



**NEIGHBOURHOOD III DESIGN COMPETITION  
WINNING ENTRY**

**MR. DELTON JACKSON  
MA URBAN ENVIRONMENTAL DESIGN  
LEEDS METROPOLITAN UNIVERSITY**

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MR. DELTON JACKSON  
MA URBAN ENVIRONMENTAL DESIGN  
DISSERTATION - PHASE 2, SECTION 3:  
NEIGHBOURHOOD IIII DESIGN COMPETITION  
LEEDS METROPOLITAN UNIVERSITY  
JANUARY 22, 1999



# PREAMBLE

This Master Plan report constitutes the winning entry for the Neighbourhood III Design Competition and is a direct response to the detailed competition brief. It is also a demonstration of how the accompanying EcoVillage Design Strategies might be used in practice.

This report also builds upon the other studies and surveys which have informed the development of the EcoVillage Design Strategy document, as well as from ongoing liaison with Mr. Ralph Maust, project co-ordinator for Neighbourhood III, via Email and in person.

The report and plan present the original Neighbourhood III design brief and set out the principles upon which the design process has been based. The nature of the Neighbourhood III competition means that this Masterplan will ultimately be subject to further revision, as detailing of the scheme will also be subject to the same internet-based competitive design process as the original brief.

# INTRODUCTION

The Neighbourhood III Project has been a competition to design a sustainable co-housing community for between 30 and 50 residences, as well as a central Common House and associated community buildings. Conceived as the fourth neighbourhood to be built at the EcoVillage at Ithaca (EVI) (<http://www.cfe.cornell.edu/ecovillage/>), the project has been run as a competition posted on the EVI website (<http://www.donaldshaw.com/ecovillage/>), which now features the designs presented here.



## THE COMPETITION

The original design brief from the EVI Website is presented below and forms the starting point for the Master Plan which follows. The design brief has not been used to the exclusion of other considerations however, and the intention has been to create a holistic and sustainable design informed by numerous relevant sources, especially the EcoVillage Design Report which has been written to accompany this document.

**NOTE:** Throughout this document bullet points using the symbol “❖” will signify those points which are outlined in the original competition brief. Elsewhere ordinary bullet points will be used.

Where scales are provided they are 100 feet in length, relative in proportion to the specific illustrations in which they appear.

All maps and site plans throughout this document are oriented to the points of the compass unless otherwise noted, with North uppermost.

All information in the boxes on pages 3-4 originally appeared on the Neighbourhood III website. (<http://www.donaldshaw.com/ecovillage/>)

### AN OVERVIEW

The project is to design Neighbourhood III for EcoVillage at Ithaca. Architecture Students, both individuals and teams of students (teams may be ‘virtual’), are invited to submit proposals which fulfil the Design Criteria.

A selected proposal, perhaps including elements of a number of proposals, will be translated into working CAD drawings, a virtual model and a virtual walking tour of the neighbourhood.

A Timeline has been established to construct and market the neighbourhood.

### ARCHITECTURE STUDENTS

The project is being offered to architecture students for the following reasons:

We seek fresh ideas in sustainable architecture, unfettered by constraints of the past, yet drawing on the wisdom and experience of your mentors, professors and elders.

This is a project designing a real community in a real world and will require you to exercise all the skills and talents that you are developing in your academic career. As such, it offers you the opportunity for a very challenging academic project.

This community will be constructed and sold according to the TIMELINE and could provide you with the opportunity to make a significant contribution to sustainable architecture with your first commercial project.

The project, in various forms, will be replicated at other locations in the future and your expertise in the initial design can provide you with continuing career opportunities in the field of sustainable architecture.

## DESIGN CRITERIA

### FOR NEIGHBOURHOOD III AT ECOVILLAGE AT ITHACA

#### GENERAL CRITERIA

- ❖ All facilities to be wheelchair accessible and have separate "grey water" and sewerage waste piping.

#### RESIDENCE SPACE

- ❖ Earth sheltered design (if feasible)
- ❖ Dwelling units connected by sunspace-enclosed walkways
  - a. provision for aquaculture/intensive gardening\*
  - b. provision for "gray water" recycling\*
  - c. passive solar heat storage\*
  - d. provision for future wind-generated resistance electric heating (DC?) or wind-driven heat pumps
  - e. aesthetic "lounge"/indoor park-like setting\*
  - f. access to outside at each dwelling unit
- \*Reference: The ARKS of New Alchemy Institute
- ❖ About 50 dwelling units in multiples of about 600 square feet (20'x30') each with provision for bath and kitchen.
- ❖ Dwelling units easily connectable or detachable (via doors) to reform into combinations of 1,2,3 or 4 units to accommodate changes in 'family' size.
- ❖ Compact overall structure to maximize heating efficiency
- ❖ Provide scenic vistas, through sunspace/walkways, from each dwelling unit
- ❖ Balcony into sunspace from each second floor dwelling unit (if any)
- ❖ Covered (enclosed?) access to covered car park (underground?)
- ❖ Provision for future electric power supplied by photovoltaic/hydrogen storage fuel cell system.

