APRENDIENDO DE LAS CIUDADES JARDÍN:

ESTRATEGIAS PARA LA REVITALIZACIÓN DE COMUNIDADES RURALES EN LA ESPAÑA VACIADA



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Tesis Doctoral

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To whomsoever it may concern

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ABSTRACT

The phenomenon of rural depopulation is having a profound impact on socio-economic and territorial imbalances in European countries like Spain that a varied and wide range of strategies are necessary to be implemented in existing rural communities in decline. Through a theoretical and empirical analysis of the garden city model, this thesis 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 rural communities suffering from depopulation in the Spanish territory. So far, the garden city model has been analysed and adopted by scholars, urban planners, and institutions to design new towns and suburban communities around the world. In contrast, this study 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 rural scheme with the capability to encourage the decentralisation of population and means of production into rural areas, develop cooperatives to achieve a self-financing system and affordable housing in existing rural areas, and implement the garden cities' design principles for the regeneration and expansion of existing rural settlements towards a sustainable, attractive, self-reliant and prosperous future beyond the urban centres.

Keywords: Garden city, rural communities, self-reliance, rural development, urban regeneration.

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1. INTRODUCTION

Nowadays, the countryside is experiencing a slow but steady process of depopulation, which is indirectly feeding the urbanisation process in developed and developing countries. For example, in China, the urban population exceeded rural communities in 2011, with 61% of urban population (The World Bank Group, 2021a) against 39% of rural population (The World Bank Group. 2021b). In the entire world, the future looks even more pessimistic for rural development. According to the United Nation's 2050 projections, China will reach a territorial imbalance similar to that currently experienced by most Western countries (80% of urban population against 20% rural), whereas other countries which currently have a greater rural population, such as India or Pakistan, will have a majority urban population by 2045 (United Nations, 2018).

In Europe, the regions experiencing population decline in rural areas are those in the East, like Germany and the Baltic States, as well as in Mediterranean countries like Portugal, Spain, Italy, Greece, Bulgaria and Romania (ESPON EGTC, 2018). Within this context, the demographic distribution of Spain is facing one of the most dramatic situations, with municipal densities ranging from five to ten inhabitants per square kilometre (Instituto Nacional de Estadística, 2022).

As a result, depopulated rural settings in European countries like Spain, which are lagging far behind resilient rural areas near large urban centres, are experiencing financial marginalisation, lack of services, agricultural decline, bad infrastructure, abandoned buildings, and degradation of architectural, urban, and cultural heritage (Paniagua, 2011). Within this context, some initiatives have emerged to overcome these issues, like social media influence, targeted migration, tourism development or free housing for young couples (Al-Saffar et al., 2022; Cáceres-Feria et al., 2021; Collantes and Pinilla, 2013; Pérez-Morote et al., 2021; Pinilla and Sáez, 2016; Onitsuka, 2019), but without any significant impact in encouraging people to move to the rural land and create a strong and diverse community in inland regions.

The current situation of rural communities suffering from depopulation in the European territory is so complex and difficult to address by one single strategy that it requires a more holistic approach based on a multi-faceted approach with the capability to combat territorial, socio-economic and planning aspects as a whole or individually, depending on the conditions and background of each case. Within this context, the garden city model can offer a wide range of strategies to attract population and means of

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production to the countryside, implement a self-financing system, ensure the affordability of houses, and develop planning schemes for the regeneration and expansion of existing rural settlements, thus complying with the three pillars of sustainability – social, economic and environmental (Brundtland, 1987).

In this regard, 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 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. This social alternative was not only a new way of living but also a territorial experiment to decentralise population and means of production across the countryside. 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. These precepts were implemented in the building of two garden cities in the United Kingdom – Letchworth (1903) and Welwyn Garden City (1920) – thus implementing the garden city model for more than a hundred years of development.

Through to the experience of Letchworth and Welwyn Garden City, this study focuses on the analysis of the garden city model because it comprises a multidimensional approach based on territorial, socio-economic, and urban design principles. However, instead of proposing the building of garden cities throughout the vast desert of the Spanish territory, this approach is totally new, as it is focused on the adaptation of the garden city model for the regeneration of existing settlements, rather than building new ones.

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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 (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, 2013; 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 combat rural depopulation. Within this context, the current situation of existing rural communities in decline could become a new field to adapt the garden city model as it can offer some alternatives to encourage the decentralisation of population and means of production across the countryside, promote a self-financing system in the absence of investors or public funding, and develop a planning model for existing rural settlements. The main aim of this paper is to analyse the potential feasibility of the garden city model as an alternative for the revitalisation of rural communities in decline.

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

Territorial field - How could the decentralisation of population and means of production into rural areas be encouraged?

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

Urban / Architectural field - How could existing rural areas be conserved, transformed, and updated to fulfil the needs of likely future rural communities?

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2. METHODOLOGY

The research methodology of this study comprises a 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 rural settlements in the contemporary world.

This study is focused on the analysis of Letchworth and Welwyn Garden City because both case studies are the main epitomes of the Garden City Movement, where the Howardian scheme has been implemented over time, through its socio-economic, territorial, and planning aspects. Thus, instead of taking ideas from subsequent case studies like New Towns, which were based on a public financing system and had utterly different design principles to rural communities, this study analyses the raise and development of Letchworth and Welwyn Garden City to analyse the potentialities of the garden city model and provide substantial findings with the capability to shape a framework for the revitalisation of rural communities through the above-mentioned three dimensions.

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 rural settlements.

For this purpose, this study has been coupled with fieldwork carried out since 2018 to 2021 to analyse the case studies' urban morphology and their townscape, landscape and architecture; archival research at Garden City Collection carried out since 2019 to 2021, Library of Birmingham in 2020 and Manchester Metropolitan University Library since 2018 to 2021 to collect historical data, statistics, plans and pictures about the planning and development of both garden cities; informal conversations with residents to know more about the history of both towns and their experiences living in a garden city; field notes and drawings to provide some illustrations to the thesis; and two academic projects carried out by students of the Master of Architecture and Urbanism at the Manchester School of Architecture in 2020 and 2021 respectively to explain how to implement the garden city's design principles, comprising the main qualitative research

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methods to explore the evolution of both case studies over time in terms of colonisation, economy and planning. The main aim of both academic projects was to provide strategies to attract people to the villages through exploring the potentialities of the garden city model in terms of design, planning and economy. To that end, the students were provided with some presentations about the main findings of this thesis to understand how to implement the garden city model for the regeneration and expansion of existing rural settlements and were taught to make site analysis, SWOT analysis, surveys, 3D models, cognitive maps, serial visions, valley sections, etc. In addition, the students of the Master of Architecture and Urbanism got some information and data through distributing surveys, having meetings with residents, and checking graphical information about both sites to make a master plan. Apart from this, 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 Census, 2020; Official Census Report, 1968; ONS UK Census, 2001, 2011; Purdom, 1949; Ward, 2016), which has constituted the basis to draw a population growth graph (Fig. 5.9) and support the analysis of each case study.

To develop this study, its results have been divided into four parts as follows: (Part one) rural communities in decline; (Part two) the garden city model; (Part three) garden cities of today; (Part four) garden villages of tomorrow.

Firstly, Part one is a historiographical analysis of the causes, circumstances, and the current situation of the depopulation process of rural areas in the global, European and Spanish context, together with a comparative analysis of two case studies in Spain. Secondly, Part two comprises an introduction to the garden city model, a historiographical analysis of its theoretical background and aesthetic background and the planning of the first two garden cities. Thirdly, Part three is an in-depth research about the foundation and development of Letchworth and Welwyn Garden City through their strategies to encourage the decentralisation of population and industry, their financial structure and their urban design principles. Finally, Part four comprises an adaptation of the garden city model for existing rural realities, through a multi-faceted approach based on territorial, socio-economic, and urban planning strategies for rural communities suffering from depopulation.

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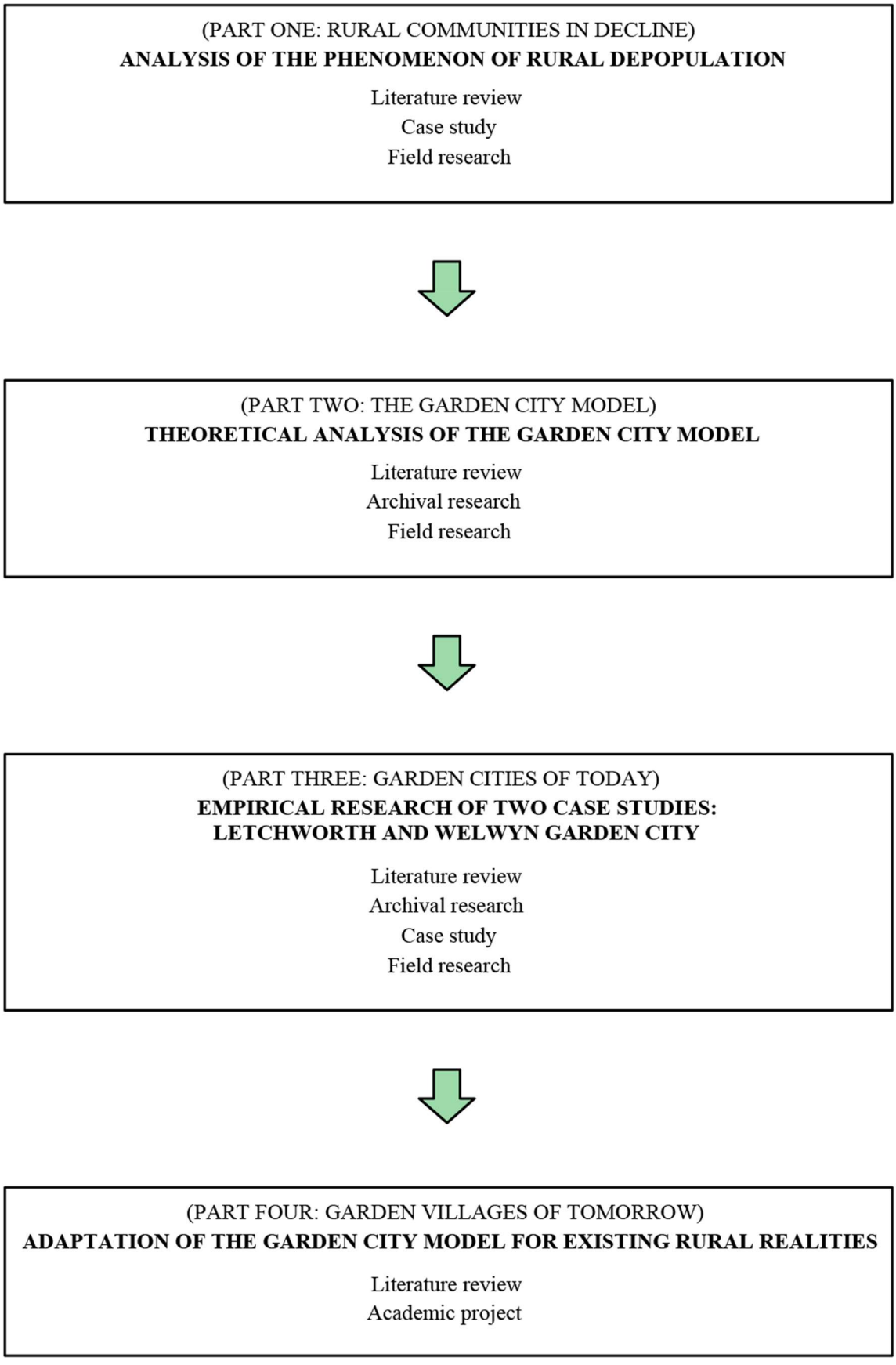


Figure 2.1 Research methods of each part of the thesis (Illustrated by the author in 2022).

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PART ONE

3. RURAL COMMUNITIES IN DECLINE

3.1 THE PEACEFUL PATH OF RURAL DECLINE

The phenomenon of rural depopulation in developed and developing countries can be summed up as the history of a "peaceful surrender", in which rural communities have been looking for better living conditions into urban areas to the detriment of the sustainability of small rural settlements (Collantes and Pinilla, 2019). In general terms, the migration out of rural areas has improved the economic situation of former rural communities, thus contributing to accelerate the phenomenon of urbanisation in the globalised world (Keats and Wiggins, 2016). Within this background, there are some negative impacts related to the rural-to-urban migration, such as the increase of air pollution and other environmental issues due to the high levels of population density in large metropolitan areas. For instance, Chinese cities like Shanghai and Beijing, which have been receiving since the 1970s a massive influx of rural communities and experiencing the above-mentioned environmental problems, are implementing population policy reform, economic support, and other incentives to encourage rural migrants to move to less population-dense areas (Qin, 2016). The case study of China is a modern version of the rural exodus experienced in the mid-twentieth century in many western countries like Italy, France, or Spain, which still have most people living in urban areas. In China, the urban population exceeded rural communities in 2011, and that trend is reaching 61% of urban population, whereas the percentage of rural population is 39% (The World Bank Group, 2019). In the entire world, the future looks even more pessimistic to rural development than today. According to UN's 2050 projections, China will reach similar territorial imbalance just like most of western countries are currently experiencing (80% of urban population against 20% rural), whereas other countries which currently have more rural population, like India or Pakistan, will start having more urban population by 2045 (United Nations, 2018).

In addition to the migration of rural communities to urban areas, there are also other factors that intervene in the decline of rural areas, such as aging population, lack of production, shortage of amenities, bad infrastructure, or no Internet access. These factors can be both the aftermaths and the origin of rural-to-urban migration, forming a vicious

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circle of deprivation and abandonment of small rural settlements. In parallel with the phenomenon of rural depopulation, there are more and more developed and developing countries that are experiencing population shrinkage in rural areas, because of a negative natural population growth (Pinilla and Sáez, 2016). Over the last three decades, the decrease of the rural population in most developing countries has led to the decline of rural fertility rates for multiple reasons. According to Keats and Wiggins, among the main reasons are the increased child survival, the economic growth, female education, exposure to mass media, and family planning services are some of (Keats and Wiggins, 2016). In short, the world is becoming more and more urban than rural in relative figures, where urbanisation has risen from 29% in 1950 to 54% in 2016 (United Nations, 2018).

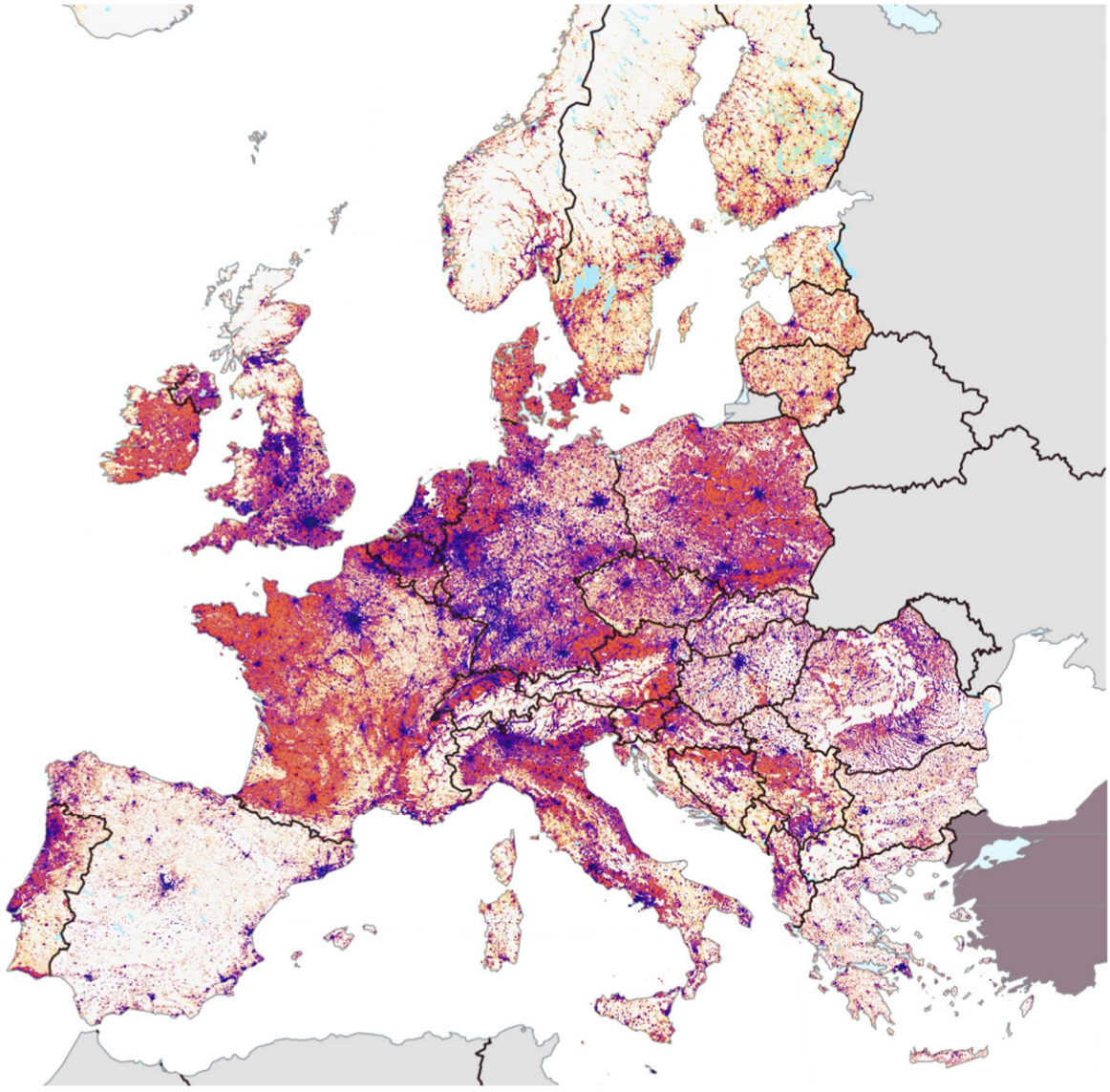


Figure 3.1 Population density of Europe in 2011 (Geostat).

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In Europe, the regions that are experiencing population shrinkage in rural areas are those found in the East, Germany, and the Baltic States, as well as in Mediterranean countries like Portugal, Spain, Italy, Greece, Bulgaria, and Romania (ESPON EGTC, 2018). Within this context, the demographic distribution of Spain is facing one of the most dramatic situations, only comparable to the population distribution of Norway, despite having better climate conditions than in northern Europe (Fig. 3.1). However, this situation in Europe is nothing new, but is the result of a long and steady process of urbanisation to the detriment of the dismantling of rural communities since the mid-nineteenth century.

Before 1850, more than 80% of the European population lived in rural areas (United Nations, 2018). Even industrialised countries like the United Kingdom, for example, did not experience significant depopulation problems, thanks to the diversified economy of rural areas, which was a key factor in stemming rural depopulation (Collantes and Pinilla, 2019).

Between 1850 and 1950, the urbanisation process began to bloom dramatically, due to the impact of the Second Industrial Revolution and the very high figures of transatlantic migration, especially between 1880 and 1914. Because of that, rural population growth began to slow down in many European countries, but at different stages. In the 1860s, the British Isles and France experienced the first cases of rural depopulation, where rural-to-urban migrations exceeded the rates of natural population growth in rural areas. This situation led to a rapid process of urbanisation in industrial cities, which most of them became unhealthy and overcrowded just in a few decades. At the beginning of the twentieth century, in the United Kingdom there was a back-to-the-land movement, which boosted the migration of urban communities into rural areas, thus relieving overcrowded cities like London. However, it is worth noting that, in absolute figures, in 1950 there were more people living in rural areas than in 1850, because of peripheral countries like Italy, Spain, and Romania had a high dependence of agriculture at that time, which reached an all-time high just after the Second World War.

The sharpest drop in rural depopulation took place in the decades after the Second World War, where countries like France, Greece and Spain lost more than 20% of its rural population in less than thirty years (United Nations, 2018). The territorial imbalance that Europe experienced between 1950 and 1980 was especially marked by the combination of two different phenomenon: the sharp decline of rural communities and the rapid population growth of urban areas. Both tendencies were almost inversely proportional in

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most of the European countries. However, a few countries like Poland and Romania, which reached an increase of 117% and 150% of urban population respectively between 1950 and 1980 (United Nations, 2018), did not experience rural depopulation. In general terms, north-western Europe experienced rural depopulation in the first decades after the Second World War, although moderately until the 1970s. In southern Europe, rural depopulation was more acute in the 1950s and continued until the end of the twentieth century. Eastern Europe experienced rural depopulation, although moderately, between the 1950s and the 1970s. However, during the last three decades of the twentieth century, the migration out of eastern Europe's rural areas dramatically increased (Collantes and Pinilla, 2019).

Nowadays, the impact of rural depopulation goes beyond rural-to-urban migrations, as many countries are experiencing the emergence of negative natural growth in rural areas. This is the case of Spain, where since the beginning of the twenty-first century, the average birth rate of the rural areas is around 6-7 children per 1,000 inhabitants, whereas mortality rate is around 11-14 people per 1,000 inhabitants (Pinilla and Sáez, 2016). As a result of these factors, coupled with the economic crisis of 2008, Spain's rural population growth went from 0.78% increase in 2007 to 1.43% decline in 2013 (The World Bank, 2020). During the period 2013 and 2019, Spain's rural population growth slightly improved, reaching 0.53% decline in 2019 (The World Bank, 2020). However, rural population growth is dropping again, due to the impact of the coronavirus pandemic into rural areas, which registered 0.81% decline in 2020 (The World Bank, 2020). Within the Eurozone, Spain is currently one of the most affected countries by rural depopulation, with 2.36% population living in rural settlements at risk of depopulation[1], whereas the Eurozone's average is 1.03% (Banco de España, 2020; Eurostat, 2018). As an example, according to Joaquín Recaño, "on 1st January 2016, 60% of Spanish municipalities had fewer than 1,001 inhabitants, occupied 40% of the country's surface and concentrated barely 3.1% of the population" (Recaño, 2017, p. 1). Likewise, the urbanisation process is increasingly fostering the centralisation of population and means of production into urban areas, thus indirectly contributing to worsen the abandonment of rural communities. In 2018, Spain registered the highest average of urban concentration of the European Union, with 13.369 inhabitants per square kilometre against the 6.839 inhabitants per square kilometre of the Eurozone (Banco de España, 2020; Eurostat,

[1] Areas at risk of depopulation are those experiencing negative natural growth and population density below 12.5 inhabitants per square kilometre.

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2018). All this data is just the tip of the iceberg, as it does not explain the causes that are pushing 42% Spanish rural communities to the verge of disappearing (Banco de España, 2020; Eurostat, 2018).

The beginning of the end of rural natural growth in Spain starts at the advent of the twentieth century, by experiencing the first episodes of decrease after a steady period of growth since the beginning of the eighteenth century (Collantes and Pinilla, 2019). That shift was mainly originated by the industrialisation of cities and the subsequent urbanisation process. For instance, in the period 1900-1950, the mountainous regions of Spain concentrated three quarter of the natural growth of urban population, whereas the other quarter represented the natural growth of rural population. However, the population change in rural areas was experienced unevenly among the four different regions of the Spanish territory (Simpson, 1995). In that period, the Mediterranean region was the most affected region in terms of rural depopulation, reaching negative natural growth of rural population in the 1930s (Simpson, 1995). Nevertheless, the Great Depression of 1929 and the aftermaths of the Spanish Civil War slowed down rural-to-urban migrations throughout the country (Recaño, 2017). Within this context, the population change in rural areas experienced ups and downs since 1900 until 1950, when the situation turned into a sharp decline of rural population in Northern, Inland and Andalusian regions, in contrast to the slow but steady process of rural population increase that the Mediterranean region has been experiencing since then. According to Pinilla and Collantes (2019), in addition to the unequal impact of depopulation in the different Spanish regions, it is worth to be noting that, from a municipal perspective, rural communities located near small urban centres were especially hard hit by rural depopulation rather than those located near large urban centres during the second half of the twentieth century. As a result, looking at the figure 3.2, the provinces which registered more than 40% decline between 1950 and 1991 are those located in the Inland region of Spain, where most of the rural population of the country lived at the beginning of the twentieth century.

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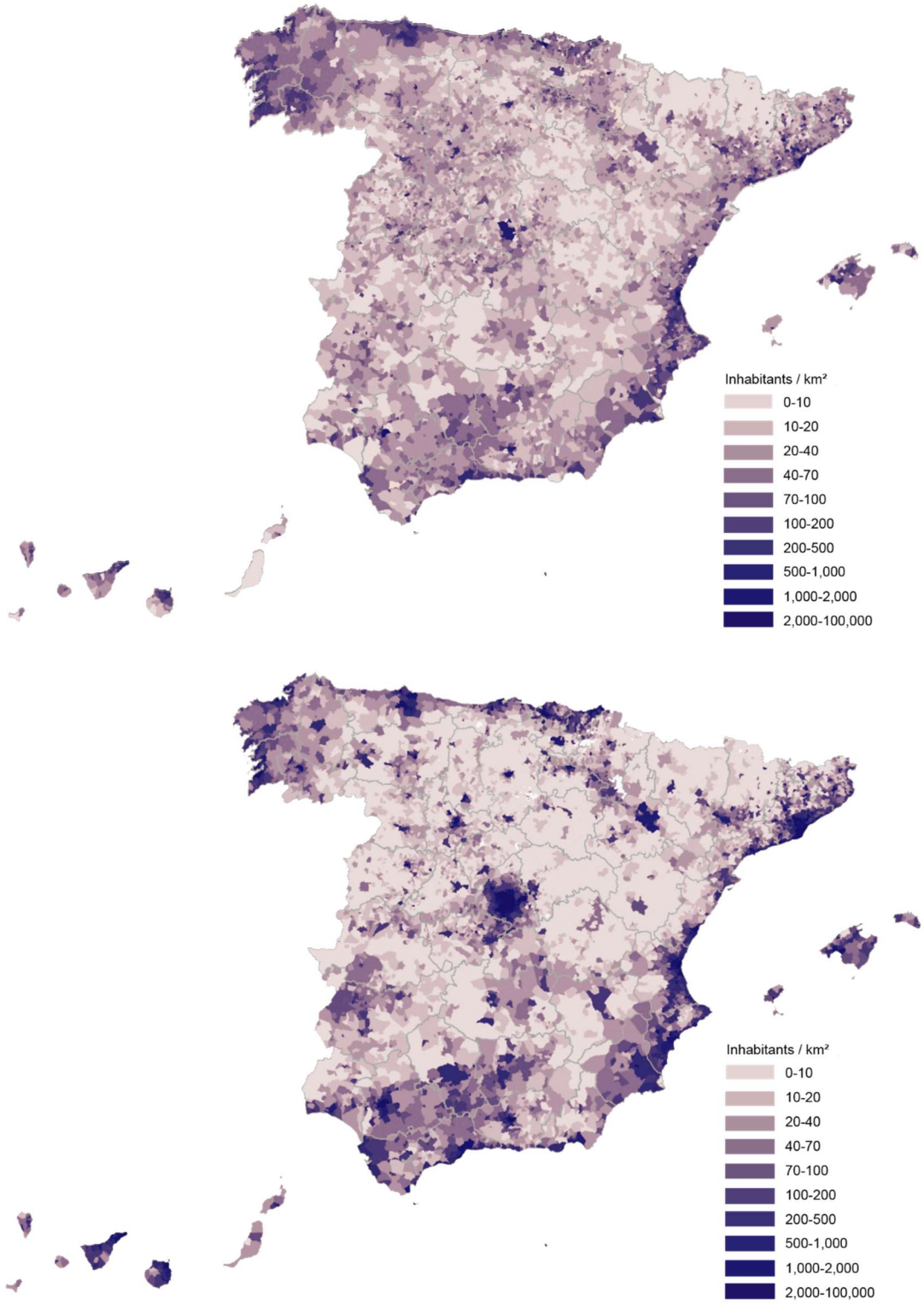


Figure 3.2 Population density of Spain in 1900 and 2000 (Instituto Nacional de Estadística).

In short, this territorial imbalance was due to the industrialisation process that started in the mid-twentieth century, which led rural communities to look for employment opportunities in cities, coupled with international migrations to South American countries in the 1940s and European countries like Germany, Switzerland, and Netherlands in the

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1960s. In addition to this, after the Second World War, the industrial progress transformed the European countryside through the implementation of self-propelled agricultural machinery and agricultural chemical inputs, thus indirectly contributing to reduce the workforce in rural areas. In parallel with the rural exodus for economic reasons, at the end of twentieth century, the post industrialisation process gave way to rural-to-urban migrations for cultural, natural, and social attractions (Collantes and Pinilla, 2019).

The combination of the above-mentioned exogenous processes had a direct impact on the transformation of the Spanish countryside, which currently comprises, according to Recaño (2017), three different typologies of rural municipalities: demographically resilient rural spaces, rural spaces of emigration and rural spaces of irreversible depopulation. In this context, there are three main factors affecting the diversity of "empty Spain". These factors are the ageing of the rural communities, the phenomenon of emigration and the proximity to populated spaces. To analyse each factor and determine the designation of each typology of rural municipalities, Recaño focused on variables like growth rate, average age population, size of town's population, altitude, sex ratio, intensity of emigration, population size of surrounding towns and density of surrounding towns. As a result, according to Recaño, the demographically resilient rural spaces are those rural settlements of larger size located on the edges of the country, away from the mountain areas; the rural spaces of emigration are those located in high altitude, with a population density of about six inhabitants per square kilometre and negative growth rates; and the rural spaces at risk of irreversible depopulation are those located in the mid-north of the country, with a population density of about four inhabitants per square kilometre and the worst rates of negative natural growth (Recaño, 2017). Regarding the distribution of these typologies throughout the country, other studies show in detail how the population dynamics of municipalities differ depending on the relief type. According to Montalvo, Ruiz-Labrador, Montoya-Beranabéu and Acosta-Gallo (2019), in the 2007-2016 period, population growth rate in mountainous areas of Spain was the 1.11% decline against 0.47% decline in the rest of the territory, whereas in inland municipalities there was 0.77% decline against 0.28% increase in coastal areas. This territorial imbalance was partly due to the ageing population of those areas in negative natural growth rate, the low and very low accessibility by road of mountainous areas of Spain like the Pyrenees and the Iberian System, and the geographic isolation of other inland areas (Montalvo, J., Ruiz-Labrador, E., Montoya-Beranabéu, P. and Acosta-Gallo, B., 2019).

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These aspects are also perceived in the regional and sub-regional level, where the territorial disparities are even sharper than in the national level. For instance, in the region of Cantabria, the population density closest to the coastline has an average of seventy-eight inhabitants per square kilometre, whereas the mountainous areas have a population density of less than nine inhabitants per square kilometre (Delgado Viñas, 2019). Among the main factors and disadvantages related to the impact of rural depopulation in mountainous areas of Cantabria are, according to Delgado Viñas (2019), their rugged orography, distance from main urban centres, high levels of dispersion of rural settlements, low accessibility, ageing population, and masculinity of rural settlements. This example can be extrapolated to other rural areas of Spain and Europe, as its main issues, causes and aftermaths can be found almost everywhere in developed and developing countries.

However, the regions with the worst rates of rural depopulation are those located in the Celtiberian Highlands like Castile and Leon, Aragon, and Castile-La Mancha, which besides having the provinces with the lowest population densities of Spain like Cuenca, Soria and Teruel, they have the highest negative natural growth rate of the European Union (Defensor del Pueblo, 2019). Even in the mid-nineteenth century, the above-mentioned provinces were far below twenty-five inhabitants per square kilometre (thirteen, fifteen and sixteen inhabitants per square kilometre respectively) to consider them demographically resilient rural spaces. However, the rural exodus of the mid-twentieth century worsened the situation of these provinces, as Teruel and Soria lost more than 40% population and Cuenca about 30% between 1950 and 2000 (Pinilla and Sáez, 2016). This situation gave rise to social movements which have been organising campaigns and street protests since the beginning of the twenty-first century to demand a fair and equal treatment for the so-called "empty Spain". In this regard, political parties like "Teruel Existe", that emerged from citizen platforms, are gaining more and more power in the political scene, even becoming the key to form the national government of Spain in 2020 (Europa Press, 2020).

Within this framework, the lack of specific policies in Spain against rural depopulation and the insufficient measures adopted by the national and regional administrations to combat territorial imbalance are leading some rural communities to implement different kinds of alternatives to attract people to the countryside. For example, in the village of Puértolas in Huesca, one of its current inhabitants who came from the city started sharing his experience on the Internet and other families decided to

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move to the village thanks to the social media (Unidad Móvil Aragón TV, 2018). In the case of Camañas in Teruel, in 2001, the village council decided to take action against the continued abandonment of people, by fostering a campaign to attract South American immigrants and in less than twenty years, the village went from having three students in the school to having fourteen students, which is, according to the former mayor of Camañas, the best indicator of a new hope for the village (Heraldo de Aragón TV, 2019). In the case of Barahona de Fresno in Segovia, in 2007, an investor purchased almost the whole village to attract tourists, without any significant impact until he decided to release for sale of the village in 2017 (Al-Saffar, M., Pastor, A. B., Tezer, Z., Fang, J., Sen, H. L., Su, Z., and Hussein, M., 2022). In the case of Purroy in Teruel, in the 90s the inhabitants offered free housing for any young couple wanting to move to the village, and despite all the efforts of many couples who moved there, currently there are just nineteen people living in the village (Loza Pérez, 2018). These are a few examples of the strategies that most rural communities suffering from depopulation are implementing now, but without any significant impact in terms of inner colonization.

In parallel, there are currently about 5,500 kilometres of abandoned railway tracks routes, along which we can find large portion of rural communities in depopulation process in the Spanish territory (Mojica and Martí-Henneberg, 2011). This situation can be considered the origin or the aftermath of the vast demographic desert of the Spanish countryside, and maybe both, but, according to Mojica and Martí-Henneberg (2011), "both railway construction and closure had significant territorial effects" (Mojica and Martí-Henneberg, 2011, pp. 23-24). Thus, while the railway construction contributed to develop Spanish urban centres since 1855, the abandonment of some routes has indirectly contributed to the decline of some rural settlements. Such territorial imbalance is one of the reasons that is fuelling the process of depopulation of small rural communities, in the absence of alternative means of transport that encourage people to remain in the countryside beyond the expensive, dangerous, and polluting use of the car.

This way, depopulated rural settings, which are lagging far behind resilient rural areas near large urban centres, are experiencing financial marginalisation, lack of services, agricultural decline, bad infrastructure, abandoned buildings, and degradation of architectural, urban, and cultural heritage. Within this framework, it is worth noting that besides the marginalisation and degradation of the structural spaces of rural communities in decline, their family structures, activities, and users are changing by the same circumstances (Paniagua, 2011). Therefore, there is not a single pattern that defines

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an overall view of the local identity and moral life of these rural communities, but a complex matrix of social, economic, natural, and cultural conditions across the country. However, a micro-rural study through several case studies can provide a deep analysis about the rural context, activities, perceptions, alternatives, and users of rural settlements at risk of depopulation located in different parts of the Spanish territory.

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3.2 LOOKING FOR A MAGNET

The impact of rural depopulation in the Spanish territory is so extended that it is composed of multiple rural realities, according to the context, geographical features, population structure or employment of rural communities suffering from depopulation. As we have seen in the previous chapter, there are three types of rural communities in Spain: demographically resilient rural spaces, rural spaces of emigration and rural spaces of irreversible depopulation (Recaño, 2017). However, this study is focused on those rural communities found in the last two types, as they share similar issues that are leading to a slow but steady depopulation process while looking for a magnet to attract population and means of production in the short term.

Within this context, two case studies located in the provinces of Segovia and Málaga has been used in this document to give an overview about the main issues, challenges, and alternatives that they are experiencing now, as examples of the two types of rural communities suffering from depopulation at local level. In this regard, the village of Barahona de Fresno in Segovia is an example of a rural community at risk of irreversible depopulation, whereas the village of Alfarnatejo in Málaga is an example of a rural community experiencing high levels of outward migration over the last decade. Apart from this, the differences between both examples, in terms of geographical location, climate, population, production, natural environment and infrastructures, can give a broad analysis about the varied range of circumstances that can contribute to diminish or intensify the depopulation process over time.

The research methodologies used comprise interviews, field notes, drawings, active looking and bibliography research to understand the social, economic, and environmental aspects of both rural communities, as well as the causes that have led to a process of rural depopulation and their different initiatives to combat it. Considering these factors, different types of micro discourses can be established to have a holistic approach about the phenomenon of rural depopulation in two different examples of the Spanish territory.

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3.2.1 Case Study 1. Barahona de Fresno, Segovia. Spain

Background and History

Barahona (Spanish-Basque term that means "good mountain") has its origin in a small Roman villa, which was located at the boundaries of the municipality's meadows, nearby the Barahona river. The village elders say they were told by their parents that the early inhabitants of the village lived by hunting and fishing (García García, 1980).

In the 12th Century, San Cristobal's church was built in Romanesque style (Fig. 3.4), which led Barahona de Fresno to become a crossing point of Christian knights and their forces during the third stage of the Spanish Reconquista, by using the tower of San Cristobal's church as a lookout tower, in the same way as in the churches of other nearby villages like Sequera and Turrubuelo (García García, 1980).

In addition to this, there was at that time an area for executions attached to the church, which was called "Cerro de la Horca" (Hill of the Gallows), because of being located on the highest spot of the territory.



Figure 3.3 Main access to the village of Barahona de Fresno in Segovia (Taken by the author in 2020).

Barahona de Fresno was part of the village of Fresno de Cantespino and in the 15th Century was given to the Constable of Castile Álvaro de Luna. At that time, Barahona de Fresno was called "Barahona de Ambos Barrios" (Barahona of Both Settlements), because of being shared by two villages - Sepúlveda and Fresno de Cantespino. However, it was not until the reign of the Holy Roman Emperor Charles V that Barahona de Fresno received the title of "Villa" (village) (García García, 1980).

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Figure 3.4 San Cristobal's church in Barahona de Fresno (Taken by the author in 2020).

At the end of the 18th Century, the six families who lived in the village moved out, what led to the village of Aldeanueva del Monte to take over Barahona de Fresno, both currently being part of the municipality of Riaza (Real Decreto 1822/1979).



Figure 3.5 Railway route Madrid-Burgos passing through Barahona de Fresno (Taken by the author in 2020).

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In the mid-20th Century, villagers from Barahona de Fresno and from different surrounding settlements started the construction of the railway track that runs through the village, in order to connect Madrid with Burgos. Such railway track was used for more than twenty years (from the 70s to the 90s). Despite the railway track is not currently working, some political parties are planning to make it work again, the recovery of which would provide a great opportunity to improve the connectivity of the village with the rest of the territory (Moción 662/000099, 2022).

Architectural and Urban Heritage

Despite most of the architectural heritage of Barahona de Fresno being buried below its cereal fields, there are still several traditional country houses, an old ox cart and the 12th-century Romanesque church, which had a Romanesque tower before constructing the belfry that remains. The old buildings were made from endogenous resources found in the village, such as adobe bricks, red tiles, and wood pillars. The new buildings still use these materials, in addition to concrete pillars and processes bricks, which are gradually becoming a kind of decoration (Al-Saffar, et al., 2022).



Figure 3.6 Some country houses of Barahona de Fresno (Taken by the author in 2020).

