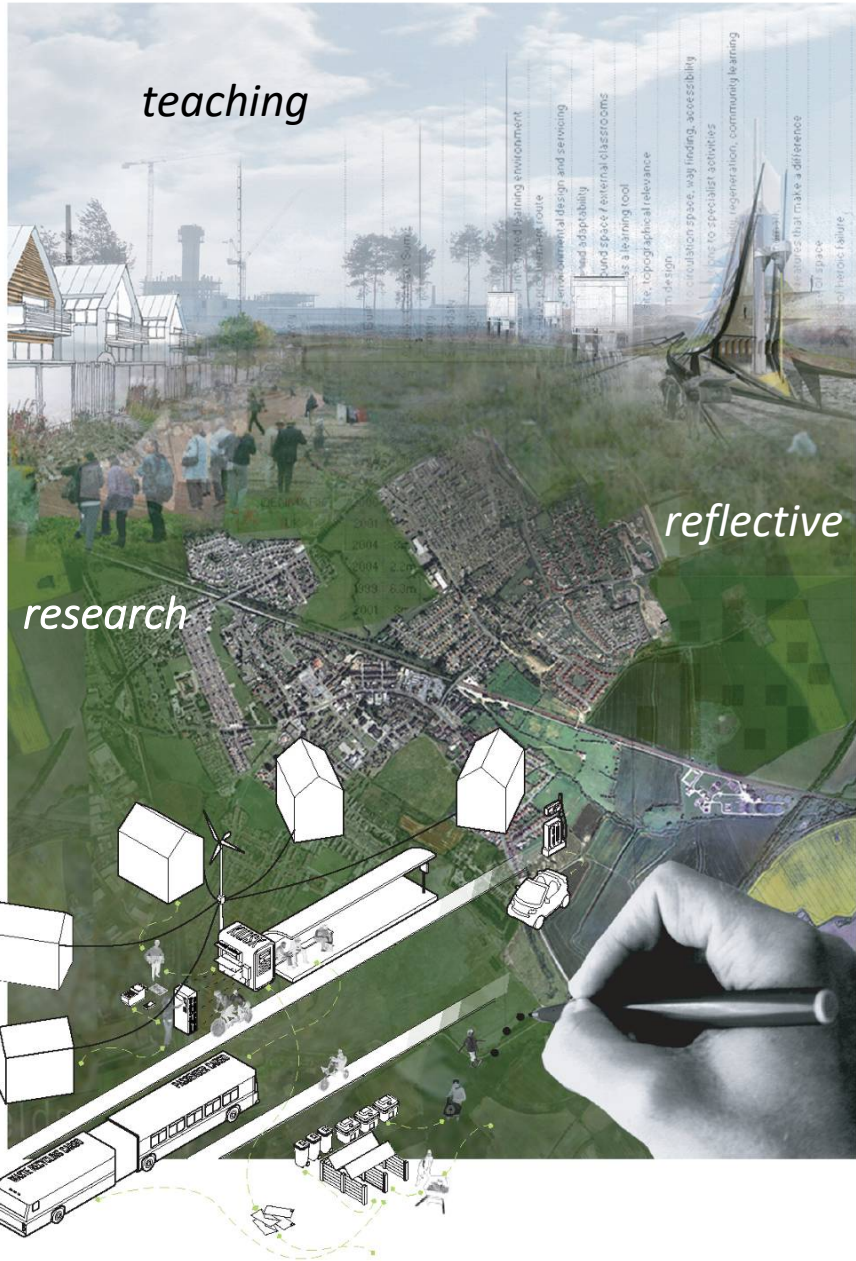


# Prue Chiles



2000 -2015  
Prue Chiles Architects

*Bureau – design + research*

*reflective practice*

2002 - 2014

Bureau-design+research  
University of Sheffield  
[www.bdr.group.shef.ac.uk](http://www.bdr.group.shef.ac.uk)  
[www.liveprojects.org](http://www.liveprojects.org)  
[www.sheffield.ac.uk/architecture](http://www.sheffield.ac.uk/architecture)

2015 -  
CE+CA - Chiles, Evans and Care Architects  
[www.cecastudio.co.uk](http://www.cecastudio.co.uk)

2014 –  
Professor of Architectural  
Design Research,  
Newcastle University  
[www.ncl.ac.uk](http://www.ncl.ac.uk)



*“What are the real possibilities for you the architect in your position in society, not as hero who is going to save society, but as worker who is engaging practices that have the possibility of opening up new ways of doing things here and there...”*

David Harvey

Architects are, or at least think like to think of themselves as, liberal optimists, set with the belief of making the world a better place. The trouble is that **notions of redemptive beauty** or deterministic functionalism mean that those aspirations are misplaced. People are not abstractions. They do not submit to the reason of functionalism: they have emotions, lives, accidents, and politics. **The space of abstraction** cannot accommodate the spatiality of being – by which I mean (following Henri Lefebvre) **the sociality of being**.

Jeremy Till on the Architects of Park Hill

Architecture as a discipline and the University in general needs to come in line with with this state of affairs by blurring the boundary between the academy and the outside world.

My work on schools and neighbourhood design in particular have been transdisciplinary experiences, working with communities, children and other professionals to try and achieve something everyone who has been involved feels a small part of. Relationships built and a reciprocal exchange of knowledge is at the base of any successful collaboration.



**A Community Plan for Parkwood Springs**, a very mixed industrial area of Sheffield with a huge landfill site, ongoing and defunct industry, homes and other businesses and fishermen on the river.

**Ballifield Primary School,  
2004**

One of the Government's Classrooms of the Future provided a three year collaboration with children, teachers and other professional colleagues in an experiment to research and design classrooms relevant to learning in the 21<sup>st</sup> century.

Research with children



This three-story potting shed and ship wreck picnic and play space was a collaboration between the children, governors and teachers and MArch Architecture students. It was part of the student led live project programme compulsory for 3 months of their 2 year Masters.

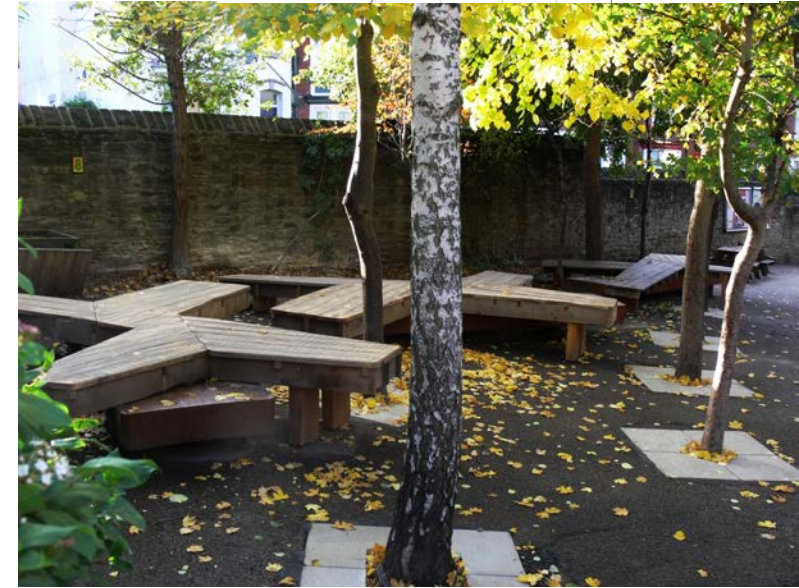
The project took nearly three years and was a complex transdisciplinary process. After a lot of health and safety issues it was achieved with re-cycled materials. It was an example of working in and outside the academy and staff being enabled to blur their teaching, research and practice to give students both a participatory, collaborative, and practical experience.



