



Learning from Letchworth and Welwyn Garden City: Garden cities' policies for the development of existing settlements in the contemporary world

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ABSTRACT

So far, the garden city model has been analysed and adopted by scholars, urban planners, and institutions to design garden cities, new towns, and suburban communities as new settlements from scratch around the world. In contrast, this paper explores the potentialities of such a model to provide a multi-faceted approach based on territorial, socio-economic, and urban planning strategies, thus offering a series of policies to combat a wide range of issues in existing communities. For that purpose, this paper provides a new approach about the garden city model through the case studies of Letchworth and Welwyn Garden City and latest updated models to form a new scheme with the capability to encourage the decentralisation of population and means of production across the territory, develop cooperatives to achieve a self-financing system and affordable housing in existing communities, and implement the garden cities' design principles for the regeneration and expansion of existing settlements towards a sustainable, attractive, self-reliant and prosperous future.

1. Introduction, background, and methodology

After the publication of '*To-morrow: A Peaceful Path to Real Reform*' in 1898, Ebenezer Howard and some advocates of the Garden City Movement provided different methods to build garden cities in the countryside (Howard, 1902; Osborn, 1918; Purdom, 1917; Unwin, 1909). This theoretical background boosted the building of Letchworth and Welwyn Garden City, which have been thoroughly analysed by numerous scholars either to give relevant data about the development of both case studies over time or to promote the building of more garden cities in the future (Adams, 1905; Lewis, 2014; Miller, 1983; Osborn, 1969; Purdom, 1913, 1949, 1963; Tyrwhitt, 1939; Ward, 2016; Warren, 1930). However, the garden city model has given way to the building of new towns, garden suburbs or urban planning principles around the world due to the rise of urban planning as a discipline and the loss of the cooperative lines, private funding and rural/urban design principles of the subsequent schemes derived from the garden city model (Purdom, 1963; Thomas, 1998; Ward, 2016). So far, the garden city model has not been taken by scholars as an alternative to develop existing settlements, but just to build new settlements from scratch.

Thus, the main aim of this paper is to analyse the potential feasibility

of the garden city model as an alternative for the development of existing communities, as it can offer some alternatives to promote the regeneration of deprived areas.

For that purpose, this research is made from three fields of analysis by answering the following questions:

Territorial field - How could the decentralisation of population and means of production be encouraged across the territory?

Socio-economic field - How could existing communities achieve a self-financing system and affordable housing without any public funding?

Urban / Architectural field - How could existing settlements be conserved, transformed, and updated to fulfil the needs of their inhabitants?

The two British garden cities of Letchworth and Welwyn Garden City implemented the above-mentioned strategies in the past, thus becoming two examples of "inner colonisation" in the European context and prompting the migration of industry and urban communities into rural areas to relieve overcrowded urban centres of Britain (Purdom, 1949; Ward, 2016; Warren, 1930). In general terms, the garden city model was designed to cope with the social, economic, and environmental issues derived from the nineteenth-century Industrial Revolution by

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combining the advantages of urban and rural areas in new settlements in the countryside.

At the end of the nineteenth century, the rural economy of the United Kingdom was highly diversified, developing off-farm and non-agricultural activities. This diversified economy led to the disappearance of rural England but gave way to other urban-rural schemes, such as the garden city model, to revitalise the British countryside. The garden city model was conceived by Ebenezer Howard as an alternative to industrial and overcrowded metropolitan cities such as London, with access to better living conditions, wellbeing, and prosperity by combining housing and industrial development in new rural settlements. To do this, the garden city model was shaped by a production model based on industry, which differed from the traditional means of production in the countryside based on agriculture and livestock; an investment and development model based on a self-financing system; and a planning model derived from the implementation of urban and rural aspects.

However, the current situation of garden cities differs from that found at the beginning of the twentieth century, as industrial production is giving way to other ways of production and its investment model has been vanished over time. Because of that, a deconstruction of the original garden city model accompanied by an analysis of the latest versions inspired by Howard's manifesto can provide a flexible framework for the development of existing settlements, rather than taking the original model or distort the essence of the Garden City movement. Fig. 1.

The research methodology of this study comprises a

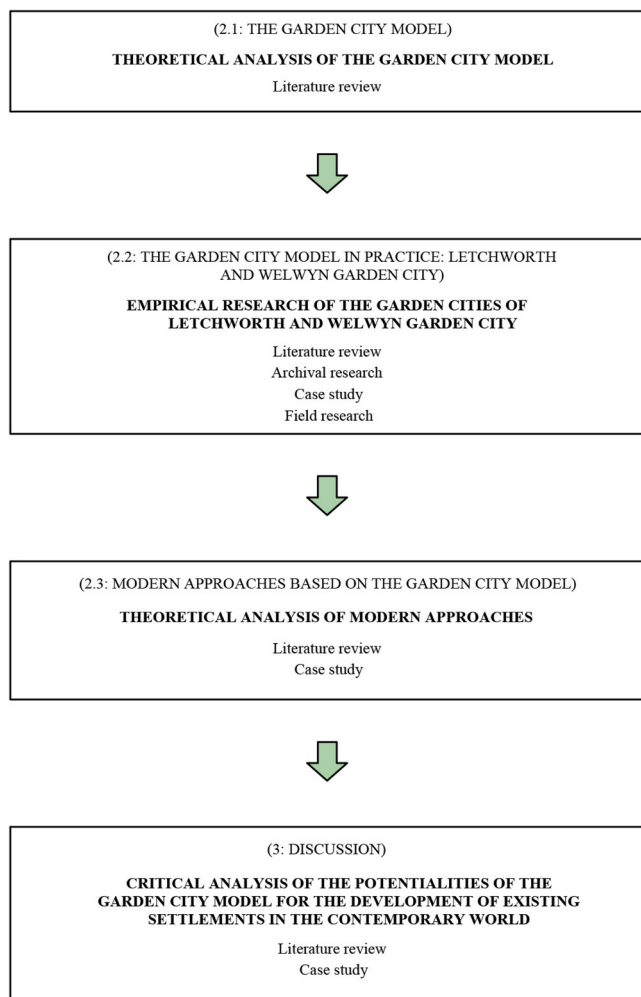


Fig. 1. Research methods of each part of the paper (Illustrated by the authors in 2023).

historiographical, sociological, and planning research of two case studies, Letchworth and Welwyn Garden City, to offer an updated analysis of such a model and outline a framework with the capability of redeveloping existing settlements in the contemporary world. For this purpose, this study has been coupled with fieldwork, including the active observation of the case studies' urban morphology and their townscape, landscape and architecture; archival research at Garden City Collection, Library of Birmingham and Manchester Metropolitan University Library; conversations with residents to know more about the history of both towns and their experiences and levels of satisfaction living in a garden city; field notes; and drawings, which comprise the main qualitative research methods to explore the evolution of both case studies over time in terms of colonisation, economy and planning.

The quantitative study was conducted using regional and local statistics and data collected by other researchers at different stages of the development of Letchworth and Welwyn Garden City until now (Hertfordshire County Council, 2020; ONS UK Census, 2001, 2011; Purdom, 1949; UK Official Census Report, 1968; Ward, 2016), which has constituted the basis to draw a population growth graph (Fig. 2) and support the analysis of each case study.

The application of this methodology establishes a series of strategies derived from the case studies of Letchworth and Welwyn Garden City, which are analysed and discussed for future implementation on the subject of study, through territorial policies to encourage the decentralisation of people and means of production into rural areas; the development of cooperatives to achieve a self-financing system and affordable housing in existing rural areas; and the implementation of the garden cities' design principles for the regeneration and expansion of existing settlements.

2. Reviewing the garden city model

2.1. The garden city model

The garden city model was constructed by Ebenezer Howard as a new magnet with the best features of town and country, such as the beauty of nature, low rents, low rates, low prices or space for enterprise to attract people from the cities to move to rural communities with a population of 32,000 (Howard, 1902). Among the broad theoretical spectrum that shaped the garden city model, Ebenezer Howard was influenced by significant utopians, reformers and philanthropists like Robert Owen, Henry George, Thomas Spence, Piotr Kropotkin, Edward Cadbury, and the Lever Brothers, who provided the basis to establish model communities in the countryside. This way, the garden city model was not just designed to achieve an idyllic physical environment for working classes, but mainly to reform the socio-economic conditions of working classes, through some alternative economic, territorial, and social patterns towards a new system of social reform. Following Howard's definition of the garden city as a "unique combination of proposals" (Howard, 1902, p. 71), its model is the result of overlapping strategies aimed at building model communities living and working in ideal commonwealths through a cooperative economic system and an industrial production model.

