

SOCIAL CITIES

FREIBURG FASHION

Wolfson Economics Prize MMXIV

Primary Submission

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Make no little plans. They have no magic to stir men's blood and probably themselves will not be realized.

Make big plans; aim high in hope and work, remembering that a noble, logical diagram once rewarded will never die, but long after we are gone will be a living thing, asserting itself with ever growing insistency.

DANIEL BURNHAM
The Plan of Chicago, 1909

It's the economy, stupid.

BILL CLINTON
Election Slogan, 1992 (coined by campaign strategist James Carville)

01

PRESENTING OUR VISION	6
The “Freiburg Model”	8
Density, Public Transport and Urban Form.	10

02

FINANCING THE VISION	12
Some History	13
The Freiburg Financial Model	14
Ebbsfleet: Paradox of a “Stuck Site” Garden City	15
Summing up the UK Experience: Three Options	17
Our Model	17
Accountability	18
Viability	19
Long-term management	20
Popularity	21
The City of Mercia: Great Central Garden Cities	22

03

REALISING THE VISION	22
Great Central Garden Cities	23
The City Palatine of Lancashire:	
Palatine Lancashire Garden Cities	27
Fylde Garden City	29
Preston Garden City	30
Next steps	31
References	32

INTRODUCTION

1. Important note to the Jury:

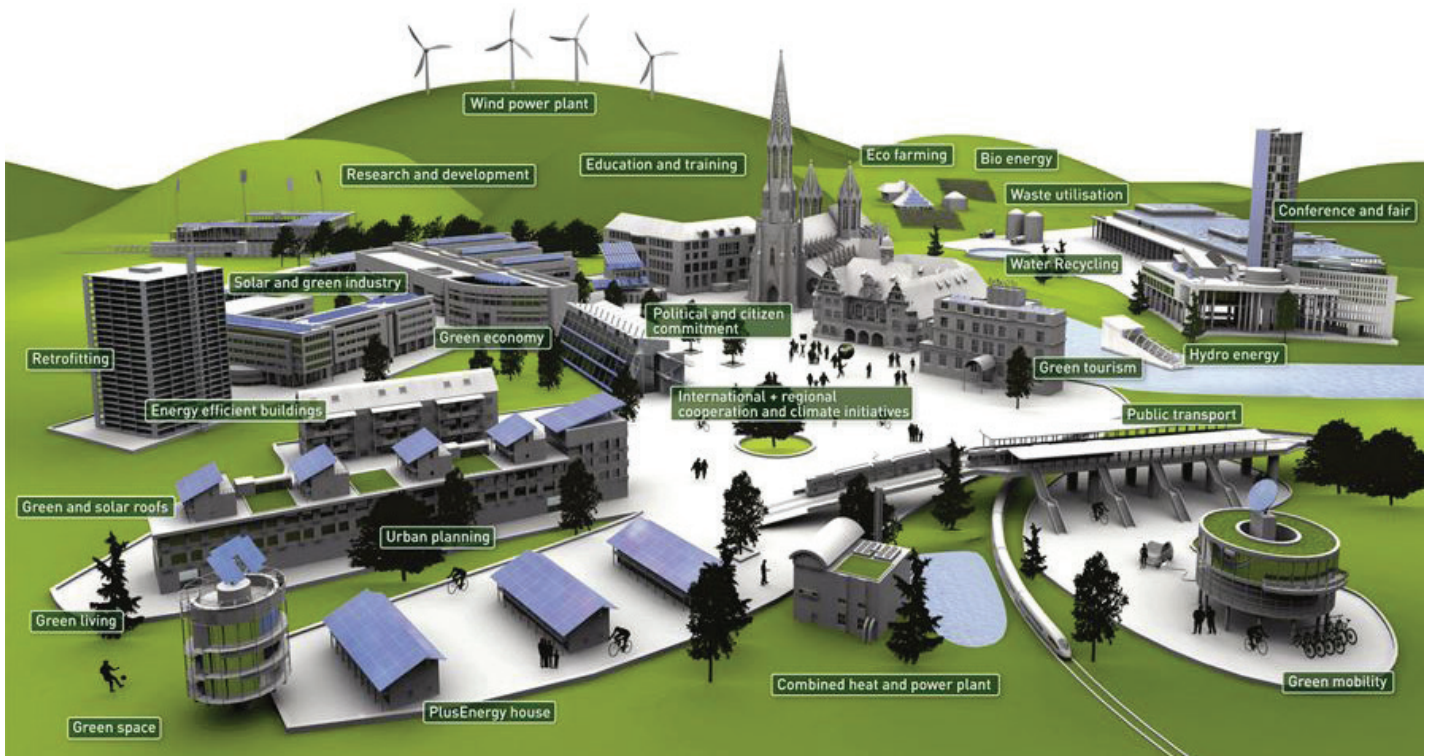
This submission is deliberately designed as a first-stage outline for further development. It sets out a central vision for 21st-Century Garden Cities, develops the financial structure needed to achieve it, and works up outline physical masterplans. It assumes that a detailed business plan and detailed designs, which would be closely integrated into a single phased development programme, would be submitted at Stage 2 of the competition.

2. This bid combines **two key elements**:

- **Economy.** This is an **economics** prize. At its core is a fully-developed financial concept for the development of a garden city incorporating all necessary infrastructure – including, crucially, the transport infrastructure that will raise land values and so make the scheme viable: the principle embodied in the famous dictum of the economist Colin Clark, “Transport, Maker and Breaker of Cities”¹.
- **Design.** The design concept marries **two classic Garden City design traditions**, a century apart: Ebenezer Howard’s **Social Cities** (Group of Slumless Smokeless Cities) of 1898, and the **City of Short Distances**, developed by Professor Wulf Daseking and his design team for the City of Freiburg (Germany) between 1990 and 2010.



¹ Clark, C. (1957) Transport: Maker and Breaker of Cities. *Town Planning Review*, 28, 237-50. Colin Clark (1905-1989) had a distinguished career as both a civil servant and academic in the UK and Australia. J.M. Keynes wrote of him “Clark is, I think, a bit of a genius: almost the only economic statistician I have ever met who seems to me quite first-class.” In 1984 he was named by the World Bank as one of the pioneers of development economics.



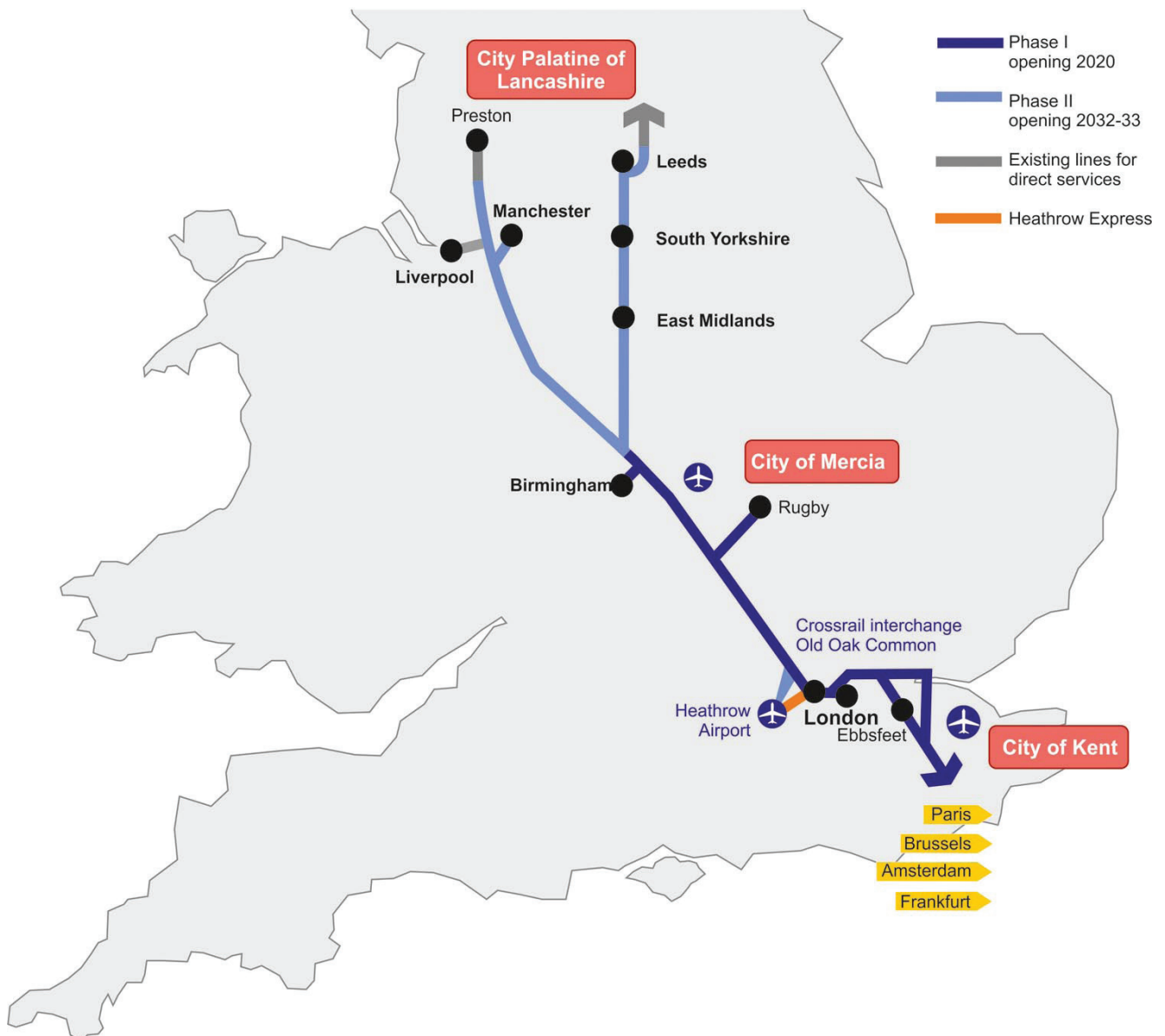
3. The proposal consequently has three sections:

- **Presenting our Vision:** this outlines the way in which we adapt Howard’s classic concept to the conditions of the 21st Century, through the Freiburg model of “the City of Short Distances”, and apply it on a much larger spatial scale.
- **Financing our Vision:** this analyses the long history of financing Garden Cities, through Howard’s original cases at Letchworth and Welwyn, through the post-World War Two UK New Towns, and more recently the Freiburg development finance model. From this it produces a composite structure for financing a new generation of Garden Cities.
- **Developing our Vision:** this presents proposals for two Garden City clusters, one on the edge of Greater South East England, based on the existing towns of Daventry and Rugby, the other in North West England, on either side of the City of Preston.