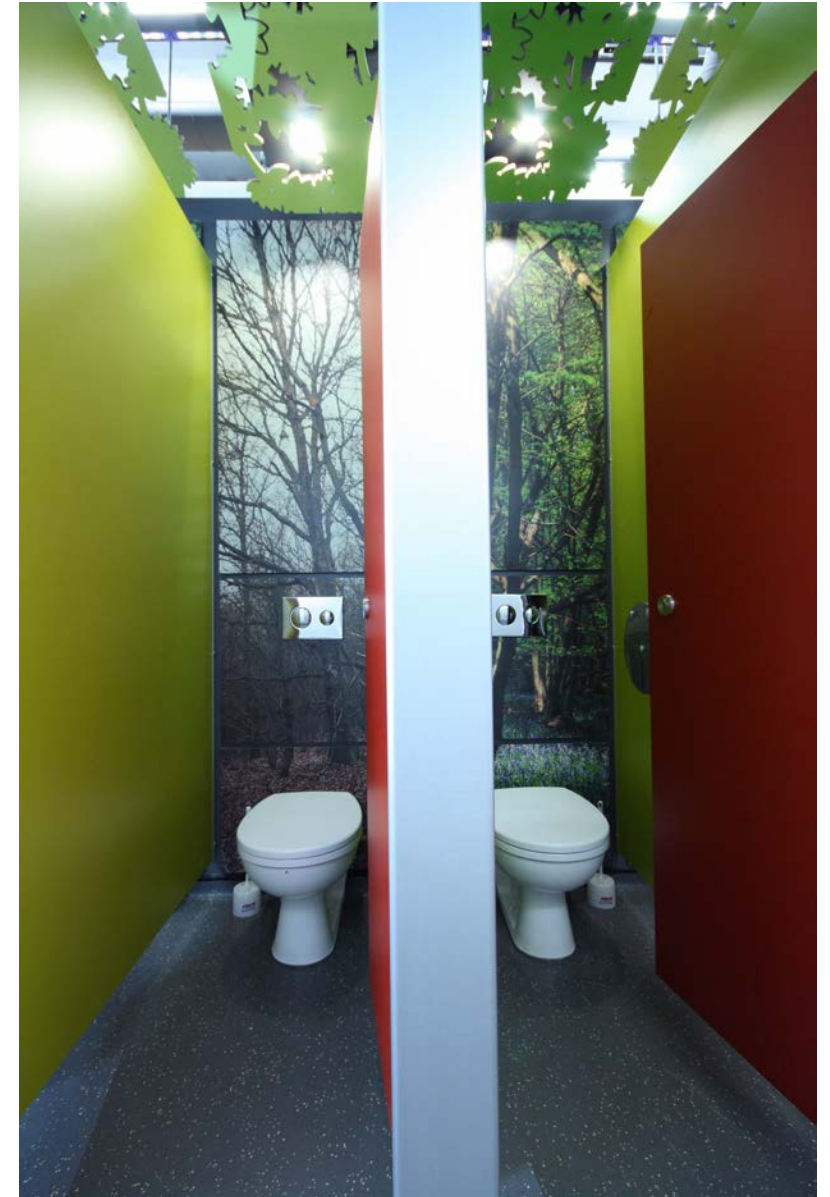
The 3 storey potting shed to encourage the growth of the gardening club



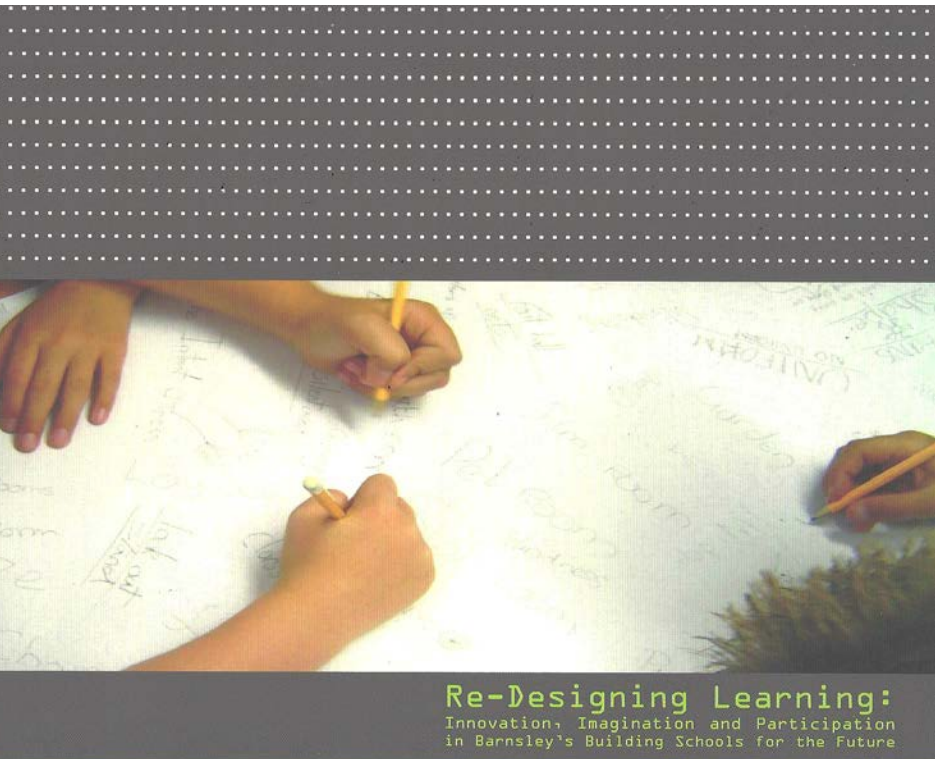
The ship wreck



Learning can happen more outside the classroom. These sustainable toilets were a combined project between research in the university and from the architects



Forest Green Primary School, London 2012



- Teaching and learning are central to the form and space in schools
- Schools should be the centre of the community
- Nature and the Environment are critical to school design
- Children learn outside the classroom – and in the landscape
- Children should participate in the design and construction of schools
- Special schools should be special
- Schools play an important role in urban development