#### COMMON SPACE

- ❖ Connected to residence units via sunspace/walkways
- ❖ Main Room (Dining/Assembly/RitualSpace) Hemispherical Dome (for 125 persons) (Usable as planetarium)
  - a. storage for portable tables and chairs
  - b. good vistas
- ❖ Kitchen adjacent to main room to prepare food and serve 125 persons

- a. walk-in cooler (and walk-in freezer?)
- b. easily accessible "root cellar"/pantry
- c. easily accessible for deliveries - waste/compost removal
- ❖ Men's and Woman's Lavatories (3 stall)
- ❖ Laundry Room with space for sorting/folding and ironing
- ❖ Small child/infant care/playroom with access to enclosed outside play area - (#5 and 6 in visual contact)
- ❖ Library/Reading/Quiet Study Space
- ❖ "Commissary"/General Store (400-600 sq. ft. ?)
- ❖ Shop/Project space with large door outside access (?)
- ❖ "Health Spa" (Wellness Centre)
  - a. Exercise Room (400-600 sq. ft.)
  - b. Sauna (for 10-20 persons)
  - c. Massage Rooms (2 or 3)
  - d. Hot tub/Whirlpool (for 10-20 persons) (Site built of Ferro cement or Gunnite) located in "tropical garden" sunspace setting
  - e. small (200-300 sq. ft. ?) men's and women's locker/shower rooms

#### RATIONALE UNDERLYING DESIGN CRITERIA

##### Dwelling Unit Size and Flexibility of Combination

As persons go through various stages of life development, the amount and complexity of required living space changes. The design should provide the option of combining or disconnecting adjacent units (in 600 square foot increments) to accommodate these changes in "family" structure. An overriding consideration is that older persons may remain integrated into the community throughout their latter years.

##### Connected, Enclosed Sunspace Walkways

These features should provide (in no particular order):

- ❖ Protected movement between dwelling units and the common space.
  - ❖ Space for enclosed aquaculture and passive solar heat storage.\*
  - ❖ A pleasant indoor "park-like setting for gathering, socializing, relaxing and spiritual renewal (particularly in winter)\*
- \*Reference the ARKs of New Alchemy Institute

#### Hemispherical Dining/Assembly/Ritual Space

This feature should provide:

- ❖ A lofty, aesthetically pleasing space for gathering, meals and ritual
- ❖ The ability to serve as a planetarium/theatre for multimedia presentations

#### Health Spa / Wellness Centre

This space should provide for:

- ❖ Group relaxation
- ❖ Exercise and body conditioning
- ❖ Massage practitioners practice

## TIMELINE

### FOR THE DESIGN AND CONSTRUCTION OF NEIGHBOURHOOD III AT ECOVILLAGE AT ITHACA

#### 1998: Jan. - June

- 'Virtual' design team forms and produces preliminary design.

#### 1998: July - Dec.

- Design finalised and working drawings begun.
- Initial search for investor/developer begun.

#### 1999: Jan. - June

- Working drawings completed, virtual model and virtual walking tour 'constructed'.
- Preliminary marketing to potential residents begun.
- Permit process initiated.

#### 1999: July - Dec.

- Investor/developer commits to construct project and negotiates relationship with EcoVillage at Ithaca.
- General contractor selected.
- Resident group forms and works with design team on final design details.

#### 2000: Jan. - Dec.

- Details of design finalised.
- Residents commit to purchase.
- Resident co-op forms and negotiates financing.

#### 2001: Jan. - Dec.

- Permit process completed.
- Neighborhood III constructed and occupied.

**NEIGHBOURHOOD III**  
**DELTON JACKSON, 1998**

**THE BRIEF**  
**DESIGN CRITERIA**

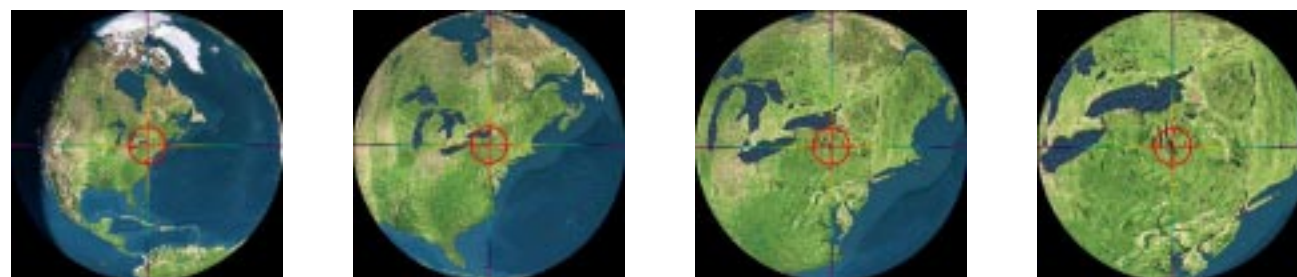






Neighbourhood III is envisioned as the fourth neighbourhood to be built at EcoVillage at Ithaca, the first neighbourhood having been completed in 1997. EVI is located on a 176 acre site two miles west of Ithaca, New York, in an area comprised of fields and woodlands.

The town of Ithaca lies in New York's Finger Lakes District, an area which features sites of outstanding natural beauty such as the Ithaca Falls. Home to the Ivy-League Cornell University, Ithaca also boasts a number of cultural amenities as well as a clear civic identity centred on its downtown, pedestrianised Ithaca Commons.