2.1.1. A territorial alternative for working classes and industrialists in new settlements beyond the urban centres

The beginning of the twentieth century was the right moment for building the first garden cities because of the great demand for housing and industrial accommodation in the United Kingdom, which encouraged the first pioneers to step forward and start from scratch far from the big city. A large part of the success of the Garden City Movement was not only due to their publicity through books, newspapers, or lectures, but it was also mainly due to the aspiration of working classes and industrialists to find an alternative to the adverse effects of industrial cities in terms of health, economy, and work (Ward, 2016). To fulfil such expectations, the countryside represented a blank canvas that gathered

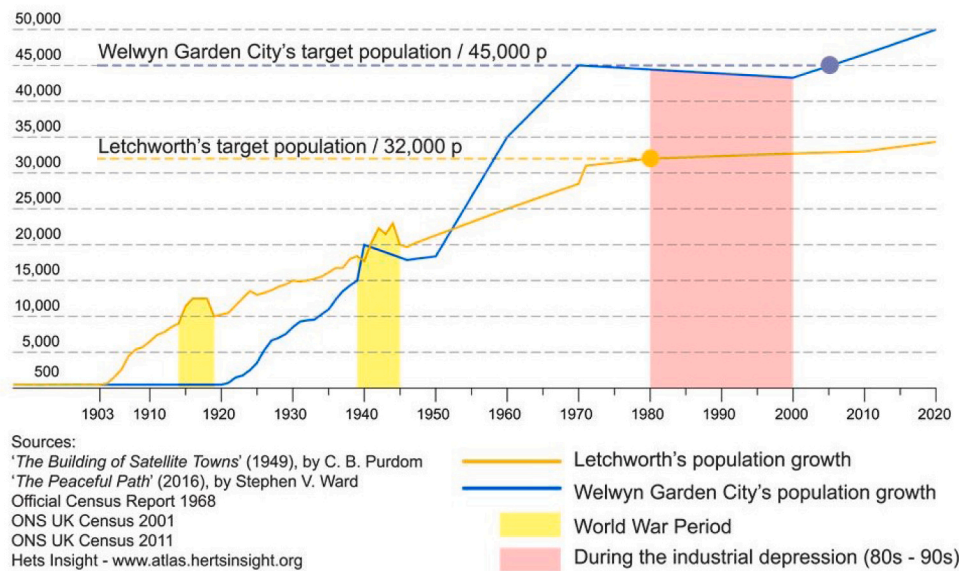


Fig. 2. Letchworth and Welwyn Garden City's population growth graph, illustrated by the authors in 2020 (Hertfordshire County Council, 2020; ONS UK Census, 2001; ONS UK Census, 2001; Purdom, 1949; UK Official Census Report, 1968; Ward, 2016).

the purified air, resources, open spaces, and natural features on which to put into practice a new physical and systemic model of building rural communities under the precepts of Ebenezer Howard.

One of the keys to success inducing people to return to the land was, according to C. B. Purdom, the transversality of Howard's manifesto, which complied with the pro-municipality, social reform, and land reform precepts of socialists, conservatives, and liberals, respectively (Purdom, 1949). The garden city model thus seemed to be more than a New Jerusalem for people in terms of aesthetics and health; it was mainly an attempt to create a self-contained community without public intervention nor the paternalist protection of wealthy philanthropists, as had happened in the industrial garden villages of Saltaire (1850), Port Sunlight (1890), Bournville (1894) and New Earswick (1902). However, from these industrial garden villages, Howard took the potential of industry in attracting people to the countryside as it represented the main source of workforce at the beginning of the twentieth century while intending to foster the decentralisation of industry in combination with agriculture across the countryside.

2.1.2. A dual land tenure system for the provision of affordable housing and industrial premises on a self-financing basis

In addition to the wide range of job opportunities, the garden city model also attracted population and industry through the affordability of its housing and industrial development. All this derived from the garden city's financial basis, which relied on a land tenure system of private funding and public interest that aimed to ease the process of building houses and factories on cheap agricultural land. Its subsequent increased value could be used for the development and maintenance of the garden cities to prevent speculation and assure the affordability of land value and rents. Lewis Mumford observed in his book's introduction, Howard had been more focused in the social process of the garden city, than its shape (Howard, 1902). It is a social process guided by principles such as the collectivization of the land, the implementation of a community tax from the earnings of residential and industrial rents, a local organization and a self-governance with labour and economic methods relying on building and production co-operatives. It would be a third way, unlike capitalism and centralist socialism, working from within the community, balancing the budgets according to demanding needs and avoiding individual or extra-community splurges.

2.1.3. A town planning scheme with urban and rural aspects

Howard, inspired in Colonel Light's project for Adelaide, proposed the building of new settlements surrounding metropolitan cities beyond their green belts, as an alternative to the overcrowded and poor conditions of the industrial cities.

To do this, Howard combined the best features of town and country into a town planning scheme with urban and rural aspects, which should be composed of limited communities of 32,000 people on 1000 acres (4046,872 square meters). This way, the garden citizens could live and work in small factories within the garden city, which would be surrounded by a green belt of 5000 acres (20,234,363 square meters) that would be exploited for agricultural activities (Howard, 1902).

2.2. The garden city model in practice: Letchworth and Welwyn Garden City

Only five years after Howard proposed the above-mentioned ideas through the publication of 'To-morrow: A Peaceful Path to Real Reform' in 1898, a company was founded in the United Kingdom to transform 4000 acres of farmland into the garden city of Letchworth. This first experiment was so successful that it prompted the building of a second garden city, Welwyn Garden City, in 1920. In general terms, Letchworth and Welwyn Garden City's achievement to attract people and means of production can be summarised by three main aspects: their strategies to encourage the decentralisation of population and industry, their financial structure and their "disurbanist" model.

2.2.1. Decentralisation of population and industry

During the first twenty years of development, the first garden city attracted a steady—though slow—stream of industries and people, whose colonisation boosted the estate's housing development. In Letchworth, as Purdom points out, the company's handicap was due to not foreseeing capital enough for developing the town; instead, building the estate was the prerogative of several small cooperative societies that were slowly shaping the estate's residential and industrial grounds to supply the demand of accommodation and work in the early years (Purdom, 1913).

Nonetheless, the town's natural growth represented a conservative and flexible process of consolidating a gradual influx of population, factories, and houses that, during its first two decades, only decreased in 1919, when most of the 3000 Belgian refugees who had arrived in

Letchworth in 1914 returned to Belgium after the end of the First World War (Fig. 2) (Elliot and Maddren, 1995).

The towns had many shortcomings due to their companies' lack of capital to build enough houses and industrial facilities, which hampered the influx of people and industries and led to other alternatives that were, in some cases, far from Howard's tenets (Purdom, 1949). However, the wide and varied range of job opportunities in both towns derived from the flexibility to adapt different kinds of manufacturing facilities within their industrial estates, and the implementation of governmental housing, industrial and employment policies boosted the migration of unskilled, semi-skilled and skilled workers from different parts of the country. Although Howard bet on private capital to build the garden cities of Letchworth and Welwyn Garden City, more so after the Garden City Committee's failed attempt to convince the government to invest public capital in garden cities after the First World War (Purdom, 1917), the state helped – albeit indirectly – to develop both towns.

In the case of Welwyn Garden City, the Welwyn Rural District Council and the Urban District Council funded the construction of 443 and 1053 houses, respectively for the working classes in Welwyn Garden City from 1922 to 1947 (Ward, 2016). The contribution of the state in building the town was unavoidable as the Housing Acts of 1919, 1923 and 1924, under which the rural and urban district councils of Welwyn Garden City built houses for workers, were passed precisely for financing the building of affordable housing anywhere in the UK. Despite the company's incapability to finance the building of the estate, its main task was to coordinate the growth of employment in relation to the provision of affordable houses by the councils.

Therefore, the use of private funding did not preclude the implementation of public policies, which somehow represented a fruitful combination for the establishment and growth of these towns, to fulfil the needs of shareholders, industrialists, workers, and residents without undermining the companies' independency in controlling the

development of the garden cities.

2.2.1.1. Real estate marketing strategy. In the case of Letchworth, the first experimental garden city did not have the pleasant start in attracting people that the company First Garden City Ltd (FGCL) expected, which led to tense discussions among its members on how to speed up the estate's colonisation process (Purdom, 1949). The different alternatives to achieve that were many – including offering residential sites on sale to speculative builders to sell freeholds for factory sites. However, after several attempts, instead of giving up the fundamental tenets of the company, its board of directors stood firm to maintain the leasehold system and sought some striking initiatives to break the wall of scepticism that many people had about the feasibility of the scheme (Purdom, 1963).

One of the most important initiatives came from the company's first manager, the architect Thomas Adams, who arranged the Cheap Cottages Exhibition in the summer of 1905 (Fig. 3). It was a breath of fresh air to the stagnation of Letchworth's development because it brought a stream of people from London and the surrounding villages and towns to visit the estate (Osborn, 1969). The main aim of the exhibition was to show prototypical attempts of houses for workers, a demonstration linked to the underlying aim of attracting the attention of industrialists so that they would move their factories and workforce there (Ward, 2016).

