



Oxford Futures

transport options

Summary of the first of a series of workshops on future growth in Central Oxfordshire.

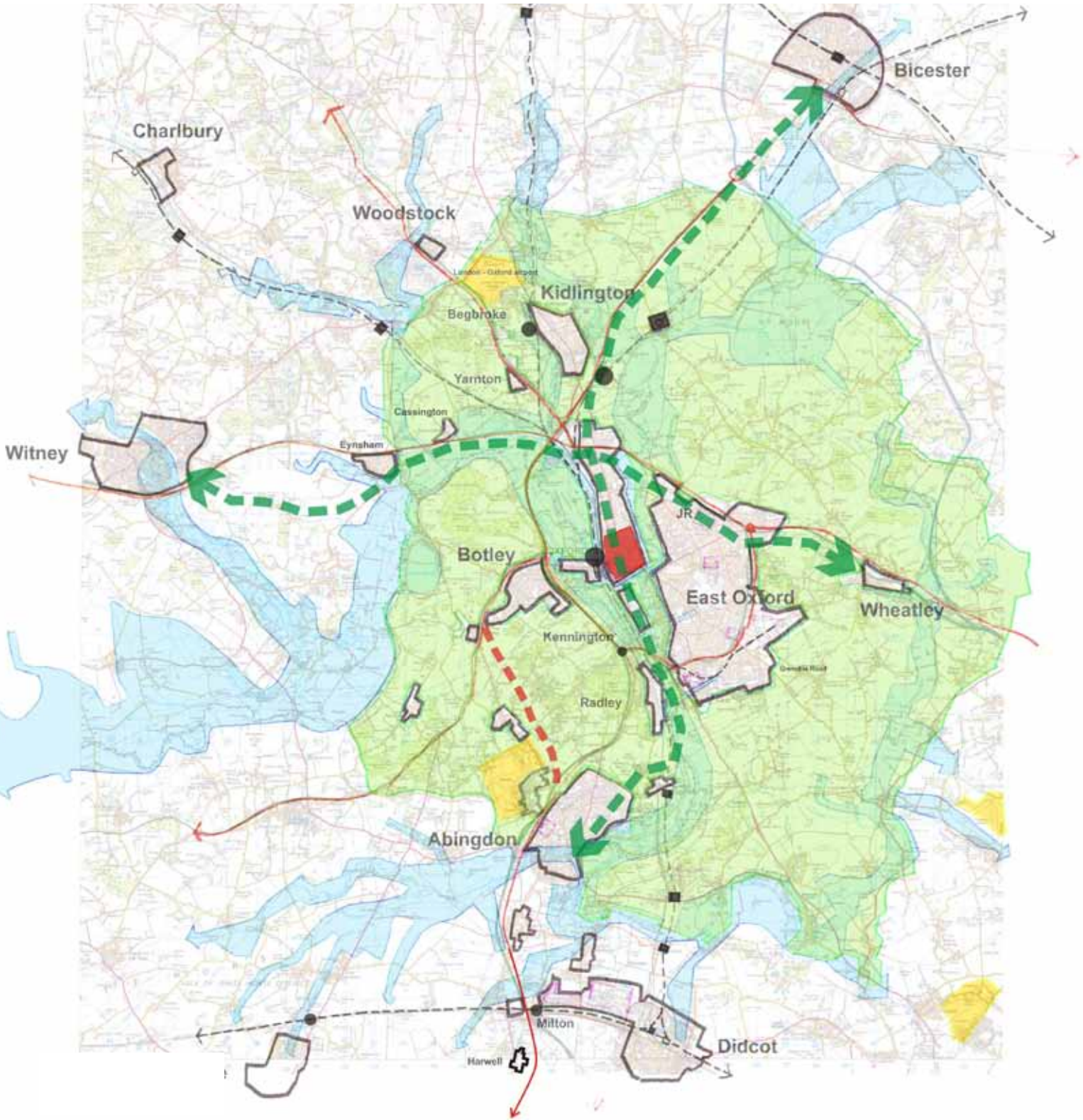
Keble College,
November 13th 2014



Oxford Futures

LEGEND

- Existing train station
- Potential new train station
- Existing airfields
- Green belt
- Flood plain
- Railway line
- Potential A34 diversion
- Oxford City Centre
- Potential fast bus route



Published by

URBED (Urbanism, Environment, Design)

The Building Centre, 26 Store Street, London, WC1E 7BT

Email info@urbed.coop

December 2014

1. Introduction

This report outlines findings from the first in a new series of workshops on future growth in central Oxfordshire. The workshops are aimed at bringing together interested people in the universities, local authorities and the wider community. It was sponsored by URBED with Keble College, and followed on from URBED's winning submission for the 2014 Wolfson Economics Prize, which tests out the idea of doubling Oxford in size. The report summarises the presentations by Dr Nicholas Falk, Professor Danny Dorling, Bev Hindle, Dr Fiona Ferbrache, and Pete Redman, including some of their slides, along with brief conclusions from the workshops on planning, transport and finance. The next in the series will be on affordable housing options at Oxford Brookes followed by one on conserving the character of Oxfordshire and reducing carbon emissions in Wallingford. The event was based on the following programme:

Introduction by the Chair: Dr Nicholas Falk, Founding Director of URBED (Urbanism Environment Design).