By actually showing the Earth and the Moon to scale this illustration is intended to bring home exactly how unique, how small, how alone the Earth is, and to show exactly what Sustainability is all about. Our next nearest planet is Venus, which at this scale is 58 yards away.

We have to learn how to live here for there is nowhere else. To paraphrase Gandhi, "the Earth provides enough for everyone's needs, but not everyone's greed", and it is here that we must find answers. Neighbourhood III will be one step on the road to finding those answers, integrating the best elements of the past and the present in a search to create a better future.



*Ithaca Falls, Ithaca, New York*



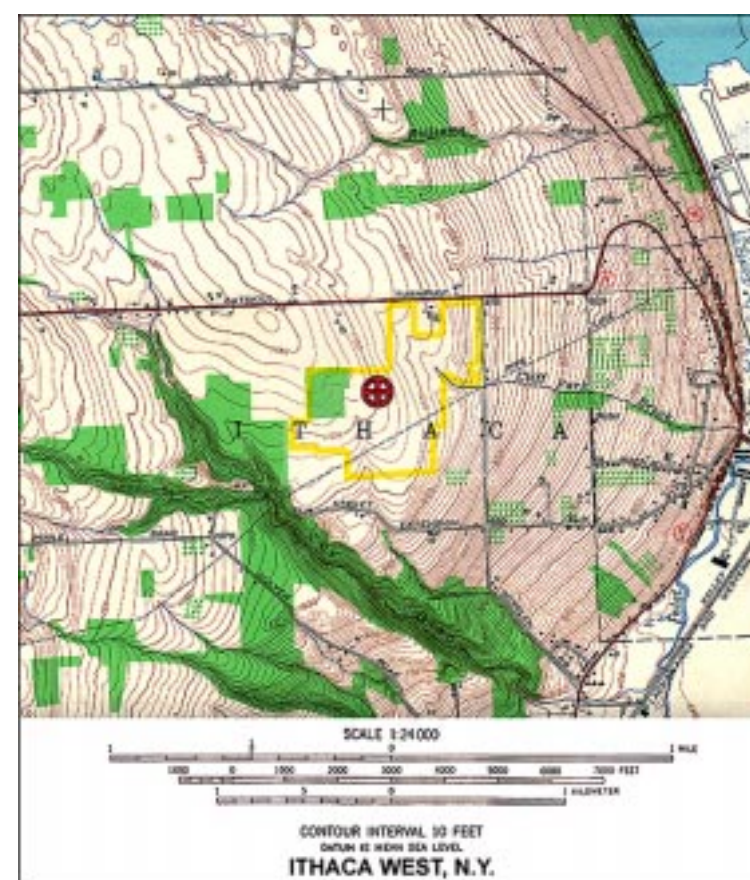
*Downtown Ithaca Commons, Ithaca, New York*



#### DISTANCES FROM SURROUNDING AREAS

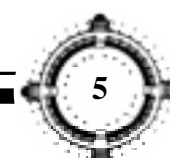
From Albany, NY: Approx. 3 Hours  
From Boston, Mass: Approx. 5 ½ - 6 Hours  
From Buffalo, NY: Approx. 3 Hours

From Montreal, Canada: Approx. 5 - 5 ½ Hours  
From New York City: Approx. 4 - 4 ½ Hours  
From Philadelphia, PA: Approx. 4 - 4 ½ Hours  
From Toronto, Canada: Approx. 4 Hours