**Many of these themes important to the design of our schools are just as relevant in the building of our Universities**

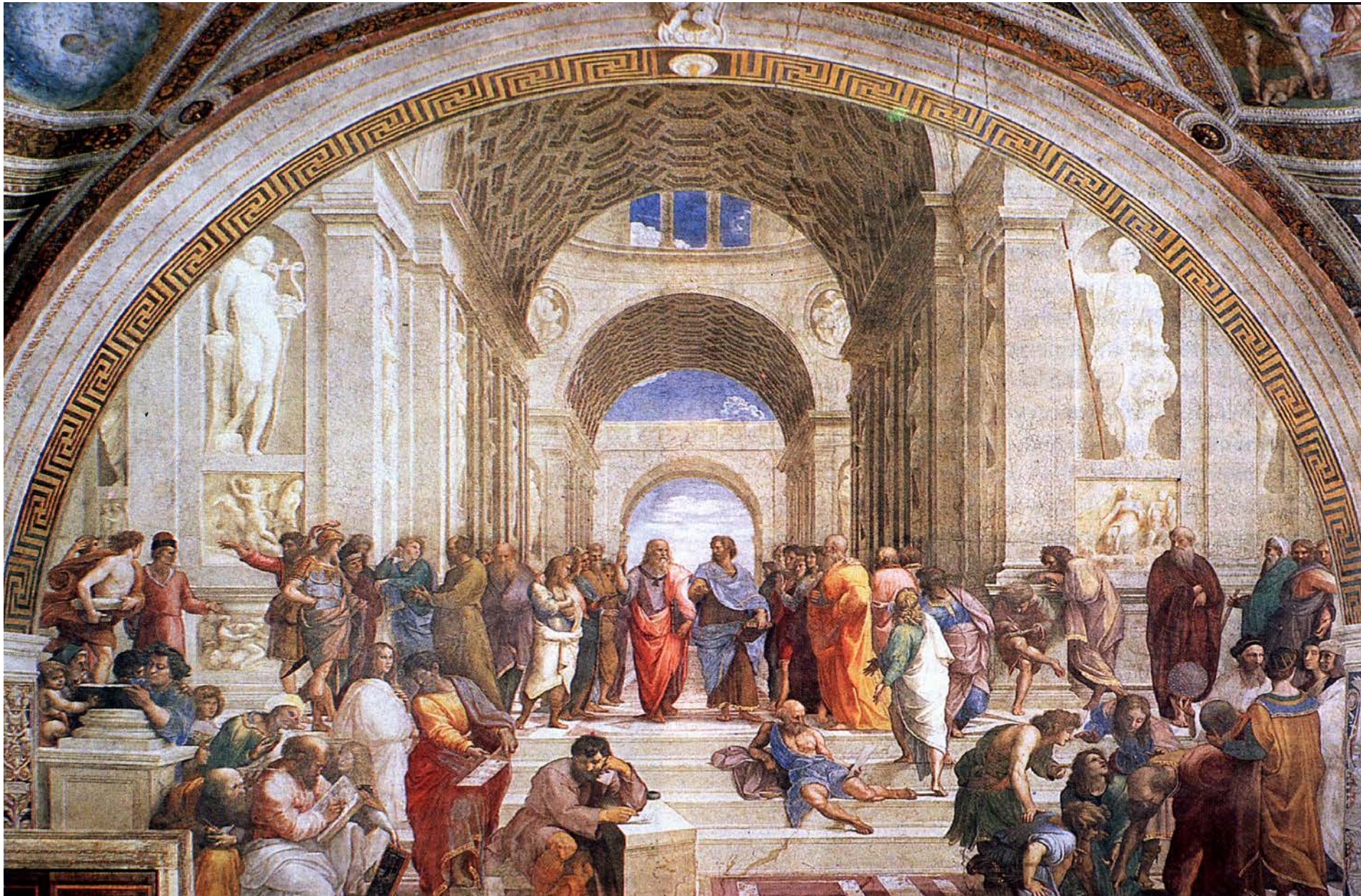


An academic/city joint project to achieve a new energy future for Stocksbridge



Participants were recruited through an exhibition on **the potential futures of the energy system in Stocksbridge** library.<sup>12</sup> workshops followed, occurring every four to eight weeks, alongside more informal weekly drop-in sessions organised at a local café. The closing event was a second public exhibition, organised by the resident participants with the aid of the academic team. The aim of the workshops was to create an experimental space, where future local energy scenarios and technologies could be explored using a variety of methods. The project acts as the catalyst to bring together a diverse spectrum of local people and academics, each with their own interests and values. A member of our 'assembled public' took the lead in each of the projects.

The Socratic dialogue is still the way we debate big questions and open ended enquiry at university



Raphael's **the School of Athens**, Vatican Museum 1509

*The present dramatic changes of economic, social, cultural and technological structures and processes and their implications for knowledge production present serious challenges for universities ...most socially and economically relevant knowledge is currently conveyed outside the university.*

(Scharmer and Kaufer 2000 P185)

The concept of university historically has:

- 1.0      **Scholastic middle ages university**      -      Teaching  
*Co-listening and thinking*  
Separated from society
  
- 2.0      **Humboldt Classical University§**      -      Research and Teaching  
*Co-listening, thinking and speaking*  
Separated from society  
The individual researcher in solitude and freedom
  
- 3.0      **21<sup>st</sup> century University**      -      Praxis, Research and Teaching  
*Co-initiating, co-creating and co-entrepreneuring*  
Integrated into society and the city  
Action research, research consortia, clinical research, community action  
(Practice as strategic co-creation with companies , consortia , venture capitalists , business incubators.)
  
- 4.0      What is next?



Typical historic college at Oxford, an inward looking elitist scholar's environment



New additions to Magdalen College at Oxford library and archives, high quality, subtle contemporary additions to enhance the luxury and quiet contemplative scholarship (Wright and Wright Architects 2017 winner of the US Architecture prize for Heritage)

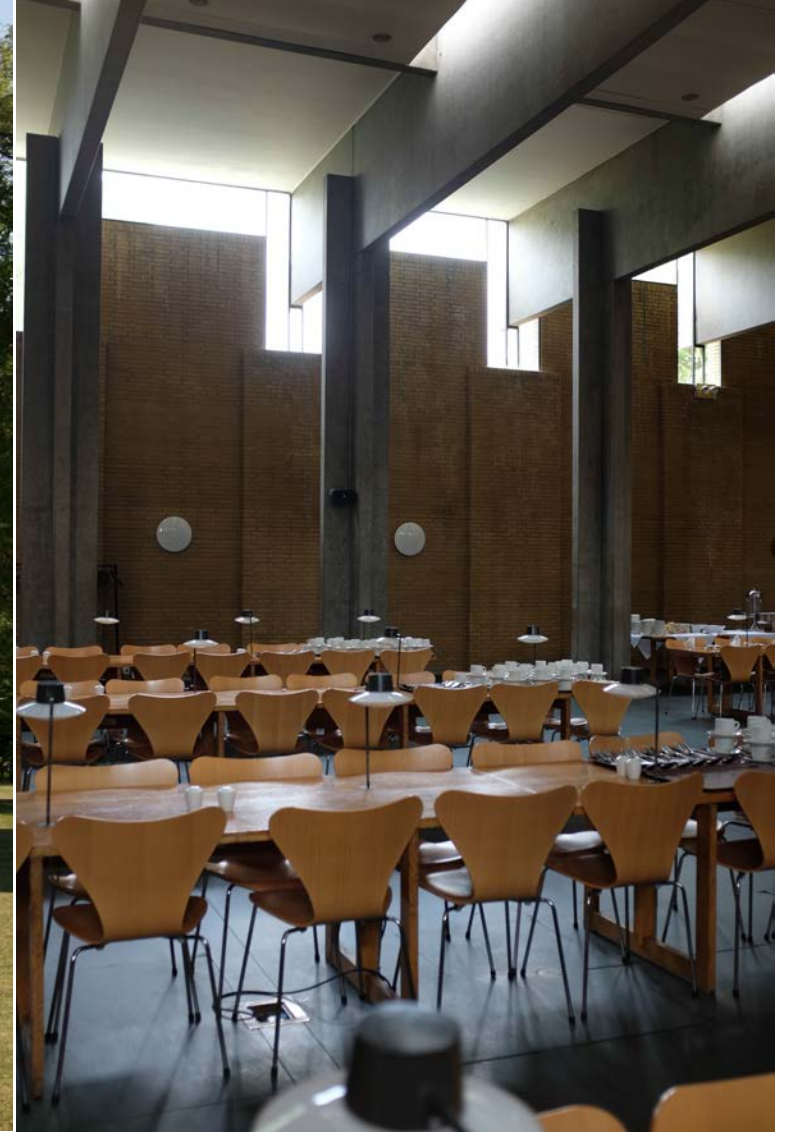
Built in 1776 The Radcliffe Observatory is an great example of the specificity of the building to the production of knowledge - for the age of exploration in the South Seas and astronomical observation as a prerequisite for marine navigation. Hornsby persuaded the trustees of Dr John Radcliffe's estate to provide the funds and was appointed as the first Observer, a post which he occupied until his death in 1810. It was also used for meterological experiments - hence the sculptures of the 8 Greek gods of the winds – Boreas, Kaikaias, Apeliotes, Euros,Notos, Lipos and Zephyryos

The observatory closed in 1936, going to South Africa for clearer skies. It is used by the college faculty as a common room.





Blavatnik School of Government, Oxford University  
Herzog de Meuron Architects 2016 Vast donations from overseas patrons fund statement buildings like this . They form 'statement' buildings, but are un-related to their discipline or the city.