Four leading thinkers illustrated key transport research findings including:

- ❑ **The Housing Crisis in Oxford** - the need for expansion and development
Professor Danny Dorling - Halford Mackinder Professor of Geography, Oxford
- ❑ **Developing a Spatial Growth and Investment Strategy for Oxfordshire:** Bev Hindle - Deputy Director: Strategy, Infrastructure and Planning, Oxfordshire County Council
- ❑ **Urban Rapid Transit** - the economic impacts of Light Rail Transit: Dr Fiona Ferbrache - Visiting Research Associate, Transport Studies Unit, Oxford.
- ❑ **Funding Infrastructure through Land Value Uplift:** Pete Redman - Managing Director Policy and Research, TradeRisks Ltd

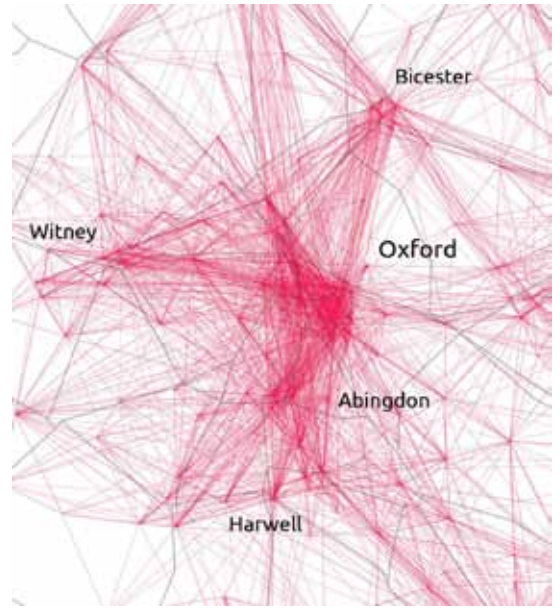
Following these presentations, delegates were invited to discuss, in groups, Oxford's constraints and opportunities before identifying key ways in which a Garden City initiative could be taken forward. The group discussions were:

- ❑ Constraints and opportunities of the URBED Garden City Model in Oxfordshire
- ❑ How can we create a Garden City for Oxfordshire
- ❑ How can we create on-going bridges between researchers and research users?

2. Presentations

2a. Nicholas Falk: URBED

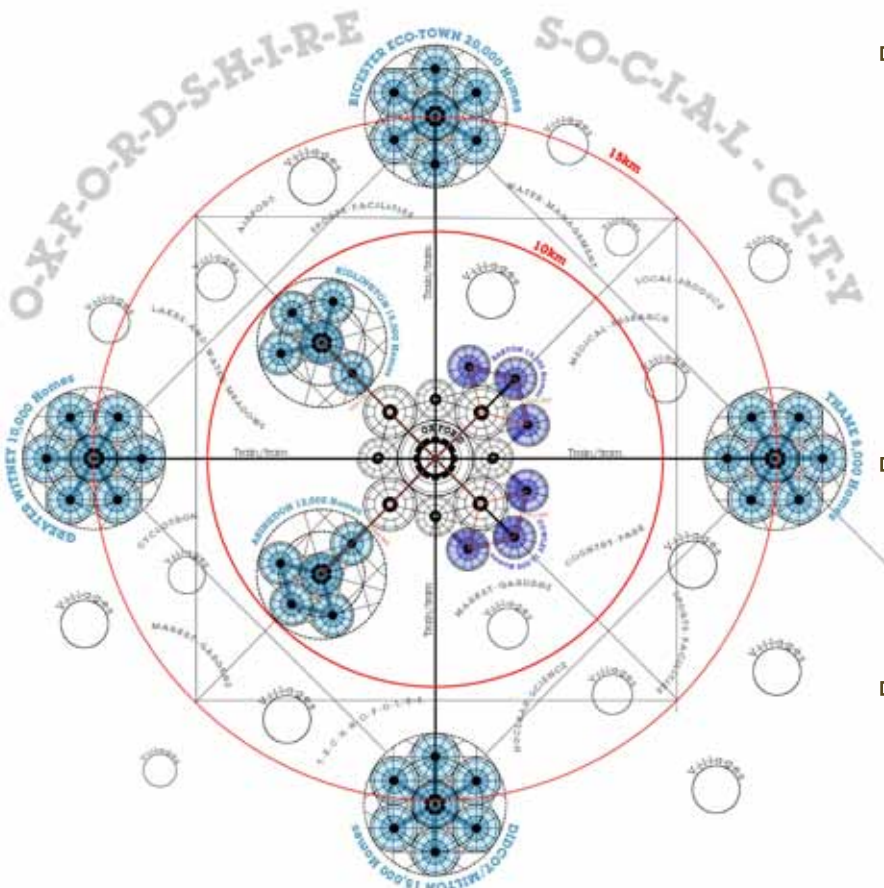
Nicholas Falk (founder director of URBED) opened the half day event with a brief explanation of URBED's proposals for Uxcester Garden City, an imaginary place, and their application to Oxford, along with some relevant precedents. Key points were:



URBED's adaptation of the Snowflake Plan in their Wolfson submission to the situation in Oxfordshire

- Ebenezer Howard's original idea was of a Social City, a series of settlements that combined the best of town and country, linked by rapid transit, and funded by ploughing back the 'unearned increment' of rising land values into social and physical infrastructure.

