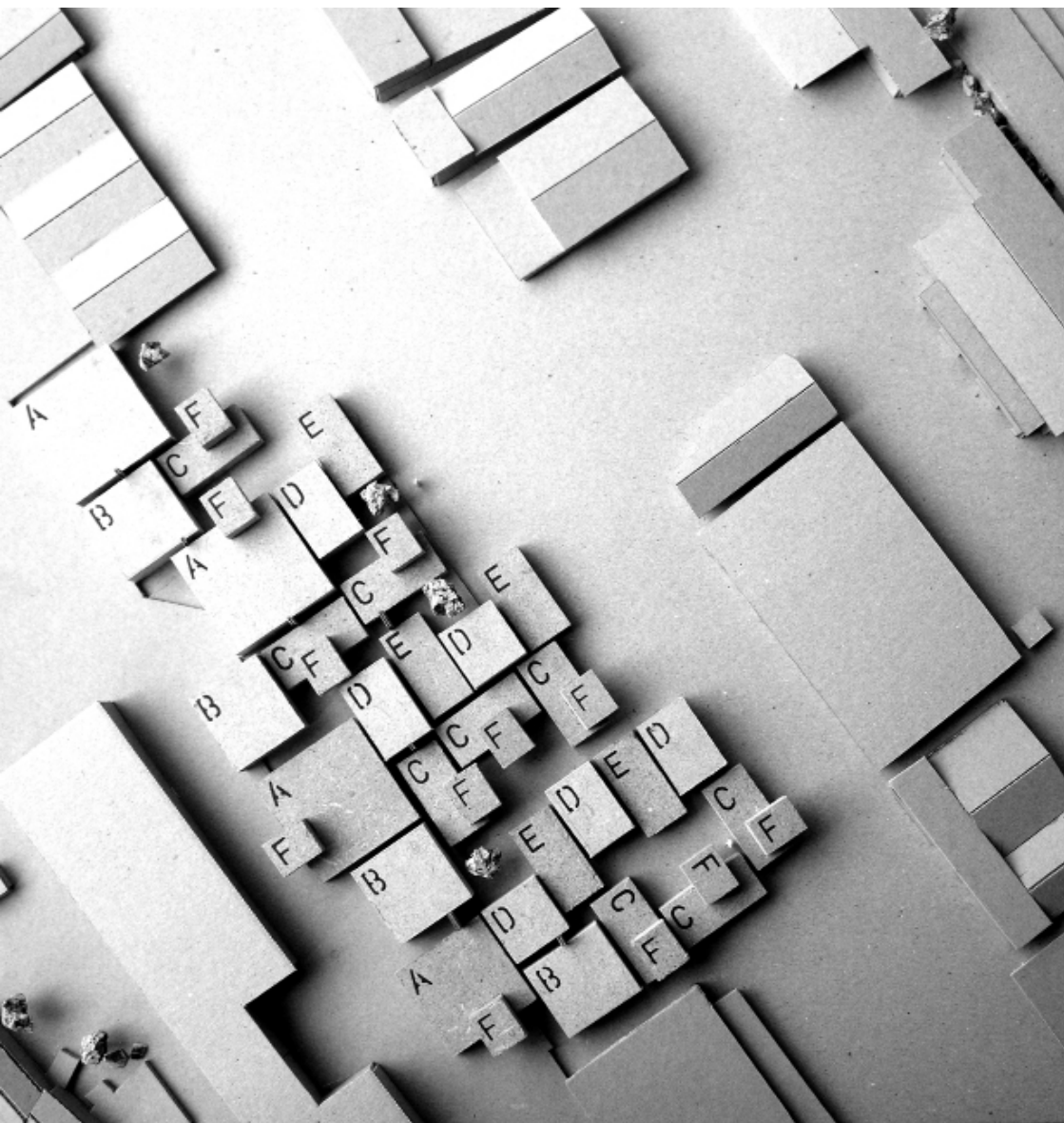


creative condensor

Elizabeth Lambert
09_05_18



This proposal for the new UCA campus seeks to establish a flexible framework in which a new pedagogic model may be formed promoting spontaneity, resisting hierarchy, and adjusting to the evolution of creative practice.

The Mat building typology as described by Alison Smithson in 1974 satisfies many of these objectives, however since the 70's technological advances, in CAD and production methods, as well as increased virtual connections means that this typology may be re-examined and a contemporary proposal formed.

Present-day context, depleting resources and climate change, must be addressed through a wider understanding of the complex systems that of which we are part. The proposal adopts several 'Permaculture' strategies, such as any intervention we make in a system ought to be productive. A 'light-touch', high-tech approach creates the interfaces between the systems parts.



The University does not act as a contained object, It is part of the global city.

The University resists hierarchy.

The learning experience is inherently linked with all social life.

The University supports spontaneity. The architecture is to do the job of framing the ever-changing content.

The project is conceived as an object in flux, transforming itself in relation to people's changing needs and aspirations.

Key

Local Connections

- 1 Canterbury Town centre
- 2 Underpass (existing)
- 3 Canterbury West Station
- 4 Existing Bus Stops
- 5 Park and Ride
- 6 A2 to London/ Dover

Landscape

- 7 Nature Reserve - Wetland
- 8 Urban Back-gardens
- 9 Cemetery - Managed
- 10 Heavily wooded
- 11 River Stour
- 12 Unmanaged Grassland

Commerce/ Industry

- 13 Light Industrial Units
- 14 Supermarket - Morrisons
- 15 Gas Supplier
- 16 Pub/ Restaurant

Site Plan



GF Plan

Flow of space of differing atmosphere.

Disciplines emerge within occupation.

Key

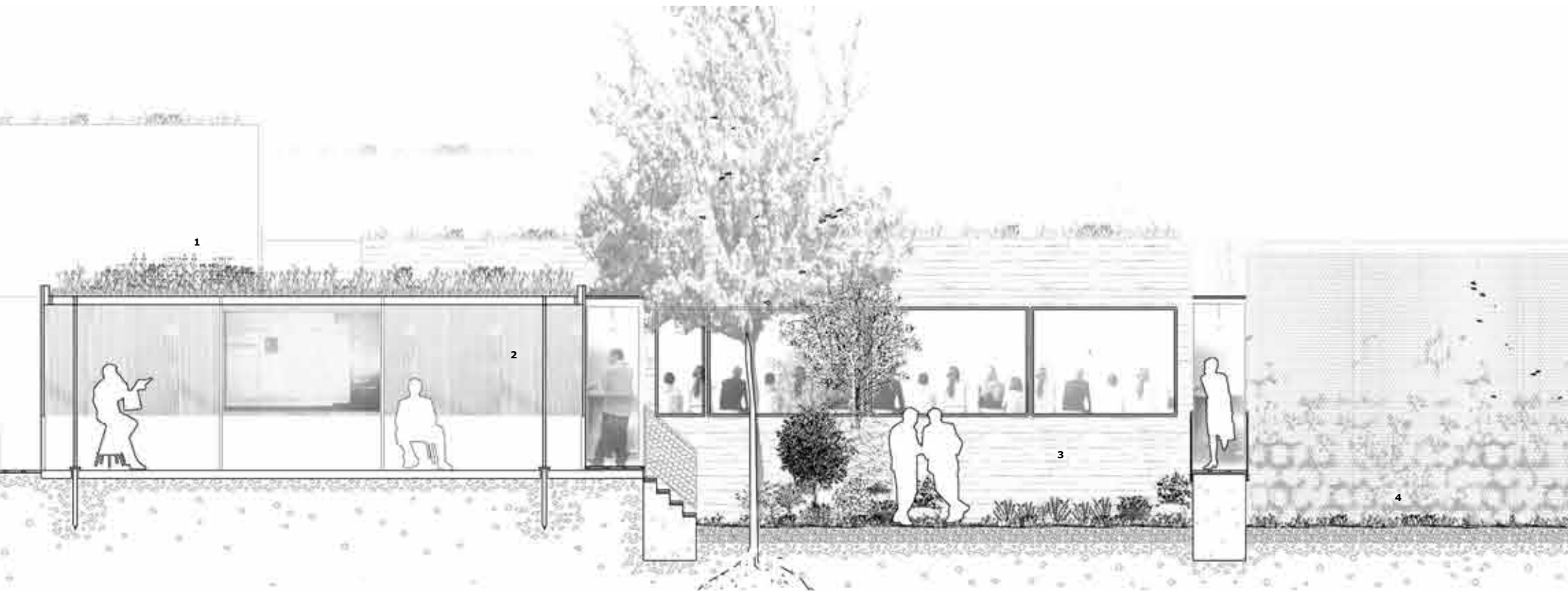
- 1 Bicycle Park
- 2 Orchard
- 3 Public Car-park
- 4 Bicycle Path to Wincheap High St.
- 5 'Streets' - Main Corridors
- 6 Layered Productive Gardens



