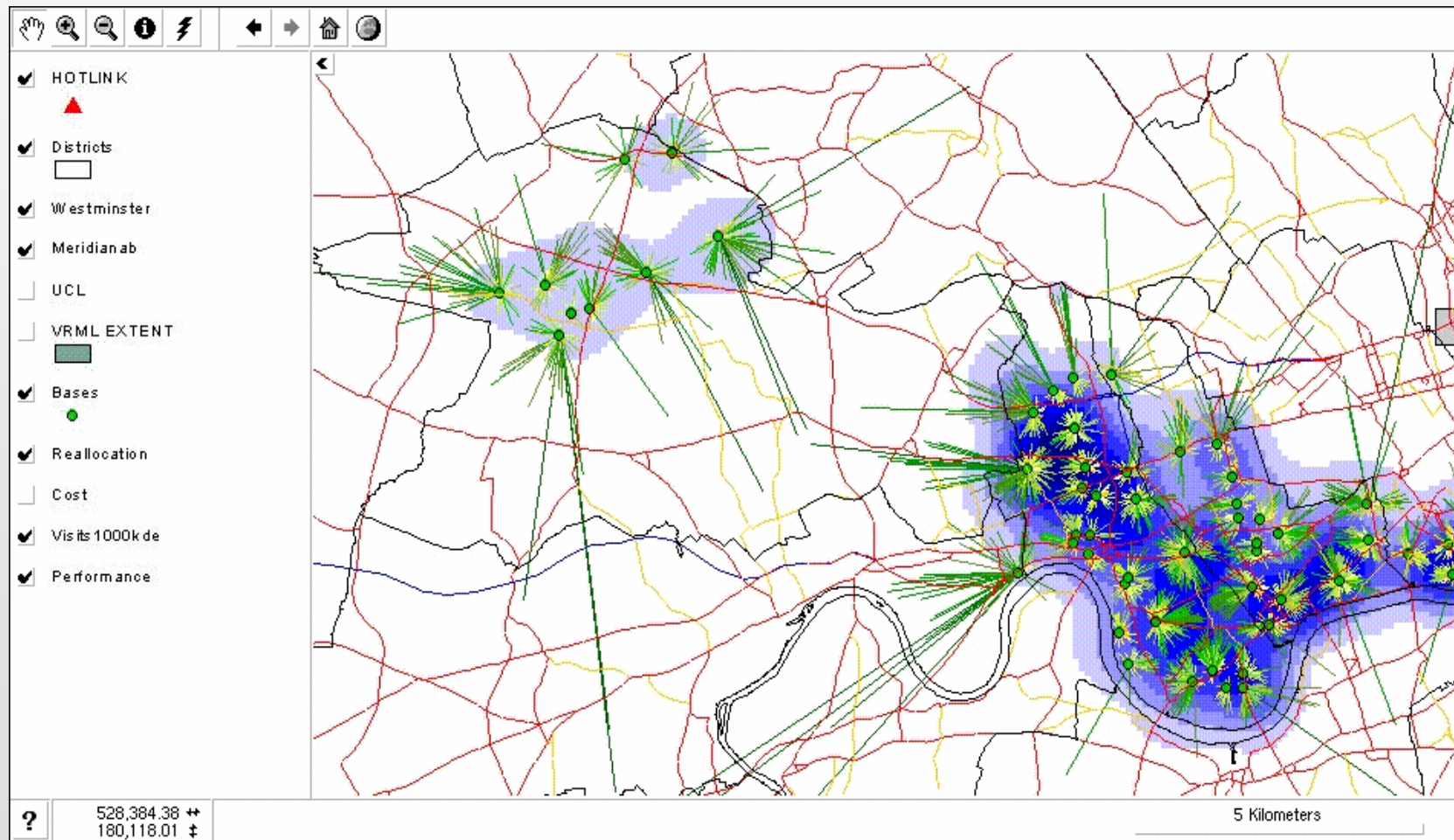


Early internet GIS delivered the map and media content as ...





## From our VR Theatre – allocation of patients to clinics using location allocation but in concert with health decision-makers