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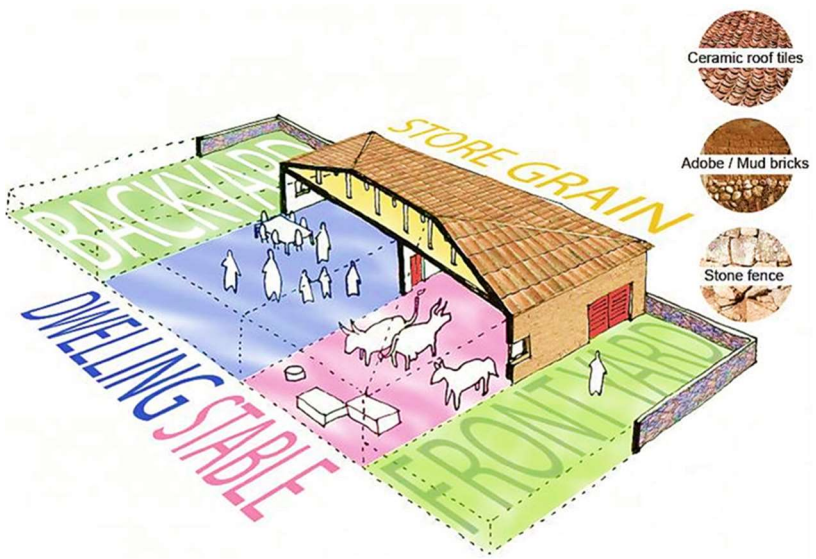


Figure 3.7 Layout and materials of a traditional country house at Barahona de Fresno (Illustrated by the author in 2022).

The village is comprised of three main areas: the settlement, farmland, and woodland. Within the settlement, the streets of the site are mainly composed of semi-enclosed external roads and irregular internal roads. The streets can be classified into three types according to their wideness and openness to the countryside, but the village has a smooth skyline with similar hues in warm colours that unifies the irregular urban fabric (Fig. 3.3) (Lin, X., Meng, Z., Sun, L., Hussein, M., and Gan. S., 2020). The main public spaces of the settlement are the church, a playground for children and a small square, where villagers often have meetings and local festivities, especially during the COVID-19 pandemic (Bernal de Diego, 2020).

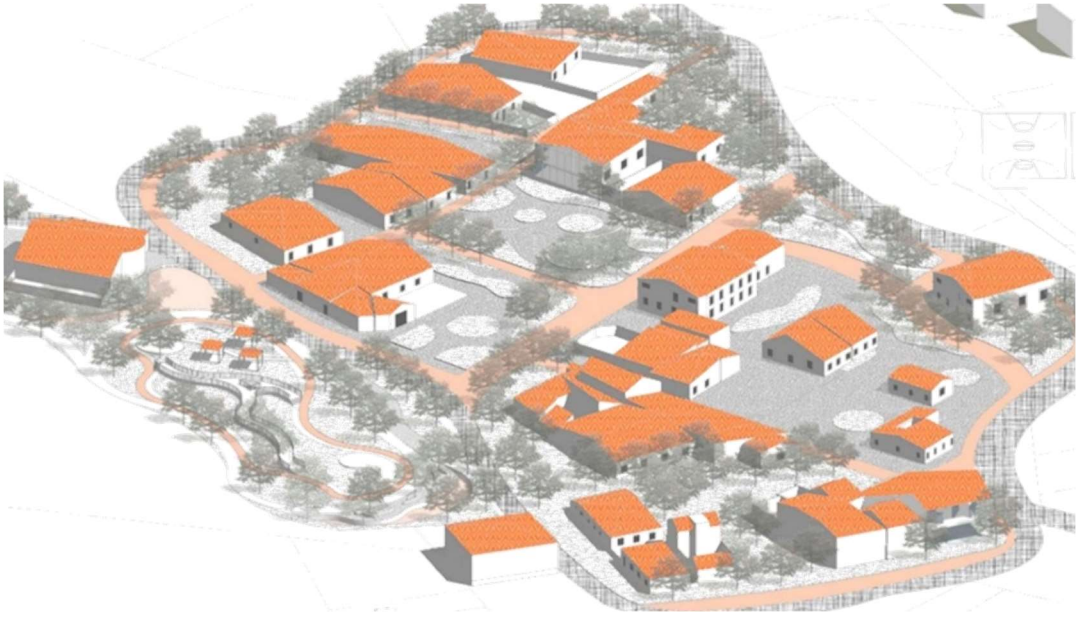


Figure 3.8 Axonometric view of Barahona de Fresno (Lin, X., et al., 2020).

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Human and Cultural Activities

The association '*Asociación Cultural y Vecinal San Cristóbal de Barahona de Fresno*' was founded in 1996 to maintain and restore the church in the absence of public funding. In addition, the association has restored the roofs and has installed the windowsills of the old schools of the village to reuse it as a Community Centre (Fig. 3.9). Within such Community Centre, the neighbours play cards and ping pong, arrange members meetings, and celebrate any kind of events both for children and elderly people. Currently, there are 48 people who are members of the association (Bernal de Diego, 2020).



Figure 3.9 Community centre of Barahona de Fresno (Taken by the author in 2020).

The main cultural activities of the village are the Patron Saint festivities, which take place the last week of August. During those days, residents, friends, and relatives gather to fulfil the tradition of attending the dinner Friday, eve of the festivities, followed by a chocolate with biscuits to chat about the old times. On Saturday - the festivities' great day - a Mass is held, followed by the procession of the Virgin, during which some women dressed up with folk clothes to dance "jotas" (Spanish folk dance) dedicated to the Virgin. After that, the sticks that the bearers used to hold the throne of the Virgin during the procession are sold by auction to the villagers and the bearers bring the throne into the church.

On Sunday, a Mass is held in memory of the deceased, and, after that, the members of the association have a meeting to discuss any matter to be addressed (Bernal de Diego, 2020).

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Figure 3.10 San Cristobal's church at Barahona de Fresno (Taken by the author in 2020).

Economy and Means of Production

Nowadays, the means of production of Barahona de Fresno are agriculture and sheep farming, which are undertaken by the two families who are living in the village. Among the crops grown are sunflower, wheat, barley, and other dry crops, which are all subsidized by the regional government. This natural environment led an investor to refurbish an old house for hotel in 2007, which closed in 2009 due to the impact of the economic crisis. There is currently any kind of tourist activity in Barahona de Fresno, although their inhabitants are willing to accommodate some restaurants and hotels to attract people to visit the estate and improve their local economy (Bernal de Diego, 2020).



Figure 3.11 Farming area of Barahona de Fresno (Taken by the author in 2020).

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Population

There are currently just seven inhabitants living there, who are two families of two different households. In addition to these residents, other householders usually go to the village during weekends and public holidays, thus bringing more life to the village for a few days a year at least (Bernal de Diego, 2020).

Some Initiatives to Combat Depopulation

In 2007, an investor purchased almost the whole village to attract tourists, by constructing a hotel and planning the refurbishment of some country houses for restaurants and more hotels.

However, it had little significant impact due to the outbreak of the economic crisis of 2008, which led him to release for sale of his properties in 2017 through an online real estate website (Idealista, 2018).

Main Issues

In general terms, Barahona de Fresno is one of many depopulated small villages located throughout the mid-north of Spain. This case has been seriously marked by the release for sale of almost the whole village in 2017 for 2.1 million €. Because of that, the value of most of the properties has exceeded 100.000 €, which is not affordable for villagers nor any young couple, single or family wanting to move to the village (Bernal de Diego, 2020).

As a result, about 50% of the houses are vacant, and some have completely become ruins and cannot be used. In addition to this, the young people of the village have migrated out of the village, in the absence of employment opportunities that go beyond farming or livestock. In addition to this, the village does not have amenities and services to live there for a whole week, as there are no health centres, school, pharmacy, grocery shopping stores, parking areas and other primary sectors which are needed in every village (Lin, X., et al., 2020).

This situation has prompted the rejection of the inhabitants and the association of the village because they are expecting for the future of the village something more than tourist apartments, restaurants, and hotels.

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Key Challenges

The territorial connectivity should be improved to facilitate the migration and mobility of people to the village, as part of the roads are not in good conditions and the inner roads of the village do not have tarmac nor any kind of solid ground to prevent from accidents. Within this context, the reopening of the railway track could help villagers and those who want to move to the village to commute every day until they get a job in the village or in the nearest rural settlements.

Additionally, a series of amenities and services should be implemented in the village to fulfil the needs of villagers and future inhabitants, so that they can get access to sanitary facilities, educational centres, or recreational areas at local level.

In order to regenerate the village, it is necessary to expand its size, so that future inhabitants can forge a strong community which is able to cope with their isolation from urban centres, i.e., Segovia. In parallel, the regeneration of the village should be relied on the conservation of its existing local identity, both tangible and intangible, with a view to integrating the implementation of new buildings and public spaces within and outside its existing rural fabric (Al-Saffar, et al., 2022).

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3.2.2 Case Study 2. Alfarnatejo, Málaga. Spain

Background and History

Alfarnatejo and its twin village three kilometres away, Alfarnate, were conceived as twin settlements because of they share a common history and there is a natural path between the mountains that connects the provinces of Málaga and Granada, along both rural settlements. Behind Alfarnatejo are the three peaks of the Tajos del Sabar, possibly the most spectacular peaks in the province of Málaga (Fig. 3.12), as celebrated in the tiled mural at the access of the village.



Figure 3.12 Eye bird's view of Alfarnatejo in Málaga (www.visitacostadelsol.com).

In Alfarnatejo, significant 5,000-years-old Neolithic relics have been found in the gorge of the River Sabar. In addition, the cliffs of Vilo, the caves of Pela Horá, Chamizo and Morronquera, and the shelter of El Cortijo de la Cueva boast pictorial remains ranging from the Paleolithic to the Chalcolithic period. The first modern settlers were made by the Phoenicians and some tombs from their era remain at the foot of the Sierra del Rey, near the Cortijo de Auta. Later, the area known as El Puerto de los Alazores, not far from Alfarnatejo, became an "inland port" for the caravans of people and goods travelling between the provinces of Málaga and Granada, something probably going on since Roman times. There is also evidence of a Roman villa not far from the village.

However, there were any permanent settlements in the area until the Moorish period in about the 10th century. As time went by, the Moors took full advantage of the lush green fertile land to develop an agricultural industry in the region based on wheat,

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which is still grown in abundance in the area and gave rise to the name Alfarnate, because it means "flour mill" in the Arabic language.

Alfarnatejo was linked with its neighbour Alfarnate for hundreds of years, and both communities share an unusual legend that comes from their respective nicknames, "los palancos" (the lever-bearers) from Alfarnate, and 'los tejones' (the badgers) from Alfarnatejo. The story can be traced back to the old horse track that used to link the two villages, where a huge stone was considered to mark the boundary between them.

The first documentary evidence of Alfarnatejo as a village was not until 1609, during the Christian period (Rodríguez García, 2017). The village was slowly developed over the centuries, but remained small, linked with Alfarnate until the 19th Century, when they became separate municipalities. Just like in Alfarnate, the mountains surrounding the village made the area a refuge for bandits, who took advantage the many caves in the region, using them as shelters and hideaways (Rodríguez García, 2017).

Architectural and Urban Heritage

Most of the buildings of Alfarnatejo have two floors (ground floor and first floor) and are in vernacular style with white façades, small windows, sloped roofs with ceramic tiles, plinths with ceramic and stone tiles, and wooden beams.

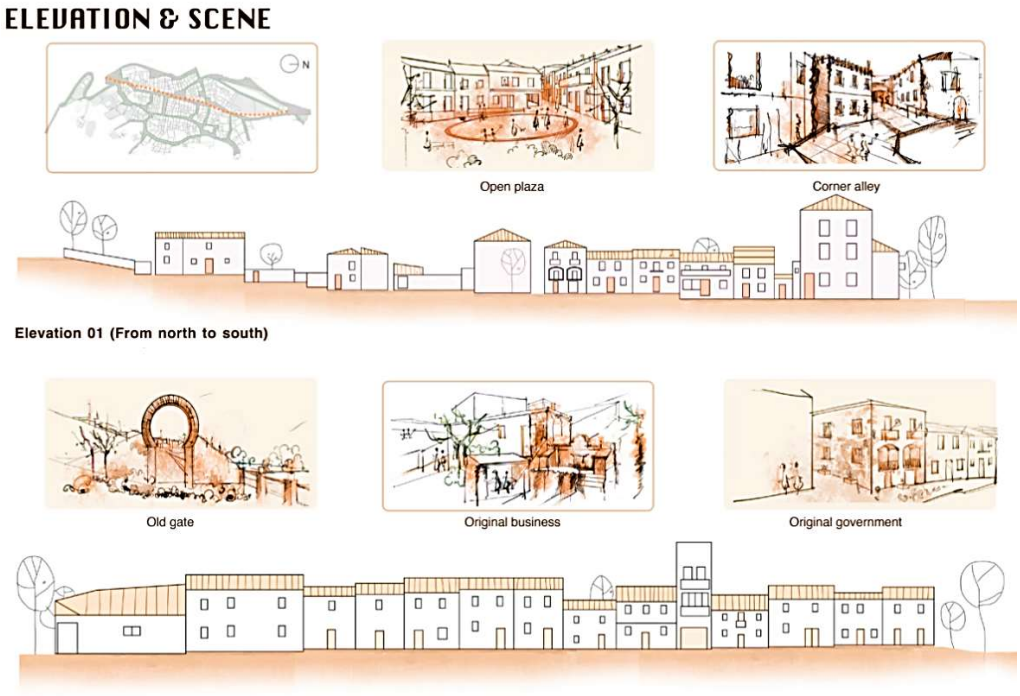


Figure 3.13 Elevations and serial visions of Alta Street at Alfarnatejo (Tan et al., 2021).

In contrast, the Santo Cristo de Cabrilla church has a valuable brick façade, which is a reconstruction of the second half of the 18th century. The church is in the highest part

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of the village, thus constituting the most notable building of Alfarnatejo. It is composed of a main nave that stands out for its width with a flat roof. It has another smaller nave attached to its left side, and both are separated by pilasters forming a semi-circular arch. The roof of the main nave is made of a wooden beam truss, while the side nave is finished with a truss of inclined beams.



Figure 3.14 Public space analysis of Alfarnatejo (Tan et al., 2021).

In addition, the cultural heritage of Alfarnatejo includes the municipal park, the high stone wall, the Moorish arch, the Pilar fountain called "Lavanderas" (washerwomen), the cave paintings, and the Roman Bridge.

The public space of the village can be divided into two groups: "informal public space" and "formal public space", according to the kind of the activities performed on each one. For example, we can find throughout the village some empty plots, road junctions and open courtyards as "informal public space", where the inhabitants of

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Alfarnatejo can gather or do sport, in the absence of recreational areas within the urban fabric. However, there are some recreational areas in the surrounding areas of the village as "formal public space", where people can do sport and play together close to the farmland (Fig. 3.14).

Human and Cultural Activities

Among all the festivities of the village, one of the most important is in the evening of the 2nd of April, where the figure of San Marcos is carried on shoulders towards the countryside, in an area called La Breña in the Puerto de la Azores. Residents and visitors gather there to eat the traditional "hornazo con choto" (roast kid).

In addition to the procession of San Marcos, the procession of San Isidro is also celebrated in the village, as well as in other settlements of the Axarquía, which is held on the 15th of May. After a mass in the Santo Cristo chapel a "romería" (pilgrimage) takes place starting in the village before winding its way out into the surrounding fields. Unlike in the old days when San Isidro, the patron saint of farmers, would be carried by shoulders, these days he is often seen on the back of something far more appropriate to contemporary farmers, a four by four. Given that, even in this era of tourism, agriculture and tending livestock is still the main income of the village, San Isidro is a very popular festival, and the Saint's favour is still sought. Thus, the procession of San Isidro to the outskirts of the village to bless the wheat fields and provide good harvests is still an important tradition of the village.

Economy and means of Production

Nowadays, the main means of production of Alfarnatejo are agriculture and tourism. Among the crops grown are wheat, olive trees, and cherry trees (Fig. 3.15). The kind of tourists that usually go to Alfarnatejo are those who are looking for an environment in which to relax, enjoy nature, practice outdoor sports, as well as people who want to enjoy a rich gastronomy accompanied by the peace and quietness that the area can provide.

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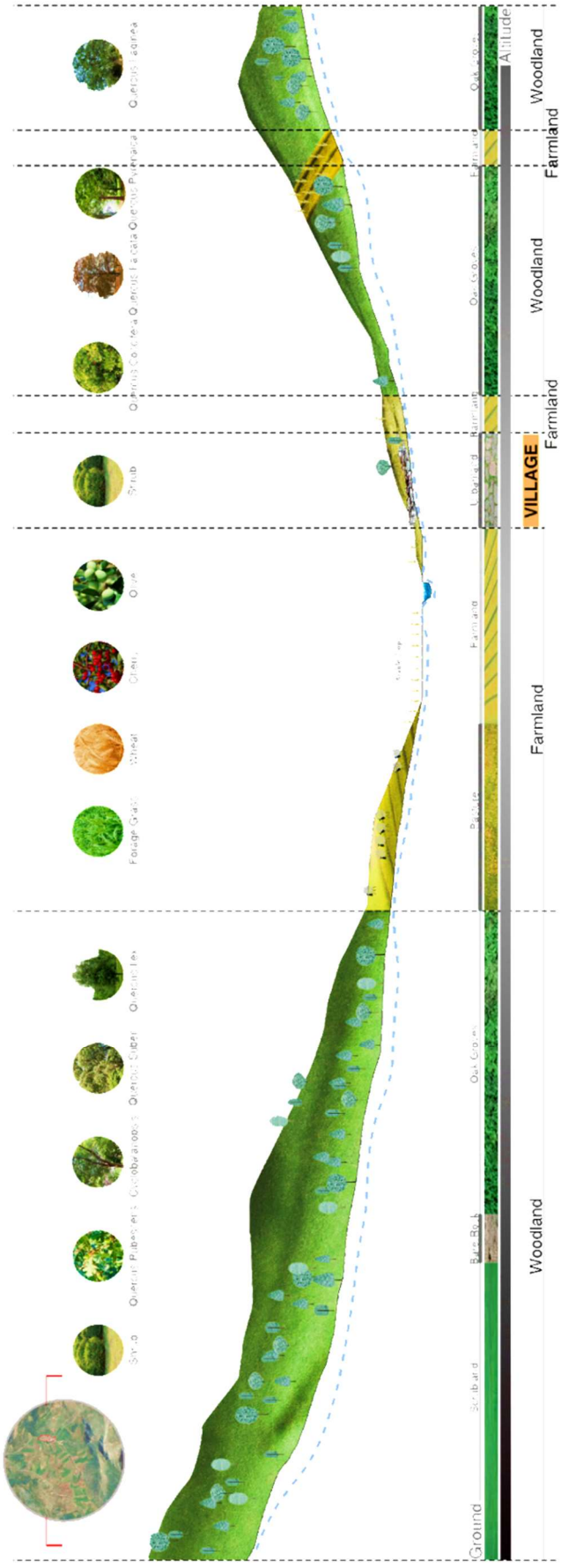


Figure 3.15 Valley section of Alfarnatejo (Tan et al., 2021).

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Population

There are currently 358 people living in the village, of which 30% are elderly people over 65 years old. Since 2003, the population growth went from 19.88% increase between 2003 and 2011, to 26.16% decline between 2015 and 2021 (Instituto de Estadística y Cartografía de Andalucía, 2021; Instituto Nacional de Estadística, 2021). This shift was mainly due to the impact of the economic crisis, the lack of employment opportunities, and the brain drain of young people leaving the village (Benítez Zamora, 2021).

Some Initiatives to Combat Depopulation

The village council is planning to develop climbing routes around Alfarnatejo and enlarge camping areas to attract tourists, thus creating job opportunities linked to sport and leisure activities. According to the Major of Alfarnatejo, Daniel Benítez, "there is still much to exploit and one of the goals of the village council is to turn Alfarnatejo into a village known for outdoor sports, spectacular scenery, and its good and rich gastronomy with a Mediterranean diet" (Benítez Zamora, 2021).

Along six hiking trails one can see the mountain ranges of Alfarnatejo, the Gallo-Vilo, the Tajo de Doña Ana and Alto del Fraile or the Sierra de Camarolos with the Chamizo Peak. It is also an environment surrounded by peaks of altitudes between 1,637 and 1,188 metres, which makes Alfarnatejo one of the strategic points for climbing in the province.

Main Issues

During the last decade, the population of Alfarnatejo has decreased 30% due to multifactorial issues including isolation from urban centres, lack of employment opportunities, lack of educational centres, etc. As a result, there are some vacant plots, abandoned houses, bad infrastructures and insufficient commercial premises within the settlement (Tan et al., 2021).

Key Challenges

In general terms, the main challenges that the village of Alfarnatejo should face to achieve a prosperous future are tightly connected with the tourism development of the area, as there are not enough accommodation units, services, and infrastructures to meet the specific needs of tourists and local people.

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Within this framework, it is necessary to regenerate and preserve the existing village and its architectural and urban heritage at first stage, thus setting the basis for a sustainable growth towards a diversified economy through the establishment of synergies between different kinds of activities and tourism development (Fig. 3.16) (Tan, H., Alobaid, M. R., Li, L., Li, Z., Paksoy, H., Zhang, S., Zhao, X., Almaymuni, S., and Yao, H., 2021).

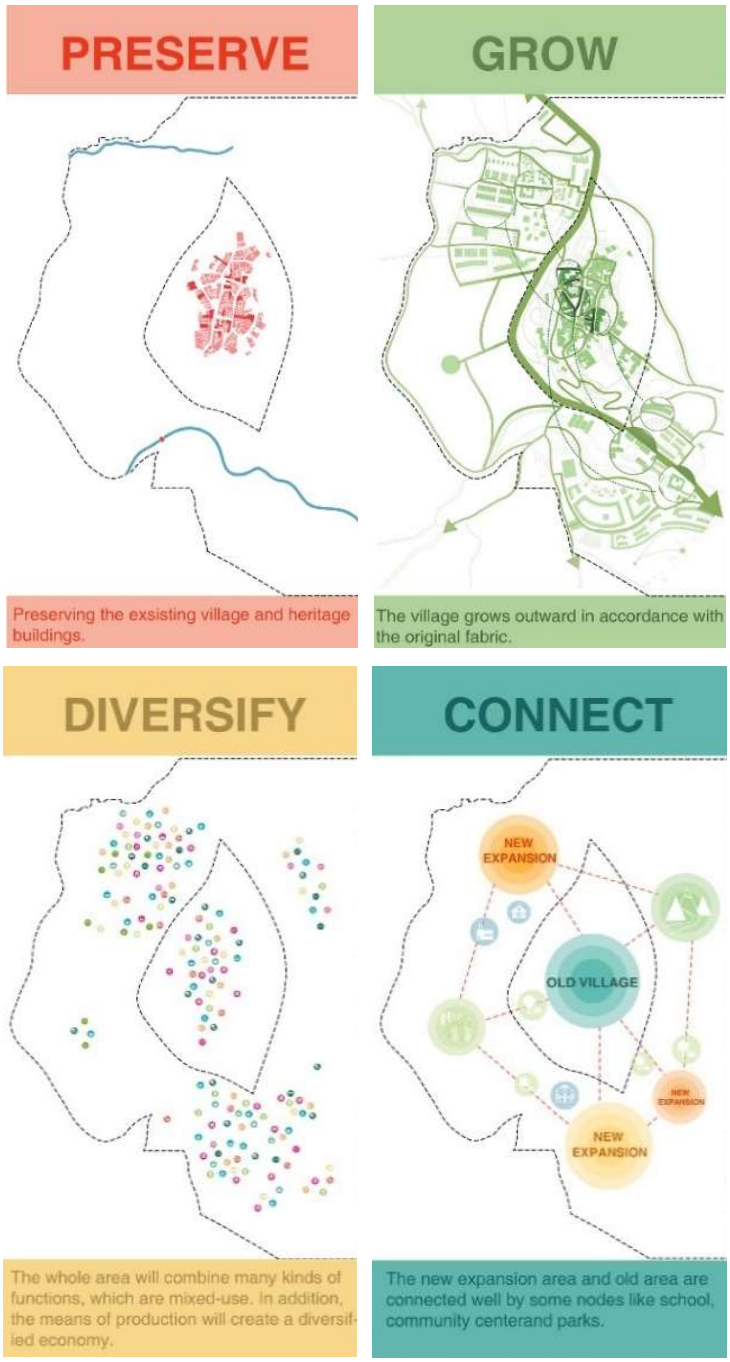


Figure 3.16 Key challenges for the revitalisation of Alfarnatejo (Tan et al., 2021).

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Comparative Analysis Between Both Case Studies

	Strengths	**Weaknesses**	**Opportunities**	**Threats**
Barahona de Fresno	· Access from four different highways. · Historic housing and landmarks. · Open spaces, and beautiful landscape.	· Redundant properties. · Territorial isolation. · Lack of communal space. · Narrow and unsecured roads.	· Potential for tourism development and research centre, thanks to its geography. · Cultural heritage, natural resources, and open areas. · The reopening of the railway route Madrid-Burgos.	· Land speculation derived from the release for sale of the village. · The village is at risk of irreversible depopulation. · The isolation of the village in winter because of the snow and the low temperatures.
Alfarnatejo	·Abundant water resources. · Beautiful natural landscape and rich forest resources. · Many historical buildings.	· Surrounded by mountains, the traffic is inconvenient, and there is only one trunk road from other settlements. · Backward industry and few job opportunities. · Lack of infrastructure construction in the village. ·The roads in the village are narrow and dangerous. · Lack of educational institutions.	· Reprocessing of local rich agricultural, animal husbandry, forestry, and mining products. · Suitable area for tourism development and service industry by taking advantage of the local beautiful natural landscape. · Make full use of local abundant clean energy such as solar and wind energy. · A large amount of land can be developed to attract people by alleviating housing pressure.	· The western area of the village is low and at risk of flooding. · Serious population loss and insufficient productivity. · The economic competitiveness of the village is low, resulting in population loss.

Table 1. Comparasion between the SWOT analyses of Barahona de Fresno and Alfarnatejo (Drawn by the author in 2022).

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Although these two locations have different urban contexts, potentialities, and specific local issues (see Table 1), they have some similarities in terms of needs, landscape resources and local heritage buildings. In addition to this, both examples share similar issues like population shrinkage, lack of production, shortage of amenities, bad infrastructure, and aging population.

In this context, some initiatives have emerged in these communities to try to overcome these issues like the influence of social media to attract people to move to the countryside, some strategies aimed at attracting immigrants, tourism development, or even offering free housing for any young couple wanting to move to the villages.

However, these initiatives are not being successful enough to attract a large number of people and create a strong and diverse community in the countryside. So, the question is how could we do it? This question raises a series of further questions:

- How could the decentralisation of population and means of production into rural areas be encouraged?

- How could rural communities achieve a self-financing system and affordable housing without any public funding?

- How could existing rural areas be conserved, transformed, and updated to fulfil the needs of likely future rural communities?

In response to these questions and with the aim of guarantying the sustainability and self-reliance of rural communities in the long term, the garden city model is analysed in the following chapters as a revision of such a model for new rural realities, in order to facilitate the mobility of people across the territory, implement a self-sufficient financial system to regenerate the villages, as well as redevelop and expand the built environment of rural settlements to enhance their existing townscape and accommodate more population in the future.

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PART TWO

4. THE GARDEN CITY MODEL

4.1 THE THIRD WAY

Before the beginning of the Garden City Movement, some industrialists like the Lever Brothers[2] and Cadbury family[3] built model villages in the United Kingdom close to their factories in the countryside. These entrepreneurs promoted new settlements such as Port Sunlight (Fig. 4.1) and Bournville respectively, to improve the life-quality of their workers in rural environment, contributing with some features of urban life (Hall and Ward, 2014). Currently, Port Sunlight and Bournville share many planning features with the garden city model, even though they were raised as industrial garden villages and the industrialists, in turn, rented their properties to their own workers (Miller, 2010). In other words, the boss and the landlord were the same person, which often led to cope with the consequences of a moralistic community system. However, both cases contained the recipes to get wellbeing in a healthy environment, achieve self-sufficient communities, avoid the property speculation, and reinforce the rural environment. These features led industrial garden villages influence garden cities, in the same way as garden cities later on influenced new towns and garden suburbs.

The connections between industrial garden villages and garden cities are beyond the green appearance and the proximity to the countryside, since the systemic and planning features are very similar in substance although different in form and size. The cornerstone between industrial garden villages and garden cities were not just Port Sunlight and Bournville, but also the industrial garden village of New Earswick, which not only had its own trust called Joseph Rowntree Village Trust[4] to manage the heritage and reinvest in the community development of the village, but was also designed by

[2] The Lever Brothers was a British soap manufacturing company, founded by William Hesketh Lever (1851-1925) and James Darcy Lever (1854-1916). In 1888, they built an industrial village close to Liverpool to manufacture the 'Sunlight Soap', which was called Port Sunlight.
[3] Cadbury family, composed by John Cadbury (1801-1889), Richard Barrow Cadbury (1835-1899) and George Cadbury (1839-1922). Cadbury family were owners of a British chocolate manufacturing company. In 1893, they built an industrial village close to Birmingham to manufacture the 'Cadbury Dairy Milk', which was called Bournville.
[4] Joseph Rowntree Village Trust (JRVT) was founded in 1904 by Joseph Rowntree (1836-1825), who was an English Quaker philanthropist and businessman from York. Currently, JRVT is still operating under the name of Joseph Rowntree Foundation to provide housing, care homes, retirement and supported housing.

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garden city pioneers and architects, Barry Parker and Raymond Unwin[5]. Among the principles of industrial garden villages and garden cities, there are common aspects like the vibrant social life, single land-ownership, long-term stewardship organisation and the holistic planning for healthy living through master plans that include jobs, community facilities, local services for day-to-day needs within walking distance of affordable homes and the use of high-quality materials in Arts and Crafts' buildings (Town and Country Planning Association, 2018).

Since the late 19th century, "back to the land" (Gors, 1891) was the social alternative that garden cities had as a main principle, in response to bad conditions in industrial cities. The premise was that people surrounded by rural environment, would gain a feeling of wellbeing that, in turn, would alleviate the social unrest that industrial cities were suffering (Howard, 1902). Therefore, this social alternative was not just a utopic way of living, but at the same time, it was a territorial experiment beyond the urban centres. Since Booth's map[6], many urban reformers have studied how to resolve the social reproduction's problem in metropolitan cities, through housing policies (Hall, 2014). However, the housing problem could not just be resolved over Hausmannian plans, due to the fact that people lived in overcrowded flats, what led to poor living conditions and an increase in crime rates.

The historical meaning of garden cities was to establish a social alternative to the bad living conditions of cities, but there were also earlier cases unrelated to social motives. Like in most prototypes, people usually create them to demonstrate their operative efficiency, instead of contemplating its possible negative impacts. This is even more negative when the founders are the only stakeholders that benefit from their own goals. The Lever Brothers and Cadbury family were lucky to maintain their garden villages in prosperity, thanks to the growth of their companies. After all, the population and employment levels needed to be in balance, in order to encourage people to stay in the industrial garden villages. Nevertheless, there were cases like Pullman (Chicago), which did not have the good fortune of the industrial garden villages mentioned above. George Pullman[7], as well as British entrepreneurs, dreamed of a new place for his industry

[5] Richard Barry Parker (1867-1947) and Sir Raymond Unwin (1863-1940) were English architects and urban planners associated with Arts and Crafts Movement.
[6] Booth's map, dated in 1889, is part of the multi-volume book '*Life and Labour of the People in London*', by Charles Booth (1840-1916), an English social reformer.
[7] George Pullman (1831-1897) was an American engineer and industrialist. He invented and manufactured the 'sleeping car' and built a company town for his industry, Pullman in Washington.

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and workers, by providing the best merge of urban and rural features in a new settlement close to the countryside: theatres, gardens, shops, buildings with neoclassical arcades, and so on. In 1884, Pullman had a population of 8,513, and ten years after it reached a population of 14,000, thanks to the company's profits, a disastrous fate had a huge impact on its population thereafter. That year, Pullman's businesses began to decline, firing workers, reducing wages and cutting working hours, what led to riots in the streets and forced federal troops to take action (Hall, 2014). As a result, in 1897, Illinois Supreme Court took action in this unhappy outcome, because of the excessive severity applied to alleviate the riots. The Court ruled out that the company had to "retire from the real estate, gas, water, heating, brickmaking and other enterprises conducted by it at the town of Pullman and in Chicago" (The San Francisco Call, 1898), which set a precedent about how an industrial garden village or garden city should not be managed hereinafter.

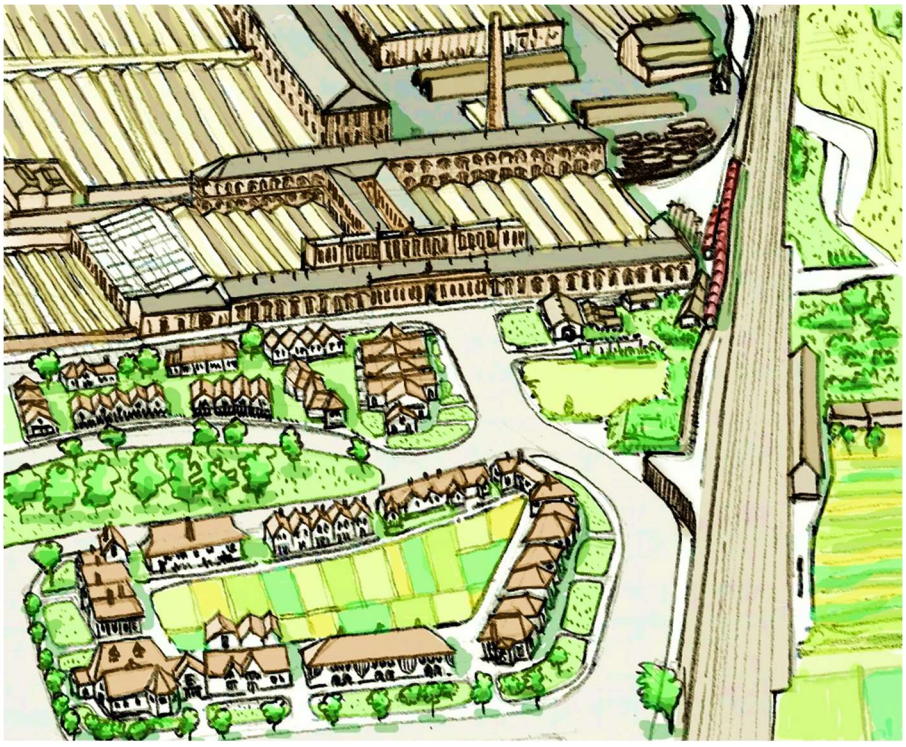


Figure 4.1 The Lever Brothers' factory at Port Sunlight (Illustrated by the author in 2019, through an aerial photo taken in 1934).

The social cause was the leitmotif of industrial garden villages and garden cities, but in some cases the social cause was overshadowed by a clumsy paternalist focus (e.g. Pullman). Thus, any community, instead of being led by founders, needs to be provided with tools to get involve in the development and maintenance of the settlement, in order

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to feel liable of its own destiny, thanks to participative, productive and affordable housing policies. Such mind-set changes did not evolve in industrial garden villages for generations because of the founders' control, which led Howard to differentiate his manifesto from the ones of previous philanthropists, carrying out a new system of garden communities.

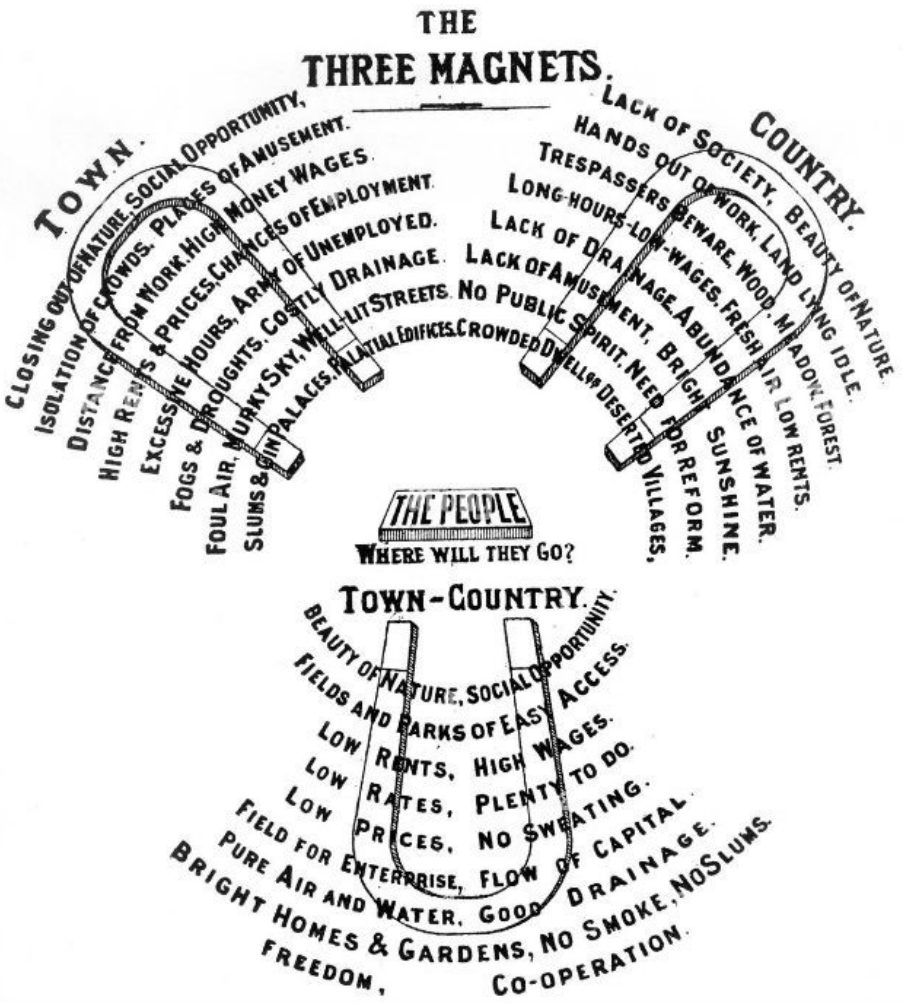


Figure 4.2 Howard's diagram illustrating the advantages of the garden city ('*Garden Cities of To-Morrow*', by Ebenezer Howard).

Howard, inspired in Colonel Light's project for Adelaide[8], dreamed of new settlements surrounding metropolitan cities beyond their green belts, as an alternative to the overcrowded and poor conditions of the industrial cities. He designed a reformist

[8] In 1836, Colonel William Light (1786-1839) planned the city of Adelaide in Australia, through a grid layout and implementing wide boulevards, large public squares, surrounding the city with parklands.

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utopia, which he called 'the garden city', setting out in 1898 its principles through his book '*To-morrow: A Peaceful Path to Real Reform*'. This book describes Howard's ideal city, represented by three magnets: the first magnet gathers the Victorian city's features, the second magnet gathers the most important aspects from the countryside and the third magnet gathers a mix of the two previous magnets, as the result of the best features of the city and the countryside in a new territorial model (Fig. 4.2).

