IT'S EASY BEING GREEN
GAD 2012

Saturday March 17th 2012

Presented by Duncan Baker-Brown RIBA
of BBM sustainable design ltd

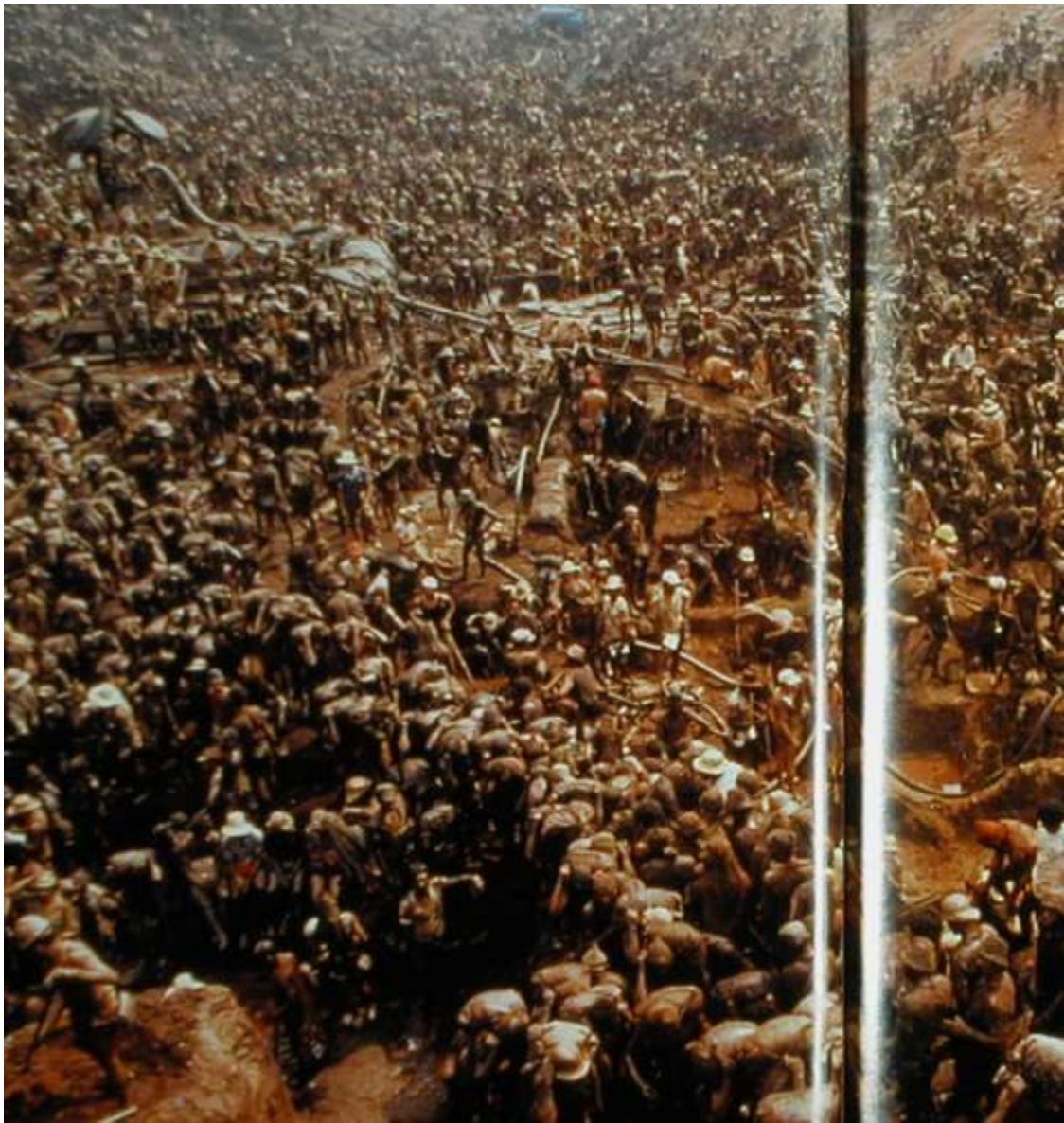
www.bbm-architects.co.uk

“If your design team are telling you that their green design will cost more than the norm ask them to try harder. If they can’t get a team who can”

….. Neil B. Chambers Urban Green

What Architect's Do

The real cost of extracting raw materials…



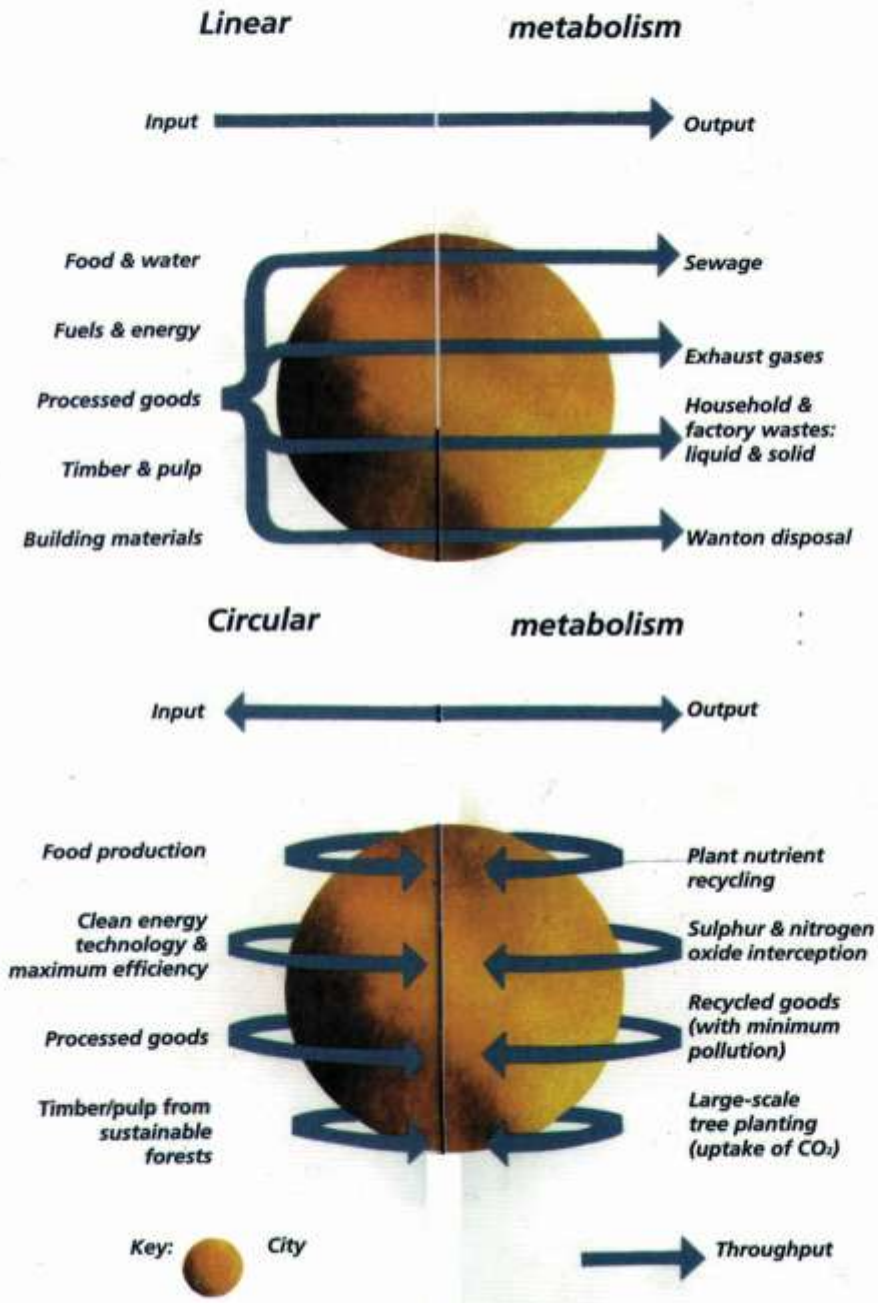
And this is what we do to redundant buildings…

IGNORANCE IS BLISS!

The INDEPENDENT

Durban Conference: The forgotten planet

As the economic crisis bites, the world's politicians are less concerned about the summit aiming to halt climate change

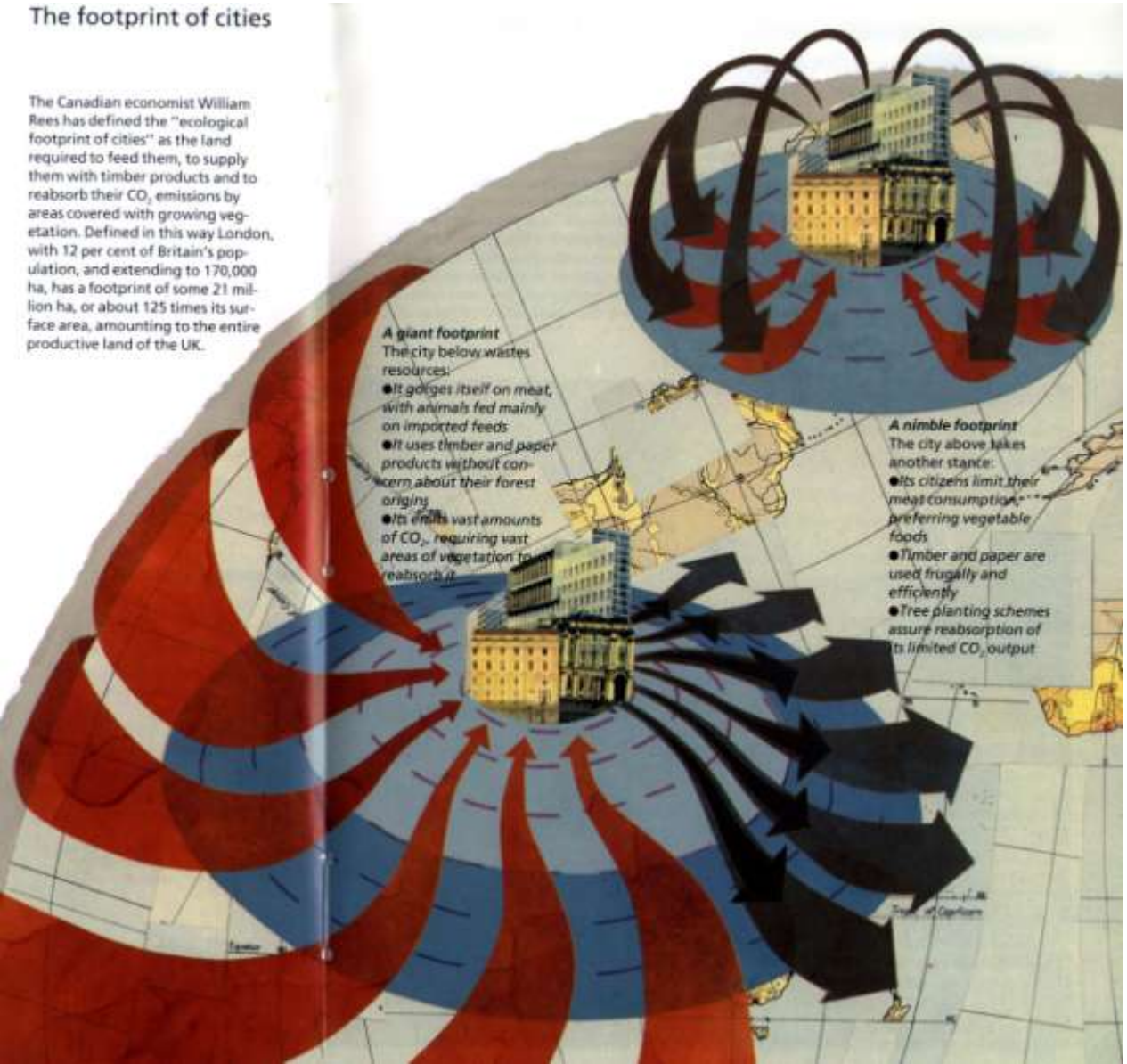


Try to change linear metabolisms into circular ones

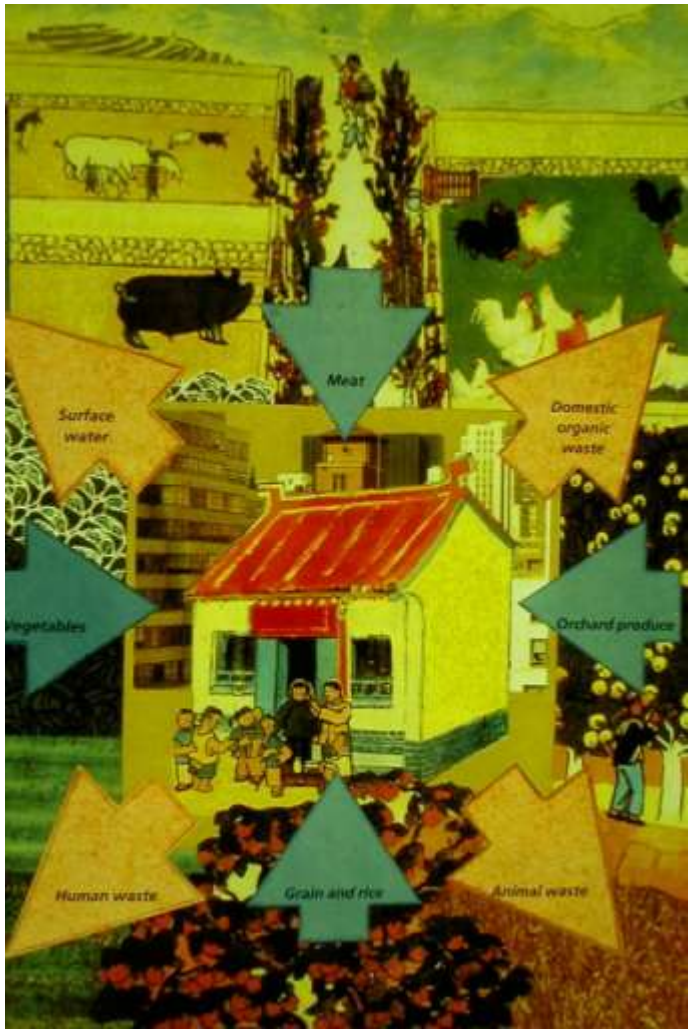
Forget Carbon Footprints it's *Ecological Footprints* that really matter

