

Willow Farm

- Growing Organic -



Aims

1. Organic Food Production
2. Community Engagement
3. Commercially Sustainable



Marketing

Manchester Veg People
Direct selling
(kiosk, picking)
Local restaurant

Polyculture

Strip intercropping
Annual vegetables
Perennial vegetables
Flowers & herbs



Willow Farm

Labour

2 part-time workforce
LAND Army
Volunteers

Education

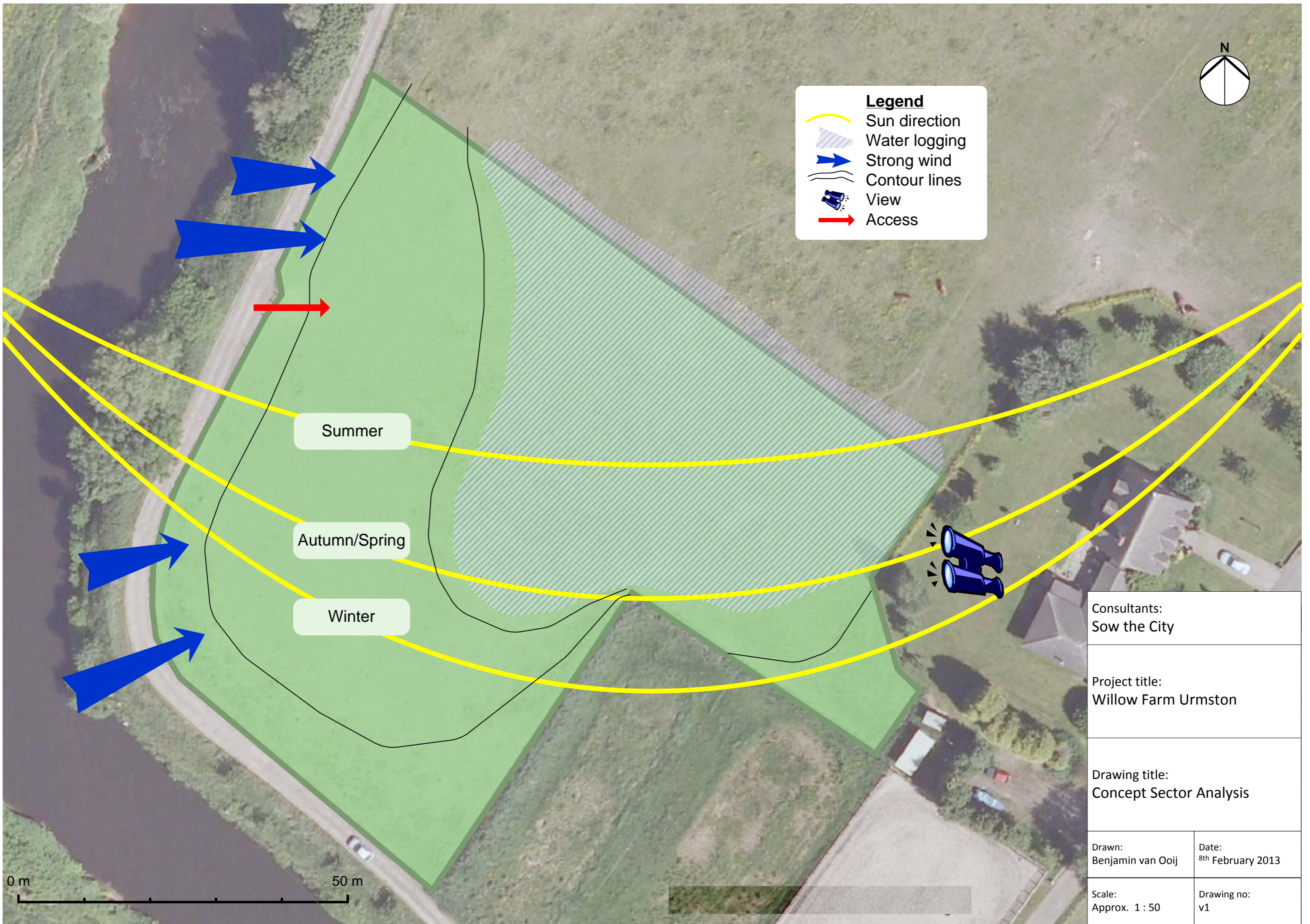
Workshops
School visits
Training courses
Community days