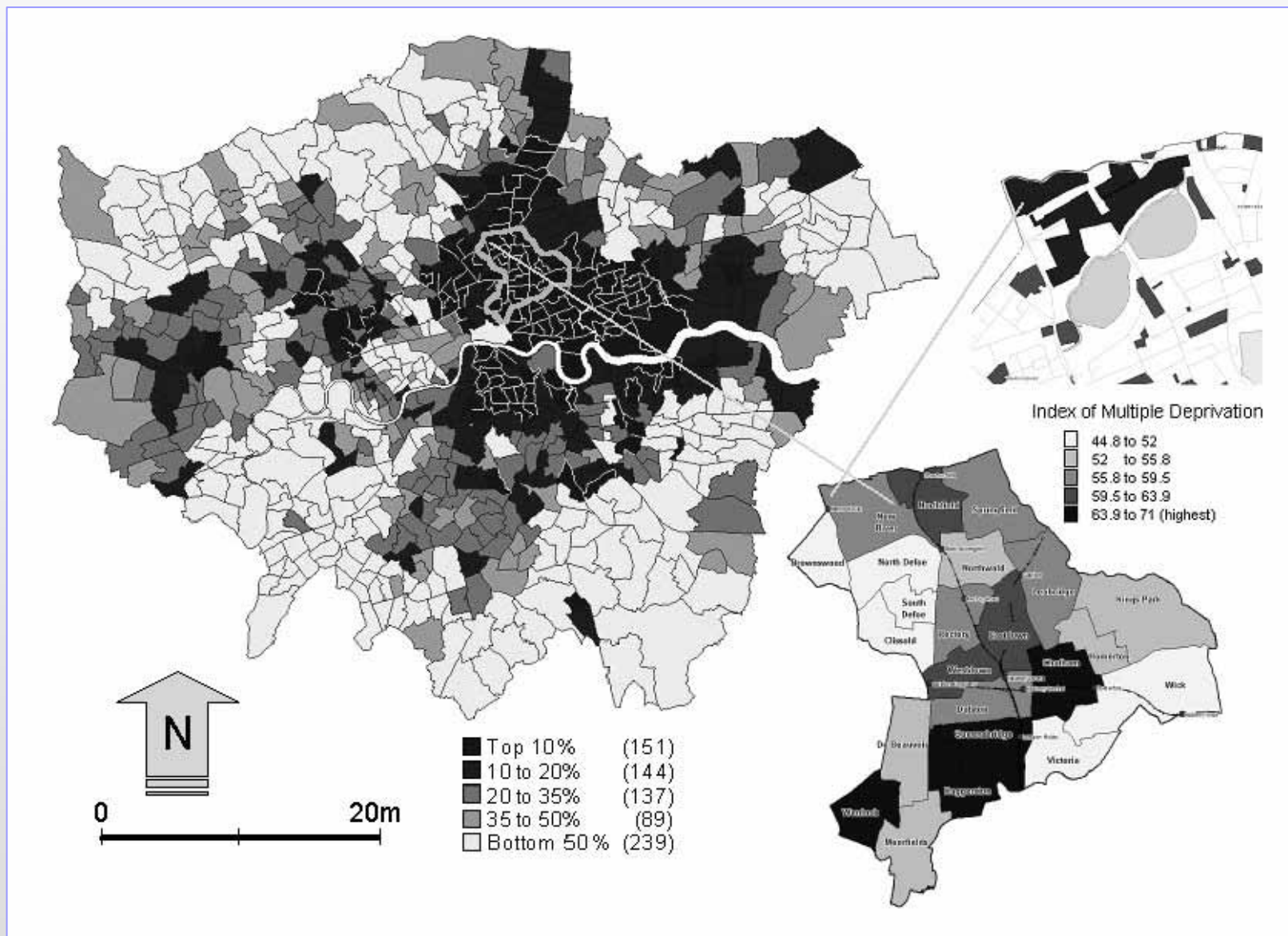
# The Woodberry Down Experiment

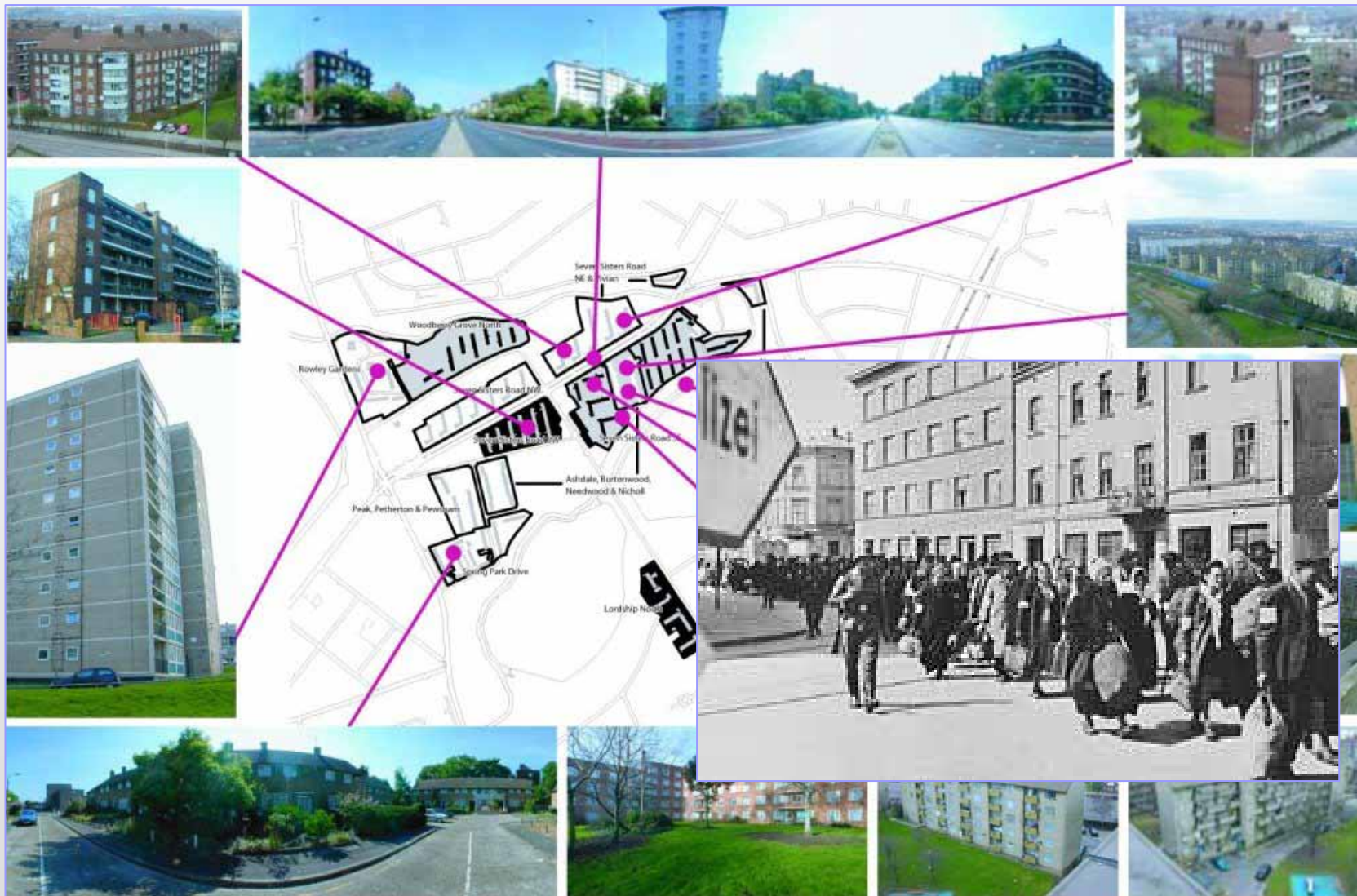
Our first example – essentially building information infrastructure from the ground up for public participation in housing redevelopment

Our experiment brings all these ideas together - delivering information, wiring the city, helping us as planners to develop new tools, and of course Visualisation .....

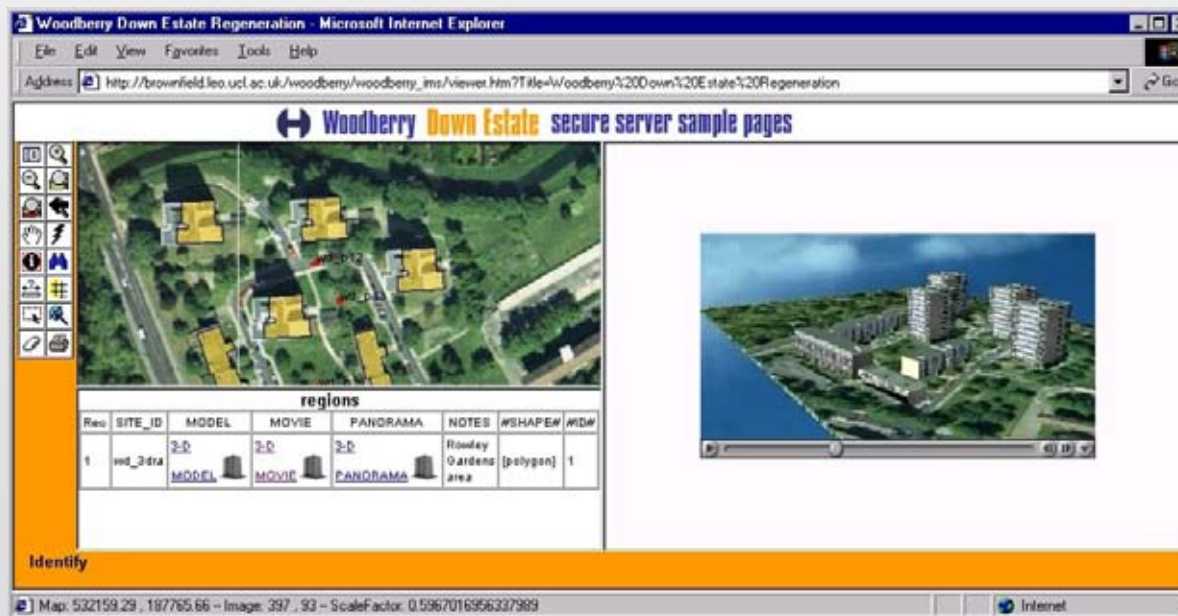
Woodberry Down is an estate of 2500 houses built from the 1950s to the early 1970s, now run down and heavily vandalised, with high rates of crime, drugs, deprivation - all the indicators of inner city decay at its worst. A massive programme of regeneration is beginning. Biggest in western Europe in scale.