It ends by outlining how we would proceed to develop this threefold vision if we are selected to go forward to Stage 2 of the competition.

4. We propose to create two **Social City Clusters of Garden Cities**, reinterpreting Ebenezer Howard's famous Social Cities diagram, at two key locations: the first, the **City of Mercia**, in the South Midlands at the fringe of South East England; the second, the **City Palatine of Lancashire**, in the heart of urban North West England.

5. Corresponding precisely to Howard's original prescription, both would be served by a train line, now a 21st-Century high-speed version: the future High-Speed Two. From a central High-Speed Train hub station, local transport networks – the 21st-Century equivalents of Howard's Inter-Municipal Railway, comprising tramway, tram-train, BRT (Bus Rapid Transit) and PRT (Personal Rapid Transit) – would extend outwards, linking the constituent parts into closely-networked city regions.



6. Within these clusters, four Garden City examples would apply the “Freiburg Model”: the principle of “the City of Short Distances”, developed by Architect-Planner Professor Wulf Daseking in his plans for Vauban and Rieselfeld in Freiburg, using strong dedicated public transport corridors – here BRT (Bus Rapid Transit), modification of the tramway in Freiburg, adapted to English Garden City conditions - direct from the high-speed train stations, into the hearts of each district.



7. These Garden Cities would be created by a **new form of agency: a public-private partnership embodied in a Development Corporation**, modelled on the partnership New Towns of the 1980s (Milton Keynes, Peterborough), adapted to the changed conditions of the 2010s.

8. The two city clusters would be developed in sequence:

- **The City of Mercia** would be built between 2017 and 2026, to anticipate the opening of Phase One of HS2 and a proposed HS2 branch to serve the new city cluster, terminating at Rugby Parkway north of Rugby.
- **The City Palatine of Lancashire** would be built between 2018 and 2030, between the completion of the North West England rail electrification programme and the opening of Phase 2 of HS2 to Preston in 2032; it would coincide with a further programme of transport improvements, outlined in the EU SYNAPTIC document S-Map 2030 North West (2013), which will provide the necessary infrastructure base.

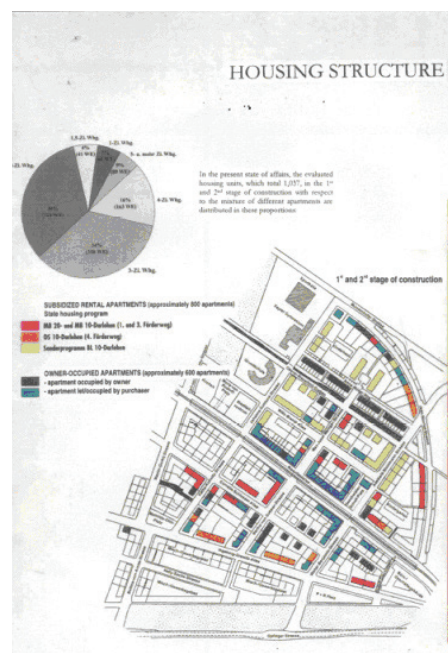
The “Freiburg Model”

9. In designing these clusters, we have followed **two basic guidelines**:

10. First, the “**Freiburg Model**”. The City of Freiburg has achieved a worldwide reputation for its achievement of sustainable urban design. Professor Wulf Daseking, who was the city’s chief architect-designer for 28 years until his retirement in August 2012, writes:

“There is one point which is absolutely necessary when you want to go on . You need some persons who will write down a program for the new areas. How will we live in future ! ?? In which area do we want to live?? That discussion has to be made ...and also has to be decided. The program is the key for the success!!!! Traffic / Energy / Waste / Water ...and of course the most important decisions will be the mixture of housing ..the private and open public infrastructure ...the natural resources - as ground and so on..... The first step can be that the decision is made that new areas have to be built ...the second must be - to write down a creative program which leads to the future....In this way I did it in Rieselfeld and also in Vauban ...and all the other smaller areas. Besides that – the most important point was that the new developments (Rieselfeld and Vauban) had to be financed separately – without touching the budget of the city ”.

11. The Freiburg Principles are set out in the **Freiburg Charter**, reissued in 2012 (Annex A). Professor Daseking has additionally produced a set of key urban design principles, developed for the Rieselfeld area of Freiburg, for our urban design teams, which are set out in the diagrams below.



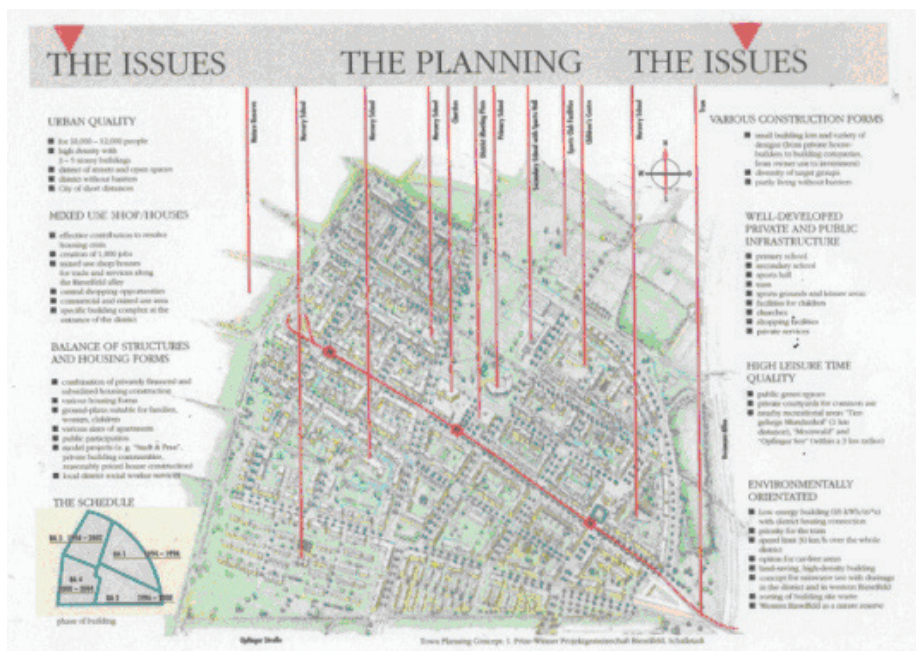
12. The detailed design concepts underlying these principles are set out, for a variety of urban locations and at different densities, in Professor Daseking's **Freiburg Portfolio** (Annex B).

13. Second, the **Eco-Town Guidelines**: the comprehensive set of guidelines set down in the government prospectus for competitively-tendered Eco-Towns, in April 2008 (Annex C). These, based on studies of international best practice by the Town and Country Planning Association, lay out standards for Environment and Carbon; Design; Transport; Community; Jobs and Homes; Community; and Land Use.

14. These two sets of principles are embodied in basic design guidelines for all the sites:

- **Shopping and services concentrated in existing town centres**, increasing their attractiveness.
- **New urban extensions** within easy reach (15-20 minutes) of these centres by public transport, built along:
- **Development corridors** centred upon strong public transport (tram, BRT) spines, with all housing located within easy walking distance (400m.) of a public transport stop.
- **Mixed use**: local services, schools, clinics integrated into the residential areas

There is a subtle variation here on the cluster concept embodied in Howard's original Social Cities principle: **to minimise travel distances, the corridors are made continuous**, with only minor park breaks to accommodate natural features like small streams or valleys.



STADT FREIBURG I. BR. NEW URBAN NEIGHBORHOOD RIESELFELD	
- Project Aims -	
MAIN AIMS	<ul style="list-style-type: none"> - Urban neighborhood for 12,000 inhabitants - Quick contribution to resolve housing crisis - Multiplicity
CITY PLANNING	<ul style="list-style-type: none"> - High density - Mixed use shops/houses - Small building lots and variety of structure - Clear hierarchy
ENVIRONMENT	<ul style="list-style-type: none"> - Low energy building (65 kWh/m²a) - Conception of rainwater drainage - Surface-saving building - Neighboring nature reserve - "Green wedge": high quality private and public green spaces
TRAFFIC	<ul style="list-style-type: none"> - First priority: streetcar, bicycle, pedestrian - 30 km/h in general - Partly carfree
SOCIAL STRUCTURE	<ul style="list-style-type: none"> - Suitable for women and children - Safety - 50% privately financed - 50% subsidized house construction - Good public and private infrastructure

Density, Public Transport and Urban Form

15. A key question is: what density, or range of densities, is appropriate for a Garden City or Garden Suburb? Traditional Garden Cities at Letchworth and Welwyn, and the postwar UK New Towns, characteristically had densities of 30/35 houses per hectare. Such densities should support a bus system but not a tram/light rail system (Rudlin and Falk 2009). In Australia, the Adelaide (guided) and Brisbane (unguided) BRT networks support very dense public transport penetration of suburban areas, with virtually all development in the Adelaide North East Corridor (for instance) within 500 metres of a bus stop.

Area	Units/Ha	Persons/Ha	Source
Low density detached – Hertfordshire	5	20	Urban Initiatives
Average net density Los Angeles	15	60	Newman and Kenworthy
Milton Keynes average 1990	17	68	Sherlock
Average density of new development in UK 1981-91	22	88	Bibby and Shepherd
Minimum density for a bus service	25	100	Local Government Management Board Sustainable Settlements Guide (assuming that the housing is occupied to capacity)
Private sector 1960s/70s – Hertfordshire	25	100	Urban Initiatives
Inter-war estate – Hertfordshire	30	120	Urban Initiatives
Raymond Unwin 1912	30	120	Nothing gained by overcrowding
Tudor-Walters 1919	30	120	Local Government Management Board's Manual on the preparation of state-aided housing schemes
Private sector 1980s/90s – Hertfordshire	30	120	Urban Initiatives
Hulme – Manchester 1970s	37	148	Hulme guide to development
Average net density London	42	168	Newman and Kenworthy
Ebenezer Howard - Garden city 1898	45	180	Tomorrow: A peaceful path to real reform
Minimum density for a tram service	60	240	Local Government Management Board Sustainable Settlements Guide
Abercrombie - Low density	62	247	Greater London Plan 1944
RIBA	62	247	Homes for the future group
New town high-density low-rise – Hertfordshire	64	256	Urban Initiatives
Sustainable urban density	69	275	Friends of the Earth
Hulme – Manchester planned	80	320	Hulme guide to development
Victorian/Edwardian terraces – Hertfordshire	80	320	Urban Initiatives
Abercrombie – Medium density	84	336	Greater London Plan 1944
Central accessible urban density	93	370	Friends of the Earth
Holly Street – London 1990s	94	376	Levitt Bernstein Architects
Holly Street – London 1970s	104	416	Levitt Bernstein Architects
Abercrombie - High density	124	494	Greater London Plan 1944
Sustainable Urban Neighbourhood (maximum)	124	494	URBED
Hulme – Manchester 1930s	150	600	Hulme guide to development
Average net density Islington - 1965	185	740	Milner-Holland
Singapore planned densities 1970s	250	1,000	Scoffham and Vale
Kowloon actual	1,250	5,000	Scoffham and Vale

1. The grey boxes show the source figure from which the density has been calculated
2. An average dwelling size of 4 bedspaces has been assumed throughout this table although it should be noted that this is higher than the average household size in the UK.