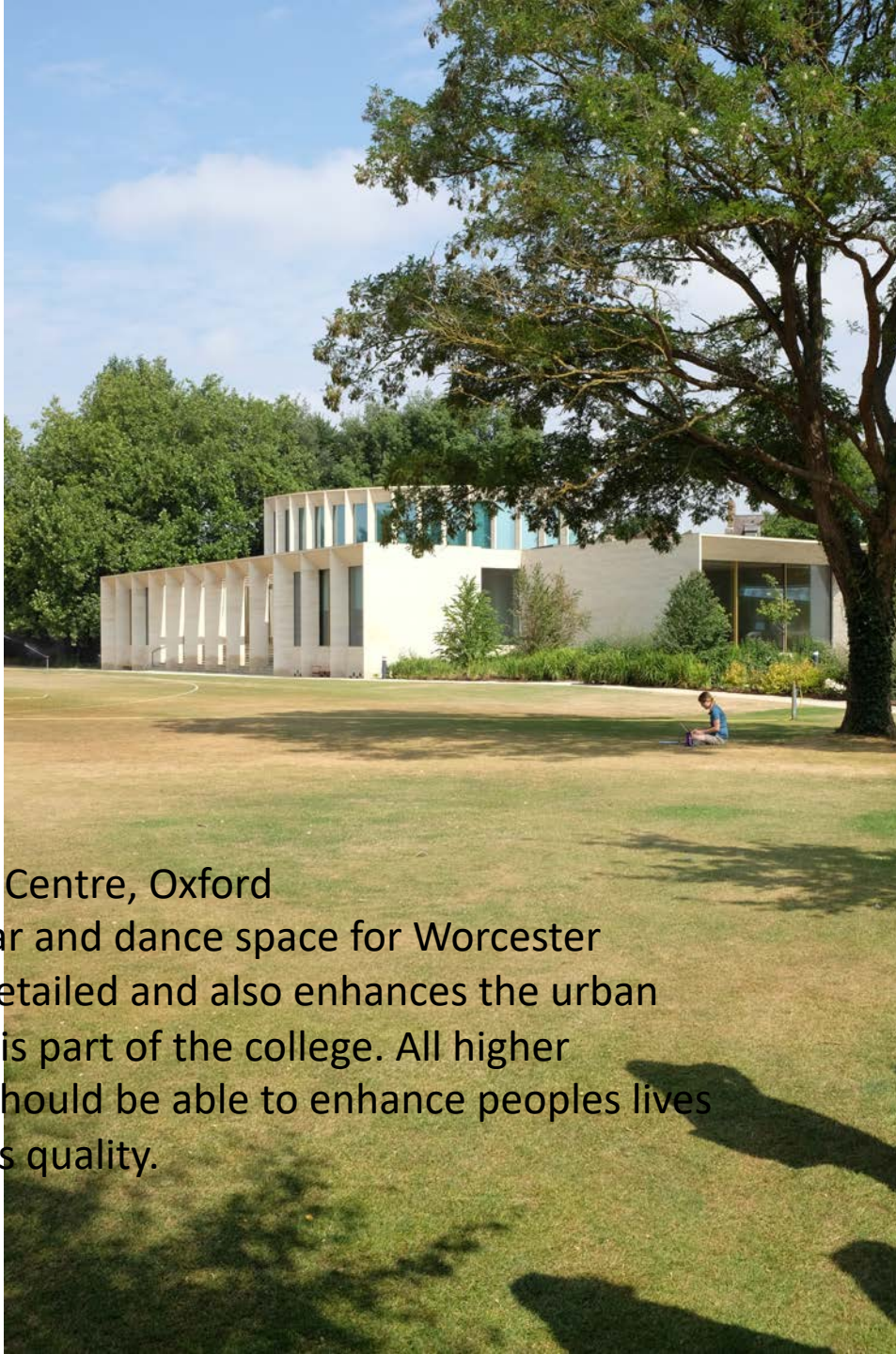


### Arne Jacobsen's St Catherine's College 1962

Fine modernist steel, concrete and glass structures but in a traditional collegiate form. - The dining room though is wonderfully symbolic of the light of knowledge created through shared eating and discussion with the floating roof and clerestory giving the space an ethereal feel.

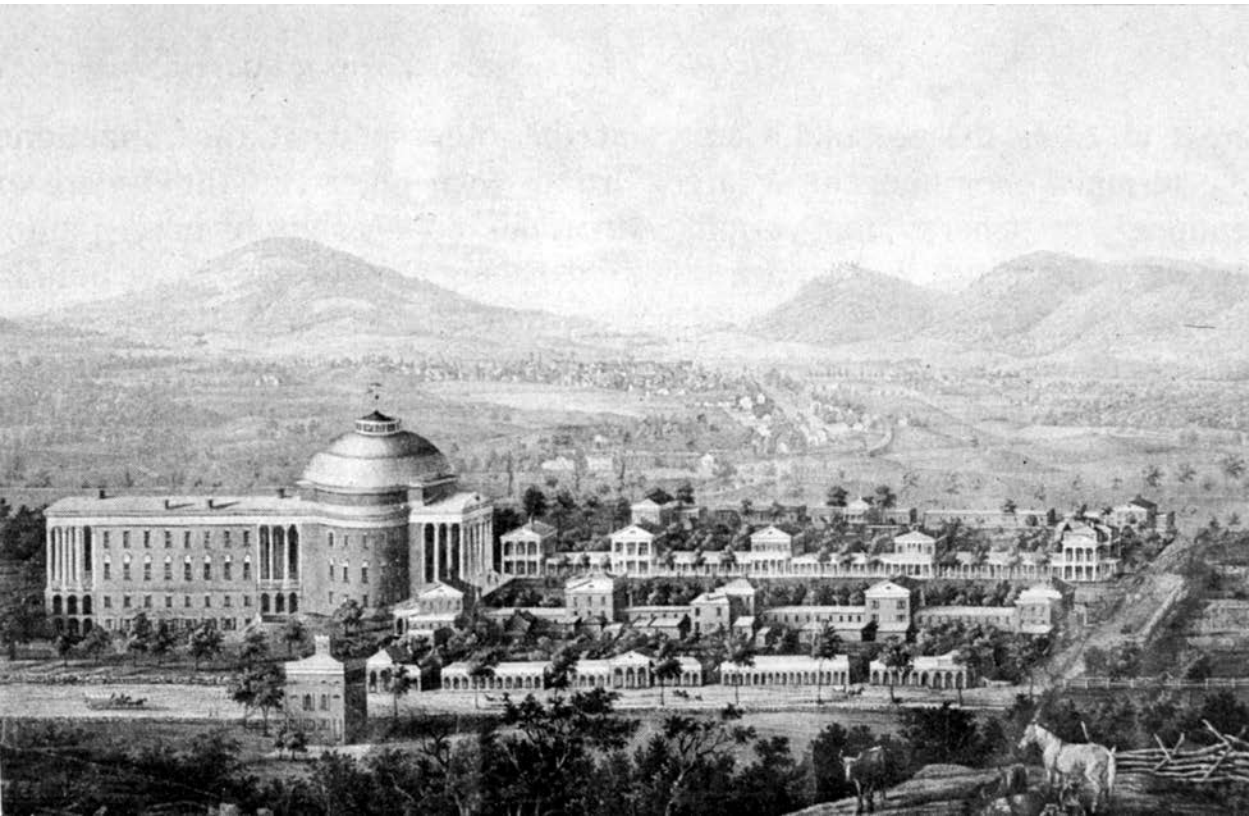


The Sultan Nazrin Shah Centre, Oxford  
Lecture theatre, seminar and dance space for Worcester  
College, is exquisitely detailed and also enhances the urban  
form of the whole of this part of the college. All higher  
education institutions should be able to enhance peoples lives  
with Architecture of this quality.





The Spatial and light qualities are exceptional and the specially made furniture is beautifully ergonomic and comfortable made from fine hard woods.



