LandscapeReview

No turning back for Yorkshire

Estell Warren is adding its talent to a major regeneration scheme on its own doorstep for Yorkshire Forward p14

It's a CAD mad world out there

They may have revolutionised design practices, but have computers changed the design process itself? p20

From brickbats to bouquets

Trafalgar Square has echoed with marching feet, battling police and now applause for prize-winning design p17

Peer of the public realm

A year after its launch, CABE Space is at its most crucial stage and the daring ambition of director Julia Thrift continues to snatch headlines p10

HorticultureWeek

Designers plug into the world

Computers have revolutionised the way practices work, but have they truly changed the design process? asks Peter Wilder

The archetypal image of the designer is of a person at a drawing board, poring over plans that reveal in intimate detail the machinations of some grand idea.

Students usually embark on design courses with the misconception that graduation will bestow upon them the ability to design. The truth is, we are all designers and everywhere we go we are constantly bombarded with information we use to evaluate our environment and build an idea of the ever-changing world around us.

Design is a process that involves absorbing, collating and distilling information into a vision of something new that we are able to project as a model for new solutions. The proliferation of the personal computer in design offices has done little to change the process, but it has radically altered the way we store and collate information. It has also given us new ways in which to visualise ideas.

More than a tool

It is often said the computer is merely a tool in the design process, just like a pen or a ruler. Not so. It allows us not only to draw and manipulate images, but to open a window on to a worldwide database of knowledge. Furthermore, it enables us to interrogate our own perception of the world around us.

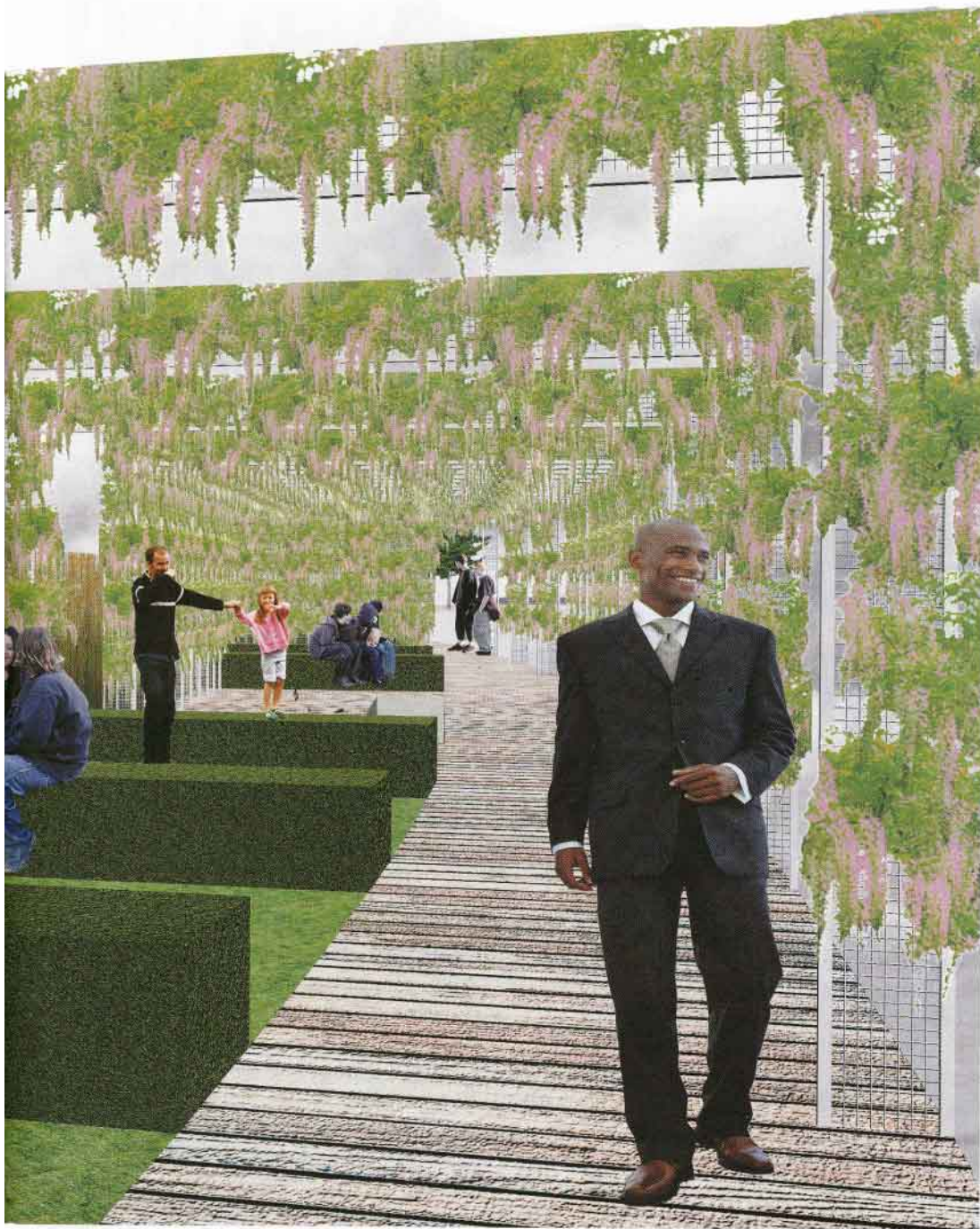Remember when computers were exiled to windowless rooms or different departments and visitors paraded through to marvel at the wonder of new technology? Back then, computer-aided design operators were a different breed from designers; now they are almost extinct. The language of computer-generated graphics has taken hold of the design process and is the talk of most graduates.