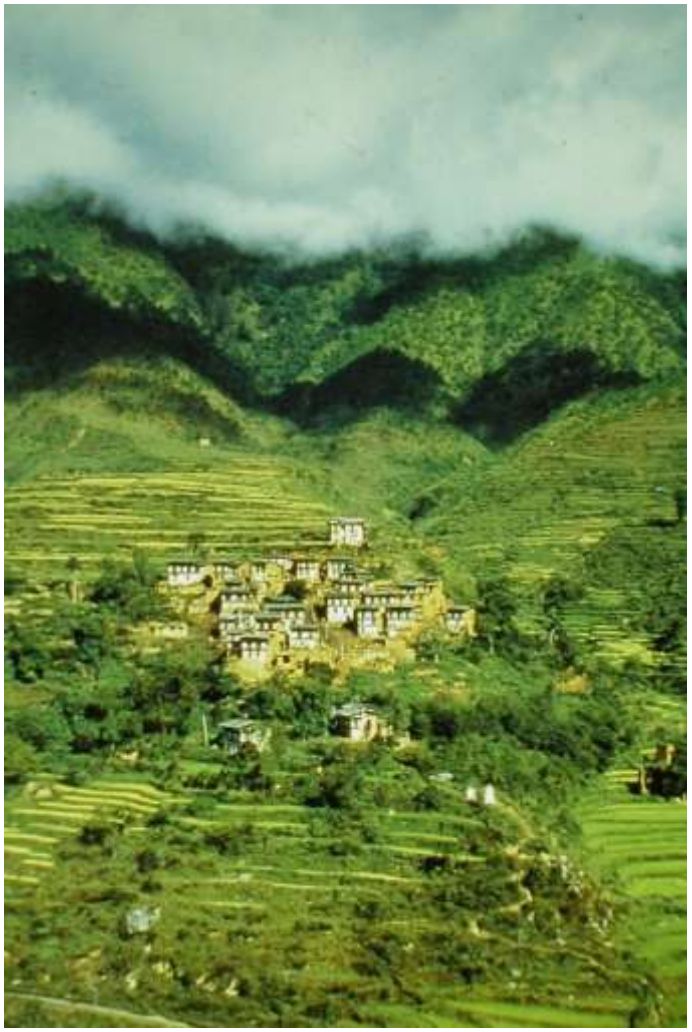
The footprint of cities

The Canadian economist William Rees has defined the "ecological footprint of cities" as the land required to feed them, to supply them with timber products and to reabsorb their CO_2 emissions by areas covered with growing vegetation. Defined in this way London, with 12 per cent of Britain's population, and extending to 170,000 ha, has a footprint of some 21 million ha, or about 125 times its surface area, amounting to the entire productive land of the UK.



Until the early 1990's most Chinese mega-cities were completely circular metabolisms MacDonald's Changed that in 1990

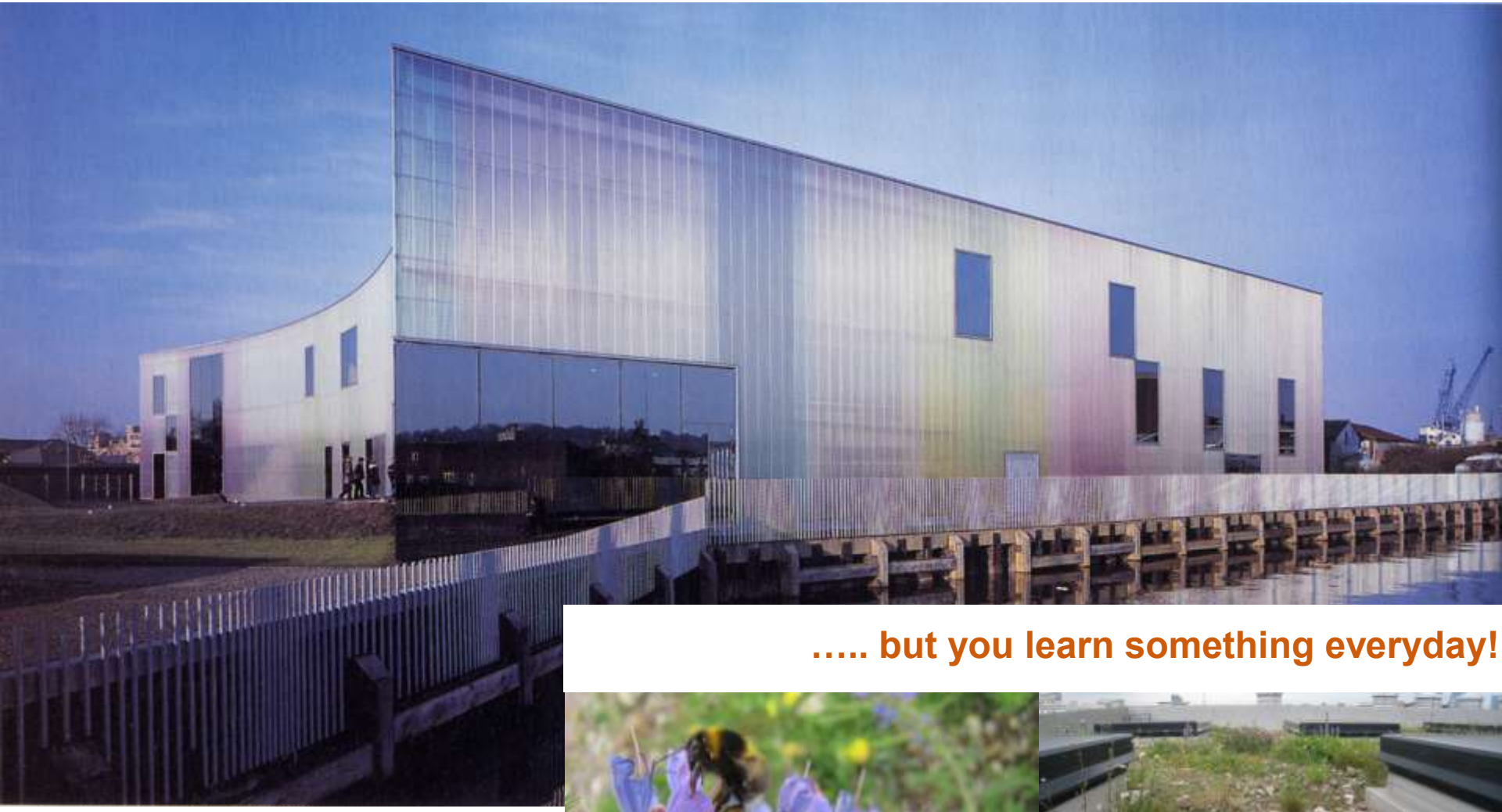




Unfortunately this is Sustainable Design…… Hyberabad-sindh

However this is not…

but it is beautiful!



….. but you learn something everyday!

REDUCE

REUSE

RECYCLE

The is no such thing as waste!

So Design for Demolition!

Rural Studio build with other people's rubbish

Architecture Student Project's

Architecture Student Project's

Architecture Graduation Pavilion

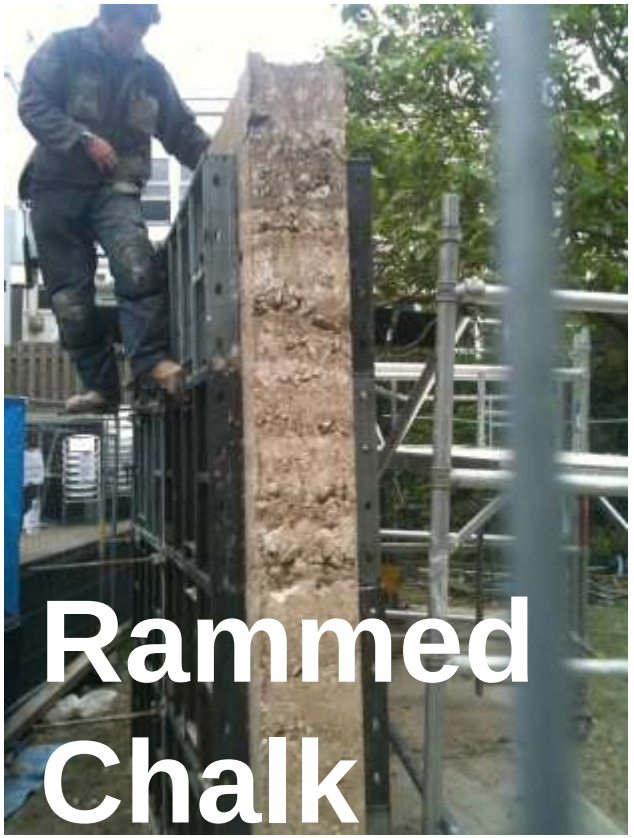
Graduate Pavilion Made of Waste

From the new Amex Building

Architecture Graduation Pavilion

2011 graduate show pavilion constructed with

rammed chalk/ straw bales and building debris …..



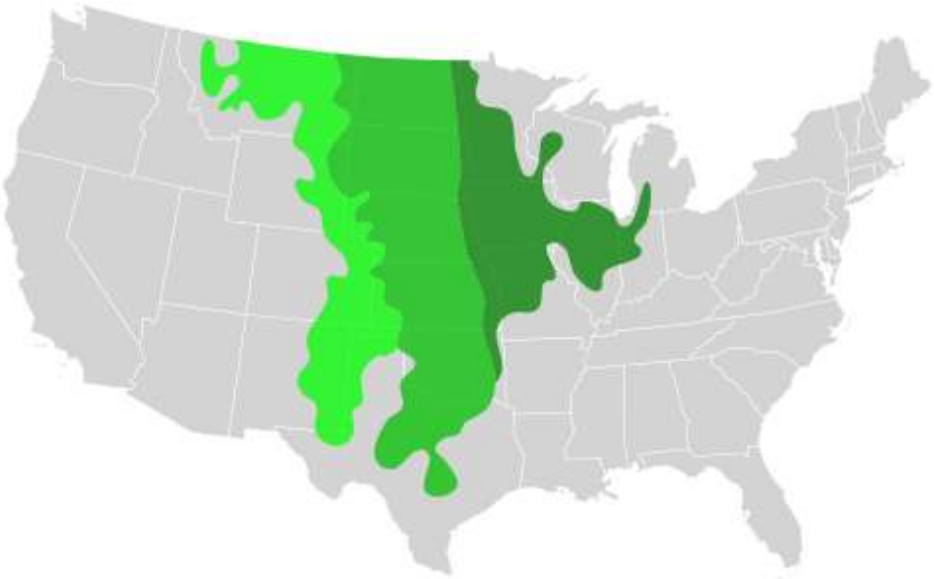
Architecture Graduation Pavilion

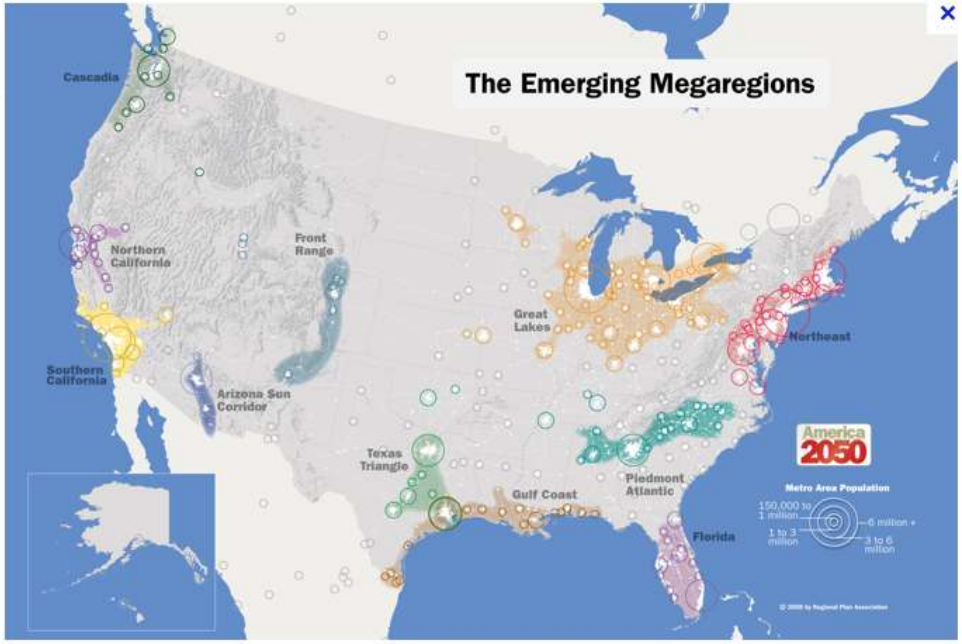

Made Entirely of Waste
Architecture Graduation Pavilion

“THERE IS NO SUCH THING AS WASTE ONLY STUFF IN THE WRONG PLACE”

….. Someone blogging on Treehugger

Part of the last herd of wild, American Bison. This vintage photo by L.A. Huffman, published 1913, had the caption of "1880 Northern Montana". Historians estimate there were less than 300 wild buffalo in all of America by that date. Still, they were hunted until the last 23 individuals were found hiding in the Pelican Valley area of Yellowstone NP in 1900. It is from those surviving animals that today's Yellowstone herds of 3,700 descended!