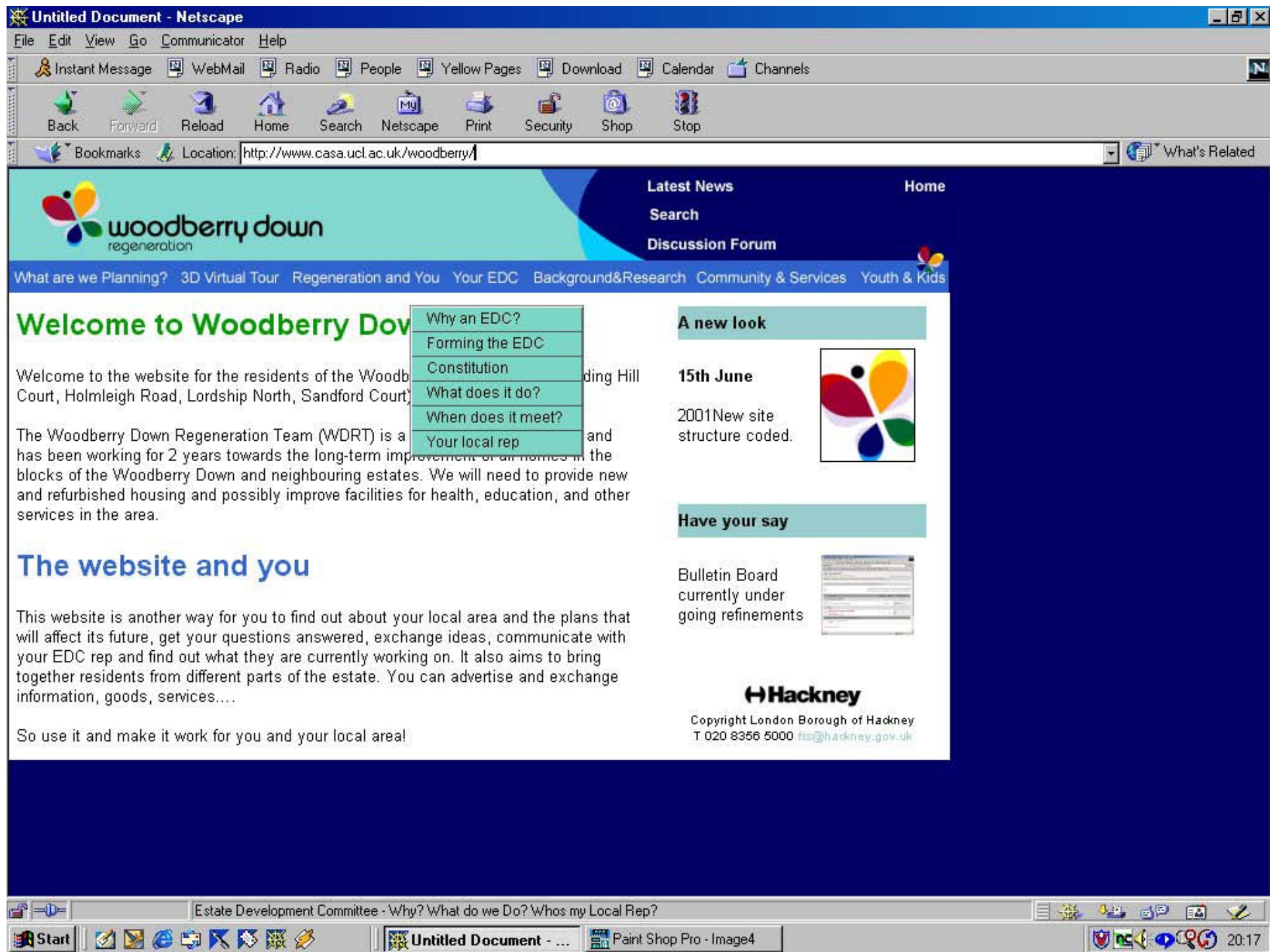




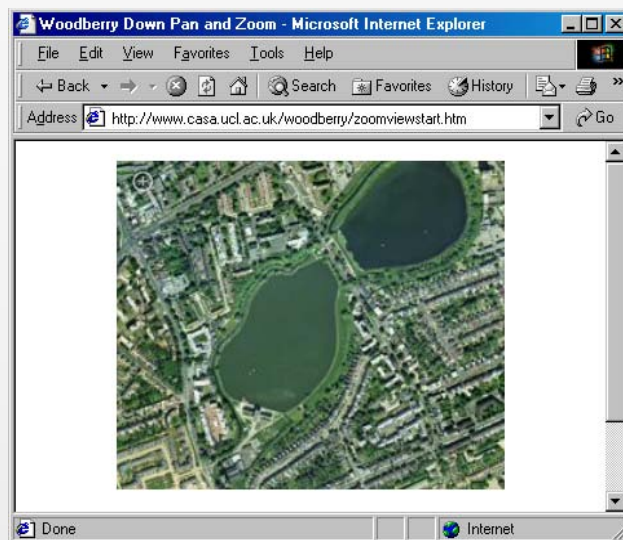




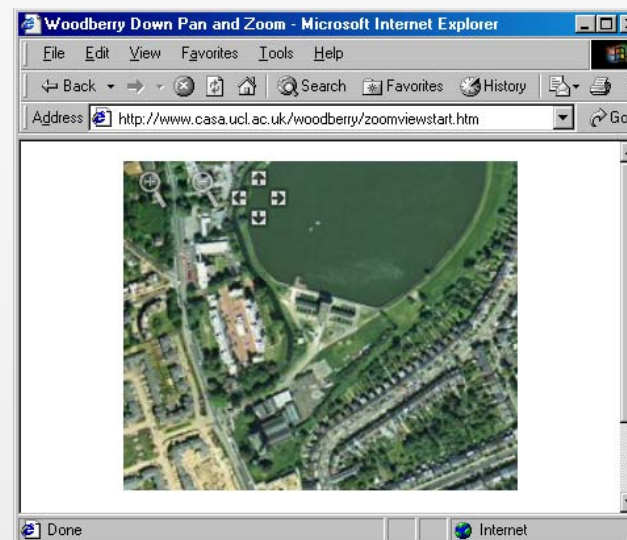




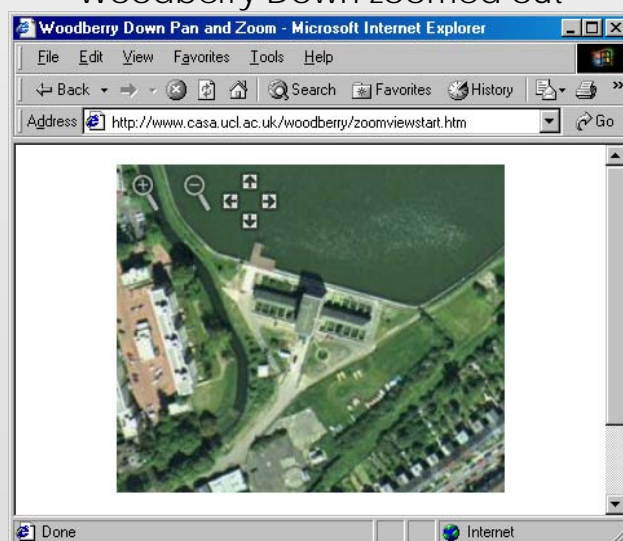




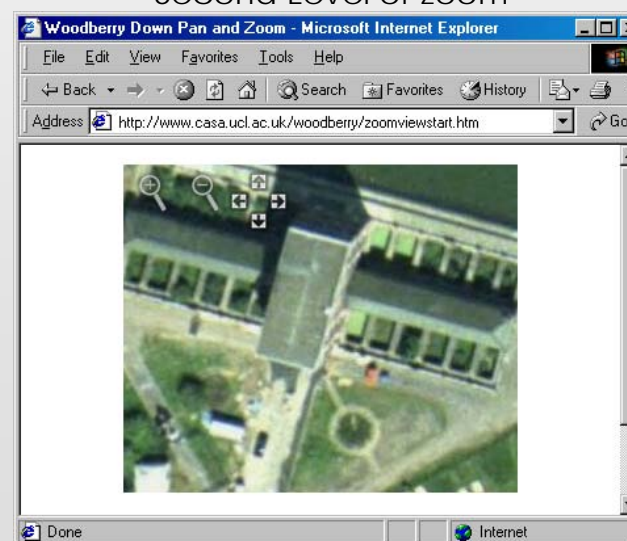
Woodberry Down zoomed out



Second Level of zoom



Fourth level of zoom



Fifth level of zoom, highest detail view

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Bookmarks Location: <http://www.casa.ucl.ac.uk/woodberry/testmap.htm>