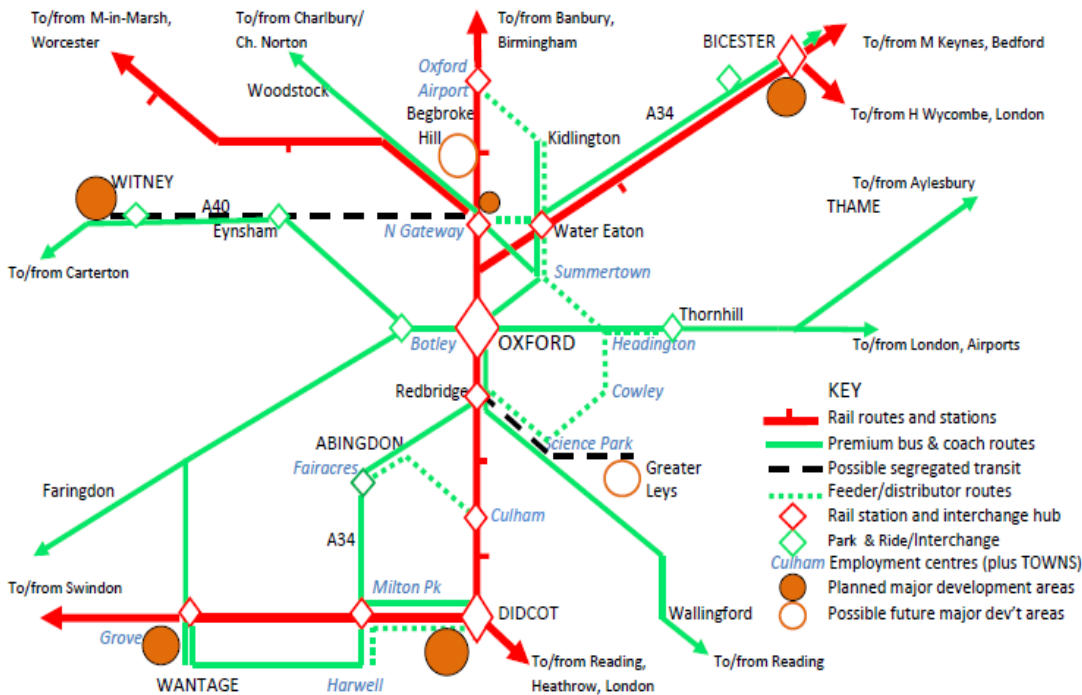
- URBED's main idea is that the Wolfson aims of building garden cities that are 'visionary, popular and viable without public subsidy' can only be achieved by extending places that are already successful, 'grafting onto strong rootstock' 'This could be done through a Garden City Foundation that assembles land at close to its current value.



- That meant expanding into the surrounding countryside, but it was better to take some 'confident bites' out of the green belt than 'nibble at the edges'. Calculations showed that Oxford could double in size without building on any flood plains or Areas of Natural Beauty. This would take at most 5% of the Green Belt: in return protection could be offered to the hundreds of villages currently threatened by unwanted development.
- The example of Grenoble, one of Oxford's twin cities, shows how the city has grown around five new tram lines built in the last three decades, to become France's leading science city.
- Freiburg in South West Germany provides benchmarks in transport and energy terms for Oxford to maintain its position as one of the leading world university and historic cities.



Grenoble's tram system offers a possible model



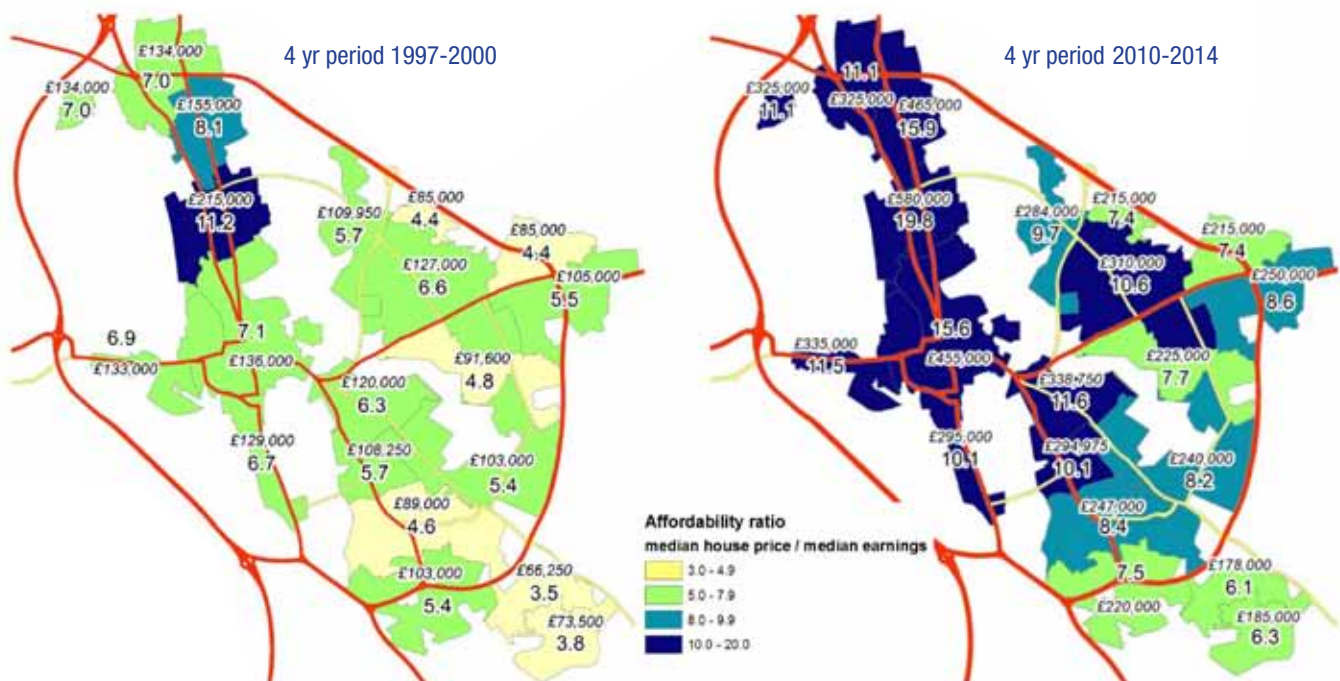
Peter Headicar's suggestion for an integrated transport system for Oxfordshire