## Jefferson's University of Virginia 1770's

Students and professors live cheek by jowl in curvaceous landscaped gardens so they can walk and talk. The gardens and residences are dominated by the classical dome of learning

The University today is a very different, outward looking institution



University of Lima  
by Grafton Architects giving the Specialist Engineering University in Peru a higher more imposing and “a distinctive vertical campus structure”



Energy and Technology Building, University of Bergen,  
- *'state of the art' science centres are proliferating on virtually every campus*

Will Alsop's Blizard building, Medical faculty,  
Queen Mary's, London  
2005

*Modelling molecules making science space fun and  
and about human interaction*



## What constitutes a civic or porous University's engagement with civil society?

*We need, presumably, to start with a much stronger articulation of what a “good” society needs, beyond a productive economy.*

*“We need to clarify the outcomes we are striving for – fairness, social justice, civility and tolerance, health and wellbeing, lifelong learning perhaps – and why we believe human and environmental flourishing matters. This goes beyond what is sometimes a rather mealy-mouthed framing of “grand challenges”. These are more than challenges – this is about taking a strong moral stance about the kind of world we want to help create, based on a deep understanding of the forces which shape our collective futures. Of course, this makes sound business sense too. A thriving civil society and a thriving economy should go hand in hand.”*

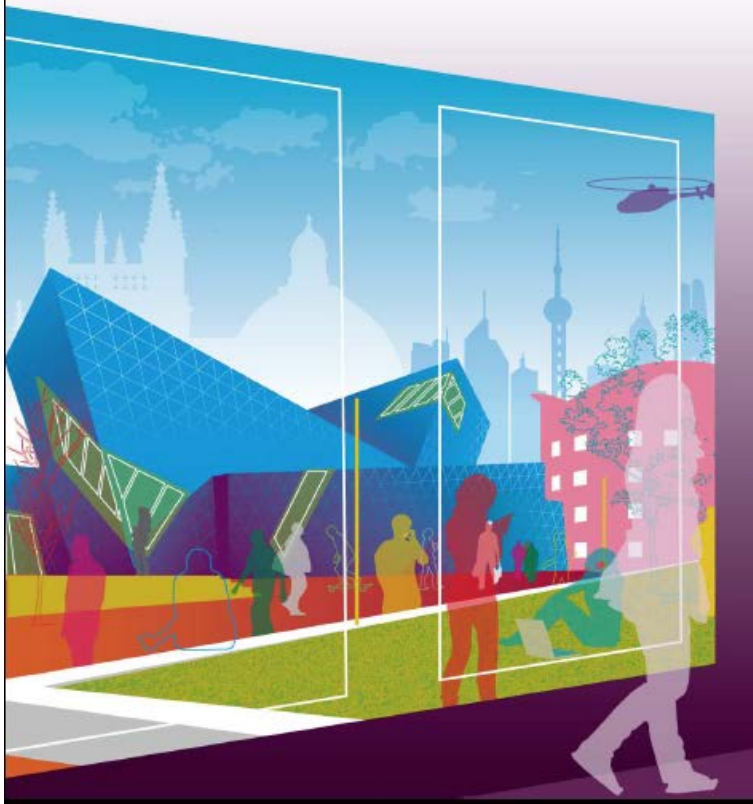
*From Wonkhe - [Higher education: policy, people and politics](https://wonkhe.com/).*

*<https://wonkhe.com/>*

*A blog and think tank about UK higher education policy, people and politics: latest analysis, research, comment, debate + university jobs and recruitment.*

# GROWING BY DEGREES

UNIVERSITIES IN THE FUTURE OF URBAN DEVELOPMENT



## WHAT IF?

TECHNOLOGY BLENDED WITH PEOPLE AND PLACE  
- Prue Chiles and Anna Holder

What if Higher Education is overwhelmingly designed around mobile technologies and global communities of interest tied together through virtual networks? What if, at all levels and in all fields, people are able and willing to contribute and collaborate to generate data and capability? Crucially, what if this triumph of the virtual goes hand in hand with a reevaluation of place and geography?

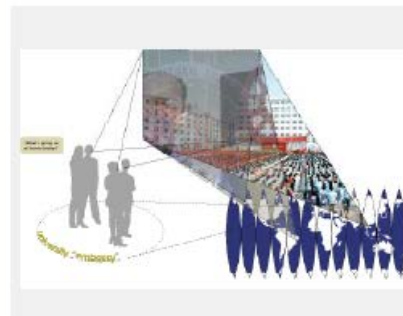
### 1. GLOBAL

We're talking about the now familiar university 'embassies', outposts of universities from China, India, Alaska and others, in the city, where we have a physical base that students can go to for 'home' support. Room-size screens stream real-time images from the university campus in China/India into our university.

I am meeting a new PhD student today from southern India. I'm here, over at her mixing-Embassy, and having a meeting with the project director and the other team members working on this EU futures project, to develop a new building material that picks up traces of the local geological strata. How it works with the new silica glass that produces energy is exciting. These transformational projects are in prototype stage now, and are about to be installed here in the university and at six other global locations. The project is getting a bit unwieldy, with four different continents involved and over 50 PhD students, half of whom are on the professional PhD programme. It's bonus points from the vice-chancellor, though, as the prototype production workshop is in the region and is being visited by a delegation from the World Trade Centre.

We have booked the first-floor meeting room, which feels like the Hong Kong and Shanghai Bank felt when I first went there back in 1993. I nearly went for the top meeting room on the 30th floor, but that feels too 'ivory tower' today – we need a presence in the city.

From here you can see the bustle below, but it is quiet behind our electrochromatic glass. Before the opacity changes you can just see the hills if you crane your head – or of course if you walk out onto the balcony. Although I love the big screen downstairs, with its real-time images from the campus at Mumbai, if truth be known I want to be inspired by the local landscape, incised valleys and moors, and to think about the weekend.



2030 – University Embassies – outposts of Universities from China, the new metropolis in Alaska and others are a physical base that students can go to for "home" support and to promote their territories. The new Embassies, with live media streaming, have facilitated links between previously disparate groups and individuals from around the world. © Prue Chiles / Claire Harrop

## WHAT IF?

- Prue Chiles and Anna Holder

What if the university library in 2030 is a treasure open for everyone?



The connected library  
a: The ability to move seamlessly from searching to using its media, ensures the stacks are still the deep and beating heart of the university.  
b: Reading rooms line the exterior walls of this slender tower, their wide windows framing views of the city which stretches out into towns and villages of the region beyond.  
c: Pathways through the halls link to the wider city networks: the buses and trams, the footpaths and parks, a permeable web of people and places.  
d: Linked into networks in the university and wider world research groups, current questions of academic communities beamed in from across the globe, all undulating, flickering and changing: a space alive with information.  
© Anna Holder

A teacher leading a school group through the part-open, part-covered spaces of the library and embassy halls stops to exclaim.  
The students, young children, wander around, gazing open-mouthed at the illuminated volumes on display in glazed cabinets contained in the walls. The flickering, glazed screens of the various facades are less exciting to them – this is the ubiquitous technology of the world they were born into – but their teacher points out the scrolling texts and images moving across a semi-translucent wall opposite. Stories of new scientific findings, meteorological movements and current questions of academic communities beamed in from across the globe, all undulating, flickering changing: a space alive with information.

I am sitting in the mezzanine, looking down over the coming and goings of the library and the surrounding embassies. The home-workers, wandering into the city centre for food or to see an exhibition, the occasional school groups and tourists passing through the city, all provide a welcome distraction from a slow-going paper. My choice of a university fully enfolded within the city was for this – the escape from homogenised academia, a scaled-up academy. The hustle and bustle of the everyday is visible at street level and from the working spaces overlooking the street. Anyone can pass through the halls and arcades of the library, the lecture spaces. Many are old buildings reused, or built upon, above and around. Pathways through the halls link to the wider city networks: the buses and trams, the footpaths and parks; a permeable web of people and places. Here the work of the university is transparent, its ideas and ideals on show.