Nonetheless, the exhibition ended up attracting the general public, which was more interested in housing design than in the town's viability (Ashworth, 1954). The exhibition proved more efficient than the press in terms of publicity, allowing the company to spread its message from the written word to word of mouth across the country. Additionally, the publicity of the exhibition in *The Country Gentlemen* and *The Spectator* through articles published during the three months that the exhibition was open encouraged their readers to visit the estate through several



Fig. 3. Some houses built in 1905 for the Cheap Cottages Exhibition (Taken by the authors in 2019).

articles, which helped to bring around 60,000 visitors (Ward, 2016). This initiative served to demonstrate the affordability of the scheme as well as to counteract the bad publicity of several London journalists who deemed Letchworth “a home for cranks” (Purdom, 1949, p. 58).

Following the experience of Letchworth, Welwyn Garden City Ltd focused its energies on publicising the estate through large notice boards on both sides of the railway, announcing “The New Town for Residence and Industry” and providing as many houses as possible to relocate the workforce of the manufacturers that wanted to move into the new town (Fig. 4). In addition, one of the first events at the outset of Welwyn Garden City was the Daily Mail Model Home Village Exhibition. The exhibition was a clever strategy to attract the attention of the general public, but it did not convince industrialists to settle their factories in the town because the exhibited houses were not affordable enough for housing their workforce. This situation, coupled with the need to boost the development of both houses and industries, led both garden cities to find other ways to attract industrialists.

2.2.1.2. Industrial marketing strategy. In Letchworth, the architect and first manager of the company, Thomas Adams, asked William Henry Gaunt, who was experienced in industrial development as manager of different gas and electric tramways companies at Trafford Park, Manchester, for help (Purdom, 1963). He oversaw the executive work of the company as an estate manager from 1905 to 1917, and his main task was to turn Letchworth into an industrial town by publicising the estate and implementing the latest improvements in industrial development in the UK.

The company publicised the estate in Britain and even in France, Germany, and the USA (Fig. 5) by taking advantage of both the 1907 Patent Act, which allowed foreign firms to keep their patents on British ground, and the increase of electric power for industrial purposes (Ward, 2016). The workforce of Letchworth’s first industries thus boosted the building of houses for workers that the company needed to achieve its financial target. In addition, the industrial development by companies that came from previous locations brought skilled workers into the town, comprising 95 % of the population who lived and worked there in 1930 (Warren, 1930).

As happened at Letchworth, some of the bigger industries that moved to Welwyn Garden City were British subsidiaries of foreign firms that needed to settle their branches in the United Kingdom, so that they could save the cost of exporting their products from overseas and become more competitive in the British market. However, to facilitate the influx of small industries into the town, the company focused its strategy on an active marketing campaign by distributing publicity through press and brochures, coupled with the building of many factories to rent, rather than only providing sites without facilities.

Thanks to this approach, as well as the flexibility of the available industrial sites – whether for sale or rent – and the good connectivity through the railway, Welwyn Garden City attracted a wide range of industry during the first two decades of its establishment, the impact of which was even more notable than the advertisement of the industrial estate in the press (Purdom, 1949; Ward, 2016). The combination of both industrial and residential assets for lease was one of the most significant strategies to allow rapid growth of people in the town as renting meant a more affordable way to get accommodation or start a business in a new location rather than building or buying a property on a mortgage (Turnbull, 2016).

In 1939, the planner Jaqueline Tyrwhitt conducted a thorough survey on labour conditions, the standard of living, and general amenities in Welwyn Garden City called ‘*Life and Work in Welwyn Garden City*’. Based on statistics and data collected in 1939, she stated that 81 % of the employed residents of Welwyn Garden City worked in the town (3263 people), which meant a great success of the scheme in terms of self-containment and independence from the metropolis (Tyrwhitt, 1939). Apart from the workers who lived in the town, 28 % of the workforce of


Welwyn Garden City commuted from outside (1264 people). All this data about the mobility of Welwyn Garden City’s workforce proved the scheme’s employment capacity, which not only gave work to four-fifths of the resident workers but provided work for surrounding villages and towns, such as Old Welwyn, Hatfield, Hitchin, or Luton (Tyrwhitt, 1939). According to the survey, 30 % of the resident workers in Welwyn Garden City comprised young labour force already living with their parents in the town as well as others who had migrated from depressed areas outside Welwyn Garden City and had obtained their first job there (1500 people). In addition to the voluntary movement of many colonists, notably, most of those who had migrated from depressed areas had been encouraged to move into the town due to the establishment of the Government’s Industrial Transference Board in 1928, which aimed to retrain people who lived in deprived areas and support their migration to existing and new centres of industry (Ward, 2016). For this reason, people who came from depressed regions, such as Northern England, Wales, and Scotland, accounted for most of the inhabitants of Welwyn Garden City by 1939 (34 %) and were even more than migrants from London (30 %). Whereas the first group mainly comprised skilled and unskilled workers specialised in metal trades, a good proportion of the second one included clerks, draughtsmen, and typists. In short, this difference between both groups of migrants was, according to Tyrwhitt, due to the “deliberate decentralisation” of Londoners and the “deliberate migration” of those who came from depressed areas (Tyrwhitt, 1939).

2.2.1.3. Proximity to the metropolis and other rural settlements. The proximity of both settlements to the main metropolis had a great impact on the colonisation of the garden cities, by allowing most of the first pioneers to keep their jobs in London in the early stages of development (Purdom, 1949). Thus, the early residents of both garden cities were able to gradually leave their jobs in London and other settlements while obtaining skilled, semi-skilled or unskilled jobs in the garden cities depending on their situation and background (Ward, 2016). Even now, the railway routes between both garden cities and London are crucial to finding jobs beyond the boundaries of Letchworth and Welwyn Garden City as about half of their current working population are commuting every day to work in the metropolis (Hertfordshire County Council, 2020). This enabled the inhabitants of the garden cities can work there or elsewhere by taking part in a large network of other rural settlements and big cities.

Despite the current number of commuters being too high to consider both towns the self-contained communities that Howard would have wanted in employment terms, their early stages of development showed that both experiments were successful in providing work and housing to most of their inhabitants for more than five decades at least (Ward, 2016). In the case of Welwyn Garden City, according to Professor Stephen Ward, “LNER season-ticket sales at the Welwyn Garden City station, the best indicator of the extent of commuting, had peaked by the end of the 1920’s. Between 1930 and 1937 the numbers remained static and further population growth was by then underpinned by local employment” (Ward, 2016, p. 105). By 1930, about 60 % of its working population worked in the town, and this proportion increased year by year, whereas that of the working people who lived and worked in Letchworth was 95 % (Warren, 1930). At that time, Letchworth was also a significant source of employment for its surrounding settlements. According to Letchworth’s first resident doctor Norman Macfadyen, “the industrial side of the place has grown so that now there are more than 100 factories and workshops. These, of course, supply work for more than the artisan population of the town, indeed the towns and villages for a radius of ten miles around contribute workers. The population of these towns and villages have increased, and North Hertfordshire is fairly prosperous, owing in no small degree to the advent of Letchworth” (Warren, 1930, p. 131).

PUNCH SUMMER NUMBER—1920.

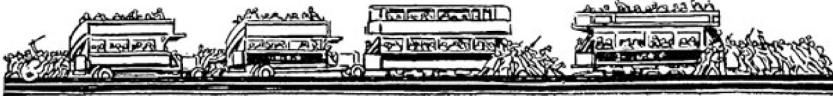
In the
Hertfordshire
Highlands




Twenty-one
miles
from Kings Cross

The New Town for Residence & Industry.


IT is not good to waste two hours daily in trains, buses and trams to and from the workshop, leaving no time nor energy for leisure or recreation.



AT Welwyn Garden City a man's house will be near his work in a pure and healthy atmosphere.



He will have time & energy after his work is done for leisure & recreation



For particulars of Housing & Factory Sites apply to Welwyn Garden City Ltd. Premier House, 150, Southampton Row, London, W.C., and Estate Offices, Welwyn Garden City, Herts.

Fig. 4. 1920 Welwyn Garden City's publicity (Purdom, 1949).

2.2.2. The financial structure

2.2.2.1. *A self-financing system for the development and maintenance of the garden cities.* Both garden cities adopted from the beginning a leasehold system not only to attract population and retain control over the property but mainly to avoid land speculation and secure the affordability of houses (Purdom, 1913). In the case of Letchworth, FGCL decided to implement a dual system, in which the land was held in trust by the company and the buildings were owned or rented by the people. The rents were collected by two means: the implementation of a "fixed-ground rent", which represented a fair proportion of the purchase price of the land and other expenses related to it, and a "rate-rent", which represented the cost of the public works (Purdom, 1913, p. 165).