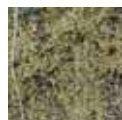
FF Plan

Key

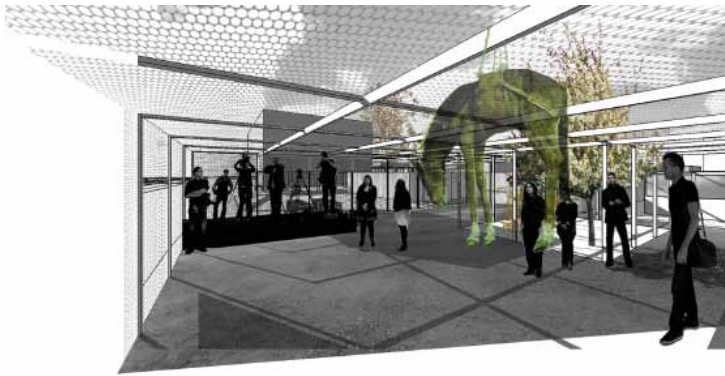
- A Loud/ Light/ 20-100/ Open
- B Muted/ dark/ 20-100/ Controlled
- C Loud/ Light/ 2-20/ Open
- D Muted/ Light/ 2-20/ Open
- E Muted/ Dark/ 2-20/ Controlled
- F (Above) Quiet/ Dark/ 1-10/ Cont.d



Section



7



SPACE A LOUD/ LIGHT/ 20-100/ OPEN

Noise
Loudness encouraged - informality - unrestricted
Light/ Views Very light - external influences - changing
Occupance Large group
20 < g < 100
Access
Open access - public - frequent traffic



SPACE B MUTED/ DARK/ 20-100/ CONTROLLED

Noise Minimal noise -
discussions - controlled
Light/ Views Dark - controlled light
Occupance Large group 20 < g < 100
Access Highly controlled -
private - infrequent traffic



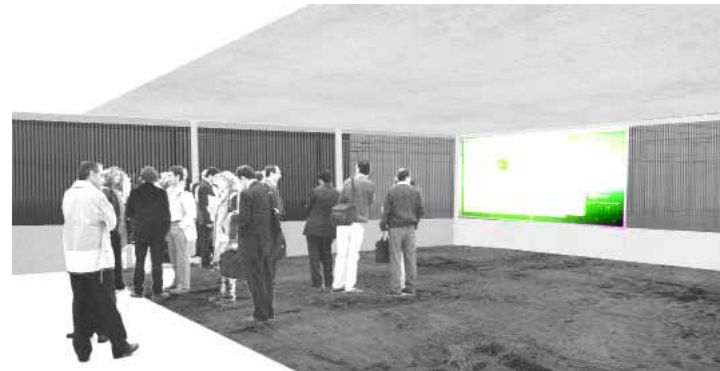
SPACE C LOUD/ LIGHT/ 2-20/ OPEN

Noise Loudness encouraged - informality - unrestricted
Light/ Views Very light - external influences - changing
Occupance Small group 2 < g < 20
Access Open access -
public - frequent traffic



SPACE D MUTED/ LIGHT/ 2-20/ OPEN

Noise Minimal noise -
discussions - controlled
Light/ Views Very light - external influences - changing
Occupance Small group, 2 < g < 20
Access Open access -
public - frequent traffic



SPACE E MUTED/ DARK/ 2-20/ CONTROLLED

Noise Minimal noise -
discussions - controlled
Light/ Views Dark - controlled light
Occupance Small group, 2 < g < 20
Access Highly controlled
- private - infrequent traffic



SPACE F QUIET/ DARK/ 1-2/ CONTROLLED

Noise Quiet - silence -
isolation
Light/ Views Dark - controlled light
Occupance Individual, g < 2
Access Highly controlled -
private - infrequent traffic

A/B/C/D/E/F/G

- Fields, grounds, carpets, matrices.

'The culture of the particular form is approaching it's end. The culture determined relations has begun.'
Mondrian.

'Many contemporary Architects have chosen to return to Mat building as a historical possibility that was never fully explored.'
Sarkis, Hashim, CASE p14.

'The individual using such buildings gains new freedoms of action through new and shuffled order, based on interconnections, close-knit patterns of association, and possibilities for growth, diminution and change.'
Smithson, Alison, *How to Recognise and Read Mat building*, 1974.

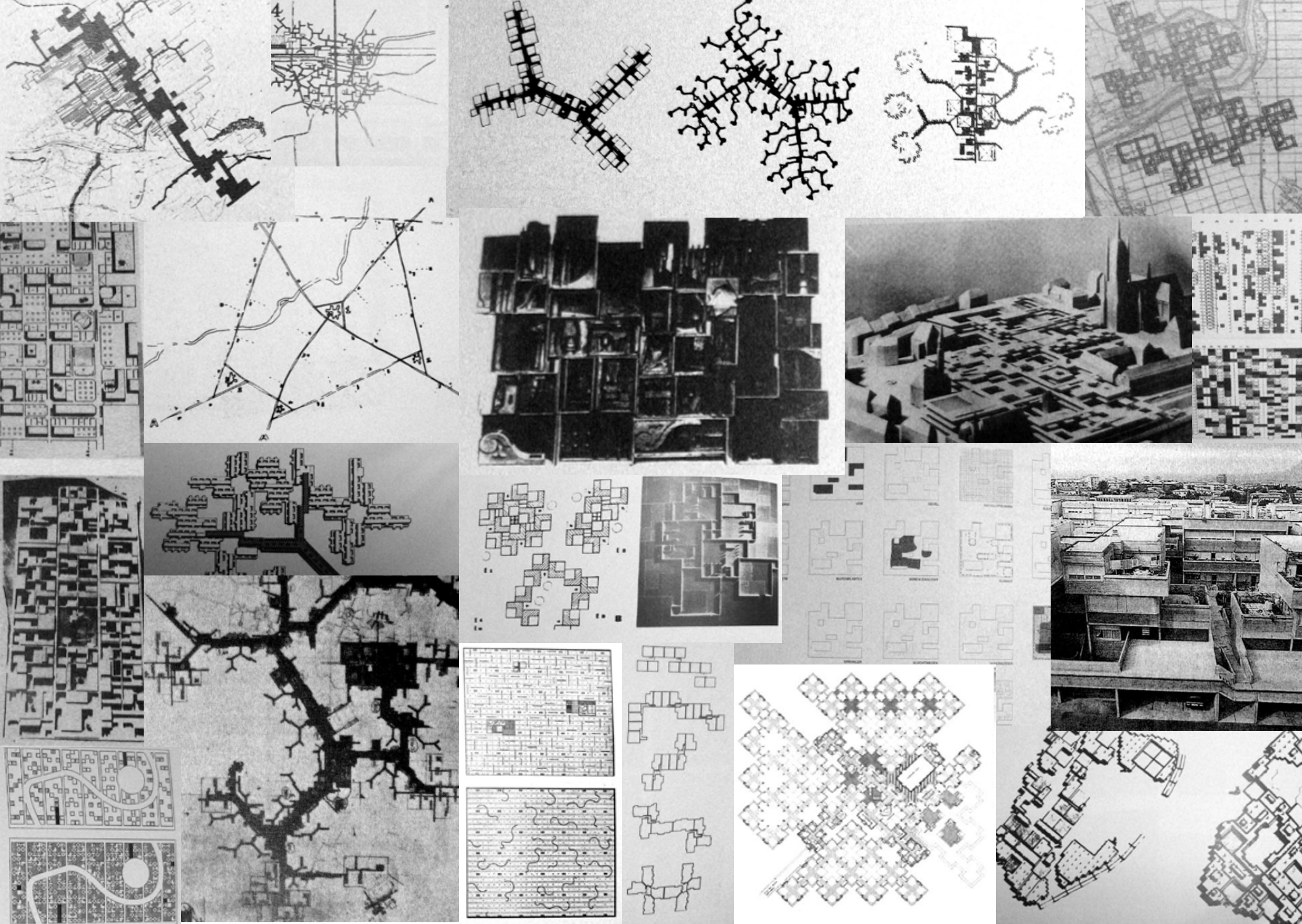
MAT BUILDINGS PROMOTE:

- Efficient land use
- Indeterminacy in size
- Flexibility in building use
- Mixture in Program
-

WHAT CHARACTERISTICS DEFINE A MAT BUILDING:

- Low-rise, High density.
- Homogenous in it's layout - unvarying, alike, composed of parts of the same kind.
- Repetition that provides a framework for different possibilities of inhabitation and a means of generating increased social interaction across segregated uses.
- Building to act as a flexible framework rather than a rigid container for the shapeless functions (hospitals, schools, airports)
- Mat-building is a process: it structures high density patterns of living.
- Mat-building is governed by connections and thresholds rather than by geometric boundaries.
- The Mat is both City and Building, both Public and Private, both Structure and Infrastructure.