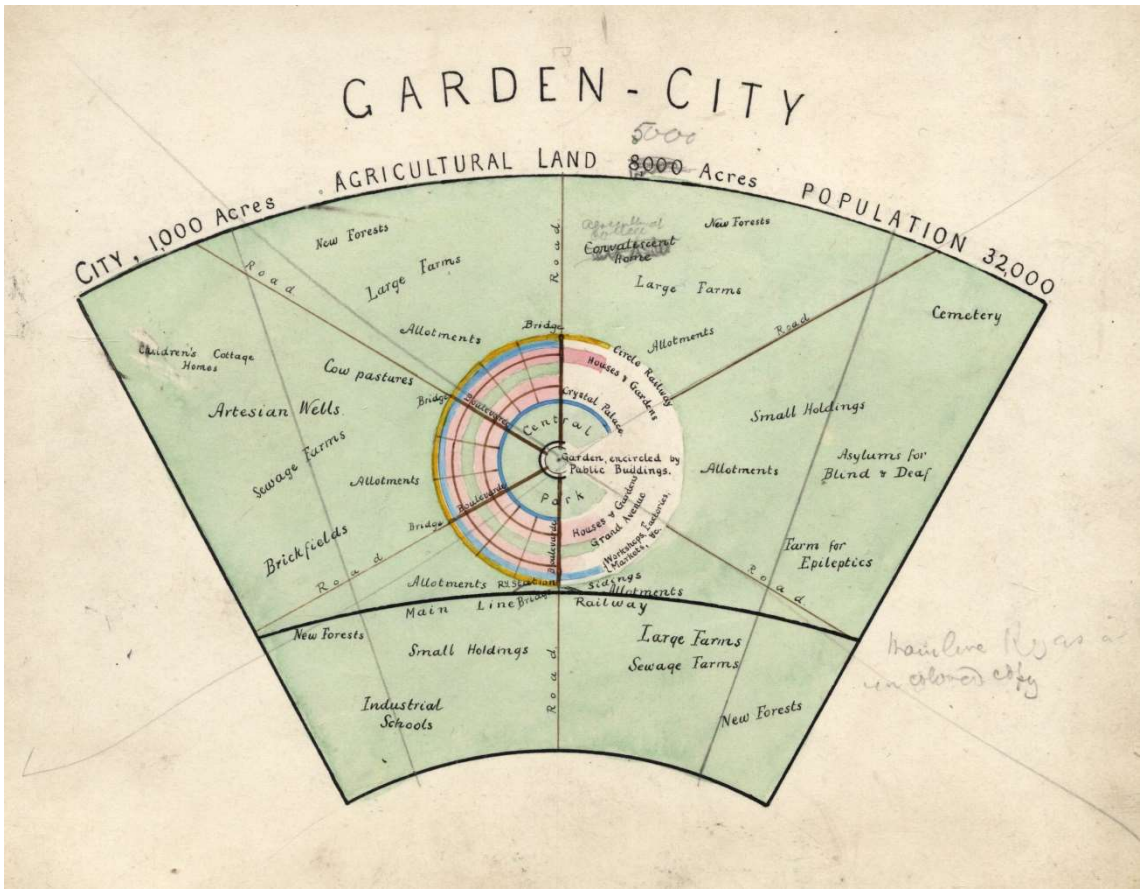


Figure 4.3 Howard's plan for the Garden City and the Rural Belt (Hertfordshire Archives and Local Studies).

To make his dream come true, Howard's recipe would need to be composed by limited communities of 32,000 people on 1,000 acres (4,046,872 square meters). This way, the communities could live and work in small factories within the garden city, which would be surrounded by a green belt of 5,000 acres (20,234,363 square meters) that would be exploited for agriculture (Howard, 1902) (Fig. 4.3).

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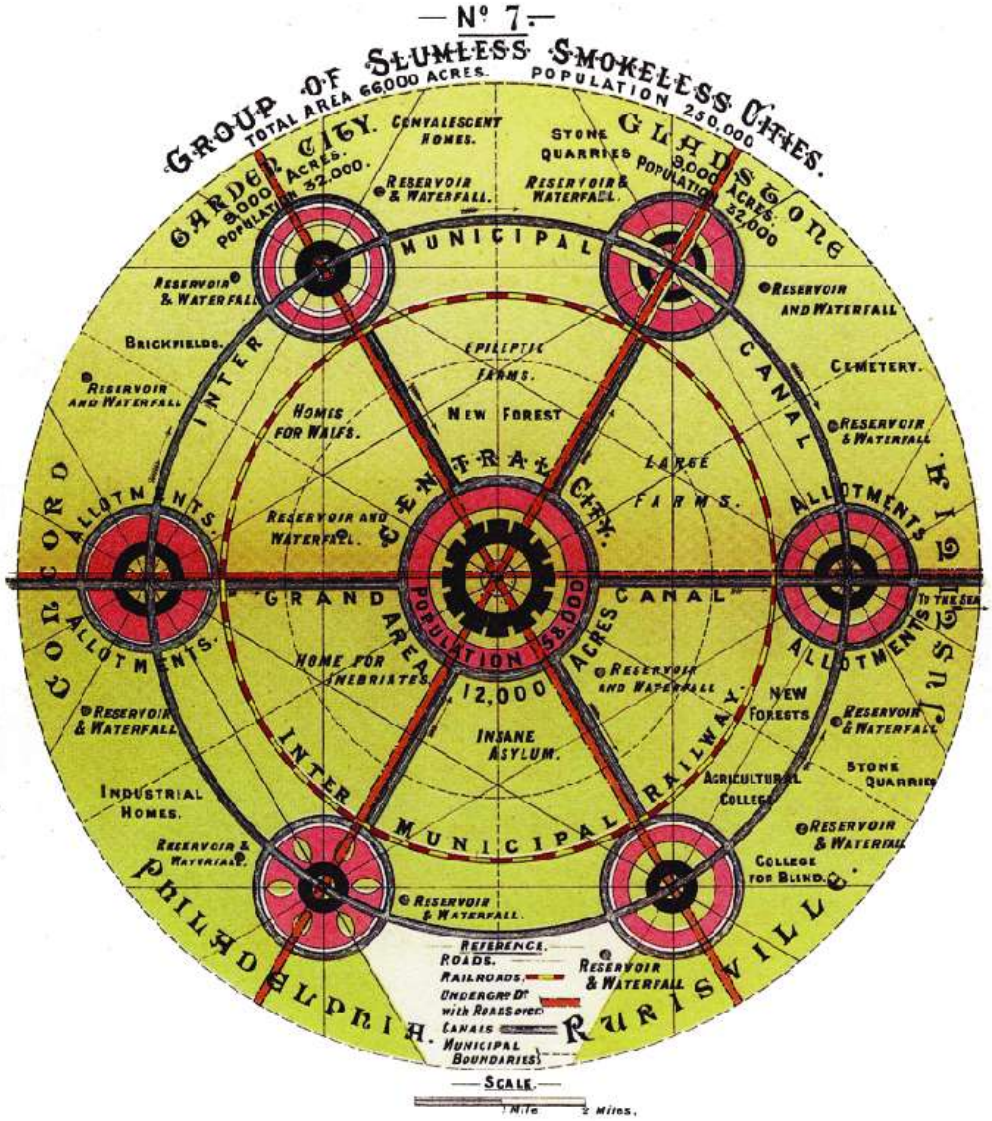


Figure 4.4 Howard's plan for the Social City ('*Garden Cities of To-Morrow*', by Ebenezer Howard).

After the creation of the first community, the population's growth would take place through new communities in a viral way, as mimetic settlements in the nature, separated by green belts or geographic features and connected by railways. In other words, the isolated and cellular model of garden cities could become a regional model of garden cities, the 'Social City', to avoid the isolation of garden cities and overcome the

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prejudices that this decentralized system could cause in people (Fig. 4.4). Nevertheless, Howard did not think of physical models or any particular design. Even Lewis Mumford[9] 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.

While in garden villages, the founders and their families were the only trust members for investing, planning, and managing the community, Howard thought of a co-operative system for garden cities.

> The estate is legally vested in the names of four gentlemen of responsible position and of undoubted probity and honour, who hold it in trust, first, as a security for the debenture-holders, and, secondly, in trust for the people of Garden City (…) All ground rents (…) shall be paid to the trustees (…) to be employed by the Central Council in the creation and maintenance of all necessary public works-roads, schools, parks, etc. (Howard, 1902, p. 2).

He implemented this system for the first time in Letchworth, founding in 1903 the First Garden City Ltd (FGCL) (currently Letchworth Garden City Heritage Foundation). The main role of the FGCL was to promote industrial and residential development at Letchworth, thanks to the members' capital, what meant that the earned increment would be spent in the community's maintenance and development, instead of enriching any individual entrepreneur. However, among the members of the Company, including Ebenezer Howard, there were philanthropist and prominent people as W.H. Lever and Edward Cadbury (the eldest son of George Cadbury), not just contributing with their capital to promote the first garden city, but also contributing with their experience as garden villages' founders.

[9] Lewis Mumford (1895-1990) was an American historian, sociologist, philosopher of technology and literary critic. He had a historical and regionalist focus on his writings about technic, city, and territory.

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Barry Parker and Raymond Unwin were the winners to the limited contest organized by the Company for the planning of this settlement, which allowed them to implement in Letchworth their experience as planners of industrial garden villages like New Earswick. It was the first time that Howard could see his dream come true, trespassing the diagram to the real life, implementing houses, factories, workshops, farms and shops in a self-sufficient community. During the Bournville Conference[10], in which Unwin took part in, he advertised some master planning concepts on how garden cities should be conceived by architects:

> We should lay out our town dwelling sites on the basis of the square. Squares are airy and sweet; they admit floods of sunlight and afford space enough to give a bright and varied outlook to all the houses. In the squares and quadrangles of our Garden City dwellings the spirit of co-operation will find a congenial ground from which to spring, for there association in the enjoyment of open spaces or large gardens will replace the exclusiveness of the individual possession of backyards or petty garden-plots, and will no doubt soon be followed by further association, to which the arrangement so admirably lends itself (Unwin, 1901, p. 70).

As RIBA has acknowledged, they contributed in urban design principles such as the informal grouping of homes with garden and allotments, wide avenues and boulevards with tree lined corridors, the creation of accents through variations in the building line, the principle of closure that represent the breaking down of the street scene into sequences by means of closing the view at key points, use different designs to give identity to main roads like corners blocks with striking design, etc. (RIBA competitions, 2018). Thereafter, this master plan would be for both the acknowledgement of becoming in the main designers of garden cities, laying the foundations of urban and housing design for the following garden city of Welwyn Garden City, garden suburbs and new towns.

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[10] The Garden City Association had many conferences around the UK to attract membership and publicity. Thanks to the Bournville Conference in 1901 and the participation in a Manchester Co-operative Housing Conference in 1902, the membership of the Garden City Association increased from 520 to 1300.

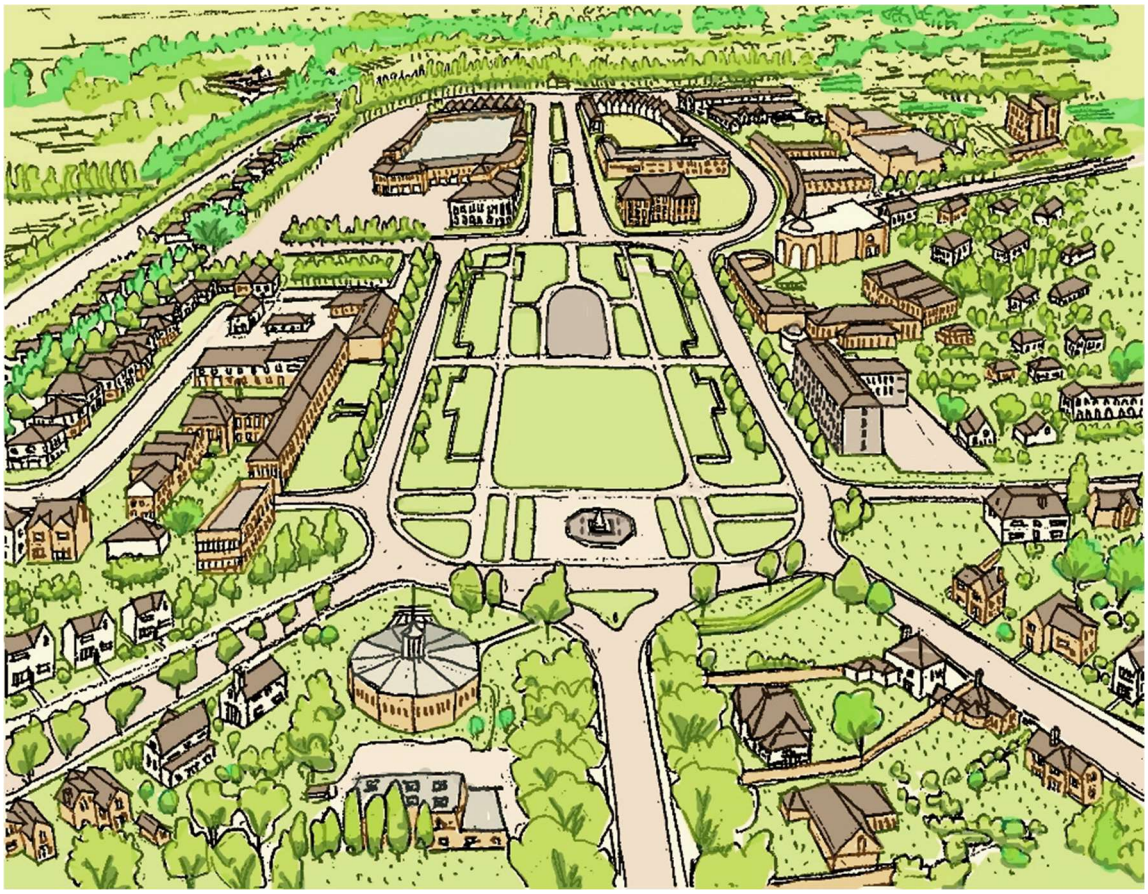


Figure 4.5 John F. Kennedy Gardens at Letchworth Garden City (Illustrated by the author in 2019, through an aerial photo taken in 2017).

After Letchworth's experience, the interest of the Garden City Association and the architects Parker and Unwin were focused to develop garden suburbs, Howard and two of the Letchworth's administrators, C.B. Purdom[11] and Frederic Osborn[12] formed the National Garden Cities Committee to cope with the garden suburbs' development and to get fifty or more government-financed garden cities (De Soissons, 1988). However, Howard distrusted that any government would sponsor the raising of more garden cities, such as he said to Osborn: "My dear boy, if you wait for the government to do it you will be as old as Methuselah before they start" (Beevers, 1988). Therefore, he realised that it would be necessary to create another private enterprise for the second garden city. But unlike Letchworth, Welwyn was partially privately funded after the First World War (1919) and publicly financed after the World War Two, being included in Patrick Abercrombie's Greater London Plan in 1948, losing the financial control of Garden City

[11] Charles Benjamin Purdom (1883-1965), was a British author, drama critic, town planner and economist. He was one of the administrators and founders of Letchworth and Welwyn.
[12] Sir Frederic James Osborn (1885-1978) was one of the administrators of Letchworth and chairman of the Town and Country Planning Association.

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Companies and resulting in the HM Treasury as main earned increment's benefactor (Town and Country Planning Association, 2014). This situation gave rise to betray one of the main Howard's principles, because the garden city and residents would not take part in the investment nor its development. However, regarding master planning principles, Louis de Soissons designed this settlement with tree-lined boulevards and parkways with a neo-Georgian town centre, which offers excellent shopping facilities (Hertfordshire County Council, 2019) within walking distance of houses taking as a reference the urban practice in Letchworth, providing continuity to Parker and Unwin's heritage.

As we have seen, the beginning of garden cities and their first cases were born in the United Kingdom, because of the examples of industrial garden villages like Port Sunlight and Bournville and garden cities such as Letchworth and Welwyn. Nevertheless, we can find many branches inspired in garden cities not just whether we look forward (suburbs and new towns), or whether we look backwards, when Arturo Soria[13] designed in 1886 another planning concept of garden communities, the Linear City, almost a territorial concept. It is a similar project to the previous settlements, sharing wealth and leisure principles, but through a different way of planning. Instead of raising satellite towns or cities surrounding metropolitan cities as Madrid, Arturo Soria aimed to raise urban-belts to connect cities and villages, from Cádiz to Saint Petersburg. Arturo Soria designed the Linear City to be developed through three ways: as urban expansion, as connection between two existent cities and as colonization and repopulation in the countryside. A linear city advocate such as Hilarión González Castillo, during a conference in Madrid's Congress of the Sciences in 1913, considered the third way of the linear city as the best territorial model of garden community for Spain. He wished that someday this territorial model could repopulate the Mediterranean coastline of Spain, from Barcelona to Cádiz, passing through Málaga, which "because of its blazing sun, it could raise a wintry city like Niza" (González Castillo, 1913). His linear distribution would allow a good and efficient transport network across the territory. Indeed, transport and connections are the linear city's soul, what led to its snake-shaped crossing the territory, being an important issue for Soria since he was taking part in the first tramway's development of Madrid in 1871.

[13] Arturo Soria y Mata (1844-1920) was a Spanish urban planner. He was internationally well known for his concept of the Linear City.

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In practice, Arturo Soria could only develop the urban expansion's model after Madrid's government ordered him to carry out the tramway to connect the east side of Madrid. In 1894, he founded the CMU (Compañía Madrileña de Urbanización) to invest in the tramway and linear cities through the tramway lines. In 1898, the east side's tramway started to work, and he could then raise a linear city to connect five kilometres between Puerta Del Sol's axis with Pinar de Chamartín. This urban-belt is the current Linear City district, which was forty meters wide with two roads, two tramways and two pedestrian walkways. On the other hand, its longitudinal function helped to connect the city with twenty meters wide cross streets with houses, which had green spaces and trees, such as Linear City's slogan said: "Each family, a house; each house, an allotment and a garden" (Navascués Palacio, 1969).

Even though linear city share many physical features with British garden cities regarding their green appearance, Howard and Soria devised two different models of garden communities. While Howard thought of garden cities as a decentralized territorial model, Soria thought the linear city as an urban expansion between cities. This led to develop garden suburbs in Spain as the previously mentioned Linear City district in Madrid and, last but not least, Garden City neighbourhoods, in Huelva, Bilbao, Vitoria, Santander, Torrelavega and Málaga, thanks to a 1921 national affordable housing's law, which was called '*Ley de Casas Baratas*'. Even though at the beginning these settlements were thought as satellite cities, currently they are districts, becoming part of the city. Nevertheless, this model share with the garden cities the same physical aspects in the urban level, as we can read in the second article of the law:

> It will be considered as part of Casas Baratas, patios, allotments, gardens, sites for gyms, baths, schools and consumer cooperatives to be attachments in a house or in a group of houses (Real Decreto, 1922).

In 1922, Málaga's government ordered the construction of five hundred affordable homes through the previous mentioned law in the north side of the city. In 1924, Gonzalo Iglesias carried out the master plan of Ciudad Jardín de Málaga with affordable houses designed in vernacular architecture, providing gardens and allotments as British garden communities were implementing.

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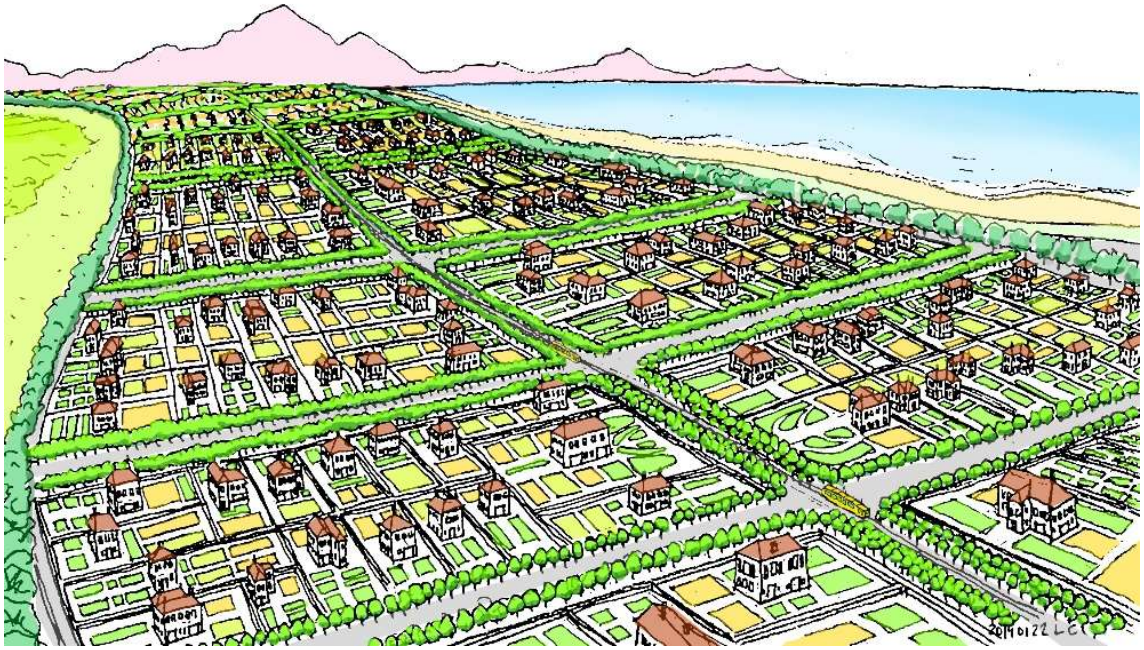


Figure 4.6 Simulation of the Linear City across the Mediterranean coast (Illustrated by the author in 2019, through a map made by Arturo Soria in 1894).

Nowadays, after industrial garden villages and garden cities examples in the United Kingdom and abroad, how could we acknowledge what are garden cities? Through garden city practices based in '*To-morrow*', the current Town and Country Planning Association (TCPA), has laid down its main systemic and planning principles, summed up in the following points:

· Land value capture for the benefit of the community.
· Strong vision, leadership, and community engagement.
· Community ownership of land and long-term stewardship of assets.
· Mixed-tenure homes and housing types that are genuinely affordable.
· A wide range of local jobs in the Garden City within easy commuting distance of homes.
· Beautifully and imaginatively designed homes with gardens, combining the best of town and country to create healthy communities, and including opportunities to grow food.
· Development that enhances the natural environment, providing a comprehensive green infrastructure network and net biodiversity gains, and that uses zero-carbon and energy-positive technology to ensure climate resilience.

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· Strong cultural, recreational and shopping facilities in walkable, vibrant, sociable neighbourhoods.

· Integrated and accessible transport systems, with walking, cycling and public transport designed to be the most attractive forms of local transport (Town and Country Planning Association, 2014, p. 3).

The TCPA has defined these principles not just to explain the existing garden cities' features, but also mainly as manifesto to set out the way to design the garden cities of the future. Nowadays, compared with a century ago, we can see the human habitat very improved, since the overcrowding and unhealthy living conditions almost do not exist in western cities. However, the climate change has increased due to the use of fossil fuels and the lack of affordable houses in metropolitan cities is still happening thanks to the new liberalist speculation. These previous issues are happening together with the imbalance between rural and urban communities, generating inequality across the territory, even though fortunately there are many countries with a majority of rural people, the trend is downward even in the most optimistic territories. In the middle of this frame, garden cities, closer to having a rural environment instead of having an urban environment, are still a magnet to people.

Currently, the population in these settlements have achieved, even overcome, Howard's goals limited in 32,000 people. For example, in Letchworth, there are 34,697 people and in Welwyn, there are 63,659 people (UK Office for National Statistics, 2017), which means that these settlements have been able to attract and to maintain people until nowadays. How do they do it, is the question that this work is going to answer. Therefore, thanks to the lessons we will learn in the following chapters, we will know the tools that garden cities have used to become successful settlements across the territory, for us to take as reference and for future planners to implement the same systemic and planning procedures of the garden cities in rural communities in decline.

However, before analysing the garden city model through the first two garden cities built in the United Kingdom, the following chapters will analyse the aesthetic and theoretical background of garden cities, in order to understand this territorial system through different ideologies and dreams that were the inspiration of founders, theorists and planners to carry out and set the basis of Howard's manifesto and master plans for garden cities.

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4.2 THE COUNTRY MAGNET

"Si te digna manet divini gloria ruris"[1]
Vergilio, Georgics, 1507

The magnet of rural landscape precedes the garden villages and garden cities in terms of aesthetics and philanthropy. During the early eighteenth century, in Britain many aristocrats and architects upgraded urban landscapes, whilst they were creating discrete upmarket environments in the heart of metropolitan cities, taking as reference different interventions made in the countryside. The practice of this kind of intervention in the heart of urban environments began in London, redefining the English country house and its garden as echoes of rural methods of enclosure in the city. The urban palaces as well as landscape gardens were hereinafter the trigger of the re-imagining of town planning, through the practice of "*rus in urbe*"[2]. Such patterns were promoted by the ruling elite, who transformed the country and city's environment to improve the quality of the space in a private manner for aesthetic and economic reasons.

Firstly, to understand the aesthetic connections between garden cities and rural landscape, we should focus on the city, which witnessed many experiments during the eighteenth and nineteenth century, being transformed by the inheritance of the rural landscape to speculatively built residences and the creation of social spaces on the outskirts of the existing urban fabric. The current garden squares and public parks of western metropolis are a very good example of this practice.

One of the first projects on landscape gardens fostered by speculative developers in the urban environment, which, at once, introduced the typology of urban villa, is Regent's Park (1809-1811) in London (Arnold, 2005). The main characters involved in the development of the park were just the architect, the landowner and the Crown, who took part in this project to redirect the fate of 500 acres in the north end of the New Street to develop novel urban property ventures, so it would provide more income to the Crown. To transform the original farmland, the Surveyor General of London, John Fordyce, set up a competition in 1809 to ensure the experiment of inserting rural landscape to the

[1] "If the blissful Country has due Honour in Store for thee".
[2] *'Rus in urbe'* is the practice of simulating the countryside within the city, through gardens or country houses.

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metropolis' boundaries. John Nash[3] was successful in this competition, applying the same picturesque principles as the rest of the competitors, such as tree-lined avenues, circle-shaped roads, big garden squares, decorative lakes, villas, and terraces, which were laid out in different manners of distribution.

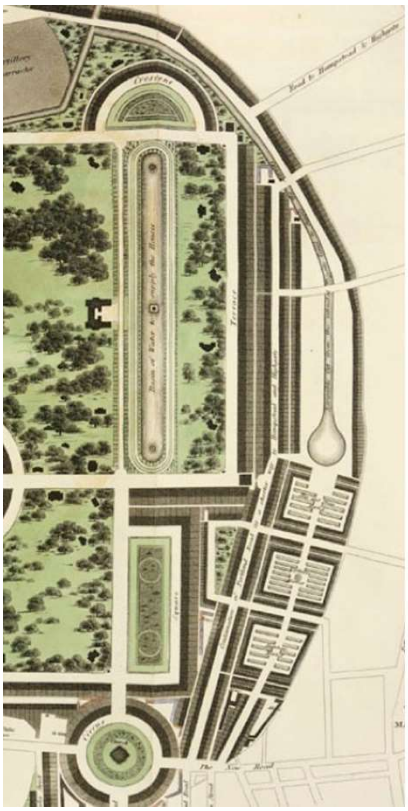


Figure 4.7 John Nash's first plan for Regent's Park. 1809 (Cadell and Davies).

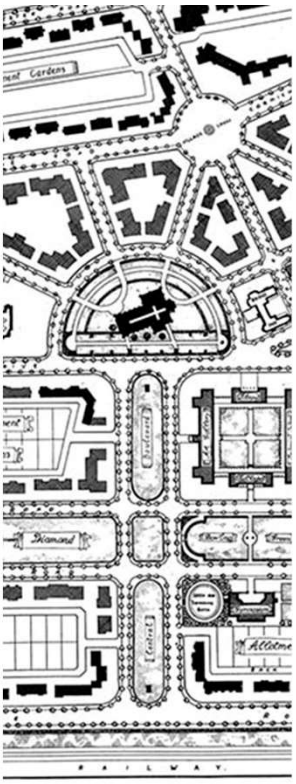


Figure 4.8 Ernest Prestwich's plan for Port Sunlight. 1911 (Port Sunlight Village Trust).

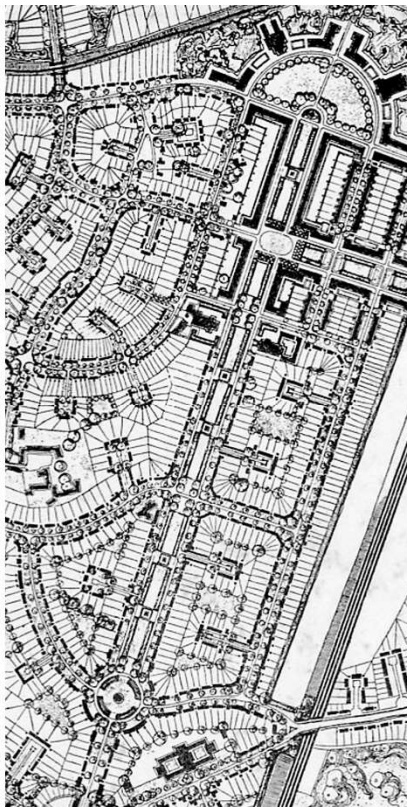


Figure 4.9 Louis de Soissons' plan for Welwyn Garden City. 1920 (WGC Heritage Trust).

Winding paths, hidden villas in the groves and water ornaments, composed the rural informality of Nash's plan and, in contrast, such imitation of nature was faced with some iconic pieces of urban planning, such as the terrace house building with crescent-shape and circus-shape. In short, natural elements of Regent's Park inherited the informality of rural landscape gardens and its geometrical elements arose from the formality of urban practices as surrounding picture frames of bucolic contained nature.

[3] John Nash (1752-1835) was a British architect, who designed neoclassical and picturesque projects in important developments of London, thanks to the support of the Prince Regent, George IV, and the property developer James Burton.

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Such aesthetic contradiction occurred because of the lack of cohesion between architecture and landscape, following the inheritance and tradition of urban formality for buildings and rural informality for gardens. This curious morphological combination and dialogue between natural and geometrical elements of planning, such as the crescent-shapes, the picturesque garden, the tree-lined avenues, etc., represent some of the most important enduring contributions to garden cities' environmental imagery, in terms of aesthetic background.

By this way, looking at the Figures 4.7, 4.8 and 4.9, quite similar crescent-shapes and tree-lined avenues can be identified in 1809 John Nash's first plan for Regent's Park, 1910 Ernest Prestwich's plan for Port Sunlight and 1920 Louis de Soissons' plan for Welwyn Garden City. These morphological connections could not have been possible without the contribution of John Wood, the elder[4], to the urban planning tradition. The inception of these circle-shapes began to take part in town planning practices after John Wood designed the Circus (1754-1768) and the Royal Crescent (1767-1774) in Bath, affecting urban developments' later in time (e.g. Edinburgh's New Town). Both curved building systems, designed by Wood as an influence of the Roman circus (Marco, 2004), share the purpose of providing magnificent views towards the open spaces from the house rows. As the Roman circus was designed in a curved-shape to see the spectacle from peripheral rings of seats towards a unique central point, Wood designed these continuous terraced house buildings following the same synopticon model[5]. This way, Wood ensured wonderful and wide views from each house towards common garden landscapes, such as the enormous old plane trees within the Circus and the rural landscape close to the Royal Crescent. However, in Regent's Park, Nash included the crescent in his plan not only to provide open views from the terrace buildings, but mainly to use the crescent as a kneecap between the park and the city, through an omniopticon experience[6] from the terrace house buildings' private spaces and from the linear pedestrian ways and roadways from the public spaces like Regent Street. Along these lines, garden cities' architects used similar combinations of tree lined corridors and crescents to set out a filter between the public space, composed by playgrounds, park ways and flower fields, and the private space,

[4] John Wood, the elder (1704-1754) was a British architect, who was fascinated by Palladian architecture and the prehistoric stone circles to redesign the urban fabric of his hometown, Bath.
[5] Synopticon is a concept created by Thomas Mathiesen in 1987 to describe the surveillance phenomena where few control many.
[6] Omniopticon is the combination of Panopticon and Synopticon effects, which are experienced at the same time.

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composed by groups of houses surrounded by front gardens and surrounding inner gardens or allotments.

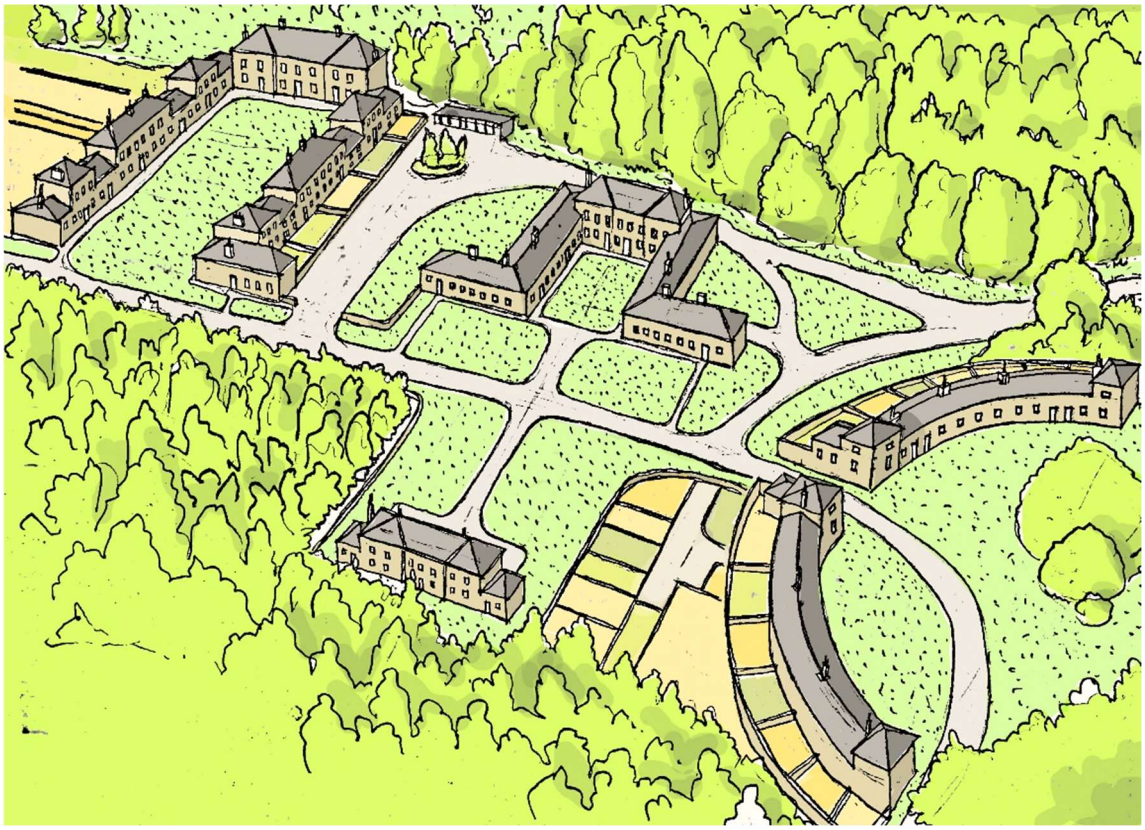


Figure 4.10 Lowther Village in Westmorland (Illustrated by the author in 2019, through an aerial photo taken in 2017 by Simon Ledingham).

4.2.1 Model Villages

Nevertheless, such planning practices did not just belong to urban developments. Other examples of these public spaces can be found in the model villages of the eighteenth century, such as Lowther Village in Westmorland (1765-1773), which had similar elements to the previously mentioned examples, despite being one of the most incongruent urban designs in the middle of the countryside. Contrary to the Romantic practice of "*rus in urbe*" headed by John Wood and John Nash in the city, this development of houses for the landowner Sir James Lowther's[7] labourers was a reproduction of "*urbs in rus*" by the neoclassical architect Robert Adam[8]. The influence

[7] Sir James Lowther (1736-1802) was a British politician and country landowner, who commissioned Robert Adam in 1766 to redesign the demolished Lowther Village in 1682, as an extension of Lowther Newton, an old industry settlement for carpet manufactory.
[8] Robert Adam (1728-1792) was a Scottish neoclassical architect, who together with his younger brother James created the "Adam style", a revival architectural style based on his studies of classical architecture.

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of Classical Architecture in the original project is represented by the distribution of houses using two Greek cross squares and a Circus square in the middle of both. However, because the inhabitants of this settlement only needed around half of the plan to provide 90 houses, only a half of such geometrical squares were built, following subsequent demolitions of 30 cottages during the 19th century, which led them to build a "U" square, a "T" square and a Crescent (Fig. 4.10). This incomplete project had the shortcoming of being too geometrical in an epoch in which the trend of the image of the homes in the countryside was composed by picturesque housing distributions rather than rational distributions. On the other hand, this example provided model villages with a different way of planning public spaces between the houses in the future, instead of simple rows of cottages as in the first model villages of the early eighteenth century.

The first prototypes of model villages arose for different reasons, one of them to improve the deprived conditions of the people in the countryside that lost their independence as freeholders after the enclosures[9], leading them to look for work on landowner's estates or in small-scale rural industries (Darley, 1975). In any case, the landowner, acting at the beginning as a feudal lord and later as a philanthropist, was the main developer of the first model villages. Small settlements in a poor relation between country palaces and their attached parks were the early prototypes of this territorial system, such as Chippenham in Cambridgeshire (1712), New Houghton in Norfolk (1729), Well Vale in Lincolnshire (1725) or Nuneham Courtenay in Oxford (1761). Among the common features of these model villages, are rows of cottages with ample space and enough amount of land to cultivate, churches, parks, lakes, schools and two of the main social developments, which helped to cement the community: the inn and the shop (Darley, 1975). During these years, whilst architects and landscape gardeners designed palaces, churches, gardens and lakes for the landowners, master builders were responsible of designing the residential settlements of the labourers. This meant a radical difference in terms of aesthetical features between both settlements, since the cottages did not evoke the individuality and picturesque image that many visitors criticized, including Prince Pückler-Muskau[10], who considered such model villages as an extension of

[9] 'Enclosure' was a process in England, from the 13th century to the 19th century, to consolidate, redistribute and fence rural land to get larger farms, which previously were composed by rural smallholdings and open fields.

[10] Prince Hermann Ludwig Heinrich von Pückler-Muskau (1785-1871) was a German nobleman interested in landscape gardening and wrote many books under the pen name of "Semilasso". "*Tour of a German Prince*", published in 1831, is one of his books in which he describes and critics England and other countries he visited in the late 1820s, in terms of landscape, architecture, people, etc.

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landowners' possessions. On the other hand, the distribution of cottages in rows did not help to achieve the picturesque effect that picturesque theorists like William Gilpin or Uvedale Price considered appropriate to the country house.