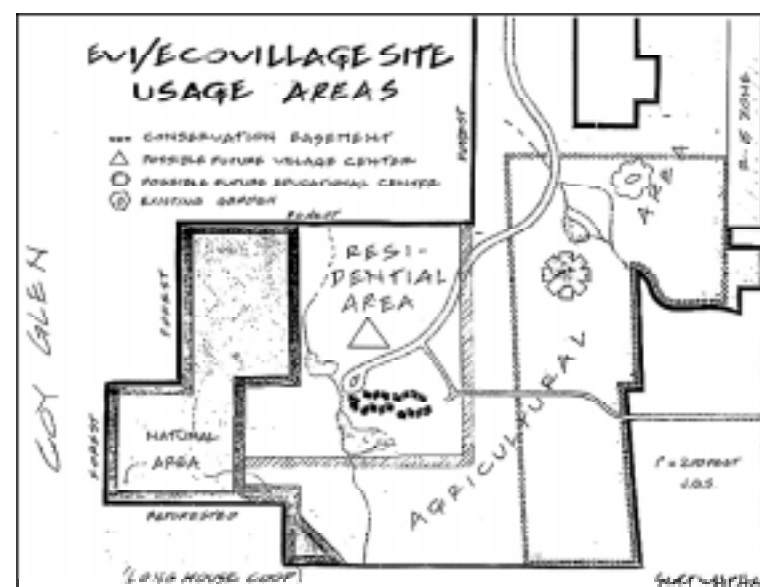
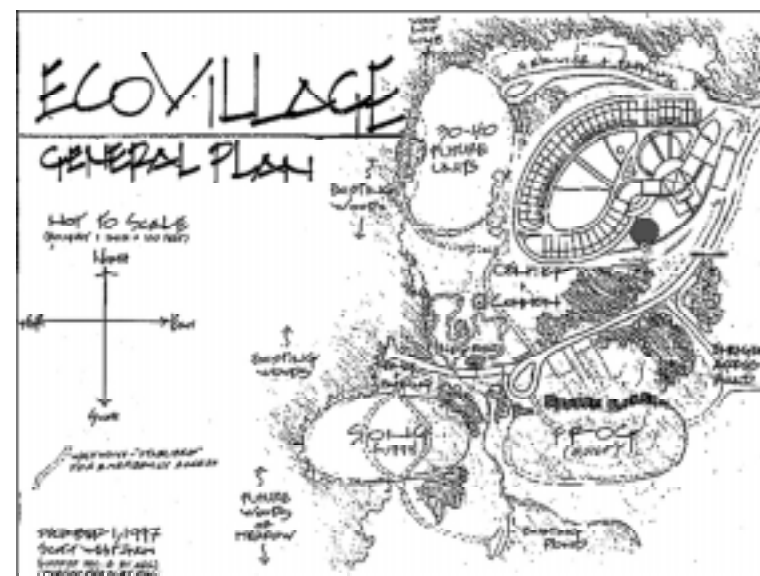
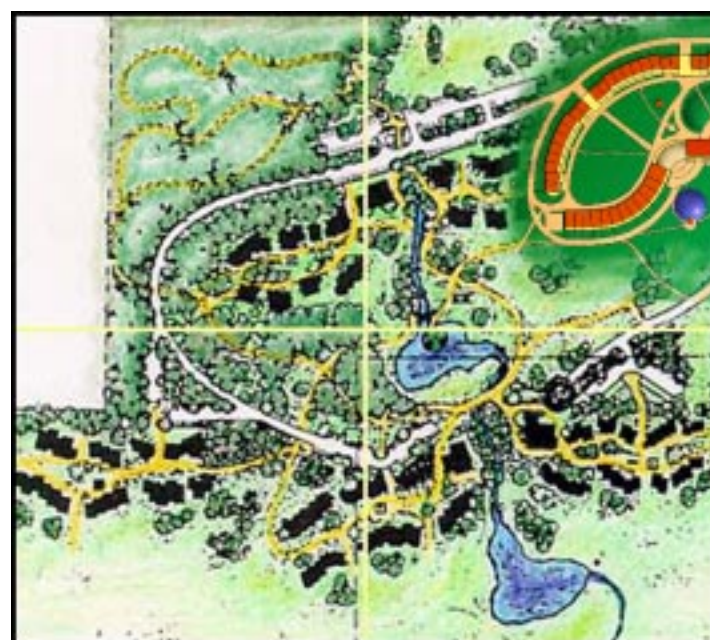


## SITE CONTEXT GLOBAL & LOCAL

## NEIGHBOURHOOD III DELTON JACKSON, 1998







Early site plans for the EcoVillage at Ithaca, here showing the approximate size and position of the proposed NEIGHBOURHOOD III. Note that at present only Neighbourhood I (FRoG) has been built (bottom right housing cluster), though groundbreaking for the second neighbourhood group (SoNG) is scheduled to take place in Autumn of 1999.



VIEW LOOKING NE TO SE



VIEW LOOKING SE TO S



VIEW LOOKING S TO SW, SHOWING THE NORTH SIDE OF NEIGHBOURHOOD 1 (FRoG) NEARING COMPLETION.

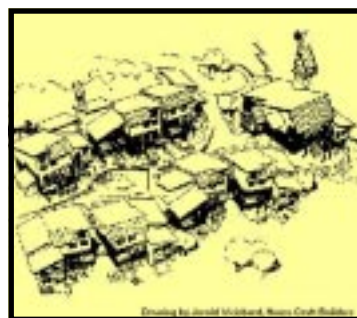
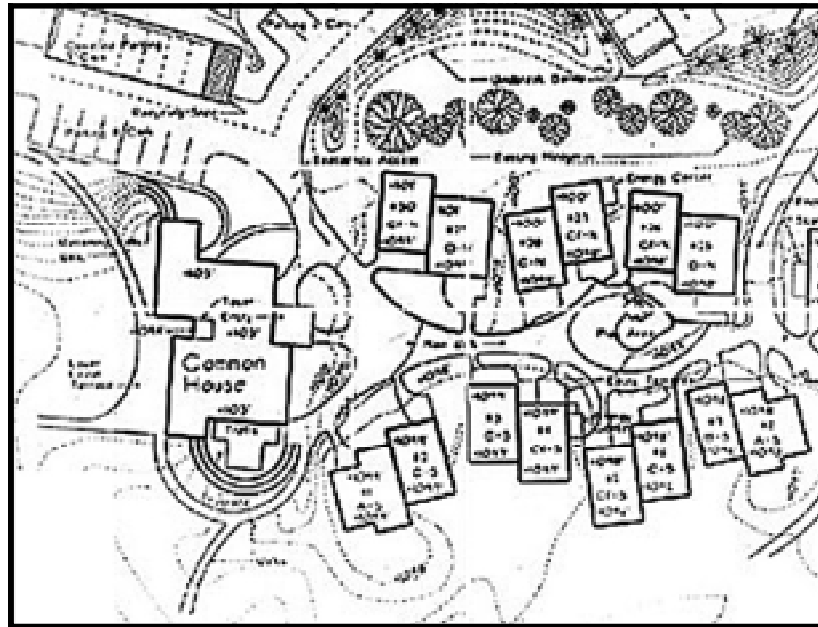
# NEIGHBOURHOOD III