2b. Danny Dorling: Halford Mackinder Professor of Geography Oxford

Danny Dorling Halford Mackinder Professor of Geography and author of 'All that is Solid' highlighted the importance of further and planned growth to Oxford's future success in all respects:

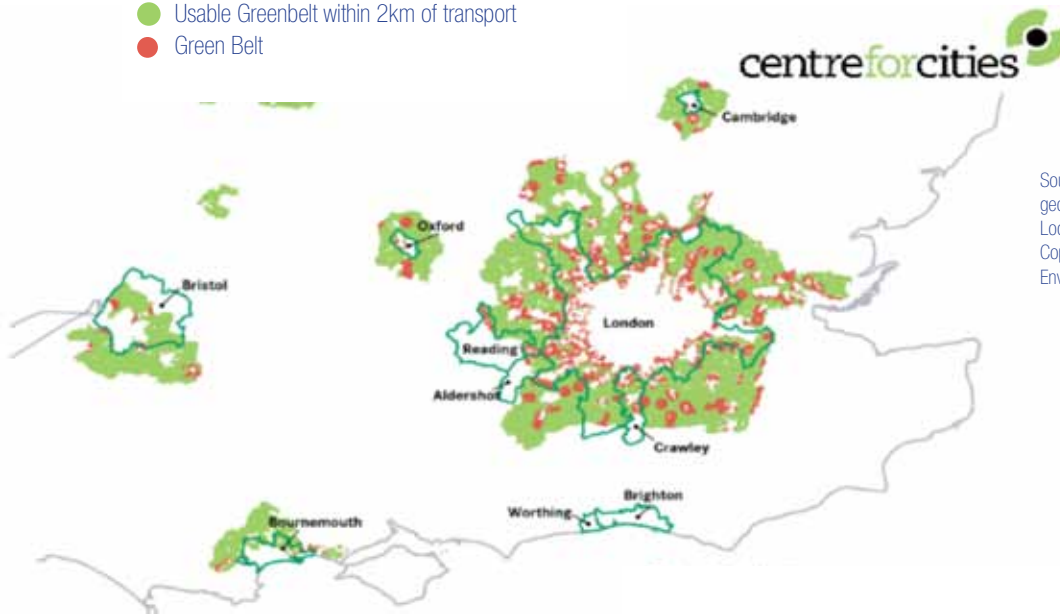
- Oxford is a success story, and the environment has been greatly improved over the last 30 years.
- As a result Oxford is now one of the most expensive cities to live in, with a very cosmopolitan population (28% born abroad).
- The University will only maintain its premier international position (which is slipping) by being able to hire and retain good researchers.
- At present it is hard even to rent somewhere if you have small children, and the city cannot cope with more cars.
- Demand will expand even further as more people move to Oxford and live much longer.
- Hence some radical changes are essential to cope with congested roundabouts on the edges eg one way down the Woodstock and Banbury Roads to free up space for other options.
- And new housing needs to be concentrated within a five mile range of the city centre.
- New housing sited further out than five miles from the city centre needs to be linked to the centre by fast and clean public transport so that people are not reliant on cars

Affordability ratios and median house prices in Oxford, 1997-2000 and 2010-2013: This is calculated as the median house price for the area divided by the median gross full-time annual wage for an Oxford resident.



House price data: Land Registry © Crown copyright 2014 | Median earnings from the Annual Survey of Hours and Earnings, Office for National Statistics Maps © Crown Copyright and database right 2014. Ordnance Survey 100019348. Mark Fransham | Social Research Officer | 01865 252797 | mfransham@oxford.gov.uk | www.oxford.gov.uk/oxfordstats | Twitter:@OxCityStats | Dec 2014