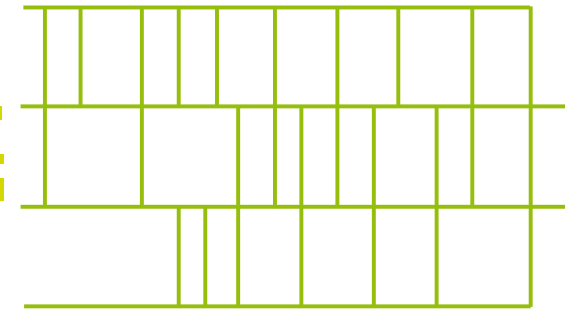
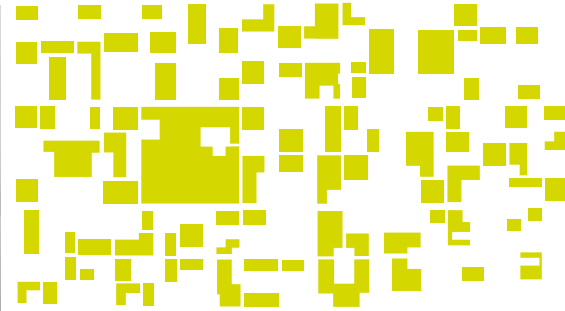
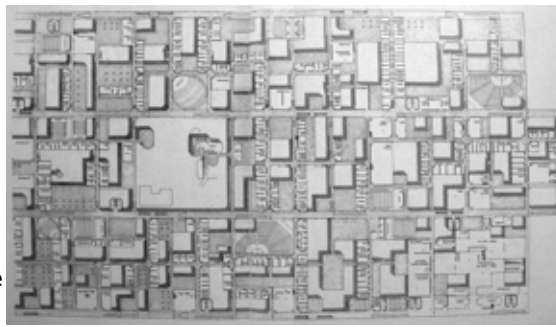
MAT Building



Berlin Free Uni

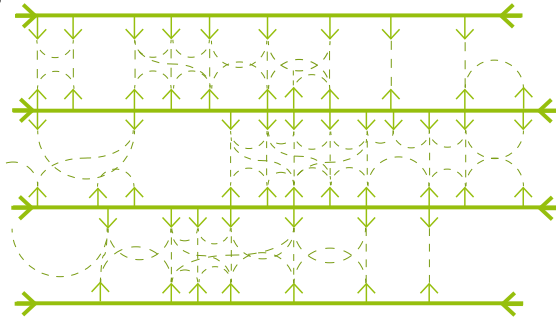
4 STEMS / STREET

- The two directions of the Free University grid are arranged into 'avenue' (Stems) and 'streets' which are spaced off the grid irregularly. The Main stems are spaced 200m apart.
- The Stem is a support system, it prescribes a topological order, a way 2 of linking locations that accommodates human activity and interaction.



5 MOBILITY

- 'The 'Web' intends to find ways for man on foot to associate... It seeks to re-establish the human scale... In relation to speed, the measure of which is distance, the human scale is the pedestrian who moves at about 4 kms/h.'
- The rectilinear variant of the grid restored informality as well as versatility, allowing greater choice and social interaction.



3

4

6

7

6 ACTIVITY

- The symbols here represent activity. Large symbols represent where groups of students and professors meet. The smaller are representative of smaller groups (up to 10 students) and one-to one discussions.
- These opportunities promote community, participation and exchange.