The net profits of FGCL were, on the one hand, divisible by way of a dividend among the members in proportion to the amount paid up on the ordinary shares, which was 5 % per year. On the other hand, the surplus of the company's net profits of the company was saved for public purposes, such as the construction of a railway station, public buildings, hospitals, lighting, water supply, gardening, amusement and even the town's embellishment (Purdom, 1949). Thus, the finance of the

company relied on a self-financing system without any government expenditure on infrastructure. In the case of Welwyn Garden City, after twenty-nine years of development in the same way as Letchworth was invested and managed, the town was taken over by the government under the New Towns Act, 1946.

Such action represented the turning point of the second garden city regarding its financial scheme, but it did not represent a drastic change regarding its original economic and land tenure scheme. In fact, during the new town period, Welwyn Garden City preserved its original land tenure scheme until the issuing of the Leasehold Reform Act 1967, which still allowed leaseholders to purchase their freeholds (Welwyn Hatfield Borough Council, 2008). Beyond the good intentions that gave rise to the Leasehold Reform Act 1967, its practice in Welwyn Garden City and Letchworth led to the loss of control of the respective development corporations by retaining a low land value through ground rents, thus opening a breach that has contributed to the increase in land values and, therefore, to land speculation in both garden cities. However, in the case of Letchworth, this situation benefited the FGCL because, according to Mervin Miller, "the modest surplus of £ 93,325 for 1972/3 rose to £ 359,546 in the following year, and £ 704,000 in 1978/9" (Miller, 1983).

Why Manufacturers

move to . . .

Letchworth (Garden City) 6,000 Inhabitants

11 FACTORIES
ALREADY . . .
WORKING . . .



**CHEAP GAS AND WATER.
GOOD COTTAGES. LOW RATES
CHEAP ELECTRIC POWER.
UP-TO-DATE FACILITIES.
BRACING AIR.
AMPLE & EFFICIENT LABOUR.**

Fig. 5. Letchworth industrial estate’s advertisement (Ward, 2016).

Despite all the efforts of the development companies, the Howardian economic theory was gradually fizzling out in both garden cities because the shareholders and residents were losing the philanthropic and cooperative aims of the garden city model, respectively. Tensions within the joint-stock companies led to the shift of shareholders and members of the respective boards regarding the original economic aims of the garden cities (Birchall, 1995). In addition, according to Ray Thomas, “the popularity of owner occupation makes inflation in property values socially desired. Wage inflation is seen as a danger signal, but house price inflation is seen as an indicator of confidence in the future”. Thus, it is a “small wonder” that “Howard’s economic ideas have been suppressed” (Thomas, 1998).

However, the reinvestment model of the garden cities has prevailed in the face of adversity. Just like the original companies were aimed at reinvesting their net profits for the benefit of the local community, the current development corporation of Letchworth is working in the same direction. The Letchworth Garden City Heritage Foundation (LGCHF), which was founded in 1995, has a large portfolio of residential, industrial, and commercial assets valued at approximately £ 100 million. Such portfolio generates an annual yield of about £ 9 million, of which £ 4

million is reinvested for the development and maintenance of a free local transport network, a free health treatment centre, a four-screen art deco cinema and a garden city study centre, among others (Lewis, 2014).

Likewise, the LGCHF supports the administration of the ‘Scheme of Management’ to control the aesthetic aspects of the garden city and provides grants to residents and organisations (Letchworth Garden City Heritage Foundation, 2019). In 2019, the total income from investments and charitable activities was £ 12.92 million (£10.33 million and £2.59 million respectively), providing £ 234,000 net income after paying expenditure on investment property management and charitable activities.

Such net income is good evidence of the successful garden city economic scheme, which not only fulfils the socio-economic needs of Letchworth but also provides a resulting surplus of capital that increases year by year (Letchworth Garden City Heritage Foundation, 2019) (Fig. 6). In short, this reinvestment model is nothing new, but according to the former Chief Executive of the LGCHF, John Lewis, “what makes Letchworth unique is that this operational model has not been replicated on this scale anywhere else” (Lewis, 2014, p. 160).

2.2.3. Deconstructing a “disurbanist”² model

The architects Barry Parker and Raymond Unwin at Letchworth and Louis de Soissons at Welwyn Garden City shaped the rural character of the garden city model by encouraging a spirit of cooperation among residents, providing a picturesque townscape, and establishing green buffers between residential, commercial, and industrial areas. This formula, the order of factors of which comes from the relationship between the household level, the space in between buildings and the public space, respectively, resulted in a suitable design pattern for a non-urban community.

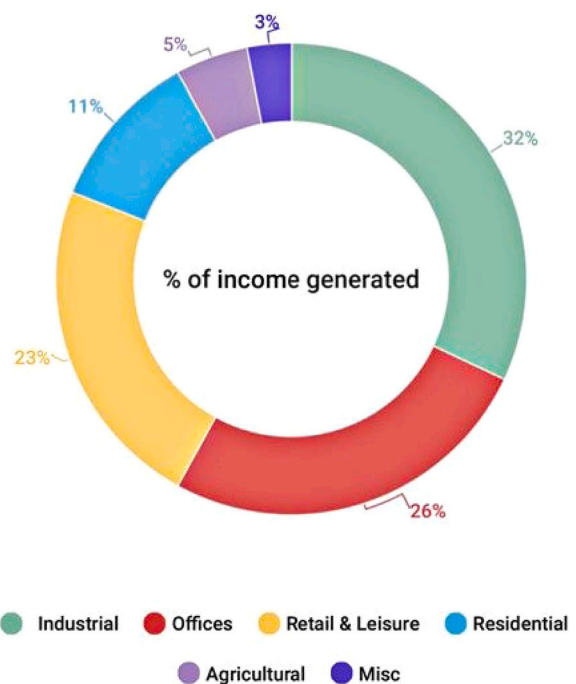


Fig. 6. Diagram of how Letchworth Garden City Heritage Foundation’s (LGCHF) portfolio generates income (Letchworth Garden City Heritage Foundation, 2019).

² The ‘disurbanist’ model comes from the word ‘disurbanism’, which is defined as a theory of dispersing infrastructure and housing development across the countryside (Macel, 1989).

2.2.3.1. Laying out green buffers throughout the settlement. Both in Letchworth and Welwyn Garden City, the railway stations, town centres and residential and industrial areas are connected along tree-lined corridors and wide gardens, which provide a pleasant walk to the busiest roads of the garden cities. In the case of Letchworth, Parker and Unwin laid out the town centre as a spider-web of diagonal roads, from where the residential roads connect with Broadway and Kennedy Gardens. Thanks to this pattern, the distance between different points of the town is not only significantly shorter than those using the traditional grid or “trellis”, but it also provides bucolic street pictures of a central green area (Unwin, 1909).

This urban pattern is distinctly traceable in the road network of Letchworth and Welwyn Garden City, which starts from a spider-web pattern in both town centres and turns into an irregular layout of roads closer to the outskirts of the towns, resulting in an organic road network throughout both towns (Fig. 7).

The preservation of existing natural features was to some extent the starting point of the arrangement of main roads in both garden cities (Harris, 1906). For instance, in the case of Letchworth, the lay-out of Broadway was the result of connecting three pre-existing plane trees (today there are just two) and the pre-existing park of Norton Common through a big green network of tree-lined corridors (Purdom, 1913). Likewise, the original plan was in some cases sacrificed in favour of preserving the few existing trees of the estate, which emphasized the importance of tree preservation at the first garden city (Purdom, 1913).

In the case of Welwyn Garden City, its early houses were laid out along a pre-existing lane for economic reasons,³ today Handside Lane, together with the preservation of pre-existing mature trees (Rook, 2001). Following these principles, the architects were extremely respectful of the original contour, topography, and trees in the arrangement of secondary roads in the residential areas of both garden cities. As a result, different housing schemes were implemented in each area, by taking advantage of the natural features of the estate.

Thanks to this, both Letchworth and Welwyn Garden City showed a mature townscape very quickly, as the architects integrated large trees, bucolic landscapes, hilly areas, orchards, livestock trails, wells, ponds, and woodlands into their designs to provide “natural street accents” to the settlements, instead of starting from scratch as a tabula rasa.

2.2.3.2. Providing a picturesque townscape. The layout of green spaces also contributes to shape the “accents” of the street scenes, forming a picturesque townscape full of surprises and variations throughout the residential areas. According to Unwin: “the chief disadvantage of the straight street (...) is a tendency to monotony, due to the fact that the street picture remains much the same for its whole length (...) This disadvantage may to some extent be met by a judicious breaking of the building line” (Unwin, 1909, p. 252). This way, the street lay-out of Letchworth and Welwyn Garden City, derived from Unwin’s ideas, constitutes an informal pattern, where, according to Sir Nikolaus Pevsner, “old trees are meticulously kept, straight roads are rare, and closes everywhere determine the pattern” (Pevsner, 2002, p. 398; Fig. 8).