Source: Rudlin and Falk (2009)

In contrast, the Freiburg neighbourhoods of Vauban and Rieselfeld have layouts at 60-70 units/ha. These are very “urban” densities by UK standards, in the top band of four that would be typical for a garden city, accounting for only 10% of the total housing:

- Low density 20u/ha - 20% of housing - detached and semi detached on the periphery
- Garden suburb 30u/ha - 40% of the housing - classic Parker and Unwin semis with gardens
- Neighbourhood 45u/ha - 30% of the housing - semis, short terraces with a smattering of flats
- Local centre 60u/ha - 10% of the housing - terraces with a few flats.

The two “main bands”, comprising 70% of the total housing in the Garden City scheme, would be at densities perhaps half of those in Freiburg. Nonetheless, these should be perfectly capable of supporting a high-quality Bus Rapid Transit system.





16. The Prize Question is:

“How would you deliver a new garden city which is visionary, economically viable, and popular?”

However imaginative the basic concept, however good the physical design, the central test of the proposal must be its economic viability.

17. In creating a new generation of garden cities, there were, and are, **five major challenges**:

- **First**, to achieve large-scale plans that will enable a sustainable, balanced package of regeneration and new areas for fresh strategic growth to be identified in pressured areas (most concentrations are in southern and midland England).
- **Second**, to develop appropriate agencies and mechanisms to bring the identified strategic land forward in the right amounts and at the right times for these purposes.
- **Third**, to do so without putting excessive claims on the public purse. Traditional agencies that proved effective in past decades, like the New Town Development Corporations (long life bodies which invested public money and paid it back with interest) and their successors the Urban Development Corporations (who tried to do the same, but were micro-managed by the Government and outside London could rarely make a surplus), became suspect because they were of necessity locally bossy in political terms, but more significantly because they appeared to be public expenditure in an era of fiscal stringency. But private enterprise seems unwilling or unable to start to build the new homes and workplaces on the necessary scale, because private finance cannot provide sufficient mortgage funds for owner-occupied housing and the capacity of the UK development industry is debilitated. The problem is thus more intractable than ever: how to marry private finance - which is said to be abundant, and searching for safe investment - with strategic planning and public-interest land development funding, so as to put strategic development in the right places, producing a pattern of development that is convenient, efficient, equitable and above all sustainable.

- **Fourth**, specifically, to assemble the funds to pay for the necessary infrastructure. Development Corporations achieved it, but for ordinary areas and for over half a century, debate has raged in this country over the right way to recoup the share of the profits from land development that has been generated by the community and rightly belongs to the community. The moral case is also founded in equity, since public agencies have had to provide much of the physical and social infrastructure, and since the land value arises in large measure through their investment following grant of planning permission. What has eluded us, all this time, is to find a way of capturing this added value that is effective, efficient in operation, and politically acceptable enough to be stable over time. As recent battles over highway infrastructure in Kent and Cambridgeshire demonstrate, this remains as large a problem as ever.
- **Fifth**, to provide an adequate quantity of subsidised housing in various forms in each area and in each major development. For the foreseeable future, a supply of affordable housing will be needed for a significant – and perhaps growing – minority of the people in the more expensive areas of England, many of which are in the south east of England, where the root problem (aside from basic poverty and people in difficulty) is that pay is too low. The working poor need subsidised housing. We the taxpayer are subsidising employers, particularly in London and the south east, but most people are unaware of that fact.

These problems have plagued us ever since the historic 1947 Town and Country Planning Act, which created the planning system that is still recognizably functioning today. But the scale of the current problems gives it a new urgency.

Some History

18. Annex D summarises the long and complex history of Garden City and New Town development financing, from the first Garden City at Letchworth, through the New Town Development Corporations following the 1946 New Towns Act, to the attempts to build private enterprise New Towns in the 1980s. It concludes with a review by David Lock (Lock 2013) of three possible models for Garden City financing today. This review is important as a basis for any new Business Plan; we have relegated it to an Annex because of space constraints. Its main conclusions are summarised below.

19. Ebenezer Howard’s original funding model failed at Letchworth. It demanded private investors willing and able to provide “patient capital” while the necessary infrastructure was built. This assumed that private capital would come in to provide commercial activities – shops, factories – paying rents on regularly-rising scale, which would provide circulating capital and eventually – as the original capital was repaid – support a range of local social services. But this did not happen, and the sites had to be let on long leases without a revision clause. The project failed to pay a dividend for many years.

20. The New Town Development Corporations represented an extraordinarily successful mechanism. They borrowed public money from the Treasury (at non-subsidised rates, in fact above market rates) to provide the “patient capital”, but over their 30-year lives they returned the money many times over. They enjoyed compulsory purchase powers at

values that (logically) excluded the value generated by the New Town “scheme” (a principle damaged, but not destroyed, by an important legal judgment, Myers versus Milton Keynes Development Corporation (1974)), though the resulting rises in value never provided more than about 15% of the necessary infrastructure; the rest was provided by public and private investment (schools, hospitals, shops, offices) attracted by the very existence of the town. The “Mark Two” New Towns of the 1960s suffered badly from exceptionally high interest rates during the “stagflation” of the 1970s, while they were in their crucial early construction phase, but such circumstances are highly unlikely to be repeated in the deflationary climate of the 2010s.

21. The private enterprise New Towns of the 1980s, to be built by a consortium of the major volume builders, could have worked. But their locations – within the commuter belt around London – evoked huge “Nimby” opposition and, even given the ideological enthusiasm of the Thatcher government – they did not get planning permission.

The Freiburg Financial Model

22. The model used by the City of Freiburg to develop its new residential districts of Vauban and Rieselfeld has some interesting parallels to the Development Corporation Model, but also some significant differences.

23. Rieselfeld was financed through a special self-renewing Trust Fund, which was kept quite separate from the City budget and from contributions to the school construction budget and the Land Baden-Württemberg housing priority programme. The basic funding came from the State Savings Bank through a bridging loan of 80 million DM, plus 30 million DM from the Government Praedisiium and from the Baden-Württemberg Land government’s housing priority programme.

24. Here the position was simplified because the area was already owned by the city. Thus the land price did not need to be ‘frozen’; this is necessary only where private individuals own the land. In Rieselfeld the area was agricultural land; the price for was about 3 5 DM per square meter. The Board of independent specialists valued it as between 60 and 70 DM in urban use. The same procedure would be used for acquisition of privately-owned land.

25. The scheme was developed in four stages, each involving about 3000 homes and associated shopping, schools, clinics and other local services. Following German Federal Law, land values were frozen at the point of planning. A board of experts supervised a process, in which a masterplan defined in detail the exact land uses and mixture of densities for each stage, following which individual plots were released in a steady sequence with an exact building specification and associated sales price, for competitive bidding by developers.

26. Total investment in Rieselfeld amounted to 2.5-3.0 billion DM, illustrating the importance of the model at a time of depression in the construction industry. City funding for development and construction of public buildings totalled some 165 million DM down to the year 2004. Planners, skilled workers and the construction industry benefitted equally from this model of cooperation.

27. However, there was one important difference from the UK Development Corporation model: the financial plan did not allow the city to make significant profits from land value uplift, which in the UK model flowed back to the Treasury. And of course both Rieselfeld (12,000 people) and Vauban (5,000 people) were very much smaller than the UK New Towns, or what we propose here. However, the key principle remains: the actual pace and pattern of land release was in fact very similar in Milton Keynes and in Rieselfeld. So comparing and combining the two models will form the heart of our detailed business plan, to be developed at Stage 2.

Ebbsfleet: Paradox of a “Stuck Site” Garden City

28. Ebbsfleet in Kent is a key example of a “stuck site”: an area awaiting development which is failing to take place. It was a key part of the strategic masterplan for the Thames Gateway project, published in 1995, which proposed huge mixed-use developments – a commercial core, related housing – around the two stations that had been located on the Channel Tunnel Rail Link, later renamed High Speed One: Stratford and Ebbsfleet (Thames Gateway Task Force, 1995). Construction was delayed and the line opened for international service only in November 2007 and for domestic service to Kent only in December 2009 – ironically, just as the economy was stricken by the financial crisis and its housing aftermath.



29. Ebbsfleet now offers high-speed services to St Pancras in seventeen minutes, with a train approximately every ten minutes at peak hours; direct Eurostar service to Paris and Brussels; and a Bus Rapid Transit (BRT) System, Fastrack, already connecting to surrounding residential developments, to the giant Bluewater shopping centre and to Dartford and Gravesend town centres, and to be extended through the heart of the Eastern Quarry development as it is rolled out. But there has been effectively no development impact. Though a planning application with complete Masterplan was submitted by the developers, Land Securities, to Dartford Borough Council as early as 2003, it finally received detailed planning permission in 2010 (Annex E), and then took until August 2012 for agreement to be reached on the plan - for some 22,600 new homes and up to 60,000 jobs - by government ministers, three Kent councils (Kent County Council, Dartford and Gravesham borough councils) and the developers. Grant Shapps, the housing minister, commented that "The Kent Thameside development - offering the opportunity for tens of thousands of new homes - has been stuck on the drawing board for a whole decade." Meanwhile the developers had invested over £100 million - but plans had been repeatedly delayed over the need for further investment and transport improvements. These were finally resolved through a Section 106 agreement that provided £110 million in planning gain for improvements to the A2 Ebbsfleet and Bean junctions and Dartford town centre, as well as three new primary schools, a secondary school, a library, open space and buildings for adult education and social services.