Above and below me, spiralling ramps and staircases beckon to the other realms of the library. Reading rooms line the exterior walls of this slender tower, their wide windows framing views of the city, which stretches out into towns and villages of the region beyond. Below, the stacks of books, periodicals, papers and pamphlets stretch down into the earth over several floors.

The stacks are my favourite place in the university – in the city even. The musty, dry smell of leather, paper and cloth pervades this clean, light and airy space. Controlled columns of light illuminate the central walkways, and wide, softly glowing work screens line the exterior walls, linked into networks in the university and wider world research groups. Working here can be as connected or disconnected as you like, and social, face-to-face discoveries of knowledge are another draw to the library's work spaces.

I have a pile of books ready for me to check out upstairs, preselected online, and retrieved from the stacks in less than an hour, via the all-pervasive technology of the book retrieval system. Indeed, the harvesting and retrieval of information is something the university continues to pride itself in – particularly via the Internet, and academic networks.

Automated programs trawl the virtual fields of online knowledge, harvesting new ideas, discoveries, facts and opinions, policies and manifests – a 'just-in-time' constantly changing snapshot of what is out there to know. In this context, editing and printing yearly textbooks becomes a doguerreotype exercise of capturing and setting down swift-moving subject specific wikis – an archiving process almost. The academic community moves persistently onwards: adding, updating, changing shared caches of knowledge, in time and in tune with changing methodologies, discoveries and concerns. The serendipitous experience of the library is not yet beaten, however, and the ability to move so seamlessly from searching to seeing to reading ensures that the stacks are still the deep and beating heart of the university.

My first exploration was being part of an RIBA publication from 2008 building on the unprecedented expansion of higher education institutions, and the immense physical impact that they are having on the urban environment. It then speculates on the future of Universities with *What if* scenarios looking at many key issues of sustainability, digital futures, the changing nature of libraries and the responsibility of Universities in their cities.



1.

## A University at the Centre of a City

At the centre of the City

Part of the city fabric

Embedded in all the institutions of the city

Contains 'embassies' of different countries

Linked and networked

An open door to the city - exhibiting knowledge exchange

The porous university



The Roy and Diana Vagelos Education Centre  
Columbia University NYC

*Transparent and open to the city community - or  
is it?*



West Campus Union, Durham , North Carolina *by Grimshaw's – ' a glazed social hub in historic city centre'*  
Allowing the university to dominate the area or a genuine attempt to open up the university

2.

**Developing a new Campus University**  
or the University as a new city district or town.

A super campus

With other commercial buildings, businesses, innovation hubs ,  
companies , leisure and facilities

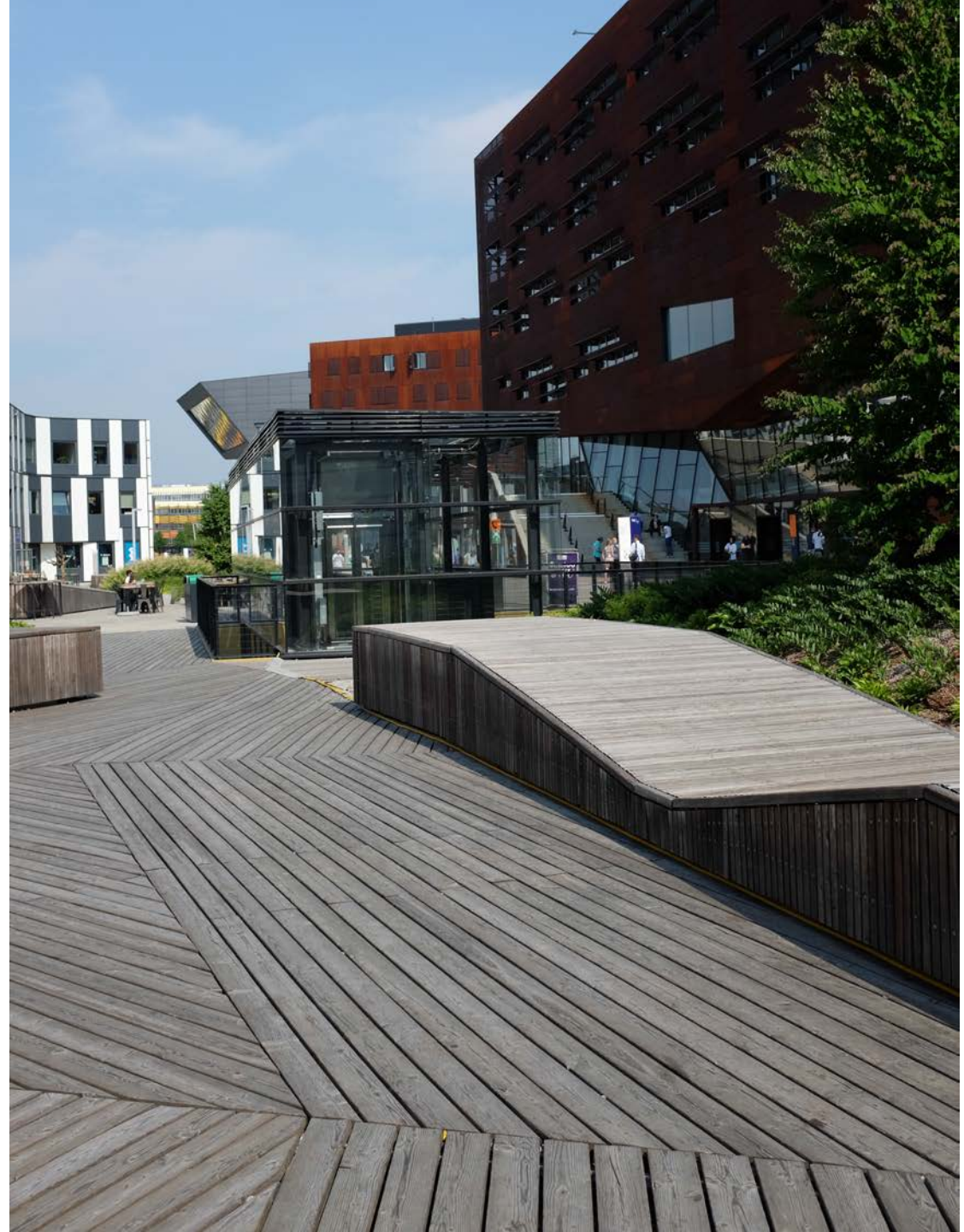
neighbourhoods and homes

Specialist

The Vienna University of Economics and Business is the new architectural landmark next to the Prater in Vienna, forms a new **super campus**. There's space here for 25,000 students and 1,500 employees, the building cost EUR 492 million and took 41 months to complete:



Lots of attention paid to the external public space, landscaping and routes through the buildings. Buildings are deliberately jostling for position in their spikey and shiny modernity!



Zaha Hadid's library and learning centre is at the centre of the University , no books are visible.









The campus includes a horse and cart race track and running track, sophisticated landscape and sustainable urban drainage and sustainable living residential buildings

3.

## A virtual and distance learning University

Nimble

Moveable - and may do just that – learning on trains, planes  
and automobiles

Global/digital

More Affordable

Open University

Open source .....

Moocks.....