The variations in the building lines are frequently coupled with some sequences of the street scene and some buildings in the background as a result of implementing the “principle of closure” (Unwin, 1909). Thus, the sense of finitude and closure is always present when walking through the garden cities’ roads because there is usually a building or a group of buildings closing the view as ‘turning points’ of the street scene.

Although the preservation of long existing lanes may create the opposite effect, the garden cities’ architects experimented with different ways of integrating road junctions in pleasant, balanced groups of buildings to shape little “places” along the roads (Parker, 1937; Fig. 9).

³ According to the historian and archaeologist Tony Rook, “to save money the Company did not construct new roads but mainly improved existing poorly metalled ones, starting at Handside (Rook, 2001, p. 85).

The sense of closure at these junctions is like that experienced in cul-de-sacs or small squares, providing a picturesque street scene and traffic safety. On the one hand, “at first sight some of these irregular shapes seem to have no purpose or meaning, but a closer examination of them will show that they are cunningly devised to give enclosed views and to render possible the erection of irregularly picturesque groups of buildings” (Unwin, 1909, p. 249). On the other hand, “there are no right-angle road junctions, and therefore there are only unusually safe road junctions at which every driver can see all oncoming traffic long before he meets it” (Parker, 1937, p. 15).

In short, the combination of existing mature trees and natural features, together with the variations in the building lines and the principle of closure, help to reinforce the picturesqueness of garden cities’ residential roads. In the case of Letchworth, such perception is emphasised by the openness of Parker and Unwin’s master plan, thanks to which the first garden city looks like a group of connected small villages around a civic centre (Osborn, 1969).

2.2.3.3. Encouraging the spirit of cooperation through urban design. In Letchworth and Welwyn Garden City, the spirit of cooperation can be found in the layout of village greens, cul-de-sacs, and allotments at the core of most residential clusters. The implementation of village greens in residential areas was the result of the reinterpretation of the traditional British village green to create a strong sense of community in the domestic realm of garden cities (Fig. 10).

According to Raymond Unwin, “greater enjoyment to each householder can be secured by grouping the buildings so that they may share the outlook over a wider strip of green or garden – in fact, that by some degree of co-operation more enjoyment of the available land can be secured than by dividing it all up into individual plots, and railing each in” (Unwin, 1909, p. 353).

Beyond these front gardens and common gardens, some of the biggest residential blocks of the garden cities contain other common areas for domestic operations and leisure, such as kitchen gardens, playgrounds, sport courts or allotments (Fig. 11). Even though these activities are hidden from the surrounding public space, their position in the core of the residential clusters acts as a semi-public space for residents to play sports, grow vegetables or have fun. Likewise, the implementation of these communal areas within the clusters was, in some cases, the solution to rearrange triangular or trapezoidal plots by grouping their corners in one common space (Unwin, 1909).

2.3. Modern approaches based on the garden city model

2.3.1. An updated version of the Howardian “Social City”: connected cities

Nowadays, the territorial scheme of the garden city model has been taken up by the association Connected Cities Ltd to outline a framework for redeveloping existing rural areas of Great Britain as a modern version of the “Social City” devised by Ebenezer Howard but with a few modifications. Whereas “Ebenezer Howard imagined his social city as a cluster of new garden cities in the countryside linked by new railways (...) Connected Cities uses the idea to rationalise the settlement structure around existing railways. They are modelled on Howard’s social city, but are not built from scratch; they are a blend of what is already there and new sustainable development” (Connected Cities, 2016; Fig. 12).

According to Connected Cities Ltd, the first stage of development should be focused on identifying towns with a population over 30,000 on a railway to become ‘Large Hub Towns’. The second stage should focus on identifying all rural settlements with existing stations within a 15-minute train journey from the “Large Hub Towns” to form a modern version of the “Howardian Social City” by shaping a network of towns, villages and small rural settlements connected along existing railway tracks or “Large Connected Cities”. Once the existing stations of “Large Hub Towns” and villages have formed “Large Connected Towns”, the third stage should involve developing those groups of rural settlements



Fig. 7. Nolle map of Letchworth and Welwyn Garden City highlighting the urban pattern of both towns (Illustrated by the authors in 2021).



Fig. 8. “The Quadrangle”, one of the closes of Welwyn Garden City designed by Louis de Soissons in 1920 (Illustrated by Antonio Blanco Martínez in 2021).

of less than 30,000 population or “Small Hub Towns”, from where “Small Connected Cities” of rural settlements might be formed by reopening or constructing stations within a 15-minute train journey from “Small Hub Towns”.

2.3.2. An updated version of the Howardian self-financing system: cooperative land banks

Despite Letchworth and Welwyn Garden City losing their original land tenure system, their experience has heavily inspired economists like Dr Shann Turnbull, who developed the concept of “Cooperative Land Banks” (CLB) (Turnbull, 1983). According to Turnbull, a CLB consists of a self-financing system upon a dual land tenure system, which, if applied to the regeneration of brownfield areas or existing settlements, could become a modern vision of the garden cities’ self-financing system (Turnbull, 2018).

The dual land tenure system of a CLB is based on the garden city model, which separates the ownership of the land from that of buildings (Turnbull, 1983). Likewise, the ownership of a residential, commercial, or industrial building takes the form of a transferable lease of land from the CLB, which is perpetual in the case of residential buildings and time-limited in the case of commercial and industrial buildings (Lewis, 2011) (Fig. 13). In other words, Turnbull proposes to tailor the garden city’s land tenure system to modern realities beyond the boundaries of the British garden cities.

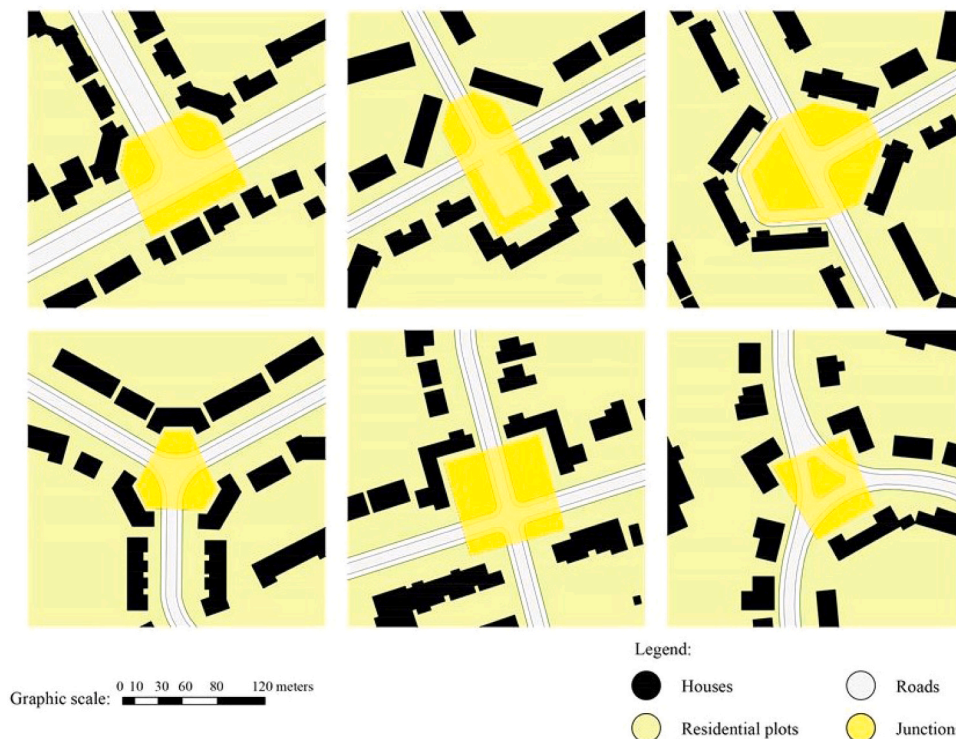


Fig. 9. Grouping of houses around some junctions highlighted in yellow at Letchworth (Illustrated by the authors in 2021).