30. Rather remarkably, the agreed masterplan follows pure "Freiburg" design principles: a BRT corridor through the centre of the site, connecting the train station at the eastern end and a shopping centre at the western end, with all residential development within easy walking distance of a bus stop, and local shops, schools and services.

31. Current plans provide for 1,500 homes to be completed by 2020, while a further 3,000 will take until 2030/31 and the entire Eastern Quarry development – eventually involving 10,000 homes - could be completed only in the 2030s. Land Securities explain that site preparation - levelling hills and draining lakes – has already cost £30 million and will cost another £50 million to complete. This would add a 30% premium to the sales price, currently making the process unviable. They think a partnership arrangement would have worked better (Hall 2014).

32. Ebbsfleet is thus a case study: a first priority of a Garden City financial plan must be to demonstrate a formula for early development of the project, which could also serve as a model for the other two locations. Adonis and Sims (2014) argue that this must be based on a Development Corporation model that shares risks between the parties. This is followed up below.

Summing up the UK Experience: Three Options

33. David Lock's review (Lock 2012) concludes that today there are three practicable options:

- A “**Left of Centre**” government freezes development values and imposes 1946-style New Town Development Corporations to build a further generation of New Towns;
- A “**Right of Centre**” government similarly freezes values (with an escape clause for land owners/developers willing to start development immediately) and auctions the values to the highest bidder; and
- A “**Third Way**” model, where the frozen values are shared in a new-style Development Corporation. This third model, proposed by John Walker (former Deputy Director of the Milton Keynes Development Corporation and CEO of the Commission for the New Towns), is the basis of our Business Plan, set out in detail below.

Our Model

34. To recapitulate: The Prize Question is “**How would you deliver a new garden city which is visionary, economically viable, and popular?**” We believe that a century of UK experience in building first Garden Cities, and then New Towns, can be combined with the “Freiburg Model” to provide the answer.

35. This is **to create complementary roles for the public and private sectors, using the best characteristics of each, to safeguard the public interest and maximise commercial viability.**

36. The roles of the public sector are **twofold**:

- to ensure that the governance structure is properly accountable for creating and delivering a vision and plan for the new town that is viable and in the long term national and local public interest;
- to create a framework which ‘de-risks’ the development as much as possible, within which the private sector can invest with maximum confidence.

37. Both accountability and confidence can best be created by use of statutory powers available under the New Towns Act, which was set up for this purpose over 60 years ago, and operated very successfully. Later new towns such as Milton Keynes demonstrated the kind of complementary relationship that could exist between the public and private sectors. The DC controlled the overall programme and pace of site disposal, planning standards, overall marketing of the new city and liaison with all other public and statutory undertakers to gain their co-operation and participation. All of this was done in liaison with private developer representatives such as the HBF. The private sector invested and developed schemes and laid out site infrastructure. This basic model worked very well in the 1980s & 90s, and could be amended to shift the boundaries of activity further towards the private sector.

38. The Government should use this Act to:

- define the areas on which each Garden City should be developed;
- set up a Development Corporation to secure the laying out and development of each Garden City, starting by producing a plan, worked up with landowners and local authorities, which is visionary and passes the tests of being in the national and local interest.

39. The DC would be equipped with powers of land assembly, planning, investment and development, but would use the latter two powers only where they could clearly demonstrate this was the best option.

40. Land assembly would be through negotiation wherever possible, using SLIC (Strategic Land & Infrastructure Contracts) principles, but with the DC's compulsory purchase power readily available where needed. Land should be bought, wherever possible on the basis of sharing the ultimate land value on an agreed basis between the DC and the original land owner, rather than by payment up front. However, compensation, equal to the existing use of the land (ignoring the hope value created by the Garden City proposals) plus reasonable disturbance allowance, should be available immediately if land owners would prefer to sell outright. Compensation case law is so complicated that ideally new legislation should be passed to clarify the right to acquire at "no scheme" values (see above, para 25), but if this is not possible a working model of 80:20 equity share between the Corporation and private landowners should be adopted (as used in some parts of Europe) and this approach should be re-enforced by whatever means government finds most suitable and available. These proportions could be reviewed after the master plan is adopted to reflect the real costs and revenues that were considered likely. Public authorities should also be expected to make contributions to reflect the extent to which the Garden City was accommodating growth that would otherwise have happened elsewhere in their area. This should be reflected in contributions from all such authorities, to be drawn down as development proceeds, and should be taken into account before finalising the land equity shares.

Accountability

41. The NTDC's Board would be legally accountable to Parliament, via the relevant Minister. However, various amounts of effective control and accountability could be given to the local authority (ies) in partnership with other local bodies representative of the business and voluntary sectors. This Board would need specific skills, and should have on it proper representation of local authorities, community organisations and businesses. In previous new town DC boards it was common for these local interests to be in the majority, though with an independent chair with relevant expertise.

42. The DC, together with landowners and local authorities, would draw up a land use plan and associated development standards, and a business plan to show how these could be phased and financed. Any amendment to the overall Vision contained within the Plan would be subject to agreement by the same national and local bodies. There would be formal consultative arrangements with transparency of proceedings and agreements reached.

43. It is tempting, but fairly meaningless at this stage, to put forward a set of detailed promises for the specific sites, which would all be vulnerable until the above work has been done; see paras. 75-78 below. However it must be the case that any new Garden City would seek to reflect modern technology, culture and aspirations and should, as a minimum, set out to be a better, more stimulating, place to live and work than most existing towns of its size, offering greater opportunities to its population and resource efficiency in its operation. Many examples of features to be included can be quoted, such as:

- extended ranges of housing tenure with a complete spectrum from social rent through equity sharing to full ownership;
- flexibility of lease terms for households and businesses, allowing change at least cost and difficulty as families and businesses grow or shrink;
- very high standards of energy efficiency in buildings (as well as transport) reducing their costs to users and their impact on the environment;
- early attention to long-term management and maintenance, in terms of its funding and rooting it in the community (see paras 71-72);
- easy access to all facilities (see earlier sections on The “Freiburg Model”)

These will be developed and expanded in greater detail in later stages, alongside the physical and business plans, to ensure that as detailed proposals emerge they are soundly based and deliverable.

Viability

44. The SLIC process, described above, would provide assurance that a defensible proportion of land value gain was being captured for investment in infrastructure, and that public authorities were making reasonable contributions in keeping with their previous expectations of capital expenditure to cater for a growing population.

45. Even where the basic numbers appear to stack up, cash flow is the biggest problem at the start of large projects, where big commitments to infrastructure are required several years before any substantial returns are available and the perception of risk is highest.

46. The New Towns were financed by 60-year fixed rate Treasury loans, which were paid back with interest 40 years before they were due. In the last few years loan finance has once again become an important tool for government, though usually on much shorter terms. In the 1980s NTDCs were belatedly given the power to borrow over different periods and from private sector sources. This facility could be used to raise loan finance and kick start the development, though it might be shown in some cases that better value could be achieved through Treasury borrowing or treasury underwriting of some part of the loans.

47. In an area where the business plan, after thorough examination by all parties, indicates a viability gap regardless of full land value capture and long term loan finance at reasonable rates, public funding would be necessary. In this case, the national government and local public authorities would be much better placed to see what they were being asked to provide, why it was needed and what benefits they would gain in the longer term.

The process would have thrown up a much clearer case for public investment than is ever normally available in these situations. Any such contribution by the public sector should be regarded as an investment, and able to benefit from any uplift in net values in a similar way to the landowners.

48. Through these actions, at minimum (often zero) upfront cost to the public purse, and usually no long-term cost, the government could create a framework whereby planning and land availability were clearly resolved, reducing unnecessary risk and facilitating private sector investment on terms close to those available from public investment. At the same time, there would be transparency of intentions and a clear demonstration of public benefits. Any central government investment that is necessary (over and above whatever support would normally have been given via local authorities to cater for existing forecasts of growth) should be by way of loans to the DC, with a clear obligation for these to be repaid with interest before the completion of development. Within this framework it should be possible to attract the maximum possible from private investors to provide long term funding for infrastructure, their returns coming provided from a share of the value added by the development process. The private investment should be secured as part of forming a “master developer” joint venture between the DC and the investor(s), which would then secure the laying out of all necessary infrastructure in accordance with the agreed plan. The JV would secure site by site development, of housing, employment, retailing, amenities, within the context of the plan, by tender and/or by direct development, with land values and/ or rental income being shared between the partners on a basis agreed at the time of the JVs creation.

49. The above approach would create an ideal mix which:

- is in the public interest, producing high quality development served by good infrastructure;
- allows landowners to share in value created;
- maximises the chances of viability without public subsidy or with minimal subsidy where this is justified, and;
- creates a high degree of confidence in the project and the best context within which to attract large scale private sector investment.

Long-term management

50. As development proceeds, adequate funding should be set aside for the longer term maintenance and renewal of all community infrastructure, from capital receipts of income streams of rental property. These should be vested in a Community Trust that would own the freehold of community assets. Income might come from a modest level of service charges on homes and commercial premises, from local energy companies and from ringfencing a proportion of the additional business rates created by development.

51. The Trust should be established at an early stage and should work alongside the NTDC throughout the period of development, ensuring proper feedback on the standards of development, their value to the community and their long term maintenance costs.



Popularity

52. Bidders are also required to demonstrate how their proposals could be made popular. This brings consideration of both time scale and the area from which opinion is sought. In the long term, if the development succeeds, it will be popular with both older and newer residents. Milton Keynes is a good example.

53. In the shorter term a Garden City can be made popular with those who live outside its immediate area if it brings a reduction in development pressure closer to home, and provides convincing assurances that existing infrastructure will not be overloaded (not an easy or quick task!). For those living in the immediate environs of the development area, it would be foolish to suggest that everyone will be in favour. Our specific plans for Daventry-Rugby and Preston are carefully designed to avoid new development in existing villages, which are preserved as distinct entities (as was successfully achieved in Milton Keynes) with enhanced environmental quality through removal of through traffic and traffic calming.