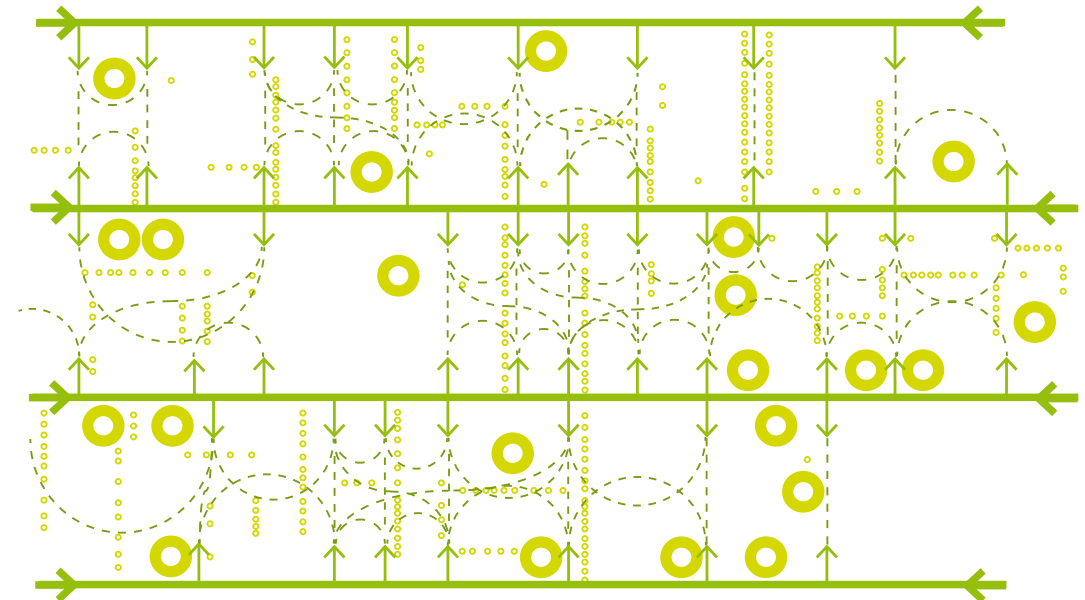
7 POLY-CENTRIC

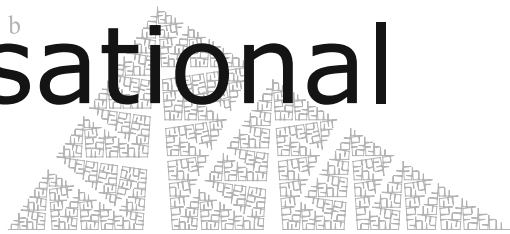
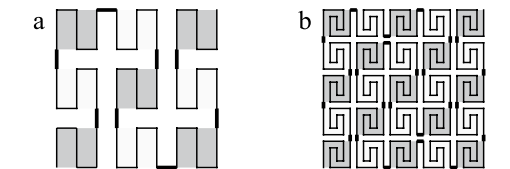
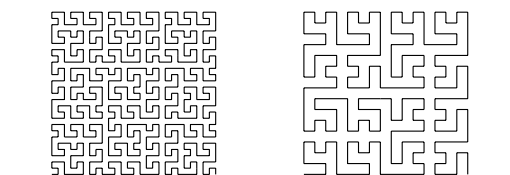
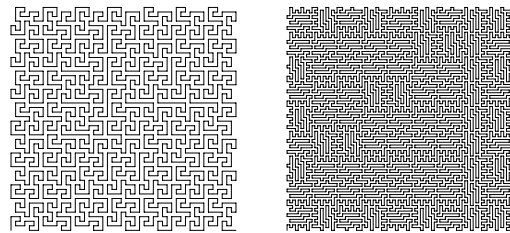
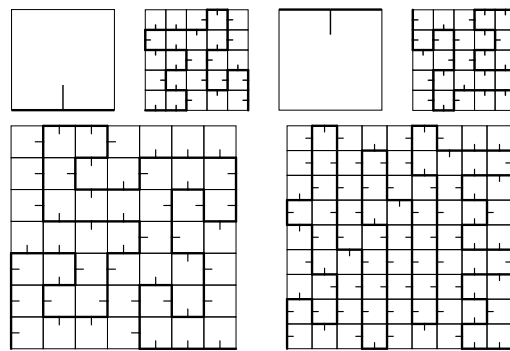
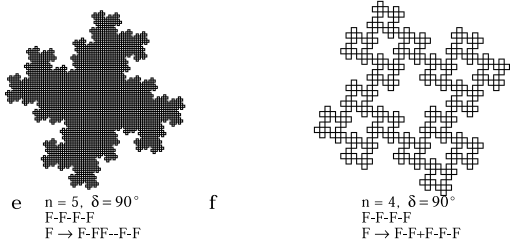
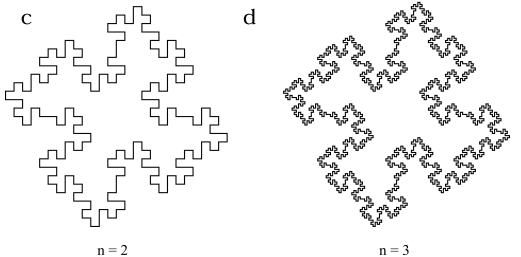
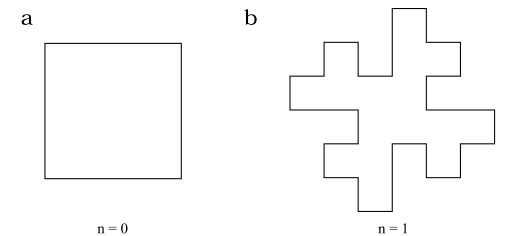
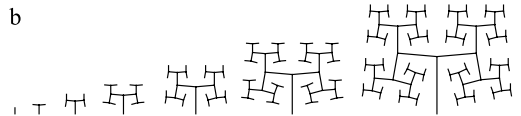
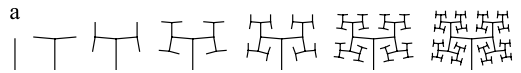
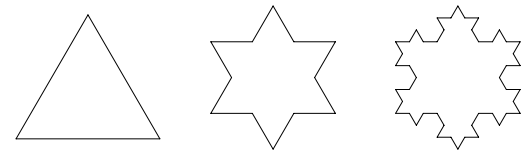
- The poly-centric nature of the building pushes for a maximum of flexibility and interaction of the universities different departments.

8 FLUX

- 'Continuous change, passage, or movement - flowing or flow'
- Design as movement meant not just mobile people and objects circulating in space -the whole project was conceived as an object in flux, transforming itself in relation to people's changing needs and aspirations.

8





		A	B	C	D	E	F
NOISE	Loudness encouraged - informality - unre- stricted	●		●			
	Minimal noise - discus- sions - controlled		●		●	●	
	Quiet - silence - isola- tion						●
LIGHT/ VIEWS	Very light - external influences - changing	●		●	●		
	Dark - controlled light		●			●	●
OCCU- PANCE	Large group, 20<g<100	●	●				
	Small group, 2<g<20			●	●	●	
	Individual, g<2						●
ACCESS / SECURITY	Open access - public - frequent traffic	●		●	●		
	Highly controlled - private - infrequent traffic		●			●	●

L-Systems

An Organisational strategy

GENERATING INPUTS - SPATIAL QUALITIES

The building is driven by the spatial require-
ments to generate spaces that can allow for a
flexible (flux) framework.

```
Output:
A: A
G0: BCF
G1: AFDE
G2: BCFCF
G3: AFDEDE
G4: BCFCFCF
G5: AFDEDEDE
G6: BCFCFCFCF
G7: AFDEDEDEDE
G8: BCFCFCFCFCF
G9: AFDEDEDEDEDE
G10: BCFCFCFCFCFCF
```

```

Rules:
0. A->BFA
1. B->FC
2. C->E
3. D->A
4. E->D

Output:
A: A
G0: BFA
G1: FCBFA
G2: EFCBFA
G3: DEFCBFA
G4: ADEFCBFA
G5: BFAADEFCBFA
G6: FCBFABFAADEFCBFA
G7: EFCBFACBFABFAADEFCBFA
G8: DEFCBFAEFCBFACBFABFAADEFCBFA
G9: ADEFCBFADEFCBFAEFCBFACBFABFAADEFCBFA
G10: BFAADEFCBFAADEFCBFAEFCBFACBFABFAADEFCBFA

```

Rules:

0. A->BCF
 1. B->FC
 2. C->DE
 3. D->E
 4. E->A

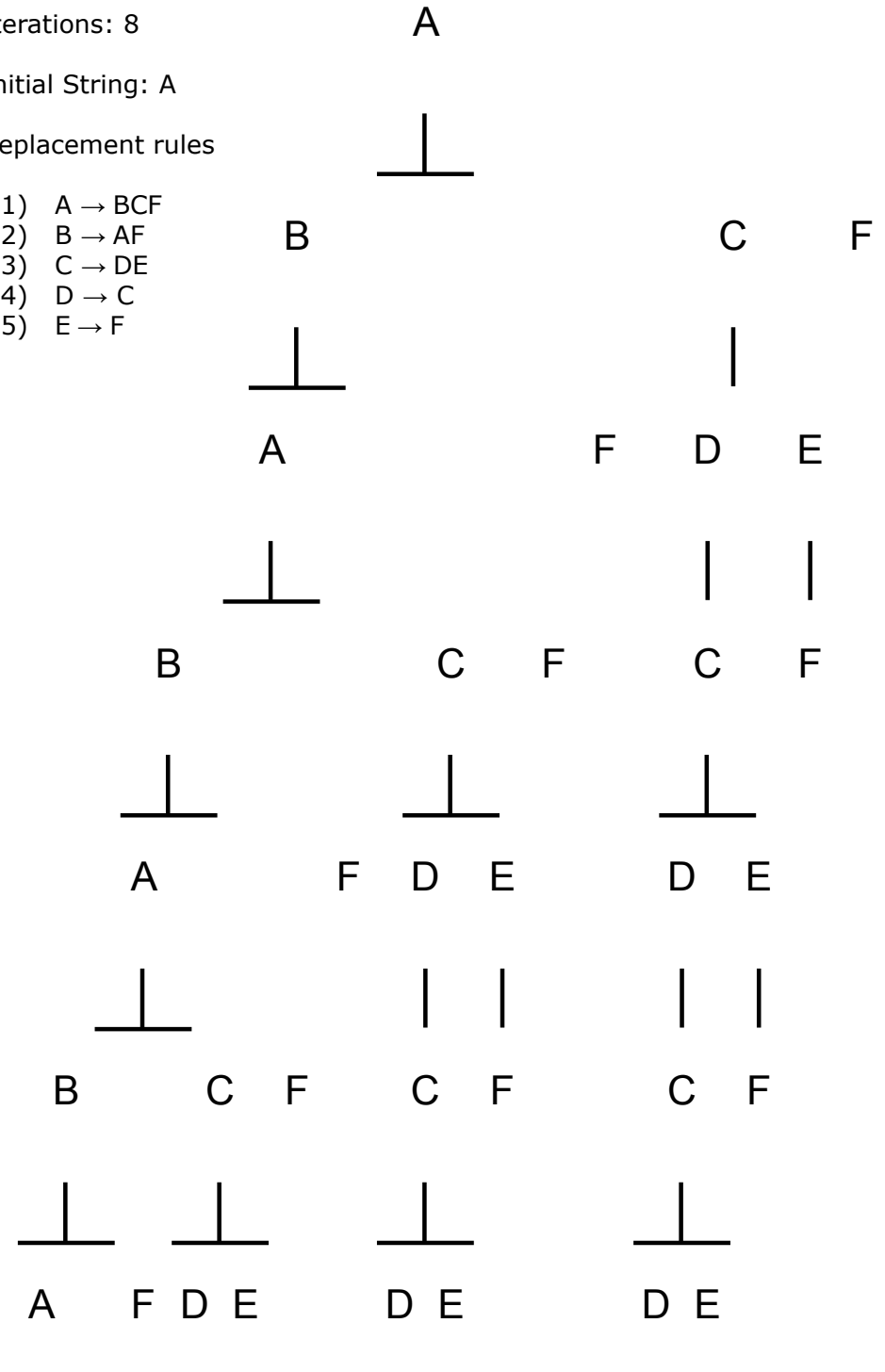
Output:

A: A
 G0: BCF
 G1: FCDE
 G2: DEEA
 G3: EAABCF
 G4: ABCBCFFCDE
 G5: BCFFCDEFCDEDEEA
 G6: FCDEDEEADEEAABCF
 G7: DEEEAAABCFEABCFBCBCFFCDE
 G8: EAABCFBCBCFFCDEABCFBCBCFFCDEBCFFCDEFCDEDEEA
 G9: ABCBCFFCDEBCFFCDEFCDEDEEAABCFCDEFCDEDEEAFCDEDEEADEE-
 AEAAABCF
 G10: BCFFCDEFCDEDEEAFCDEDEEADEEAABCFDEDEEADEEADEEAABCF-
 DEEAABCFEAAABCFBCBCFFCDE

G2: BCFDEEFA
 G3: AFCDEEFAFABCF
 G4: BCFDEEFAFABCFBCFAFCDE
 G5: AFCDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAAFCDDEEFAFABCF
 G6: BCFDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEEFAAFCDDEEFAFABCF
 G7: AFCDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEEFAAFCDDEEFAFABCF-
 FAFCDDEEFAFABCFBCFCDDEEFAFABCFBCFAFCDE
 G8: BCFDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEEFAAFCDDEEFAFABCF-
 CFACFDEEFAFABCFBCFCDDEEFAFABCFBCFAFCDEBCFDEEFAFABCFBCFAFC-
 DEAFCDDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAAFCDDEEFAFABCFBCFAFC-
 DEAFCDCEBCFDEEFAFABCFBCFAFCDEAFCDCEAFCDCEAFCDCEBCFDEEFAFBCFDEE-
 FAFCDDEEFAFABCF
 G10: BCFDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEEFAAFCDDEEFAFABCF-
 CFACFDEEFAFABCFBCFDEEFAFABCFBCFAFCDEBCFDEEFAFABCFBCFAFC-
 DEAFCDDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAAFCDDEEFAFABCFBCFAFC-
 DEAFCDCEBCFDEEFAFBCFDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEE-
 FAFCDDEEFAFABCFBCFCDDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEE-
 FAFCDDEEFAFABCFACFDEEFAFABCFBCFAFCDEAFCDCEBCFDEEFAFBCFDEE-
 FAFCDDEEFAFABCFACFDEEFAFABCFBCFDEEFAFABCFBCFAFCDE

- Iterations: 8
- Initial String: A
- Replacement rules

- 1) $A \rightarrow BCF$
- 2) $B \rightarrow AF$
- 3) $C \rightarrow DE$
- 4) $D \rightarrow C$
- 5) $E \rightarrow F$



'Consciously designed landscapes which mimic the patterns and relationships found in nature, while yielding an abundance of food, fibre and energy for provision of local needs.'

Holmgren, David. Permaculture Principles & pathways beyond sustainability'

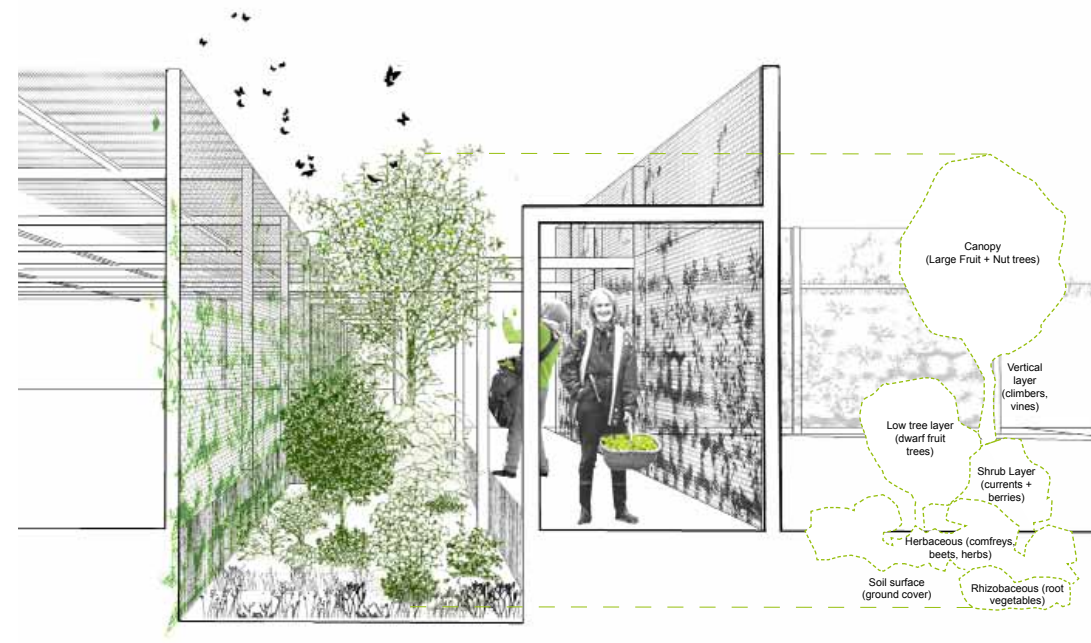
The scientific foundation for permaculture design principles lies generally within the modern science of ecology, and more particularly within the branch of ecology called 'systems ecology'.

Permaculture states that good design is dependent on a free and harmonious relationship between nature and people, in which careful observation and thoughtful interaction provide the design inspiration, repertoire and patterns.

It is not something that is generated in isolation, but through a continuous and reciprocal interaction with the subject.

The commonality of patterns observable in nature and society allows us to make sense of what we see, but to use a pattern from one context and scale, to design in another. Pattern recognition is the necessary precursor to the process of design.

Permaculture



Obtain a Yield (and Wild Productivity)

- Any intervention we make in a system, any changes we make or elements we introduce ought to be productive, e.g. Productive trees in public places, edible roof gardens, or urban edible landscaping.
- Increase the role of trees and other perennial plants, in order to stabilise the landscape and provide for human needs.

Proposal 1: **Forage (un-managed)**

Highlighting local species such as Hairy Bittercress, Cow Parsley, Ground Ivy and more.

- Wild foods are local and sustainable, minimising food miles and reducing carbon footprint. Also promotes a greater appreciation of nature and the seasons, reconnecting the forager to the origins of the food.

Objective: To promote the appropriate retention, incorporation, and management of wasteland habitats within the proposals framework.

'whole families out blackberrying, picnicking, taking short cuts. The land here was as bizarre and artificial an ecosystem as you could find. There was a coot's nest on a floating car seat...close by you could stand and look down across a wonderful jungle of plants from three continents...' (Mabey, 1998)