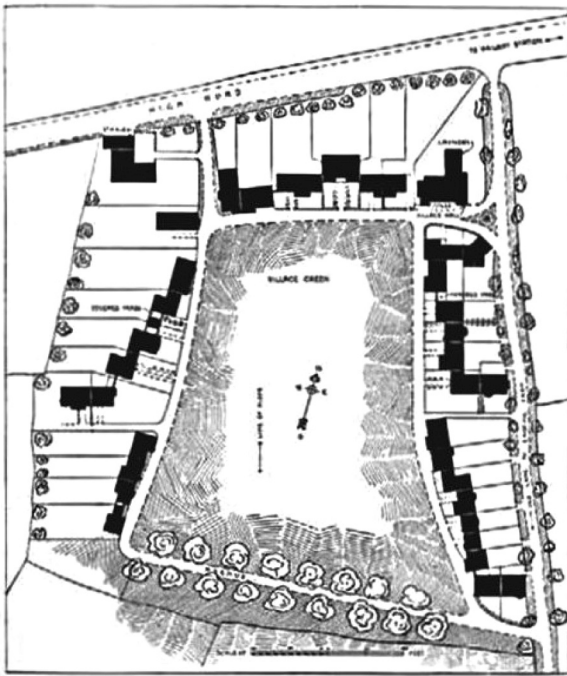


Fig. 10. Plan for a village green designed by Barry Parker and Raymond Unwin (Parker and Unwin, 1901).

corporation. To avoid such a situation, Turnbull proposes to distribute shares among the pioneer homeowners and future inhabitants in proportion to the area occupied and time of permanence⁴ (Turnbull, 2018). In addition, adult residents would have one vote each,⁵ so that the CLB could take the role of a “Community Land Trust”, in the form of a local government body (Benello et al., 1997). This way, it meant that a homeowner in a CLB disposes of two types of equity: the building or apartment where they live, and the community shares related to the land (Lewis, 2011).

In short, according to Turnbull, “residents would not need to pay any rent/rates while also obtaining dividends from their Cooperative Land Banks shares” (Turnbull, 2007, p. 9).

2.3.3. An updated version of the garden cities’ planning principles: re-imagining the garden city

The implementation of common areas at the back of the houses is still latent at Letchworth, as can be seen in the new master plan for the expansion of the town. In October 2018, the Letchworth Garden City Heritage Foundation (LGCHF) launched a design ideas competition called ‘Re-Imagining the Garden City’, in which the author participated, to develop the first expansion of Letchworth on a 45-hectares site located on the north of the estate.

In June 2019, the RIBA and the LGCHF announced that the winner of the competition was the architecture and urban design studio EcoResponsive Environments, with their design ‘Grange in the Hedges’ (Letchworth Garden City Heritage Foundation, 2019). Their proposal for the residential blocks included some common areas at the core of the clus-



Fig. 11. Residential blocks with inner common gardens at Letchworth (Illustrated by the authors in 2021).

However, unlike the garden cities’ management structure, the shares of a CLB should be held by residents rather than by the investors, thus complying with Howard’s self-governance scheme (Turnbull, 1992). As Turnbull points out, “Howard did not design ways for the invisible structures of ownership and control to be localised to facilitate self-governance. As a result, the Letchworth Corporation became the target of a take-over bid from a corporate raider in the 1970s” (Turnbull, 2008, p. 5), which prompted the nationalisation of the development

ters, such as playgrounds, sport courts, allotments, and orchard trees (Fig. 14). The urban design studio laid out these “spaces within the perimeter blocks (to) afford opportunities for urban food-production;

⁴ E.g., one share per square meter.

⁵ Voting shares would not be issued to the owners of office, commercial and industrial buildings.

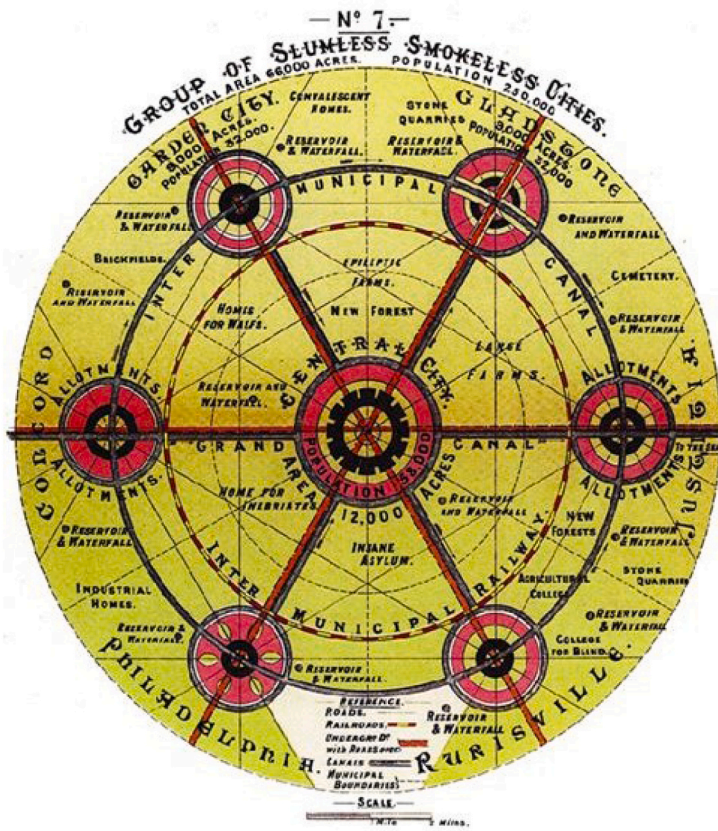


Fig. 12. A comparison between Ebenezer Howard’s social city and the Connected City diagram (Howard, 1902; Connected Cities Ltd, 2016).

and offer suitable spaces for active, relatively unsupervised play in outdoor green environments, with health and socialisation potentials” (Ecoresponsive Environments, 2018).

3. Discussion

One of the keys to the success of the garden city model in attracting population resides in its integration into a territorial network of pre-existing railway tracks, thus allowing a rapid and efficient decentralisation of population and means of production across the territory (Purdum, 1949). Nowadays, instead of building new communities from scratch under this approach, the redevelopment of existing settlements on pre-existing railway routes offers an alternative method to encourage the mobility of population to the countryside in developed and developing countries.

Just like the experience of Letchworth and Welwyn Garden City is good evidence of the suitability of developing these settlements close to urban centres (Ward, 2016), existing towns or villages of today can be redeveloped following the same approach. Within this framework, those communities located near railway tracks and those without railway infrastructures should be integrated into a sustainable territorial network alike. Whilst the former should reopen or build sidings or stations to be part of such a territorial network, the latter should implement railway and/or tram routes to ease the mobility of population throughout the territory. Thanks to this, some cities or towns would have the opportunity to reduce the pressure on overcrowded urban centres, thus contributing to minimize the carbon footprint and enhance the living conditions of urban communities, whereas small settlements can benefit the surplus urban population willing to live close to the countryside in pursuit of a new hope of prosperity, affordability, health, and safety for them and future generations. In this way, the economic and labour market recovery of existing settlements located along railway routes can

be boosted thanks to the influx or commuting of people from urban areas, as well as the cooperation between cities, towns, and villages in terms of resource, commercial and cultural exchange in a territorial level.

However, while the British railway companies have the capacity to connect almost the whole country, other European countries like Portugal or Spain have been gradually closing railway routes (Mojica and Martí-Henneberg, 2011). Within this context, both abandoned railways and those about to close can benefit from this scenario by identifying medium-sized towns located nearby small rural settlements in order to establish new sub-regional groups, either “Large or Small Connected Cities” (Connected Cities Ltd, 2016), in the form of “Linear Shires”, as an adaptation of the “Howardian Social City” to territorial and local conditions of existing settlements and railway routes.

Additionally, this territorial strategy can be coupled with the development of “Opportunity Areas” located in between existing settlements, in order to provide a series of large facilities for different purposes related to production, amenities, services, education, health-care or infrastructure (Rando Burgos, 2020). Thanks to this, instead of each town or village developing industrial, commercial, sport, medical or agricultural facilities within the municipal boundaries, all the existing settlements of a “Linear Shire” would cooperate in the development of common facilities, thus contributing to the preservation of the surrounding landscape of each settlement and the burden-sharing of developing and maintaining large facilities for economic and social welfare purposes. To achieve that, both scenarios should integrate the implementation of ICT technology along these routes, in order to minimize the risks of spreading that technology across the countryside and give rise to job opportunities related to urban areas. In this way, urban communities might start being interested in new fields for practice in the countryside, as the mobility of people across the territory and remote working methods can provide a wide and varied range of