DELTON JACKSON, 1998

# SITE CONTEXT

ONSITE





**“FRoG” - THE FIRST NEIGHBOURHOOD GROUP TO BE BUILT AT THE ECOVILLAGE AT ITHACA IN 1997.**

## NEIGHBOURHOOD III

DELTON JACKSON, 1998

### EcoVillage at Ithaca, New York, USA

EcoVillage at Ithaca, Inc. is a not-for-profit foundation, formed to envision and actualize a more sustainable kind of neighbourhood development, by creating a model village on a site in the Town of Ithaca, NY. A related organisation, EV/CRESP is a project of Cornell University’s Centre for Religion, Ethics, and Social Policy, and serves as the educational arm of the EcoVillage project. The EVI site is 176 acres of fields, woods, and wetlands, about two miles west of downtown Ithaca, NY.

The basic idea is to create a pedestrian village which maintains open space and agricultural land within the urban area, by densely clustering housing in appropriate-sized neighbourhoods. It is thought that the EVI site can eventually accommodate 4-5 such neighbourhoods. The Danish Cohousing model is being used as a taking off point. In cohousing, households cooperate to design, build and manage their neighbourhood. Key aspects of cohousing are a Common House where meals can be shared, and pedestrian-oriented commons areas. The development of the EcoVillage will hopefully correspond to an increasing proportion of the resident’s energy and materials needs being met by on-site or local sources. A big step has already been taken - West Haven Farm, a 3-acre organic CSA farm, has been operating on the EVI land for five years.

Construction of the first neighbourhood of 30 homes (a.k.a. the “FRoG”) was completed in July 1997. A second neighbourhood group, SoNG, is now in the planning stage, with about 16 households involved. A third project, “Neighbourhood III” is in the early envisioning stage.

Development Guidelines for EVI were created in Land Use Planning workshops by over 100 persons, including future residents, architects, landscape architects, students, professors, planners, ecologists and energy experts. Ideas for future implementation include orcharding, agroforestry, aquaculture, on-site biological wastewater treatment, greywater recycling, and a Visitor/Education Centre. Currently there are educational programs in ecology and agriculture at EVI for local youth.

The fishing village of Yoff, in Senegal, is the sister-city of EVI, and the host of three International EcoCity Conferences organised by EVI staff. At these conferences, hundreds of experts and government officials from around the globe came together to share ideas on creating and maintaining sustainable cities and villages.

FOR MORE INFORMATION, CONTACT:

ECOVILLAGE AT ITHACA

ANABEL TAYLOR HALL

CORNELL UNIVERSITY

ITHACA, NY 14853 USA

ECOVILLAGE@CORNELL.EDU

<http://www.cfe.cornell.edu/ecovillage/>



**AN EARLY PICTURE OF THE FIRST NEIGHBOURHOOD GROUP (FRoG), BUILT IN 1997. (APPENDIX I)**



**SITE OF ECOVILLAGE AT ITHACA’S SECOND NEIGHBOURHOOD GROUP (SoNG), LOOKING SOUTH FROM THE NORTHEAST CORNER. GROUND BREAKING FOR CONSTRUCTION IS SCHEDULED TO COMMENCE IN THE AUTUMN OF 1999. (APPENDIX I)**



**WEST HAVEN FARM, ECOVILLAGE AT ITHACA. (APPENDIX I)**

## SITE CONTEXT

EXISTING DEVELOPMENT ONSITE



## PRECEDENTS & INSPIRATIONS

These are just a few of the many places from which inspiration was drawn in the designing of Neighbourhood III.

CLOCKWISE, FROM TOP LEFT:

### 1. PUEBLO BONITO

Located in Chaco Canyon in New Mexico, a Native American precedent of a connected, curvilinear, solar oriented village form.