The Great Plains v’s MegaCities

Big Ideas - The Why Factory

Big Ideas - The Why Factory

Urban Food Production

Page 2

Big Ideas - Vertical Farming

Big Ideas - Vertical Farming

Working with Existing Infrastructure

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Retrofitting our cities will take a lot more than just insulating buildings and adding solar panels

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Retrofitting our cities will take a lot more than just insulating buildings and adding solar panels

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WASTE BRIGHTON

Aim: Keep Waste in Brighton

Keep current facilities and implement new ones to create a complete waste strategy for the city, with no waste going to landfill.

GENERAL STRATEGY:

-New Waste Hierarchy

Waste hierarchy set for the Brighton + Hove waste strategy will be implemented, Waste prevention and reuse dependent mainly on changing lifestyles and education. Therefore the facilities shown in this plan are dealing with the last three tiers.
The waste that these facilities deal with are aimed at a lower tonnage of waste than is currently produced in Brighton, as an assumed result of the first 2 tiers.

3. GASIFICATION/CHP

The proposed facility at Newhaven is not within the catchment area for an autonomous strategy for waste in Brighton.

A gasification plant with energy production will provide a facility for anything that cannot be recycled or composted.

Located near other industry.

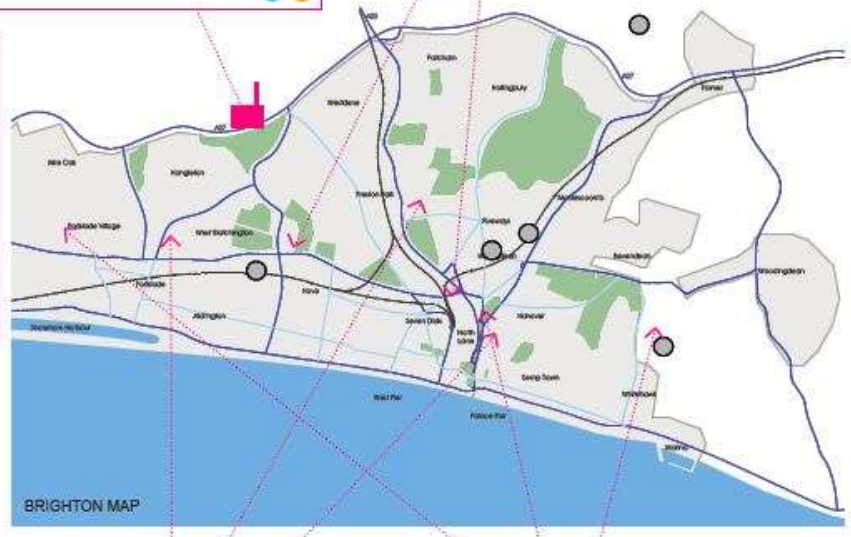
4. PAPER MILLS

Mini paper mills dealing with paper from local businesses and schools. Demand led location/s and size.

LANDFILL MINING

Landfill mining for resources at Beddingham Landfill site.

Extraction of materials for use in the construction industry. Reprocessors and resource centre at same location.



Existing MRF/Composting/ Household Recycling Facility that will be retained

1. ANAEROBIC DIGESTERS

Any biodegradable waste not taken to the community composting facilities will be taken to one of the 3 anaeroboc digesters accross Brighton. This will include biodegradable waste from:

-restaurants
-schools and colleges
-hospitals

Collections from these places in electric vehicles powered by outputs of digesters

2. RECYCLING FACILITIES

Recycling centres to ensure recyclable waste is kept in Brighton:

mixed facilities for non-paper recyclables.

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6. COMPOSTING NETWORK

Network of small scale composting. Based around residential areas, food waste is collected and the compost used in the green spaces of the area.

5. COMMUNITY SWAP-SHOP

As well as internet based swapping (eg. freecycle), a central hub will also serve as a swap shop for bringing and taking goods. Would be for local residents and also have materials for construction.

7. LOCAL MARKET

Local market selling locally grown food without the need for excessive packaging.
This would also sell excess compost from local composters and the anaerobic digesters.

WASTE VALLEY GARDENS

PROXIMITY PRINCIPLE

The proximity principle advocates that waste should be disposed of (or otherwise managed) close to the point at which it is generated, thus aiming to achieve responsible self-sufficiency at a regional/or sub regional level. Where this is not possible priority should be given to transportation by rail or water

POLITICAL WARD MAP FOR POTENTIAL DIVISION OF BRIGHTON INTO ZONES DEALING WITH THEIR OWN WASTE

NB. The emphasis of this report is on municipal waste.
Construction and demolition waste is crucial in an holistic waste strategy but would not necessarily be reflected in an architectural conclusion for valley gardens.

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Priorities

There are about 27 million cars on the UK roads.[5]

Have our cities become car orientated?

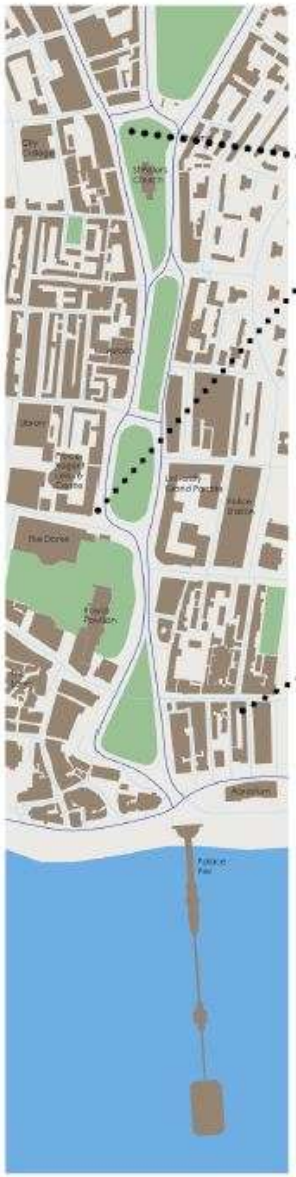
TODAY

TOMORROW?

Should you get wet waiting to cross the road, or should dry car driver be delayed so you can walk?

Shouldn't buses be cheaper and quicker than driving your car?

Should everyone get a seat on the train?



TRANSPORT Small Scale Proposals

Cycle Scheme

The arterial roads, and the central areas of Brighton and Hove are relatively flat, making them accessible by bike. The largest issues at the moment are the poor quality of the designated cycle routes, and the lack of secure facilities to lock ones bike to.

A communal cycle scheme would give everyone the opportunity to cycle to a variety of ddestination at very low cost, and the city-wide scheme would reduce bike theft.

Walking Trains

In a densely populated city centre, where there is a school within 1km of nearly every home, all children should be walking to school. Unfortunately safety and road junctions and the threat of other people often leads to the car being chosen. Walking trains are a safe and cheap method of getting school.

Animal Driven Carts

Some items are too heavy for humans to carry themselves, but horse drawn carts are a cheap alternaitve to the 'white van'. And in a compact and congested city can be just as fast!

Electric Vehicles

For some distances animal pulled carts might not be appropriate and electric vehciles could be utilised. It is likely that these would coordinate with the CHP plants.

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FOOD Proposed

Farms surrounding Brighton will all become organic, supplying fresh food to Brighton and East Sussex. The vertical farm will reduce the pressure on farmers in the short term by giving the soil time to regenerate. When a farmer changes from chemical to organic farming, the productivity of the farm immediately drops. This is because chemicals have degraded the soil and killed off predators. It can take several years to restore the land to full productivity. However, comparative studies have found that fully restored organic fields average between 94% and 100% of the yields of nearby conventional crops.

Also, more trees can be planted on farmland which will help soil regeneration and will reduce carbon levels.

1. VERTICAL FARM

There is not enough land within and around Brighton to completely sustain the community. Therefore in order to supply everyone with locally produced food vertical farms may need to be considered. With the existing farmland around Brighton being poor quality, much of the food we eat is imported from around the city. Vertical farms would allow this land to regenerate by farmers concentrating on improving the soil to enable future crop growths. Trees could be planted on the land around Brighton to replace those felled from the South Downs which will aid the reduction of carbon levels.

Accoding to Despommier: (Scientific America)
A 30 storey Farm can feed 50,000 people year round. Brighton has a population of 247,817, therefore 5 farms to feed the whole community.

2. GREEN ROOFS / HYDROPONICS

Where the soil quality is not of a sufficient standard or there is simply a shortage of available land, such as in the city centre of Brighton, green roofs should be considered.

New high-level green spaces can be created on walls and roofs, revitalising existing industrial buildings, such as the Market building or the Astoria, and contributing towards an increase in quality of the urban environment. The new spaces will relieve the stress on existing green areas, acting as productive landscapes, allowing more efficient production of food.

Where the structure cannot take the extra weight of soil on the roof, a medium culture hydroponics should be used.

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FOOD Proposed

3. COMMUNITY GROWING

Available, underused land within Brighton and Hove will be adopted by the local community for growing fresh fruit and vegetables for consumption within the City.
Community growing schemes already exist within the City, however they need to be made more prominent and have a bigger impact on the City as a whole.

These schemes will bring people together to share ideas and knowledge about growing food, therefore they are not only set up for educational purposes but also as a social network.

New City landscapes should emerge throughout Brighton and Hove revitalising existing underused spaces.

5. GARDEN ALLOTMENTS

In the City centre private gardens are very scarce. However where there are garden plots residents should be encouraged to produce their own food which will contribute towards an improved urban environment and cut down on personal food bills.

If households produce excess food they can exchange them at the local swap-shops for either different produce or money.

4. MARKETS / SWAP-SHOP

Markets are a great way to buy local, fresh fruit and vegetables that are cheaper than the big supermarkets. Markets must play a more significant role within the community becoming *the* place to buy fruit and vegetables. This would have a positive impact on local farmers who supply the stalls.

The existing open market on Marshalls Row in Brighton is not very accessible and is hard to find if you are not familiar with the area. This needs to have more of an impact along with the integration of more market places.

A swap-shop is a fantastic way of rewarding people who grow excess food and sharing their produce with the community for either a small sum of money or alternative produce.

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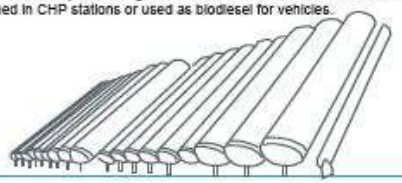
HEAT + POWER SUSSEX

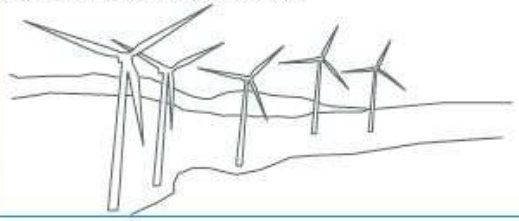
1. SOLAR POWER

As previously discussed Photovoltaics are not the most efficient way of producing energy for the community. They are expensive and currently inefficient. Another way of harnessing the solar energy that falls on Brighton is to us algae, more specifically algae farms to produce algae biomass and biodiesel. Biomass and biodiesel can be burned in CHP stations or used as biodiesel for vehicles.



2. WIND POWER

Another way of generating electricity for Brighton could be the use of large wind turbines located on the high grounds of the South Downs. This would keep the aesthetic disturbance to a minimum while allowing the turbines to be in a close proximity to Brighton. The South Downs receive a higher rate of wind speed than Brighton due to their height and open environment.

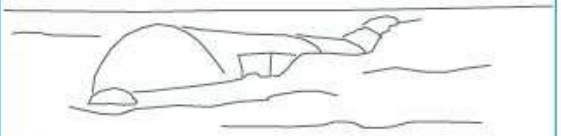


3. COMBINED HEAT AND POWER STATION

Currently the 420MW power station at Shoreham-by-Sea provides Brighton and local areas of the south coast with electricity produced from natural gas. As natural gas supplies are depleting, the UK is forced to import gas from surrounding countries such as Norway and further countries like Russia. Combined Heat and Power Stations simultaneously generate both electricity and useful heat. The heat generated can be used by local buildings as a source of heat or as a hot water supply. As CHP's are smaller and more localised interacting with the surrounding population more, then it is suggested that CHP's are spread around Brighton to serve the local community.

4. WAVE POWER

The effectiveness of any wave/hydro power harnessing near Brighton (English Channel) could be compromised by several issues; depth of channels, width of the English Channel (for Atlantic storms to pass along), efficiency of harness technology.