Computers have become an integrated part of the design team at all levels, from concept through to documentation. This change has not taken place just because computers have become cheaper.

There has been a worldwide shift in the way we share information and the way design teams communicate.

The ability to share a common platform for design production has driven the adoption of electronic media, which can be bounced around the globe via telephone lines. The internet has not only changed the way we communicate, but has given us a worldwide database that spans countries and cultures.

It is possible to trawl historical archives, read newspapers or download

tion is constantly being cut. So how is it still possible to maintain a thorough design process and the quality of the end product? The answer is streamlining.

The steps needed to produce well-informed design and advanced graphics are constantly being shortened, and the time it takes to take a scheme from concept to detailed design has been cut by optimising production workflow.

Design starts in the mind and tentatively makes its way to the page via the hand. However, scanners can turn hand-drawn graphics into electronic media and — voom — off they go to a global audience by email or the web. This process has fuelled the huge growth of multidisciplinary work.

Sharing ideas

A sketch that once would have remained on the drawing board for development now travels the length and breadth of the design team, receives client comments and is scrutinised by the quantity surveyor at an early stage.

This enables ideas to be rationalised quickly into viable options, while the speed of circulation means a greater number of options can be given a chance to fly. And though email has still not replaced the value of a physical meeting of the design team, it has meant much of the information transfer can happen outside that meeting so more important issues, such as design integrity and scheme development, can be discussed.

Once a scheme has entered the electronic design stream, it can move in any number of directions. It could move into concept illustration, where colour, texture, and shadow add realism and a sense of spatial quality. It may move into a vector-based CAD program, where measured components can be detailed, scheduled, priced and issued for tender.
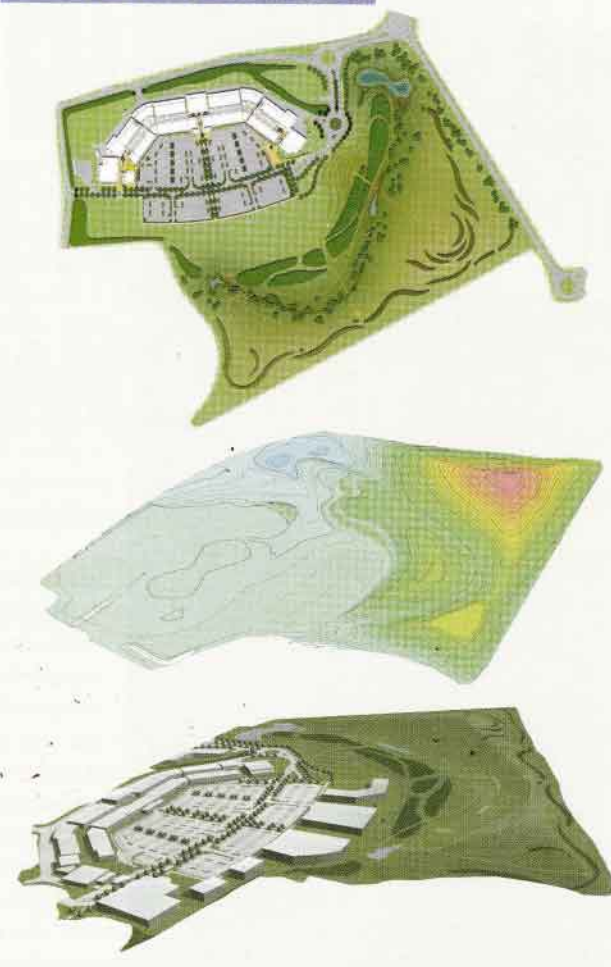
In some cases, the hand-drawn concept may move directly into the third dimension, where a model may be used to illustrate the completed scheme. Animation can be added to sell the idea to developers, planners or funding bodies. In each of these processes, the ability to send part or all of the drawing to consultants is vital in the flow of information.