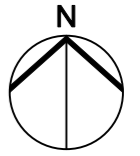
Accountant -External



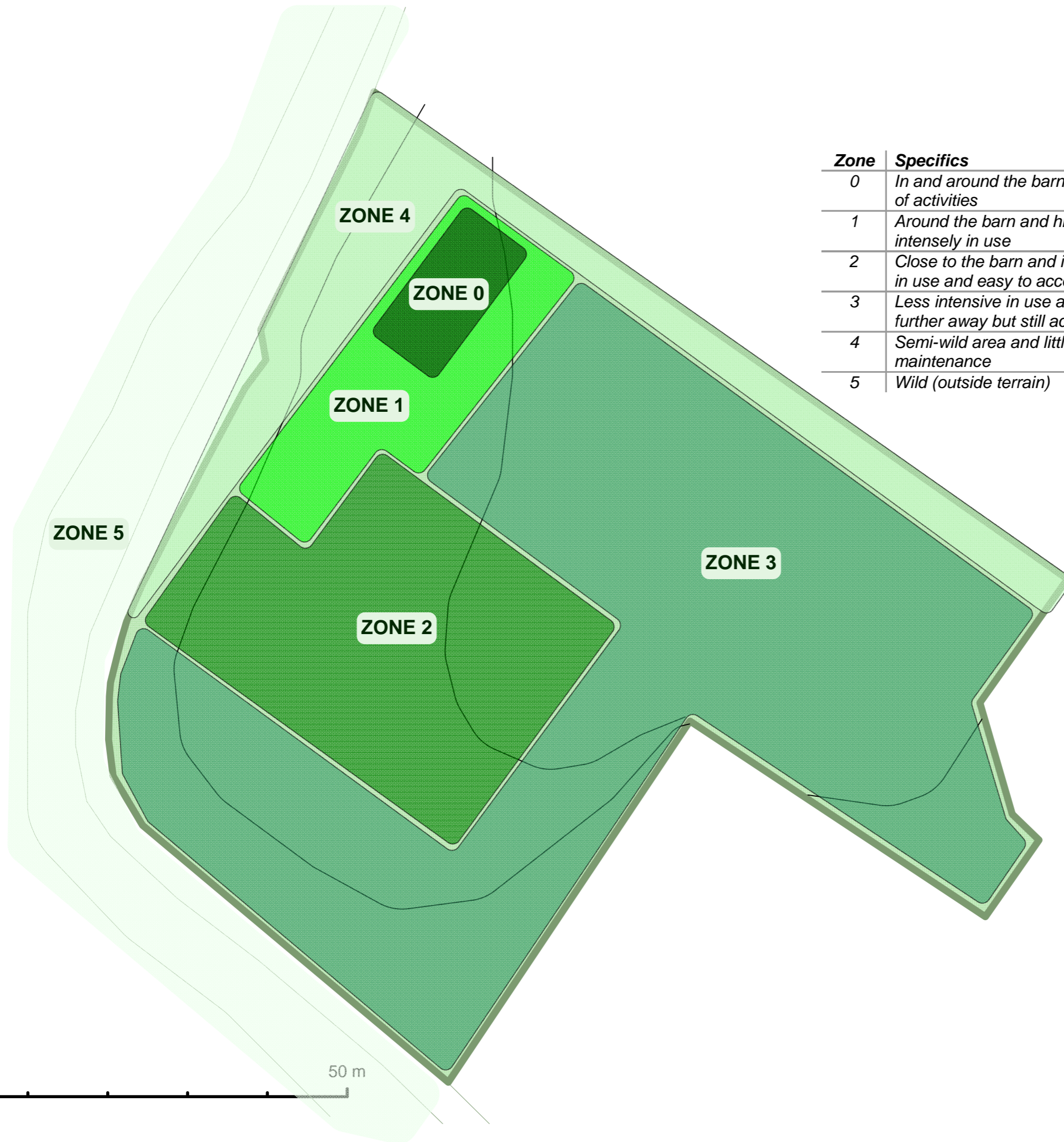
Maps







Zone	Specifics	Elements in the zone of use
0	<i>In and around the barn/ centre of activities</i>	<i>barn, kitchen, storage, trash area, kiosk, educational area</i>
1	<i>Around the barn and highly intensely in use</i>	<i>(vermi-)compost, compost toilet, chickens, pot plants</i>
2	<i>Close to the barn and intensive in use and easy to access</i>	<i>intensively used poly-tunnels, perennials, compost, espalier fruit trees</i>
3	<i>Less intensive in use and further away but still accessible</i>	<i>poly-tunnels, field crops, orchard, pond, wildflower field, perennials, outdoor classroom</i>
4	<i>Semi-wild area and little maintenance</i>	<i>edible windbreaks, edible hedges, wild crops, firewood</i>
5	<i>Wild (outside terrain)</i>	<i>river, wild forage plants, wild life, windbreak</i>