54. There would be strenuous efforts to make the new development as interesting as possible to the existing residents, by:

- communicating a clear a compelling vision for a better place to live, high standards of design and far more opportunities for local work and leisure;
- priority for affordable housing to families already living in the area and unable to buy;
- support for institutional development, in particular where these are lacking or weak; for example a community foundation; chamber of commerce, orchestra, drama groups, CAB, etc.;
- commitment to a programme which will enable existing residents to improve the energy performance (and therefore energy costs) of their homes to standards close to those of new development;
- commitment to early provision of key infrastructure and new local facilities;
- protection and enhancement of some green spaces including woodland and hedgerows within the framework of an overall plan for green spaces occupying at least 40% of the area (similar to Milton Keynes);
- Homes and workspaces that will be available of flexible lease terms and minimal commitments to cater for changing requirements of families and small businesses;
- an opportunity to influence development and its after care, through community consultation and the Community Trust.

55. These principles would be worked up at Stage 2 into a fully-developed Business Plan for the development of the Garden City over a 20-year period. This would be developed for one of the Garden City complexes, which are now presented.

The City of Mercia: Great Central Garden Cities



56. The City of Mercia would extend in a horseshoe-shaped line between 60 miles (80 km) and 85 miles (140 km) from London: a distance which, as demonstrated in recent research (Hall and Pain 2006) will ensure a very high degree of self-containment: 80-90% of the residents will find local jobs, but the minority needing (or wanting) access to London will be conveyed there in under 30 minutes by trains running at 250 mph (400 km/hr).

57. High Speed 2, the first section of which is due to open from London to Birmingham in 2026, has – in sharp contrast to HS1 – been deliberately designed as a very high-speed railway with no intermediate stops between the major conurbations. But, for 11 miles (17 km.) between Aylesbury in Buckinghamshire and Brackley in Northamptonshire, the route utilises the Great Central Railway, the last main-line railway to open in Britain before HS1, in 1899, and designed for unusually high speeds and for continental-scale trains, closed and abandoned in the Beeching cuts of the 1960s. This gives a unique opportunity to restore the next 24 miles (38 km.), as far as Rugby², and to use it to trigger a major extension of the City of Mercia: the **Great Central Garden Cities**, with major Garden City extensions of Daventry to the west – **Daventry Magna Garden City** – and of Rugby to the east – **Rugby Garden City** - separated by a green parkland belt. The construction costs of this line would be supported on the basis of projected development gains from the associated urban development.

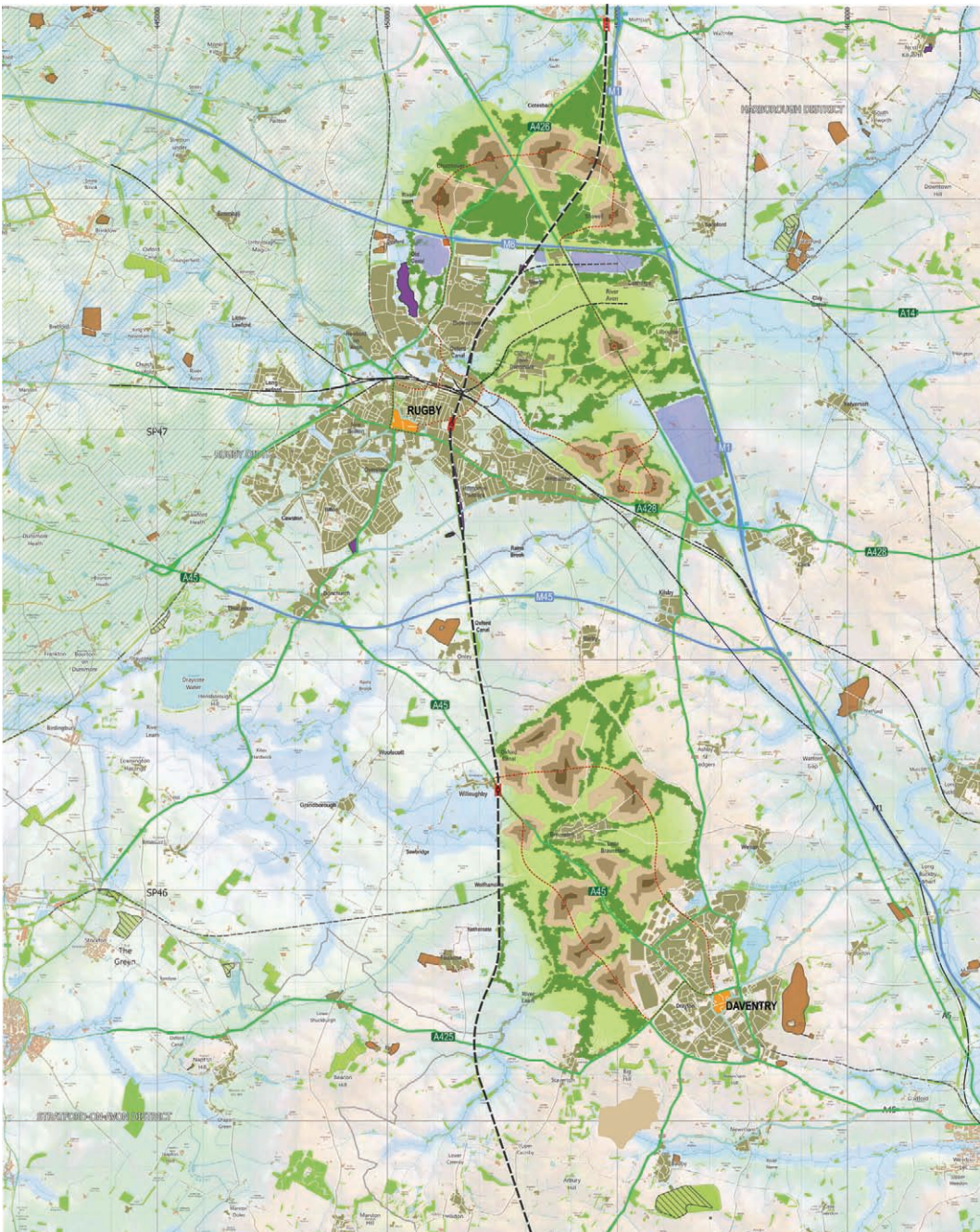
58. Leaving the HS2 main London-Birmingham line at Brackley, the line runs west of Daventry. The first stop, **Daventry Parkway**, would occupy the site of the former Braunston-Willoughby station at a key location in the western extension of Daventry on the A45 north-west of the town centre, with rapid transit access, via the extension, to the town centre. A second stop, **Rugby Central**, would be relocated to Clifton Road, east of the town centre, connecting to BRT (Bus Rapid Transit) services, running out to the Rugby Radio development and to a cluster of other Garden City developments, described below: a 21st-Century version of Howard's Social City. Thence, in a second stage of construction, it would be extended northward, over the West Coast Main Line, following the restored line out to a third station at **Rugby North Parkway**, just north of the M6, located between the A426 and the M1. This also would be a Park and Ride location, with direct access from the M6 Junction 1³, and would serve a future logistics park,

² It appears that the entire infrastructure has been preserved in its integrity save for demolition of three viaducts (including the so-called 'Rugby Birdcage' over the West Coast Main Line at Rugby, demolished in December 2006) and for one industrial development in the village of Moreton Pinckney. Some structures, for instance the magnificent Catesby Viaduct, are however seriously degraded.

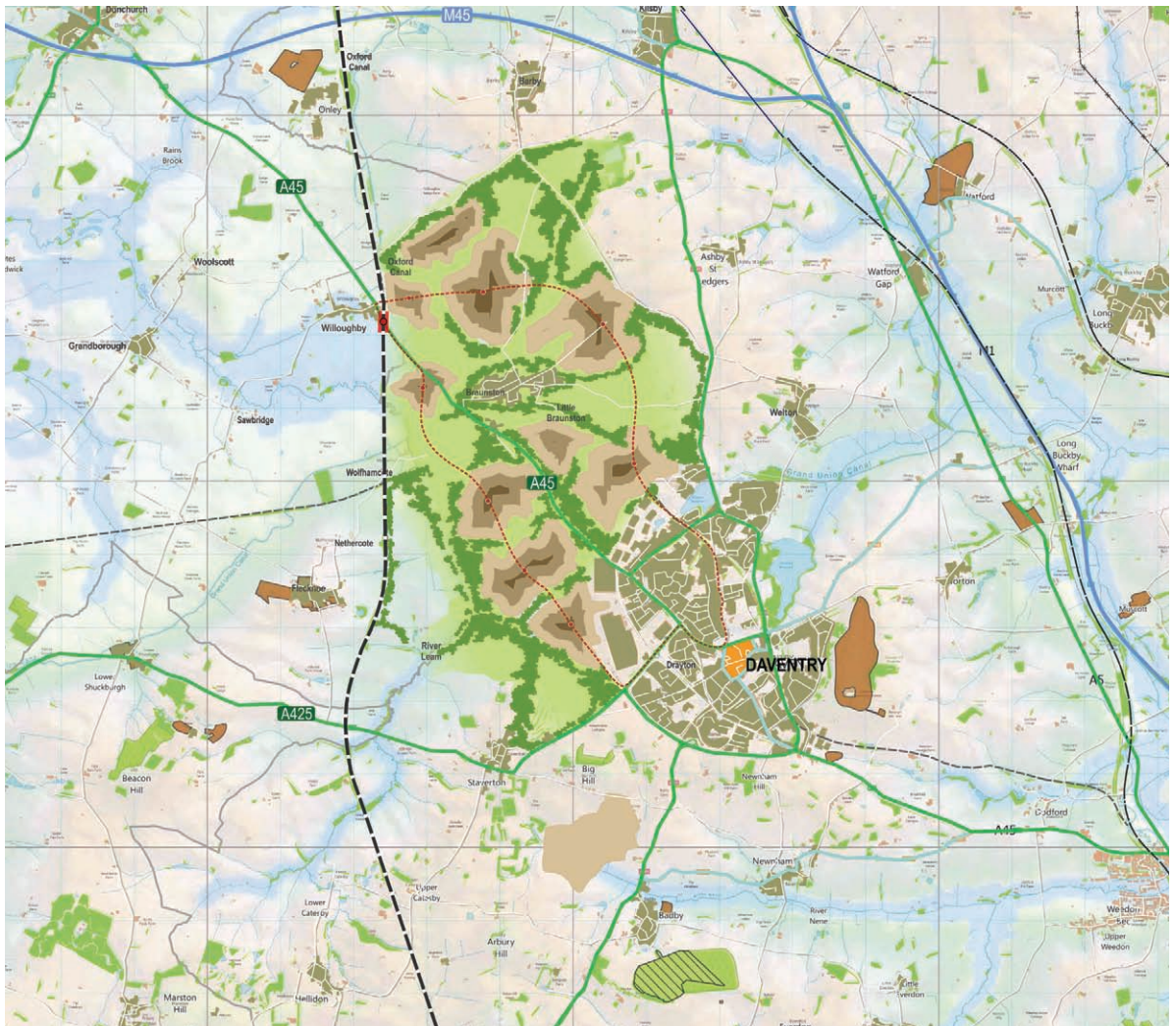
³ M6 J1 would also serve traffic via the A14 from the east, via the M1/M6/A14 Catthorpe interchange, now under reconstruction to provide free-flow interchange.