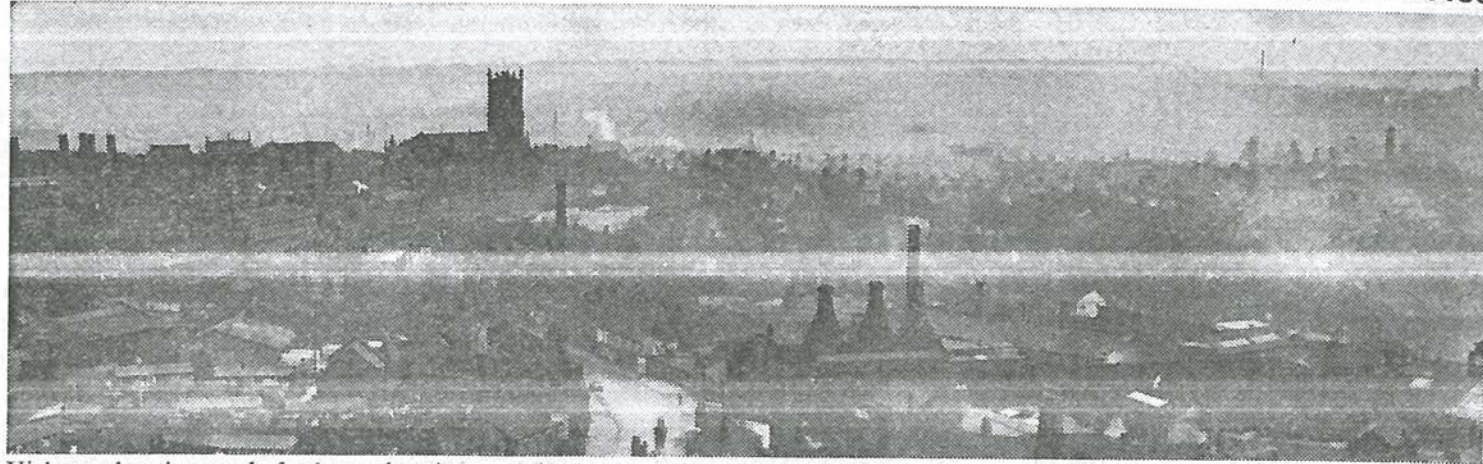
From **New Society** no 192  
June 1966

Aa radical plan for a completely new type of university embedded in the post-industrial community and using the old industrial rail tracks to move and connect students and learning

# POTTERIES THINKBELT

When the next round of university building starts, perhaps we should treat education less as a polite cathedral-town amenity. We print here an architectural project for a 20,000 student campus in North Staffordshire which is built around a road and rail network, emphasises temporary housing, and ties in the students to the community

**Cedric Price**



Higher education and further education should become a major industrial undertaking, not a service run by gentlemen for the few. The "Potteries Thinkbelt" outlined here will break down the isolation and peculiarity now associated with universities. It is big enough to involve the whole community and help it to realise that education at this level is not merely desirable but essential.

The Thinkbelt itself will be on a vast scale, and oriented towards science and technology: a kind of cross between Berkeley in California and a CAT. The contrast with Keele, which it will include and supplant, could hardly be more extreme. It will rely on temporary buildings rather than permanent ones—to give flexibility and allow experimentation. It will be built around a network of roads and railways which will provide links both internally and with the outside world. The Thinkbelt will be, roughly, a vast triangle, enclosing the whole area around Stoke and Newcastle-under-Lyme (see map opposite). It will be especially closely tied in with the local community as regards housing.

Various reports have appeared in the press

Science and Technology said in December that he thought the time had come to appoint professors with part-time commitments in the college, who would keep their industrial posts. *Yet now part-timers who operate the other way round by accepting consultancies are supposed to be rather shamed about it.*

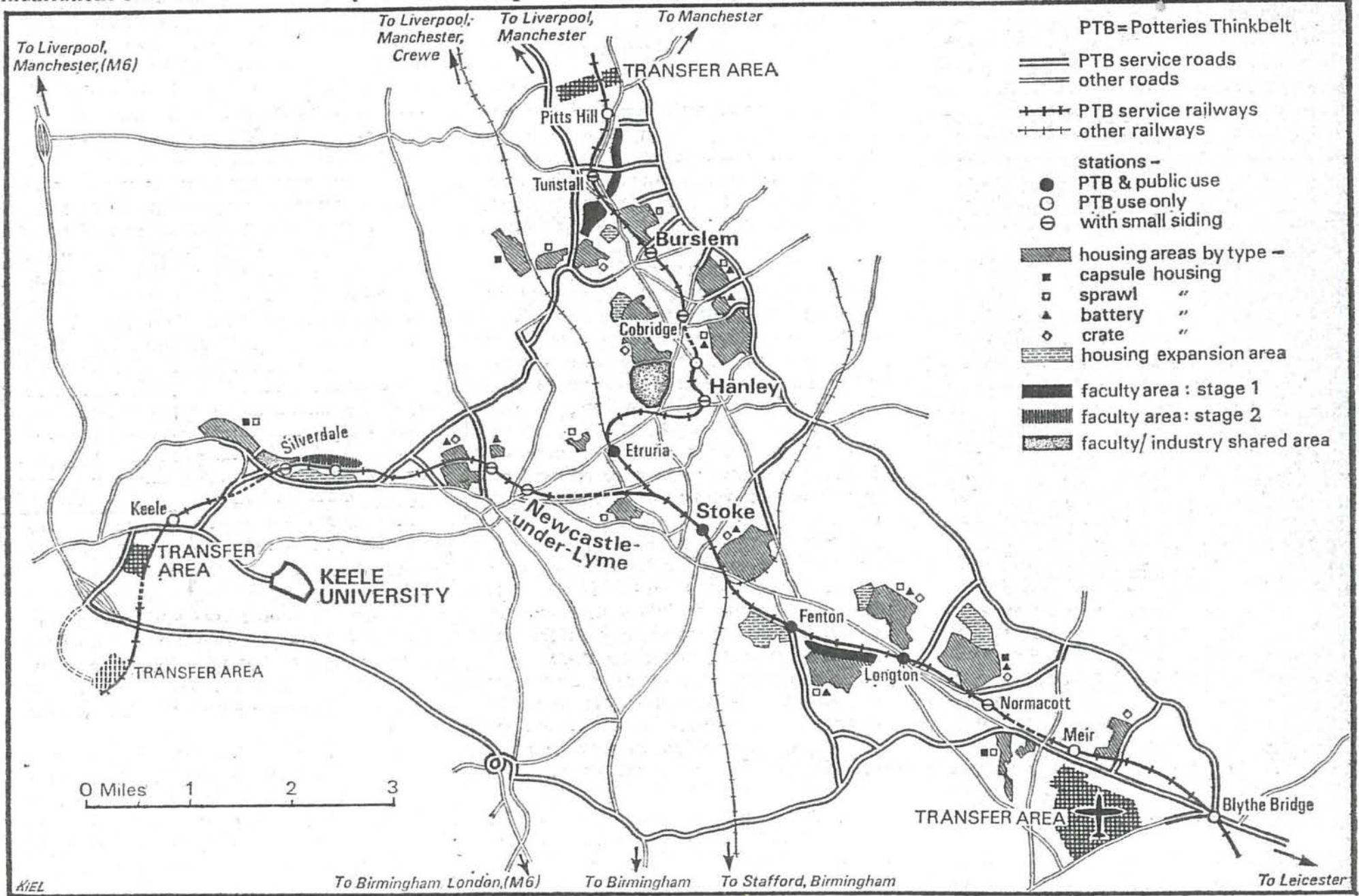
And in a letter to *The Guardian* 282 students at Keele very relevantly protested at the £100,000 chapel erected at the university when in Stoke-on-Trent "about 24,000 people are living in sub-standard housing." It wasn't as if there was nowhere for the religious-minded to go. *Yet now a university's building needs are looked on as something quite separate from the needs of the community that surrounds it.*

The major weakness, however, in present thinking, is that of scale and intensity. Because education beyond 18 is not accepted as a prime national industry, universities and colleges risk seeming to lack (a) recognisable social relevance, (b) the capacity to initiate progress rather than attempt to catch up.