Consultants: Sow the City	
Project title: Willow Farm Urmston	
Drawing title: Zone-planning	
Drawn: Benjamin van Ooij	Date: 8th February 2013
Scale: Approx. 1 : 50	Drawing no: v1



Consultants:
Sow the City

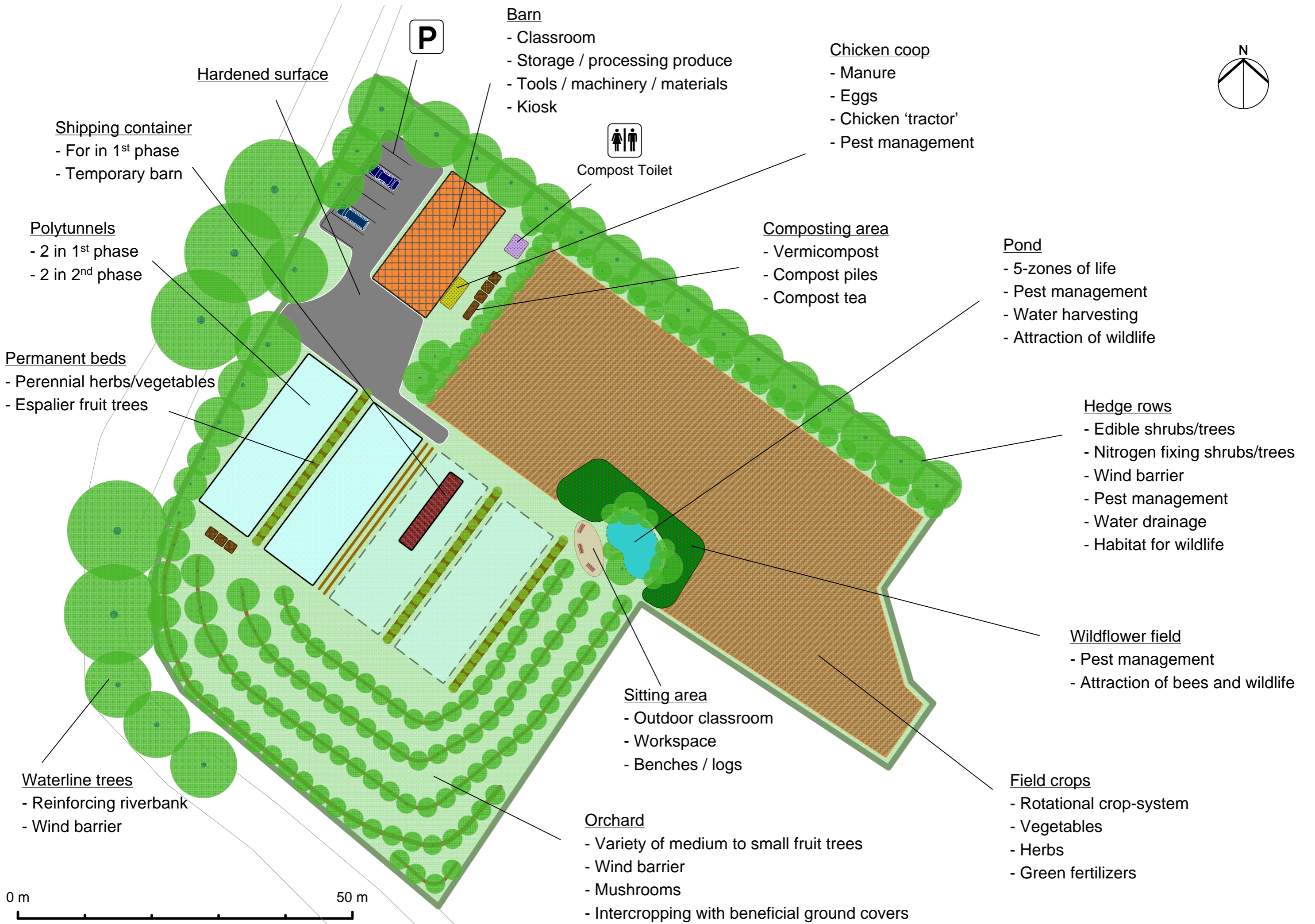
Project title:
Willow Farm Urmston

Drawing title:
Concept Design

Drawn: Benjamin van Ooij	Date: 8th February 2013
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Scale: Approx. 1 : 50	Drawing no: v3
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0 m 50 m