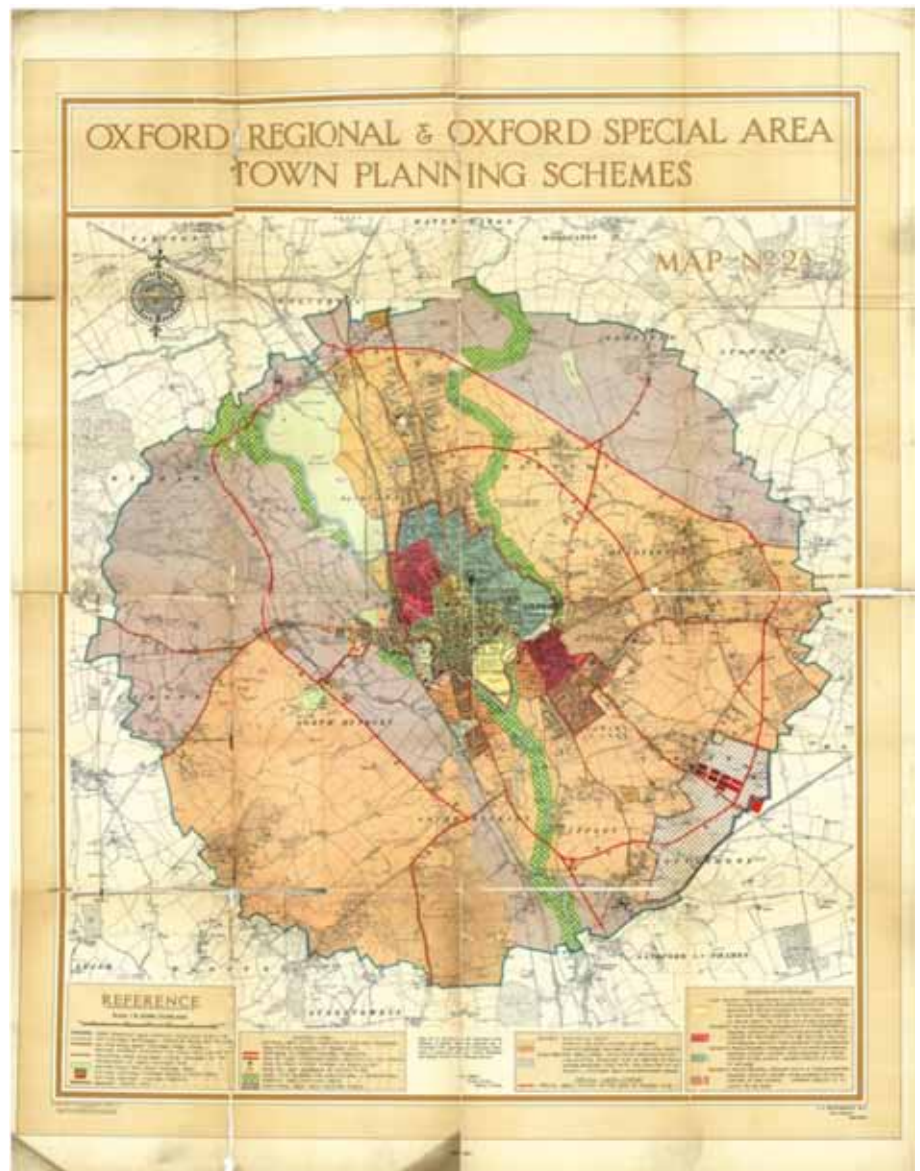
- Least affordable cities
- Usable Greenbelt within 2km of transport
- Green Belt



Source: DCLG 2007, Green Belt geographical extents provided by English Local Authorities, Contains OS Data, Crown Copyright and database right 2014 and Environment Agency Data

The question is how, Oxford may expand. 'If' is less of an option

This map shows the 1927 Oxford Regional and Special Areas Town Planning Scheme published in 1927. The colours reflect the densities of housing that it was proposed should be built in each area. The area prone to flooding and reserved for agricultural and recreational use was cross-hatched green illustrates how the extent of the flood plain was under-estimated. Few people owned cars in 1927 and so it was assumed that the majority of the expanded population would walk, cycle or use public transport. This partly explains the circular nature of the proposed extent of the expansion. In the almost 90 years since the plan was first drawn car use became more and more common. However, by 2011 walking, cycling and public transport were the modes of transport becoming more and more popular again in the city.



2c. **Bev Hindle:** Oxfordshire County Council

Bev Hindle (Deputy Director Strategy and Infrastructure Planning at Oxfordshire County Council) explained why a new transport strategy is needed to ensure that growth is focussed in places where the infrastructure can cope:

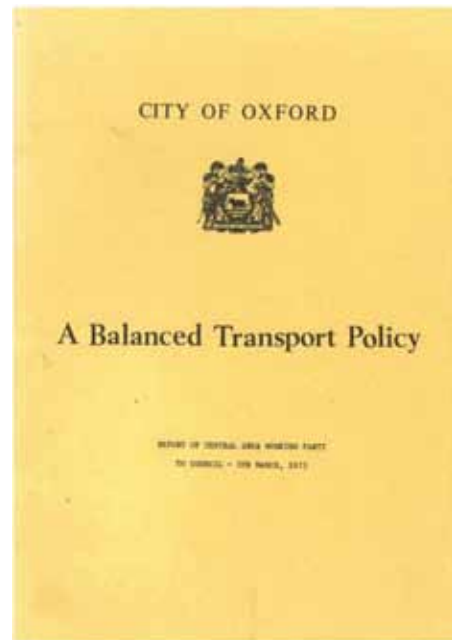
- ❑ Oxford has long been a pioneer in transport in the UK eg Park and Ride, and twenty years ago the last transport strategy set out 100 measures to give pedestrians a better life.
- ❑ The situation is changing again, for example with more jobs now in the Eastern arc than in the city centre, so if innovation is to take place anywhere it should be in Oxford, and along the Technology Spine running from Bicester to Didcot/Harwell.
- ❑ Major national investment is going into improved infrastructure (£500 million on rail improvements, £75 million on roads) which will make access to places such as Bicester and Heathrow much easier.
- ❑ We now need to explore a range of other new ideas, such as extending the Chiltern Line through from Marylebone to Cowley, with new stops at Magdalen Science Park and at Redbridge Park and Ride.
- ❑ We now need an agreed strategy (not a statutory plan) that starts to ‘connect up the dots’ as the costs of uncoordinated dispersal would be huge (in terms of congestion, lost GVA, and other respects).