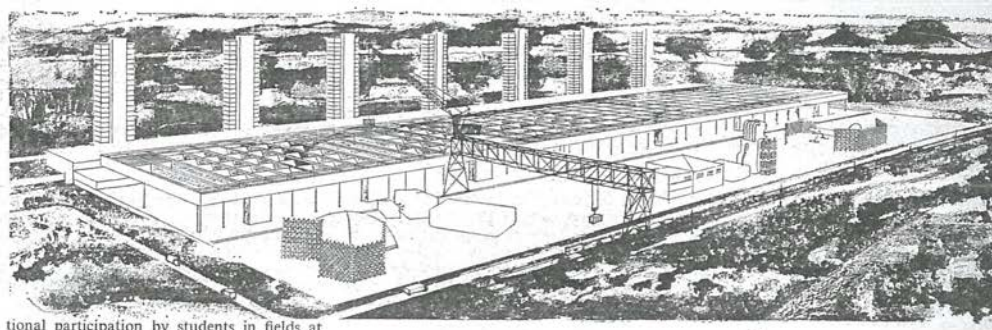
unchanged and uncared for since its industrial expansion throughout the 19th century. But with a population of almost half a million, concentrated in the conglomerate towns, the surrounding country is easily accessible. The area's nearness to both national routes and existing national movement patterns is unexploited. The present industries—steel, pottery and rubber—though reasonably prosperous, show little sign of important expansion. The coal industry is likely to contract still further.

Advanced education, including technical colleges and the WEA, is fragmented. Keele, the first post-war New University, has shown the slowest growth of all British universities (present student population approximately 1,000). It has little contact with the area and few faculties related to local industries. Many university entrants go from here to other major Midland universities like Birmingham, Manchester or Nottingham.

To begin with, the Thinkbelt will take 20,000 students. This means its effect will be national as well as regional. Its relationship to all other universities is likely to be similar in each case, unaffected by their location



The **Potteries Thinkbelt** a radical narrative for a future university

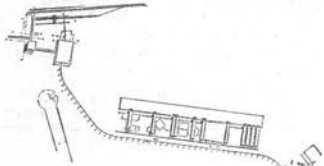


tional participation by students in fields at present rigidly defined as "secondary" or "adult education."

The Thinkbelt's effect on employment will be of only short-term benefit to a community heavily dependent on two basic and contracting industries. But its long-term value will be the ability of its research side to reorientate and revitalise some industries (like ceramics) and attract new ones.

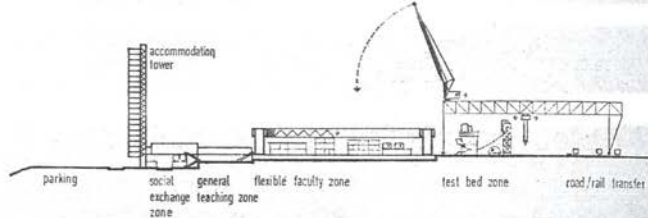
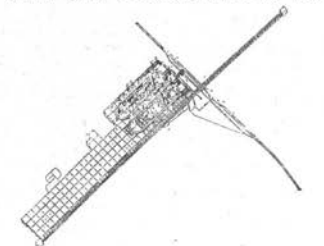
The transfer areas are clearly basic to the Thinkbelt.

Meir has internal road and rail links, and national/international air links. ("Internal" here means internal to the Thinkbelt.) It has fixed general accommodation for students and staff, leading direct to the rail-based



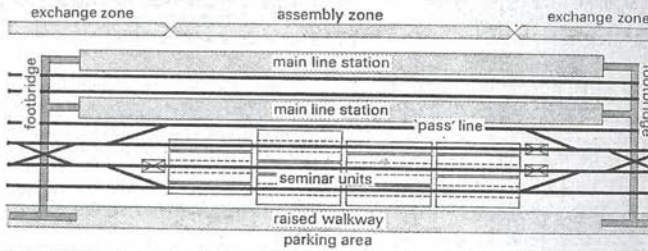
equipment gantries which service short-term portable enclosures. Besides public rooms, the accommodation block provides bedrooms/offices with access to small conference/seminar rooms. The accommodation will be used, in the first place, by short-stay visitors to the Thinkbelt and local industry. Madeley (top of page) has motorway, and internal rail and road links; and its facilities handle, assemble and construct large-scale goods and equipment. Two workshop zones, which can be varied section by section within the overall structure, lie next to enclosed conventional work areas. These, in turn, adjoin the reception and amenity spaces. Accommodation towers rise from the amenity spaces. These provide minimal "hotel" room for visiting staff who will not be staying very long.

Pitts Hill has internal road and rail, and national rail links. This means that there can be quick, continuous transit for bulk



#### STANDARD SECTION OF RAIL FACILITY AREA

Such sections are designed to enable maximum interchangeability

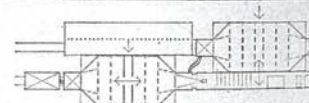
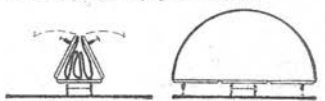


goods and staff. Experimental industrial plant will be installed here on a large scale. Next to this are flexible teaching areas, roofed over by a layer of variable rooms for staff who have round-the-clock responsibility for the plant, but who also teach.

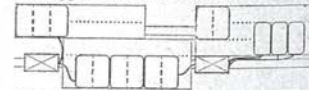
The Thinkbelt faculty areas occur at intervals along the internal rail system. They are based on existing or specially built sidings. They provide rail-based, mobile learning units which fit the immediate needs of each faculty. Equipment is thus used to its full intensity.

There are five main kinds of unit:

1. Seminar units. These may be used either in conjunction with normal railbus services, or in separate services (with long stops of scheduled duration at Thinkbelt stations), or stationary in small faculty sidings.
2. Self-teach carrel units. These will be used in conjunction with closed or open circuit TV transmission, or with the linked information and programme store.
3. Information and equipment storage units.
4. Fold-out inflatable units. These will give either two orthodox 30 person lecture spaces or one demonstration/TV area, linked to the storage and equipment stores.

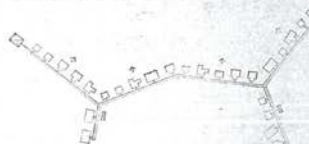


5. Fold-out decking units. These will either be a means of access to other units, or they will support further enclosures.



The four types of experimental housing—crate, sprawl, battery and capsule—are all just as feasible today as the different kinds of faculty unit.

Sprawl housing will consist of timber framed prefabricated units arranged differ



ently to house families of all sizes or age ranges. If people want a larger house for



**Agit-Prop Trains** travelled the railways of Russia including Siberia and the Ukraine in an attempt to inculcate the values and programme of the new revolutionary government to scattered and isolated workers. They were brightly painted and carried on board a printing press, government complaint office, printed political leaflets and pamphlets, library books, and a mobile cinema. Launched in August 1918, **agit-trains** — and their close counterparts, the urban **agit-streetcar** (Russian: агиттрамвай) and the aquatic **agit-boat** (Russian: агитпароход) — continued in limited use throughout the 1920s. The agit-train concept was revived during World War Two as a mechanism for the direct spread of information during a time when ordinary means of communication and government control structures between the centre and the periphery had faltered. They were however a way of experiencing culture and science and were a kind of university on wheels.

# A one hour workshop to design a 4.00 University

The **Workshop task** is to think ‘in a designerly way’ about the physical manifestation of a **4.00 University** (30 minutes)

1. The ideas you think are important to conceptualise a 4.00 University ie  
Do we have disciplinary areas at all? What is a library in the 21<sup>st</sup> century  
What new **spaces** are needed..... (10 minutes)
2. What spaces or places are needed for these ideas – and what is their **function**  
We have ‘located’ the university for your (but it could be elsewhere) (10 minutes)
3. Do you have any ideas about their **form** or what they should **feel** like (10 minutes)
4. Feedback your university 4.00 map (3 x 10 minutes)

