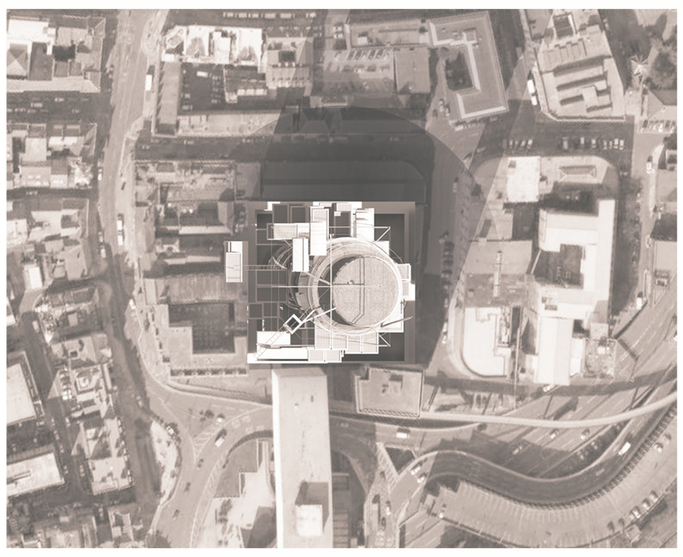
Eco-Chrysalis _____ for newcastle upon tyne

Def. a case or a cocoon: an entity in the process of development



The site

Newcastle is an historic city on the northeast of England on the banks of the River Tyne it is an industrial city that in Victorian times was responsible for building 25% of the world s ships. The backdrop to the region is industrial, of cranes, gantries and chimneys.The architectural language is deliberately raw- the project evokes the city s critical regionalism. The architecture is familar to the people of Newcastle who have lived alongside enormous structures of ship yards the pit heads, viaduct and aqeducts that criss-cross the landscape.

We are proposing a holistic housing development that supplies as well as conserves resources. This scheme is a mixed-use development that is highly sustainable in its use of energy, urban in its character , compact and promotes co-operative lifestyles and is appropriate for the site.

We aim with this development to address the dire situation in the western world especially the UK

·The average UK meal has travelled over 2000 miles from farm to dinner plate
·15 million tonnes of household waste is disposed of in landfill sites in the UK each year; this amount is rising
·UK residents use one fifth of their total energy consumption travelling to work
·As urban sprawl increases we have less space to produce our own foodstuffs, 70% of our nutrients are imported

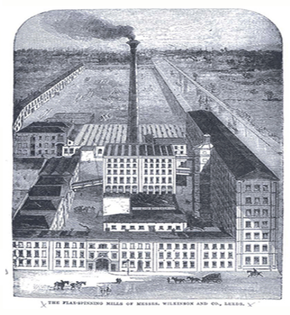
building and urban design strategy:

Site specific
·to contribute to a sense of place
·to acknowledgement of site history in the design
·to proposed suitable typologies and development

Universal
·to increase the density of the city –a compact city
·to increase the productivity of the urban environment, to reduce the reliance on the wider landscape
·to improve the physical environment by introducing greenery and public space

Environment and system strategy:
·to develop an appropriate strategy for waste management
·to incorporate appropriate environmental systems
·to propose appropriate building form and skin technologies

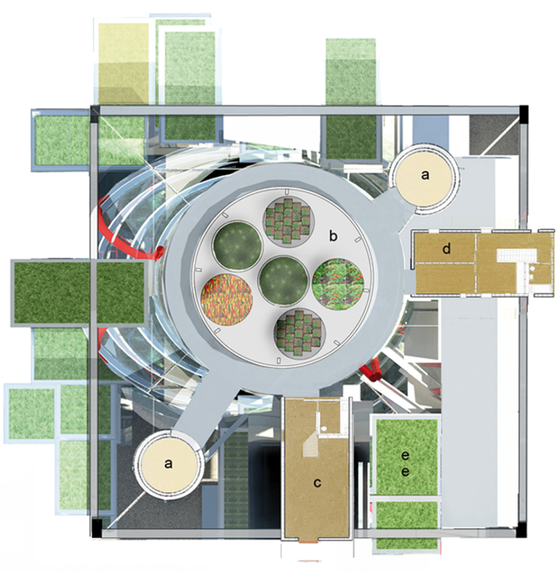
building concepts



working and living

The density of living and working accommodation in Newcastle in the Victorian period was not supported by appropriate infra structure and technology. The density of the ,now erased, street plan and the grid layout, offered us interesting design opportunities however. Of particular interest was the cooperative units integrating both work and housing within the same block. The typology has no excessive travel distances to and from work-this model also supported a strong sense of community