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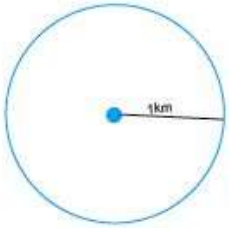
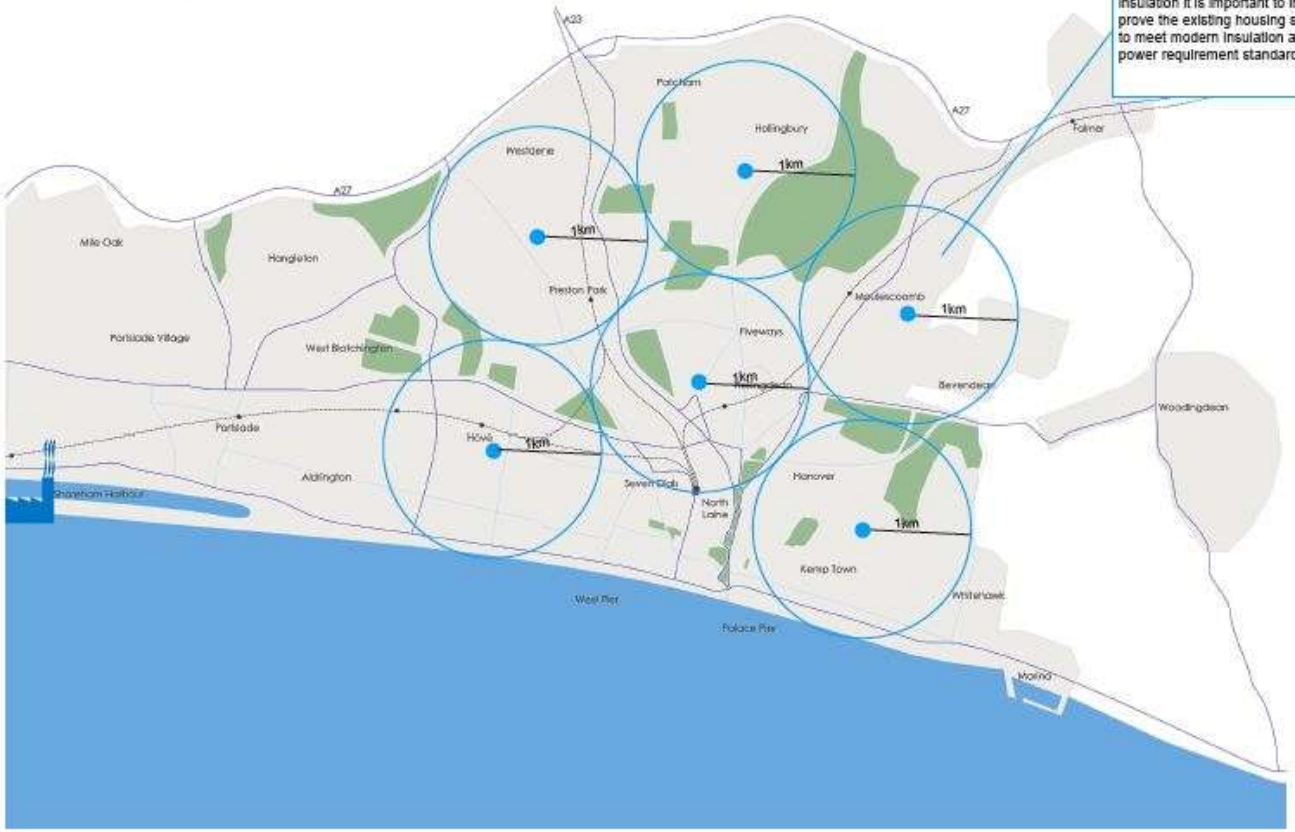


The area to be fed by power and heat / cooling from the proposed CHP's will be 1 km radius, in mainly residential areas. This will provide hot water to close residence and pre heated water to further homes. Included with the CHP's would be algae farms. These would be used to power the CHP with biomass and provide biodiesel for transportation of local (food/material) waste and biomass materials to burn in the plant

5. HOMES (DEMAND-SIDE EFFICIENCY)

It is imperative that to fulfil the diagram on the 'Current Supply' page entitled 'Transition from large to small scale power stations' we concentrate on the demand-side efficiency, the efficiency of individual homes. As most existing properties in the UK have less that adequate insulation it is important to improve the existing housing stock to meet modern insulation and power requirement standards.



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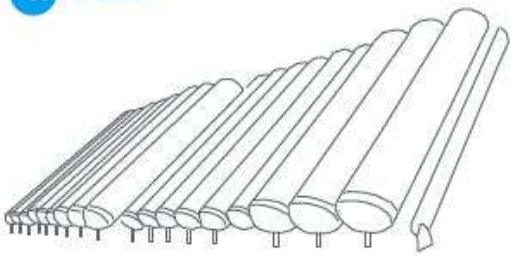
HEAT + POWER PROPOSED

1. SOLAR



CASE STUDY

PETROALGAE

PetroAlgae's production process satisfies need through extremely high oil yields. With daily harvesting methods, their systems can produce 200 times more oil per acre than traditional biofuel crops like soybeans. With this level of productivity, the entire feedstock requirement for the United States and the European Union could be met with less than 2% of the land suitable for farming in those regions. The PetroAlgae systems do not need arable land for production allowing for greater flexibility.

Petroalgae uses external tubes (top right image) to grow the algae but there are several ways to achieve desired growing conditions, for example; vertical pockets (bottom right)

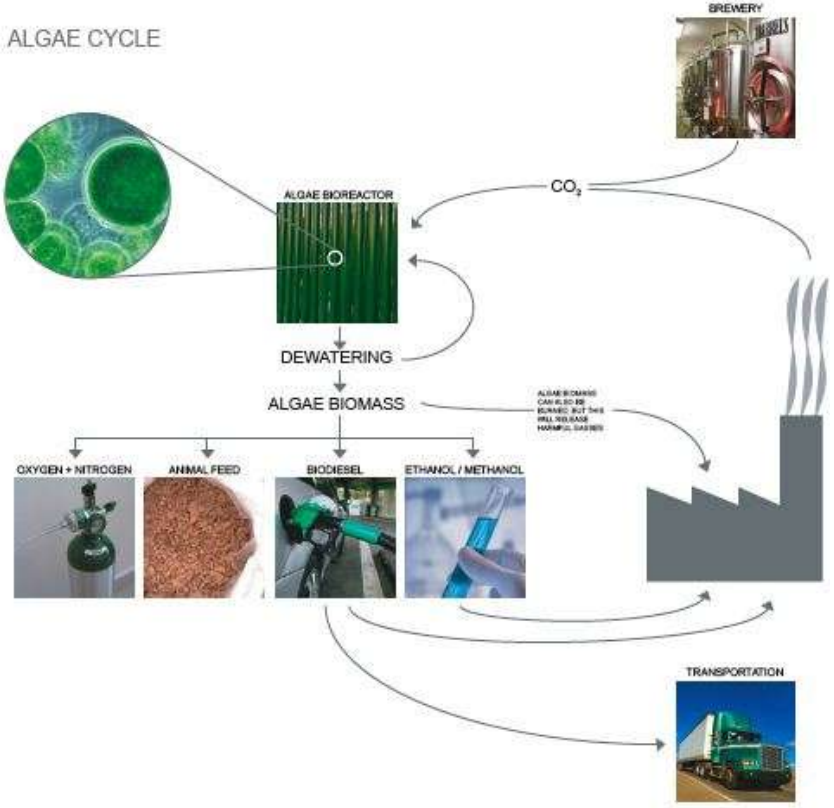
ALGAE FARMS + BIOFUEL

Algae can be used in several ways and cycles;

- The Bioreactor contains fresh water and algae organisms
- Carbon-dioxide is pumped through the Bioreactor (the carbon-dioxide can come from several sources e.g. breweries, factories, etc.)
- The algae is fed by the carbon-dioxide
  - Ethanol from corn (1year to grow harvestable crop)
  - Bio-diesel from soy beans (1year to grow harvestable crop)
  - ALGAE CAN BE HARVESTED IN 2 DAYS (according to PETROALGAE)
- To harvest, the algae is dewatered
- Then centrifugal forces is used to break it down
- This produces;
  - Powdered Meal - For Animal feed
  - Oil (crude state) - Bio-diesel
  - Ethanol / Methanol- Can be used in factories
  - Oxygen + Nitrogen

Biodiesel can be used in existing diesel engines with no change to the engine. Biodiesel is about 5-8% less energy dense than diesel, but its greater lubricity and more complete combustion offset that somewhat, leading to an overall fuel efficiency about 2% less than diesel. Among the most photosynthetically efficient plants are various types of algaes. Some species of algae are ideally suited to biodiesel production due to their high oil content (some well over 50% oil), and extremely fast growth rates. Algae farms could also be constructed to use waste streams (either human waste or animal waste from animal farms) as a food source, which would provide a way of spreading algae production around the country. Nutrients can also be extracted from the algae for the production of a fertilizer high in nitrogen and phosphorous. To make biodiesel, you need not only the vegetable oil, but an alcohol as well (either ethanol or methanol). The alcohol only constitutes about 10% of the volume of the biodiesel. Among the most land-efficient and energy-efficient methods of producing alcohol is from hydrolysis and fermentation of plant cellulose.

ALGAE CYCLE



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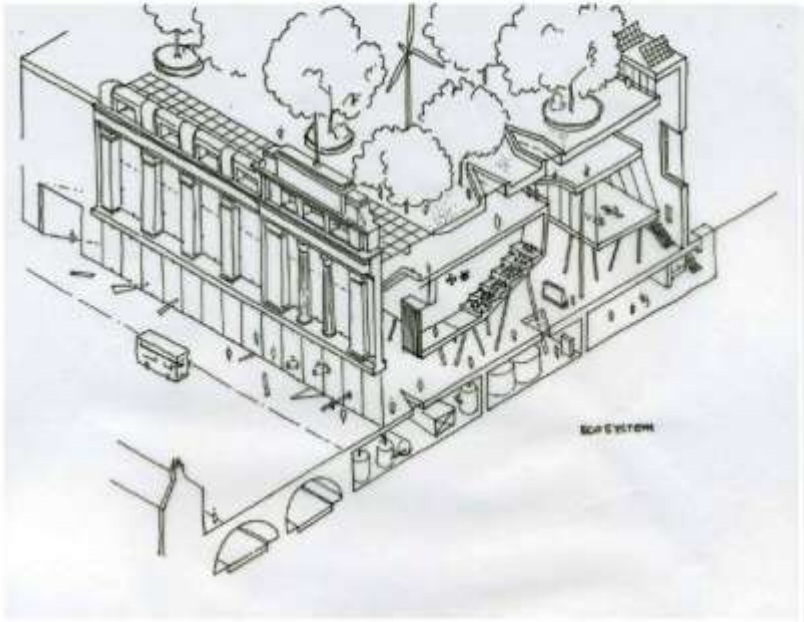
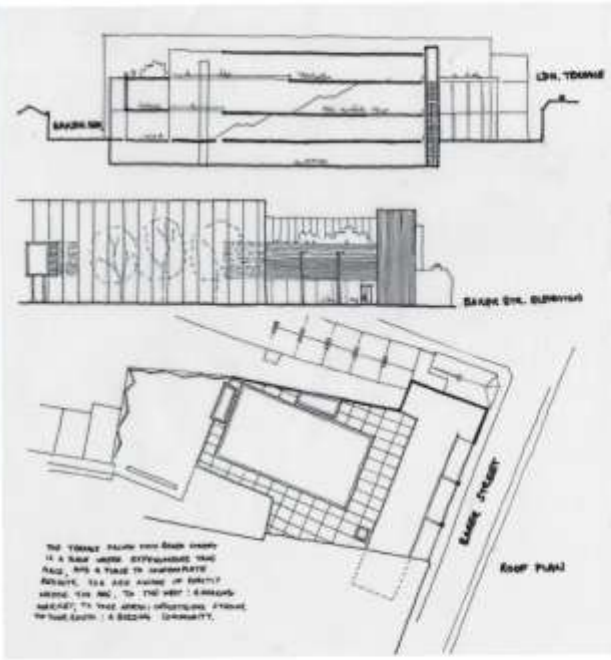
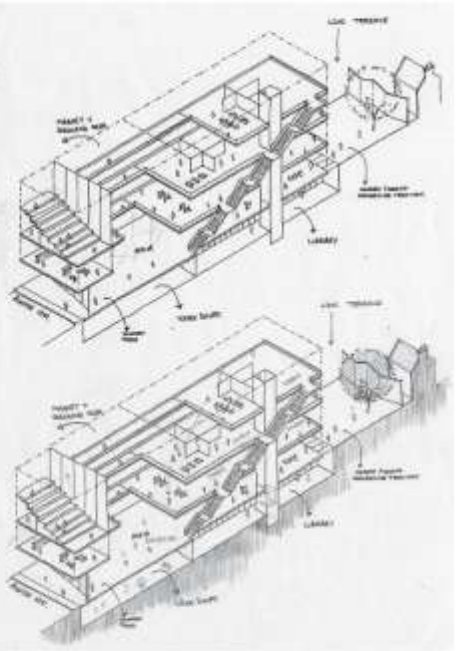
Explorative sketches







Buildings Creating their own energy

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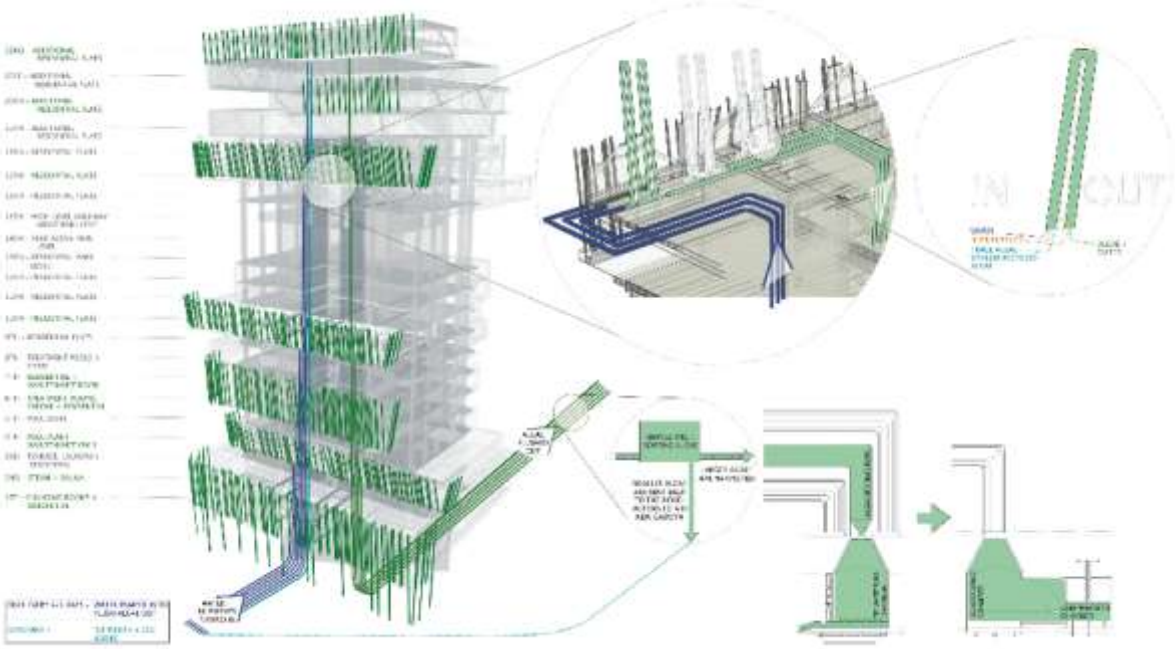


THE CURRENT REALITY

Lights go out across Britain as recession hits home

Electricity demand falls as economy slows at fastest rate since 1980

Ashley Seager and Mark Milner

Britain's days as the fastest growing economy in Europe were officially declared over yesterday as the deepest recession in a generation saw consumers turning off the lights and Poles returning home.