Great Central Garden Cities

59. **Great Central Garden Cities** would comprise two distinct Social City clusters: the first, **Daventry Magna Garden City**, constituting a westerly and northerly extension of Daventry centred on the Daventry Parkway station, the second, **Rugby Garden City**, constituting an easterly and northerly extension of Rugby centred on the Rugby Central station, with a number of distinct neighbourhoods – Rugby Radio, Watling upon Avon, Shawell and Churchover – located in the Rugby district of Warwickshire and the Harborough district of Leicestershire, linked by a BRT network along the A5 Watling Street spine which forms the county boundary (and which was once the limit of the 10th-century Danelaw).

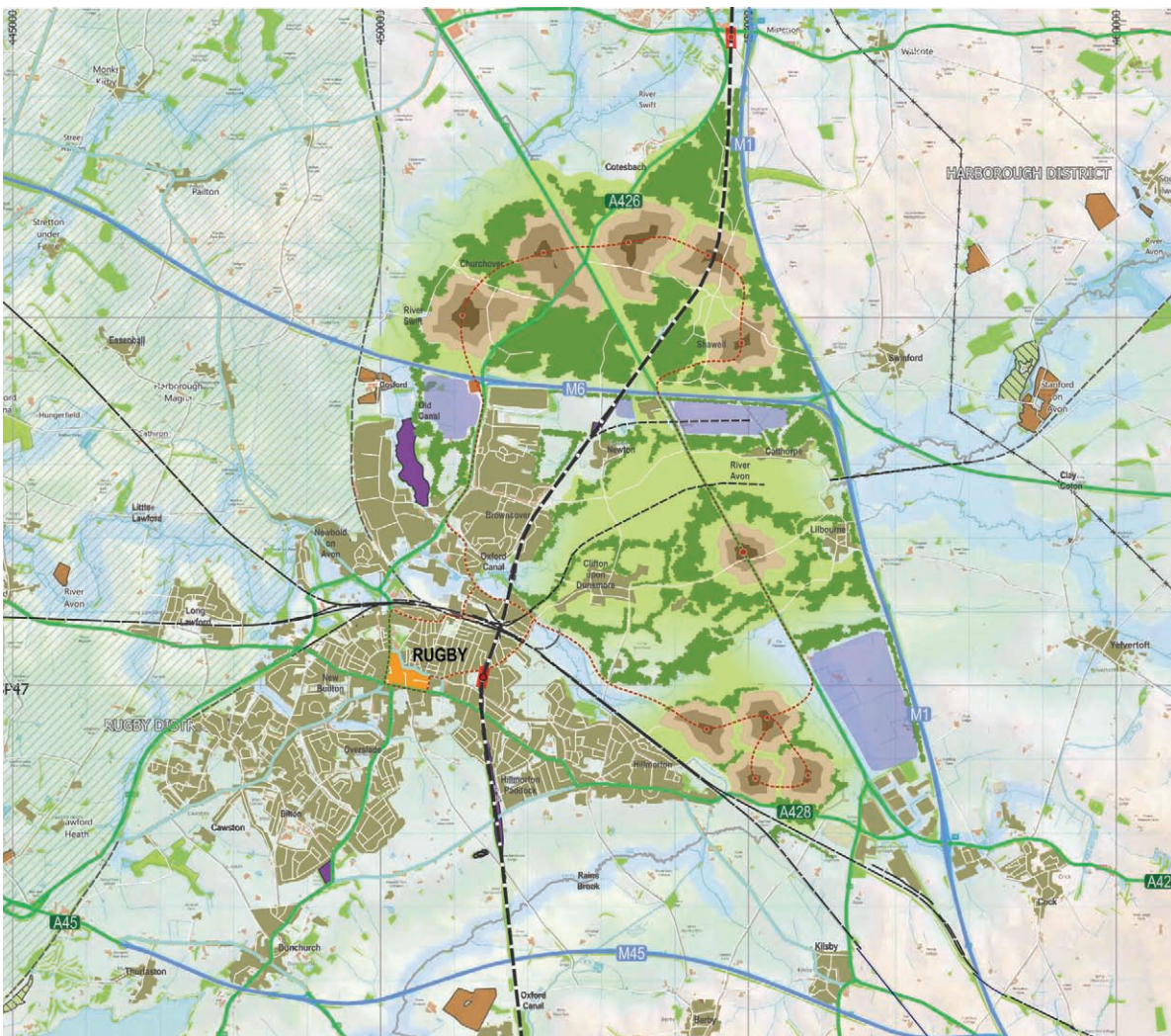


60. **Daventry Magna Garden City** would be based on two sectors, each based on a Bus Rapid Transit spine, radiating out from the town centre northwards and westwards, and meeting at the Daventry Parkway station. These would be separated by a green strip carrying the A45 highway directing connecting the centre and the station. The Oxford Canal and Marina would be preserved in a green/blue belt crossing the site, embodying the villages of Braunston and Willoughby. At the northern extremity, the existing minor (but very straight) minor road (Longdown Lane/The Ridgeway) would be upgraded to form a northern Daventry/southern Rugby relief road (“A3610”), with an upgraded diversion of the Oxford Canal crossing (the original hump bridge preserved).

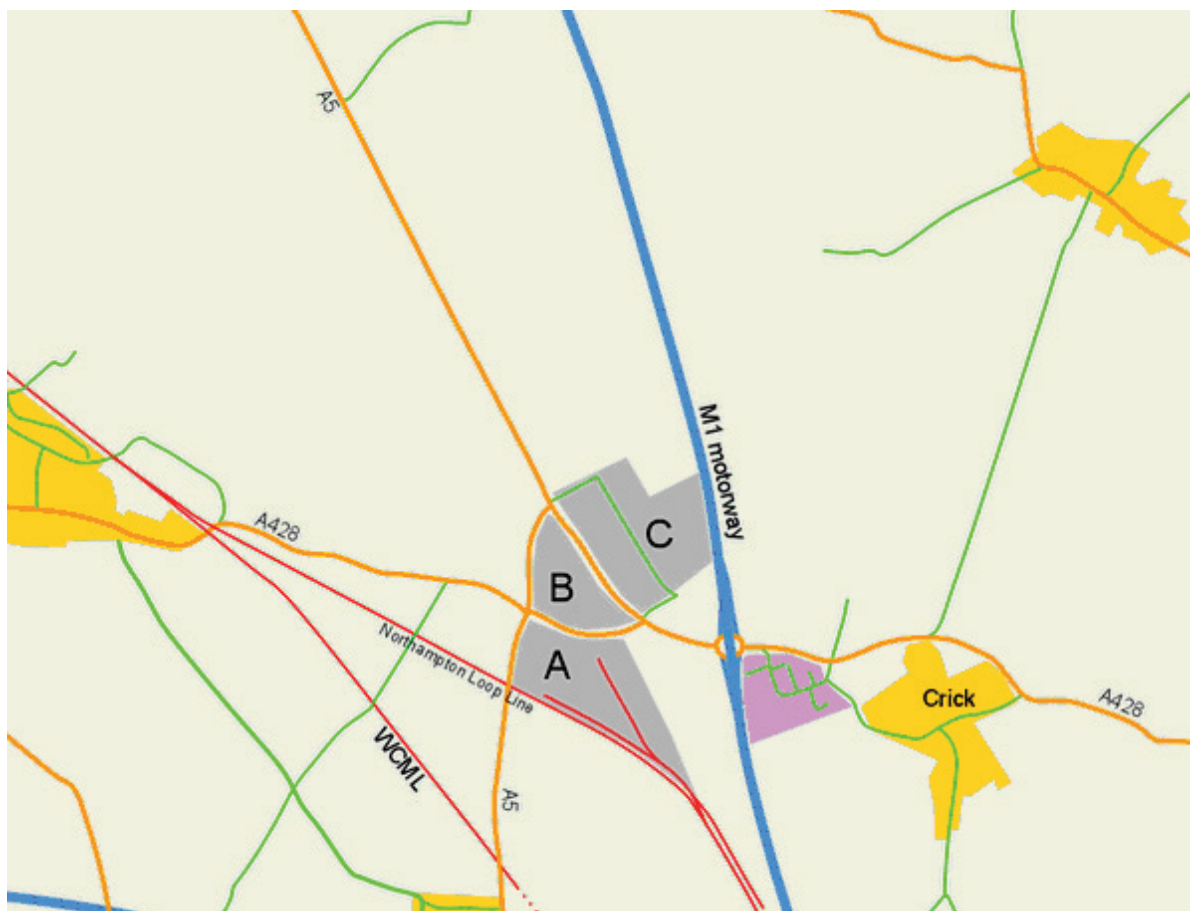


61. **Rugby Garden City** would likewise incorporate three sectors radiating south-eastward, eastward and north-eastward from the town: Rugby Radio, Watling upon Avon and Shawell. Each would be based on a Bus Rapid Transit corridor radiating from Rugby Central station, located on Clifton Road east of the town centre. The existing villages of Newton, Catthorpe and Shawell would be preserved within this structure, maintaining their existing village character.

62. The site is a challenging one since it is bisected by major highways (the M1, M45, M6, and A14), but a cluster of garden cities against a green-belt background (as in Howard's classic diagram) would provide adequate protection from noise and other environmental impacts.



63. Conversely, the complex enjoys unparalleled highway access from the M1 (J18) and the M6 (J1). M1 J18 already supports the huge DIRFT (Daventry Integrated Rail Freight Terminal), a Prologis Logistics Park with direct access on to the West Coast Main Line Northampton Loop Line). Likewise, the upgraded M1/M6/A14 free-flow Catthorpe interchange (to be completed 2016) and the adjacent M6 J1 will offer unequalled access to the northern border of the complex from all directions. This will be complemented by a new industrial/logistics complex north of M6 J1, between the A426 and the M1: RIRFT (Rugby Integrated Rail Freight Terminal), with direct access on to HS2 for express rail freight, offering potential for overnight delivery to any major business centre in Europe.