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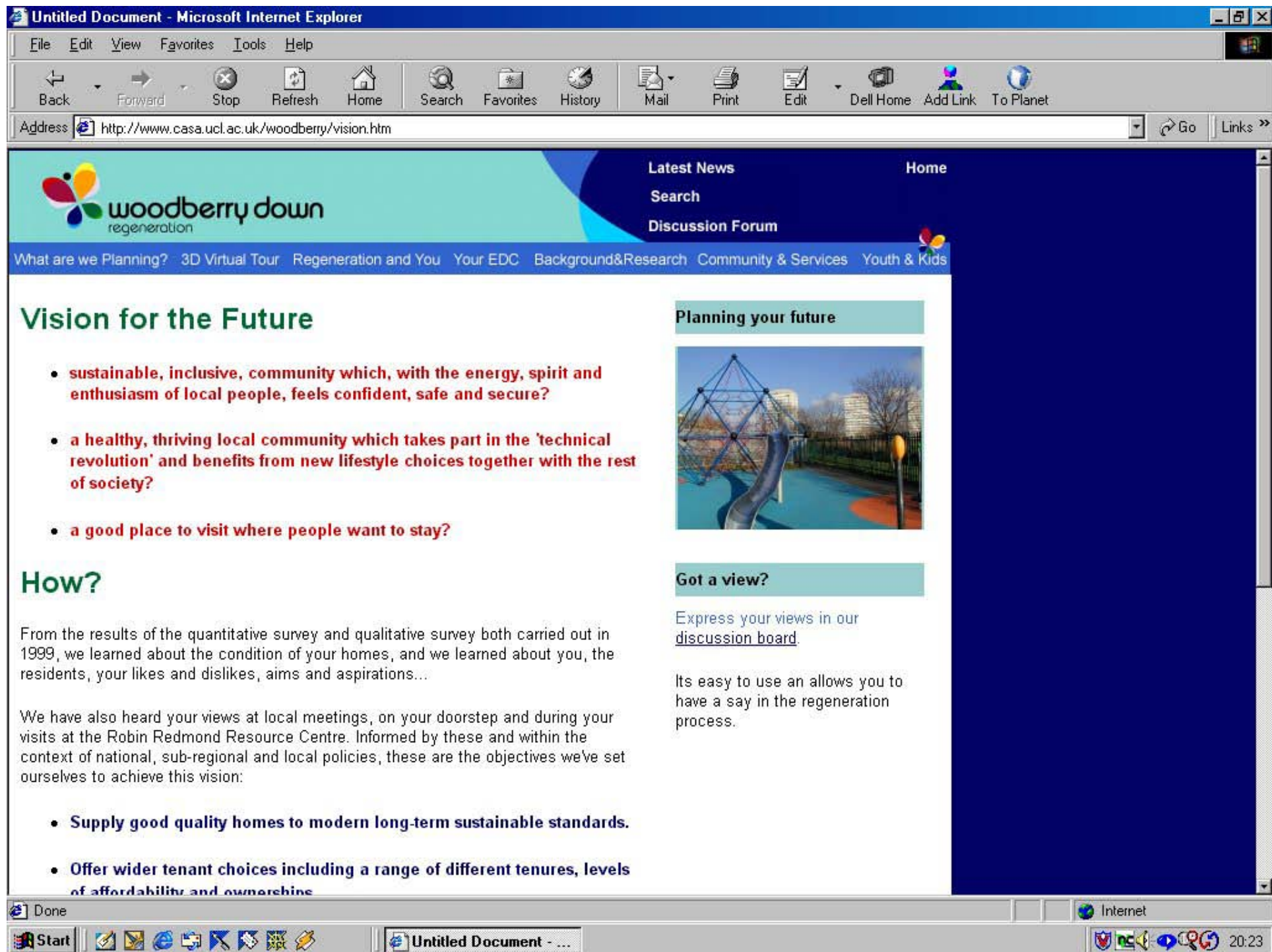
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*a*



*b*



*c*



*D*



# The Hackney Building Exploratory

Children learning about their environment – underprivileged children and aided by ICT. Here is the old web page and then the new



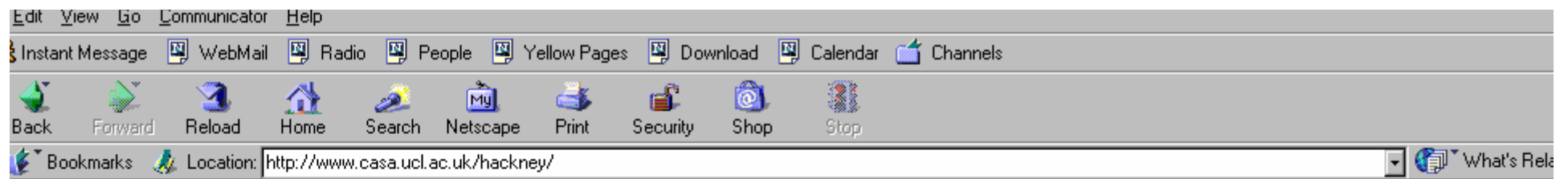




*Children Playing  
in the Exploratory*







*The Web Version of the Desktop Building Exploratory Interactive* 



Home Housing **Panoramas** Geographic

**Housing**

Click and Drag with the Mouse to Rotate the Building



Details



Home Housing **Panoramas** Geographic

Click and Drag with the Mouse to Rotate around the Scene



Panoramas Featured:

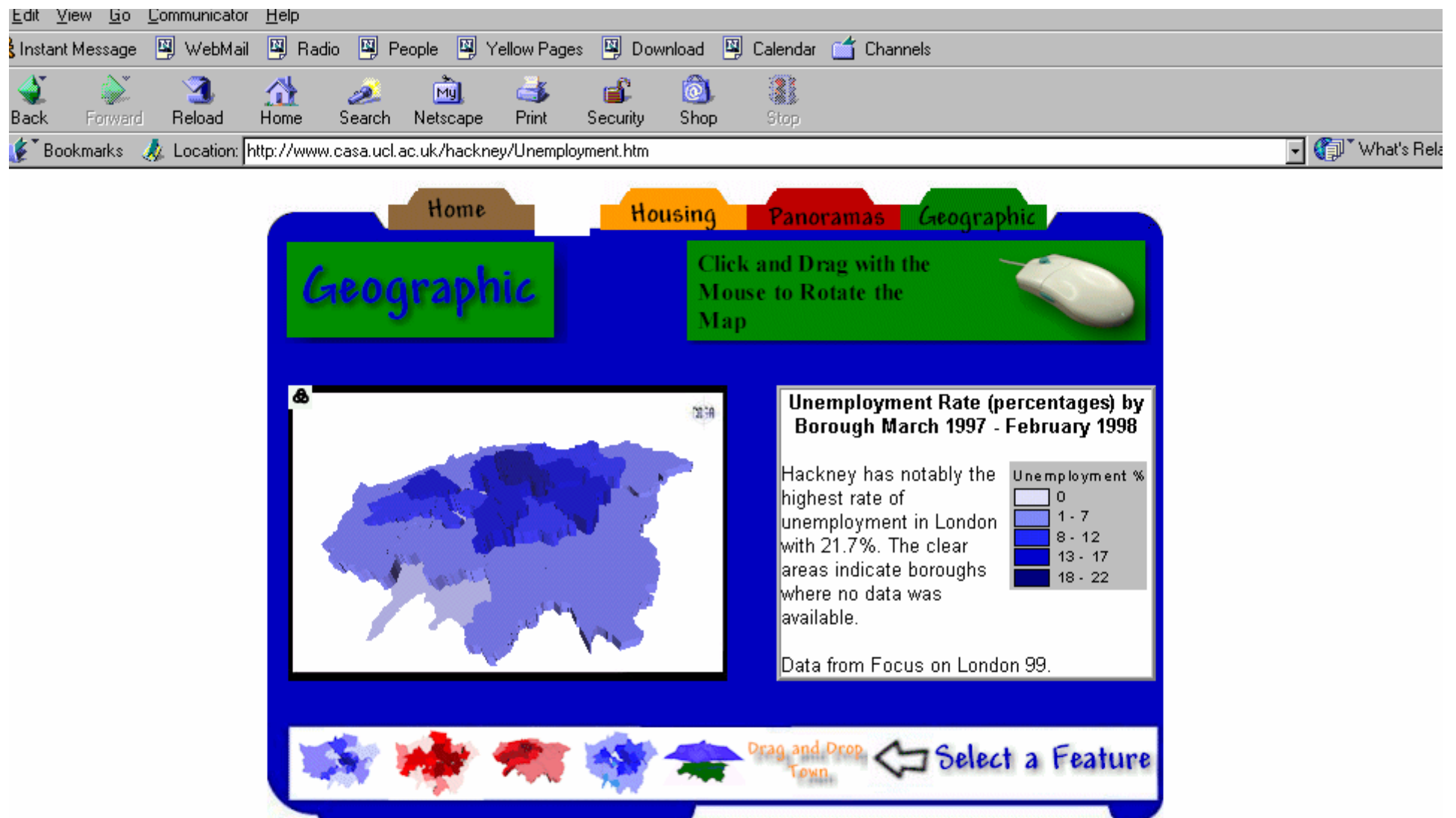
**Hackney**

- [Murray Grove](#)
- [Hoxton Street / Stanway Street](#)
- [Hoxton Square](#)
- [Wenlock Street](#)

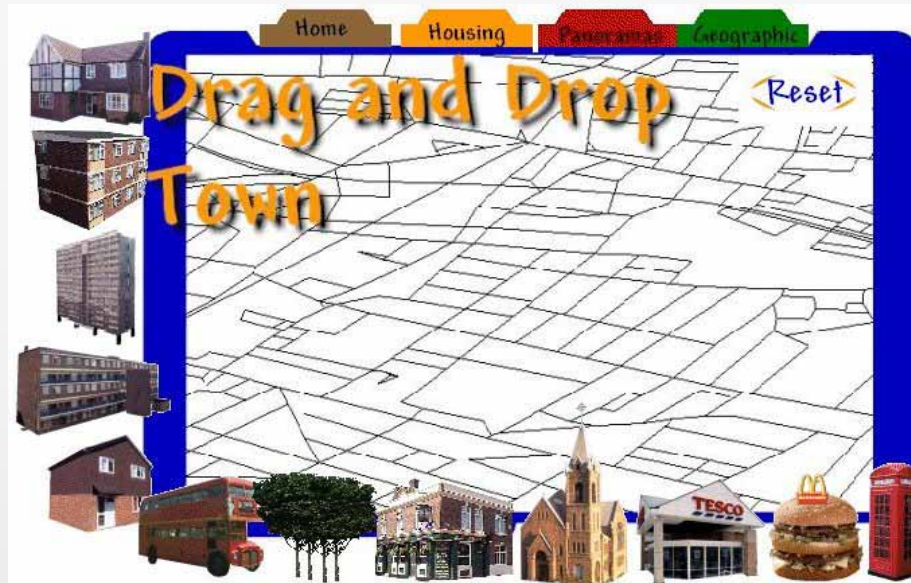
**London at Large**

- [Covent Garden](#)
- [Leicester Square](#)
- [Whitehall](#)

 Location: Hoxton Street/Stanway Street, Hackney



All kinds of media are being used in this package - from digital panoramas to 3D block models to 2d and 3d GIS - here is an example of 3d GIS being used so you can pan and zoom across the London Borough to see how the unemployment rate varies



Here kids can place the objects on the map and with the teacher, can discuss why 'McDonald's' should or should not go next to the 'Church'




This lets kids learn about the things that are good and bad in the environment as well as the fact that we all differ in our environmental preferences



# Brickfields



<http://www.brickfields.org.uk/>




[About the Building Exploratory](#)
[Search](#)
[About this site](#)

[Victorian Hackney](#)
[Homes Through Time](#)
[Kingsland Road](#)
[Hackney Trail of the Month](#)

The landscape of what is now the London Borough of Hackney has changed dramatically from Roman times. From the woodland through which the Romans carved the first road, now Kingsland Road, the land remained predominantly agricultural until the Victorian period. The green fields gave way to the brickfields of housing developments and industry, which still characterise Hackney today.


This site graphically explores the events and people that fuelled this transformation. The main body of the site is for anybody interested in Hackney from Roman times to the present day. In addition there are two sections aimed at family learning: Homes through Time and Victorian Hackney. These are for adults and children to learn together and they contain activities and games.


The forum is for anyone who has a Hackney query or memory they would like to share.



## timeline

AD43	1216	1485	1714	1837	1901	1945	present day
Roman	Medieval	Tudor	Georgian	Victorian	Early 20th C	Late 20th C	