While official figures showed the economy contracting at its fastest since 1980, National Grid said demand for electricity had fallen over Christmas at homes and factories across the land, and Poland confirmed that thousands of its citizens were coming home from Britain and Ireland.

National Grid said it was cutting its forecast for electricity consumption this year because of the recession. The thousands of people being laid off each week and the hundreds of firms cutting production are reducing demand.

Industry has suffered most in this recession and made the biggest contribution to the slump in national output, which fell by a worse-than-expected 1.5% in the fourth quarter of last year compared to the third – or around 6% on an annualised basis.

As the economy had contracted by 0.6% in the July to September period, Britain now meets the most common definition of a recession - two consecutive quarters of shrinkage. But some analysts say the country fell into recession last April.

Financial markets took fright at the sheer speed of the economy's contraction, which outpaced anything seen in the recession of the early 1990s.

The pound slumped to a fresh, 23-year low against the dollar of just $1.35 - a far cry from the peak of $2.11 seen last summer - and to an all-time low against the yen. The FTSE 100 share index fell below the key 4,000 level after the news, although it later recovered to end little changed.

"These figures are the final nail in the coffin for Gordon Brown's claim to have 'ended boom and bust'. The UK economy is most definitely bust at the moment," said Charles Davis at the Centre for Economics and Business Research.

"It is not just that the UK has entered recession; it is the size of the contraction ... The economy is set for the steepest contraction in the post-war era in 2009."

Brown admitted the government had not seen what was coming: "What we did not see, nobody saw, was the possibility of markets' failure.

"We are fighting this global recession with every weapon at our disposal. We need other countries to work with us and we are asking them to agree with us a common set of measures."

He criticised David Cameron for having suggested Britain might need to go to the IMF for help in financing its bail-out of the creaking banking system. But Cameron insisted he was right to warn that the country faced the prospect of an IMF loan for the first time since 1976. "I think it's right to warn about that, I think it's a responsible thing to do," Cameron said.

He and the shadow chancellor, George Osborne, mocked Brown's claims last summer that the economy was better placed than in the past to withstand recession and would grow in spite of the credit crunch.

But TUC chief Brendan Barber blamed bankers and previous Tory governments for the economic mess: "This recession is not bad luck or an inevitable swing of the pendulum. Its cause is irresponsible behaviour by banks and financial institutions taking advantage of the deregulation started by Mrs Thatcher and president Reagan, and continued to a greater or lesser extent ever since."

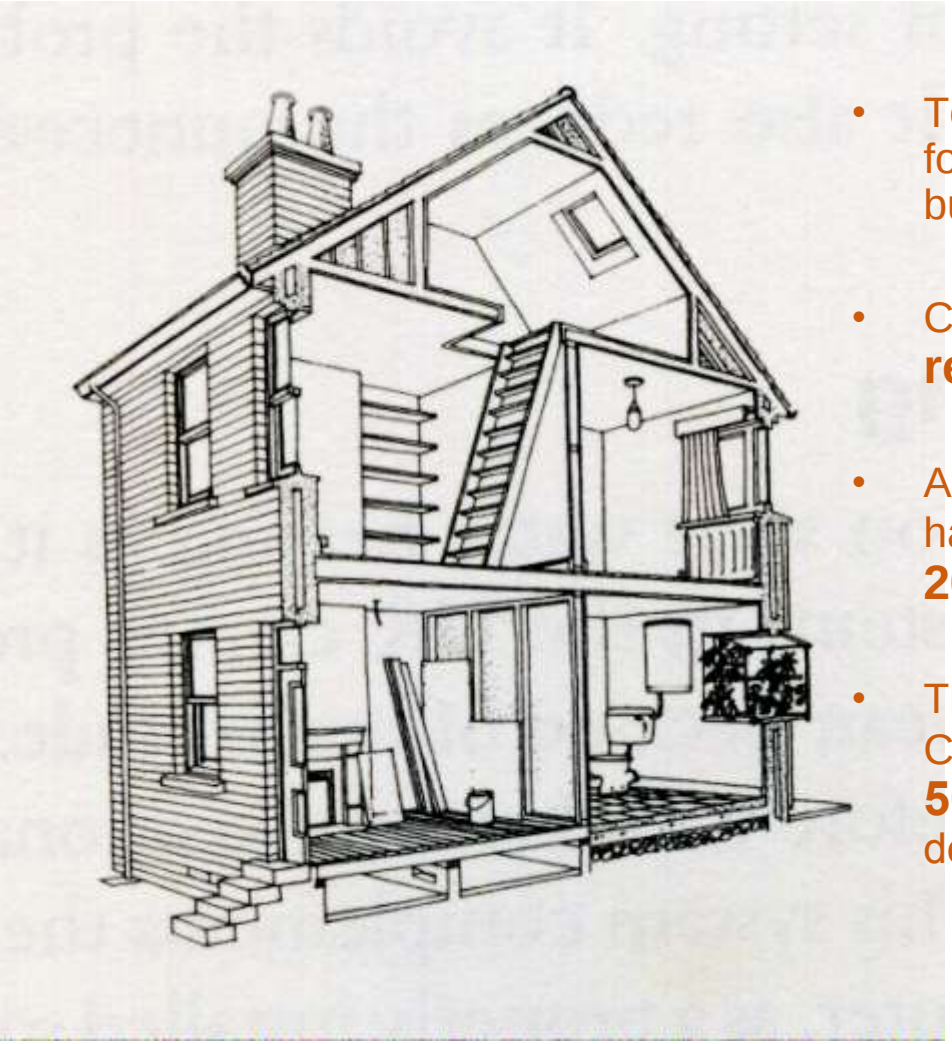
Unemployment was this week reported to have jumped to nearly two million, and analysts say it would be much higher were it not for workers from countries such as Poland returning home.

Poland's treasury minister Aleksander Grad told the Guardian that the economy there, unlike Britain's, would avoid recession. Poland's banks had been regulated tightly and had not got into the toxic derivative products that have brought down banks around the world, said Grad.

National Grid said weekly peak electricity demand would fall by 600-1,000 megawatts, the equivalent of a large power plant, over the next year. The drop will ease the strain on power stations, some of which are facing closure because of age or environmental rules. It will also reduce CO_2 emissions.

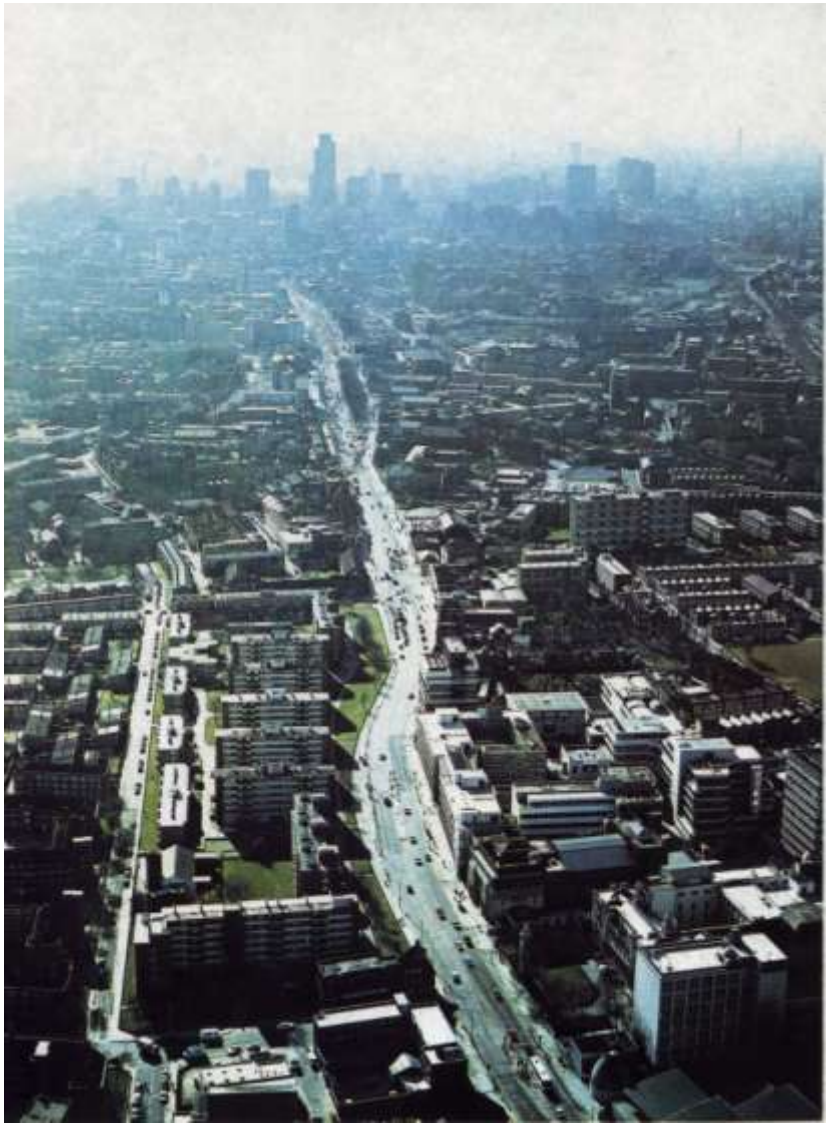
4-5 »

THE REAL CHALLENGE



- To make a real impact on CO2 emissions we must focus on improving energy efficiency of existing building stock
- Central government requires CO2 emissions to be **reduced by 80% by 2050**
- At current demolition rates we should expect to have **80% of our current building stock in 2050**
- Therefore we need to retrofit existing homes to a Code Level 4 standard at least at **a rate of 500,000 per year for 40 years!!…..** And that doesn't allow for schools, offices etc..

WE ALREADY LIVE IN OUR FUTURE ECO TOWNS

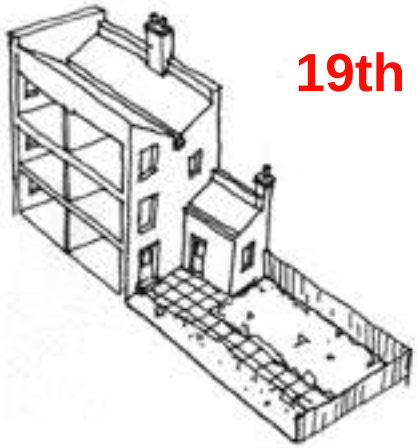


Working with Existing Places

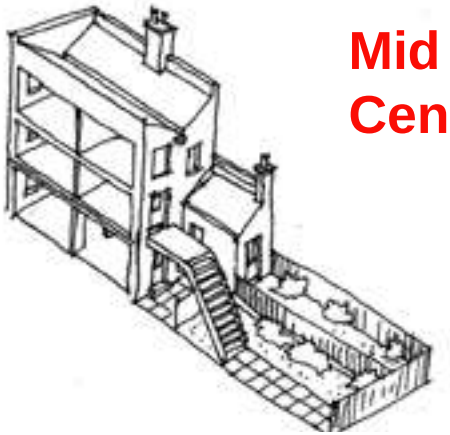
Working with Existing Places

Working with Existing Buildings

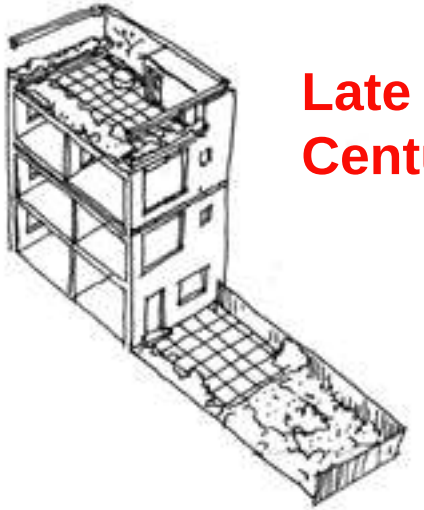
Learning from the evolution of a terrace house



