The Integration of Permaculture into a Land Use Plan for the City of Guelph, ON

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Research Goal

• To integrate certain aspects of permaculture principles into the land use plan of the City of Guelph, providing a possible framework for a sustainable local food system.
Permaculture Design System

• ‘..the integration of self-perpetuating plant and animal species that supply human needs, or a complete Agricultural ecosystem.’ – Bill Mollison & David Holmgren (1978) *Permaculture One*

• ‘..An ever-evolving design and management of agriculturally-productive ecosystems, integrating human settlements within the landscape, and providing food, shelter and energy sustainably.’ – Bill Mollison (1988) *Permaculture: A Designer’s manual*

• ‘..A framework to incorporate permanent agriculture systems within communities.’ – David Holmgren (2002) *Permaculture: Principle’s & pathways beyond sustainability*
Permaculture Principles

Ethical
• Care for the earth
• Care for people
• Set limitations on consumption, resources, population, and redistribute surplus

Design
• Twelve principles
  – (1) Observation (2) Energy storage (3) Yield (4) Self-regulation (5) Renewable resources (6) Produce no waste
  – (7) Patterns (8) Integrate (9) Small solutions (10) Diversity (11) Ecotones (12) Creative change

Principle Seven
  – Patterns to Details (organization in the landscape)

Permaculture Districts
  – Five Land Use designations
  – Related to Energy Inputs required and scale of land
Permaculture Land Use Districts

Intensity of use relates to the scale of land being used
Frequency of human activity coincides with a higher intensity of use

1- Small scale - High Input
2- Moderate scale & Input
3- Large scale - Low Input

To reduce energy input required for maximum energy output
The Official Plan for the City of Guelph

...Serves as a guide for future land use activity, promoting long-term sustainability of the community... intended to achieve social well-being, economic vitality and protection of the environment...
The City of Guelph Land Use & Zoning map
Permaculture District One (PD.1)

Link to the Official Plan

- Parcels of land with direct access to a place of residence

- Residential (R)
  - R.1 (A,B,C,D)
  - R.2
  - R.3
Permaculture District One
Land use

• Vegetable Garden & Herb Garden
• Roof Garden
• Patio & Balcony Garden
• Cold frames & Greenhouses
• SPIN Farming
  – Backyard Bounty
Permaculture District Two (PD.2)
Link to the Official Plan

- Public Parcels within residential areas, community parks and institutions
- Residential
  - R.4 (A,B,C,D)
- Parkland
  - P.2, P.3, P.5
- Institutional
  - I.1, I.3
Permaculture District Two
Land Use

- Community Gardens
- Small intensive fruit production
- Chicken coops
- Vermiculture & composting systems
- Market gardens
- Community farms
- Community cold storage units, seed saving & preserve/canning facilities
Permaculture District Three (PD.3)

Link to the Official Plan

- Parcels within Industrial areas, agricultural areas and regional parks
- Parkland
  - P.4
- Urban Reserve
  - UR
- Industrial areas
  - B
Permaculture District Three
Land Use

- Plant Nurseries
- Cropland
- Small animal production
  - Turkey, sheep, goats
- Orchards
- Vineyards
- Bee hives
Permaculture District Four (PD.4)

Link to the Official Plan

• Parcels within floodplains, existing forested parkland and land unsuitable for development

• Parkland
  – P.1

• Urban Reserve
  – UR

• Floodplain
  – FL
Permaculture District Four
Land Use

- Pastureland
- Agro-forestry
- Sustainable woodlots
- Trails & Recreation
Permaculture District Five (PD.5)

Link to the Official Plan

- Parcels within protected wetlands, floodplains, wildlife corridors and any other unsuitable land for development

- Floodplain
  - FL

- Wetland
  - WL
Permaculture District Five
Land Use

- Conservation lands
- Waterways & Wetlands
- Native Seed banks
- Groundwater recharge
- Wildlife corridors
- Biodiversity
Conclusion

- Five Permaculture Districts were applied to the City of Guelph’s Official Plan, creating Permaculture land use designations for the City of Guelph.

- The establishment of these Districts could provide a key building block towards a food system plan for the City of Guelph.