the new optimists: food futures for birmingham 2050

background info about the city

- Birmingham lies at the heart of the West Midlands conurbation, an area of some 60K hectares. Although central to England's motorway and canal systems, its air and rail systems are relatively undeveloped.
- Formerly a few hamlets, it grew explosively at the beginning of the Industrial Revolution; it is an18th, 19th & 20th century city. Swathes of the city were badly damaged by World War II bombing, then redeveloped in the 1960s. Its economy collapsed in the 1980s; it is still heavily dependent on the public sector. Significant investment took place downtown in 1990s, and in the new QEH & LoB recently.
- It sits on the Birmingham Plateau, an area rising 500-1000 ft (150-300m) above sea level, and between the basins of the Rivers Severn and Trent, served only by minor rivers and brooks. Water, potable and for industry, is from the 1904 Elan aqueduct.
- Originally part of the ancient Forest of Arden, there is still dense oak tree cover in the city. Many districts have names ending in 'ley', the Old English word for a woodland clearing, some have the name 'heath' (which itself indicates poor soil).
- Geologically, the city is dominated by the Birmingham Fault running from the Lickey Hills in the south west through the central area to Sutton Coldfield in the north east. South-east of the fault the ground is largely Keuper Marl (layers of siltstone and mudstone); to the north-west there is a long ridge of Keuper Sandstone.
- Similar to other large UK conurbations, Birmingham has a considerable urban heat effect but, relative to other British built-up areas, it is a snowy city due to its inland location and comparatively high elevation.

Population (2010 est): 1,036,900; density: 9,451/square mile

3.2K ha parks/open spaces, 94K street trees. Sandwell Valley: 1K ha.

7K+ allotments, community orchards, wildflower meadows, Bourneville & Moorpool garden estates, sizable gardens aplenty.

Tyseley Plant ~366K tonnes of household waste burnt/year giving ~166MW electricity and ~282K tonnes of CO2. (Average person uses 5.84MW/year.)

KEY FACTORS

I: FACTORS about SUPPLY	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
1 Sustainability of international supplies			
(a) population expansion (global)			
(b) diversion of produce to emerging markets			
(c) climate change • carbon credits			
(d) transport infrastructure			
(e) price efficiency • international cheap labour around the world • international transport costs • international production costs			

2 Development of local supplies			
(a) development of local markets • supply chains • transport infrastructure			
(b) land pressures			
(c) technologies • vertical farming/precision hydroponics • semantic web • materials (e.g.for storage, packaging)			
(d) demand for locally-grown produce			
(e) price efficiency • local production costs • local labour costs • local transport costs			

KEY FACTORS

I FACTORS about SUPPLY (continued)	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
3 Community growing initiatives			
(a) investment			
(b)social value of food			

4 Scale of production			

5 Food packaging			

6 Availability of wide range of food stuffs			

II: FACTORS about DISTRIBUTION	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
7 Sustainability of international distribution networks			
(a) price efficiency			
(b) viability of alternative energy sources			
(c) Sustainability of international food supplies • cost of fuel • changes to food availability			

KEY FACTORS

II: FACTORS about DISTRIBUTION (continued)	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
8 Development of local distribution networks			
(a) development of local food supplies			
(b) price efficiency			
(c) investment			
(d) political commitment			

III: FACTORS about THE BUILT ENVIRONMENT	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
9 Pattern of urbanisation			
(a) megacities			
(b) densification			
(c) expansion			
10 Role of planning authorities			

IV: FACTORS about WASTE	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
11 Levels of waste			
(a) composition of waste			
(b) food price			
12 Recycling			
13 Attitudes to waste			
14 Waste to energy			
(a) distributed energy supply systems			
15 Waste repurposing			

KEY FACTORS

V: FACTORS about ENERGY	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
16 Availability of fossil fuels			
17 Depletion of fossil fuels			
18 Availability of alternative fuel sources			
19 Viability of alternative fuel sources			
20 Investment			
21 UK Government policy on renewable energy			
(a) levels of subsidy			