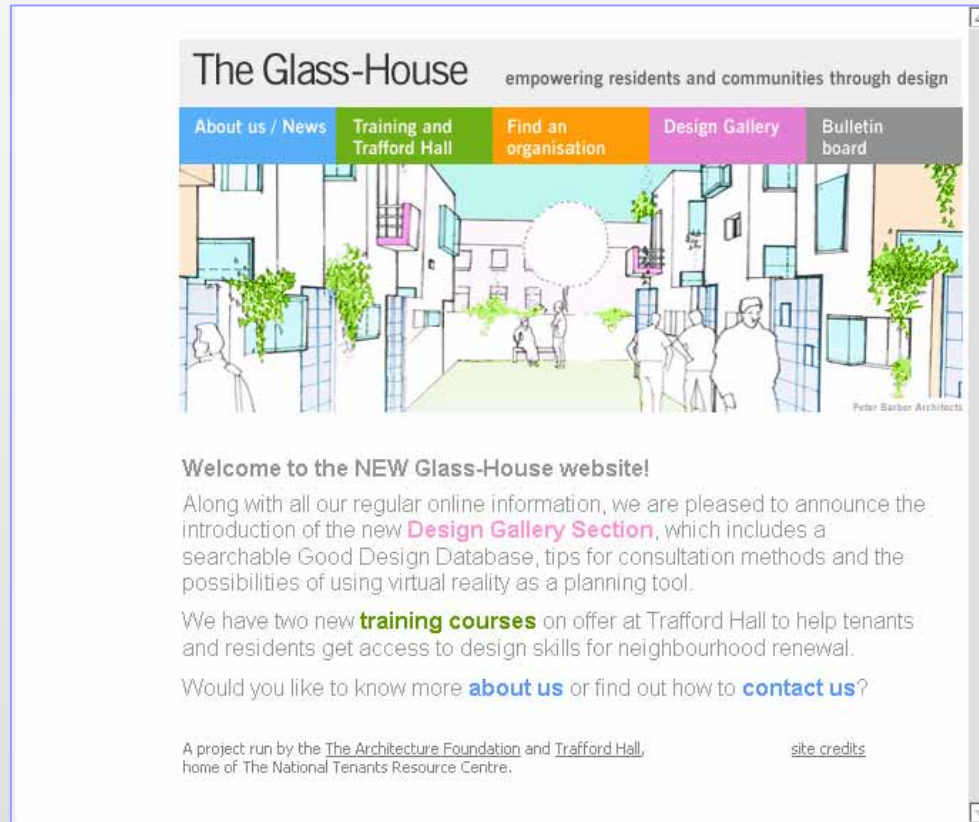


New Opportunities Fund  
funded





# The Teviot Centre: Community Design Work with the Architecture Foundation

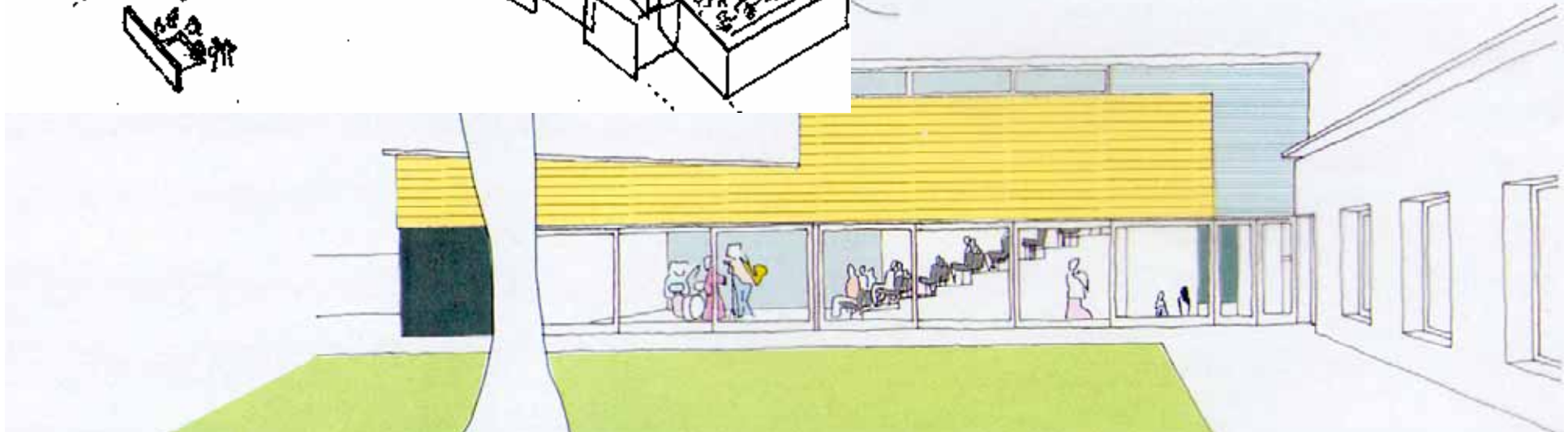
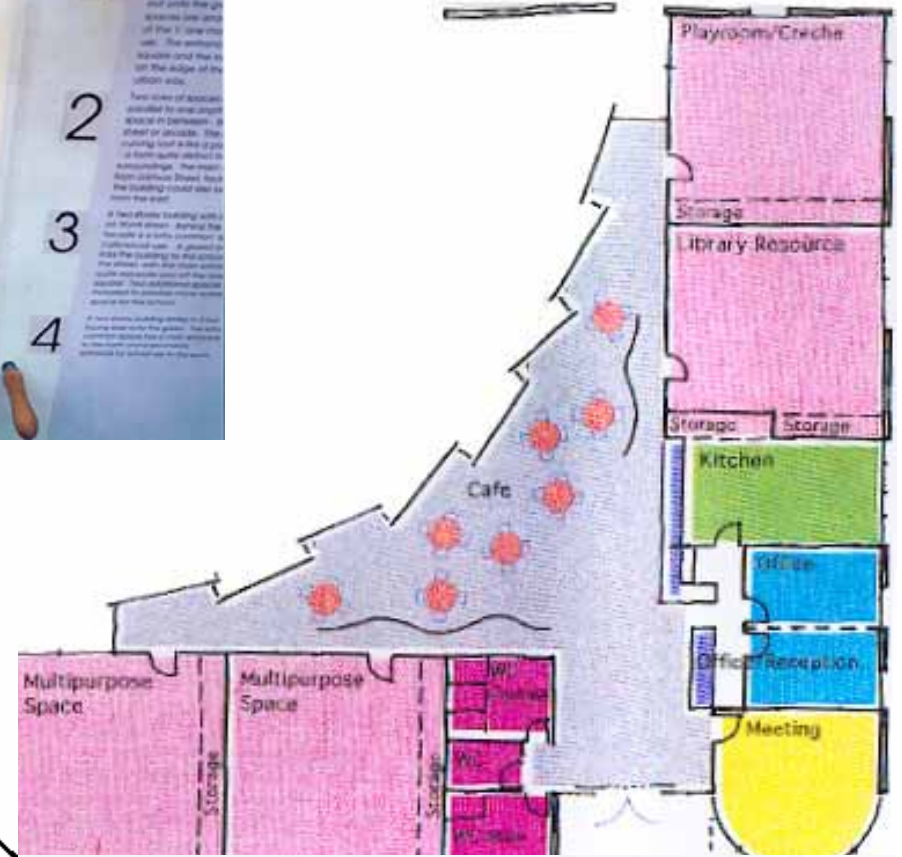
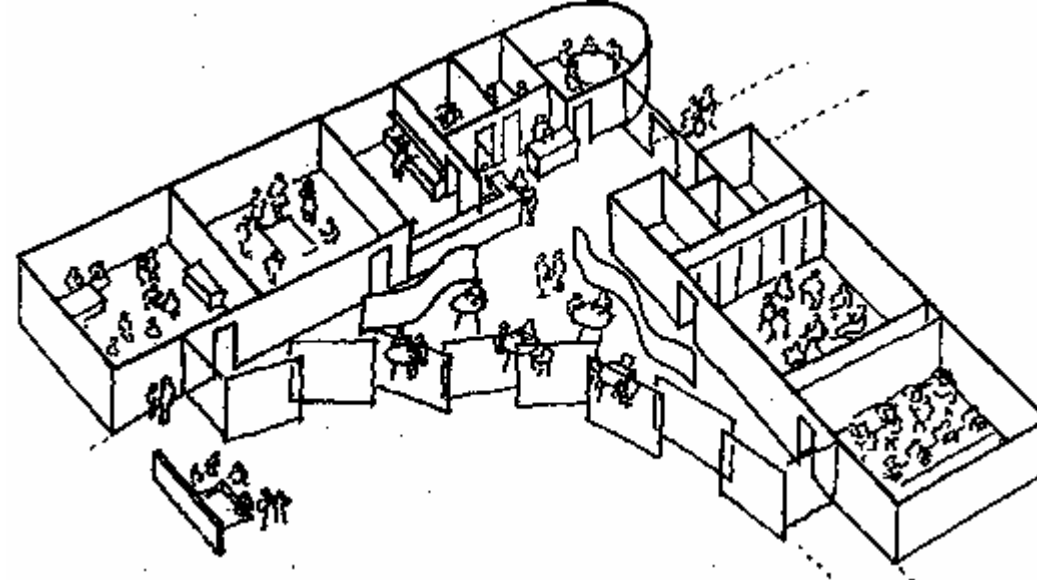
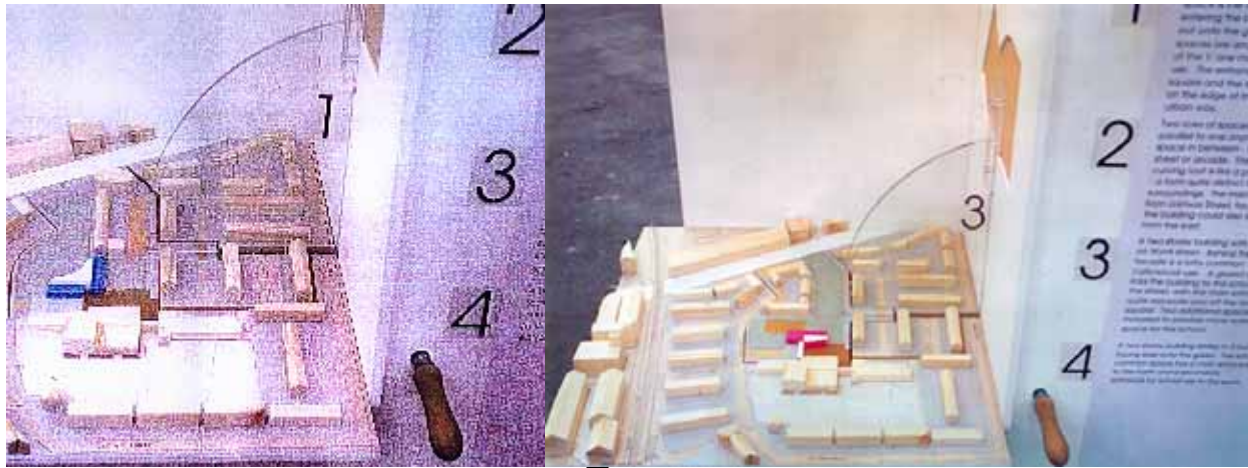