It means the work in presenting a scheme can be shared between remote ▶

maps from virtually any location in the world from the comfort of the office workstation. The speed at which information can be acquired means that designs can be better informed and more thoroughly interrogated against local and international criteria.

The internet, being an interactive medium, allows public consultation to be carried out on a non-exclusive basis that anybody with a PC can get involved with. Ultimately, design solutions and finished projects can be posted on to the world-wide web to become part of the archive of information that informs subsequent solutions.

Many larger projects are now co-ordinated from a central database that exists online where all consultants can access drawings and documents remotely. This is intended to speed up the transfer of project data and provide a secure central point of access to all consultants.

All this information flow has compressed the timescale of projects to a point where the turnaround time for produc-

Digital vision: computer-generated images of the renewal of Leeds' Holbeck Viaduct, by Estell Warren, give a greater sense of space and texture

> "Success as a designer does not depend on producing the most amazing graphics, but on the ability to communicate and sell a vision for a space"

DEATH OF THE MASTER-PLAN

Dalton Park: (top) master-plan (image: MacFarlane Wilder); (middle) altitude map (image: Lovejoy London); (bottom) 3D model (image: Lovejoy London)

The master-plan has served as the basis for graphic representation of development plans for many years. For designers, it simplifies the expression of information into a single plane and allows for easy extraction of areas, which is good for pricing projects.

But it runs into limitations when dealing with undulating landforms and other changes in levels. The planning of Dalton Park in County Durham involved the creation of a heaped landform and the shifting of well over 600,000cu m of colliery spoil.

Using a 3D model of the landform at an early stage helped evaluate cut-and-fill balances and the design of a sustainable drainage concept through watershed modelling. It also produced animated and still graphics for client and planning presentations.

Rather than develop complex and time-consuming 3D models, quick "sketch" models were updated as the design progressed, allowing each new version to be evaluated. Only at a later stage was the master-plan image developed to help explain the zoning of the parkland.

specialists, who know their part of the scheme can be assembled by the design team in a seamless integration of parts.

The use of 3D modelling, which once required specialist operators with costly software and hardware, is far more prevalent due to the affordability of powerful processors and memory, and the availability of better, cheaper software. This has encouraged students to explore 3D work, and practices to invest in IT.

One of the benefits of this investment has been a change in the way landscape architects explore space. While the master-plan has long been the accepted graphic representation of landscape, it is unable to convey a sense of space. The ability to model landform and structure enables the designer to give a sense of place and spatial choreography.

Through animation, we can not only provide an overview of schemes but explore the sequence of arrival and passage through and over landscapes. New programmes, such as Bryce by Corel,

have changed the shape of environment mapping by providing a new logic to the interface that turns the operator into a movie director.

Landscape becomes a scene into which terrain can be painted and vegetation applied. Environment effects, such as cloud-cover, mist, haze, moonlight and sunlight can be applied and animated to provide a realistic environment to 3D models imported from programmes such as AutoCAD or 3D Studio.

Communicating vision

The key to success as a designer, however, does not depend on producing the most amazing graphics, but on the ability to communicate and sell a vision for a space and, regardless of the media, to deliver that vision in the built scheme.

Some practices still test the CAD ability of new candidates. This can be futile. I have never met a student who did not have the ability to master CAD in a matter of weeks. But the ability to under-

stand the design process is a much more valuable commodity.

The most desirable skill in new candidates is an ability to grasp the language of space, the subtlety of materials, the magic of light and the relationship between man and environment. Computers have only ever been part of the design process, but with the introduction of wireless technology they are allowing us to take the office with us wherever we go.

In meetings we are no more than a mouse-click away from our server, our database of design vocabulary. Conversely, the landscapes that inspire us can become our new office. As we sit in the landscape, soaking up inspiration while tapping into a worldwide knowledge-base, the image of the designer at the drawing board is sure to change. ■

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