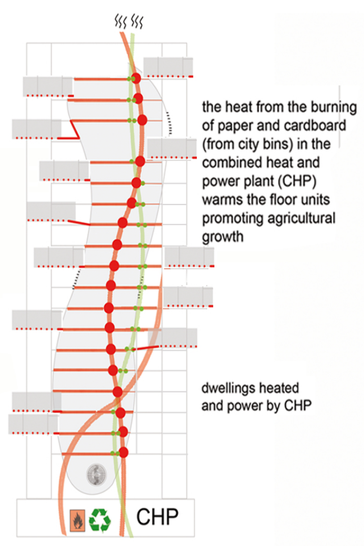
Compact cities-promoting density
Cities are the big consumers of resources and producers of waste; cities are also where the most environmental damage is taking place on the planet. Therefore the form and structure of the city is where we need to direct our efforts if meaningful improvements are to be made, in terms of energy consumption and pollution. Many environmentalists are advocating compacting our cities, increasing the density of developments as a way of reducing our energy consumption. Elkin et al (1991 p12) goes as far as to say that 'a sustainable city must be of a form and scale appropriate to walking, cycling and efficient public transport and with compactness that encourages social interaction.'



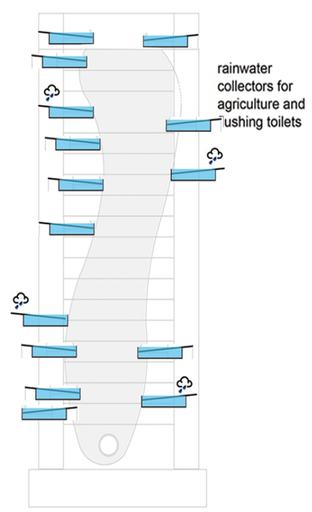
legend:

a lift and structural shaf
b hydroponic units for fc
c living one bed apartm
d living two bed duplex
e grass roof and externa

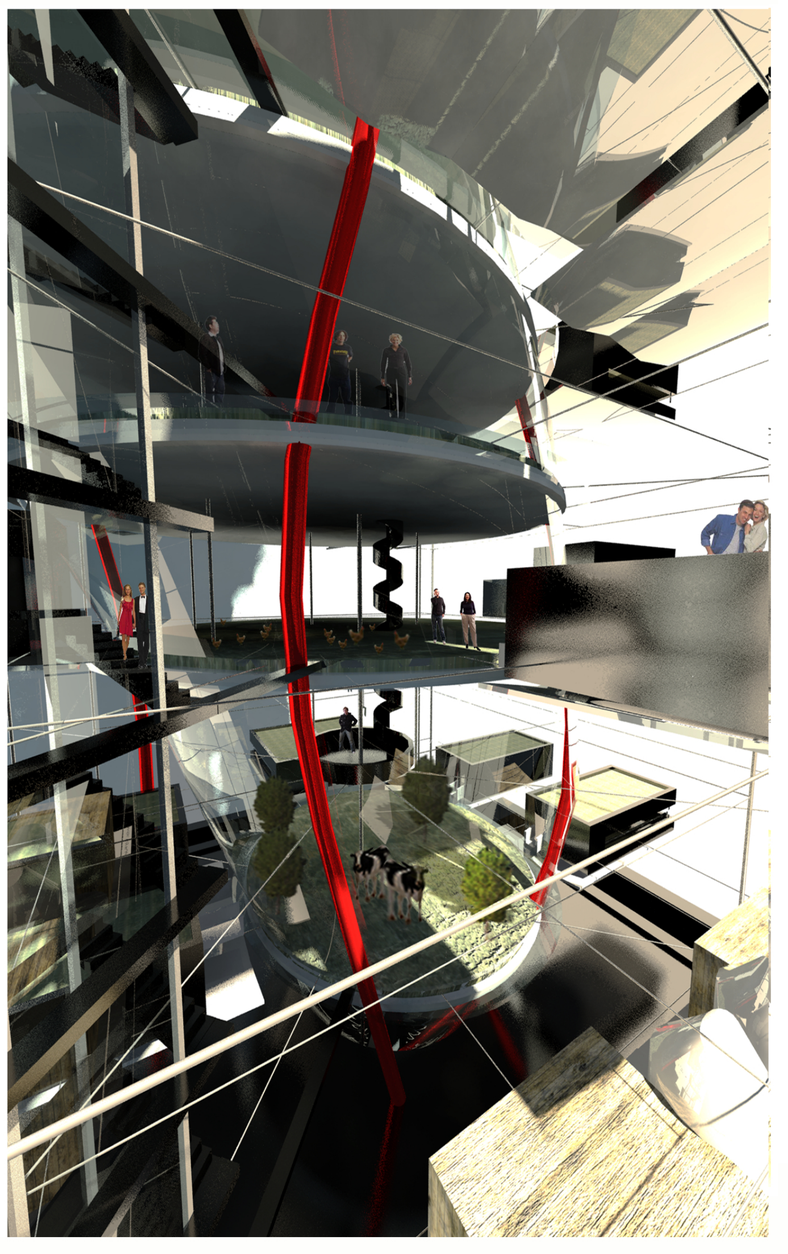
typical floor through agricultural zone showing hydrponic pods and living units