19th Century



Mid 20th Century



Late 20th Century

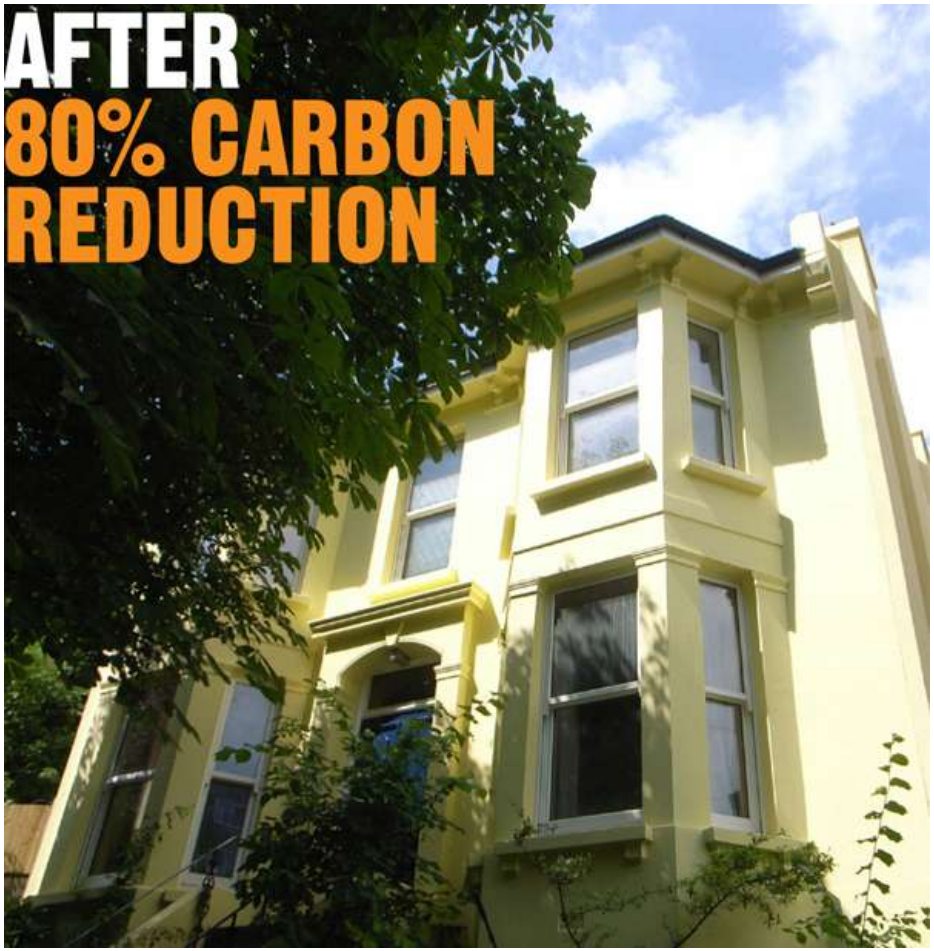
Early 21st Century

Working with ExistingPlaces

Jakob & Macfarlene's *Cite de la mode et du design* in Paris

T.S.B. RETROFIT THE FUTURE

The Nook Brighton



GREEN RETROFIT

Using Locally Sourced Organic & Waste Material

……and let heavyweight & lightweight material do its job

- Existing brick walls as THERMAL MASS

- 140mm of waste timber fibre insulation

- untreated chestnut rain-screen cladding from less than 10 miles away

Most often we work with these..

Masonry & Timber: Heavyweight & lightweight

Most often we work with these..

Masonry & Timber: Heavyweight & lightweight

Buildings that are :

Easily Adaptable

Have a sense history/ place

Materiality

Buildings that can *BREATH*

Or perhaps buildings like these?

And even these……!

Southampton Street Retrofit Project

Project Introduction

The need for solid wall insulation

- Government targets are to achieve an 80% reduction in C02 emissions by 2050
- Homes are responsible for around 30% C02emissions so we need to start improvements now.
- Real C02 savings can be achieved by reducing heating demand (and fuel bills!) through better insulation.
- Housing constructed before 1919 (which includes all the Victorian housing in Hanover) is the least energy efficient type of construction. A significant amount of heat is lost through solid walls and we need to consider how this may be reduced.
- The latest government plans to meet C02 reduction targets include solid wall insulation to 3.5 million homes (4th carbon budget 2011). There have only been around 105 000 installations to date so we have a long way to go!
- Installing solid wall insulation is not easy so we need to consider how we can overcome the problems, and ensure that the right solutions are specified.

Internal Insulation

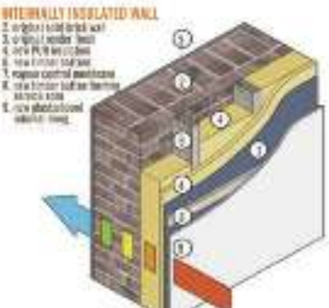
Issues:

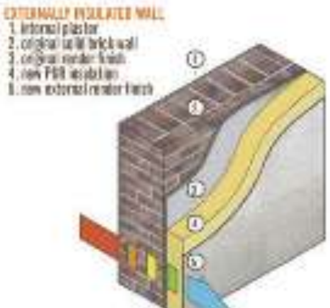
- Reduction in space
- Disruption to residents
- Cold bridging
- Condensation risk
- Internal detailing / floor junctions

External Insulation

Issues:

- Overcomes cold bridging and condensation risk
- Less disruptive than internal insulation
- Internal space is not reduced
- More expensive
- Greater impact on building appearance
- Difficulty in detailing around building features
- Planning policy issues
- Street level improvements are needed to achieve scale and consistency





Accepting change to older buildings

Hanover in the 1930s – housing is only habitable today due to improvement programmes in the 1960s and 70s. (source Hilly Lane to Hanover)

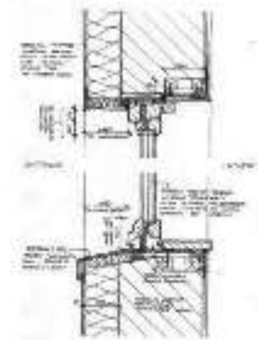
Southampton street today

Hanover SWI (Solid Wall Insulation) project

External wall insulation generally produces the best results as it provide a continuous layer of insulation on external walls and does not result in reduction in floor area.

Through HASL and Brighton and Hove 1010, we have government LEAF funding to support a external solid wall insulation feasibility study. We have selected a typical example street, and are carrying out a measured survey of the facades of 20 homes. Our architects, Lewes based BBM, will consider the external insulation options and produce illustrations of what the houses would look like before and after insulation and the measures needed to overcome some of the problems. We will also consider the amount of energy that can be saved, insulation costs, and other issues such as whether it would make sense to carry out other measures such as window replacements at the same time. We then will discuss the results at presentations to local residents and the Council's planners to get their views.

Example of retrofit project "the nook". In the context of the Southampton street project we will be looking into one aspect, which is externally insulating the street facade and understanding the complications that arise from its application.



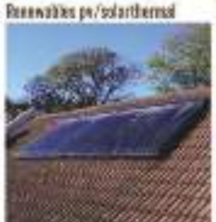
Possible windowsill and head treatment in relation to additional insulation

BBM Case Study - The Nook, Brighton

The project came about as a call for proposals from the Technology Strategy Board who were looking to award grants to ... properties of all shapes and sizes in the social housing sector up and down the country and monitor the results for two years to determine whether or not each project had achieved an average carbon footprint of around 17kg of CO2/m2/annum. This figure is deemed by government experts as the average consumption figure we need our building stock to achieve if we are to meet the UK's 80% carbon reduction targets by 2050.

BBM who have been a leading exponent of low energy design and ecoretrofit since the mid 1990's were able to draw on a huge range of experience in establishing the building fabric and services strategy. We worked with specialist suppliers to derive the specification of materials and apply them through carefully thought through construction details with a view to establishing the required levels of insulation and air tightness whilst designing out cold bridging and the risk of condensation forming within the structure which in turn can lead to unhealthy living environments and material defects.

Renewables pv/solarthermal



External insulation

Internal insulation

Airtightness

Features / Details

phlorum

BBM SUSTAINABLE DESIGN

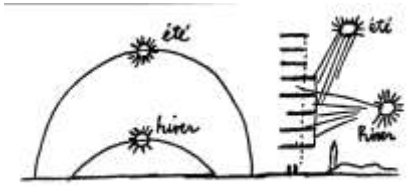
for more information:
web: www.bbm-architects.co.uk
email: info@bbm-architects.co.uk
tel: 01273 480533

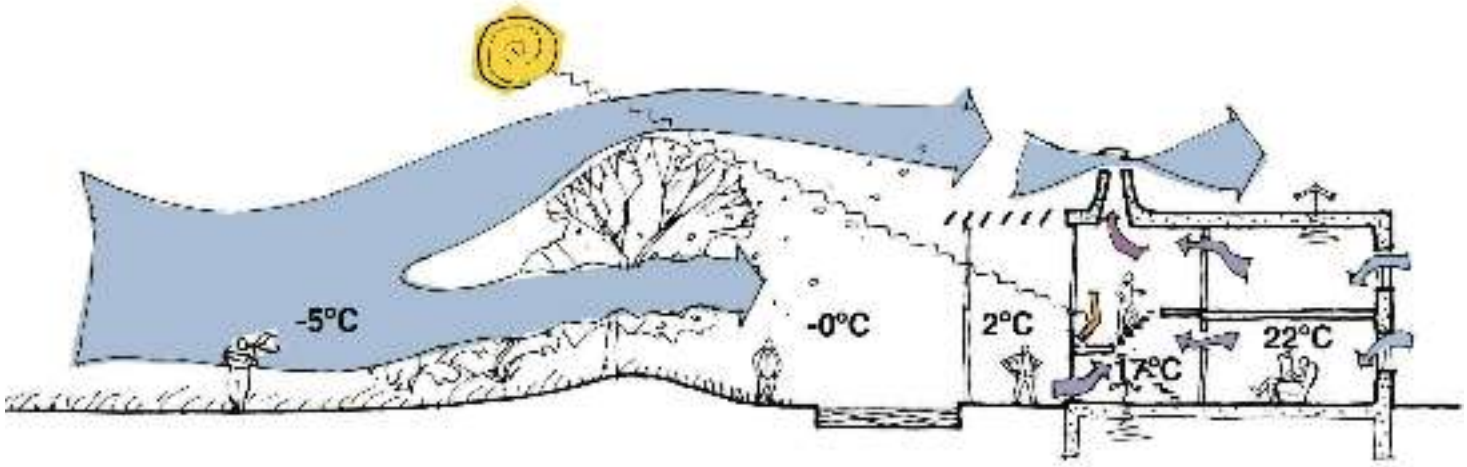
Now It's Time to Think…….