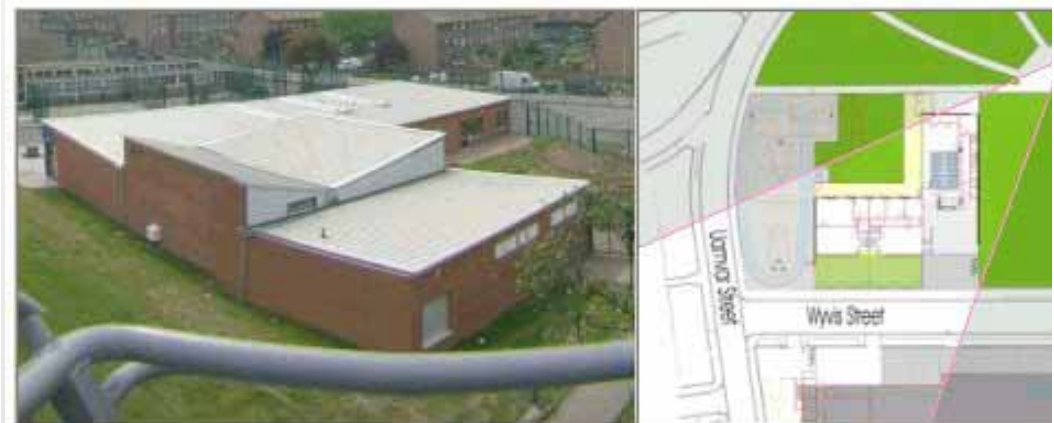
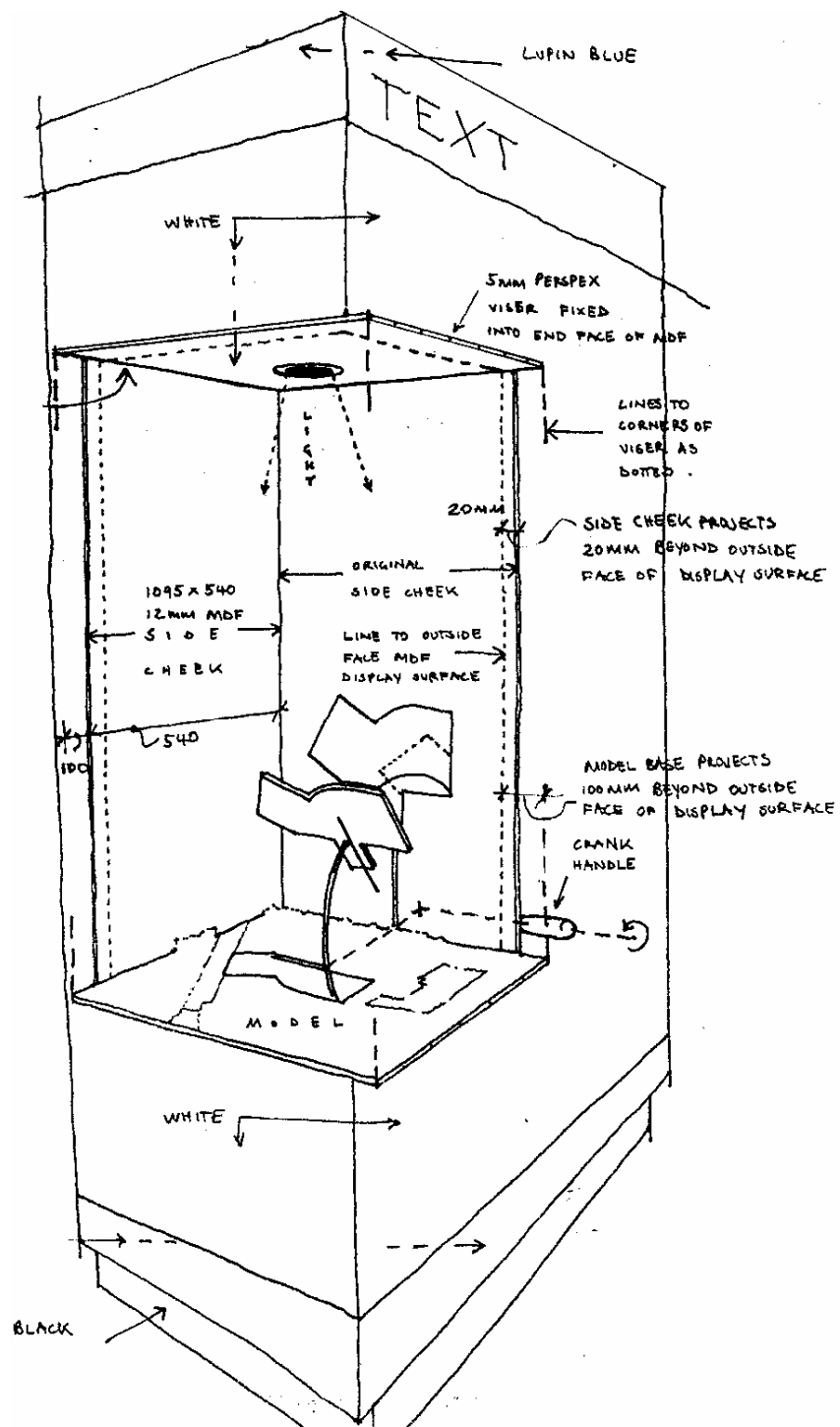
*The Architecture Foundation, Trafford  
House & CASA*