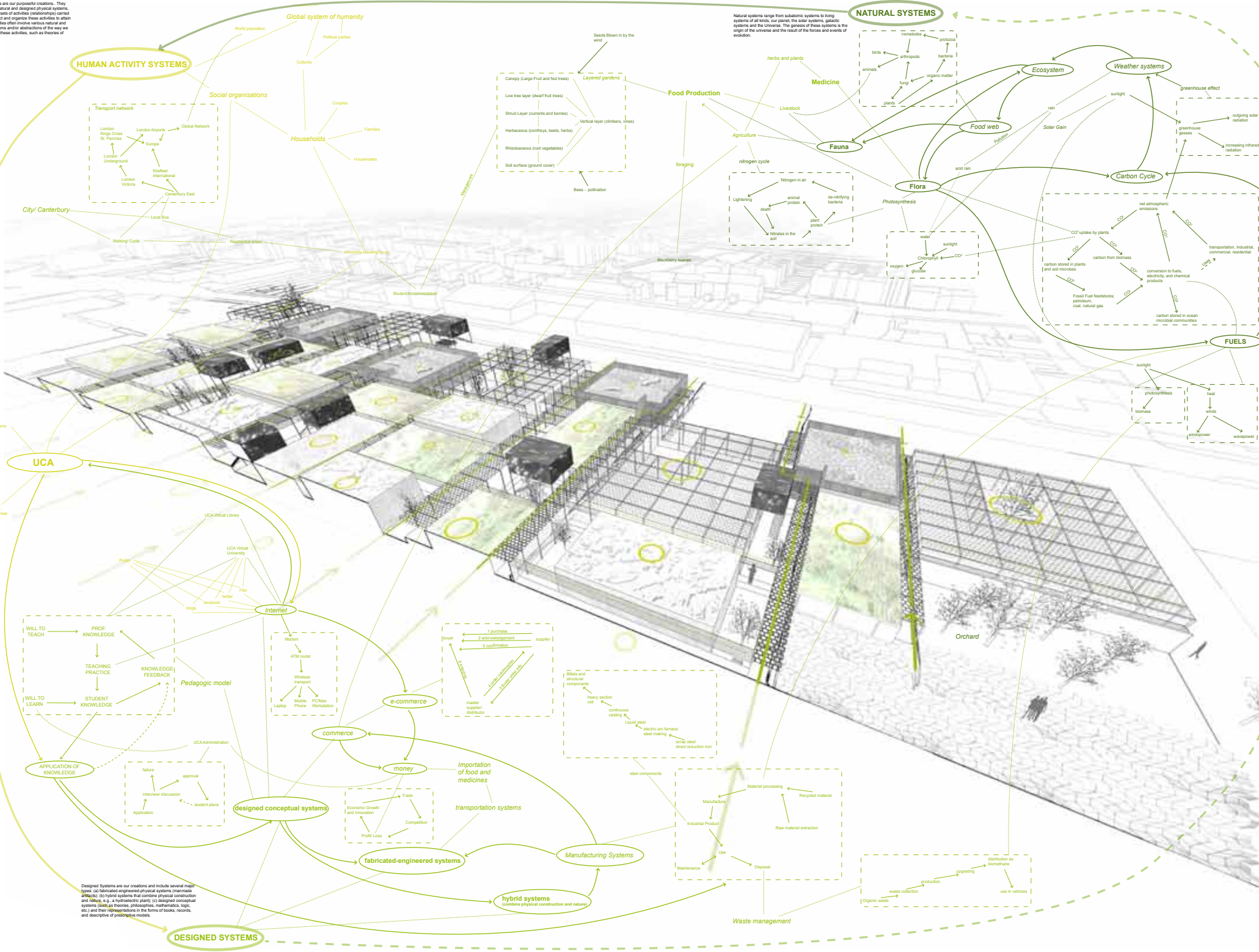
Proposal 2: **Replicated Woodland edges (managed)**

Planting of "useful" species in arrays to mimic natural systems. Not only in the courtyards of the building, but out over the site. This is not only key in aligning the building with the permaculture principles, but in extending the mat into the urban and semi-urban context.

- Potentially the most productive system for growing food, it requires far less work to maintain and also provides habitats for our native wildlife.

Plant species in layers to gain maximum food production:

- Layer 1: The Canopy. Typical species may include: Pears, Apples, Plums, Cherries and Mulberries.
- Layer 2: The Shrub Layer. Typical species may include: Blackcurrents, Gooseberries, Rosemary and Sage.
- Layer 3: The Herbaceous Layer. Typical species may include: Mints, Oregano, Lemon balm, Rocket.
- Layer 4: Bulbs. Typical species may include: Leeks, Wild Garlic, Chives.
- Layer 5: Ground Cover. Typical species may include: Docks, Sweet Violet.
- Layer 6: Climbing Plants. Typical species may include: Blackberries, Grapes, Kiwi Fruits.



Occupation + Virtual hot spots

Activity to solidify elements of the design.



Choreography of change

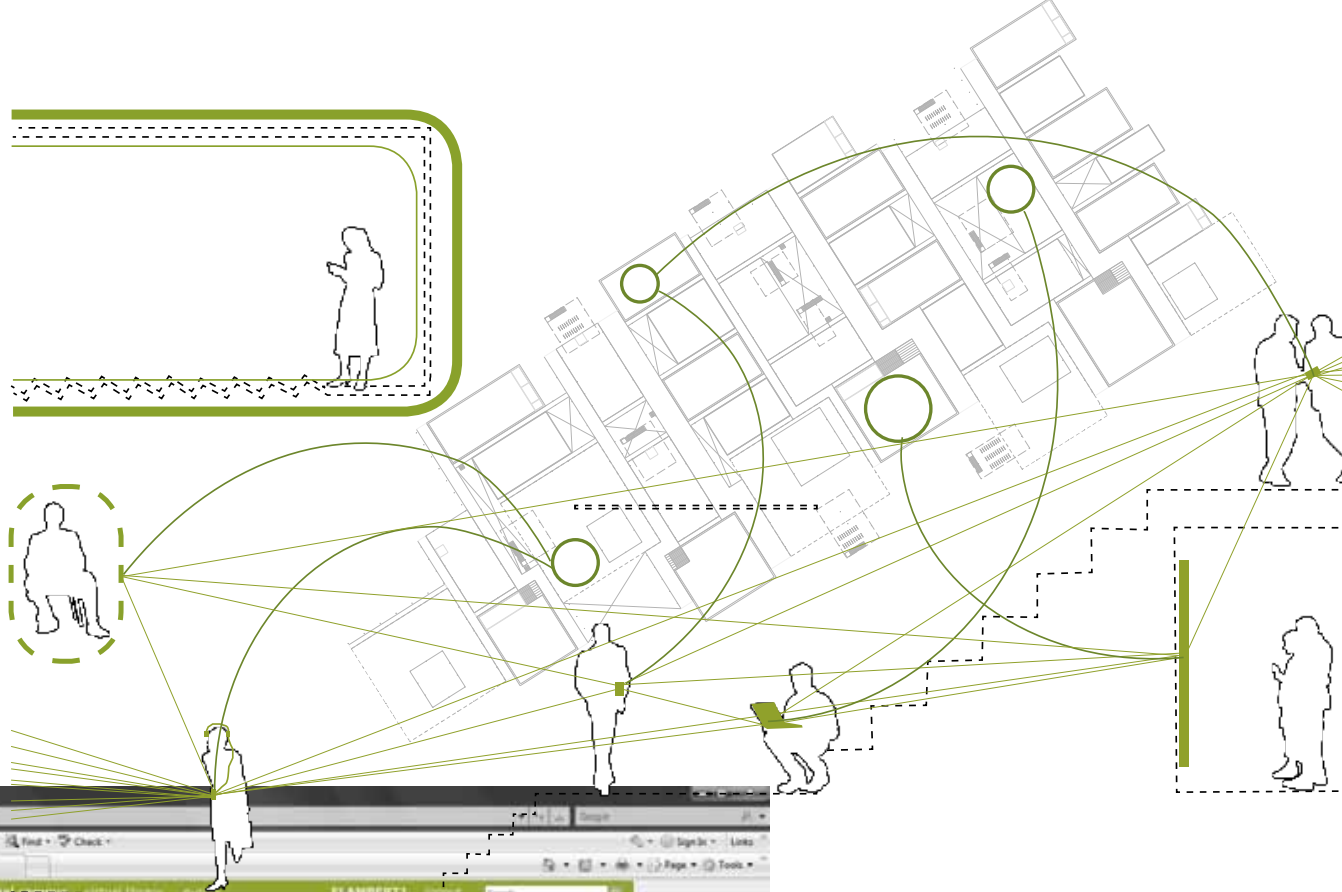
Creatively use and respond to change:

- Natural systems are constantly in flux, evolving and growing.
- Remaining observant of the changes around you, and not fixing onto the idea that anything around you is fixed or permanent.
- An approach is to start with no complete plan, to allow the process to be emergent.
- This is not a time when we can work to a rigid plan as conditions will change so fast.

Forced Change:

Plants 'push through'

- Very thin layers of concrete on a sandy bed allow seedling to push through over time.
- Temporary use as car parking/ storage while University 'Hardens' to become a productive garden.



Virtual Windows:

Remote controlled cameras are placed in exhibition spaces, they pulse their images online to data-projectors in the interior of other spaces. Through sensors students can activate these projectors. Online access allows off campus students and the public to remotely engage with real-time events. This also allows for a continual and 'live' storage of work and progression.