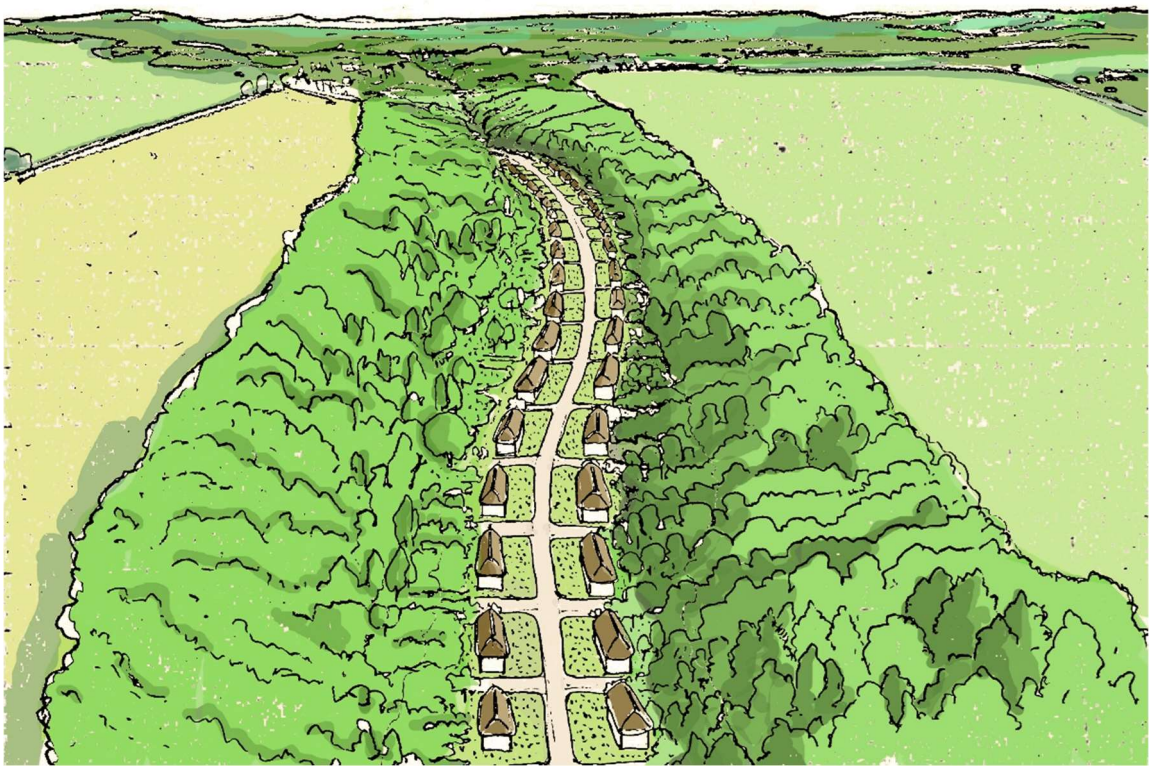


Figure 4.11 Milton Abbas in Dorset (Illustrated by the author in 2019, through an aerial movie frame taken in 2019 by the BBC).

> An obvious and easy method of rebuilding a village (and one which unfortunately has been put in practice) is to place the houses on two parallel lines, to make them of the same size and shape, and at equal distance from each other. Such a methodical arrangement saves all further thought and invention: but it is hardly necessary to say that nothing can be more formal and insipid. Other regular plans of a better kind have been proposed; but it seems to me, that symmetry, which in cities, and generally in all the higher styles of architecture produces such grand effects, is less suited to humbler scenes and buildings (Price, 1810, p. 346).

The row of cottages became the most compositional resource of the first model villages and this rational distribution of cottages began to evolve when landscape

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architects were required to design and plan small-scale rural communities and their residential typologies for the working class (Darley, 1975).

Milton Abbas in Dorset (1773-1786), despite being one of many examples of a row of cottages, represents one of the most iconic examples of resettled villages because of the landowners' whims[11]. The landowner, Joseph Damer, commissioned the architect William Chambers and gardener Lancelot "Capability" Brown[12] to plan the distribution of forty cottages (most semi-detached), alms-houses, shops, four inns and a brewery and relocate the community of the previously demolished market town of Milton (Fig. 4.11). Thus, to encourage the community to be resettled in a new village, the architects applied several picturesque concepts: the natural location of the settlement across the linear green valley and the vernacular style of cottages using "Dorset Cob" and thatch roof, whitewashed walls and flint floors.

4.2.2 The Picturesque Village

However, the aesthetic effects of rebuilt villages as "roadside villages" (Sharp, 1931, p. 48) (e.g. Milton Abbas) led to the search of a new concept of villages, the "Picturesque Village", changing the focus in landscape projects through a pseudo-haphazard distribution of vernacular style houses. This way, aesthetes such as Uvedale Price set the basis of the Picturesque Village's characteristics in contrast to the city, which are "intricacy, variety and play of outline" (Price, 1810, p. 346). In other words, the structure and order of planning as well as the design of buildings should be expressed as a simulation of a spontaneous and traditional community, establishing connections with the principles of landscape gardens and the later urban parks. These connections and inheritance over time regarding the practice of picturesque planning in urban and rural settlements, lead us to emphasize again the figure of John Nash.

Simultaneously to the Regent's Park project, John Nash took part in planning the village of Blaise Hamlet in collaboration with George Repton[13], both commissioned by the landowner and Quaker banker John Scandrett Harford[14]. Since the publication in 1794

[11] After 1770s (Milton Abbas' experience), many landowners rebuilt and relocated existing buildings, even villages, to clear the views of the rural landscape from their properties.
[12] Lancelot Brown (1715-1786) was an English landscape architect and William Chambers (1723-1796) was a Scottish-Swedish architect. Previously to work together in planning Milton Abbas, both of them had worked on Milton Abbey and the grounds.
[13] George Stanley Repton (1786-1858) was a British architect, fourth son of Humphry Repton. He worked in many occasions with John Nash after he became one of his assistants.
[14] John Scandrett Harford (1785-1866) was a British Banker, who was known as a philanthropist landowner and abolitionist.

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of the '*Essay on the Picturesque*' by Uvedale Price, there were many individual attempts to achieve the aesthetics principles but just in isolated cottages in the countryside. In the case of Blaise Hamlet (1810), thanks to the contribution of Harford and his architects to provide a worthy retirement place for Harford's elderly former employees, the project of a small community of nine cottages did not become just one of the first philanthropist projects of garden communities, but also, according to Nikolaus Pevsner, "this group of detached cottages is the nec plus ultra of Picturesque layout and design. English theory about 1800 had preached variety. Here is variety at its most varied" (Pevsner, 1986, p. 176). The unifying thread between this settlement and its surroundings is its park, which is one of the most famous picturesque landscapes in Britain because of its "follie" (Blaise Castle), laid out by Humphry Repton in the early nineteenth century. This background led Harford to buy the estate, and to carry on the aesthetical tradition of Picturesque landscape in his grounds, trespassing the appearance of "follies" and providing real cottages to his retired employers. Harford commissioned John Nash to design the cottages, after he designed a dairy in 1802 at Blaise Castle, which, in addition to representing the picturesque architecture's prototype to design Blaise Hamlet, it shares a similar composition with the 1914 Rest House of Bournville: octagonal shape, bench seats surrounding the dairy and a hat-shaped roof. In 1810, John Nash and George Repton designed nine picturesque cottages, evoking different vernacular styles of the regions, laid out in a square plot in a haphazard way, with a surrounding common garden, which is the key of success of this project. The inner insight from such common garden inherits the same sense of perception of landscape gardens, multiplying the effects of depth, variety, surprise and complexity of the space between the cottages, playing with the sense of public space with the implementation of a sundial within the common garden (Fig. 4.12). Every element, whether a chimney, a roof, a porch, a shrub, a tree, a hedge, even a climbing plant was thoroughly planned, following the precepts of Price.

> Village-houses generally afford many warm aspects and sheltered situations, where the less hardy climbers will flourish, and of course a still greater number of more exposed walls and projections, against which those that are perfectly hardy may be placed; and from the irregular shape of many of the houses, there are various divisions and compartments of various sizes and heights, by means of which a collector of climbing plants might arrange them, according to their different degrees of hardiness and luxuriancy; so that while he was indulging his

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favourite passion, he would be adding the most engaging ornaments, to the most pleasing of all rural scenes (Price, 1810, pp. 354-355).

Even though this settlement was too tiny to consider it a village even a hamlet, its features made a different recipe to the previous mentioned model villages to get a unique microcosm to relocate people in the countryside. In less than fifteen years, the idealized "objet petit a"[15] of Price's picturesque village came true as a revival of vernacular styles to simulate and reinforce the sense of rural community in an aesthetic way.



Figure 4.12 Blaise Hamlet in Bristol (Illustrated by the author in 2019).

After Blaise Hamlet, there were many villages which took as a reference the architecture as well as the planning of cottages, schools, churches and so on, distributed across roadways like the first model villages such as Old Warden in Bedfordshire (1830s) or surrounding common gardens like Blaise Hamlet such as Somerleyton near Lowestoft (1850s). In addition, bigger villages and towns implemented the principles of the last model villages following the "nature-worshipping tendencies" (Sharp, 1931, p. 137) of the Picturesque Movement, as in the resort for the wealthy retired people of Bournemouth, "where the straight road was definitely taboo. Everything was to be natural, picturesque and romantic" (Sharp, 1931, p. 139). Bournemouth, as well as the previous villages, is

[15] "Objet petit a*"* is a psychoanalytic term coined by Jacques Lacan, which concerns the unattainable focus of desire.

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composed mostly by detached houses with gardens through haphazard roads, which aids to reinforce the rural environment of the town, avoiding urban physical aspects such as squares, rows of streets, circuses and crescents. Architects and urban designers such as Decimus Burton[16] in the 1840s or Christopher Crabb Creeke[17] in the 1850s were responsible of setting the basis of such meandering town planning. After that, Crabb became Bournemouth's main architect and surveyor thanks to being commissioned by most of Bournemouth's landowners, among which was the famous English novelist Mary Shelley.

4.2.3 Industrial Villages

In contrast, the countryside was not just the testing ground to be recolonised for a bucolic retirement. During the mid-nineteenth century, some industrialists were more focused in the opportunities of the countryside for their workers envisaging the residential area in the same way of back-to-back housing of cities, instead of encouraging the individuality of the natural microcosm for each employed.

Thanks to philanthropic industrialists like Sir Titus Salt[18], the model villages went from being settlements for estate workers or resorts, to reformist alternatives, which, at the same time, coped with the depopulation of the countryside and the poor living conditions of the Industrial Revolution. This strong idea of industrial development in the countryside was the spearhead of industrial villages to attract people, repopulating the countryside and using the same 'pull effect' of industrial cities. Even though, the philanthropic tradition of industrial villages in the United Kingdom had its maximum development during the mid-nineteenth century onwards, there were initial attempts of industrial villages, as well as other model villages had their picturesque background. A tradition that dates back to 1724, when the sugar industrialist Duke of Montague planned Bucklers Hard in Brockenhurst for his industrial workers, providing them with "housing, a chapel, an inn and a bath-house" (Darley, 1975, pp. 62-63) and other industrial villages such as Seaton Sluice in Northumberland (1763), Tremadoc in Wales (1805), Barrow

[16] Decimus Burton (1800-1881) was a British architect and urban designer. In 1815, he entered the office of John Nash, who he met in London through his father James Burton (1761-1837) a property developer and main sponsor of Nash's London designs.
[17] Christopher Crabb Creeke (1820-1886) was a British architect and surveyor, who planned the early development of Bournemouth during the 1850s.
[18] Sir Titus Salt (1803-1876) was a British industrialist, philanthropist and politician in Bradford, West Riding of Yorkshire.

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Bridge in Bolton (1830), Copley in Leeds (1837) and Saltaire in Bradford (1850), being the latest one and the most significant epitome.

Saltaire, located close to Bradford, was the last alternative of Sir Titus Salt to relocate his alpaca wool factory in the countryside, far away from the pollution, after his unsuccessful attempts to encourage other factory owners to implement the device of the Rodda Smoke Burner[19] in each factory to alleviate the pollution of Bradford. He was an industrialist worried about health problems triggered by the Paleotechnic Era[20] aftermaths, which led him to head the tradition of investing the industrial villages as new model villages to improve the living conditions of the industrial workers and set the basis of repopulating the countryside through industrial development, which was hereinafter taken as a reference in other territories of the United Kingdom and overseas.

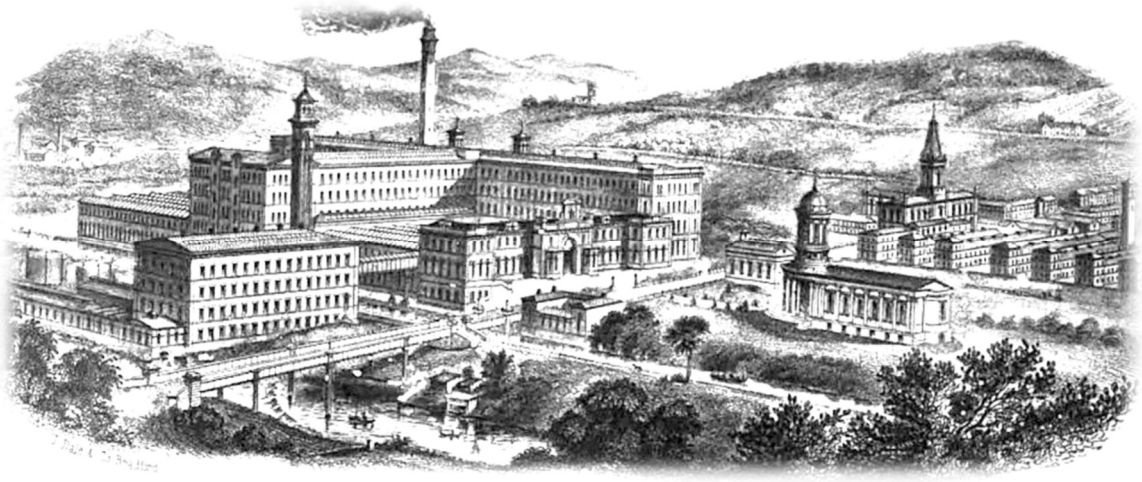


Figure 4.13 Saltaire in Bradford (www.victorianweb.org).

This way, Salt not only grouped his workers to carry on the production of his factory in a healthier site, but in addition established an industrial community surrounded by nature. To develop such mixed use of industrial and residential development, Salt commissioned two relevant local architects, Lockwood and Mawson[21], who designed 560 homes, the mill, a church, a school, a lecture hall and a park across the riverside of Aire

[19] Rodda Smoke Burner was a device created by Richard Rodda, the patent of which described it as an invention of "certain improvements in furnaces, fire-places, and stoves for the consumption of smoke and saving of fuel, and in the mode of applying them to the generation of steam, the smelting of metals, and other purposes" (Rodda, 1854).
[20] According to Merriam-Webster, the Paleotechnic Era is the "period of industrial development marked by the predominance of hand tools and craft industries or by complex industries based on the use of coal and iron" (Merriam-Webster, 2022).
[21] Henry Francis Lockwood (1811-1878) and William Mawson (1828-1889) were two British architects, who formed a partnership to work in Bradford.

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River to enhance the rural environment of the settlement. Unlike the previous model villages and picturesque villages, Saltaire does not have many private nor public garden pockets within its urban fabric of semi-detached houses, only a few restricted green areas together public buildings such as the church or the school and Robert Park as transition between the village and the countryside. Though the urban environment at Saltaire of back-to-back housing is too contradictory for a rural settlement, the most important contribution of this industrial village was the introduction of more activities than the previous model villages to redesign the model village of the nineteenth century, which are the industrial, residential and recreational developments, sharing the same rural environment.

4.2.4 Garden Suburbs

The green aspect on housing would not be implemented in industrial villages until the end of the nineteenth century. Nonetheless, before industrial garden villages, such a concept was experimented in suburban neighbourhoods of existing cities. After the massive ribbons of houses in close formation surrounding parks, gardens, circuses and crescents of rural urbanism at Bath or at the north-east of London (e.g. Regent's Park and Bloomsbury), during the second half of the nineteenth century, cities began to develop other concept of rural urbanism, but in a private manner for property speculation. Bedford Park (1877) at 5 km from London, developed by Jonathan Thomas Carr[22], became the first garden suburb, setting the basis of low-density distribution of medium-sized detached and semi-detached houses with gardens, following the precepts of the Aesthetic Movement[23] and William Morris[24]'s dreams that

> people lived in little communities among gardens and green fields, so that you could be in the country in five minutes walk, and had few wants; almost no furniture for instance, and no servants, and studied the arts of enjoying life, and finding out what they really wanted: then I think one might hope civilization had really begun (Kelvin, 1984, p. 218).

[22] Jonathan Thomas Carr (1845-1915) was a British property developer, who bought Bedford House and 24 acres of land to Hamilton Fulton in 1873, when Jonathan married Agnes (Fulton's daughter).
[23] Aestheticism, or the Aesthetic Movement, was an art and intellectual movement during the 19th century, which was more focused on aesthetic values rather than having deeper sake.
[24] William Morris (1834-1896) was a British designer, writer, socialist activist and key figure in the Arts and Crafts Movement.

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Carr and his architects reproduced the first physical example of suburban village life (Fig. 4.14, creating community through nostalgic architecture, as prototypical attempts of Arts and Crafts designs.

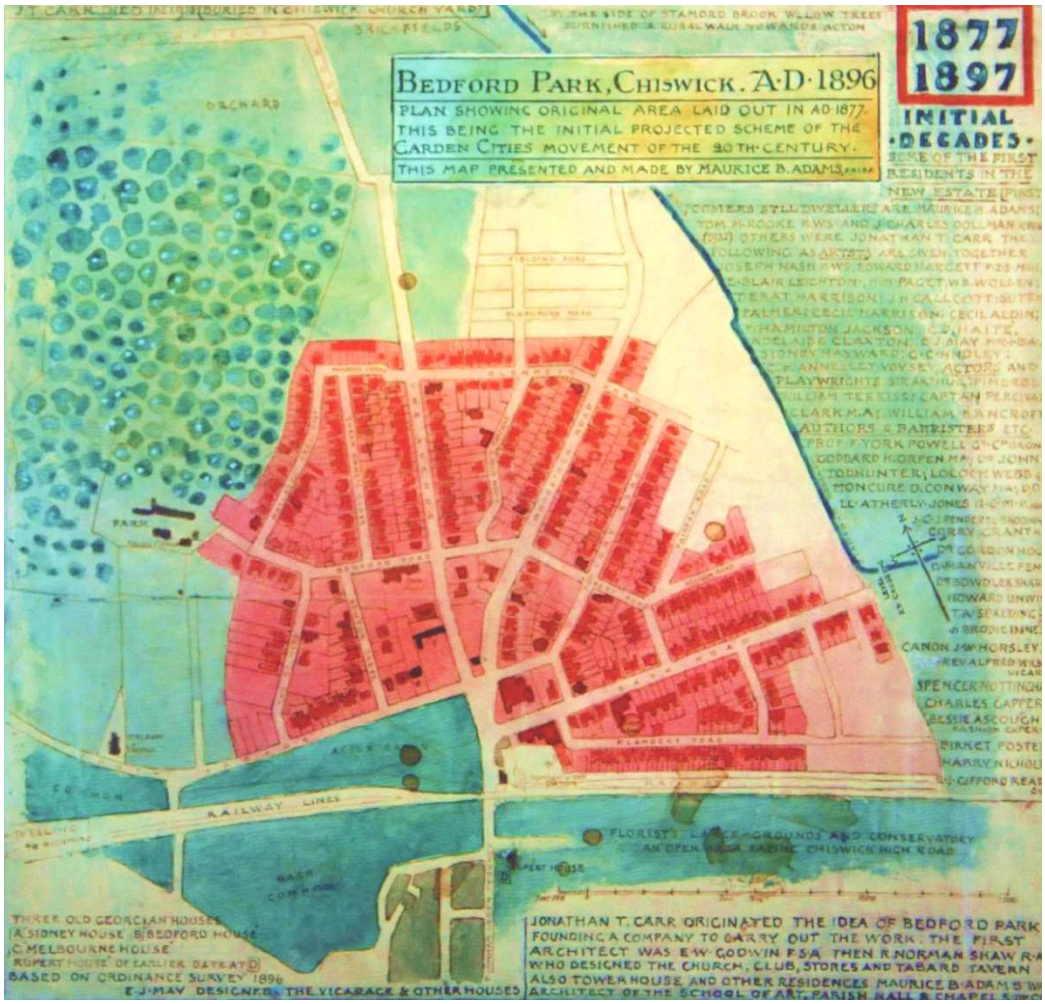


Figure 4.14 1897 Maurice B. Adams' map of Bedford Park at Chiswick (www.bedfordpark.org).

Apart from the picturesque architecture of Bedford Park, the preservation of many mature trees and its consequent organic and radial distribution from the station are some of the physical features, which compose "the ad hoc nature of the planning" (Budworth, 2012, p. 5), that architects of garden communities took as reference hereinafter to lay out the planning of industrial garden villages and garden cities. An example of these physical connections with garden communities was the interest of foreign researchers to investigate housing typologies and their planning in the United Kingdom during the early

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years of the twentieth century, as Hermann Muthesius[25] expressed in his book '*Das Englishe Haus*', where he took Bedford Park and Bournville as case studies to research on British vernacular architecture. Such connections are the result of the recurring picturesque trend to represent in a revival manner regional housing typologies surrounded by nature, evolving from the first model villages previously mentioned until the Aesthetic Movement and the Arts and Crafts Movement. During the last decades of the nineteenth century, London's middle classes had acquired a taste for these movements, through writers and artists, and they felt the urge to improve the industrial environment of the city to return to preindustrial modes of production and living. Because of that, Carr commissioned Edward William Godwin[26], who was taking part in the Aesthetic Movement, to plan and design the estate. Despite of the brief contribution of Godwin, because of several critics regarding his first house designs in Bedford Park, his successors Richard Norman Shaw[27], Edward John May[28] and Maurice Bingham Adams[29] achieved the picturesque effect that Carr had promised (Greeves, 1975).

In addition to houses, Carr built a club, a church, an inn, some stores, and a School of Art, completing the ingredients of a self-sufficient community far away from the city centre. This garden suburb was during its early years the focus of several artists and personalities, such as the Irish poet William Butler Yeats and his family, the painter Edmund Blair Leighton or the actor William Terriss, who lived in Queen Anne's buildings designed by Shaw and Arts and Crafts' buildings designed by May, Adams and even Charles Francis Annesley Voysey[30]. Thank to this, Bedford Park became the aesthetical prototype of the garden cities in a suburban manner. The catalyst effect of Arts and Crafts in garden communities was their hallmark as well as the opportunity of the movement to implement physical and social principles in such kind of territorial models

[25] Adam Gottlieb Hermann Muthesius (1861-1927) was a German architect, diplomat and author of the book '*Das Englishe Haus*' (1904-1905). Mainly, he was known for influencing on architectural modernism through his researches on English Arts and Crafts Movement.
[26] Edward William Godwin (1833-1886) was a British architect and designer, whom works in polychromatic 'Ruskinian Gothic' and 'Aesthetic Movement' influenced in Arts and Crafts Movement.
[27] Richard Norman Shaw (1831-1912) was a Scottish architect and one of the most influential British architects in the 1880s and the 1890s.
[28] Edward John May (1853-1941) was a British architect, who was the last pupil of Decimus Burton and was working in partnership with Richard Norman Shaw.
[29] Maurice Bingham Adams (1849-1933) was a British architect in Arts and Crafts style and editor of the weekly '*Building News*'. He was the first one to coin the term "Garden City", through his map on Bedford Park (see figure 11): "This being the initial projected scheme of the Garden Cities' Movement of the 20th Century".
[30] Charles Francis Annesley Voysey (1857-1941) was a British architect and designer very influential in Arts and Crafts Movement.

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in contrast to industrial cities. Whether architecture and modes of production or ideology and lifestyle, the Arts and Crafts Movement was the inspiration of philanthropic founders and planners, as happened during the Picturesque Movement, to lay out new villages for new communities addressed to enhance the dignity of working class in the countryside.

4.2.5 Industrial Garden Villages

The revival of model villages during the last nineteenth century carried on the philanthropic tradition of industrial villages such as Saltaire thanks to industrialists like the Lever Brothers and the Cadbury family, who were presented in the previous chapter. The late nineteenth century's model villages had the ingredients to bring and maintain people in the countryside, since "work", "play" and "live" headed the main aims of industrialists to improve the life quality of their workers in a healthier environment. However, such philanthropists were aware that they needed to strengthen the links between the people and these new settlements through new aesthetic patterns, far away from urban terraces of houses, which were "common, monotonous, repressive of individuality, symbolic of slavery and uniformity, unworthy of civilized man" (Sharp, 1931, p. 150).

Previous to creation of such a mix of aesthetic and philanthropic venture in the industrial garden village of Port Sunlight, the Lever Brothers laid out a first prototype, on the Wirral peninsula, which they named Thornton Hough. In 1891, William H. Lever purchased Thornton Manor, which was owned by Joseph Hirst until his death in 1874 and had a church (All Saints' church – 1867) and a terraced building of seven houses and a shop (Wilshaw Terrace - 1870), both designed in Gothic style by Kirk and Sons. Lever wanted to implement in this settlement his own notion of what a village should be: a picturesque village through the revival of half-timbered style of southwest Lancashire and northwest Cheshire (Bayley, 1975). Because of that, Lever commissioned the architects William Owen and his son Segar Owen[31], Douglas & Fordham, and J. Lomax Simpson to design his utopic village under his supervision. Despite that the village of Thornton Hough was the result of being aesthetically and capriciously surveyed by Lever, its architects achieved to make sense of the village through a compact layout of houses. After this first attempt to carry out an aesthetic version of the model village, Lever and his architects developed a bigger extension only four kilometres from Thornton Hough,

[31] William Owen (1846-1910) and Segar Owen (1874-1929) were British architects, who were the first designers of Port Sunlight.

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which was influenced by the philanthropic patterns of Saltaire and the experienced aesthetical patterns of Thornton Hough to create the first industrial garden village, Port Sunlight.

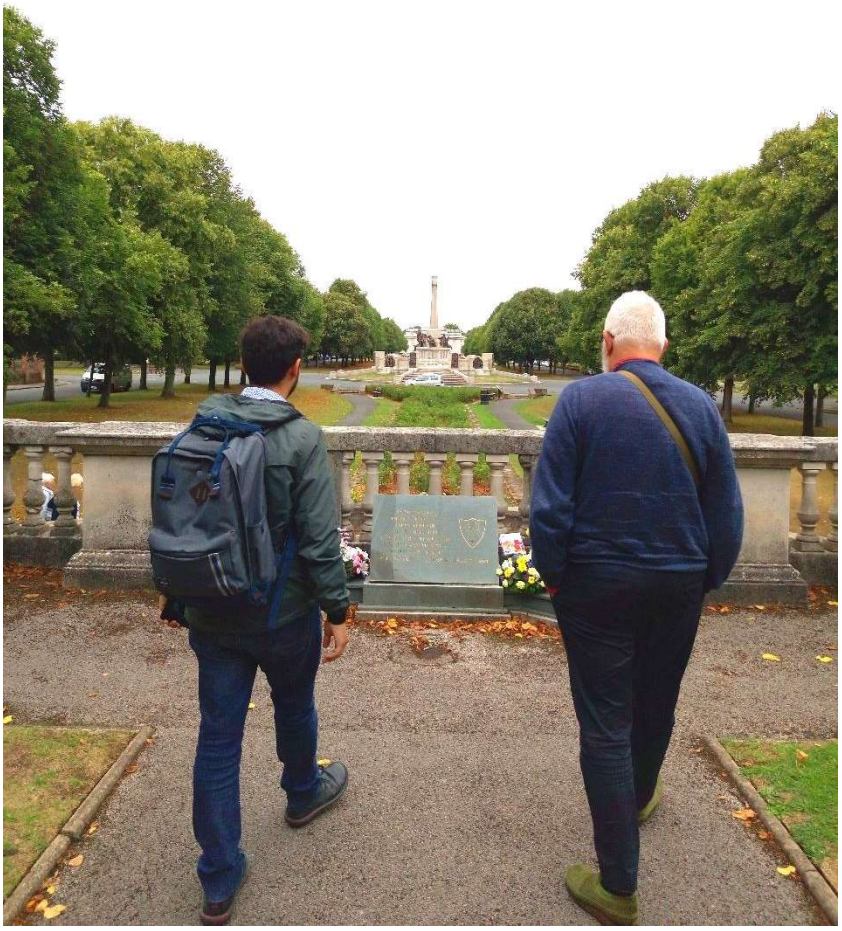


Figure 4.15 Hillsborough Memorial Garden at Port Sunlight (Taken by the author in 2018).

Lever's architects William and Segar Owen introduced in Port Sunlight the Arts and Crafts' northern version through their designs of black-and-white Cheshire vernacular architecture built in Thornton Hough, transferring the middle-class' environment to industrial workers, who originated from the standardised back-to-back houses of industrial cities. Houses in which, said Lever in 1888 about his vision for the site,

> our workpeople will be able to live and be comfortable. Semi-detached houses, with gardens back and front, houses in which they will be able to know more about the science of life than they can in a back slum and in which they will learn

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> that there is more enjoyment to life than in the mere going to and returning from work, and looking forward to Saturday night to draw their wages (Lever, 1888, p. 2).

Since 1890, further architects took part in Port Sunlight, such as Edward Augustus Lyle Ould[32], George Enoch Grayson[33], Ernest Newton[34], Maurice Bingham Adams (Bedford Park's architect) and even Edwin Lutyens[35], who together with the Owens provided open frontages of semi-detached and groups of houses surrounding outbuildings and allotments, which were located in the core of quadrangles.

This vernacular typology of groups of houses were growing from the factory in a longitudinal expansion of "superblocks"[36] toward the beaux-arts axial planning of green parkways (Fig. 4.15), in addition to a church, two schools, a museum, a hospital, recreation grounds, a gymnasium and open-air baths. This way, the Lever Brothers encouraged the community to cultivate their own crops, do sport, go to church, play football or bowling, go to school and reinforce the sense of community in parks and common gardens. Such a programme of activities in specific spaces were laid out by Lever's architects through the principle of "open development"[37], used by Unwin and Parker fifteen years later in Letchworth: large house-gardens, low density distribution, the use of detached, semi-detached, and demi-semi-detached typologies of houses and the situation of buildings well back from the street, creating informal contraction and expansion of building lines to avoid standardised ribbons of houses (Sharp, 1931). The revival of the picturesque model village and the Lever Brothers' publicity caused several visits of politicians and English and European royalty, Lever becoming a benefactor of Town Planning in 1909, founding a Chair in Civic Design in the University of Liverpool (Miller, 2010).

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[32] Edward Augustus Lyle Ould (1852-1909) was a British architect, who designed 'timber framing' buildings in Port Sunlight.
[33] George Enoch Grayson (1833-1912) was a British architect, who was working in partnership with Edward Ould.
[34] Ernest Newton (1856-1922) was a British architect, who was working as an apprentice in Norman Shaw's office and described by Hermann Muthesius as "one of the busiest architects in England and therefore represents the good principles of current thinking about the house in perhaps its most accessible form" (Muthesius, 1904, p. 153).
[35] Sir Edwin Landseer Lutyens (1869-1944) was a British architect, who designed, among his first works, many country houses in an Arts and Crafts style.
[36] In Port Sunlight, the term "superblock" is used to describe a group of terraced cottages surrounding allotments to the rear.
[37] "Open development" is a planning concept, which was coined by Thomas Sharp in 1932 in his book '*Town and Countryside. Some aspects of urban and rural development*'.

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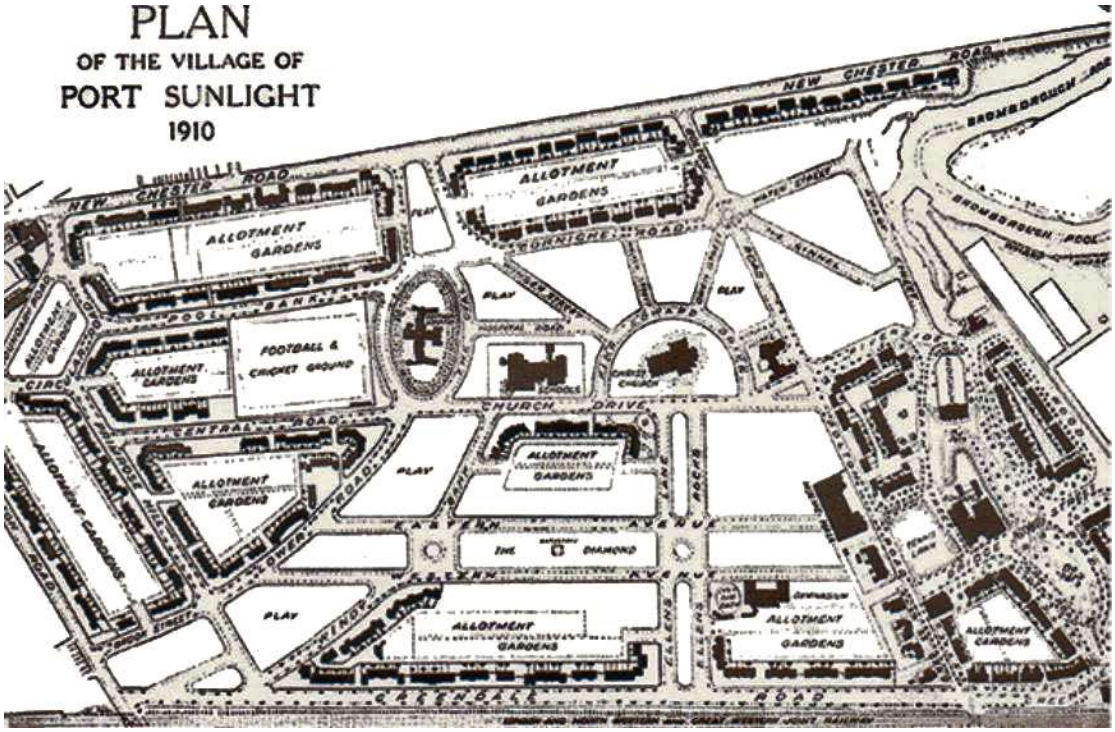


Figure 4.16 1910 Ernest Prestwich's plan for Port Sunlight (Port Sunlight Village Trust).

Thanks to this, Lever could organise a contest at the Liverpool School of Architecture and Civic Design to lay out a new plan for the village, since hitherto Port Sunlight's houses were surrounding geographic features as ravines and tidal inlets, which in 1910 were dammed, filled in and levelled (Port Sunlight Conservation Management Trust, 2018). Ernest Prestwich[38] was successful in the competition, proposing a radical geometrical plan composed by a cross-shaped tree-lined corridors and a crescent surrounding the church. After such contribution of beaux-arts designs, the re-imagining of Port Sunlight became a mix of picturesque vernacular architecture surrounding bucolic dells and geometrical core planning, resulting in a still perceived dual-level planning of rural and urban patterns (Fig. 4.16). In this way, the garden communities' spirit of place began to weave itself under overlapped threads of beaux-arts formality, Arts and Crafts' physical and social aspects, and philanthropist industrials' systemic aspects, ready to spread this territorial system over the British countryside hereinafter.

[38] Ernest Prestwich (1889-1977) was a British architect, who was pupil of Thomas Mawson, the first lecturer in landscape in the University of Liverpool.

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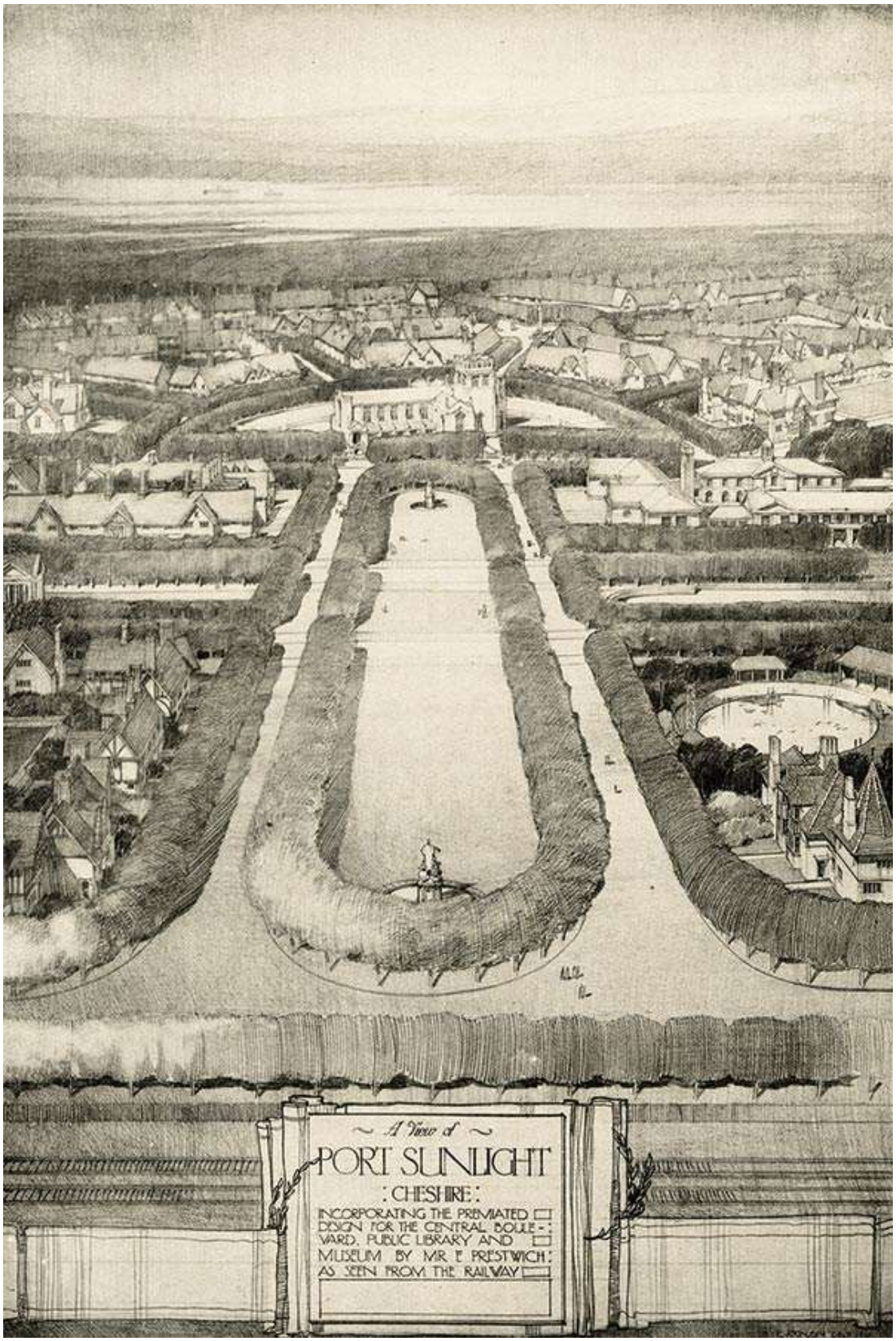


Figure 4.17 1910 Ernest Prestwich's sketch about his plan for Port Sunlight ('*Civic Art. Studies in Town Planning, Parks, Boulevards and Open Spaces*' by Thomas Mawson).

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In Bournville's case, as well as in Port Sunlight's, its development was the result of a previous plan to locate the factory close to the station, which was followed by a park across the Bourn stream, recreation grounds for men and women, swimming pools, gymnasium, libraries, baths, houses for workers and alms-houses for retired workers. Alfred Pickard Walker laid out the first plan of the estate in 1894, following the Cadbury family's vision. According to Elisabeth Cadbury's biographer,

> Morning by morning she would walk through the fields from her home to the factory with her husband as he set off for his day's work, discussing with him the development of the village, where the roads should run and the shopping centre should lie, what type of house and cottage should be built, and what labour-saving devices could be introduced (Scott, 1955, p. 75).