Top - Queen Street in 2009 and...



Below - The same view in 2009



With the adoption of its The Balanced Transport Policy in 1973 Oxford was one of the first cities to strike a balance between limiting the use of cars and persuading people to use the bus, cycle or walk



There are plans for major growth in Oxfordshire (**below left**) much of which is focussed along the Knowledge Spine (**below right**). Connecting Oxfordshire envisages radical transport improvements along this spine (**above**)



Oxfordshire growth plans to 2031



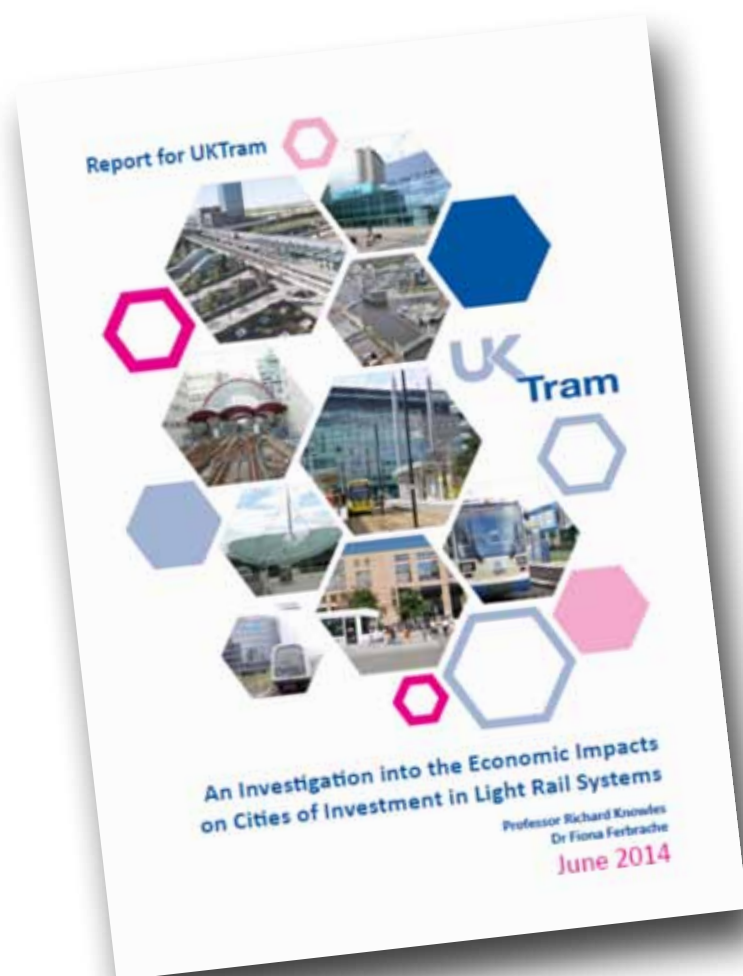
2d. **Fiona Ferbrache:** Keble College and Oxford Brookes

Fiona Ferbrache (Human Geography lecturer at Keble College, and Oxford Brookes; Visiting Research Associate of the Transport Studies Unit, Oxford) focussed on the economic benefits that could be secured from a light rail system, (which URBED had shown could be financed out of land value uplift to the North of Oxford):

- The UK has spent about 40% less in GDP on transport than competitors in Europe since 1960s, and in the UK there is a dearth of light rail systems (see Knowles and Ferbrache 2014)
- Congestion costs the UK economy between £7 and £30 billion per annum (Shaw & Docherty 2014)
- Rail investment needs to be supported by land use policies and traffic management schemes if the potential benefits are to be secured
- There are some good UK examples of successful light rail schemes, such as the Docklands Light Railway and the Manchester Metrolink, but 'geography matters' - the impacts are different in different places.
- Success stories, such as Manchester, demonstrate the importance of other factors, in addition to transport, including:
 - Local political leadership and project champions
 - Public-private partnerships
 - Integrated transport and land use planning policies

An extensive research study for UK Tram established the economic impacts of light rail on cities, including (see Knowles and Ferbrache 2014):

- The ability to eliminate transport constraints such as congestion (e.g. Manchester)
- Extension of labour market catchment areas (e.g. Croydon)
- Supporting Smart Growth and Transit Oriented Development (TOD) e.g. Montpellier and Grenoble
- Boosting the city's image through pedestrianised and traffic free centres e.g. the 'Grenoble effect'.
- Land and property value increases. If captured, these can help to support development of transport infrastructure.