Virtual Network:

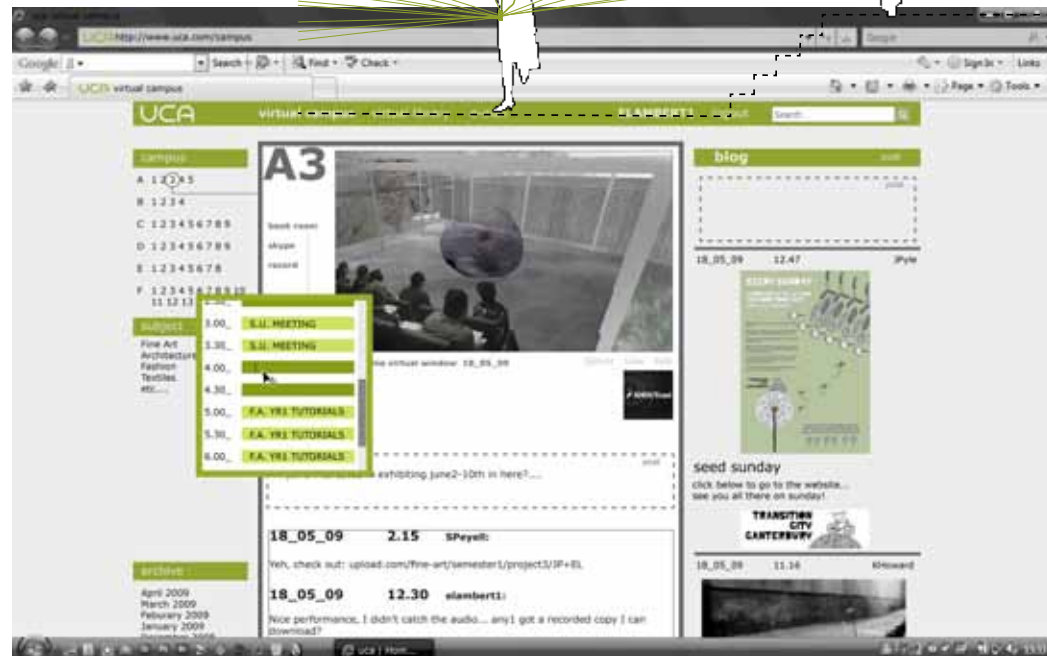
The virtual network present in the university allows connections to be made irrelevant of distance and physical separation. This is significant in allowing external influences to be more prevalent, as well as allowing for stronger associations to be maintained between faculties. By establishing highly networked spaces you are able to increase adaptability and flexibility and make it easier for the students to become involved in the common project by sharing their own previous experience, knowledge, and assets in order to achieve common as well as individual objectives.

How does the building interact with other non-physical networks?

The advances and progression of technology is inherently linked with creative practice. Creatively we continually adapt and evolve in the virtual sense, at a rate that manifests itself only intermittently in the physical context. How can the building become malleable in order to allow extension of the virtual, increasing flux and a reciprocal negotiation between self and environment - an interactive uncertainty.

F, Autonomous space:

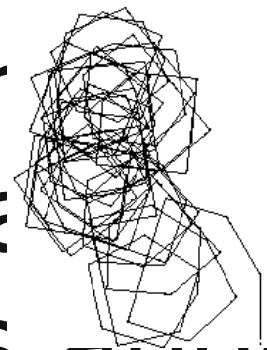
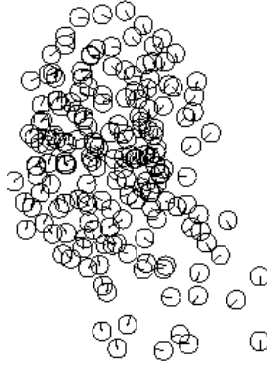
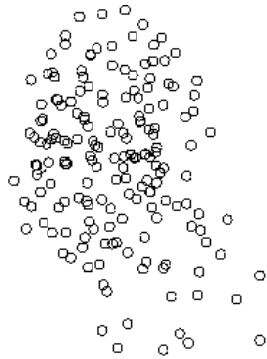
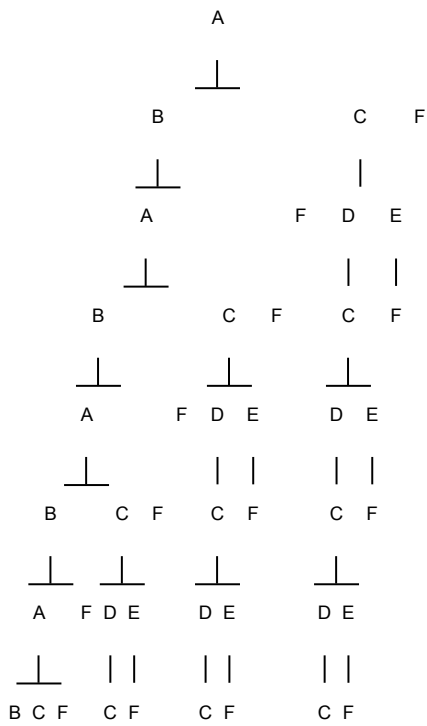
Consciously separate from networks, to allow for completely independent reflection and production. Blocking of wireless signals through material.



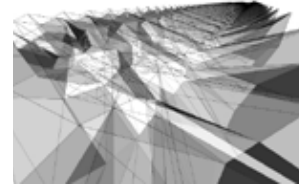
Virtual Campus

L-System

The interactive process & Materials approach



```
100
10
80
A=BF+^CZ^GZ%
B=AztIGZ%
C=DF$EF|
D=CZ^A
E=GZ%
@
```



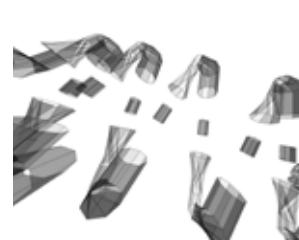
```
10
35
35
ABCDEG
A=DFEBaz-c(8)
B=Cac(10)^(37)
C=<Zc(6)c(2)Zf-(-40))Zw
D=DfZF
E=%Z+-(48)Zc(10)
F(130.00)FG|
G=Z(FZZ-g)|c(4)Ff
@
```



```
10
61
38
ABCDEG
A=FAZ(90.00)F<B[Z]
B=-F^A
@
```



```
10
73
67
ABCDEG
A=BAz(90.00)C<Fc(3)
B=Z-++$Fc(7)F(80.00)z
C=DZc(7)^(79)<Z
D=Z^IF->
@
```



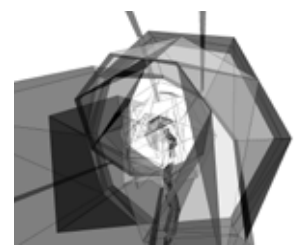
```
10
32
103
ABCDEG
A=^c(6)AZ(100.00)
F<,&,f(70.00)
zFAZzB&|fFzf
B=c(6)zF(100.00)>^C&c(9)
fzZf
C=Z&-ZZ(120.00)Z%F..
ZZ(80.00)^fB%f(5)
z(60.00)
@
```



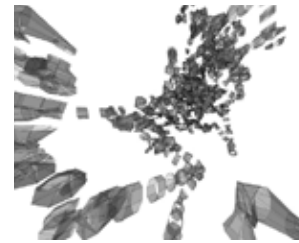
```
10
38
59
ABCDEG
A=CAB^Df<
B=GJlc(8)zB&&^
C=z%w
D=|HEZ(100.00)-ff
E=|f>z|&z^A
G=^ff^
H=>>^Af
I=c(2)|>&(f.)
J=F-$
@
```



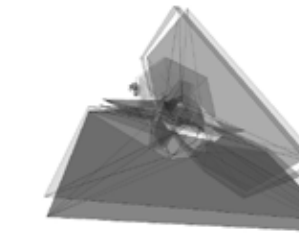
```
10
38
59
ABCDEG
A=CAB^Df<
B=GJlc(8)zB&&^
C=z%w
D=|HEZ(100.00)-ff
E=|f>z|&z^A
G=^ff^
H=>>^Af
I=c(2)|>&(f.)
J=F-$
@
```



```
10
62
195
ABCDEG
A=BzffAZE
B=F(70.00)C<DAZF
C=>(72)zEF^-
D=B+F<+^
E=fZ+(90)
@
```



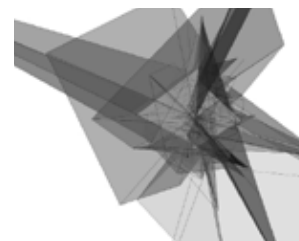
```
10
75
186
ABCDEG
A=AZEBCz'
B=?<c(3).F
C=ZF&D
D=^+<(t.)fZ^<
E=|f+(80)>+^J&FC+
@
```