After a second sketch plan (Fig. 4.18) to lay out roads and houses on the former farming lands of Five Gates Farm (in the north of the factory) and Bournbrook Farm (in the south of the factory), Walker implemented a small grass triangle, which became the sketch plan's central element (Harrison, 1999). Unlike Port Sunlight's longitudinal expansion of the original settlement, Bournville evolved in a concentric way, surrounding the factory with more quadrangles of houses and focusing the core of the village with a church, schools and shops in the boundaries of the green village centre. Nevertheless, both cases share the same principles of "open development", even the similar strategic position of their factories. Port Sunlight's factory was placed in the south of the settlement and Bournville's factory in the northeast, because of the prevalent southwest wind in summer, so the smoke of the chimneys would be avoided and ensure an outdoor life season for the villagers (Harvey, 1906). On the other hand, instead of providing informality in the layout of housing, through contraction and expansion along the roads like in Port Sunlight's parkways, Bournville has beautiful examples of informality mainly in junctions to achieve not just more distance between houses, but a subtle perception of reception.

In 1895, after the first houses designed by Walker, George Cadbury commissioned the Arts and Crafts architect William Alexander Harvey[39], who designed

[39] William Alexander Harvey (1874-1951) was a British architect, whose Arts and Crafts buildings were developed mainly at Bournville (Birmingham).

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most of the buildings of Bournville Village, through "the two movements of housing reform and the revival in domestic architecture" (Harvey, 1906, p. 6).

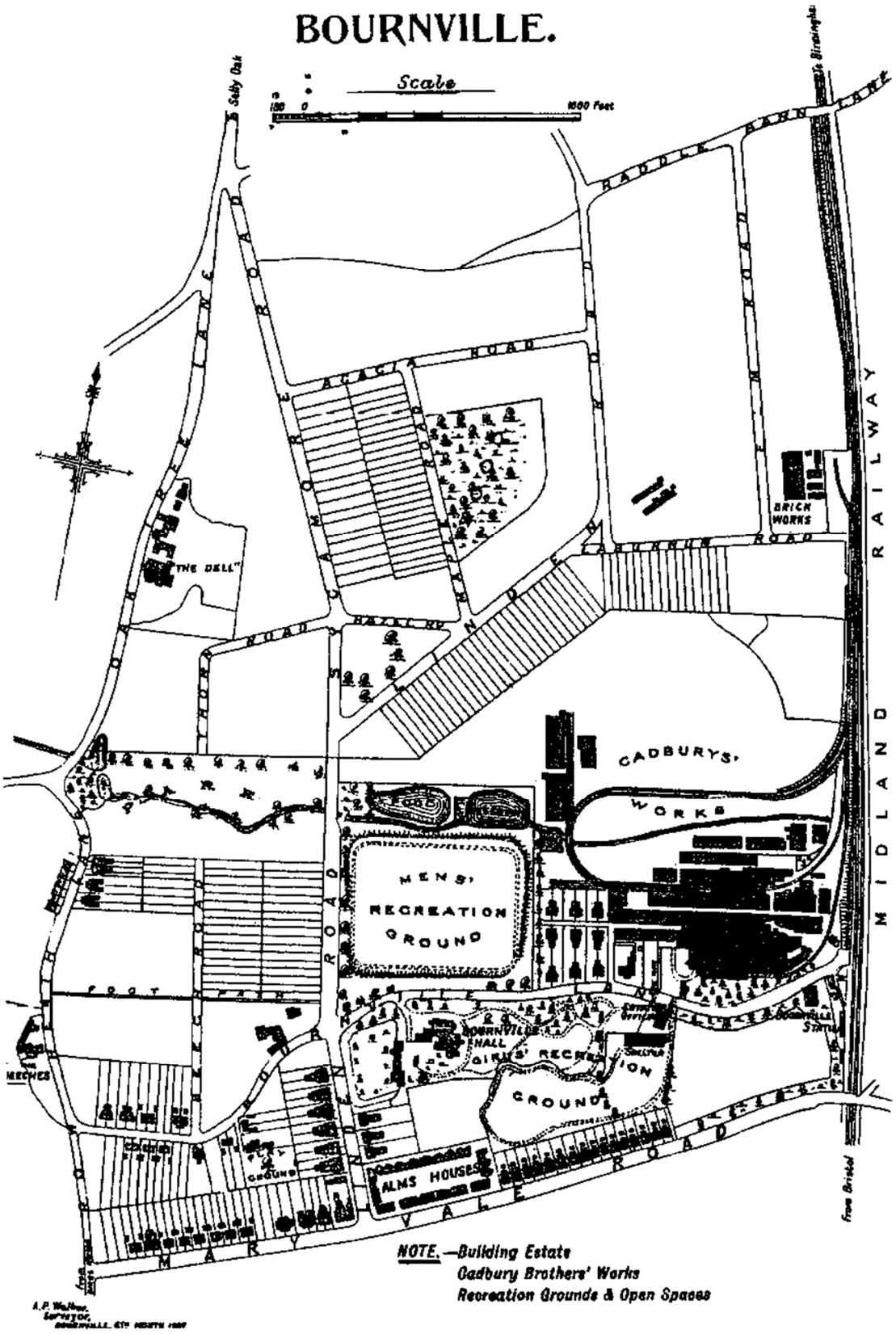


Figure 4.18 1897 A. P. Walker's plan for Bournville (The Bournville Society).

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Regarding the domestic architecture of the village, Harvey, who was very influenced by Arts & Crafts architects such as Voysey and M.H. Baillie Scott[40], designed housing typologies aiming to achieve the experienced individuality of Port Sunlight and the picturesque villages. "The fact is that the Englishman's house is his castle" (Harvey, 1906, p. 4), wrote Harvey to describe the ideal house for the worker in terms of order and composition, using also this analogy to enhance the spirit of place of Bournville through its physical aspects. Nonetheless, such individuality of architectural design to avoid monotony across the roads did not preclude Harvey to carry out a compact cottage plan "even with a repetition of the same plan, by variety in combination and disposition" (Harvey, 1906, p. 6).

Among the main ingredients of industrial garden villages, which help to reinforce the rural environment of the villages, are the vernacular architecture of buildings and the provision of sunlight, gardens, allotments, recreational grounds, and basic amenities. Mainly, ornamental trees, hedges and bushes that grew up near the cottages, are the leitmotiv of Bournville's landscaping, even leading to name the most of its first roads (Cadbury, 1901). According to John Ruskin[41], the main function of a garden for the worker man should be to cultivate his own crops (Illingworth, 1994), as a kitchen garden. "An allotment system", Ruskin wrote in 1874, "was to be one way of helping the industrial community remember their agricultural origins" (Ruskin, 1874, p. 1891). In the same way, gardening was an outdoor activity very appreciated by George Cadbury, which he wanted to include in Bournville, because of his experiences during his childhood when he lived in Edgbaston (a settlement in the countryside between Bournville and Birmingham) (Harrison, 1999). "The cultivation of a garden", George Cadbury wrote to T. C. Horsfall[42], "improves a man and his wife and family, not only physically, but morally and spiritually" (Harrison, 1999, p. 59). Endorsing such a theory, Harvey argued that:

[40] Mackay Hugh Baillie Scott (1865-1945) was a British architect and artist, who designed in many different vernacular styles throughout his career.
[41] John Ruskin (1819-1900) was a British social thinker and philanthropist, whose ideas influenced in Arts and Crafts Movement.
[42] Thomas Coglan Horsfall (1841-1932) was a British town planner active in Manchester, philanthropist, and author of '*The Improvement of the Dwellings and Surroundings of the People: The Example of Germany*' (1904), which encouraged British Town Councils to control and plan the urban growth through urban policies on housing and social reform.

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> the cultivation of the soil is certainly the best antidote to the sedentary occupations of those working in large towns. A primitive instinct is indulged, the full value of which seems hardly yet to have been realised. Many believe, indeed, that with its encouragement the abuse of the social club and public-house will be materially lessened, and one of the greatest social evils of the time disappear (Harvey, 1906, p. 5).

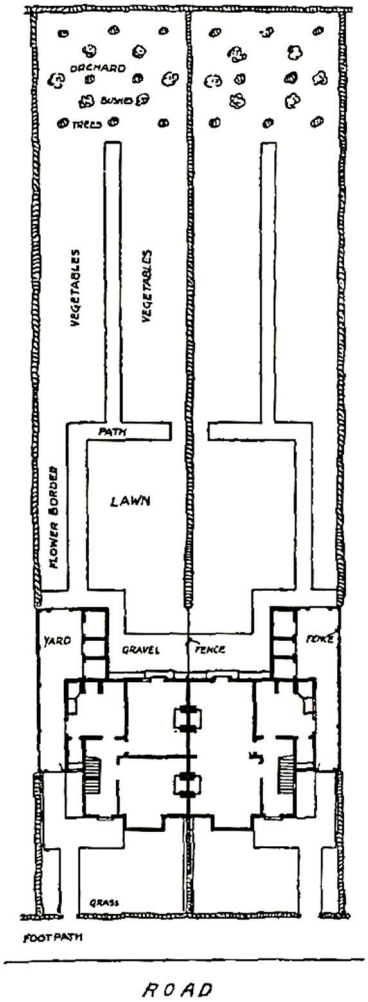


Figure 4.19 Harvey's garden plan. ('*The Model Village and its Cottages: Bournville*' by William A. Harvey).

According to William Morris, the garden's layout should be "large and small, it should look both orderly and rich. It should be well fenced from the outside world. It should by no means imitate either the wilfulness or wildness of nature, but should look like a thing never to be seen except near a house. It should in fact look like part of a house" (Morris, 1879). Previously to garden cities, Harvey set the basis to lay out large private garden-spaces or kitchen gardens on each dwelling to cultivate vegetables and fruit trees (Fig. 4.19), instead of developing common grounds for crops, as happened in the inside of the Port Sunlight's quadrangles. In any case, both industrial garden villages planned the core of housing quadrangles to domestic operations, hidden from the surrounding public space, following the precepts of the Arts and Crafts Movement about recovering pre-industrial customs within the community.

On the other hand, the quadrangle's inner area does not have the same function in each housing pocket. Bournville Almshouse Trust, as well as Harford's developed in Blaise Hamlet, supported the construction of alms-houses for the retired employees, which contain an inner common garden for recreational activities. In 1897, Ewan Harper designed the "attractive brick Tudor-style quadrangular almshouse block looking onto a

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grassed quadrangle, with a small meeting place at the centre and an orchard beyond" (Harvey, 1906, p. 42). Despite the architecture and layout Bournville almshouses do not represent the simulation of an ancient hamlet like Nash's project for Blaise Hamlet, both settlements share the same order composed by a ring of houses surrounding a common and green meeting place.

Just like gardens and allotments are surrounding houses and cottages as a transition between each other and the public space, the recreation grounds become transitional public spaces for adults between the factory and the houses, as well as the public parks are transitional public spaces for children between the school and the houses. The Cadbury family and their architects thoroughly planned each recreational area to be settled across the daily flows of Bournville's residents, reinforcing the synergies between work, play and life. In this way, the workers are able to do sport when they are leaving the factory, whilst children play together in the park, before both of them get home. Still today, such recreational network is working, giving life to the heart of Bournville Village throughout the day and providing picturesque landscapes of green areas flanked by community facilities, public buildings, houses and the factory, across the bucolic Bourn stream.

The aesthetic background of garden cities, composed by urban and rural threads mentioned from the beginning of this chapter, gathered in industrial garden villages the rural informality and vernacular architecture from Nash and Repton to Owens and Harvey, coexisting with the geometrical formality to perceive the rural landscape of Wood and Nash, and the mix of different housing typologies of Shaw, May and Adams. In short, such mixtures of different aesthetical backgrounds were the result of several attempts of introducing traditional rural aspects within urban and rural environments, as a chain of overlapped revivals of rural imagery. Linked to this, the foundational aspects of landowners as Harford and Carr, and industrialists as Salt, the Lever Brothers and the Cadbury family, were the epitome to carry on the philanthropic tradition of employers or private investment, fostering new settlements or garden cities far away from the metropolitan city. Both branches, the aesthetic and philanthropic aspects, were responsible of the first examples of industrial garden villages, as first prototypes of garden cities, becoming the inspiration of Howard and his architects' impulse to carry out a bigger and more ambitious territorial system across the countryside, "the Garden City". After all, the countryside represented the place of provenance of the biggest migrations to the industrial cities during the second half of the nineteenth century, where pollution

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and rate of death of the Paleothecnic Era increased proportionally to the excessive population growth. Therefore, such nostalgic alternative sounded as something more tangible, known and experienced over time in small model villages and industrial villages, leading Howard to design a new territorial model with the ability to improve living conditions of the industrial workers and decentralise population across the territory.

Simultaneously to the previous aesthetic and philanthropic branches, writers and professionals close to socialist and anarchist precepts began to focus on the empty rural environment, as a territorial revolution of repopulating the countryside in a more dignifying manner after the effects of Industrial Revolution over the whole western civilisation.

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4.3 BEYOND THE GARDEN

In this context of philanthropic activity, among the broad theoretical spectrum of garden cities' background, Ebenezer Howard was influenced by significant utopians and reformists, which provided the basis to establish model communities in the countryside. After all, the first industrial garden villages and garden cities were 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. In short and following Howard's definition on the Garden City's concept as a "unique combination of proposals" (Howard, 1902, p. 71), the spirit of garden cities is the result of enhancing a model community living and working in ideal commonwealths, through a co-operative economical system.

Among these initiatives, the concept of model community characterised the core of such combinations, leading the nineteenth-century utopian socialists to seek the solution to the pandemonium of dysfunctional families and the imbalance between city and country in socio-economic terms. In this way, significant social reformers proposed the layout of small rural settlements to get away people from the evils of existing cities and towns and start from scratch.

Robert Owen[1], father of the Co-operative Movement, introduced the concept of "Agricultural and Manufacturing Villages of Unity and Mutual Co-operation" (Owen, 1858, p. 37) after two experimental communities in the UK and the USA. These "villages of unity and mutual co-operation" (Owen, 1817, p. 2), such as Robert Owen described them in his '*Report to the Committee of the Association for the Relief of the Manufacturing and Labouring Poor*' in 1817, should be composed by the formula of 1,200 people, from 1,000 to 1,500 acres of land for living, the layout of public buildings distributed into parallelograms within a quadrangle of houses (Owen, 1817). In this way, Owen introduced the formula of Fourier's phalanx[2], where "the center of the palace or Phalanstery should be a place for quiet activity; it should include the dining rooms, the

[1] Robert Owen (1771-1858) was a Welsh industrialist, social reformer, philanthropist and a forerunner of utopian socialism and the Co-operative Movement.
[2] The phalanx or phalanstère was a building for a utopian community, devised by Charles Fourier (1772-1837).

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exchange, meeting rooms, library, studies, etc." (Fourier, 1822, p. 240). In addition, Owen implemented in his parallelograms: a public kitchen, an infant school, a place of worship, a school for the elder children and adults and grounds for exercise and recreation, all of them surrounded by a quadrangle of semi-detached houses with attached gardens and allotments (Fig. 4.20).

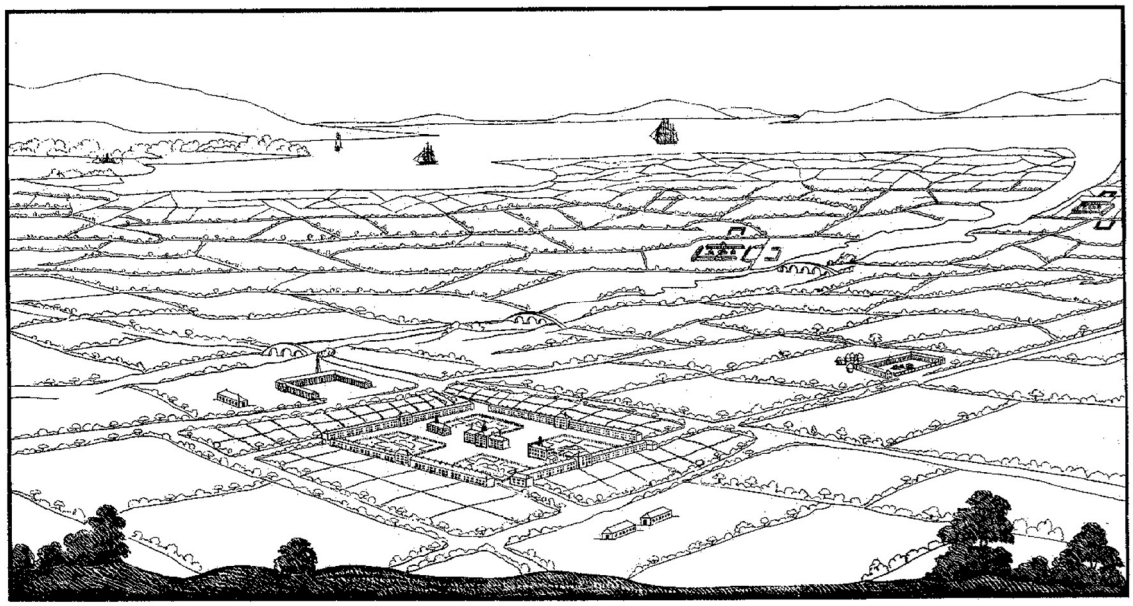


Figure 4.20 A view and plan of the villages of unity and mutual co-operation, described in Robert Owen's report on the poor, 1817 (www.urbanplanning.com).

Beyond these enclosed living quarters, factories and workshops would be located near the boundaries of the townships, and farther away, there would be the agricultural establishments, completing the features of how Owen thought a self-sufficient industrial community should be. His model township represented a radical mixture of physical and social patterns, where each resident would be located in specific blocks, according to age and occupancy, reforming not just the public sphere of working and leisure, but also the private sphere of living or social reproduction. Thanks to this spatial hierarchy, children could keep away from the bad habits of the first colonists and, in turn, such distribution could help to assign different tasks per age group. Therefore, ¾ of the quadrangle would be aimed at providing dwelling to families with two children or less, meanwhile the rest, ¼ of the quadrangle, would be aimed at absorbing all the exceeding children above two children per family and all children above three years old. Nonetheless, thanks to the shape of the residential quadrangle, with all the frontages faced towards the same

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common public space, parents and children could meet and "converse at meals and all proper times" (Owen, 1817, p. 14).

Apart from working in manufacturing, agriculture, community facilities or co-operative housekeeping, people should take part in the administration and management of the community, through the "Home Department [and the] Foreign Department" (Owen, 1849a, p. 66). The Home Department, composed by people from thirty to forty years old, should govern the organisation of production, distribution, and formation, meanwhile the Foreign Department, composed by people from forty to sixty years old, should foster good connections with other Townships, even "regulate and assist in the establishment of new Townships, composed of their surplus populations" (Owen, 1849a, p. 67). Thanks to such departments, the community could not just govern itself through local planning and management, but also taking part of a bigger network of more Townships "federatively united" (Owen, 1849a, p. 65) and clustered in circles.

Beyond the territorial scale, Owen pretended to be more ambitious, providing some specific physical and social patterns to set the basis of how his villages of co-operation could achieve being "self-educating, self-employing, self-supporting, and self-governing (communities scattered across the territory of) Europe, and afterwards to all parts of the world, uniting all in one Great Republic, with one interest" (Owen, 1849a, p. 65). This global perception led him to encourage other countries, through his '*Supplement to the Revolution in Mind and Practice of the Human Race*' (in English, French and German), to implement his model township as a solution to supersede the deprivation of existing urban and rural settlements, "comprising all the advantages of cities, towns and country residences, without the disadvantages of either; and thus, by degrees, will transform this pandemonium of falsehood, disunion, and evil, into an earthly paradise of truth, union and goodness" (Owen, 1849b, p. 80). In short, Owen's townships embodied an early formula of Howard's three magnets, which comes from 1799, as synthesis of his first experimental community in Scotland.

New Lanark in Scotland was a cotton-spinning establishment founded in 1784 by Sir Richard Arkwright[3], who owned the estate in partnership with David Dale[4]. Two years later David Dale became the sole owner of New Lanark until 1799, when Robert Owen

[3] Sir Richard Arkwright (1732-1792) was an English industrialist and inventor, together with John Kay, of the spinning frame, what helped the textile manufacturing process and fuelled the Industrial Revolution.
[4] Daved Dale (1739-1806) was a Scottish industrialist and philanthropist, who provided educational and social improvements to workers of the cotton mills in New Lanark.

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and two partners more purchased the estate with the aim of carrying on their industrial development far away from the big industrial cities. While Owen's partners invested in New Lanark to make money, Robert Owen focused on New Lanark to put into practice his knowledge and experience in a new community, after he implemented his first social experiment for the benefit of five hundred workers in a factory at Manchester (Donnachie and Hewitt, 1993).



Figure 4.21 1818 John Winning's painting of New Lanark (New Lanark Trust).

Unlike his partners and regular industrials of his time, Robert Owen came from the bosom of a working-class family, whose childhood he spent working hard in a factory since he was ten years old (Owen, 1874). Thanks to his background and his formidable evolution, he learnt about the inception of all the symptoms of the last seventeenth-century working class' deprivation and became a philanthropic industrialist more focused on social welfare than individual profit. New Lanark was the model industrial village that Owen needed, to lodge a new model community maintaining the good mechanical improvements implemented by Arkwright and Dale and introducing his reformist methods to increase the welfare of the community and, consequently, good profits for him and his partners. His method relied on providing houses, streets, a small garden per family, playgrounds and the development of new habits by means of the Institute for the

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Formation of Character, which consisted of two large buildings with the function of teaching children and adults (Owen, 1849b) (Fig. 4.21). Such physical and social improvements were a very good combination to get fantastic profits, which helped to endorse Owen's methods and led him to start a transatlantic venture in 1810 to establish a second "owenite" township in the USA.



Figure 4.22 1838 F. Bates' painting of New Harmony, as proposed by Robert Owen (The Association of all Classes of all Nations).

New Harmony in Indiana was his last attempt to put in practice his model community in a more ambitious and radical social experiment than New Lanark (Fig. 4.22). In 1825, the Harmonists[5] sold their town, Harmony, to Robert Owen, who renamed the town as New Harmony, to represent the gospel of social reform, aiming to achieve a "community of equality, based on the principle of common property" (Owen, 1874, p. 285). In May 1st of the same year, the inhabitants of New Harmony had adopted '*The Constitution of the Preliminary Society of New Harmony*', whose aim was focused on encouraging the harmonites of becoming independent communities in every way under the management and advisement of Robert Owen (Owen, 1825). However, New Harmony was soon overcrowded and its inhabitants were gradually giving up the ethos

[5] The Harmony Society, also called as the Rappites, was a religious community founded by Frederick Rapp (1775-1834) in 1814. For ten years, the Harmonists led a communal life in Harmony and developed an economic system relied on agricultural holding and manufacturing.

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of the Constitution and, therefore, not meeting the expectations of Owen, because of the premature implementation of such radical principles upon an unreformed and inexperienced society, which considered unfair the distribution of credit between workers and non-workers (Lockwood, 1902). But despite all, Owen did not throw in the towel and he issued an appeal to significant teachers of diverse subjects, even early feminists, among which he met William Maclure[6], who became his partner, leading to build and establish "the first kindergarten, the first woman's club, etc. (…) populating the town with "Fathers": Father of Infant Education, the Father of American Zoology, the Father of American Ichtyology, etc." (Wilson, 1967, p. 172). In February 5th of 1826, The New Harmony Gazette published '*The New Harmony Community of Equality*' to lay out the life of the harmonites which according to its articles relied on "cooperation, common property, economic benefit, freedom of speech and action, kindness and courtesy, order, preservation of health, acquisition of knowledge, and obedience to the country's laws" (Wilson, 1967, p. 149). Unfortunately, the second constitution did not stick either among the harmonites, which led Owen to break ties with New Harmony in 1827.

Following similar precepts as Owen's to remodel society, James Silk Buckingham[7] wrote in 1849 '*National Evils and Practical Remedies*'. Just like Owen, apart from pursuing a model society, Buckingham laid out his own idyllic utopia, which defined as a "model town" and pointed out the opportunity of England's wastelands to foster a mix of agricultural and manufacturing developments in the same community across the countryside[8]. After all, Buckingham joined in the reformist trend of many associations, which arisen in Europe during those years to provide work and model lodging-houses for poor people in the countryside, even "associations for establishing suburban villages for the working classes, to get them at night at least out of the crowded haunts and vicious atmosphere of the towns" (Buckingham, 1849, p. 132). His proposal on agriculture, instead of being relied on a small holding system, which he considered very expensive for poor people and that offered very little profit, Buckingham set out a co-operative system or association of shareholders to exploit the land (Buckingham,

[6] William Maclure (1763-1840) was an Americanized Scottish geologist, also known as father of American geology, philanthropist, and partner of Robert Owen during their social experiment at New Harmony.
[7] James Silk Buckingham (1786-1855) was an English writer and journalist.
[8] However, Robert Owen considered that Buckingham's model town was "a model town established on the old erroneous principles respecting humanity' and what it was in that time required was '[…] a model arrangement for producing and distributing wealth, forming character, governing locally and generally, and placing all in the best manner to constitute a permanently prosperous, superior and happy state of society over the world; or, in other words, a rational state of human existence" (Owen, 1845).

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1849). This way, his model society could work in agriculture, around a ten per cent of the community, and most people in manufacturing, achieving a self-sufficient network of production between both activities, working at the same time in the same community.

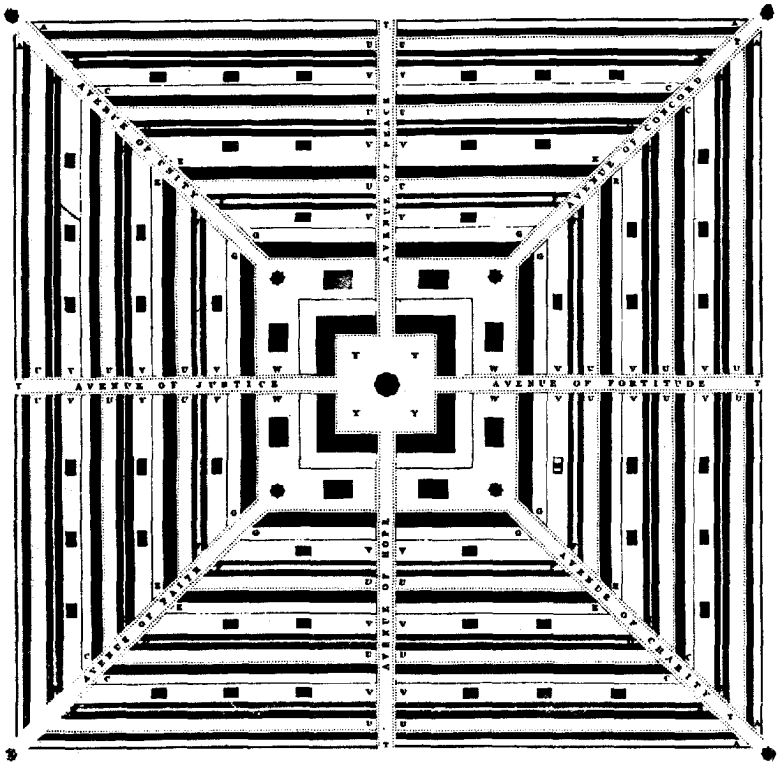


Figure 4.23 1849 James Buckingham's sketch about his model city ('*National Evils and Practical Remedies*', by J. S. Buckingham).

His military layout of houses and public buildings represented, as well as Howard's scheme, a conceptual and abstract concentric network of successive rings in quadrangles for distributing different functions in a rational and practical way, so people could walk less than ten minutes to go everywhere in his model town, under the principles of "order, symmetry, space and healthfulness" (Buckingham, 1849, p. 183) (Fig. 4.23). Thanks to such arrangement of buildings, the inhabitants of the model town could walk through "under continuous shelter from sun and rain, when necessary; with the disposition of the public buildings in such localities as to make them easy of approach from all quarters, and surrounded with space for numerous avenues of entrance and exit" (Buckingham, 1849, p. 183). These architectural patterns, inheritance of Fourier's street-galleries (Fourier, 1822), later on influenced Ebenezer Howard to introduce the Crystal Palace within the core of his scheme, sharing the same function of preventing people from suffering environmental elements (Howard, 1902). Buckingham despite laying out the

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model town's urban fabric as a radical quadrangle of continuous terraced houses, he was aware that such monotonous buildings should be designed through the picturesque principle of "variety in architectural elegance" (Buckingham, 1849, p. 184), what would aid to provide, at least, individualism within the township and a more attractive urban landscape. Furthermore, each dwelling is composed, depending on the case, by single, two or three bedrooms and a garden for cultivation and recreation, connecting each other across a continuous covered gallery or arcade and using classical aesthetic patterns to differentiate, symbolically, each social group. From Doric colonnades for workers to Composted colonnades for founders, each inhabitant could experiment a psychological serial view of different orders, walking from the edge of the town towards the core of the community, where the public edifices would be located. Just like Owen's parallelogram, Buckingham distributed the community facilities like dinning-halls, public-baths, drawing-rooms, or schools in quarters, reserving a privilege place in the centre of the "moral quadrilateral" for the most important building (Manuel and Manuel, 1979). In this way, the reformist character of this model township would be located in the core of the community, bridging the gap between the residential area and the public buildings, where, in addition, there would be no place for vice, "neither beer-shops, gin-palaces, dram-shops, cigar divans, pawnbrokers, gambling houses, or brothels" (Buckingham, 1849, p. 193).

Such ideal society, as a result of the influence of community facilities and the absence of pubs, represented a mix of a reformist initiative through a moralist background for coping with the evils of society and becoming a model society. Further utopias, following similar precepts to relieve the habits of society and its environmental poor living conditions, were more focused on hygienic urban patterns, through a sanitary perspective.

One of such utopias came from the prolific writer on medical history, Sir Benjamin Ward Richardson[9], who wrote in 1876 the book '*Hygeia, a City of Health*'. The triangulation of his formula to build a model city should be relied on "100,000 people, living in 20,000 houses, built on 4,000 acres of land" (Richardson, 1876, p. 18) distributed across wide streets and boulevards. Thanks to establish an average of 25 people per acre in the model city, the density of housing distribution could provide ventilation and sunlight to all the houses, which, according to Richardson, should be surrounded by

[9] Sir Benjamin Ward Richardson (1828-1896) was an English physician and writer on medical history, who was mainly concerned on public hygiene.

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gardens with trees and shrubs to encourage the use of its backyards. "There is a wide space consequently between the back fronts of all houses, which space is, in every instance, turned into a garden square, kept in a neat order, ornamented with flowers and trees, and furnished with playgrounds for children, young and old" (Richardson, 1876, p. 27). In short, every building, garden, utility, infrastructure or community facility would be laid out through, mainly, sanitary reasons. In this way, Richardson implemented in his model city a public laundry through a sanitary inspection to prevent people could fall ill for washing infected clothes by contagious maladies, likewise a device to ensure the quality of drinking water through an ozone generator, which would purify the water and a thorough description on how a model hospital should be. Just like Owen and Buckingham, Richardson wrote about a model society far away from vices like alcohol or tobacco and furnished with educational and recreational facilities like "baths, Turkish baths, playgrounds, gymnasia, libraries, board schools, fine art schools, lecture halls, and places of instructive amusements" (Richardson, 1876, p. 39). In other words, Hygeia represents the healthy utopian community that garden villages and garden cities used to publicise as healthy communities without losing their raison d'être, as well as further tuberculosis colonies like Papworth Village Settlement[10] in Cambridge (Worpole, 2017).

Together with the previous thinkers, who focused on improving the environment and lifestyle of the nineteenth-century British society, whether in towns, villages or cities, other thinkers were more endeavoured to foster the colonization of new settlements, as an opportunity to achieve prosperity in new lands instead of reforming the existing ones. After all, such proposal pursued, according to John Stuart Mill[11], the recurring dream of relieving population pressure (Mill, 1880), through the owenite dream of providing wealth and growth by means of a territorial expansion of townships, creating a big co-operative network composed by new communities and the existing ones. However, to achieve that, it is essential to find the way to attract people to such new settlements and colonize them.

The key figure in the early colonization of South Australia and New Zealand, Edward Gibbon Wakefield[12], wrote in 1849 the book '*A view of the Art of Colonization*', which set the basis of a theory of colonization as "a natural means of seeking relief from

[10] Papworth Village Settlement was a rural settlement founded in 1917 to build some dwellings for TB patients and so providing them clean air in the countryside and improving their health.
[11] John Stuart Mill (1806-1873) was an English philosopher and political economist.
[12] Edward Gibbon Wakefield (1796-1862) was an English politician and a significant figure in the establishment of colonies of South Autralia and New Zealand.

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the worst of our social ills, and of thus seeking formidable political dangers" (Wakefield, 1849, p. 9). Such theory provided a specific way to rise new settlements under a self-supporting system of colonization, influencing not only colonization societies to settle in remote colonies, but also inspiring economists and thinkers like John Stuart Mill to appeal to Wakefield's principles for designing resettlement patterns anywhere (Purdom, 1925). The main aim of his theory was focused on improving social, productive and economic networks between new colonies and their mother country, through a bidirectional betterment of repopulating wastelands, obtaining raw materials or food, fostering self-supporting communities in new lands and, in turn, alleviating population problems, reinforcing the manufacture industry and having good profits in their home territory. To do that, Wakefield proposed a system of acquisition of land by the colonists, which should be more effective than cheap lands, whose practice was, according to Wakefield, the main reason of the decline of past colonies (Kittrell, 1973).

Unlike Adam Smith[13], who designed a land tenure system without paying rents nor taxes to improve the local economy of colonies, Wakefield proposed a "restrictive price" to acquire the land. In this way, such land tenure system would foster communities of labourers "to work some considerable time for wages before they could become landowners. A price that did less than this would be insufficient; one that did more would be excessive; the price that would do this and no more, is the proper price. I am used to call it the Sufficient Price" (Wakefield, 1849, p. 98). Just like the practice of the enclosures, Wakefield's sufficient price embodied a socioeconomic strategy that would lead colonists to be dependent on their wages and, hence, becoming labourers of the soil and getting involved in a big exchange network of goods with the mother country. Thus, the colonial lands should be firstly owned by the government, which should sell the lands to colonization societies and, consequently, resell the land to the colonists. As a result, this land tenure system might achieve, at once, concentration in terms of distribution of economy and population, precluding dispersion beyond the boundaries of the colonies, as a sustainable population control. Wakefield used the metaphor of the:

> elastic belt [to explain that] in order to create and maintain a very high rate of wages in the colony, it is necessary, first, that the colonists should have an ample field of production (…) to permit a large proportion of the people to be engaged

[13] Adam Smith (1723-1790) was a Scottish economist and philosopher, mainly known as "The Father of Capitalism".

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> in agriculture (…) but, in the second place, it is quite as necessary that the field of production should never to be too large (…) as to encourage hurtful dispersion (Wakefield, 1833, p. 150).

Despite Wakefield's theory of colonization being only focused on providing an alternative to reinforce English economy and its manufacturers thanks to the surplus of food and raw materials of colonies, such theory represented at once a framework of inner colonization to attract people towards new lands by means of a sufficient price, which could keep economic and population concentration under, mainly, agricultural holding. Nonetheless, self-supporting did not mean that each colony could be totally self-sufficient, since while colonies produced food and raw materials through agriculture, pasturage, mining or lumbering, the mother country produced manufactured goods thanks to the industry, strengthening the exchange network to benefit the markets of the mother country and weakening the independence of colonies.

The combination between agriculture and industry was the answer of Piotr Kropotkin[14] to achieve self-sufficient rural communities throughout the countryside, by means of his book '*Fields, Factories and Workshops*', which was the result of a series of articles published from 1888 to 1890. He did not pretend to create a new territorial system, but bet for rural systems, which should be able to prosper under the production of small industries in co-operation with agricultural development. According to Kropotkin, rural industries, domestic trades and petty trades represented the best suitable branches of industry for achieving a worthy system of organisation, production, work and trade, in contrast to the division of labour, monotony, pauperisation and competition of the big industry. At the end of the nineteenth century, the big industry concentrated people, production, commerce and profits in metropolitan cities, resulting in a territorial unbalance in terms of population and economy between urban and rural communities, in detriment of agricultural workforce. Kropotkin focused on these problems by means of a thorough analysis about the causes and aftermaths of such territorial unbalance, concluding that it happened because of the rural exodus towards the cities, which increased the population of many cities and, therefore, increased the workforce to work in factories (Kropotkin, 1888). This way, he was endeavoured to find out the way of repopulating the countryside to recover agricultural production and, thanks to this,

[14] Pyotr Alexeyevich Kropotkin (1842-1921) was a Russian geographer and philosopher.

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improve the poor living conditions of industrial workers. In some way, his proposal embodied a new radical version of the 1840s chartist villages, through the Chartist Cooperative Land Company, founded by Feargus O'Connor[15], who focused on the agricultural lands of Great Britain, as a mean of providing prosperity for working classes, far away from the manufacturers' reach (Worpole, 2017).

Regarding territorial distribution, Kropotkin's idea of rural colonization relied on decentralisation, as means of relieving population of urban areas and providing prosperity across the territory, whether town or village. He thought that the decentralisation of production would lead the decentralisation of population, thanks to "the scattering of industries over the country so as to bring the factory amidst the fields, to make agriculture derive all those profits which it always finds in being combined with industry and the combination of industrial and agricultural work" (Kropotkin, 1888, p. 529). Hence, such co-existence of industry and agriculture would become the key of success to attract people towards the countryside, following the premise that if the factory was "the curse of the village" (Kropotkin, 1888, p. 527), the factory should also be the remedy or vaccine of the village to be prosperous once again. In this way and thanks to the proximity of both ways of production, the agriculture labourers could repair their machinery in mechanical workshops and the industrialists could use the agricultural products of its surrounding fields to manufacture textile goods, food, furniture, etc., establishing a symbiotic exchange between each other.

After all, the implementation of "the factory amidst the fields (represented the) pronounced tendency of the factories towards migrating to the villages" (Kropotkin, 1888, p. 526) that industrialists and philanthropists like Sir Titus Salt, the Lever Brothers or the Cadbury family had accomplished during the second half of the nineteenth century. He even mentioned in the second edition of his book that these industrial garden villages "found of late its expression in the Garden Cities Movement" (Kropotkin, 1919, p. 151). In this way, he established one of the first connections between both tendencies as epitomes of his theory in terms of rural colonization, industrial development in the countryside and, therefore, decentralization of population and economy across the territory, beyond the boundaries of metropolitan cities.

[15] Feargus Edward O'Connor (1796-1855) was an Irish Chartist who founded the National Land Company in 1845 to help working-class people to become landholders. Thank to this, the new landholders acquired the right to vote and O'Connor gained a seat in the Parliament.

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However, the great challenge faced by such ambitious rural odyssey lay in the problem of how to demonstrate its economical sustainability, by means of providing, developing and maintaining agriculture lands, factories, infrastructures, amenities and affordable houses for working classes. Since the early nineteenth century, several economists and politicians drew up some strategic guidelines on a co-operative land tenure system, which inspired Ebenezer Howard and, thus, the Garden City Movement to achieve self-supporting and self-managing communities.