### 2. EGUISHAIN IN ALSACE

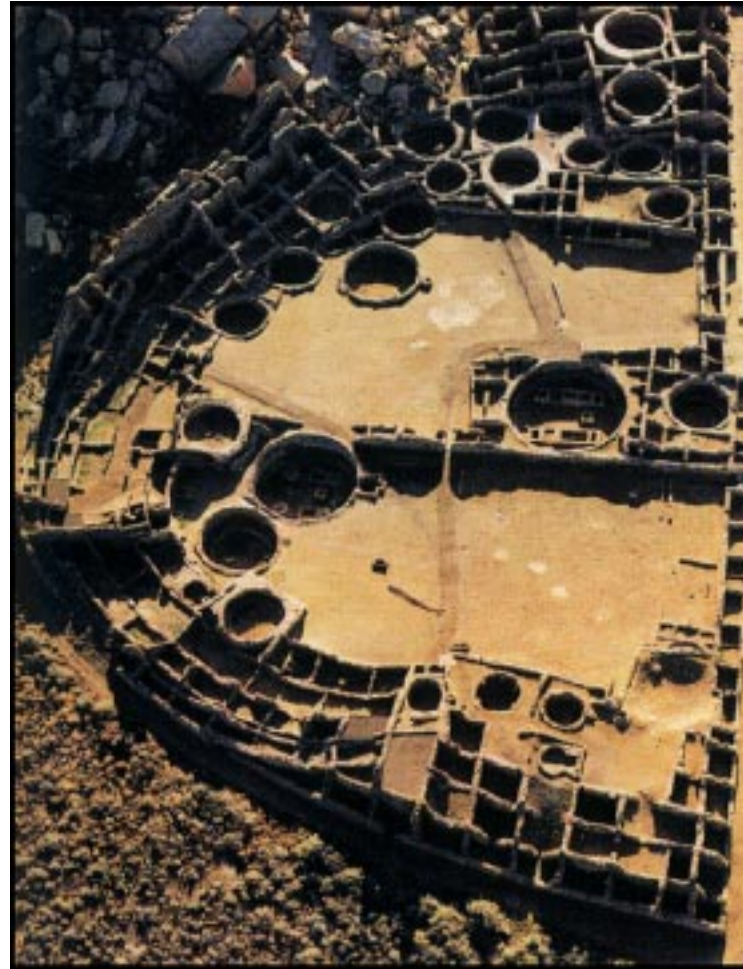
The medieval towns of Europe demonstrate that an organic morphology can provide further basis for urban form, with a visual and functional logic that lends itself to future growth despite the absence of a grid pattern.

### 3. HOCKERTON SHAKER VILLAGE, USA

The village green is an archetypal pattern of community and village development, providing a positive environment and a common focus and tie for the community.

### 4. HOCKERTON HOUSING PROJECT, NOTTINGHAMSHIRE

New ecological terraced housing in the United Kingdom (designed by Brenda and Norman Vale), establishing a new precedent for the suitability of this building type in the creation of sustainable communities.



**NEIGHBOURHOOD III**  
**DELTON JACKSON, 1998**

**INSPIRATIONS**

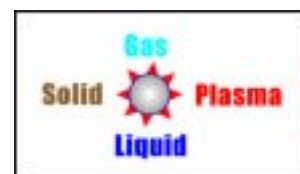
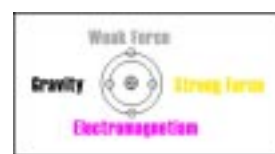
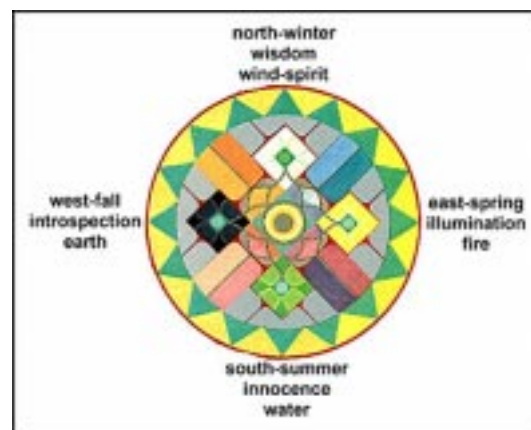




## CONCEPTUAL STRATEGY 1 - WHY III?

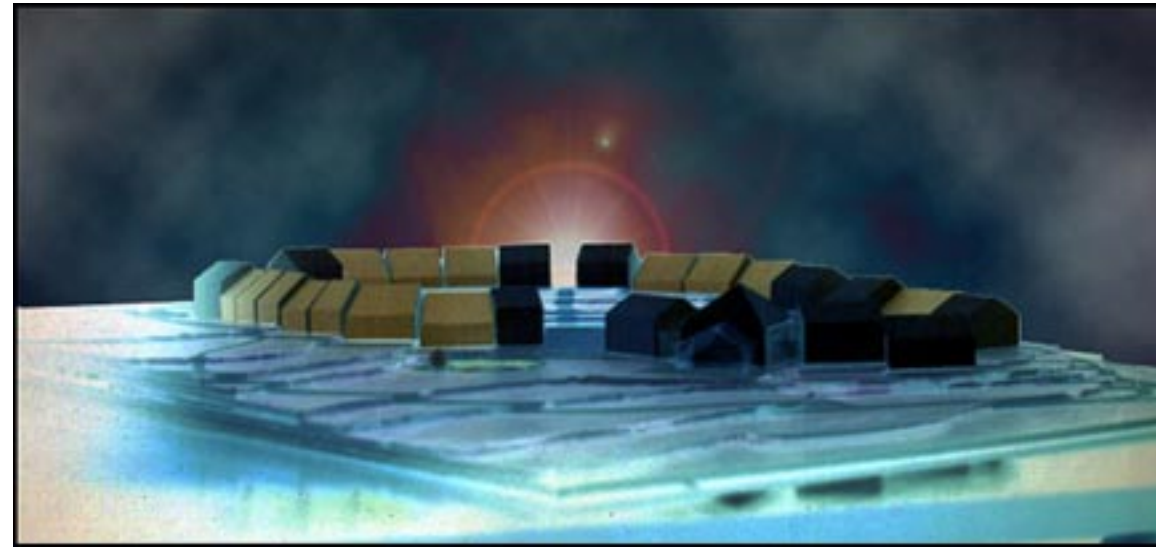
Neighbourhood III will be the fourth neighbourhood to be built at EcoVillage at Ithaca, hence the name. However the Native American notation has been adopted in favour of either Roman or Arabic numerals. This is in recognition of the Native American tradition of the four directions as a conceptual starting point for the development of the neighbourhood, but which also extends to embrace the following:

- ❖ The 4 Essences of the Ancient World....  
*EARTH, AIR, WATER & FIRE*
- ❖ ...and their Modern Equivalents  
*SOLID, LIQUID, GAS & PLASMA*
- ❖ The 4 parts of Creation Spirituality  
*VIA TRANSFORMATIVA, VIA CREATIVA, VIA NEGATIVA & VIA POSITIVA*
- ❖ The 4 Forces of the Universe  
*GRAVITY, ELECTROMAGNETISM, STRONG FORCE & WEAK FORCE*



# NEIGHBOURHOOD III

DELTON JACKSON, 1998



## CONCEPTUAL STRATEGY 2 - SACRED GEOMETRIES & CELESTIAL ALIGNMENTS

An examination of history's greatest buildings reveals an understanding of life's hidden geometries and reveals the beauty of their proportions and harmonies. The knowledge and science of the modern era has revealed that these patterns exist not only at the human scale, but as archetypes that span from the micro- to the macrocosm.

Reaching further into history the research of authors such as Graham Hancock (Heavens Mirror, 1998) and Robert Bauval (The Orion Mystery) into the monuments of prehistory reveals a vast and unexpectedly early understanding of advanced mathematics and of astronomy, including knowledge of the size and shape of the Earth itself. It is this same spirit then that underlies and inspires the layout of N4, reflecting in its very structure an acknowledgement, an understanding and an appreciation of a larger universe. As such, Neighbourhood III embodies the major tenants of Creation Spirituality (CS) which seeks, in the words of Ralph Maust, Neighbourhood III Project Coordinator:

*"...to honour creation as original blessing, integrating the wisdom of Western spirituality and global indigenous cultures with the emerging scientific understanding of the universe and the passionate creativity of art."*

The design should *"attempt to facilitate an holistic environment for the telling of the universe story, and our active participation in that story through art, education and ritual. A place to honour the artist, mystic and prophet in each person and enhance the experiences of awe, amazement, gratitude, suffering, silence, mystery, mystery, imagination, creativity, renewal, justice-making compassion and celebration."*



*CLOCKWISE, LEFT TO RIGHT:  
SETTING SUN OF THE SUMMER  
SOLSTICE, MARKED AND  
CELEBRATED BY THE VERY LAYOUT  
OF NEIGHBOURHOOD III.*

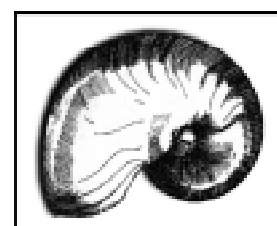
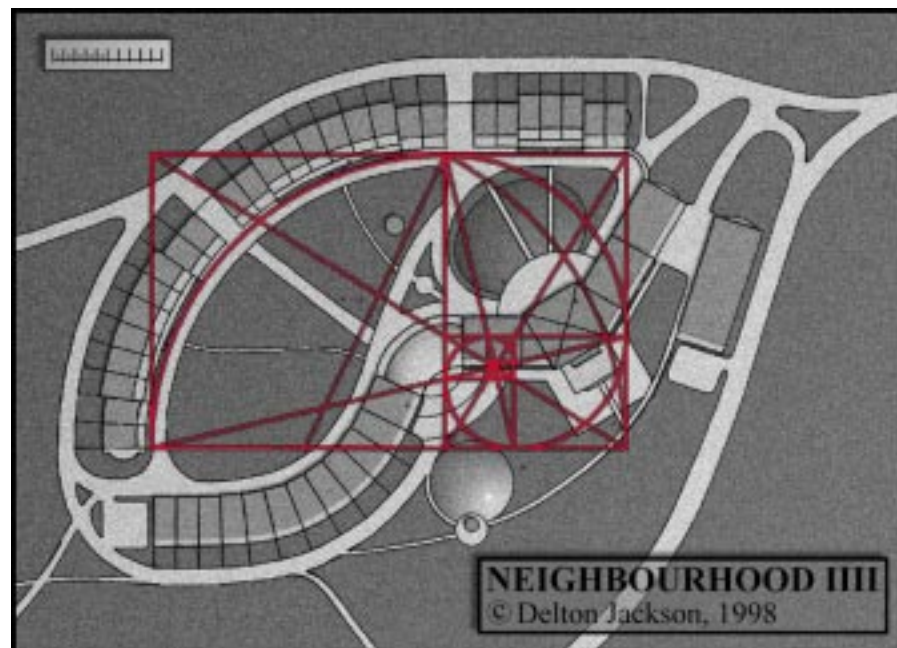
*PRECEDENTS FROM PREHISTORY:  
STONEHENGE AT MIDSUMMER  
(TOP) AND THE NEWGRANGE  
TUMULUS IN IRELAND AT  
MIDWINTER.*

## FEATURES

- ❖ Neighbourhood III possesses five gateway points, the alignments of which celebrate and mark the rising and setting suns of both the winter and summer solstices.
- ❖ The Layout also incorporates Euclidean geometries of the Golden Mean and Section, a formula defined by the Greek mathematician Euclid in the 3rd century BC. Modern science has discovered the Golden Spiral (which is one result of this formula) to be a common pattern in nature, "in the spirals of sunflower heads and snail shells, the coiled fern frond, the arrangement of leaves on a stem..... and so on", revealing the Golden Section and the phi ratio as innate patterns of nature. (p.59, The Healthy House, Sydney & Joan Baggs, Thames & Hudson Ltd, London, 1996)
- ❖ Stained glass panels within the Common House Sunspace to celebrate and mark solar events.