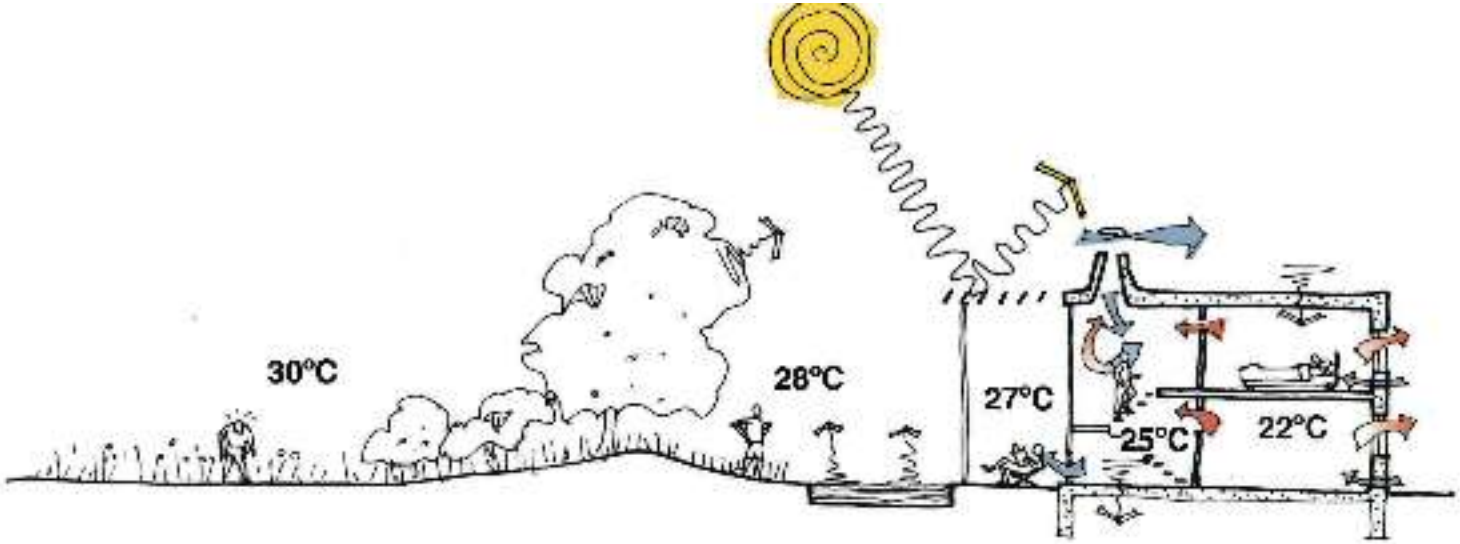
THE BIG ROOF

Jourda & Perraudin

DEFENSIVE LAYERS







DEFENSIVE LAYERS

Latapie House Lacaton & Vassal

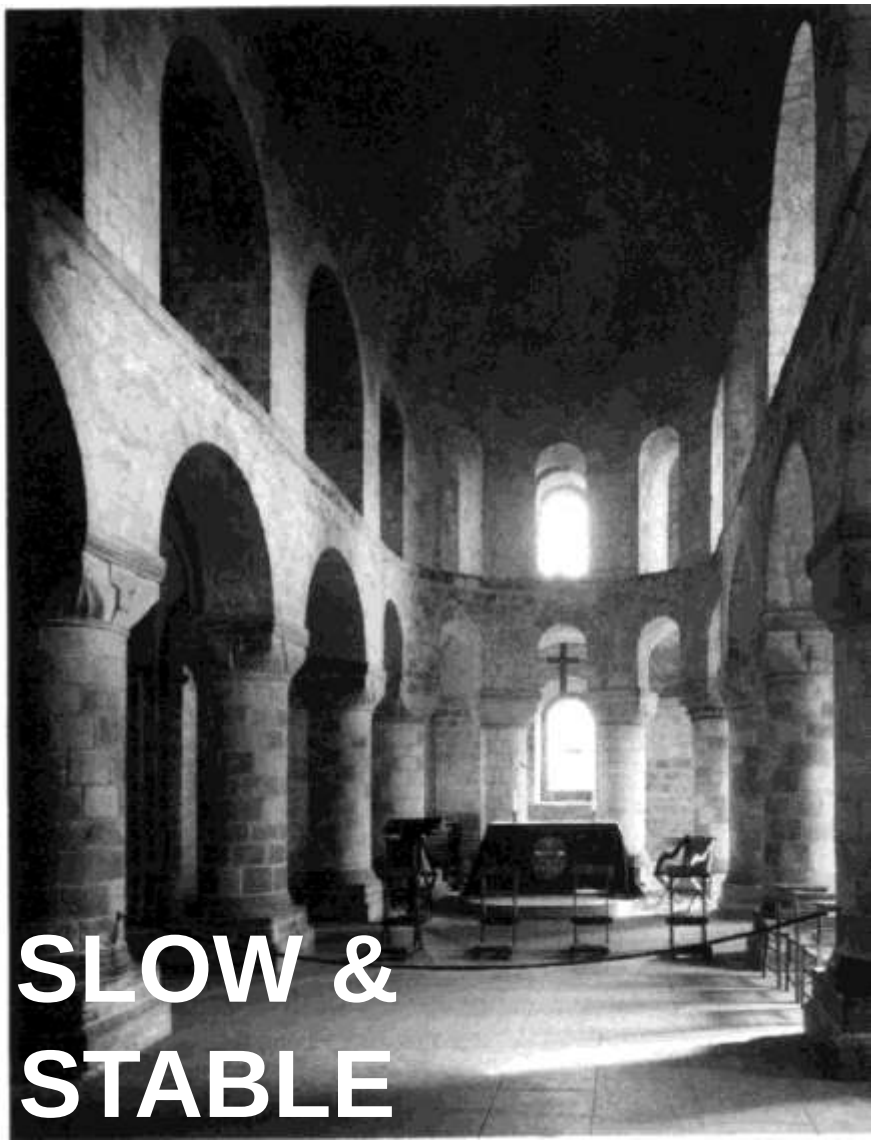
DON’T THROW ANYTHING AWAY & DO IT CHEAP

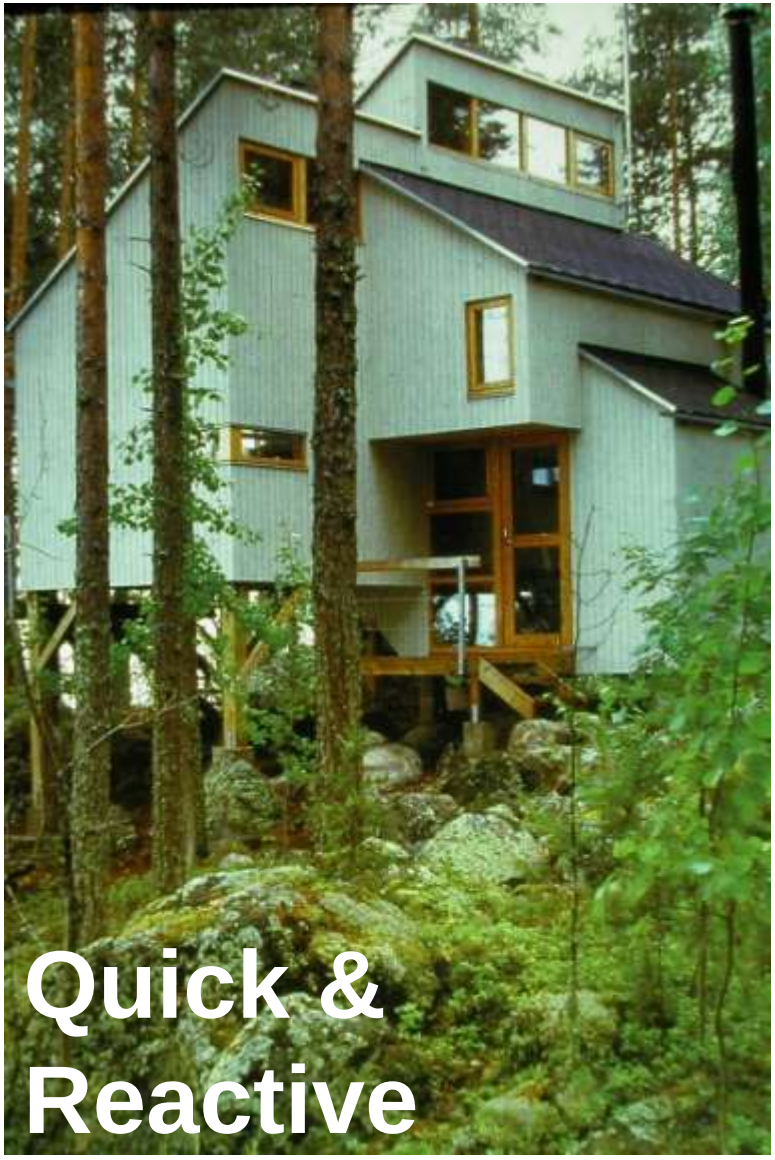
Palais de Tokyo by Lacaton & Vassal

USE WASTE MATERIALS

USE MORE WASTE MATERIALS

IS IT HEAVY OR LIGHT





THE HOUSE THAT KEVIN BUILT

The UK's First Fully Organic Prefab
The UK's First A+ Rated House

droog

UP

Initiated by Droog, UP is an investigative economic model that aims to increase the value of dead stock through re-design. An alternative to recycling and disposal, UP treats leftover goods as raw material for creative re-interpretation in order to bring leftovers back into circulation.

UP was launched at the UP conference on November 3rd, 2011, where issues ranging from copyright to branding and market perception were discussed. The first line of UP products was unveiled, using stock from collaborating companies including Makro, van Gansewinkel, Vlisco and Mediq.

See the UP products here.

▸ HOW IT WORKS

Read More

▸ CONFERENCE

Read More

▸ PRODUCTS

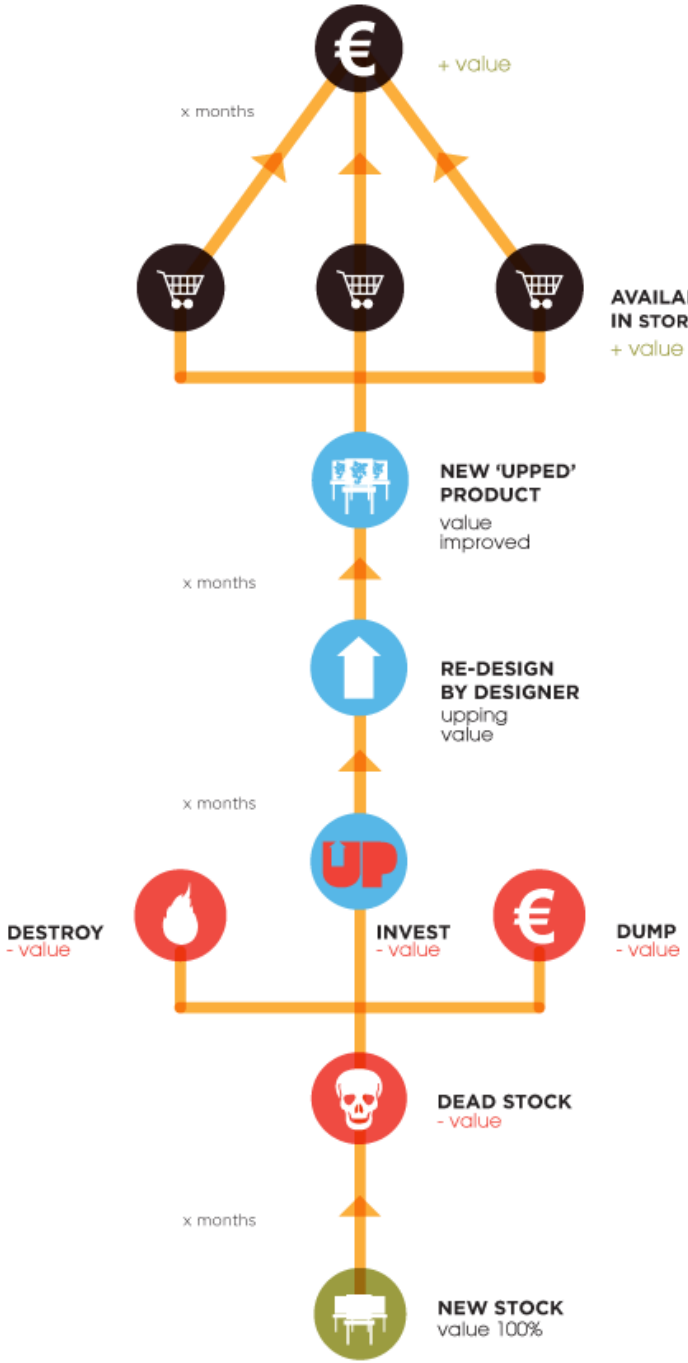
Products

▸ PARTNERS

Read More

▸ CONTACT

Contact Now



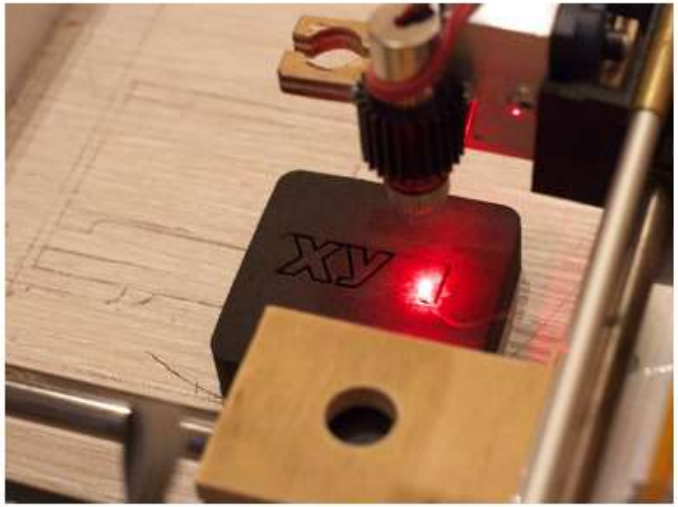
how it works

In most supply chains, stock has maximum value when it is first introduced to the market. From that moment, it tends to rapidly drop in value, finally reaching a point at which companies tend to either dispose or recycle it at a cost - both financial and environmental.

UP introduces an alternative: to reinvest in the dead stock through a new way of designing, introducing new functions, new aesthetics and new markets to leftover goods in order to bring them back into circulation.

See the UP products here.

models



Downloadable design

date: 2010-11

No longer from the furniture store, but with a download from a website, design goods take the form of a digital blueprint that the consumer takes to the local manufacturer for customizable on-demand production.

Droog is working with a network of designers, digital distributors, manufacturers and material suppliers to develop new business models and product designs for Downloadable design. Through a world wide platform for design distribution two pilots will be implemented to test the developed models and designs.

Possible benefits include lower product costs, less transport and less waste, new design concepts, more variation, possibility of co-creation, lower investment due to no warehousing, more responsive production chains, and involvement of the consumer in the design outcome. Not only for day-to-day goods, Downloadable design can play a role in global urgencies.

Currently we are in the design and development phase, look out for further announcements soon. This is a project of Droog Design and Mediagilde.

Renny Ramakers

Home
Bio
Blog
Events
Publications
Droog
Contact
I like this

Hello.

Co-founder and director of Droog, Renny Ramakers initiates projects, curates design exhibitions, and lectures worldwide. She is a judging panellist on various design boards and has advised on governmental advisory boards, amongst others as a member of the Dutch Council of Culture (1995-2001). As a critic, she has contributed to international magazines, books and catalogues, and has authored several books. She is chairman of the board of THNK, Amsterdam school for creative leadership.