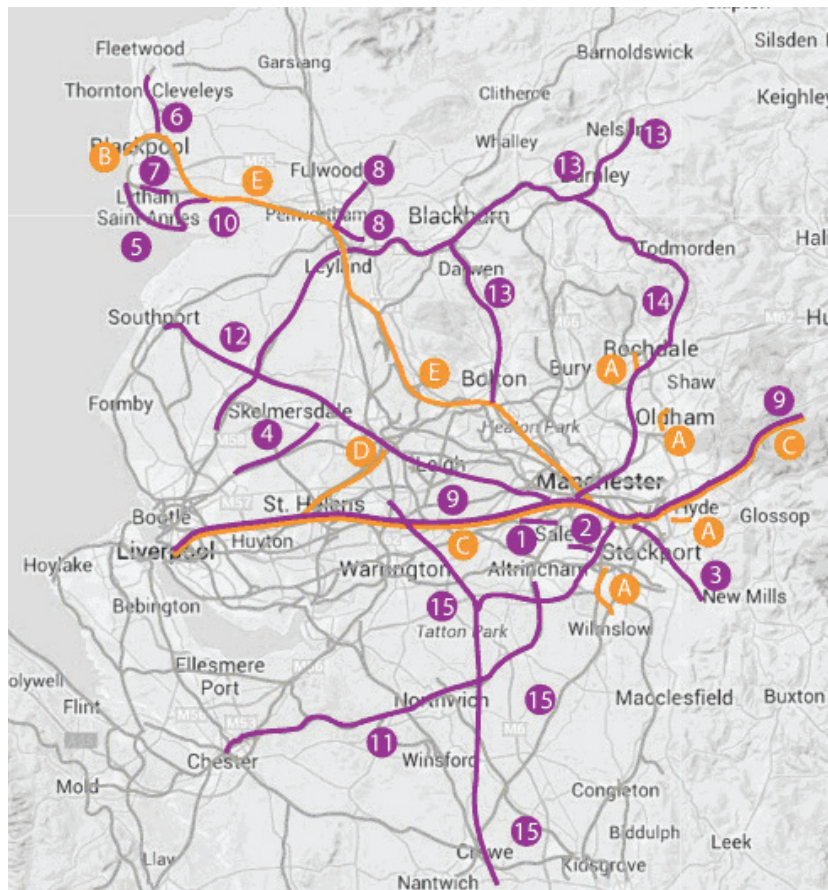


64. Both Garden City complexes would be built on the Freiburg model: linear clusters along a BRT (or PRT) spine, with residential developments 200-300m. wide on either side, leading outwards from the respective central rail stations (Rugby-Daventry Parkway and Watling upon Avon). All homes would thus be within 300m. of a transit stop, and freely accessible within 15 minutes both to their train station, and also to town shops and public services in Rugby and Daventry town centres.

65. The reopened Great Central Line, and Great Central Garden City, would be built in two stages. The first would involve reopening the line for 24 miles (38km.) to Rugby Central, using the Daventry Parkway station (19 miles, 31km.) and Rugby Central as the basis for construction of the two complexes. The second would involve extension northwards and eastwards for 3 miles (5km.) to Rugby North Parkway, serving as basis for completion of the Rugby Garden City complex including RIRFT.

The City Palatine of Lancashire: Palatine Lancashire Garden Cities

66. **S-Map 2030 North West**, unveiled at the final conference of the SYNAPTIC project in Manchester in June 2012, is a dramatic proposal for a round of transport investments for North West England over the critical period between the completion of electrification of the main-line rail network in 2017, connecting the core cities of Manchester and Liverpool with other key centres such as Bolton, Wigan, Preston and Blackpool, and the opening of Phase 2 of HS2 in 2032, by creating an integrated multi-level network of high-quality public transport linked at key locations through high-quality 'station superhubs'.



Stage One 2020

- A. Ashton, Oldham and Rochdale Centres, Wythenshawe/ Airport
- B. North Pier-Blackpool North tram extension
- C. Liverpool-Manchester-Leeds electrification and Ordsall Curve
- D. Liverpool-Wigan electrification
- E. Manchester-Preston-Blackpool North electrification

Stage Two 2032

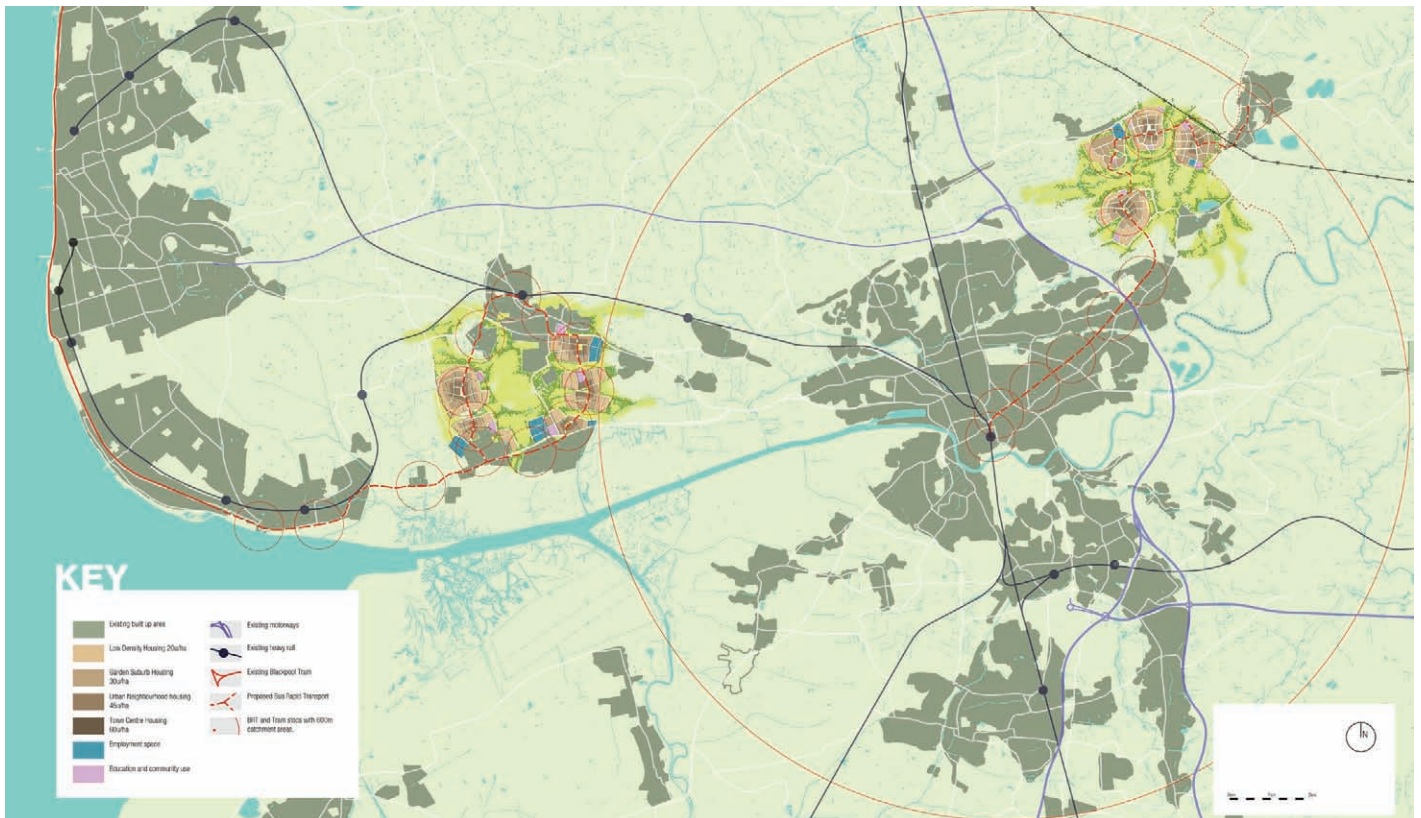
1. Trafford Centre-Port Salford tram extension
2. East Didsbury-Stockport tram extension
3. Manchester-Marple tram-train
4. Kirkby-Skelmersdale electrification
5. Squires Gate-St Anne's tram extension and St Anne's-Kirkham & Wesham electrification
6. Poulton-Fleetwood tram
7. Yeadon Way BRT
8. Preston BRT
9. High Speed 1.5: Pendolino Liverpool-Manchester-Leeds
10. Blackpool-Preston tram-train
11. Altrincham-Chester electrification
12. Manchester-Wigan-Southport and Preston-Ormskirk electrification, with Lancashire Coast tram-train
13. Manchester-Blackburn-Burnley-Colne electrification
14. Preston-Blackburn-Burnley-Todmorden electrification
15. High Speed 2

The plan includes:

- extension of the Blackpool Tramway from North Pier to North Station (recently prioritised for early implementation);
- extension of the Tramway from its southern terminus at Starr Gate via St Anne's and Lytham to Preston, inter-operating with heavy-rail services as a tram-train;
- conversion of an abandoned rail line to carry a new express BRT service from Preston station to a park & ride interchange at M6 junction M6 junction 31A.

Together these new tram, tram-train and BRT links would create a city-regional network for North West England, embracing the Fylde Coast of Lancashire and the Central Lancashire City Region, based on a new interchange hub at a transformed Preston station, which is already only 2 hours 8 minutes from London by an hourly Virgin Pendolino service, and in 2032 will become the logical intermediate stop for HS2 trains from London to Glasgow.