Transport hubs can unlock land value -
Ørestad New Town, Copenhagen
Source: By og Havn, Copenhagen, in Knowles and
Ferbrache 2014



The 'Grenoble Effect':
Before and After
Source: Pitrel (2008) in
Knowles and Ferbrache 2014

St Giles, Oxford, with mass transit and pedestrianised space. Source: www.oxfordshire.gov.uk



2e. Pete Redman: Tradewinds

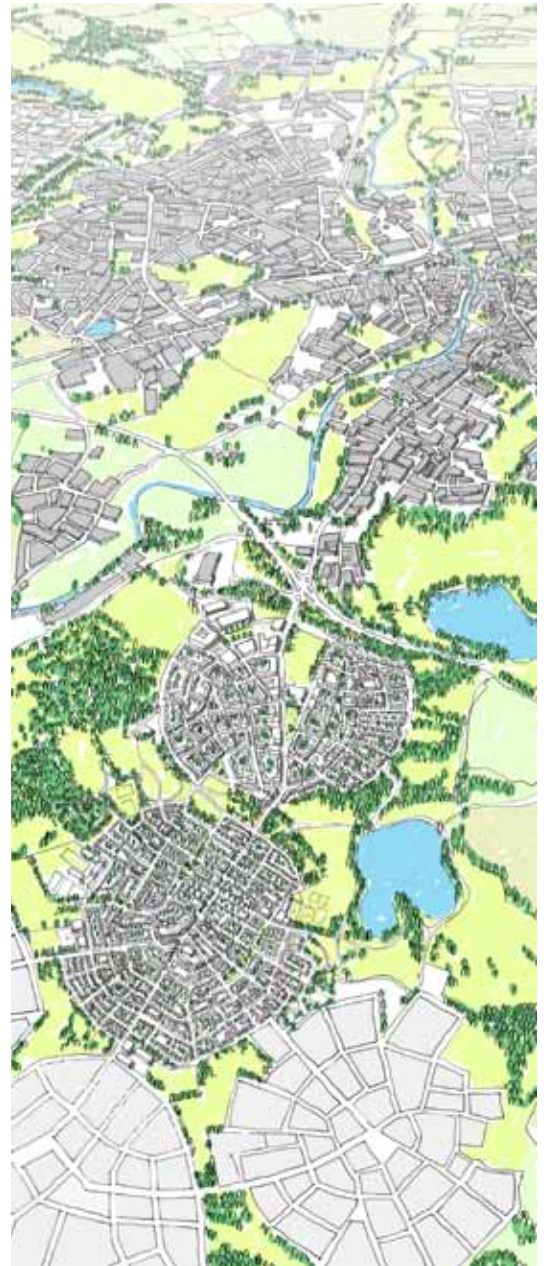
Pete Redman (director at TradeWinds responsible for research) showed how the URBED submission to the Wolfson Prize had solved the problem of funding a new garden city:

- Out of the £50 billion a year of investment needed to renew old infrastructure only about 3% comes from developers (the Community Infrastructure Levy only yields about £0.4 billion)
- Even in a good year developer contributions are quite small (about a quarter of the cost of related infrastructure, which comes to as much as the cost of building a new home)
- Hence it is vital to locate new housing in locations with good amenities, not like most current housing estates, and not all the housing we need can come from infill sites
- Adding 50,000 to Oxford's current 58,000 homes over a thirty year period could yield £3.3 billion for infrastructure, nearly a billion for transport alone
- By building on just 2.4% of Oxford's green belt (as a garden city would create lots of its own green space) would produce
 - Accessible open space
 - A tram system on Continental lines
 - Economic growth
 - World class status
 - With a peak debt of around £150 million.
- Funding could come from a variety of sources, including a bond (and TradeWinds has already helped housing associations raise £4 billion) provided the developments are in the right location, capitalise on existing or planned infrastructure, and can tap into the land value uplift.

	HA	Rate	Total (£M)
Total land acquired	6,000	£200,000	1,160
...allocated as open space	3,000		
...allocated as development land	3,000		
Infrastructure costs			4,115
Affordable Housing Budget			423
Financing costs			293
TOTAL		TOTAL Cost	5,989
Foundation Receipts			
Housing plot sales	2,300	£2.34M	5,421
Commercial development	260	£1.5M	390
Retail development	40	£1.0M	40
CIL Share		50%	423
TOTAL Receipts			6,273
Balance			284

Figures are rounded so may not total exactly as shown

Item	Unit	Quantity	Rate	Total
EDUCATION				
Primary	No.	12	£10M	£120M
Secondary	No.	4	£25M	£100M
Other	Various			£35M
			sub total	£255M
Open scape/land-scape/recreation				
	HA	1,000	£250,000	£251M
TRANSPORT				
Minor Roads	Km	12	£7.5M	£90M
Major Roads	Km	4	£22.5M	£90M
Tram to city centre	Km	6	£20M	£120M
Tram within N'hood	Km	6	£10M	£60M
Other Public tran	Various			£50M
				£410M
HEALTH				
Primary	No.	5	8	£40M
Hospices/nursing homes	Part	2	10	£20M
				£60M
Land preparation				
	HA	2,000	£50,000	£101M
Distinctive Quality				
	Various			£100M
Admin / marketing				
	Years	15	£3M	£45M
Contingency				
				£100M
TOTAL				£1,372M