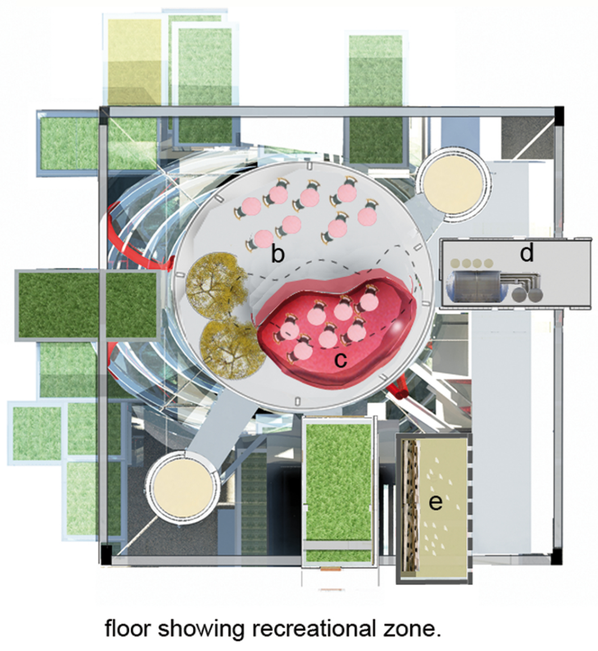


power and energy diagram



rainwater harvesting



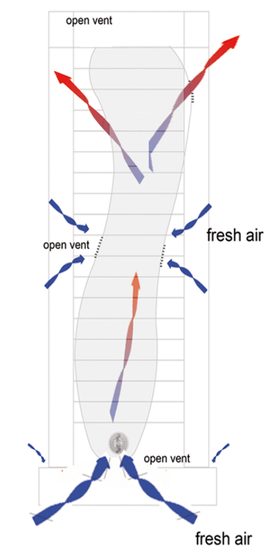


legend:

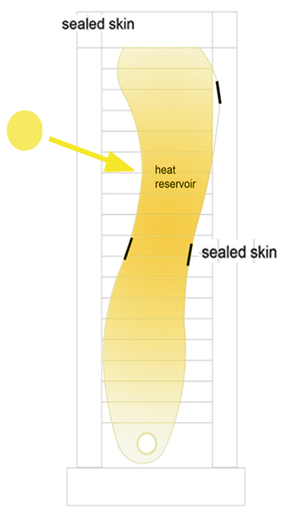
a lift
b cafe
c afterschool club
d micro brewery
e dove cote

floor showing recreational zone.

stack effects



Winter Environmental Diagram,



Summer Environmental Diagram,

environmental diagrams

view thro' chysalis from dwelling