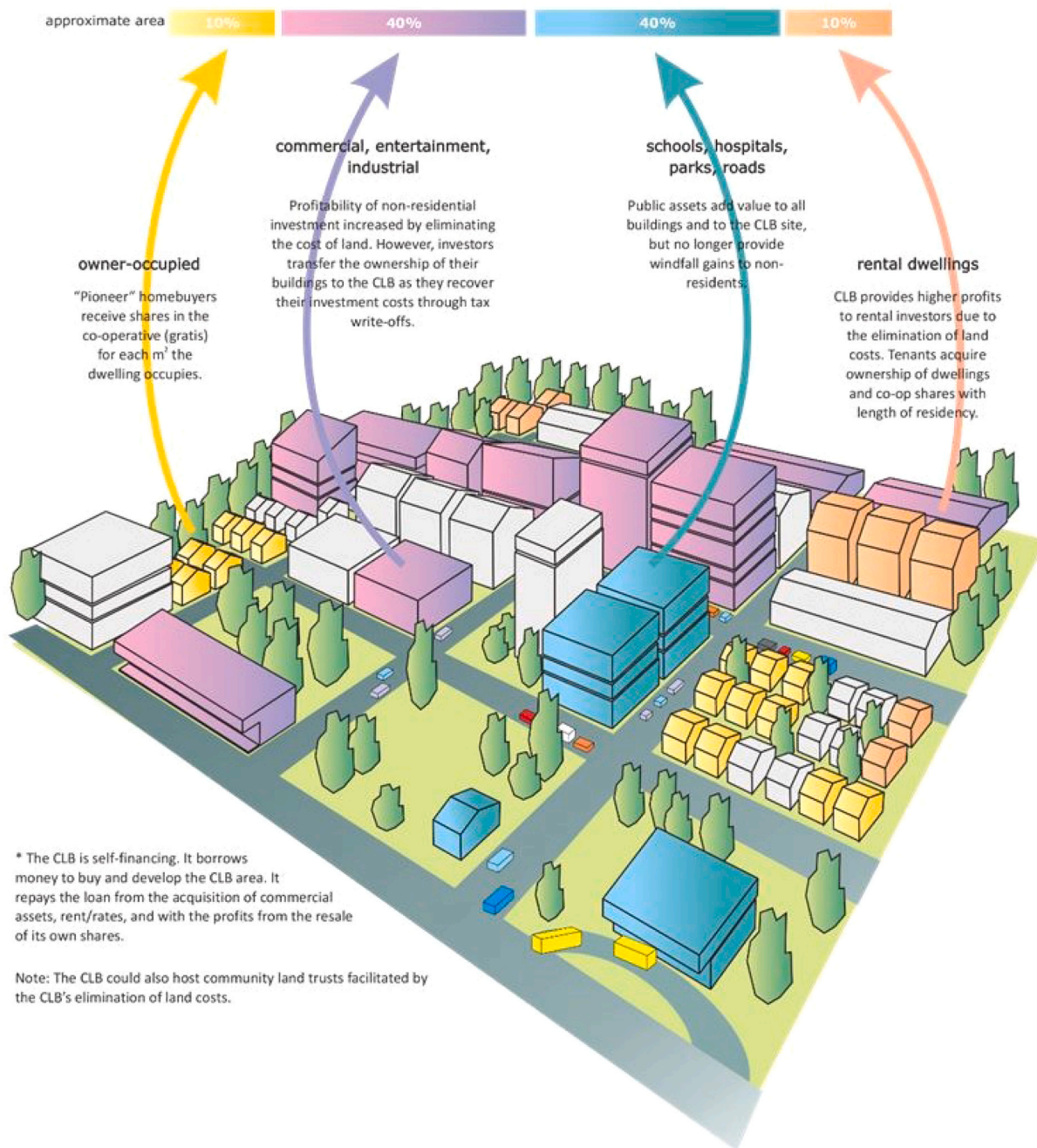


Fig. 13. Diagram of a Cooperative Land Bank (*The Resilience Imperative*, by Michael Lewis (2012). Illustration by Don McNair).

employment opportunities.

Once assured the basis to encourage people and means of production to remain in existing small towns and villages or move to them from urban areas through railway lines, opportunity areas and ICT technology, the cooperation between rural communities should extend beyond a territorial approach and reach local-level approaches in terms of investment, employment, development, and management, as an adaptation of the invisible architecture of the garden city model to existing realities. Just like the garden city model prompted the establishment of cooperative companies to finance, develop and manage the building of new settlements in the absence of public funding, cooperatives can be a feasible alternative for existing communities of today, in order to minimize the risks of establishing new companies and redeveloping existing settlements that are not subject of interest for investors or public administrations, without precluding the indirect participation of the

public administration in terms of employment and development.

In the case of Welwyn Garden City, a big part of its success in attracting population was due to the deliberate migration of less advantaged communities who were encouraged to move into the town due to the establishment of the Government's Industrial Transference Board in 1928, the aim of which was to train young people who lived in deprived areas and support their migration to existing and new centres of industry. Thanks to this strategy, the companies of Welwyn Garden City were able to grow their workforce very quick and a large of those who went to the town ended up becoming inhabitants of Welwyn Garden City (Tyrwhitt, 1939). According to this approach, existing communities should promote the creation of cooperatives by holding workshops or courses on professional training by taking advantage of national, regional, or municipal policies on employment, so that young people can meet others with similar interests and skills, thus

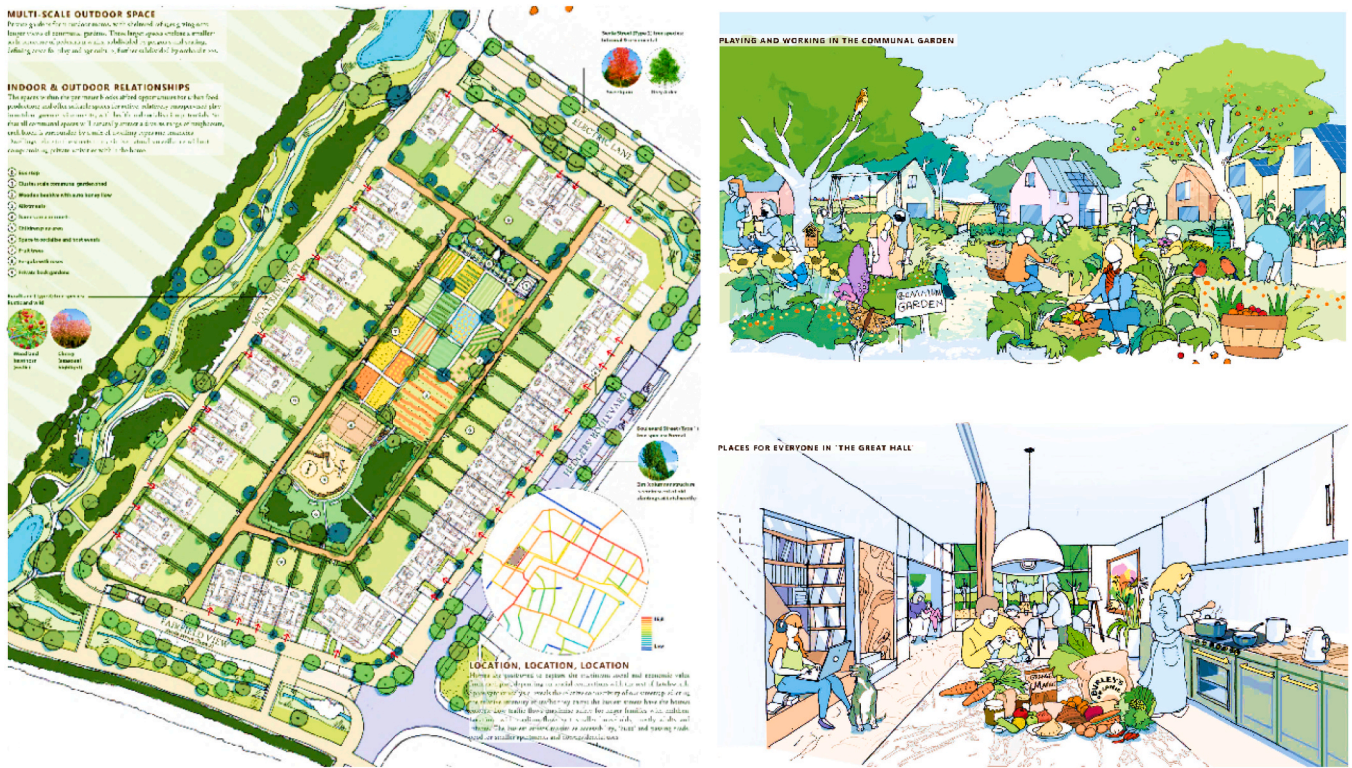


Fig. 14. Plan and sketches of one block for the expansion of Letchworth (Letchworth Garden City Heritage Foundation).

encouraging them to work together in running agricultural, worker or housing cooperatives.

To do this, the educational and formative activities should integrate some additional activities aimed at instructing students to finance, develop, and manage cooperative companies, so that students are trained to run cooperative companies as a bottom-up strategy to create job opportunities in the absence of public or private companies. This way, the public administration would take the role that credit cooperatives or non-governmental organizations have played in many countries so far in teaching people to run cooperative companies (Giagnocavo, 2020).

Likewise, in parallel with the promotion of worker cooperatives, the labour market of existing communities should be updated to new realities as well. Just like the garden city model opted for the implementation of a diversified economy (Ashworth, 1954), existing settlements can adopt a similar approach, but adapted to modern times, in order to provide a wide range of employment opportunities for young people. Although it might bring about the demise of the traditional economy, a diversified economy has the potential to attract population and means of production that, for example, agriculture or livestock alone cannot. This strategy would help to establish synergies between the traditional economy and alternative forms of production and employment, including non-agricultural activities, small industries, cottage industries, research centres or telework in existing settlements at local level.