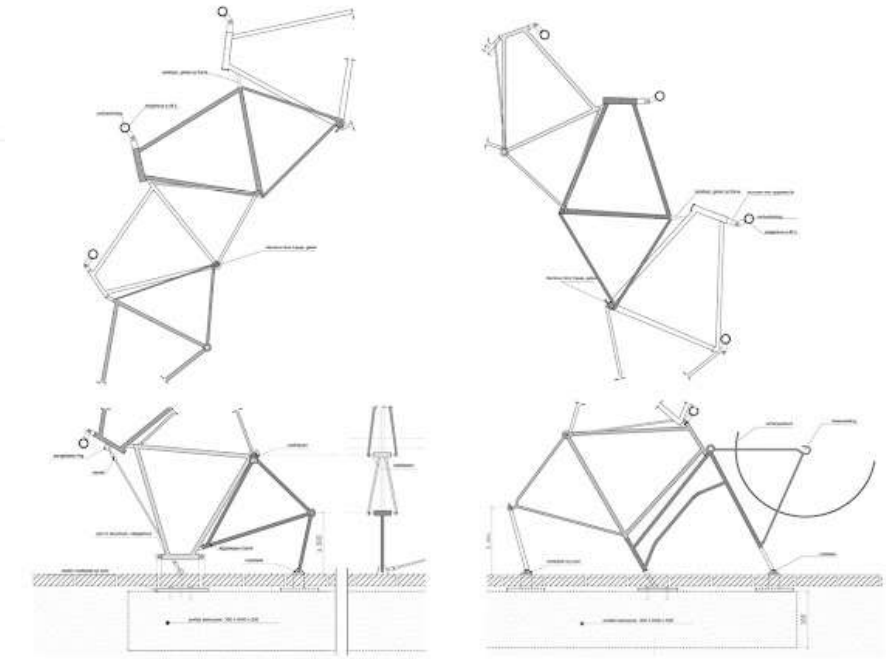
Read more

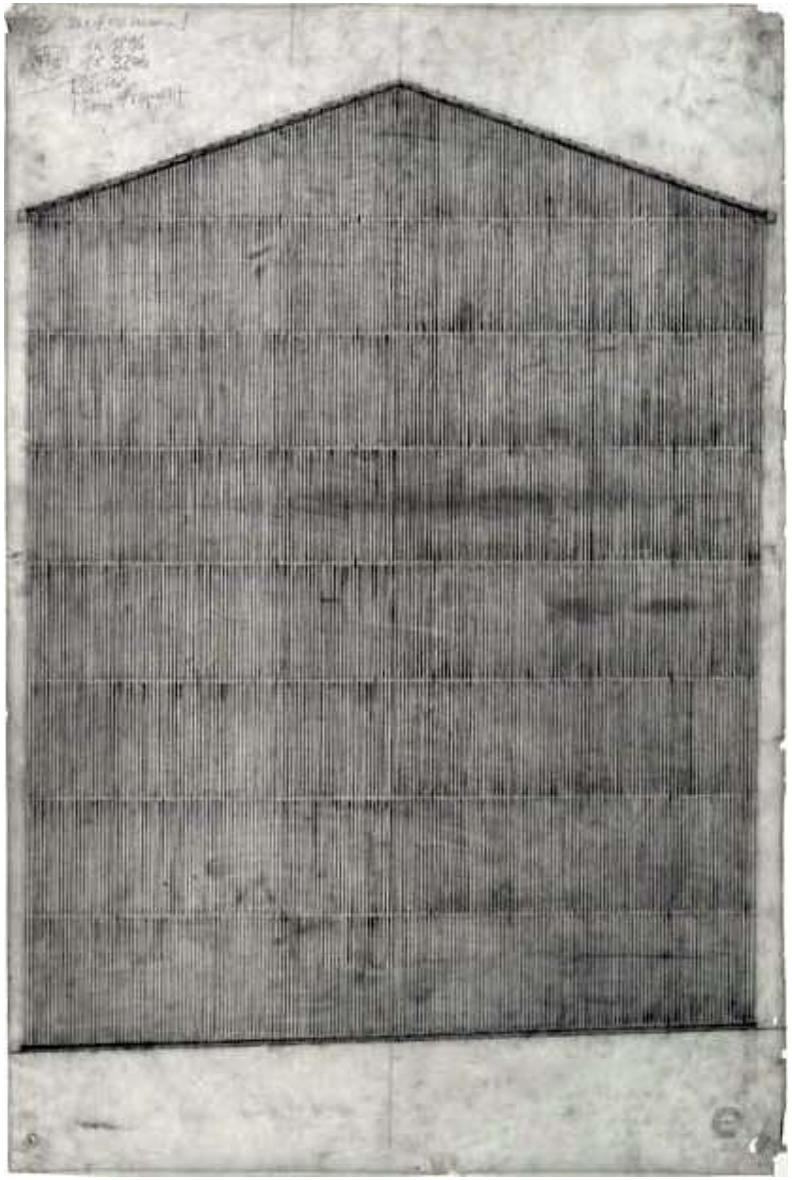
Symposium: WIJkonomie Tarwewijk

PROVEN HOME-GROWN ENTREPRENEURSHIP
SPONTANEOUS NETWORKS
MIX OF FORMAL AND INFORMAL
STIMULATING SERVICE EXCHANGE
TAPPING INTO EXISTING SOCIAL INFRASTRUCTURE
FLUID REGULATIONS
A REALISTIC GRASS-ROOT APPROACH BASED ON LONGEVITY
BOTTOM-UP BUSINESS MODELS

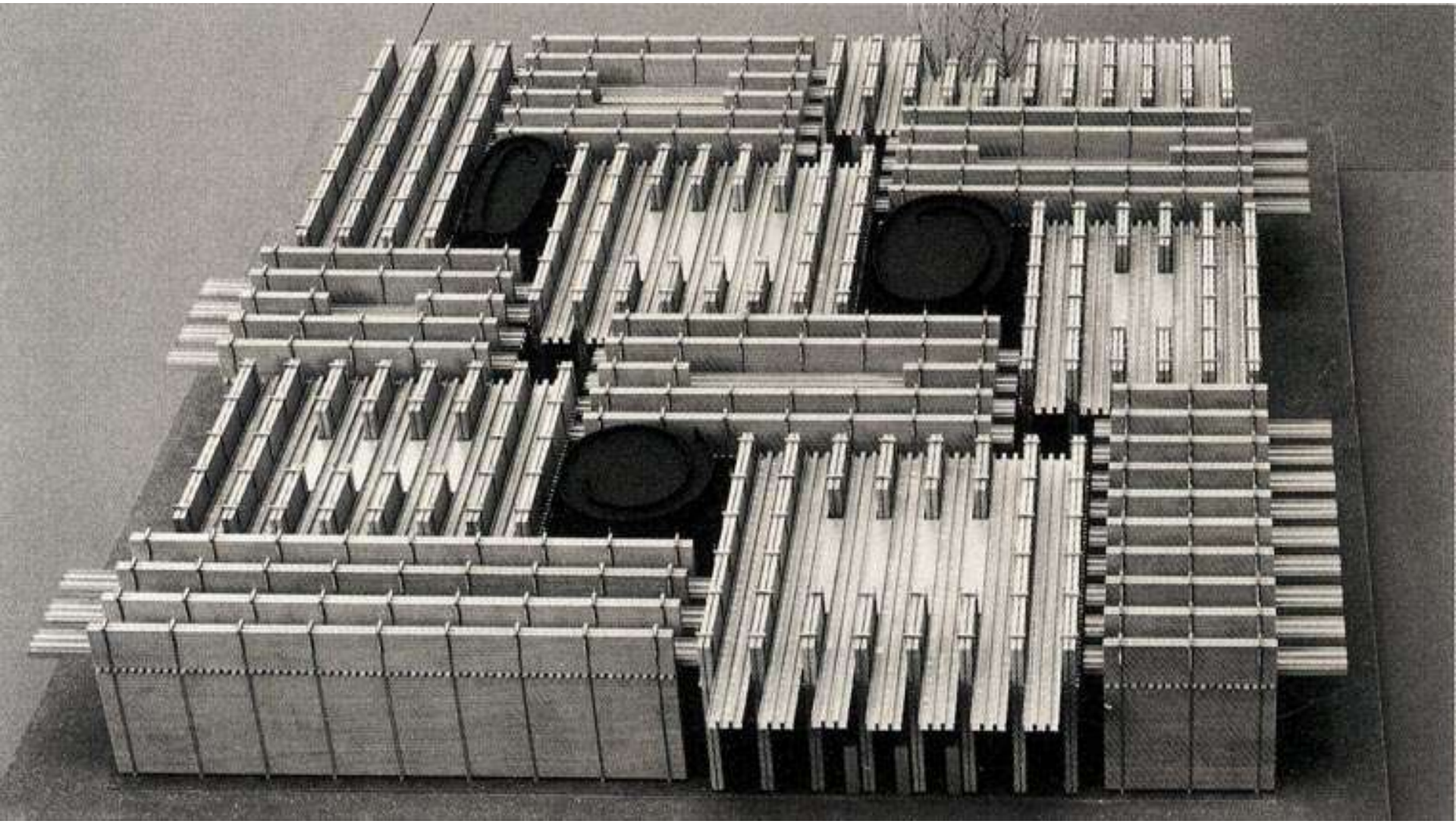
"Intellectual property rights will be one of the greatest challenges to the design industry moving forward." (2010)

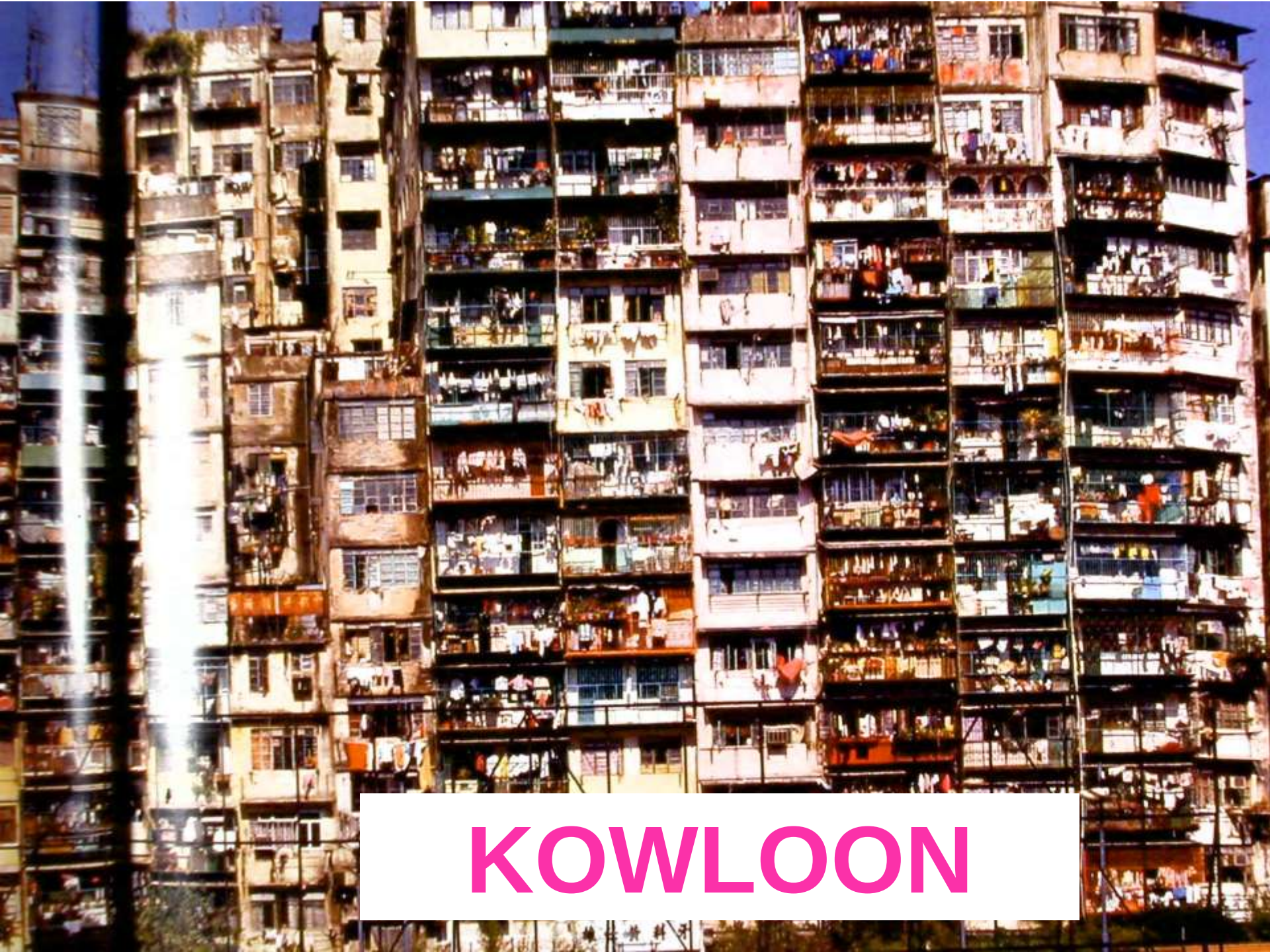
iReCycle





Remember the Swiss Sound Box?




KOWLOON

Kowloon High Street

Kowloon Shops including the best dog meat restaurant in Hongkong!

Kowloon had community centres

Kowloon had schools

But before you get comfortable….

I THINK THIS IS SUSTAINABLE DESIGN

GREEN BUILDINGS CAN BE AFFORDABLE TO ALL

THE ARK BUILDING : Contract Sum £275,000 = £1,400/ m2

SPARROWHOUSE : Contract Sum £147,000 = £1,547/ m2

CREATIVE MEDIA CENTRE :
Contract Sum £3,000,000 = £1,500/m2

THE BRIDGE :
Contract Sum £1,500,000 = £2,000/m2

The Social Justice & Human Rights Centre

Expression of Interest
Architecture Services

YOUR REQUIREMENTS
g. Innovative use of materials/ equipment/ technology

Prepared for
The Social Justice & Human Rights Centre Ltd

Presented on
28th February 2012

By
Duncan Baker-Brown RIBA Director
BBM Sustainable Design Ltd

BBM SUSTAINABLE DESIGN
architecture - interior design - urban design

RIBA Chartered Practice

constructionline

Green can be Cheap

Sparrowhouse Lewes

Green can be Cheap

Sparrowhouse Lewes

Project Type: Self Build three bedroom house

Total Project Value: £147,000

Gross Internal Floor Area: 95m^2

Average Cost/ m^2: £1,442/m^2[i](inc. renewables)

Duration on site: 5 months

Location: 1920's suburban estate

Renewables:
4m^2 solar thermal panel £3.0k

'U'Values :

Walls - 0.18
Roof - 0.23
Floor - 0.23

Annual Utility Bills:
Gas - £300
Electricity - £300
Water - £200

Code For Sustainable Homes:
Level 4 equivalent

NEW BUILD: Case Study

Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes

Floor Insulation made from Waste Timber Fibres

Power Floated ‘heat sink’ Screed finish with integral under floor heating

NEW BUILD: Case Study

Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes


NEW BUILD: Case Study
Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes

NEW BUILD: Case Study

Sparrowhouse Lewes

Green can be Expensive Too

Code Level 6 Eco House Whitehill Bordon

We need to work together

Herstmonceux CE School
Who is needed to make a building happen?

Herstmonceux CE School
Being an architect

But watch out for *greenwash*