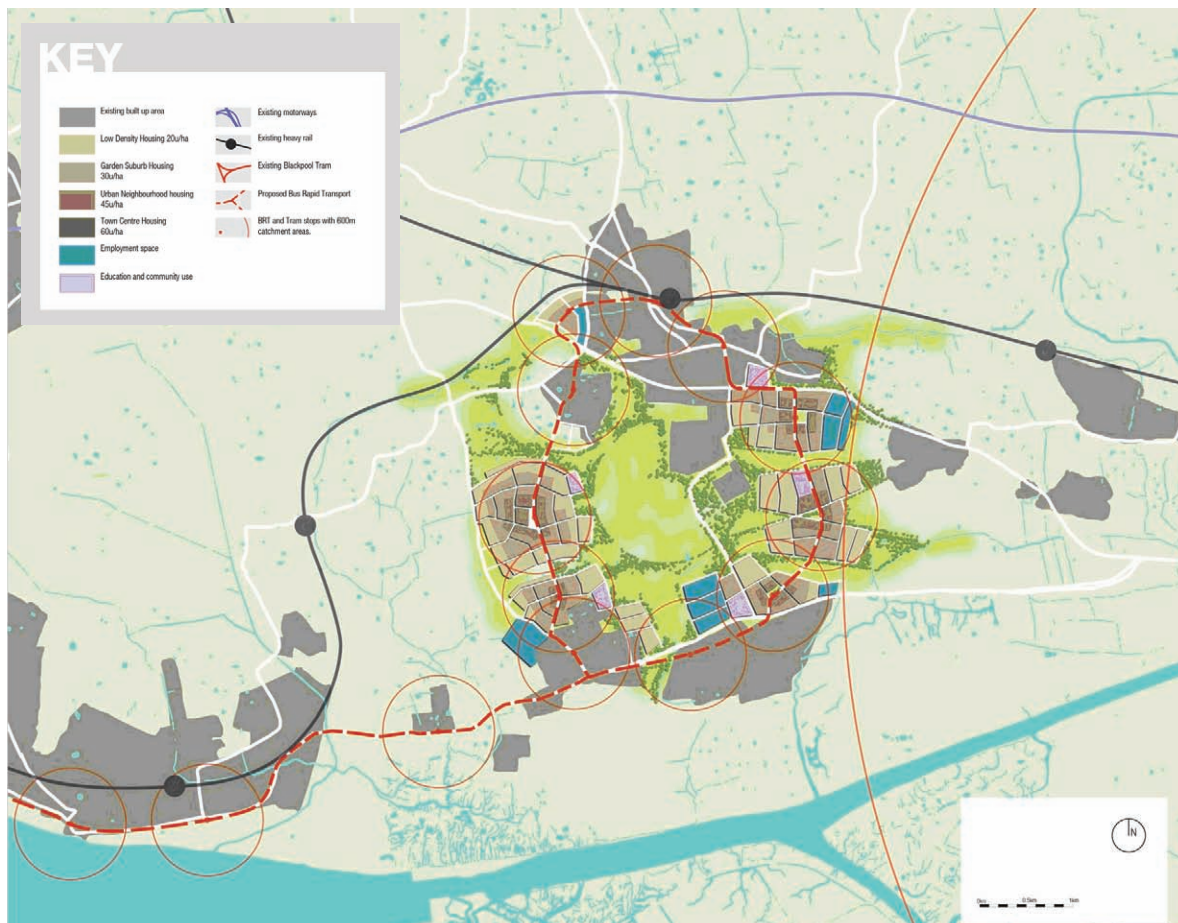
67. We propose a **linear cluster of Garden Cities, the Palatine Lancashire Garden Cities**, running west-east through Preston, and using key parts of this network: the South Fylde railway line - electrified (Proposal 5) to enable a tram-train service connecting Blackpool Promenade with Preston (Proposal 10) – and the BRT line running north-eastwards from Preston station (Proposal 8). This would consist of two Garden City complexes: **Fylde Garden City** between Kirkham and Warton, and **Preston Garden City** north-east of Preston.



Fylde Garden City

68. Fylde Garden City would be connected at the southern end via BRT on the existing A584 across the Green Belt from a new tram-train stop on the South Fylde Line in east Lytham, and would be based on two linear corridors (broken where they are crossed by the west-east high-tension power line) running northward: one from north-west Warton⁴ via the Ribby Hall Holiday Village complex (preserving the “Zone of Separation” from the village of Wrea Green) and via a western extension of Kirkham⁵ to Kirkham & Wesham railway station, the other running from east of Freckleton to the eastern edge of Kirkham. These corridors would be served by BRT, and would link on-street through the centre of Kirkham. Between them, the Fylde DC Green Belt would be enhanced to form a central park.

69. There would be a strong economic base in Warton Airfield, which could become a new Lancashire International Airport replacing Blackpool, and the high-technology aerospace complex of BAE Systems next to the Airport.



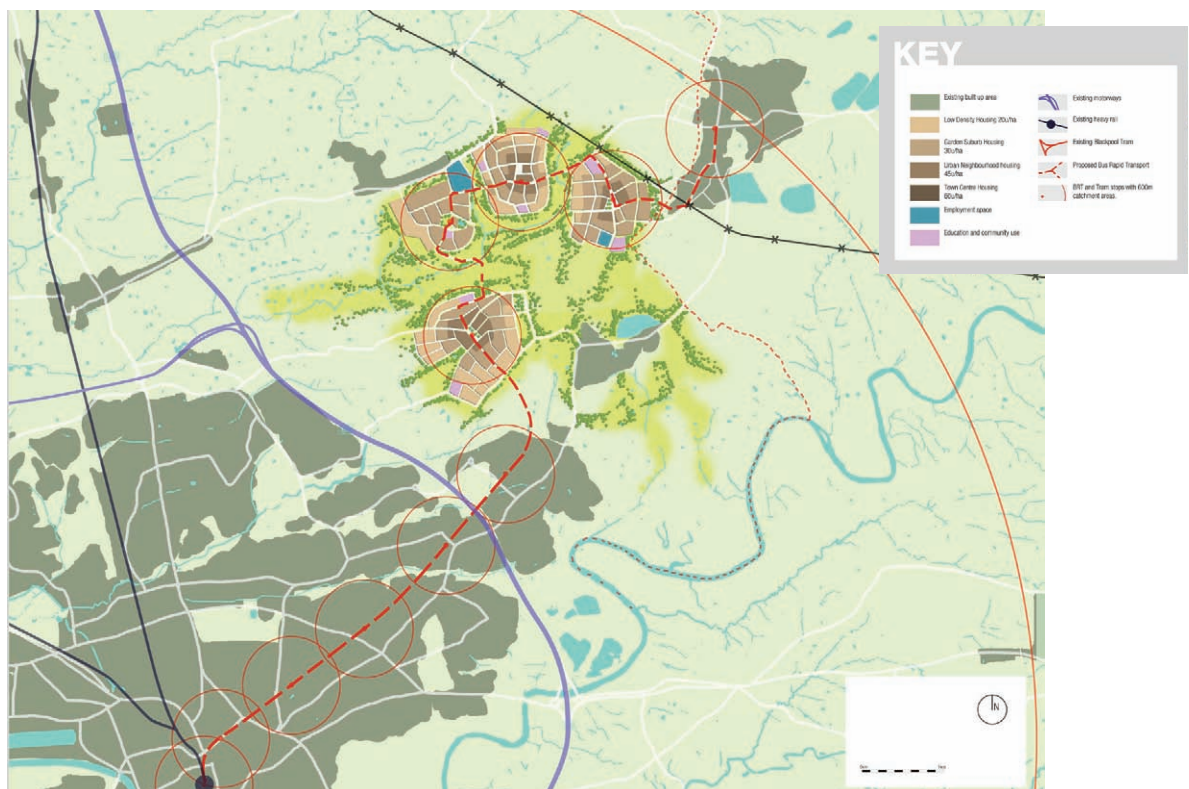
⁴ Fylde BC Local Plan, Preferred Options to 2030 (2013), Sites H8, H9 and M10 on the Warton map, p. 62.

⁵ Fylde BC Local Plan, Preferred Options (2013), Site M3 on the Kirkham map, p. 67.

Preston Garden City

70. The Preston North-East BRT would be built on the right-of-way of the former Preston-Longridge railway line, opened between 1836 and 1850, and closed to passengers in 1930 and to goods in 1967. A central section, serving Preston Station, Lancashire County Hall, the University of Central Lancashire and the main shopping area, would run on-street loop from the two Preston ends of the line - at A6063 Deepdale Road next to its junction with the A59 RingWay, and at UCLan - and passing along Fishergate to Preston station, to the Lancashire County Council HQ, and to UCLan.

71. At its outer end, east of the M6, the BRT would split into two branches, one to a reopened Park and Ride facility at M6 J31A and a second turning northward to form the spine of the Garden City, with 3-4 blocks of residential development, 200-300m wide on each side, and with bus stops at approximately 600m intervals. The spine would turn eastward to pass through the grounds of the former Whittingham psychiatric hospital⁶ (already granted planning permission but not yet started), and continue eastwards to Longridge, where the BRT system would run on to town streets to terminate at the Post Office in the town centre. The Garden City would thus skirt the central rural space, preserving the “Area of Separation” between Grimsargh and Goosnargh indicated in the Central Lancashire Adopted Core Strategy⁷. The existing villages of Grimsargh and Goosnargh would be preserved in their integrity.



⁶Whittingham, opened in 1869 and closed in 1995, was the largest psychiatric hospital in Britain, with some 2820 patients at the peak.

⁷ Preston City Council, South Lancashire Borough Council, Chorley Council (2012) *Central Lancashire Adopted Core Strategy: Local Development Framework*. Preston: Preston City Council.

Next steps

72. If the bid is shortlisted, we shall further develop the Business Plan for Rugby Garden City. A development vehicle, The Great Central Railway and Garden Cities Development Corporation, would fund the railway based on the expectation of rising land value. This is a model widely used a century ago in the United States, as in Henry Huntingdon's Pacific Electric Railway in Los Angeles (Hall 1998, Chapter 26), in Japan, and in the Metropolitan Railway Country Estates Limited which created London's Metroland in the 1920s. It has also been successfully used more recently in the Hong Kong MTR and the Singapore MRT.

73. Normally, as the law stands at present, once a site is in the planning system, it is too late to capture its land value unless the statutory development plan states its intention to do so as a condition of approval – and the owner of the railway can demand up to 60 per cent of the land value of the whole development. In this case, however, the railway and development corporation would be in this advantageous position, and the value uplift would pay for the construction.

74. This will involve a close look at the upfront infrastructure costs, including work on reopening of the Great Central Railway between Brackley and Rugby. It is difficult to cost this, since there are few precedents. But one, the East-West Rail Link between Bicester and Bletchley, recently approved by government, involves the similar reopening of 16.09 km. of derelict railway, at a committed cost of £270 million: £16.78 million/km. This would give an estimate of £638.4 million for the GC reopening. It will also involve a response to the assertion by HS2 Company that, with 18 trains per hour planned on the line south of Birmingham, it would be at the limit of capacity. We believe that this question remains open and that the potential for increasing the capacity on the existing network has been underestimated.

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