VI: FACTORS about WATER	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
22 Availability of drinking water			
(a) locally			
(b) nationally			
23 Availability of non-potable but safe water			
(a) locally			
(b) nationally			
(c) globally			

KEY FACTORS

VII: FACTORS about TECHNOLOGIES	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
24 Current or emerging technologies			
(a) precision farming			
(b) GM crops (incl designer crops)			
(c) other biotechnologies (incl, cloning, epigenetics)			
(d) medicine (e.g. new diseases, assistive technologies)			
(e) hydroponics & aquaponics			
(f) materials technologies: inedible (storage, packaging)			
(g) materials technologies: edible			
25 Semantic web or other data system developments			
26 New food storage systems			
27 Industrialised food stuffs (low/high nutrient value)			
28 Attitudes/public responses to new technologies			

KEY FACTORS

VIII: FACTORS about GOVERNMENT	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
29 Ability to influence public behaviour/opinions			
(a) level of political commitment			
(b) legislation (incl "nudge policies", taxation)			
(c) investment in education re food/health			
30 Ability to influence the market			
(a) level of political commitment			
(b) legislation (e.g. taxation, planning)			
(c) level of agricultural subsides			
(d) horticultural subsidies (e.g. in urban areas)			
31 UK government in power/state of UK politics			
32 Influence/power of developing economies			
(a) BRIC economies (UK currently net importer)			
(b) other economies (e.g. Africa)			
33 Changing UK regional political landscape			
34 Changing EU political landscape, incl EU legislation			

IX: FACTORS about EDUCATION	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
35 Food education (production & preparation)			
36 Re-introduction of food into mainstream			

KEY FACTORS

X: FACTORS about SOCIETY	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
37 Level of social cohesiveness			
38 Role of community initiatives			
39 Food scarcity (divisive or unifying)			
40 Public attitudes			
(a) food sourcing			
(b) recycling			
(c) food preferences (incl GM food)			
(d) methods of food production			
(e) "green" (e.g. allotments, rainwater, roofs)			
41 Size of homes in the UK			
42 Age of Birmingham housing stock (70% pre-1930s)			
43 Shopping patterns and habits			
(a) online			
(b) local/hyperlocal			
(c) hypermarkets			
(d) in/out of town			
44 Time spend preparing/consuming food			
45 Value placed on food			

KEY FACTORS

X: FACTORS about SOCIETY (continued)	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
46 Power of big retailers (currently supermarkets)			
(a) impact of resource scarcity on bargain product			
(b) monopoly on food psychology			
(c) food mix on offer & its price			
47 Social readiness for change/response			
48 Taste preferences			
49 Age cohorts			
50 Aging population & available workforce			
51 Skill demographics			
52 Pandemic/s			
53 Self-sufficiency (individual movements)			
54 Self-sufficiency (nationally, either here or overseas)			
55 Working patterns			
56 "Unemployment"			
57 "Worklessness" (e.g. children, retired, carers)			
58 Geo-political impact (war and/or climate change)			
(a) mass migrations			
(b) pressure on resources			

KEY FACTORS

XI: FACTORS about CULTURE	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
59 Social value of food			
(a) "eating as social glue"			
60 Food prices to consumers			
61 UK disposable income levels			
(a) proportion of UK income spend on food			
(b) proportion of Birmingham income spend on food			
62 Food quality			
63 Education			
64 Demand			
65 Scarcity			
(a) impact of UK consumer hyper-selectivity			
(b) external-to-UK demand on basic foodstuffs			
(c) excessive demand			
66 Evolution of UK palate			
(a) ancestral evolutionary forces (e.g. for salt, sugar)			
(b) new taste development			

XII: MISCELLANEOUS	importance (1-10)	predictability (1-10)	examples &/or what it might mean for Birmingham (& hinterlands)
67 Redundant infrastructures			
68 Ambient information			
69 Surveillance			
70 Family structures			