[www.theglasshouse.org.uk](http://www.theglasshouse.org.uk)







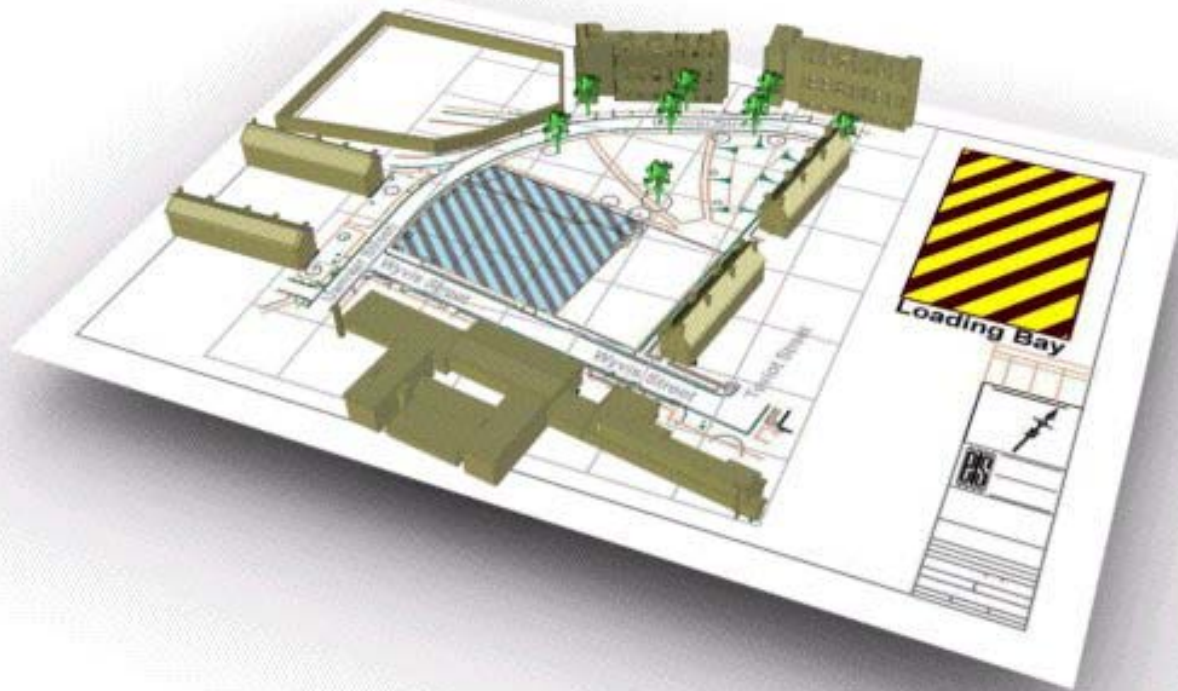


Entrance

Navigation: Click and Drag the mouse in either the site plan to navigate. To 'zoom in' drag the



## Instructions



Select an Option from the list ▼

### The Options

Make a selection from the options. The yellow building is 'stored', and was available for selection.



Click and drag with the mouse to navigate the model

### Instructions



Centre for Advanced School Architecture

### Instructions

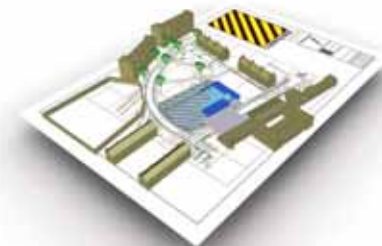


### Option 2

Option 2

Two rows of spaces are arranged parallel to one another with the central space in between. The building with its curved roof is like a pavilion in the park, a form quite distinct from its surroundings. The main entrance is from Limerick Street, being west but the building could also be entered from the east.

### Instructions



### Option 1

Option 1

A single cluster 'U' shaped building with a cafe in the cross of the 'U'. The cafe is the first place you come to on entering the building and from here the building opens onto a garden at the rear, and a new square at the front. The entrance to the building is opposite the school, on Henry Street.

### Instructions



### Option 3

Option 3

A two storey building with its facade on Henry Street. Behind this facade is a large common space for recreational use. A glazed passage links the building to the school across the street, with the main entrance quite separate and off the main square. Two additional spaces are included to provide more nursery space for the school. A double 'Y' section was considered, similar to 'Y' but facing east onto the green.

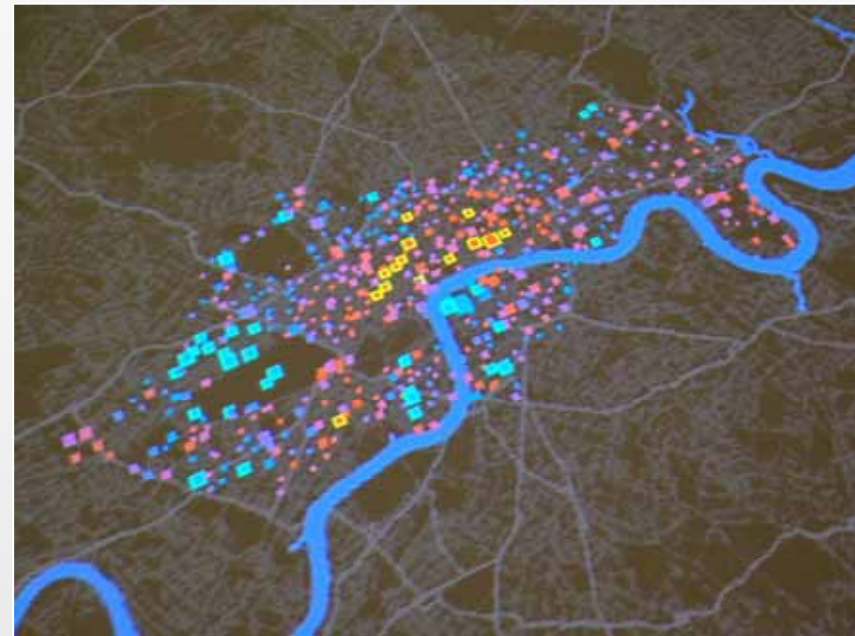


## Many Projects and the Current Situation

Recently we have developed a number of exhibits that participants can actually work with – analogy renditions of digital media

Let me finish by showing some of these. There is the London Data Table that essentially projects digital media onto a physical map rather than a screen and PigeonSim that develops digital media in a fly through capacity in terms of 3D cities where the user controls his or her flight path

We also look at a model of riots which is on our touch table where physical icons of police etc interact with the media to control their spread











# Thanks, Any Questions?

Look at our web site

<http://www.casa.ucl.ac.uk/>

Our Blogs

<http://blogs.casa.ucl.ac.uk/>

And for 3D content

<http://www.digitalurban.org/>