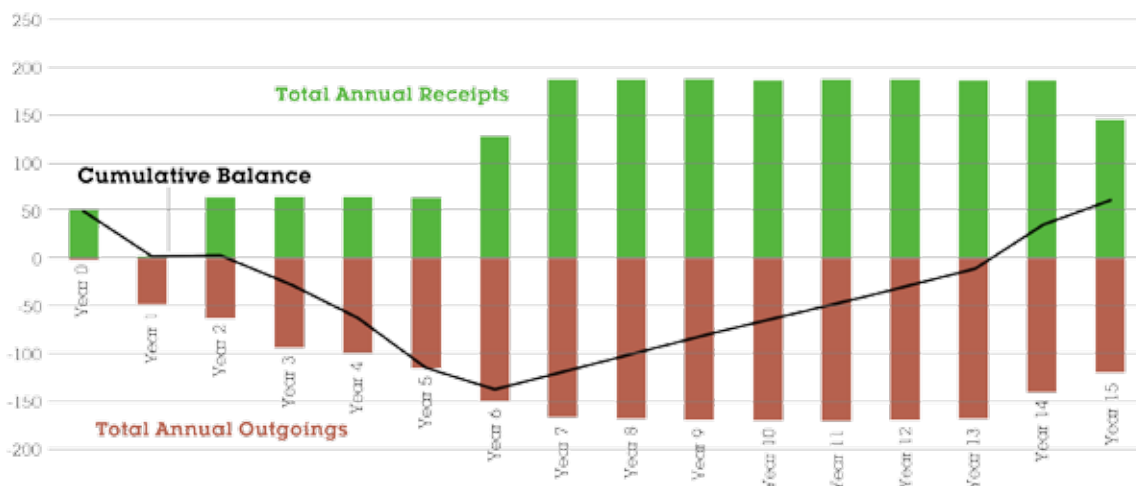
Figures are rounded so may not total exactly as shown

The tabs on these pages come from Pete Redman's work on the Wolfson Submission and relate to the proposals for Uxcester, which is of course fictional.

Opposite: This shows the suggested land deal for the whole of the scheme covering 6,000HA and 69,500 homes.

Above: The infrastructure costs for one of the urban extensions including just over 23,000 homes.

Below: The Cashflow for the development of one of the neighbourhoods.



3. Conclusions

After a short question and answer discussions, which addressed how land value could actually be captured, workshops focussed on three main topics:

1. Land use planning

The workshop convened by Danny Dorling concluded that:

- a. Concentration needs to be shown to be more attractive than dispersal
- b. Apartment living should be promoted better
- c. We need to sell the health benefits of compact (walkable) cities
- d. The benefits for rural areas have to be spelt out
- e. Presentations should be made to district councils



2. Housing

The workshop convened by Sue Brownill and reported back by Councillor Colin Cook concluded that:

- a. A new spatial plan needs to look at all part of Central Oxfordshire, not just Country towns, with the aim of rebalancing communities through growth, including taking account of school capacity (eg new private schools might best be located on the ring road)
- b. Preference in new homes needs to go to those who work in Oxford, not Londoners moving out
- c. New models for affordable housing are required
- d. Better use should be made of public land eg through swap deals, and staffing up a development agency to serve the needs of Oxfordshire as a whole.



2. Transport

The workshop convened by Peter Headicar concluded that:

- a. The priority is to reduce excessive levels of traffic in the city (for example through entry tolls or workplace parking charges) given the prospect of significant population growth in Central Oxon. Many people currently drive into or within the city when there are reasonable alternatives available.
- b. Charging mechanisms generate a revenue stream which can be utilised to invest in sustainable travel, thus creating a 'win-win' virtuous circle.
- c. A key issue is where and how opportunities to transfer to other modes can be created as existing Park and Ride sites are 'too close in' and generate unnecessary vehicle miles and congestion. Transfers would be facilitated by a 'smart card' payment system that should include bike hire
- d. Viewed in isolation tram lines on the city's main radial routes (funded through urban extensions) appear attractive. But if a number of other bus services need to operate on all corridors would both modes in combination be the most practicable and cost-effective solution, especially as far as 'fitting in' stops and services within the city centre is concerned?
- e. New developments should be sited close to the city and make use of additional stations on existing rail lines and/or the re-use of former lines to Cowley and Witney, plus a 'transit' route to serve the city's Eastern Arc (Headington-Cowley) as well as transfer opportunities at Water Eaton and Redbridge.
- f. The siting of development and the form of public transport should complement past and planned infrastructure investment and established travel patterns to achieve the cost-effective evolution of the network as a whole.

3. Finance

The workshop convened by Pete Redman concluded that:

- a. District councils' ambitions should be raised through efforts to improve connectivity and protect the quality of ALL the villages
- b. Legislative changes would be needed to capture land value uplift, though most of the other powers already exist, provided that the County uses its borrowing powers to support smarter growth
- c. Work is needed to establish land ownership and attitudes, with CPO powers in reserve
- d. Existing under-used infrastructure should influence where development takes place.

Overall recommendations

1. **The idea of workshop discussions on specific topics between experts and members of the community should be continued (and a proposals for Knowledge Exchange has since been developed).**
2. **Discussions should focus on the factors to be considered in assessing alternative growth scenarios for different levels of concentration vs dispersal, such as affordable housing and the distinctive character of Oxfordshire.**
3. **Demonstration projects (as proposed in the Oxford \Low Carbon Economy report) are needed to help convince the sceptics, including some 'early wins'.**
4. **A spatial strategy needs to engage the support of all the stakeholders to avoid piecemeal and isolated developments.**
5. **Feasibility studies need to be commissioned for specific options (such as modal interchanges and rapid transit systems) .**
6. **Further research is needed into how land values can be tapped, and the costs of new infrastructure shared fairly, as well as into the impact of different growth scenarios on a range of objectives.**