P

- Barn
- Classroom
 - Storage / processing produce
 - Tools / machinery / materials
 - Kiosk

- Chicken coop
- Manure
 - Eggs
 - Chicken 'tractor'
 - Pest management



Compost Toilet

- Composting area
- Vermicompost
 - Compost piles
 - Compost tea

- Pond
- 5-zones of life
 - Pest management
 - Water harvesting
 - Attraction of wildlife

- Hedge rows
- Edible shrubs/trees
 - Nitrogen fixing shrubs/trees
 - Wind barrier
 - Pest management
 - Water drainage
 - Habitat for wildlife

- Wildflower field
- Pest management
 - Attraction of bees and wildlife

- Sitting area
- Outdoor classroom
 - Workspace
 - Benches / logs

- Orchard
- Variety of medium to small fruit trees
 - Wind barrier
 - Mushrooms
 - Intercropping with beneficial ground covers

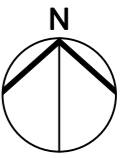
- Field crops
- Rotational crop-system
 - Vegetables
 - Herbs
 - Green fertilizers

- Shipping container
- For in 1st phase
 - Temporary barn

- Polytunnels
- 2 in 1st phase
 - 2 in 2nd phase

- Permanent beds
- Perennial herbs/vegetables
 - Espalier fruit trees

- Waterline trees
- Reinforcing riverbank
 - Wind barrier



Placement of elements

- Elements are placed in accordance to their needs, products, behaviour and specific characteristic's;
- Elements are placed where their functions can be utilised most efficiently and were they can work together with others;
- Important functions are supported by many elements.



Examples of elements and their relative location

- *Example:*
The vermicompost is placed near the barn where food scraps and waste from produce are collected which eliminates organic waste. The compost can be used in the nearby polytunnel or brewed into compost-tea in the barn, the excess of worms can be fed to the chickens or released on the land. The vermicompost is one of many systems where compost is created.
- *Example:*
The pond is placed between the orchard and the area for field crops, where water can be collected from various places like the overflow from the on contour orchard, pathway and sitting area. It is a habitat for beneficial wildlife and insects, creates a microclimate (by catching and storing energy with its thermal mass and reflection of sunlight) and irrigates the lower area with the use of gravity only. The pond is one of many systems that harvests water.



Growing Organic



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Soil test

Test	Result	Discussion
pH	5.5	The soil pH is low. The soil pH can be raised by adding lime to make the land suitable for growing a wider range of crops if required.
Organic Matter	7,5%	The soil has a high level of organic material which is good for cultivating fruit and vegetables.
Phosphorus	8ml/l	The soil is within the optimum for growing vegetables (6.1mg/l-10mg/l). Manure and fertiliser applications should aim to maintain this target by maintenance applications after crops are harvested.
Potassium	67mg/l	The soil is below the optimum for growing vegetables (101-150mg/l). Manure and fertiliser applications should aim to raise levels of potassium and then maintain this target by maintenance applications.
Magnesium	117mg/l	The soil is slightly above the optimum range for growing vegetables (51-100mg/l). No action required.

Annual vegetables

Family: Alium

Onions / Red onions / Leeks

Family: Brassica

Cauliflower / Mustard leaves / Cabbage / Kale

Family: Legumes

Broad Beans / Green Beans

Family: Other

Sweetcorn / Courgette / Lettuce / Chard

Family: Solanaceae

Potatoes

Family: Roots

Beetroot / Beetroot / Celeriac / Parsnip / Carrots

**Strip
Intercropping
System**

Herbs and Flowers

- Basil
- Chives
- Garlic chives
- Nettles
- Oregano
- Parsley
- Rosemary
- Sage
- Thyme
- Borage
- Calendula
- Chamomile
- Comfrey
- Lavender
- Marigold
- Nasturtiums
- Roses
- Violets

Permanent beds

**Intercropped with
hedges/trees**

Perennial vegetables

- Artichokes
- Asparagus
- Jerusalem Artichoke
- New Zealand Spinach
- Perennial Kale
- Pigeon Pea
- Rhubarb
- Sweet Potato
- Earthnut Pea

Permanent beds

**Intercropped with
hedges/trees**

Community Involvement



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Community Involvement

- **Public meetings**
where community members can influence and support this project.
- **Harvest 'festivals'**
where people can help harvesting and bring traditional festivals around seasonal harvesting back to life.
- **Volunteers**
supporting hands-on, with the organisation or with other activities to start-up and maintain this project.
- **Workshops and Courses**
about organic farming and other related topics will be given.