## CONCEPTUAL STRATEGIES 1





THE GOLDEN SPIRAL, AN ARCHETYPAL AND RECURRENT PATTERN OF GROWTH IN NATURE, FORMS PART OF A CONCEPTUAL FOUNDATION FOR THE LAYOUT OF NEIGHBOURHOOD III.

# NEIGHBOURHOOD III

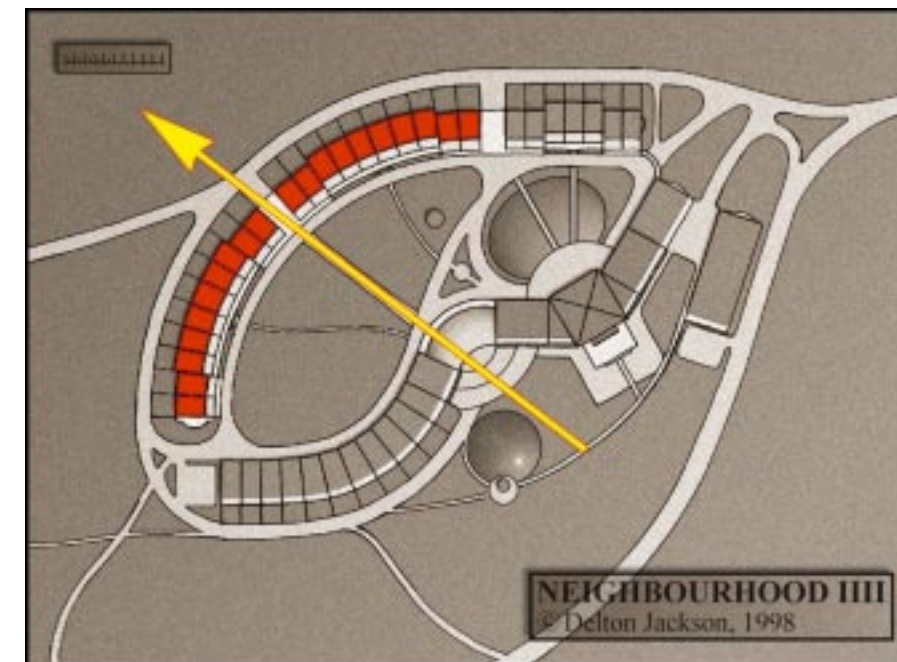
DELTON JACKSON, 1998

## CONCEPTUAL STRATEGY 3 - SYMBOL & MYTH (POETICAL)

Inspiration for Neighbourhood III has also been drawn from the name of its chosen site, the EcoVillage at Ithaca. Looking into history the legendary Island of Ithaca has been a wonderful place to start in building a vision of a city or community in the mind. With this start it is tied from the outset to history, to archetypal imagery and to the power of myth.

Within this context the following features have been conceived:

- ♦ The Northwest terrace describes an arc, oriented towards the sun and the views. If interpreted as the bow of Odysseus, the Sunrise of the Winter Solstice can be seen as the arrow which sets winter to flight, marking this celestial event with a further layer of meaning as the sun streams up the tree-lined path from the Amphitheatre Steps and through the glazed Northwest Gateway.
- ♦ The Pond is another feature, a circle ringed by a path and punctuated by an “outdoor room”, a gazebo or other open sided structure. The symbolism here can be taken as far as one wishes, with the path representing Ouroboros (a serpent swallowing its own tail) a symbol from the Western mystical tradition of the eternal and cyclical nature of the universe; the body of water symbolically marking the South in relation to Neighbourhood III. The stark geometry will however be softened with perimeter plantings, with the pond acting as a focus and a feature within the overall composition of the development.



*“While they were talking Odysseus..... had picked up the great bow and checked it all over. As a minstrel skilled at the lyre and in song easily stretches a string round a new leather strap, fixing the twisted sheep-gut at both ends, so he strung the great bow without effort or haste. Then with his right hand he tested the string, and it sang as he plucked it with a sound like a swallow’s note.”*

THE ODYSSEY BY HOMER, Penguin Books, 1991, London, revised translation by D.C.H.Rieu

*As you set out in search of Ithaca  
Pray that your journey be long,  
full of adventures, full of awakenings.  
Do not fear the monsters of old...  
You will not meet them in your travels  
if your thoughts are exalted and remain high,  
if authentic passions stir your mind,  
body and spirit.  
You will not encounter fearful monsters  
if you do not carry them within your soul,  
if your soul does not set them up in front of you.*

- Constantine Peter Cavafy, written in 1911, and read at the funeral of Jacqueline Kennedy Onassis.

## CONCEPTUAL STRATEGIES 2