In 1807, the English radical thinker Thomas Spence[16] wrote '*The Constitution of Spensonia*' as a manifesto focused on guaranteeing, according to its second article, the natural rights of "Equality, Liberty, Safety and Property" (Spence, 1807, p. 72). Regarding the right of property, the ownership and management of land should belong to the inhabitants, who should be grouped in parishes, through which the inhabitants could decide the destiny of their revenues for general utility.

> The right of property (according to the nineteenth article) is that which belongs to every citizen to enjoy and dispose according to his pleasure, his property, revenues, labour, and industry. Here his property in land is excepted, which being inseparably incorporated with that of his fellow parishioners is inalienable (Spence, 1807, p. 73).

Thanks to this, the inhabitants would not need to pay any tax to support the development and maintenance of the community, since their rents should be enough for such purpose. In this way, Spence's land tenure system represented a practical way to encourage life in co-operation and avoid the existence of speculative landlords, who could subdivide houses or lands within the community. Nonetheless, he was very concerned about the lack of small accommodations and proposed the implementation of "small and convenient apartments (in towns and) small and convenient dwellings with little parcels of land adjoining for gardens" (Spence, 1807, p. 79) in villages to accommodate those people who dwell in solitude, instead of encouraging any kind of territorial expansion of such settlements beyond their boundaries. In addition, the boundaries should be protected from the outside border thanks to green belts composed by agricultural lands "for their fruits and flowers, and trees indispensably necessary for their wood" (Spence, 1807, p.

[16] Thomas Spence (1750-1814) was an English philanthropist and advocate of the common ownership of land.

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80). In this way, it started to introduce the marriage between the spirit of economy under a co-operative land tenure system or trust and the spirit of place under rural settlements surrounded by agricultural green belts.

Following Spence's idea of a co-operative land tenure system, Herbert Spencer[17] wrote in 1851 the book '*Social Statics*', in which he proposed the nationalisation of the land, as "the right of the use of the earth (to guarantee) the right of property" (Spencer, 1851, p. 8). Unlike the reformist alternatives set out by Owen and others, who demonstrated new ways of production as a result of social reform, Spence was more concerned on improving social reproduction's conditions, rather than tying production together with social reproduction's network. Because of that, his claims represented a utopian alternative, close to socialist and communist's precepts, to improve the dignity of working classes through a nationalisation system fostered by the state. Nonetheless, independently of the kind of system or ideology that could govern the nation, he thought on the state as a big co-operative network of people, what would lead to upgrade the possibilities of Thomas Spence's co-operative land tenure system by means of the biggest community network that could be possible within a nation. His proposal meant a step forward on how to accomplish a land tenure system, in terms of affordability, dignity and equality, since "on such a system, the earth might be inclosed, occupied, and cultivated, in entire subordination to the law of equal freedom" (Spencer, 1851, p. 8). In short, such as he summed up his land tenure system:

> instead of being in the possession of individuals, the country would be held by the great corporate body-society. Instead of leasing his acres from an isolated proprietor, the farmer would lease them from the nation. Instead of paying his rent to the agent of Sir John or his Grace, he would pay it to an agent or deputy-agent of the community. Stewards would be public officials instead of private ones; and tenancy the only land tenure (Spencer, 1851, p. 8).

Herbert Spencer's land tenure system, as well as Thomas Spence's, represented a combination of two kind of land tenure within the same system, since the inhabitants would become at the same time landlords and tenants of their own properties. In this way, a group of people could become owners and lessors of their common lands through co-

[17] Herbert Spencer (1820-1903) was an English philosopher and a significant political theorist of the Victorian era.

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operatives or the state, whilst each of them could rent a piece of their common lands, providing benefits for the group. However, both proposals differed in relation to the way to acquire land, inspiring economists like Henry George[18] to think on a moderate alternative in which the state would act as a moderator, instead of acting as a confiscator of land.

In 1879, Henry George wrote '*Progress and Poverty*', in which he proposed a third way to get affordable houses, being more focused on the way to regulate a fair land tenure system, instead of thinking on a way to take land. In order to achieve that, "it is not necessary to confiscate land; it is only necessary to confiscate rent" (George, 1879, p. 405). Thanks to this system, people would pay their rents to the state, which would distribute the money for the benefits of the community, by means of improvements like utilities, public services, schools, etc., and would control the rental rate to avoid that individual landowners could speculate on the price of landholdings. His theory relied on the principle of equality derived from Herbert Spencer's theory, as a right to use and secure the land, through a quotation of '*Social Statics*' on Herbert Spencer's system, in which "under it all men would be equally landlords, all men would be alike free to become tenants" (Spencer, 1851, p. 8). In addition, it would not be necessary to pay any taxation apart from the rent, since such taxation would be somehow included within the rental rate.

> What I, therefore, propose as the simple yet sovereign remedy, which will raise wages, increase the earnings of capital, extirpate pauperism, abolish property, give remunerative employment to whoever wishes it, afford free scope to human powers, lessen crime, elevate morals, and taste, and intelligence, purify government and carry civilization to yet nobler heights, is to appropriate rent by taxation (George, 1879, p. 406).

Although all theories and examples mentioned in this chapter are very different among each other regarding their topic or idea, all of them share the same goal, which is to relieve the burden of people by means of providing socio-economic alternatives towards a worthy prosperity beyond the concentration of economy and production in specific venues. Furthermore, since such economic theories are abstract ideas without the need of being confined in specific territorial systems, they are more easily applicable in

[18] Henry George (1839-1897) was an American political economist and economic writer.

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new or abandoned settlements, thus encouraging their pioneers to move them in experimental ventures, far away from the imbalance of the metropolitan cities. This way, the socio-economic issue became one of the main reformist tasks that Howard focused on to overcome isolated cases of industrial garden villages, learning from their experience and setting the basis of how garden cities could become true, through the invisible architecture of such systemic patterns.

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4.4 SHAPING THE GOOD PLACE

It was not until the publication of '*To-morrow: a Peaceful Path to Real Reform*' in 1898 when the previously mentioned experiments, schemes and theories forged the soul of a third territorial alternative as an antidote against the overcrowded cities and a means to attract people to the land. Within the tenth chapter of '*To-morrow*', '*A Unique Combination of Proposals*', Howard described how he selected the best proposals "for an organized migratory movement of population of Edward Gibbon Wakefield and of Professor Alfred Marshall, the system of land tenure first proposed by Thomas Spence and afterwards by Mr. Herbert Spencer; and the model city of James Silk Buckingham" (Howard, 1902, p. 72). Thanks to such a combination, Howard devised a complete framework in order to shift the migration of people to the land and build self-sufficient communities across the countryside, just waiting to find the appropriate site to go beyond his diagram and plan the first garden city from scratch, Letchworth.

4.4.1 Letchworth

Nonetheless, from the 6,000 acres that Howard considered suitable for a town, there was only 3,822 acres available easily reachable from London by train, which increased to 4,598 acres after purchasing more land. Most of the area was a levelled rural area with water resources, besides having three existing hamlets where 450 people lived. This site did not just represent the first chance to demonstrate the validity of Howard's scheme, but mainly overcome the general concern about "how to maintain and increase industrial efficiency without impairing the national physique" (First Garden City LTD, 1903, p. 4). The First Garden City Limited was very concerned about such a challenge and their members were well aware that the success of the first garden city would depend on their ability to attract industrialists and their workers from their overcrowded but also profitable cities, as well as carry out a thorough business plan endorsed by the attractiveness of a pioneer and appropriate town planning scheme. Therefore, in 1903 the Company arranged a competition, of which it is worth mentioning the proposals of several significant teams of architects such as W. R. Lethaby[1] and Halsey Ricardo[2], Geoffry

[1] William Richard Lethaby (1857-1931) was an English architect, architectural historian and a very influential figure in the Arts & Crafts Movement.
[2] Halsey Ralph Ricardo (1854-1928) was an English Arts & Crafts architect and designer.

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Lucas[3] and Sydney Cranfield, and the winners of the competition, Barry Parker and Raymond Unwin.

At that time, there were no planning conditions, what gave absolute creative freedom among the contestants. Lethaby and Ricardo designed a compact and rational grid layout with a big square located in its core, surrounded by public buildings and a campanile, as a landmark at the junction between three tree-lined avenues (Fig. 4.24) (Purdom, 1963). These boulevards represented the main arteries of the plan, which ran through the residential area and connected the town centre with the northwest grounds where the architects proposed the location of the station and the industrial area, towards the southwest lands where the pre-existing settlement of Letchworth Hall is located and towards the northeast area where the nearby village of Baldock is sited. Most of the green areas, whether gardens or allotments, were laid out by the architects within the residential quadrangles of the town plan, so that the residents had more privacy to develop domestic operations, as in Port Sunlight and Bournville.



Figure 4.24 1903 Lethaby & Ricardo's proposal for Letchworth ('*The Letchworth Achievement*', by C. B. Purdom).

[3] Geoffry Lucas (1872-1947) was an English architect, who began his practice in Hitchin, a town near Letchworth, and designed 26 houses at Letchworth after taking part in the 1903 competition.

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Lucas and Cranfield's town plan was even more compact and rational than Lethaby and Ricardo's, whose grid layout was almost symmetrically disposed north and south of the railway line, across which the architects proposed the location of the industrial area (Fig. 4.25). The public buildings, located on both sides of the railway, surrounded the space of confluence between the residential area, the station and the industrial area, by shaping a large square at the town centre, as well as a Victorian public park, small squares, junctions and gardens (Miller, 2016). Unlike Lethaby and Ricardo's town plan, there were no diagonals nor informal distributions, what displayed a monotonous and rigid urban fabric without connections with its pre-existent settlements and its natural features. Although Lucas and Cranfield proposed some bridges over the railway to connect north and south, the division created by the factories in the middle of the settlement was even more inappropriate than its geometrical layout, which would have inferred the building of a wide industrial wall between both residential areas.

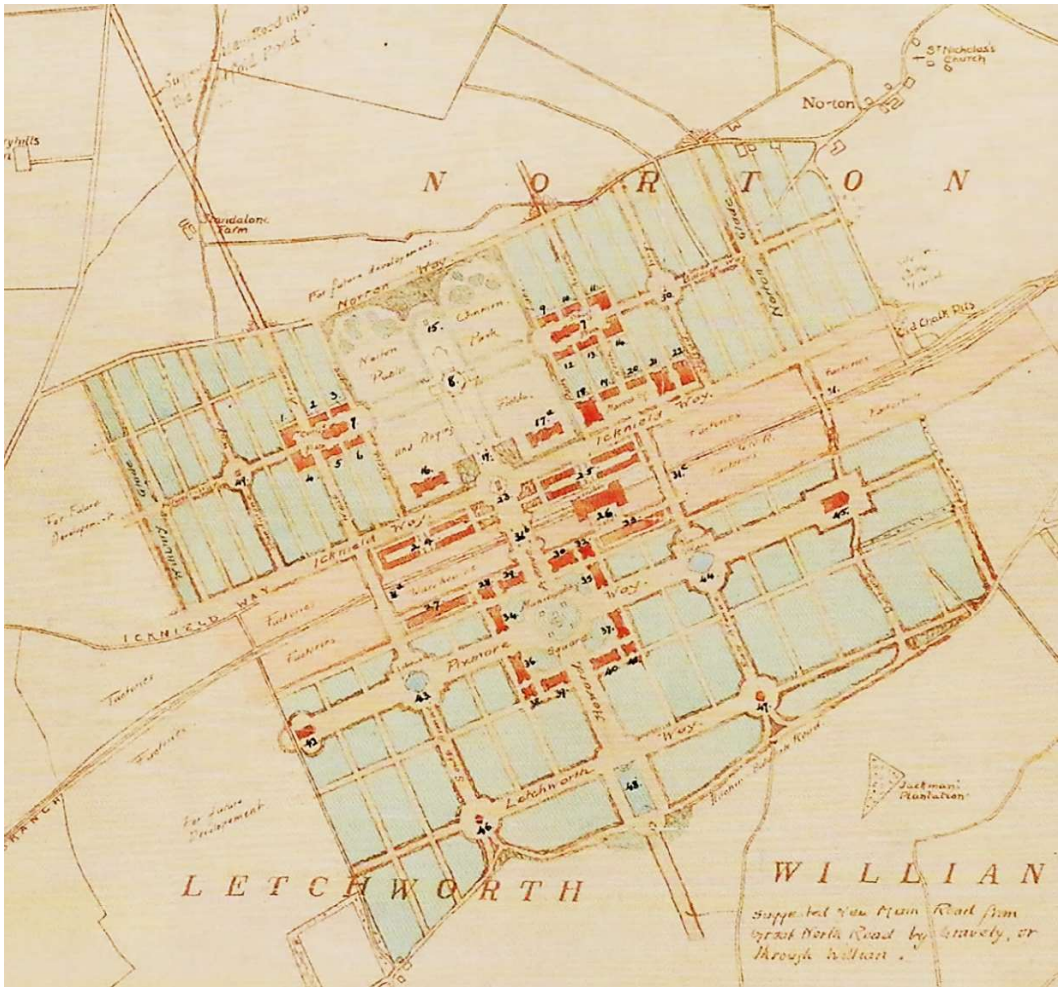


Figure 4.25 1903 Lucas & Cranfield's proposal for Letchworth (Garden City Collection).

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Despite all, the unsuccessful proposals shared some key points with Parker and Unwin's town plan, such as the use of tree-lined avenues and residential clusters, in addition to locating the main public buildings in the town centre and the industrial area close to the railway (Fig. 4.26). Actually, the composition of elements of each proposal, even the concentric order of distribution, were quite similar to Howard's scheme, but fortunately quite different regarding its morphology. Parker and Unwin proposed an organic distribution of functions by respecting the pre-existing settlements, roads and the railway, rather than forcing the layout of buildings and areas through a rigid plan in the same way as the other contestants. Its public space, gardens and avenues, characterize Letchworth's masterplan, providing an environmental transition between the man-made urban fabric and its surrounding countryside. In addition, Parker and Unwin laid out wide pedestrian ways within the tree-lined avenues and green squares, in order to create direct connections with the main venues of the town and a picturesque daily walk between the residential area, the town centre, the station and the industrial area. Such green infrastructure attached to broad paths, big nodes and star-shaped junctions perfectly aligned with the central path of Norton Common and the pre-existing two big plane trees of the central square (now Broadway Gardens), influenced by Sir Christopher Wren's plan for London (Axell, 2018), became the most important key point of Parker and Unwin's town plan. Apart from its aesthetic values, the Garden City Association deemed it as a means to bring nature into the town. By 1906, the '*Official Handbook of the Garden City Movement*' highlighted the importance of:

> the roads radiating from the Central Square, which will give ready access to all parts of the town, have been so planned that glimpses of the open country will be obtainable along them from the heart of the town, while they will afford to those approaching from the outskirts good views of the central buildings (Harris, 1906, pp. 60-61).

Unlike the other contestants, Parker and Unwin prioritized a strong public space, rather than a rigid urban pattern, and took advantage of the pre-existing parks, connections and contour of the estate, so that the town was born from the picturesqueness of its original landscape, instead of from a tabula rasa.

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In addition to the existing natural features of Letchworth, there were also existing houses scattered throughout the estate before the First Garden City Company purchased the land. These existing small settlements led to the development of the town from outside to inside and filling the gaps beyond the pre-existing hamlets towards the town centre. The architects were responsible for developing the town following this approach, thus giving time for well-studied decisions about the planning of the central area, whose layout experienced several changes until 1925. According to C. B. Purdom, "what was desired was that the town should grow as far as possible in a natural rather in an artificial or forced manner" (Purdom, 1949). This way, the natural growth of Letchworth went hand in hand of its town plan, paying attention to the integration of its pre-existing small settlements and their connections, to avoid the isolation of them and take advantage of their vernacular style to ruralize the rest of the town.

The housing schemes of Letchworth relied on Unwin's neighbourhood principle, which provided the decentralisation of self-contained districts within the town. This principle led Unwin to lay out the master plan, in Purdom's words, "as a group of connected villages around a civic centre with a factory district on the outskirts (because) his mind was upon the small community, the village or suburb, rather than upon a new town" (Purdom, 1949, pp. 88-89). Although Letchworth's master plan was laid out as a town with a unique town centre, the partition of the settlement by the railway in two halves and the implementation of Unwin's neighbourhood principle resulted in a series of minor civic centres throughout the town.

Nonetheless, the handicap of the railway in the layout of Letchworth was in turn the opportunity to locate the town centre nearby the station, becoming the core of the town. From the station the public utilities, shops, banks, restaurants, etc. emerge in phased extension towards the residential and industrial areas, providing an expansive and vibrant public activity in the core that dissolves gradually towards the quiet residential areas of Letchworth. In the same way as in Bournville, the factory area was planned on the east side of the town and physically separated by belts of trees to avoid the aftermaths of the southwest wind during the summer and therefore ensuring a pleasant and healthy smoke-free public space within the town (Harris, 1906). Thanks to this, the industrial area is far enough distant to prevent its noise and smoke pollution, although is still near enough to be easily reachable on foot from workers' residential areas, thus fulfilling the sanitary principle of the garden city movement on providing worthy housing for working people.

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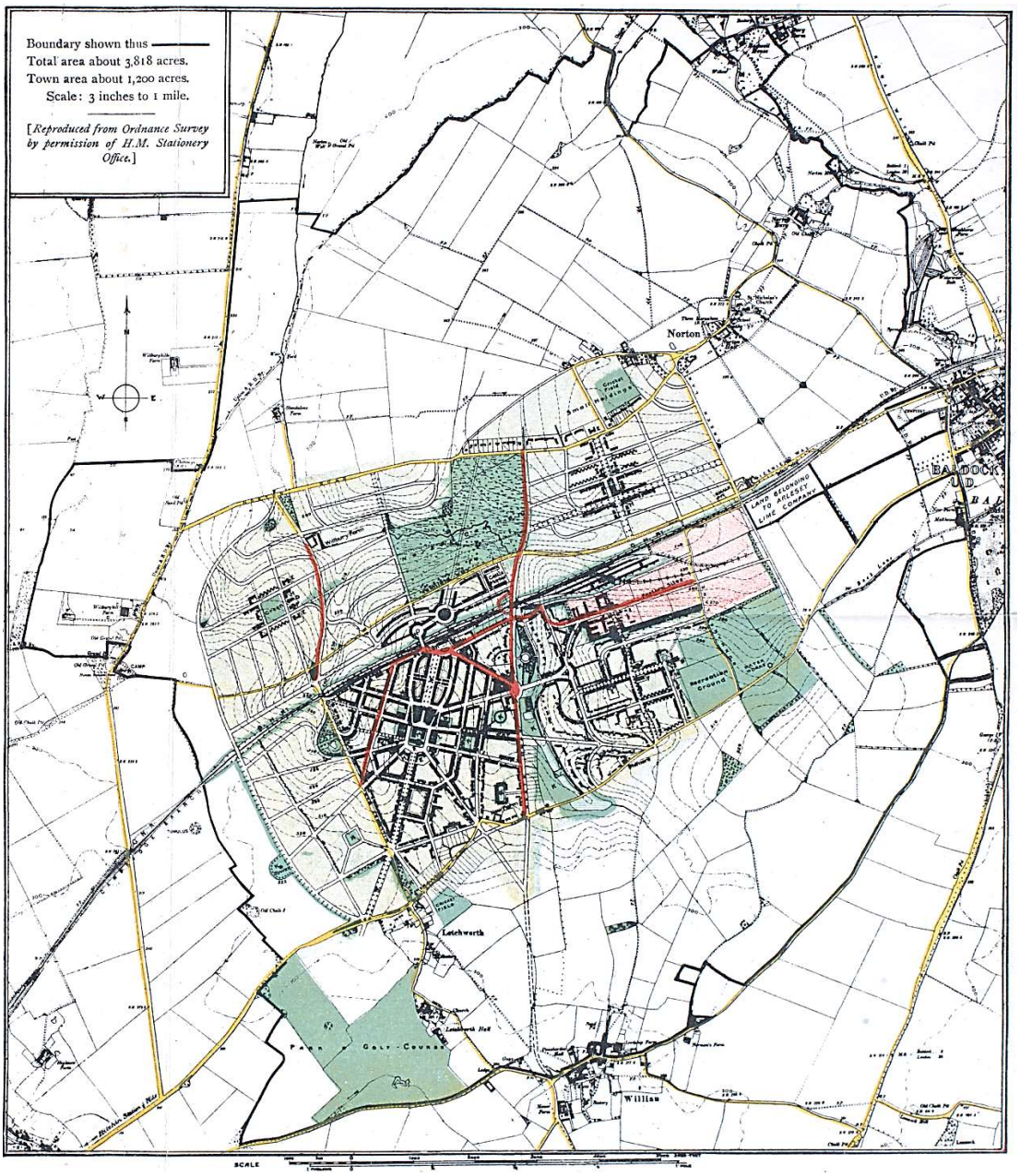


Figure 4.26 1903 Parker and Unwin's town-plan for Letchworth, drawn on a map of the estate (Garden City Collection).

After the first cottages built at Letchworth for the workers of the First Garden City Ltd., the company realised that the cost of such cottages was too expensive to attract workers to the garden city, which led to the organization of '*The Cheap Cottages Exhibition*' in 1905. The main aim of this exhibition was to show good examples of well-designed and affordable houses for workers, which, according to Purdom:

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was certainly successful in showing that it was possible to build a good cottage cheaply, and it gave a powerful impetus to the better planning and the reduction of the cost of the small cottage throughout the whole country, and not least in Letchworth (Purdom, 1949).



Figure 4.27 M. H. Baillie Scott's pair of cottages at Letchworth (Taken by the author in 2019).

Among the house that were built for the exhibition, it is worth highlighting the proposals of the architects Hesketh and Stokes, Henman and Cooper, M. H. Baillie Scott[4], A. H. Clough and Percy Houfton. These architects explored different ways of distribution, material and design, being aware that their cottages should cost less than £150 and they

[4] Mackay Hugh Baillie Scott (1865-1945) was an English Arts & Crafts architect, who, after his participation in the 1905 'Cheap Cottages Exhibition', designed four cottages more at Letchworth.

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should at least have one large living room, a kitchen and three bedrooms in not less than 2,000 feet. Hesketh and Stokes submitted a single-storey dwelling that looked more like a tent rather than a traditional house, because of its atypical circular shape for a house and radial distribution of rooms around a lighted central hall by an oculus. Henman and Cooper designed a pair of single-storey dwellings more traditional than Hesketh and Stokes', composed of a low gable roof and many details in windows and chimneys to look more picturesque than its simple and rectangular distribution. However, the designs of Baillie Scott, Clough and Houfton overshadowed the previously mentioned cottages because of, depending on the case, their aesthetic or economic components. Baillie Scott designed a pair of roughcast and half-timber dwellings to be used for co-operative housekeeping (Fig. 4.27), which were built on the eastern boundary of Norton Common under the name of Elmwood Cottages (Pearson, 1988); Clough built in the northern boundary of Norton Common three brick cottages characterized by their mansard roofs and dormer windows; and Houfton built the first prize-winning cottage in the southern boundary of Norton Common, that consists of two storeys and the possibility of becoming a semi-detached house. The simplicity of the latest, which lies in the combination of its white roughcast façade, green windows and clay tile roof, represents a beautiful example of vernacular architecture and gets the perfect balance between its rural aspect and its quality-price. Thanks to this exhibition, Letchworth could arrest the attention of working classes and set the basis of building a picturesque variety of affordable houses throughout the town.

However, despite the frustrated attempt of Unwin and Parker to give some architectural guidance in the development of the town under Unwin's principle of informal formality, Letchworth's development was the result of many speculative builders and their architects who put up each house or clusters of houses according to their own architectural taste. Paradoxically, the ad hoc nature of the development of the town carried out without the supervision of their planners coupled with the impromptu and whimsical design of others, forged the informality that Unwin aimed to get within the neighbourhoods in a natural way step by step, instead of using a planned informality as he suggested. In Purdom's words:

> lack of uniformity in building and the individualistic character of most of the houses are the town's architectural characteristics (…) at Letchworth the houses

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> are individual, some good, some bad, but most with some sort of character if only because they were not built en masse (Purdom, 1949, p. 103).

Nonetheless, Unwin would have liked to go beyond the aesthetic and foster another development model more focused on co-operation rather than on speculation, which inspired Howard to encourage the building of two schemes of co-operative housekeeping at Letchworth.

In '*The Art of Building a Home*', Unwin wrote a chapter called '*Co-operation in Building*' in which he put forward the layout of cottages around a quadrangle with common open grounds for recreational purposes, a common kitchen and a common laundry.

> The houses should be clustered together as much as possible, not to set villas each in the centre of a little plot (…) but the majority of houses should be gathered into groups, which would inevitably acquire picturesqueness from the variety both in size and form of the building (Parker and Unwin, 1901, p. 98).

Like Nash at Blaise Hamlet, Unwin proposed to apply the picturesque effect of laying out different kind of houses in clusters, so providing somehow the feeling of living in a traditional hamlet or village, in the same way as the aesthete Uvedale Price conceived the picturesque village.

> Certainly, where many buildings of various characters and sizes are gathered together, as in a village, a picturesqueness of grouping is rarely absent even when the individual buildings have in themselves no special beauty; and very often the introduction of one or two really ugly modern buildings detracts little from this particular charm (Parker and Unwin, 1901, p. 92).

Nonetheless, his thoughts about the architecture and the layout of buildings in the countryside did not attempt just to emulate the physical conditions of existing rural settlements, but mainly encourage townspeople to develop certain "sociable instincts" of living in co-operation within "little centres of life" (Parker and Unwin, 1901). In short, Unwin's idea represented the aesthetic and philanthropic combination of Uvedale Price's picturesque village, Robert Owen's moral quadrilateral, Buckingham's Victoria and

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Richardson's Hygeia. The inception of this combination came from his study on the Medieval English Village, through which he inspired to bring back the co-operative lifestyle of feudal society by means of its "crystalline structure" of unity and contentment (Unwin, 1901). In addition, Unwin was influenced by the socialist leanings of William Morris's co-operative model of living by encouraging, according to May Morris, to build clusters of houses as "in the Colleges of Oxford and Cambridge, which it would be pleasure merely to sit in" (Morris, 1936, p. 129) and:

> inside the houses, besides such obvious conveniences as common laundries and kitchens, a very little arrangement would be given the dwellers in them ample and airy public rooms in addition to their private ones; the top storey of each block might well be utilised for such purposes, the great hall for dining in, and for social gathering, being the chief feature of it (Morris, 1884, p. 5).

These ideas were borrowed by Unwin to persuade the nineteenth-century society in embracing the co-operative schemes through lectures. However, his experience was not fruitful as regard to attracting the attention of people, what led Unwin to give up his endeavour to spread the co-operative housekeeping scheme and give priority to architecture. According to Lynn F. Pearson:

> he still believed that architecture always reveals the life it clothes and reflects its ideals, but because of his urge to produce real changes in the living conditions of the working class, he began to give priority to the form of housing over the lifestyle reflected in it, seeking immediate improvement rather than being satisfied with promises of a better future (Pearson, 1988, p. 84).

Despite all, by 1899, Unwin in partnership with Barry Parker designed their first draft of a co-operative housekeeping scheme at Bradford, but alas, it was never built. Their preliminary draft document relied mainly on encouraging the social unity of the scheme by the architecture of common rooms, galleries with colonnades, bathhouses and allotments (Fig. 4.28).

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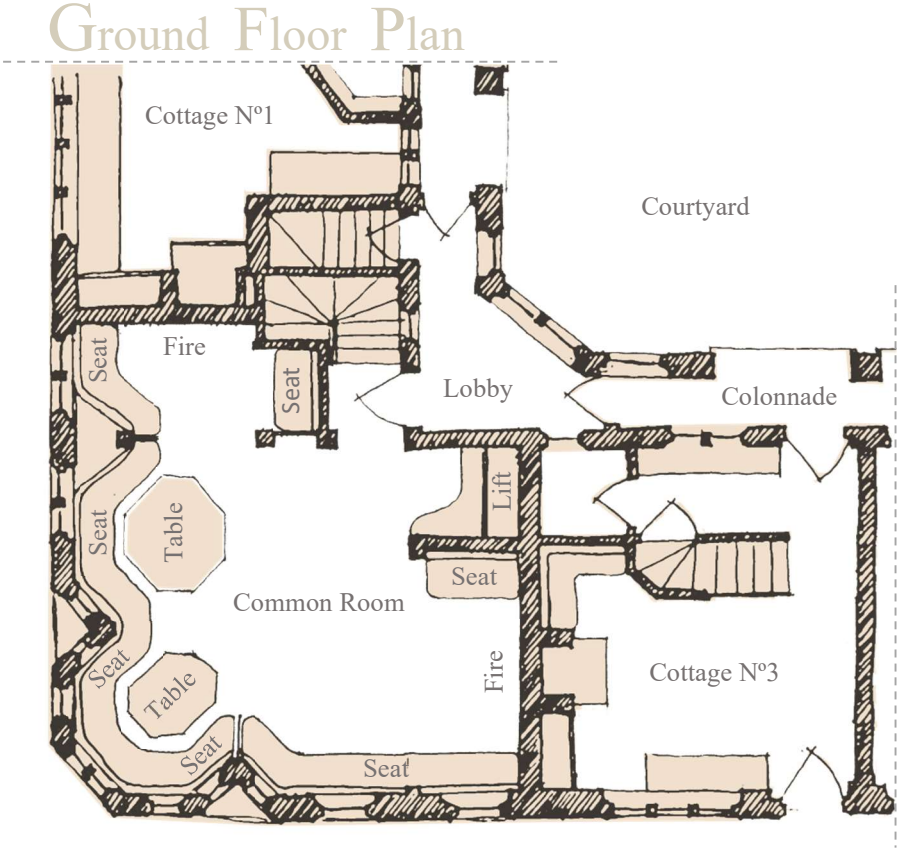


Figure 4.28 Parker & Unwin's design of common rooms for co-operative dwelling at Bradford (Redrawn from '*The Art of Building a Home*', by Barry Parker and Raymond Unwin).

Following the same co-operative scheme, in September 1901 Unwin set out a proposal '*On the Building of Houses in the Garden City*' at the first conference of the Garden City Association that was held at Bournville. He put forward his concept on the garden city's housing as:

> the centre of a happy communal life. Plenty of room in that large house for quite a small colony to live, each one having his own den upstairs where he could go to write, or sulk, or spend a quiet evening with his lady-love or his boon companion; and downstairs would be large common dinning-halls, dancing-halls, smoking rooms, etc." (Unwin, 1901, p. 72).

In the same conference, Unwin met the architect Harold Clapham Lander[5], who presented a proposal which relied on previous examples of 1870s co-operative homes

[5] Harold Clapham Lander (1868-1935) was an English architect and lectured widely on the garden city after joining the Garden City Association in 1901.

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built in northeast and west London, as he pointed out in his paper and speech given in the conference (Lander, 1901). At that time, the most frequent architectural typology used to embody the co-operative spirit of living was the quadrangle. According to Unwin:

> There is something at once homely and dignified about the quadrangle which gives it a charm even when the buildings are quite simple and adorned. There is a sense of unity, of a complete whole, which lifts it out of the commonplace in a manner that nothing can accomplish for a mere street of cottages (Unwin, 1901, p. 57).

Even the writer H. G. Wells described in his 1905 book '*A Modern Utopia*' the architecture of utopian townships as co-operative quadrangles with the fashion of an Oxford college, private apartments on the upper floors and common spaces on the lower floor "by the equivalent of a London club, kitchens and other offices, dining-room, writing-room, smoking and assembly-rooms, a barber's shop, and a library" (Wells, 1905, p. 211). This way, almost fifty years after Owen, Fourier and Buckingham used such an architectural typology, the co-operative housing schemes in quadrangles of apartments and common spaces once again became a trend among associations and social movements. For instance, apart from the proposed Unwin and Lander's housing schemes, the first president of the Arts and Crafts Exhibition Society, Walter Crane[6], also took part in the first conference of the Garden City Association by presenting a plan for a quadrangle for collective dwellings, which he carried out in collaboration with his son, the architect Lionel Crane. It was a quadrangle composed of a U-shape row of apartments with private gardens out of the quadrangle, whose courtyard would be enclosed by another row of apartments with common spaces on the ground floor. After the mentioned proposals and following the socialist leanings of Parker and Unwin, the architect H. C. Lander and associations implemented some co-operative housekeeping schemes at Letchworth, such as Homesgarth and Meadow Way Green.

Homesgarth, currently named Sollershot Hall, was a personal project of Ebenezer Howard to encourage among the residents of Letchworth an alternative way of living in co-operation by means of relieving their daily tasks and strengthening their community ties. In 1909, Harold Clapham Lander laid out Homesgarth in a U-shape ground plan,

[6] Walter Crane (1845-1915) was a British artist and book illustrator, who was closely linked to the Arts and Crafts Movement and the International Socialist Movement.

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earmarking the central body as the servant space of the cluster for common activities such as a community kitchen, a dining hall, a reading room, a tearoom, a laundry, a common cloakroom, smoking rooms, staff accommodations, bicycle parking and a telephone, wherefrom distributing the served spaces of two wings of apartments with two or more bedrooms, a sitting room, a pantry and a bathroom for each accommodation. According to Lander, Homesgarth represented a suitable housing scheme "for single people or small families wishing for a wider social life than they could obtain in an hotel, combined with the privacy of home life" (Lander, 1911, p. 62). This co-operative scheme represented a new way of living that Howard committed to promote through the Daily Mail, where he described it as "a home of comparative comfort and beauty for those numerous folk of the middle classes who have a hard struggle for existence on a meagre incomes – for those who require domestic help, but who can very ill afford it" (Howard, 1906, p. 7). Howard was so tightly involved with the development of Homesgarth that he moved there in 1911. However, in spite of his efforts in attracting the attention of people to move into Homesgarth through the Daily Mail in 1913, so that the construction of the scheme could be completed with 32 more households, the quadrangle was left incomplete and so was the support of the activity of the central facilities. Thus, the original quadrangle planned by Lander became finally a row of apartments and the central block of community facilities, which ceased their activity when conventional kitchens were installed in the apartments about 1915 (Fig. 4.29).



Figure 4.29 Sollershott Hall (formerly called Homesgarth) at Letchworth (Taken by the author in 2019).

After Homesgarth, the Howard Cottage Society built a second co-operative scheme, Meadow Way Green, aimed to become a co-operative scheme for professional

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women who did not have time to do their housekeeping after work, what led the suffragists Ruth Pym and S. E. Dewe to be involved in this collective housing experiment focused on relieving the burdens of women. Meadow Way Green was initially composed by twenty-four dwellings with living room, bathroom, scullery and toilet, two communal kitchens and two communal dining rooms where residents could have lunch. The society commissioned the architect Courtney M. Crickmer[7] to design and build the estate in two stages, its first half in 1915 and its second half in 1924. Unlike Homesgarth's quadrangle, Crickmer laid out Meadow Way Green as a group of two village greens opposite each other on both sides of Meadow Way. Nonetheless, the combination of these two groups of houses somehow achieved the same picturesque effect that Unwin outlined for his co-operative units.

> A good number of the houses too might be open to the road or green. The unfenced common coming right up to one's doorstep, always gives a charming sense of openness whether viewed from within or from without; a sense in no way diminished by the contrast that occasional fenced gardens or forecourts offer where the houses are set back somewhat (Unwin, 1901, p. 98).

However, although both residential clusters still keep the exterior appearance of the scheme, their residents gave up the co-operative scheme for different reasons. On the one hand, Homesgarth's decline was because of the scheme was just addressed to middle classes without children, thus precluding working class families. On the other hand, Meadow Way Green's dining rooms gradually ceased to function during the 70's, because some residents were by then retired and others moved out to other districts (Brightwell, 1997). In short, the experiment of co-operative housing did not become a popular housing alternative among Letchworth's residents, even less popular among working classes that the Garden City Movement aimed to attract.

Although Parker and Unwin were the pioneers of such housing schemes, they were not involved in their development, because the later gave up the idea of the co-operative quadrangle after the First Garden City Company expressed their concern of the financial viability of any non-conventional housing scheme for working classes.

[7] Courtenay Melville Crickmer (1879-1971) was an English architect, who designed a large number of houses and public buildings in Letchworth, what made him the most important Letchworth architect outside the Parker and Unwin circle.

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Nonetheless, they bet for implementing the model of the village green to encourage, at least, the spirit of co-operation at Letchworth in terms of perception.

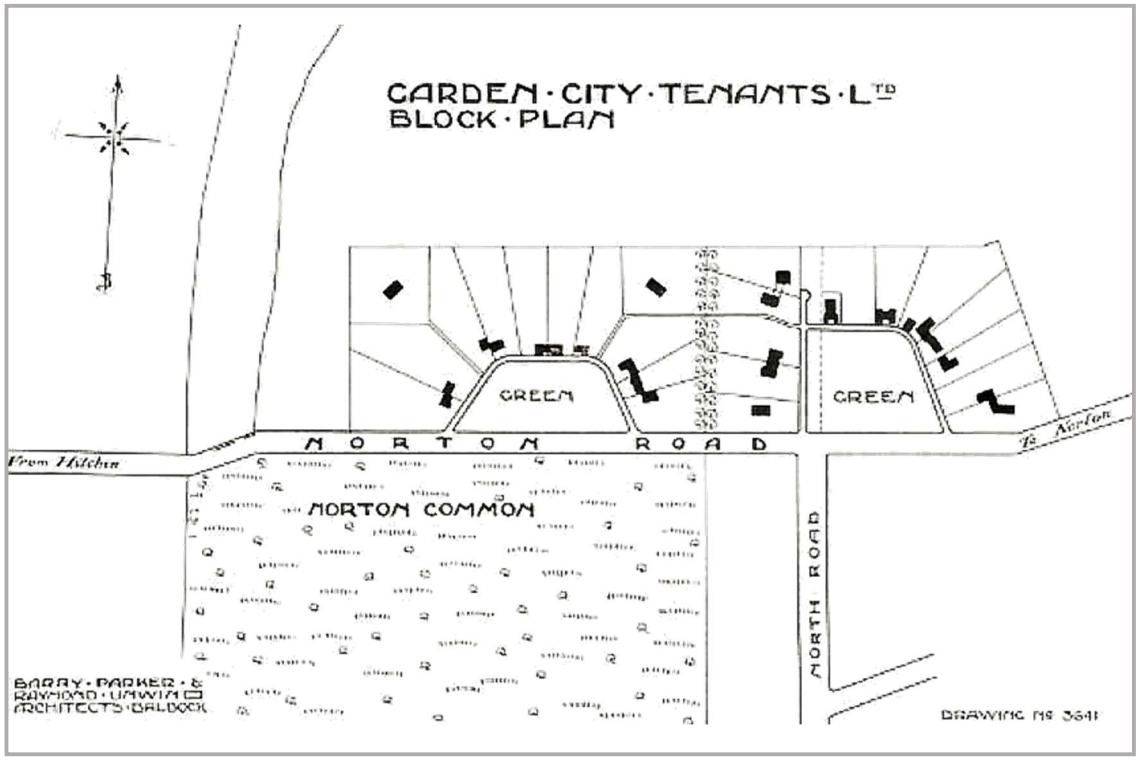


Figure 4.30 Parker & Unwin's early plans for Westholm and Eastholm at Letchworth (Garden City Collection).