Public meeting



The first meeting was held on the 23rd of April 2013 in Urmston by Jon Ross of Sow the City.



The outcome of the meeting was:

- 40 people including 4 councillors and several school teachers attended;
- Steering committee was chosen;
- Volunteer days have been planned to proceed with project;
- Rotary club interested to support the project;
- Design was received very well.

Budget

Budget

- Total start-up costs = 15400 pounds
- Return of Investment (ROI) = 4 years
- Expected yearly costs = 26000 pounds
- Expected yearly turnover = 29400 pounds



Income	Year 1		Year 2		Year 3		Year 4		Year 5	
Produce	8500		16000		18000		21000		24000	
Training	200		5400		5400		5400		5400	
Grants	0		0		0		0		0	
Total Income		8700		21400		23400		26400		29400
Investment										
Startup costs	15400									
Total Investment		15400		0		0		0		0
Operational Costs										
Wages	20000		20000		20000		20000		20000	
Fees	905		905		905		905		905	
Growing	1915		2915		2915		1915		1915	
Marketing	1145		1145		1145		1145		1145	
Office	1500		1500		1500		1500		1500	
Depreciation	460		460		460		460		460	
Total Oper. Costs		25925		26925		26925		25925		25925
Total Costs		41325		26925		26925		25925		25925
Annual Gross Margin		-32625		-5525		-3525		475		3475

Forecasting *(without polytunnels)*

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Investment

Initial	
Shipping container -shed	1500
Earthworks + Soil preparation	2000
Pond	2000
Compost Toilet	500
Sitting area	250
Tools	
Rotovator	800
Manual tools	500
Wheel barrows, trolley	150
Packing	
Benches	200
Scale	100
Promotion	
Signs	100
Leaflets	150
Total	8250
Total startup	15400

Soil improvement

Composting areas	200
Compost	800
Straw for mulch	400
Mulch cloth / Nets / Fleece	600

Growing

Seeds	350
Perennials	300
Trees / Shrubs	1100

Propagation

Benches	200
Trays & things	500
Seed bank	200

Irrigation

Tape irrigation	1500
Tanks + piping	1000
Total	7150

Annual Costs 1/2	Year 1		Year 2		Year 3		Year 4		Year 5	
Wages										
2 part-time, 10 per hour	20000		20000		20000		20000		20000	
Total Wages		20000		20000		20000		20000		20000
Fees										
Soil Analysis	50		50		50		50		50	
Certification	550		550		550		550		550	
Organic Growers Alliance	25		25		25		25		25	
Permaculture Association	80		80		80		80		80	
Manchester Veg People	200		200		200		200		200	
Total Fees		905		905		905		905		905
Growing										
Seeds & Modules	1000		2000		2000		1000		1000	
Compost	200		200		200		200		200	
Soil additives	100		100		100		100		100	
Water	500		500		500		500		500	
Electricity	15		15		15		15		15	
Fuel for machinery	100		100		100		100		100	
Total Growing		1915		2915		2915		1915		1915

Annual Costs 2/2	Year 1	Year 2	Year 3	Year 4	Year 5
Depreciation					
Shipping Container	300	300	300	300	300
Rotovator	160	160	160	160	160
Total Depreciation	460	460	460	460	460
Marketing					
Packaging	300	300	300	300	300
Fuel	500	500	500	500	500
Promotion material	75	75	75	75	75
Website/branding	100	100	100	100	100
Phone	120	120	120	120	120
Post	50	50	50	50	50
Total Marketing	1145	1145	1145	1145	1145
Office					
Office costs	100	100	100	100	100
Accountant	600	600	600	600	600
Insurance	800	800	800	800	800
Total Office	1500	1500	1500	1500	1500
Total Annual Costs	25925	26925	26925	25925	25925