In addition to this, the development of opportunity areas for production purposes can play an important role in reinforcing the synergies between different labour sectors of different settlements within clusters at supra-municipal level, since their main aims are to go through municipal boundaries and develop strategic locations with the ability to concentrate existing economic activities of surrounding areas and promote the arrival of new ones in a shared place (Rando Burgos, 2020). Thus, opportunity areas can provide similar working conditions to those found in big urban centres, thus giving work to skilled, semi-skilled or unskilled workers working together within the same labour market. In

the same way as the industrial estates of Letchworth and Welwyn Garden City gave work to other surrounding settlements and attracted people from urban centres (Tyrwhitt, 1939), the development of opportunity areas beyond metropolitan cities can promote the implementation of the knowledge economy in small towns or villages in the form of industrial and technological estates aimed at attracting highly qualified urban communities and encouraging rural communities to live and work close to their hometown.

In addition to worker cooperatives, housing cooperatives can be also an alternative to refurbish and supply accommodation, either because the development corporations involved in the acquisition of the properties and plots do not have enough capital to build houses or cooperative housekeeping schemes do not have financial support from traditional real estate companies. In Letchworth, several housing cooperatives were established at the early stages of development like Garden City Tenants Ltd. and Letchworth Cottages and Buildings Ltd., which were crucial in providing accommodation to the first waves of colonizers (Purdum, 1949). However, it is worth noting that both housing cooperatives did not come out from nothing. While the former was born from the first industrial company and worker cooperative established at Letchworth, the Garden City Press Ltd., to build some cottages on a co-partnership basis for its workforce, the latter was promoted by Letchworth's development corporation and joint-stock society First Garden City Ltd to fulfil the demand of cheaper dwellings than those built by the first one (Letchworth Local History Research Group, 2021). So that, these housing cooperatives had tight ties to worker and development cooperatives of the town and helped to promote cooperative values among the members of all these companies who were inhabitants of Letchworth in turn. In short, the cooperative system of the garden city model went beyond its financial dimension and overcame the shortage of labour and housing supply at the outset of Letchworth. According to this approach, existing towns and villages can be redeveloped through promoting the growth of housing cooperatives at the early years, rather than just hoping for the arrival of philanthropic investors or politicians concerned about the future of these communities.

However, this approach does not preclude the use of public policies oriented to build affordable housing in the same way as the rural and urban district councils of Welwyn Garden City implemented the Housing Acts of 1919, 1923 and 1924 to build affordable houses for workers (Ward, 2016). In addition to the implementation of public policies, the use of endogenous resources for the construction or refurbishment of buildings can also contribute to build affordable housing, just like Welwyn Garden City's development corporations used local clay for brickmaking as an economic strategy to lower production costs, make affordable housing and reduce the carbon footprint (Osborn, 1969). Thanks to this, the red brick buildings of the town contributed in turn to forge a strong aesthetic identity, which is still part of the local identity of Welwyn Garden City (Rabbitts and Jeffree, 2021). Additionally, this sustainable strategy can be coupled with the re-using of building materials, thus promoting the development of a circular economy aimed at minimizing the environmental and economic impact of housing development.

In the same way as the garden city's economic model was thought as a barrier against land speculation and to attract population by securing the affordability of residential, industrial, and commercial assets (Purdum, 1963), the CLB is aimed at pursuing the same goals, as well as minimizing the inequities derived from periods of crisis and windfall gain in property values (Angel et al., 1983). While untested, the CLB model can be applied to the building of a new community, as well as to the redevelopment of a deprived area, brownfield or abandoned settlements. However, other cases of trustees that own the land, such as the Bournville Village Trust at Lightmoor or the Parks Trust at Milton Keynes, can be taken as a reference to achieve a dual land tenure system in new and existing settlements (Henderson et al., 2017). Through the achievements and mistakes of Letchworth, Turnbull has updated the invisible architecture of the garden city model, in order to foster and regenerate human settlements towards becoming self-reliant communities throughout the territory. Therefore, just like the garden city model has led to the search of new ways to democratize local economies through the CLB model, the garden city model can also become the key to success in existing settlements, by capturing rising property values for the benefit of the residents, while preserving the housing affordability, encouraging citizen participation, and thus attracting population and means of production to start from scratch in existing towns or villages. This way, residents can manage the benefits and burdens derived from housing, agriculture, and industrial development for the maintenance and development of their settlements.

Among all the different kind of settlements located in rural regions of developed and developing countries, some of them are not in good living conditions, others are not large enough in size to accommodate a minimum of population to become a village, such as hamlets or scattered rural areas, and others share both issues (Carson et al., 2011). Although the garden city model was thought to design communities from scratch, its design principles can be adapted for regenerating and expanding existing settlements alike, depending on the existing scenario to work from. For example, pre-existing natural elements and heritage can be preserved by integrating them into the layout of houses and recreational areas, such as we can find in the cul-de-sacs or village greens of Letchworth and Welwyn Garden City (De Soissons, 1988). Likewise, scattered rural areas can form a new village or town as connected villages around a civic centre, in the same way as Letchworth was devised by Parker and Unwin, or can be integrated to a "Linear Shire" of other settlements. Therefore, no matter the difference of scale between a garden city and a small town or village when the elements that shaped both case studies are sensibly adapted and applied to existing settlements. This way, the deconstruction of such a "disurbanist" model can be the starting point for shaping a new urban design framework that defines a suitable housing density, urban pattern, and planning schemes for existing communities.

To do this, the combination of all the above-mentioned strategies, through the development of "Linear Shires", opportunity areas and ICT

technology along pre-existing railway routes; the promotion of agricultural, worker, housing and development cooperatives in rural areas; the synergies between the traditional economy and the knowledge economy to achieve a diversified economy; the use of endogenous resources; and the application of a "disurbanist" model for planning purposes, provides a re-interpretation of the garden city model to improve the situation of existing communities of today under the same umbrella of co-operativism, self-reliance and ruralism that gave rise to the Garden City Movement more than one hundred and twenty years ago.

4. Conclusion

This study focuses on the analysis of the garden city model because it relied on a multidimensional approach, which can fulfil the needs of existing towns and villages, in the absence of enough public funding and suitable urban design principles for the regeneration of deprived areas around the world. Likewise, instead of taking the new town model, which was public-funded and had utterly different design principles to the garden city model, the findings of this study present the garden city model as a suitable scheme with the capability to be adapted into existing realities, both in socio-economic and design terms.

The analysis of the case studies responds to the research questions of the Introduction section, as it provides:

Territorial strategies based on the development of 'Linear Shires', opportunity areas and ICT along pre-existing railway routes to encourage the decentralisation of population and means of production across the territory.

Socio-economic strategies through the promotion of agricultural, worker, housing and development cooperatives, coupled with the promotion of synergies between the traditional rural economy and the knowledge economy, to achieve a self-financing system and affordable housing in existing communities.

Urban planning strategies through the layout of green buffers, the development of a picturesque townscape and the promotion of the spirit of cooperation among residents in existing settlements.

Thus, the garden city model offers a wide range of strategies to attract population and means of production to existing settlements, implement a self-financing system, ensure the affordability of houses, and develop planning schemes for the regeneration and expansion of towns and villages, thus forming a multi-layered scheme to combat a wide range of issues in existing communities, as a whole or individually, depending on the conditions and background of each case.

In short, the combination of all the above-mentioned strategies provides a reinterpretation of the garden city model to address the problems of today's existing communities under the same umbrella of cooperativism, self-reliance and ruralism that gave rise to the Garden City Movement more than 120 years ago.

However, this study has some limitations. On the one hand, questionnaires on present day of Letchworth and Welwyn Garden City's residents or stakeholders have not been carried out, what would have contributed to support the analysis and develop a more varied mixed-methods research. On the other hand, the applicability of the garden city model to existing settlements outlined here has not yet been put into practice to prove its validity. Likewise, there is no precedent of CLBs in existing settlements, and neither 'linear shires' nor with opportunity areas have been developed in other cases. Nonetheless, this document offers an updated version of the garden city model in the form of a general framework that can be used by future scholars to analyse other cases to redevelop existing settlements and adapt such a framework to rural areas suffering from depopulation, south-south theory, and developing country's landscapes which are not too similar to the predominantly European spatial landscapes.

This reinterpretation of the garden city model for the development of existing communities can provide a series of different strategies, which might be implemented as a whole or partially depending on the regional and local conditions of each settlement. Therefore, this scheme

represents a flexible framework that can offer social, economic and design strategies derived from three different dimensions to address structural or concrete problems of existing settlements, without precluding the combination of other initiatives or more comprehensive approaches adapted to specific contexts around the world.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability

No data was used for the research described in the article.

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