In 1905, the Garden City Tenants commissioned the architects Parker and Unwin to design the layout of Eastholm, a small group of houses located at the northeast corner of Norton Common (Fig. 4.30). They designed the estate by using Unwin's concept of a village green surrounded by cottages and providing them the same perception of a crescent whether viewed from within or from without the cottages, but with an irregular outline to enhance its picturesqueness. Eastholm was not just marked by being nicknamed by Parker and Unwin as the "first green", as they wrote down in a draft of the project, but also triggered the building of more village greens they and other architects carried out throughout the town, such as Westholm at the north side of Norton Common and Ridge Road, nearby the eastern boundary of the industrial area.

In short, Letchworth's townscape might be summed up, according to Uvedale Price's concept on the Picturesque Village, as a unique combination of "intricacy, variety and play of outline" (Price, 1810, p. 346). The sense of intricacy is a time-space experience in which different sequences can be perceived from the beginning until the

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end of many residential roads, providing a multiplication effect of villages in miniature in the same street (Fig. 4.31). The variety of the town landscape lies in its residential architecture, which is the most common typology at Letchworth, in order to get a clear distinction between some groups of houses and provide a sense of individuality among the residents. The play of outline is reflected in the way through which the houses are laid out in order to avoid the creation of rows and its subsequent sense of monotony, by setting back some houses along each road and expanding the corners as if they shaped a square in the junction. In addition, its open lay-out of houses and roads in combination with trees, shrubs, hedges, flowers and gardens give a picturesque and park-like appearance throughout the whole residential area, except in winter when trees are bare.



Figure 4.31 Serial vision of Rushby Mead at Letchworth (Illustrated by the author in 2020).

4.4.2 Welwyn Garden City

After twenty years of Letchworth's experience, Howard aspired to build a second garden city to fulfil his territorial project of the Social City, i.e. the creation of a socio-territorial network of garden cities in connection with the big metropolis. The compliance with such standard led him to find a new suitable estate nearby Letchworth and not so far from London, which he found on his regular train trips between Letchworth and London. The selected area was twenty miles from London on the Great Northern Railway main

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line, two miles southeast of the town of Welwyn and three miles north of Hatfield. Most of the estate was composed of woodlands, the hamlet of Handside, the greater part of the village of Hatfield Hyde and part of Digswell Water (Fig. 4.32). After several purchases of land from Lord Desborough, the Marquis of Salisbury and others, the estate comprises a total area of 4,536 acres (Purdom, 1949).

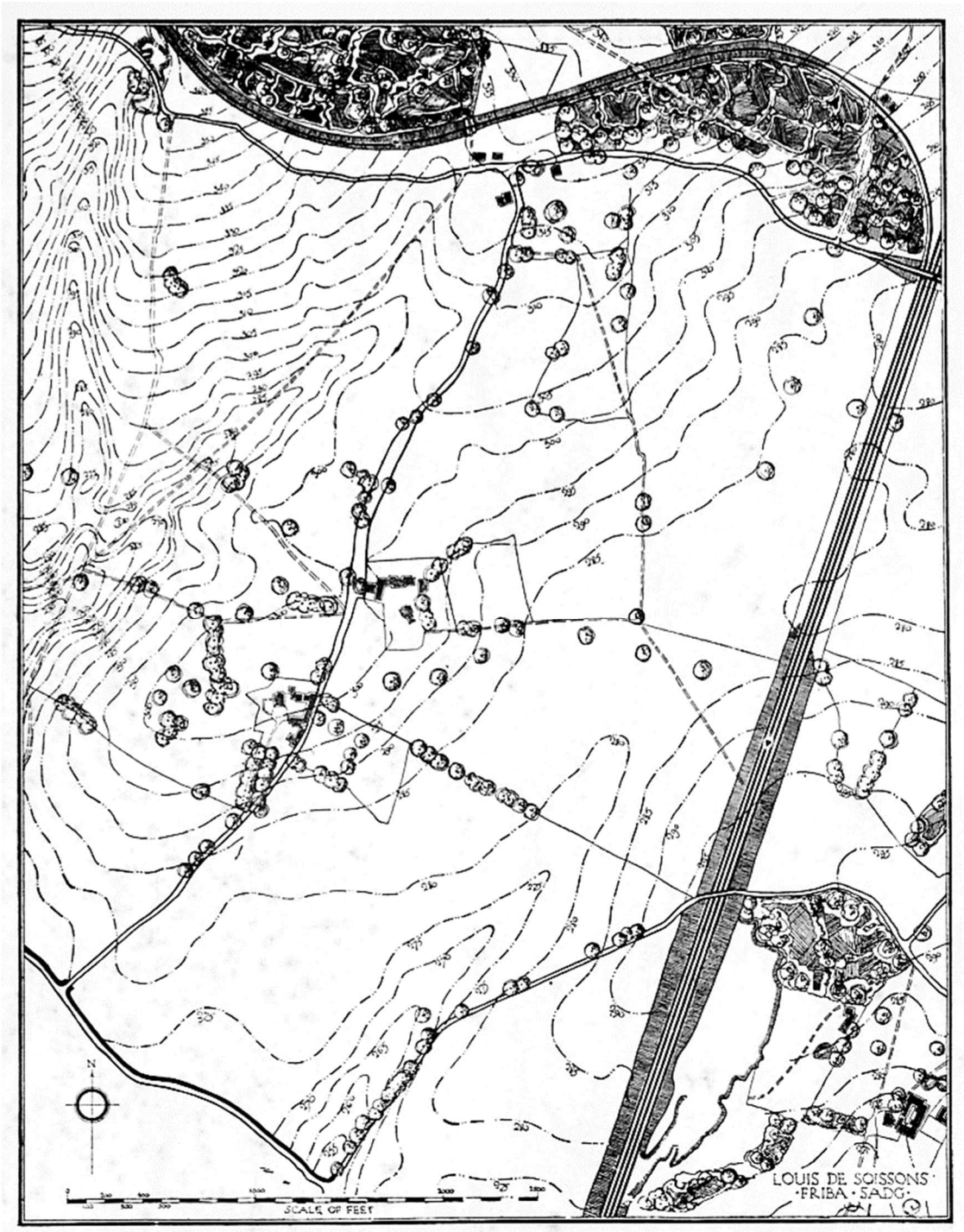


Figure 4.32 Welwyn Garden City's original south-west area ('*Site Planning in Practice at Welwyn Garden City*', by Louis de Soissons).

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The Letchworth clerk Sir Frederic Osborn carried out one of the first drafts of Welwyn Garden City in 1919, through a sketch plan for exploring the possibilities of the selected estate in relation to its surface, zoning, connectivity and resources (Fig. 4.33). Despite Osborn was not an architect, his commitment with the Garden City Movement and his experience at Letchworth, was even more useful than any professionals' experience on town planning to lay out a first approach to locate the factory on the eastern side of the railway, the commercial area on the western side of the railway and the residential area beyond. Osborn's proposal set the basis of this particular zoning used later on by the Welwyn Garden City's architects to plan the site.

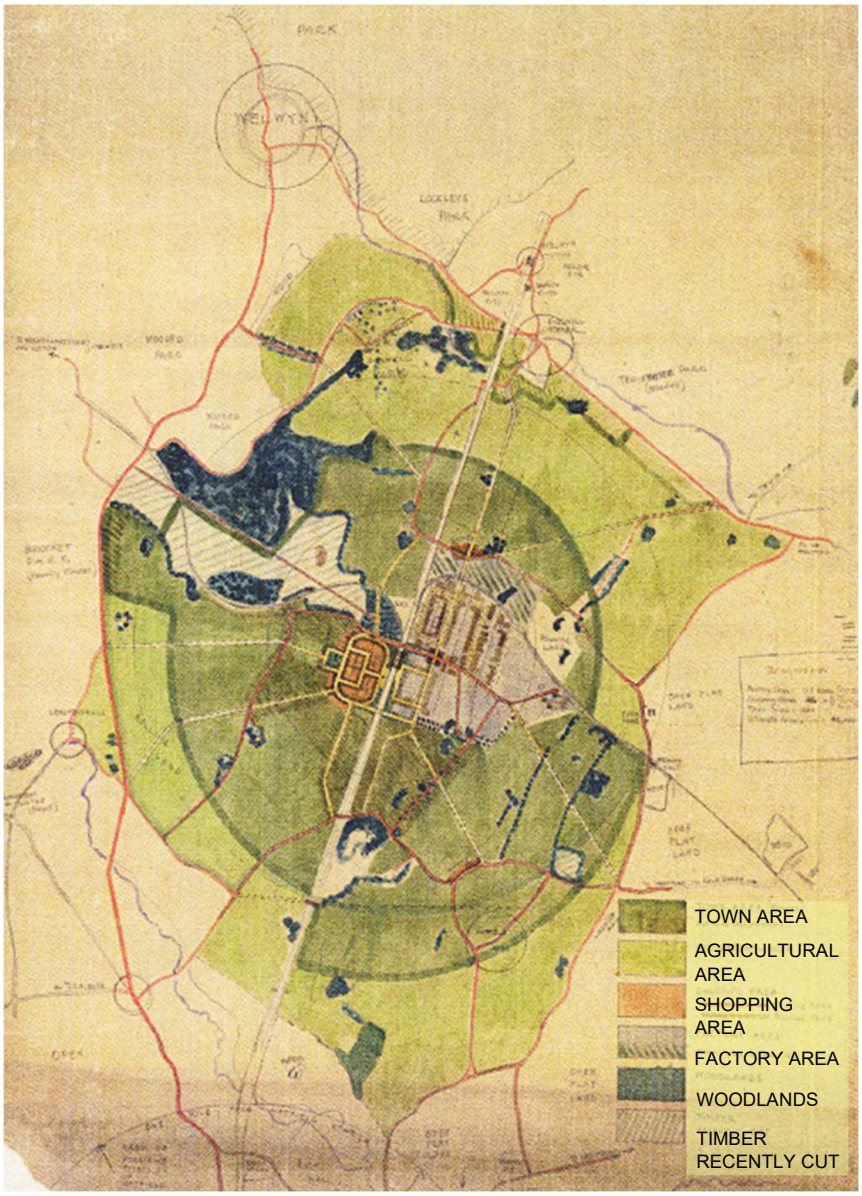


Figure 4.33 1919 Frederic Osborn's first draft of Welwyn Garden City (Town & Country Planning Association).

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The first architect commissioned by Howard and the Company to design the estate was the Letchworth architect Courtenay Melville Crickmer (Miller, 2016). In 1919, he submitted a town plan to the Company, through which he proposed a green network of two tree-lined corridors, of which one would run through the western side of the estate in parallel to the railway and the other would connect the latter with the eastern side by means of a bridge over the railways (Fig. 4.34). Along such boulevards, Crickmer proposed the layout of a big 'Letchworthian' square north of the town, a crescent in the middle, as a kneecap of the both tree-lined corridors, and a circus south. Somehow, Crickmer implemented Howard's idea on the layout of boulevards, which, according to Howard in '*To-morrow*', "in order to ensure a longer line of frontage on Grand Avenue, are arranged in crescents – thus also to the eye yet further enlarging the already splendid width of Grand Avenue" (Howard, 1902, p. 5 and 6).

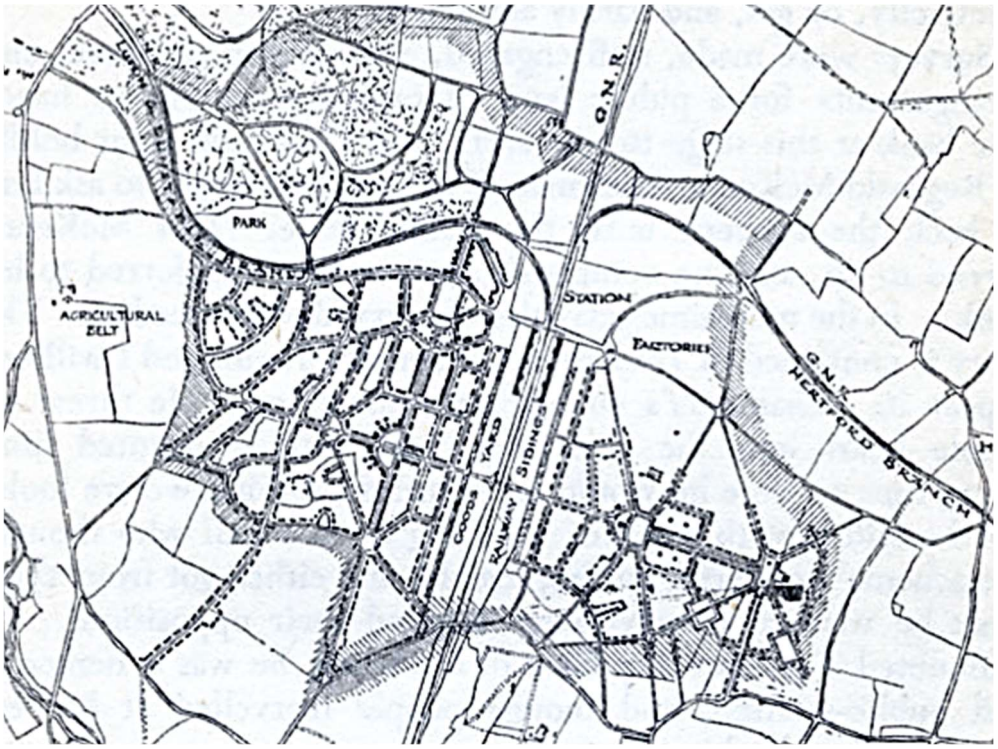


Figure 4.34 1919 C. M. Crickmer's proposal for Welwyn Garden City ('*Life Over Again*', by C. B. Purdom).

Despite Crickmer's proposal being rejected, his contribution of combining the mentioned boulevards with some iconic pieces of urban planning at least wound up being part of the final town plan of Welwyn Garden City. In 1920, after RIBA's

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recommendation, the Company appointed Louis de Soissons[8] as architect and town planner of Welwyn Garden City, who was successful after submitting the first diagram of its general town-plan the same year (Fig. 4.35).



Figure 4.35 1920 Louis de Soissons' town plan for Welwyn Garden City ('*Site Planning in Practice at Welwyn Garden City*', by Louis de Soissons).

[8] Louis Emmanuel Jean Guy de Savoie-Carignan de Soissons (1890-1962) was a Canadian architect and planner of Welwyn Garden City. His work for the garden city was extensive, not only setting out the entire town plan but also designing many of its Neo-Georgian buildings and a factory.

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Just like Letchworth's town-plan, Welwyn Garden City reflects the rigid radial order of functions conceived by Howard in '*To-morrow*'. De Soissons proposed a compact town centre, with 80 acres of commercial areas and a civic centre located almost in the core of the settlement, facilitating connections with the surrounding 1,298 acres of residential areas and 170 acres of industrial area on the east side, the extension of which is encircled with 608 acres of agricultural belt. De Soissons's town-plan had a significant difference with Crickmer's, as De Soissons provided more compactness and unity to the morphology of the town centre and more informality and variety to the morphology of the residential areas, by means of implementing an even more radical dual scheme than Letchworth's.



Figure 4.36 Howardsgate at Welwyn Garden City (Taken by the author in 2019).

The town centre integrates the layout of a crescent and tree-lined corridors that Crickmer proposed in his sketch plan, but in a similar composition to John Nash's first plan for Regent's Park, as mentioned in chapter II. The monumental quality of such implementation of wide boulevards with a crescent is, according to Sir Frederic Osborn, because of the former Chairman of the Welwyn Garden City Company Sir Theodore

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Chambers's[9] "love of the grand manner" (Roberts and Taylor, 2017, p. 49) in combination with de Soissons's Beaux-Arts aesthetic contribution. The big green network of a two hundred feet wide Parkway and Howardsgate, wider than Broadway at Letchworth, embodies the function, character and style of a magnificent public space composed by pathways, parks and big squares in the junctions, whose aim was to enhance the daily walks of the residents by connecting and reducing distances between the station, shops, factories and the residential areas (Fig. 4.36). According to Purdom:

> The aim in preparing the plan of Welwyn Garden City was to take advantage of the strategic position of the site in relation to its railway and highway communications, and to keep the urban area as compact as possible, so that most of the houses would be kept within a short walking distance (say three-quarters of a mile) of the factories and the shops (Purdom, 1949, p. 229).

Such a need of achieving a walkable and well-connected town led to avoid the dilution of its compactness by the implementation of open green spaces, such as big parks or playing fields, within the core of the town. Therefore, the architect and the Company placed the open spaces on the outskirts of the town, considering more suitable for a small town the implementation of linear parks and tree-lined corridors, such as Parkway and Howardsgate, as magnificent promenades in the town centre (Purdom, 1949).

In contrast to the geometrical layout of wide boulevards and rows of houses in the town centre, the residential areas were composed by meandering roads derived from preserving most of the pre-existing mature trees of the estate as possible and adapting the layout of houses to the contour of the terrain, like Parker and Unwin also did at Letchworth. Nevertheless, unlike the lack of professional supervision during the development of Letchworth's residential areas due to the financial urgency of developing the town, Welwyn Garden City Ltd[10] had a tight control over what was built (Roberts and Taylor, 2017).

[9] Sir Theodore Chambers (1871-1957) was an English surveyor who, before the establishment of the town, had little acquaintance with the Garden City Movement, but after being appointed to the Welwyn Garden City Ltd board in 1919, he became an important figure in the garden city, by bringing his experience in estate administration for the development of the town.

[10] Welwyn Garden City Ltd was a company founded in 1920 to plan and build the garden city, chaired by Sir Theodore Chambers.

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This way, the picturesqueness of the residential areas at Welwyn Garden City have turned out to be even more marked than at Letchworth, thanks to the supervision of Louis de Soissons of its development, whom the directors of the Company steadfastly supported so that his original plan was not distorted. Such privilege of being planner and surveyor at the same time was the key of success to achieve the town's aesthetic unity that Parker and Unwin would have wanted for Letchworth. Thanks to this and the implementation of Unwin's sequential "street picture" (Unwin, 1909, p. 254) as a principle to avoid monotony and get informality within the residential areas, de Soissons laid out a complex townscape, whose aim was to give a pleasant urban experience to Welwyn Garden City's inhabitants.



Figure 4.37 Handside Lane at Welwyn Garden City (Taken by the author in 2019).

Each road was designed in order to preserve and integrate the pre-existing elements, so that the original cottages, the big mature trees, the slopes of the terrain and the old tracks that ran through the town helped to reinforce the informality of the residential areas (Fig. 4.37). Just like at Letchworth, the layout of houses in road junctions were set back from the strip of houses, likewise also the rows of houses were avoided by creating recesses through the haphazard slightly set-back of houses along the roads.

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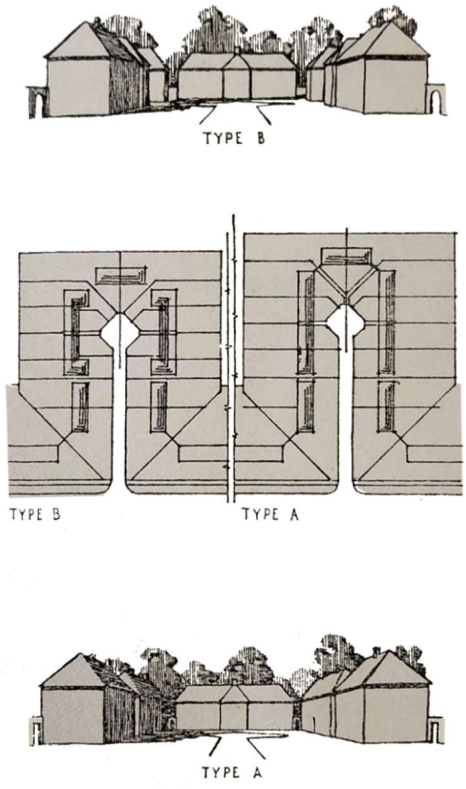


Figure 4.38 Parker's scheme on the cul-de-sacs of New Earswick ('*Site Planning as Exemplified at New Earswick*', by Barry Parker).

Together with the play of outline of houses in junctions and the variation of the townscape by using different groups of housing typologies, the implementation of Parker and Unwin's concept of "village green" in most of the cul-de-sac designs of the town completes the picturesque effect of the townscape, which still gets a strong sense of community in Welwyn Garden City's residential areas. Before Letchworth, Parker and Unwin experimented with housing schemes in cul-de-sacs in planning the industrial garden village of New Earswick in 1902 (Fig. 4.38 where, according to Barry Parker, "much of the pioneer work has been in site planning" (Parker, 1937, p. 1). This pioneer work led Parker to give a lecture before the Town Planning Institute in 1923 about the advantages of the cul-de-sac, in order to save money and community space. Parker stated in relation to cul-de-sacs that:

> If we at each stage in the development of the village, increase the number of houses for which given lengths of roads and services suffice, we shall ultimately have a village much less costly to maintain, light, supervise, drain and keep clean, and we shorten the rounds of the rent collector, the policeman, the dustman, the postman and the milkman, while securing better and far more interesting architectural grouping of buildings (Parker, 1923, p. 9).

Beyond Parker and Unwin's original housing schemes, that relied on optimizing a suitable and economic housing layout for residential areas by avoiding through roads as much as possible, Louis de Soissons was able to take advantage of such economic tenet to turn it into a strong aesthetic tenet that brought a certain sense of intricacy and quietness into the residential areas of the town. Thanks to the aesthetic possibilities of the cul-de-sac, "the architect", in the words of Louis de Soissons's son, "began to experiment with the wonderfully contrived variety of cul-de-sac designs which became such pleasant

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backwaters in which to live" (De Soissons, 1988, p. 49). He used different variations of cul-de-sac designs to avoid the monotony of only using the usual layout of a cul-de-sac as a panhandle-shaped straight road, by also implementing others in a T-shaped road, an open squared or triangular scheme, a curving road (Fig. 4.39) or even a U-shaped road.

According to Frederic Osborn:

> The cul-de-sac system gives a convenient unit for building, and is pleasant to live in. The common front garden can be laid out and planted in an infinite variety of ways, and every close can have a distinctive character. It was unpopular at first, but it was not long before people saw the great possibilities of the idea when carried out well (Osborn, 1927, p. 8).

These mentioned forms evolved over time, in parallel with the development of the town, thanks to further surveys to incorporate the pre-existing natural features within the thorough layout of micro-communities scattered across the town.



Figure 4.39 "The Orchard", one of the cul-de-sacs of Welwyn Garden City (Taken by the author in 2021).

The Company built the first roads and houses in the south-west area, where the pre-existing settlements of the estate became the cradle of Welwyn Garden City, by

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making sense of the pre-Welwyn constructions, tracks, trees and hedges in relation to de Soissons's town plan. Following these precepts, in April 1920, C. M. Crickmer designed the first 50 houses of Welwyn Garden City, along the old track of Handside Lane and created the first "street picture" of the town, by means of reproducing the local architectural patterns of the eighteenth-century Handside Corner Cottages in roughcast brickwork. However, after Sir Herbert Trustram Eve's[11] report in November 1920, which highlighted the good quality of the clay at Welwyn Garden City to make strong red bricks (Trustram-Eve, 1920), de Soissons relied on some economic and aesthetic reasons to build the houses in fair-faced brick (De Soissons, 1988). On the one hand, thanks to the use of the local clay as an endogenous resource the Company saved enough money to build most of the town and on the other hand, the good quality and colour of the bricks led de Soissons to introduce the Hertfordshire Georgian architectural style of St. Albans, Hatfield, Welwyn and Hertford. This way, de Soissons's Neo-Georgian houses give a homeliness aesthetic unit to the townscape, whether in residential or commercial areas, which does not preclude its contrast with the few white plastered houses at High Grove Glove and Handside Lane, whose combination obtains "variety and individuality against the larger brick houses" (Roberts and Taylor, 2017, p. 60). In one of the many letters that Osborn wrote to Lewis Mumford, he highlighted that:

> Welwyn happens to be built mainly in an honest and functional continuation of the Hertfordshire tradition, with life and freshness of detail, and the use of the local brick was economically and structurally entirely justified – indeed inescapable unless one wanted to be funny just for the sake of being funny (Hughes, 1971, p. 46).

In short, the residential areas of Welwyn Garden City get a rural effect on its townscape, relying on the traditional English village green, by building irregular cluster of houses with cul-de-sac designs that reinforce the sense of individuality through the architectural design and foster in turn the sense of community by means of the housing layout in groups.

[11] Sir Herbert Trustram Eve (1865-1936) was an English politician and expert in real property, who was firmly committed in the preservation of London's Green Belt.

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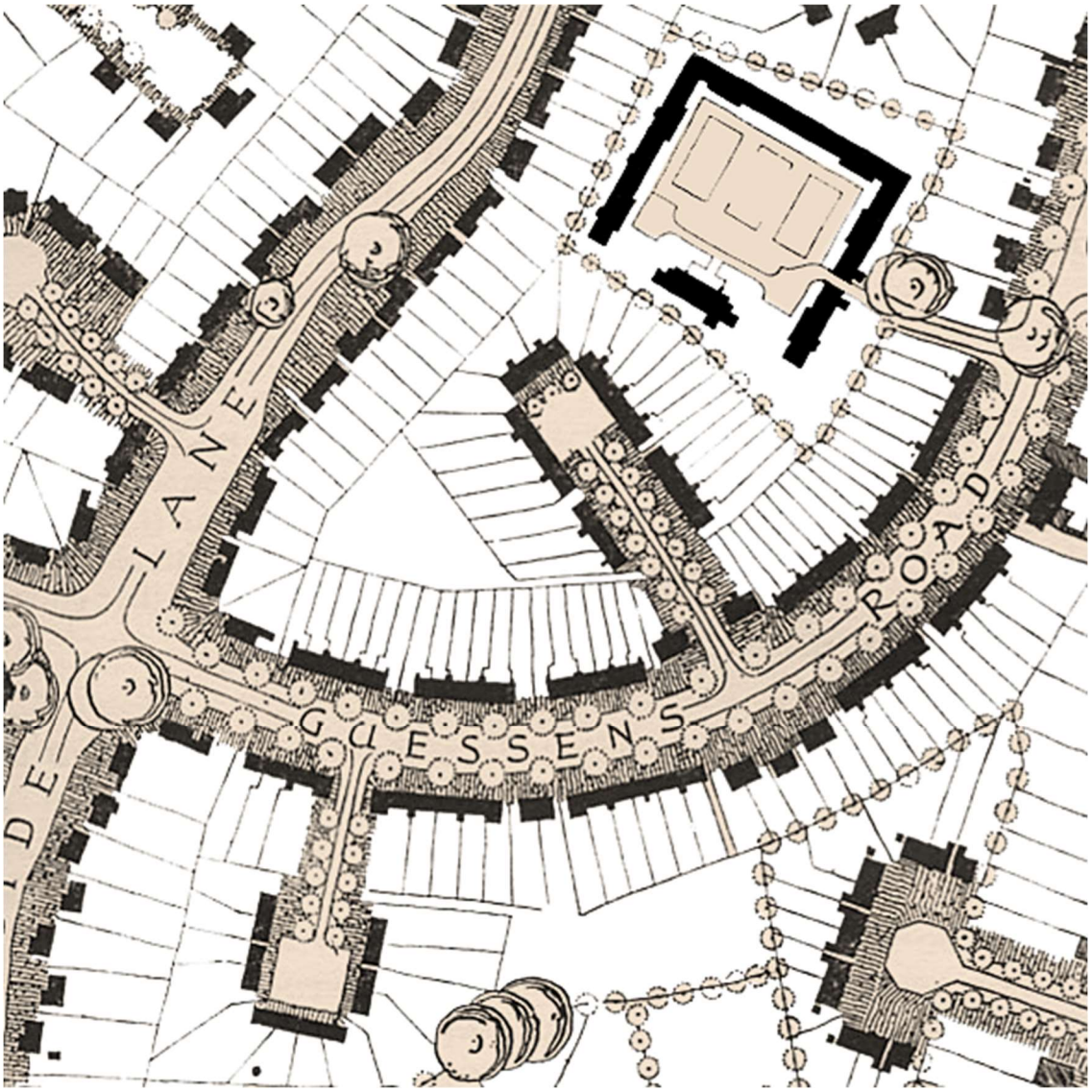


Figure 4.40 "Guessens Court" (highlighted in black) and other cul-de-sacs in Guessens Road ('*Site Planning in Practice at Welwyn Garden City*', by Louis de Soissons).

Apart from the main housing schemes previously mentioned, in 1925, the Letchworth architect, Harold Clapham Lander designed a quadrangular cul-de-sac in Welwyn Garden City, as a co-operative housing scheme called Guessens Court (Fig. 4.40), by using the same layout as in Meadow Way Green and Homesgarth at Letchworth. After the later precedent, Lander designed Guessens Court as a three-side quadrangle with 40 flats on two floors and a central block with community facilities on three floors, such as a common dining room, kitchen, and guest rooms (Pearson, 1988). Unlike the picturesqueness of most of the groups of dwellings within the residential areas of Welwyn Garden City, Lander designed Guessens Court using the same compact, geometric and symmetrical model of Homesgarth, even sharing the same unfeasible investment and

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management that led Guessens Court's central block and eight flats to gradually becoming a hotel from 1928 to 1970, whilst the remaining flats became accommodation for elderly people. In spite of the decline of the co-operative living in both garden cities, the spirit of this scheme can still be perceived nowadays thanks to the inner village green that ensures a sense of community surrounded by the privacy of the houses. After all, the village green does not just represent a design tool for embellishing the townscape of the garden city, but a public space for enhancing the social relationships among the residents, by allowing children to play together on the green, encouraging parents to chat with each other, etc. Whether squared or irregular, the open garden is the hallmark of the garden city's townscape, which represents its spirit of place by highlighting its pre-existing big mature trees of the estate, its co-operative nature of housing schemes in clusters of dwellings, its rural picturesqueness under the combination of natural and manmade elements and its order of enclosure that provides in turn a sense of unity and cohesion.

Beyond the differences between Welwyn Garden City and Letchworth in terms of planning and development, their similarities lie in the basis of Howard's tenets for achieving a self-contained, limited and productive community. Both garden cities are characterised by having a wide range of industry and manufacturing located a few minutes walking distance from the residential, recreational and commercial areas[12], and an agricultural belt that prevents the sprawl of the town beyond its open belts. Such flexible and limited schemes outlined the compactness and walkability of the town by keeping a two-mile diameter in both garden cities, "whereby everybody is within walking distance of the open country as well as of the town centre, that I think any advantages of a larger population are outweighed" (Osborn, 1927, p. 4). The agricultural belt, apart from being a means to obtain fresh vegetables and fruits by engaging the garden city's citizens in agriculture, is the physical framework of both garden cities that maintains the population's limits to prevent its dispersion, in the same way as Edward Gibbon Wakefield's theory on the "elastic belt". In '*To-morrow*', Howard relied the concept of the agricultural belt on Captain Leigh's plan for Adelaide in Australia, whose implementation would not preclude the expansion of the social city by building other garden cities connected by train (Howard, 1902). Moreover, from a territorial perspective, the agricultural belt is in turn a territorial buffer in between other settlements, either

[12] From the boundaries of the residential areas, the residents are at approximately 15 minutes walking distance from the town centre, the factories and the commercial areas.

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towns, villages, cities or new towns, by preserving the sufficient surface of open space in the countryside for natural resources and enjoyment.

In short, the Garden City Movement and its two main examples were born to provide an alternative to relocate at the same time population and industry in the countryside to improve people's lives in a healthy environment. Apart from the sanitary reasons, both garden cities were the testing ground of the theories set out in the previous chapters, in terms of investment, management and planning. The following chapters will focus on an in-depth research about the foundation and development of these two garden cities, its precedents and related examples, in order to use their experience to carry out an alternative framework to overcome the current scenario of rural communities in decline by depopulation.

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PART THREE

5. GARDEN CITIES OF TODAY

5.1 DECENTRALISATION OF POPULATION AND INDUSTRY

A large part of the success of the Garden City Movement's first prototypes was not only due to their publicity through books, newspapers or lectures, but was 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. In order to fulfil such expectations, the countryside represented a blank canvas that gathered the purified air, resources, open spaces and natural features on which the founders and architects got the chance to put into practice a new physical and systemic model of building rural-urban communities under the precepts of Ebenezer Howard. In addition to these circumstances, the beginning of the twentieth century was the right moment for both garden cities, because of the great demand for housing and industrial accommodation in the United Kingdom, what encouraged the first pioneers to step forward and start from scratch far away from the big city. One of the keys of success to induce people to go back 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). Thanks to this, Letchworth and Welwyn Garden City seemed to be more than a New Jerusalem for people in terms of aesthetic and health, but mainly an attempt to create a self-contained community without public intervention nor the paternalist protection of wealthy philanthropists, as happened in the industrial garden villages of Saltaire, Port Sunlight, Bournville and New Earswick.

Nonetheless, thanks to two conferences held at Bournville and Port Sunlight in 1901 and 1902 respectively, the example of the industrial garden villages demonstrated the feasibility of settling factories and workforce in there for many years (Purdom, 1913), what endorsed the garden cities' venture in order to attract the attention of people to work and live there. Moreover, whether in '*To-morrow*' or even in the 1906 '*Garden City Movement's Official Handbook*', Howard highlighted the success of the industrial garden villages through their experience. "Are not Saltaire, Bournville, and Port Sunlight witnesses and proofs of what can be done if only we make a fresh start, turn over a new

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leaf, and dare to do what our friends declare impossible?" (Harris, 1906, p. 13). Thus, Howard focused their production basis on industry so that it comprised the economic base of the scheme, as it represented the main source of workforce at the beginning of the twentieth century, and put into practice Kropotkin's theory on fostering the decentralisation of industry in combination with agriculture across the countryside. Whereas at the beginning of the Industrial Revolution a big part of the workforce was composed by farmers and unskilled workers who came from the countryside, which led to a drastic loss of rural habits, the garden cities' advocates endeavoured to foster industry as a means to attract as many people as possible in the shortest possible time. This way, the industrial development of the garden cities would attract industrialists and workers to employ and be employed respectively in a varied range of industry with which they were familiarized and experienced. This initiative was somehow a hook to attract people, although it was not the only means to achieve that. The board of the Garden City Association remarked that the aim was to build not "merely a manufacturing town, but shall be a complete city in itself, containing representatives of every class. We therefore want to see what inducements the Garden City has to offer to every kind of person" (Harris, 1906, p. 36).

In addition to the wide range of job opportunities, the affordability of the housing and industrial development aimed to attract even more the attention of people. All of this would be possible thanks to the garden cities' financial basis, which was 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, and whose subsequent increased value should be used for public purposes. This way, both garden cities' companies were aimed to distribute such "unearned increment" (Howard, 1902) for the development and maintenance of the towns, with the purpose of preventing speculation and assuring the affordability of land value and rents. Thanks to these strategies, the garden city scheme seemed to be convincing enough in terms of health, affordability and work, as well as to encourage the migration of people and industries from existing settlements to the new towns of Letchworth and Welwyn Garden City.

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 expected, what led to tense discussions among its members on how to speed up the colonization process of the estate. There were many different alternatives to achieve that, from offering

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residential sites on sale to speculative builders to sell freeholds for factory sites[1]. However, after several attempts of giving up fundamental tenets of the company, its board of directors stood firm to maintain the leasehold system and looked for some striking initiatives to break the wall of the scepticism that many people had about the feasibility of the scheme (Purdom, 1963).

5.1.1 The Cheap Cottages Exhibition

One of the most important initiatives to save the situation came from the first manager of the company, the architect Thomas Adams[2], who in the summer of 1905 arranged the Cheap Cottages Exhibition in collaboration with the editor of the '*Spectator*' and owner of '*Country Life*' John St Loe Strachey[3] (Adams, 1905). 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. The main aim of the exhibition was to show prototypical attempts of houses for workers, whose demonstration linked to the underlying aim of attracting the attention of industrialists so that they moved their factories and workforce to live there (Ward, 2016). Nonetheless, the exhibition ended up attracting the general public, which were more interested in housing design than in the viability of the town (Ashworth, 1954). The exhibition resulted more efficient than the press in terms of publicity, allowing the company to spread its message from the written word to the word of mouth across the country. Additionally, the publicity of the exhibition in '*The Country Gentlement*' (Fig. 5.1) and the '*Spectator*' encouraged their readers to visit the estate through several articles during the three months the exhibition was opened, whose contribution helped to bring around 60,000 visitors in all (Ward, 2016). This kind of initiative served to demonstrate the affordability of the scheme, as well as to counteract the bad publicity of several London journalists who deemed Letchworth as "a home for cranks" (Purdom, 1949, p. 58). Thanks to Letchworth's temporary station built by the Railway Company in 1905, many Londoners were able to attend the exhibition by getting on a train to Letchworth from King's Cross

[1] William H. Lever of Port Sunlight was especially concerned about the slow development of Letchworth, which led him to give up his seat on the board of directors after trying to persuade his colleagues to change the strategy without any success.
[2] Thomas Adams (1871-1940) was a Scottish architect and urban planner, who worked as secretary to the Garden City Association (1901), first manager of Letchworth (1903-06), architect and urban planner in Canada and in the USA (1914-37), and teacher at Harvard University and at MIT (1930-36).
[3] John St. Loe Strachey (1860-1927) was an English journalist and newspaper proprietor.

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Station in little over 45 minutes. At that time, among the first people interested to come to Letchworth, there were, according to Purdom:

> a few retired men and women who sought merely for a house and garden, but the majority were younger people who had jobs in London, and some were on the look-out for jobs in the town as they came available. There were, too, some architects, doctors, lawyers, and other professional men looking for a new field for practice. The atmosphere engendered was exciting and pleasant (Purdom, 1949, p. 59).

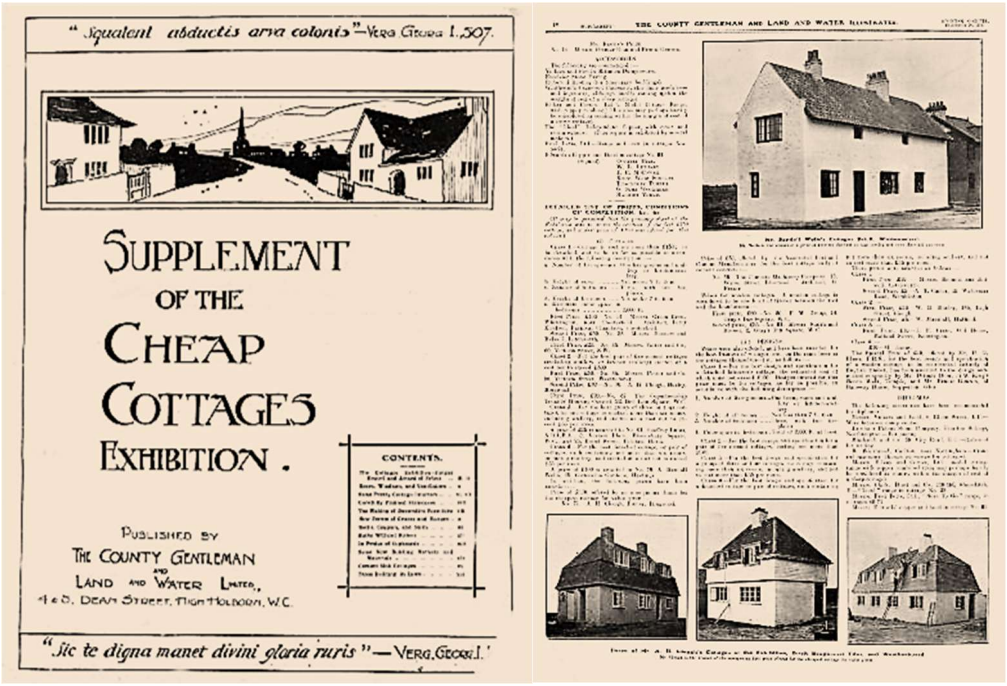


Figure 5.1 The Cheap Cottages Exhibition's advertisement (Garden City Collection).