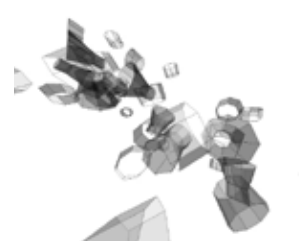
```
10
45
64
ABCDEG
A=->[Fc(5)BAC^(79)]+
B=|F>c(9)[c(3)<-c(2)]<[]
fz(90.00)g
C=<c(3)+>C>(49)
z(60.00)>..^Z&A^<&(58)
@
```



```
10
12
12
ABCDEG
A=>B-^fF&ZB&(66)
B=+|Z:C[DZ]
C=|F?^(0.60)]
D=FZfF
@
```

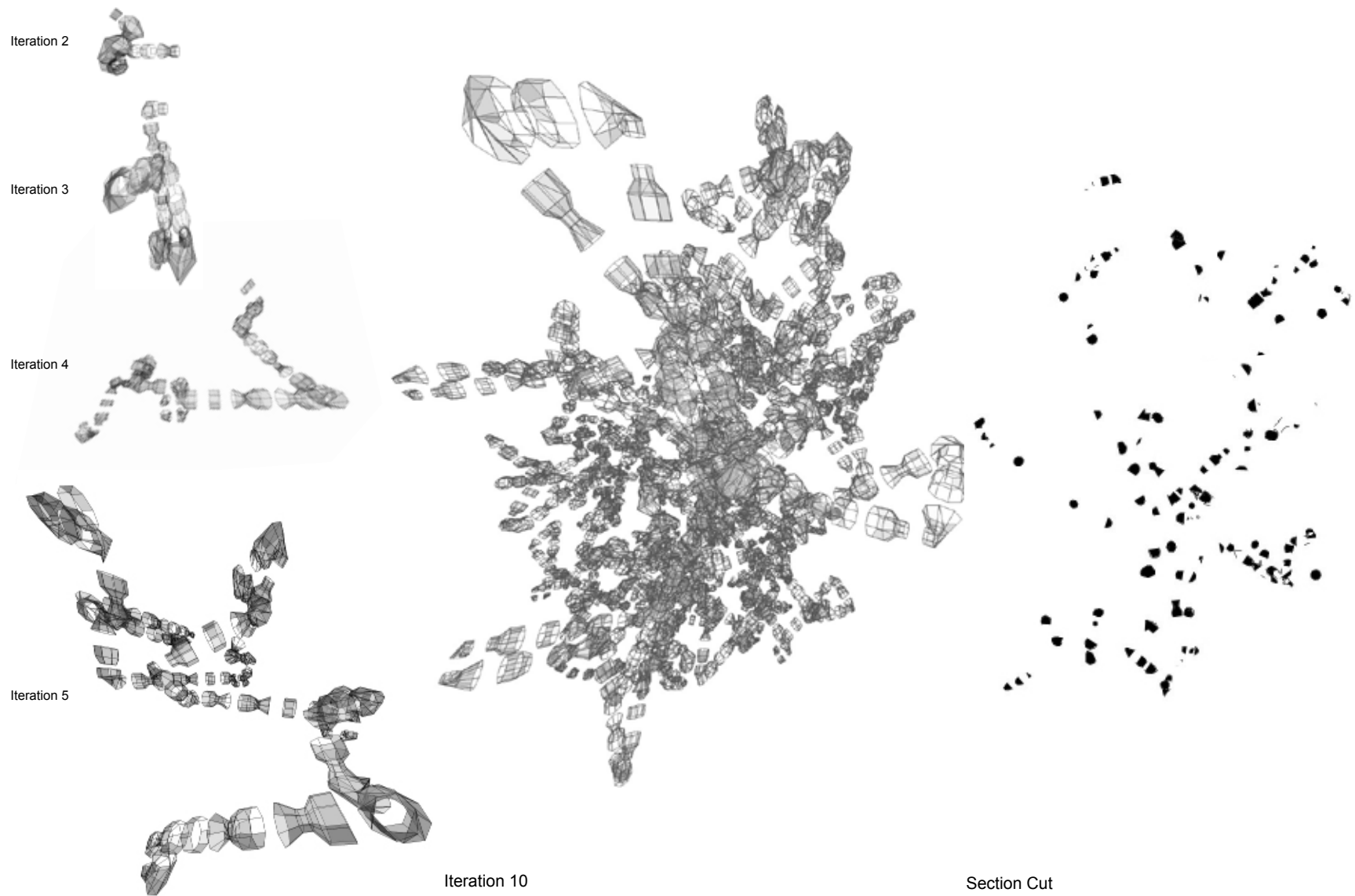


```
10
48
173
ABCDEG
A=-AB[DEC]
B=zc(7)FCZ<+^(68)f
C=zz+c(7)
D=Cc(1)ZFcf&
E=f<Zz
@
```

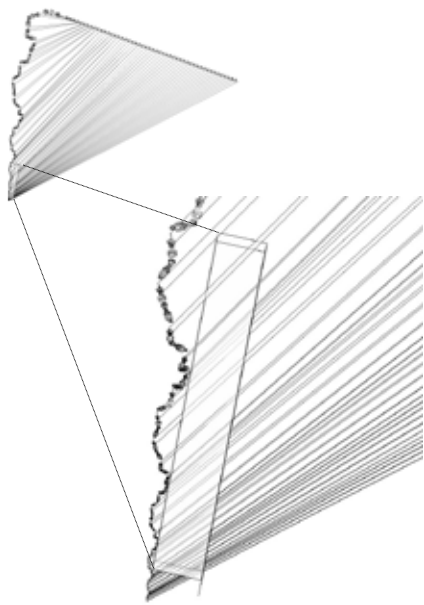


Inputs:

- String: ABCFAFDEBCFCFAFDED
EBCFCFCFAFDEDEDEBCFCFCFCF
- Interpretation rules:
 - 10
 - 62
 - 195
 - ABCDEF
 - A=BzfFAZE
 - B=F(70.00)C<DAZF
 - C=>(72)zEF"-
 - D=B+F<+'
 - E=fZ+(90)
 - @



1. Patterning-Cutting - 'Lanterns'



Inputs:

- String: ABCFAFDEBCFCFAFDED
EBCFC FCFAFDEDEDEBCFCFCFCF
- Interpretation rules:

20

183

A

$A = \{f < B + A\{Zz\}z\}$

$B = CEFZ\&''\&ffZff$

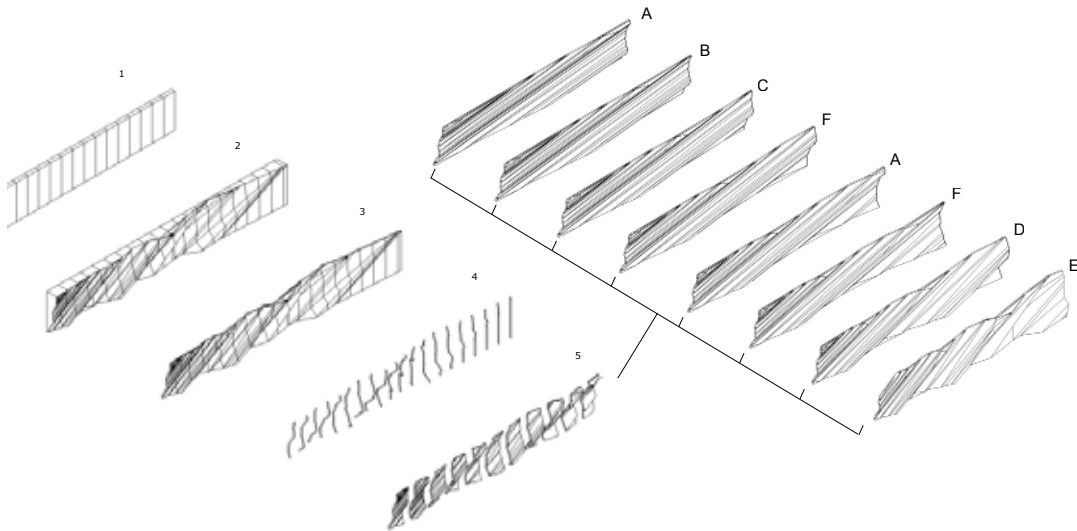
$C = DF < F$

$D = + < z[f(120.00)Zc(8)]^{(50)}$

$f <$

$E = ZZZ\&$

@



Step 1 - Intersect generated form

Step 2 - 1000x3000mm panels

Step 3 - Offset form

Steps 4 & 5 - Separate into panels

2. Corridor Panels