Undoubtedly, much of the success of Letchworth in attracting people was due to its connectivity and commuting with London, what led many people who were involved in the development of the town to get another job and a house far away enough from the metropolitan city. Indeed, it was a very common chain of events that settled the first garden citizens in the town, such as in the case of one of many Letchworthians, whose:

> husband's father came from London having worked at the ABC restaurant as a cook. He came here as a cook for the road makers, that was in 1905, I think, and then consequently he liked the town, what he saw of it, and he stayed there,

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> stayed on not as a cook but in various other jobs (Elliot and Maddren, 1995, p. 18).

However, despite the efforts of the first pioneers who moved there in dribs and drabs in the first houses of the estate, it was not enough for the company, which needed to recover costs derived from the acquisition of the estate and its early development.

5.1.2 Industrial marketing strategy at Letchworth

At the outset of Letchworth's development, its publicity was mainly focused on showing a healthy place to live through several national newspapers and local ones, such as the '*Hertfordshire Press*', the '*Garden City Press*' and the '*Letchworth Magazine*', which was indeed a very good strategy to bring people to visit the town. However, such publicity on worthy housing had finally a small impact on settling population, what led to the subsequent slow development of the town during the early years. As a result, the company focused its energies to find the way to attract industrialists to get them involved in the scheme and, therefore, boost the development of Letchworth in both population and houses for the workforce. Once again, Thomas Adams took charge of the situation by asking William Henry Gaunt[4] for help, who was experienced in industrial development as manager of different gas and electric tramways companies at Trafford Park, Manchester (Purdom, 1963). He was in charge of the executive work of the company as estate manager from 1905 to 1917 and his main task was to turn Letchworth into an industrial town, by publicizing the estate and implementing the latest improvements on industrial development in the UK. Thanks to his experience at Trafford Park, he knew very well how to implement a strong industry campaign to attract a huge range of industries and convince many industrialists who were unwilling to move Letchworth by considering the scheme as an experiment focused just on social reform. Gaunt used a varied range of publicity on the American pattern to highlight the advantages of the estate in establishing industries and so overcome the industrial stagnation of Letchworth (Ward, 2016). Despite he was not an advocate of the Garden City Movement and did not even like the aesthetic aspects of the town, Gaunt was a businessman with the taste of a "Man

[4] William Henry Gaunt (1874-1951) was an English transport engineer, who after working for Letchworth's company was appointed as a distribution superintendent to the Coal Mines Department of the Board of Trade (1917) and adviser to the Ministry of Food (1940).

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of the North"[5], who helped to sow the seed of professionalism that drove Letchworth to be perceived as a normal town to invest.

The company distributed the publicity of the estate in Britain and even in France, Germany, and the USA (Fig. 5.2), by taking advantage of both the 1907 Patent Act, which allowed foreign firms to keep their patents in Britain, and the increase of electric power for industrial purposes (Ward, 2016). Thanks to this, the workforce of the first industries of Letchworth 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. All these circumstances led to a steady growth of population and industrial development until 1914, when Letchworth started to have several fluctuations derived from the outbreak of the First World War, the international economic crisis of 1929 and the Second World War. It is worth noting that, during the First World War, Letchworth experienced a notable growth of factories and workforce linked to the arms industry, of whom there were around 3,000 Belgian refugees, who were producing munitions in the new factories until they returned to Belgium with the advent of the armistice.

About ten years after, the unemployment derived from the economic crisis of 1929 brought the opportunity to reopen any factory that was bankrupt as a Ministry of Labour Training Centre. This way, by 1935 many of the 3,000 youths who went to Letchworth to be trained in mining, ended up becoming part of the semi-skilled industrial workers of the town (Elliot and Maddren, 1995). During the Second World War, the town had a similar industrial development to the influx of factories and workers during the First World War, reaching a population of 23,030 people in 1944. However, although the unexpected international circumstances boosted the development of the town, its slow tempo, according to Purdom:

> was to some extent inevitable, because that is how all beginnings take place, but more particularly because the company was not in a position to build. Had the company been supplied with adequate initial capital, a different story might have been told (Purdom, 1949, p. 63).

[5] According to Purdom, "the slightest sign of art or taste offended him, so that, for instance, he fought hard to have red roofing tiles banished from the town to be replaced by grey Welsh slates, as though red roofs were a sign of decadence!" (Purdom, 1963, p. 25).

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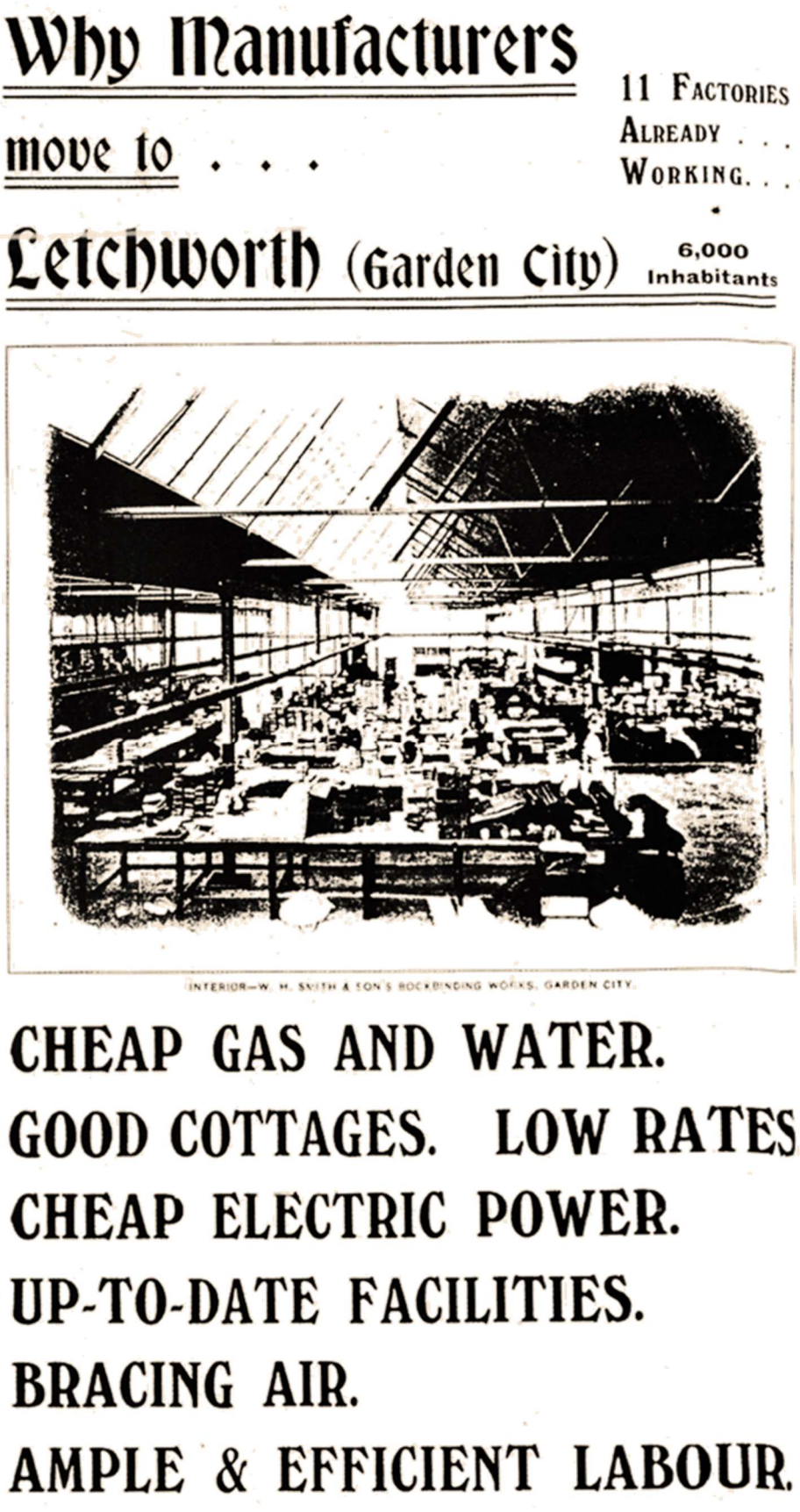


Figure 5.2 Letchworth industrial estate's advertisement ('*The Peaceful Path. Building Garden Cities and New Towns*', by Stephen V. Ward).

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Despite all, these circumstances helped to forge the strong industrial character that the garden city kept until the end of the twentieth century.

5.1.3 Garden City in relation to Agriculture

In addition to highlighting the potentialities of the industrial development of Letchworth, the company encouraged workers to take advantage of the agricultural belt to cultivate crops in their spare time, as well as farmers whom the company aimed to attract. Regarding this matter, Thomas Adams was personally involved in providing a framework to attract agricultural labourers after arranging a conference in September 1904 at Letchworth together with several experts in agricultural matters, such as the adventure-fiction novelist Sir Henry Rider Haggard[6] and the Alderman of Peterborough Sir Richard Winfrey[7]. Resulting from the conference, Adams published in 1905 the book '*Garden City and Agriculture: How to solve the problem of rural depopulation*', in which he set out his proposal on how to bring people back to the land by developing land into smallholdings, establishing agricultural co-operatives, giving long leases as a land tenure system and creating a stronger productive network in combination with small industries in the countryside. One of his suggestions was addressed to the First Garden City Ltd, which, according to Adams, should implement all these tenets in Letchworth's rural belt, as a means to put into practice Kropotkin's theory on combining agriculture and industry in the countryside, as well as to attract the attention of farmers to the scheme. He deemed that "the Garden City in showing how to solve the housing problem will at the same time show us to solve the land problem in the rural districts" (Adams, 1905, p. 20).

After the 1904 conference on '*Garden City in relation to Agriculture*', the company welcomed Adams' ideas and aimed to attract a stream of a wide range of population groups, in order to concentrate as much varied productive means as possible within the same settlement. Supporting such an ambitious theory, Ebenezer Howard, who attended the conference, observed that the estate might become more self-contained by implementing Adams' proposal, because, according to Howard, "those who occupied small holdings on the Garden City Estate would have the advantage of proximity to the

[6] Sir Henry Rider Haggard (1856-1925) was an English novelist on lost world literary genre and agricultural reformist, among whose works stood out his famous book '*King Solomon's Mines*' (1882).
[7] Sir Richard Winfrey (1858-1944) was an English Liberal politician, newspaper publisher and campaigner for agricultural rights.

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population that would live on the central part, and would thus have every chance of disposing of their produce easily" (Adams, 1905, p. 118).



Figure 5.3 A Letchworth smallholding and the Letchworth Allotment and Horticultural Association - about 1910 (Garden City Collection).

Additionally, in order to achieve such synergy, Adams suggested the company to create the suitable conditions to bring people to work the land, whether for their

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livelihood, supplementing their incomes or enjoying their spare time in growing food. Adams' idea on agricultural smallholding was focused on getting as much profit as possible from the land, in the same way as the factory workers of Bournville were getting at that time from each kitchen garden of one eighth of an acre, and whose cultivation represented a profit of eight times more than in large holdings (Adams, 1905). He deemed necessary about two hundred smallholdings and allotments for Letchworth on the 1,000 acres of its agricultural belt, by providing lots of land from a half acre to 50 acres, at an average of five acres each. Furthermore, he proposed the creation of a "Co-operative Centre" for instructing local residents and boarders in agriculture, besides providing the means for working the land, such as manures, seeds, tools, etc. Together with the "Co-operative Centre", he proposed the building of an "Experimental Farm" of 200 acres, where a skilled farmer could demonstrate the feasibility of the scheme. According to Adams:

> there should be no difficulty in establishing about 50 small holders during the first three or four years, if arrangements can be made for the erection of the necessary dwellings. This will attract a new population of about 200 to the Estate, which will bring up its total agricultural population to about 600 (Adams, 1905, p. 73).

Despite all his efforts to achieve that target by arranging conferences, coupled with the creation of a society to assist small holders in 1905 and an exhibition of houses and buildings suitable for small holders in 1907, the company could not accomplish Adam's expectations, because the company had not enough capital in building the facilities that the smallholders needed. In addition to the shortcoming of capital, there were further difficulties related to several existing tenants in the agricultural belt who objected to cut up the land into smallholdings and the general economic conditions of many small holders who had no money to build whether cottages, dairies or cowsheds. However, in less than thirty years of town development, the amount of agricultural population increased four times more than when the estate was purchased in 1903, among whom there were mainly fruit farmers and dairy farmers who sold their produce in the local market of Letchworth (Purdom, 1949) (Fig. 5.3).

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5.1.4 Letchworth's early houses

At the early stages of Letchworth's development, the company had enough money for roadmaking, drainage and water, but did not have money to build houses, agricultural facilities or factories, which would have accelerated the development of the town (Purdom, 1963). The lack of capital of the company to build houses, together with the advent of the first industries, led to establish construction companies such as Garden City Tenants Ltd. and Letchworth Cottages and Buildings Ltd. (Fig. 5.4). The first one was formed in 1905 on a co-partnership basis to build some cottages for the workers of the Garden City Press, as well as for the demand of other industries, becoming one of the first public utility housing societies in the country (Purdom, 1949). However, Garden City Tenants Ltd. was not able to accomplish the demand of workers' houses, what led the garden city company to promote Letchworth Cottages and Buildings Ltd., which is still working, to carry on the construction of more cottages. Subsequently, more private construction companies were established to build houses for workers, such as Howard Cottage Society Ltd. Or Letchworth Housing Society Ltd., which demonstrated the affordability of the cottages' rents by using local resources in building the cottages and their management. Nonetheless, the lowest paid workers were not able to pay weekly rents of from 4*s* 3*d* to 6*s* 9*d* that these private companies offered (Purdom, 1949). Thus, both the Hitchin Rural District Council and later the First Garden City Ltd. were involved in building cottages in order to accommodate low-income tenants within the town. Despite the outset of all these private and public enterprises was too experimental, their commitment and pioneer work in looking for the means to build affordable houses, demonstrated at the same time the feasibility to build good quality houses for working people, which was indeed the main aim of the Garden City Movement.

During the first twenty years of development, the first garden city attracted a steady, though slow, stream of industries and people, whose colonization boosted the housing development of the estate. This way, the garden city's scheme became, for the first time in history, a worthy example of "inner colonization" in the heart of the countryside, whose success did not only lie in the support of the company and founders as in the industrial garden villages of Port Sunlight and Bournville, but also in the cooperation among private and public societies. In Letchworth, as Purdom already pointed out, the company's handicap was due to not foreseeing capital enough for developing the town. Instead, the role to build the estate lay in several small societies that in dribs and drabs were shaping the residential and industrial grounds of the estate, in

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order to supply the demand of accommodation and work for the first commuters and job and housing applicants who sought to move into the town. Nonetheless, the natural growth of the town represented a conservative and flexible process of consolidating a gradually influx of population, factories, and houses that during its first two decades only decreased in 1919, when most of the 3,000 Belgian refugees went back to Belgium (Fig. 5.9).

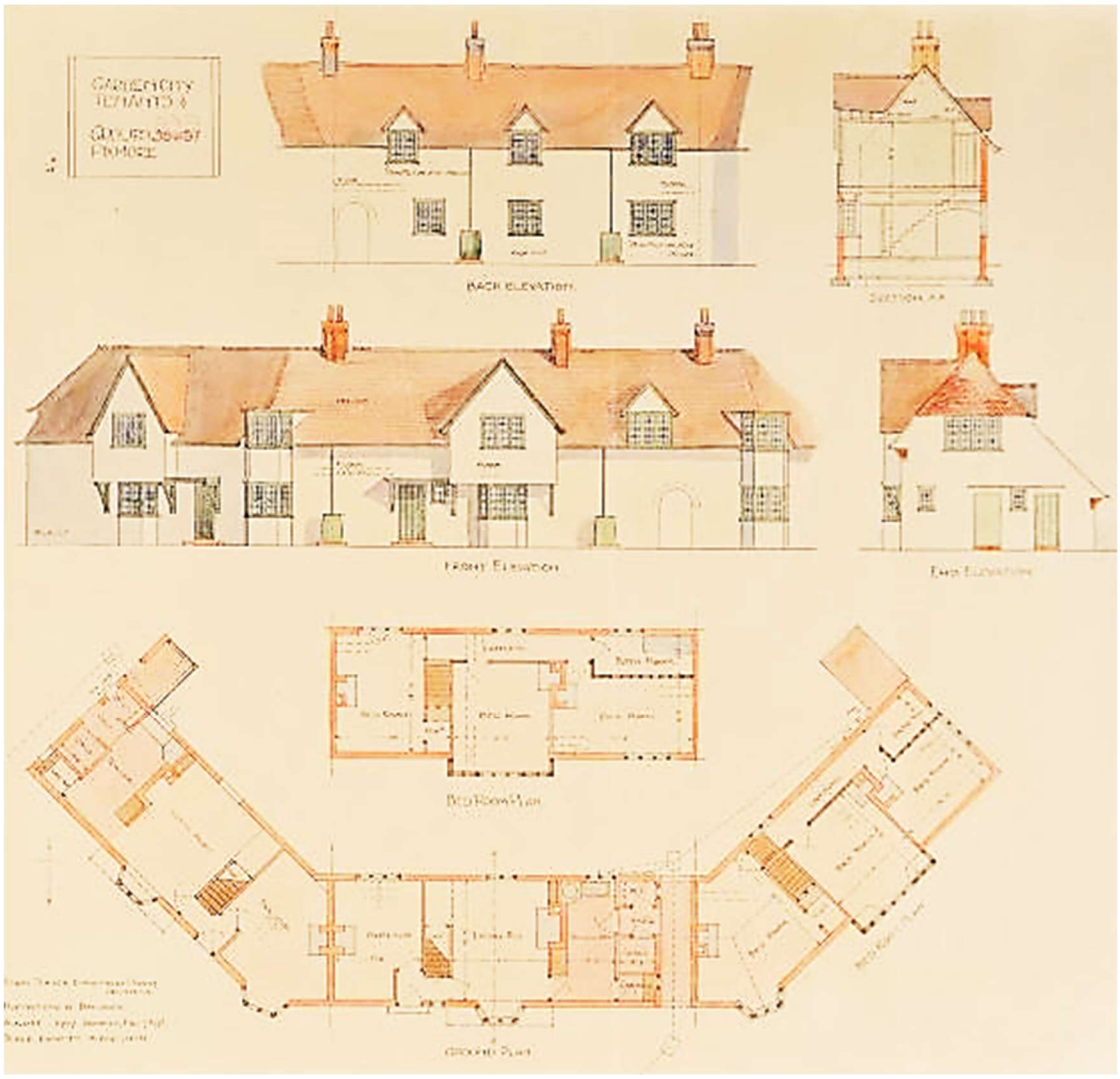


Figure 5.4 Parker & Unwin's housing project for the Garden City Tenants in Pixmore Road (Garden City Collection).

5.1.5 New Towns after the War

However, the Garden Cities and Town Planning Association had a different interpretation about the early development of Letchworth and since before the outbreak of the First World War had been discouraging the creation of more garden cities like

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Letchworth to house working classes, because of the slow growth of the garden city's scheme. As a result, the Association shifted its attention in fostering the building of garden suburbs in existing towns and cities henceforth (Buder, 1990). Purdom disagreed with the Association's change of course and published in 1917 a small pamphlet called '*The Garden City after the War*'. It was as a manifesto to promote a housing policy based on the garden city's scheme by using the example of Letchworth and preventing the boom of suburban development that was starting to spread in existing big settlements at that time. He deemed that the future of the garden city movement should be tied to a national housing policy through which the state funded the establishing of 50 new garden cities of 50,000 people each, instead of increasing the size of metropolitan cities (Purdom, 1917). Although such an ambitious proposal differed from Howard's mistrust in the involving of the state in building garden cities, Purdom endeavoured to involve the state in the garden city movement, in order to accelerate the process of rural colonization by using public capital enough to fulfil the demand of houses and factories in the shortest possible time. "It is obvious that what has been done for the first time with straitened means by a group of individuals (referring to Letchworth's experience) can be done with far greater prospect of success with wider experience, large resources, and an idea no longer merely experimental" (Purdom, 1917). Finally, the idea of involving the state in building new garden cities convinced Howard, who together with Purdom and Osborn formed the National Garden Cities Committee to press government to support a post-war programme of garden cities (Ward, 2016), and in 1918 they published, under the nom de plume of the "New Townsmen", the book '*New Towns after the War*', in collaboration with the Letchworth publisher W. C. Taylor.

After the First World War, the parliament passed the Housing, Town Planning, &c. Act 1919, also known as the Addison Act to allow the building of houses for working classes. This Parliament Act followed the recommendations of the 1917 Tudor Walters Report, in whose committee Raymond Unwin was a member, on improving the poor living conditions of working classes, by using the example of Well Hall, built by the Office of Works in 1915. At that time, there were many alternatives to supply the demand of "Homes Fit for Heroes", which more or less offered the same quality of housing, but relied on different schemes of distribution, from garden suburbs to new towns. Under such circumstances, coupled with the appointment of Purdom as new secretary of the GCTPA in 1919, the Committee carried out a memorandum to the Minister for Housing

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Dr Christopher Addison[8] in collaboration with the GCTPA, through which they suggested to use the Housing Act of 1919 as a means to boost the programme of garden cities that the Committee aimed for.

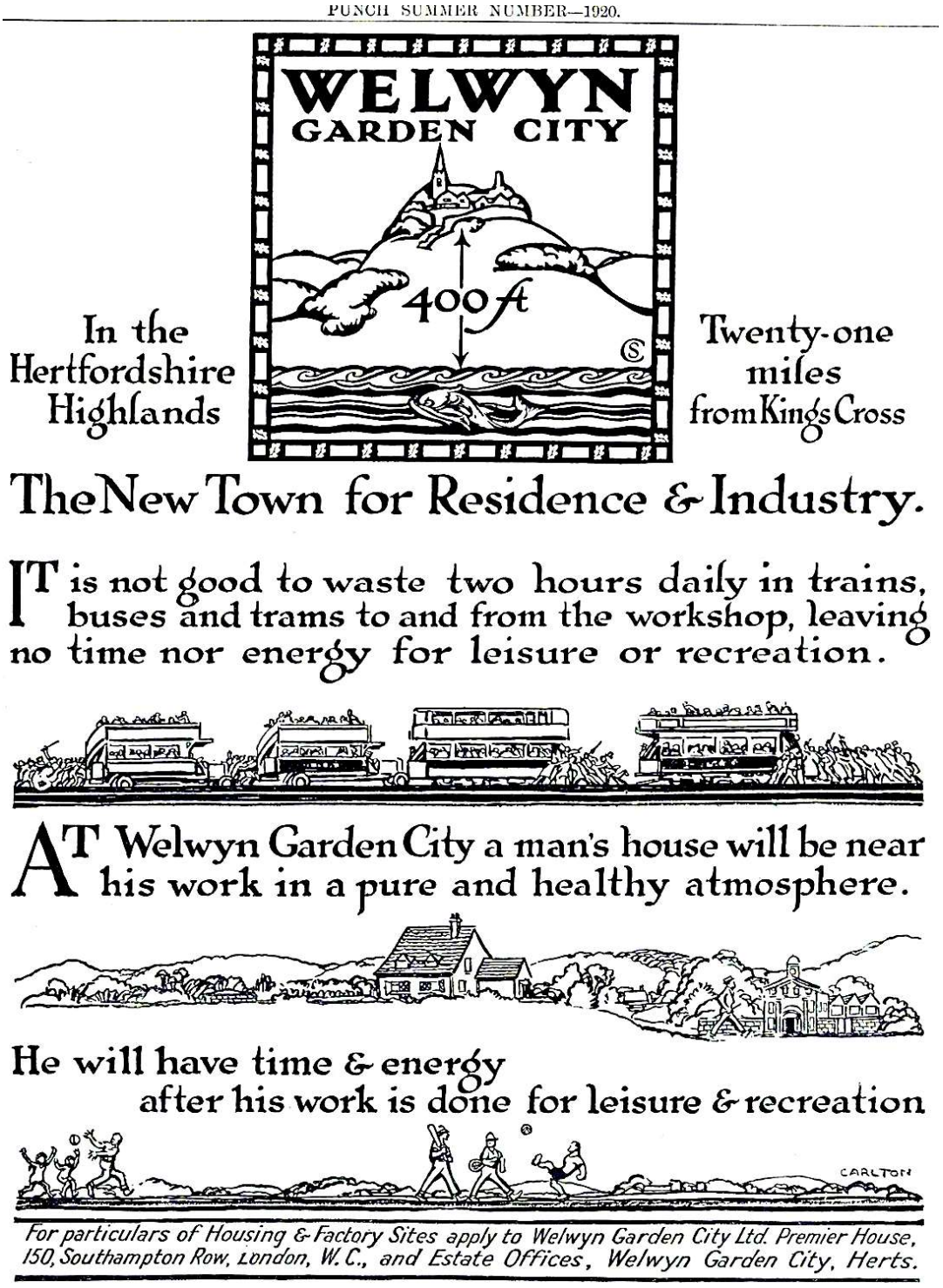


Figure 5.5 1920 Welwyn Garden City's publicity ('*The Building of Satellite Towns*', by C. B. Purdom).

[8] Dr Christopher Addison, 1st Viscount Addison, (1869-1951), was an English politician and medical doctor.

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Such memorandum aimed to discourage the building of houses without a territorial planning or survey and endorse the combination of housing and industrial development across the territory, by using the example of Letchworth. However, Addison rejected the proposal because he thought the building of new satellite towns would detract from the urgent provision of houses in the shortest possible time (Purdom, 1949).

Against this backdrop, Howard preferred not to waste time and encouraged Osborn and Purdom to outline a plan for the second garden city they had in mind since the end of 1918. In order to select a strategic location to attract people and industry, they conceived Welwyn Garden City as a self-contained satellite town for London with the sufficient independence from the city, but was close enough to the metropolitan city in terms of distance, exchange, migration, etc. (Fig. 5.5). Such a strategy somehow represented the first attempt to put into practice Howard's territorial concept of the "Social City". In the words of Frederic Osborn:

> Howard founded both the Letchworth and Welwyn Garden Cities as experiments and demonstrations of his thesis. They were intended to show the way to the redevelopment of great cities as groups of beautiful towns on a background of open country; a conception now informing the most advanced regional planning schemes (Osborn, 1969, p. 53).

This way, Howard, Purdom and Osborn selected the location of the estate in between Letchworth and London, so that its example could demonstrate the feasibility of the scheme they had proposed to Addison. In September 1919, they wrote the document '*Preliminary Announcement of a garden city in Hertfordshire for London industries*', in which they set out the suitability of carrying out a second garden city in that precise moment.

> On the one hand, the great demand for housing and factory accommodation is likely to lead to the rapid development of the Company's estate. On the other hand, it is urgently necessary that a convincing demonstration of the Garden City principle of town development shall be given in time to influence the national housing programme, which is in danger of settling definitely into the wrong lines. Garden suburbs are not the solution (Purdom, 1949, p. 186).

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At that time, there was already a certain need among the garden city's advocates to clarify a growing widespread confusion between both schemes of the garden city and the garden suburb. According to Osborn, "when Welwyn was started, the promoting group debated whether they should give it a new label to kill the confusion; deciding finally to stick to Howard's term and to redefine and rehabilitate his idea" (Osborn, 1969, p. 40).

5.1.6 Daily Mail Ideal Village

Thanks to the experience of Letchworth, the Welwyn Garden City Ltd focused its energies on publicizing the estate through large notice boards on both sides of the railway announcing "London's first satellite town" and providing as much houses as possible to relocate the workforce of the manufacturers that wanted to move into the new town. In addition, one of the first events at the outset of Welwyn Garden City was the '*Daily Mail Model Home Village Exhibition*' (Fig. 5.6).



Figure 5.6 '*Daily Mail Model Home Village Exhibition*' at Welwyn Garden City in 1922 (WGC Heritage Trust).

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Unlike the '*Cheap Cottages Exhibition*' at Letchworth, Welwyn Garden City's was specially restrained by the architectural control of Louis de Soissons so that those buildings could fit into the townscape of the residential area and accommodate some residents after the event. The exhibition was a very good strategy to attract the attention of the general public, but it did not have the expected impact to convince industrialists to settle their factories in the town, because the exhibited houses were not affordable enough for housing their workforce. According to Professor Stephen Ward[9]:

> The formation of the garden city company and the first buildings operations began to create more local jobs, but it took time for industrialists to feel sufficiently confident that either their existing workers who moved to work in the town would be able to find local housing or they would be able to recruit a new workforce locally (Ward, 2016, p. 102).

Therefore, despite the Company not having enough capital for housing development, as happened in Letchworth, the Welwyn Rural District Council and the Urban District Council funded the construction of 443 and 1,053 houses respectively (the first 50 houses built under the Housing Act 1919) for working classes in Welwyn Garden City, from 1922 to 1947 (Purdom, 1949). The contribution of the state in building the town was unavoidable, since 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 co-ordinate the growth of employment in relation to the provision of affordable houses by the councils.

As happened at Letchworth, some of the big industries that moved to Welwyn Garden City were British subsidiaries of foreign firms that needed to settle their branches in the United Kingdom, so they could save the cost of exporting their products from overseas and become more competitive in the British market than before. However, in order 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 brouchers, coupled with the building of many factories to rent, rather than only providing

[9] Stephen V. Ward is an English Professor of Planning History at Oxford Brookes University.

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sites without facilities. Thanks to this, the flexibility of available industrial site, 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 the establishment of the town, the impact of which was even more notable than the advertisement of the industrial estate in the press. Mostly the combination of both industrial and residential assets for lease was one of the most significant strategies to allow a rapid growth of people in the town, because 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.

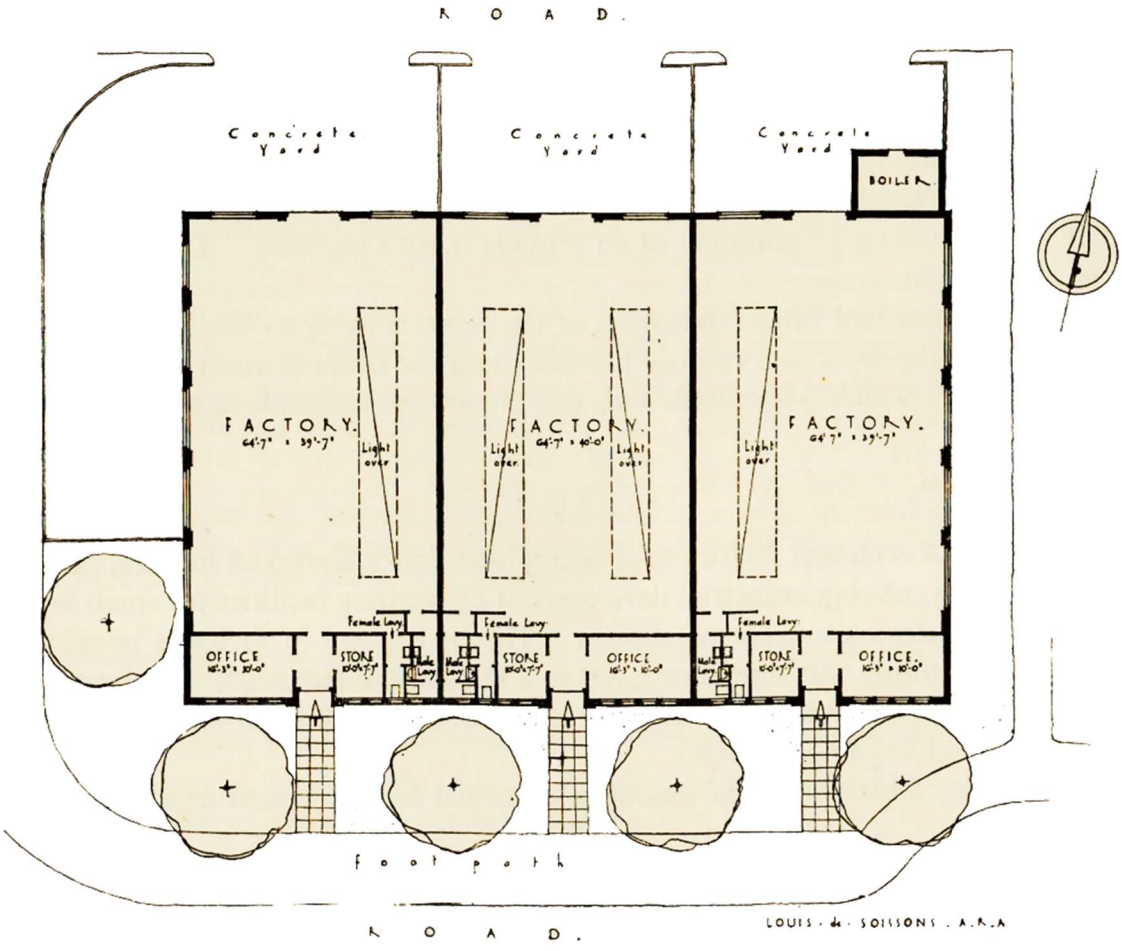


Figure 5.7 De Soissons' project of a group of three sectional factories at Welwyn Garden City ('*The Building of Satellite Towns*', by C. B. Purdom).

5.1.7 Sectional factories

However, according to Osborn, "in the case of factory sites, industrialists building factories were found to be dynastic by instinct; they hated mere 99 years' leases. The

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prejudice against the leasehold system diminished as people came to realize the advantages of planning control" (Osborn, 1969, p. 73). This practice started at Letchworth in 1914, when the First Garden City Ltd. built a three-storey sectional factory let out in floors in order to attract small sized firms. After such experiment, Letchworth's company realised that it was more appropriate to build one-storey sectional factories, because they would have a greater practical utility for start-ups. In the case of Welwyn Garden City, its company used the same strategy and built one-storey sectional factories on the industrial estate (Fig. 5.7), what proved, according to Osborn, "a most successful way of attracting small and medium sized firms, some of which grew to large undertakings" (Osborn, 1969, p. 76).

Thanks to this, many firms could start their business in rented premises in both garden cities, mainly in Welwyn Garden City, and after several years of production, some of them earned enough capital as to build factories for themselves. Among the comments of the early industrialists of both garden cities, many of them highlighted the availability of rented premises, as one the main reasons for coming to Letchworth and Welwyn Garden City. For instance, the director of Hume Atkins & Co. Ltd., when asked about why he came to Letchworth to set up his company, he stated that it was, according to Purdom:

> because attractive rates, coupled with reasonable wages, were available, together with the possibility of renting floor space in a tenement factory or small separate factory, with a further opportunity later of purchasing a small factory outright, or building on available land (Purdom, 1949, p. 119).

Furthermore, the director of Murphy Radio Ltd, who ended up becoming one of the major manufacturers in Welwyn Garden City, stressed the "availability of factory premises to meet our expanding requirements, along with provision of houses for growing labour force (small in 1929, and now 1,500)" (Purdom, 1949, p. 288). In parallel to such economic strategies to attract industrialist and semi-skilled or unskilled workers, the Welwyn Garden City's company did not miss the opportunity of attracting wealthier commuters to the town, thanks to its proximity to London. In spite of that initiative did not fit with the self-contained town that the company aspired to achieve, the affluence of commuters helped to enhance the perception of the town as a good place to live. It is worth noting that the proximity to London was in turn a transitional step for many initial

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commuters to get a local job in Welwyn Garden City. According to Professor Stephen Ward:

> LNER season-ticket sales at the Welwyn Garden City station, the best available 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 was increasing year-by-year, whereas the proportion of the working people who lived and worked in Letchworth was 95% (Warren, 1930). In addition to the local employment in both towns, the town of Letchworth started becoming a significant source of employment for its surrounding settlements. At that time, "the industrial side of the place", according to Letchworth's first resident doctor Norman Macfadyen[10]:

> 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).

5.1.8 Life and Work in Welwyn Garden City

In 1939, the architect Jaqueline Tyrwhitt[11] carried out a thorough survey on labour conditions, standard of living and general amenities in Welwyn Garden City called '*Life and Work in Welwyn Garden City*'. By means of statistics and data collected in 1939, she stated that 81% of the employed residents of Welwyn Garden City worked in the town (3,263 people), what meant a great success of the scheme in terms of self-containment and independence from the metropolis. Apart from the workers who lived in the town,

[10] Dr Norman Macfayden (1877-1959) was an English medical doctor, who lived and worked at Letchworth as first medical officer of health and chairman of the Town and Country Planning Association from 1929 to 1944.
[11] Mary Jaqueline Tyrwhitt (1905-1983) was an English architect, town planner, educator, journalist and editor, who served during the Second World War as both Director of Research and Director of Studies at the School of Planning Research for Regional Development.

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28% of the workforce of Welwyn Garden City were commuters from outside (1,264 people). All this data about the mobility of Welwyn Garden City's workforce proved the capacity of employment of the scheme, which did not just give work to four fifths of the resident workers of the garden city, but went beyond its boundaries by providing 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 got their first job there (1,500 people), who were mainly composed of young labour force who already lived with their parents in the town, as well as others who migrated from depressed areas outside Welwyn Garden City. In addition to the voluntary movement of many colonists, it is worth noting that most of those who migrated from depressed areas were encouraged to move into the town due to the establishment of the Government's Industrial Transference Board in 1928, whose aim was to retrain people who lived in deprived areas and support their migration to existing and new centres of industry (Ward, 2016). Because of that, people who came from depressed regions, such as Northern England, Wales and Scotland, comprised most of the inhabitants of Welwyn Garden City by 1939 (34%), even more than those migrants who came from London (30%). Whereas the first group was mainly comprised by skilled and unskilled workers specialized in metal trades, a good proportion of the second one was comprised by 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). Despite the early efforts of the company to avoid the unbalance and inequality among social classes, by providing working-class housing in the west side of the town at Guessens Road, Elm Gardens, Handside Lane or Longcroft Lane, the east side was specially developed as a working-class area because of its proximity to the factory area. This situation drove to sharpen the social imbalance on both sides of the railway, what somehow failed to meet Howard's principle on avoiding distinctions among residents in the garden city. Nonetheless, the perceptions about such east-west divide differed among the residents of the east side, even among members of the same household. One woman who moved together with her husband into the town in 1952 said about the east-side divide:

> I never felt that. I was content over the east side of Welwyn Garden City. Everybody knew each other and we were all good housed together. He (referring

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> to her husband) did feel there was a divide, and that is what the New Town Commission was trying to eradicate that feeling that all the best fit places were over the west side and the workers were over the east side and the factories (Smith, 2011).

Indeed, this kind of initiatives represented the most significant strategies carried out during the New Town period, which was marked by the construction of the Beehive conservation area in the southeast of Welwyn Garden City from 1953 and resulting in a significant, but insufficient, influx of affluent residents on the eastern side (Ward, 2016). Notwithstanding all the efforts made to balance the socio-spatial segregation of Welwyn Garden City, the wide range of population that the early migrants formed, in combination with 20% of people who hailed from Hertfordshire and 16% of people from Midlands and elsewhere (Tyrwhitt, 1939) could come true the variety of employment, activities and perceptions that the garden city movement aimed to relocate in the countryside.

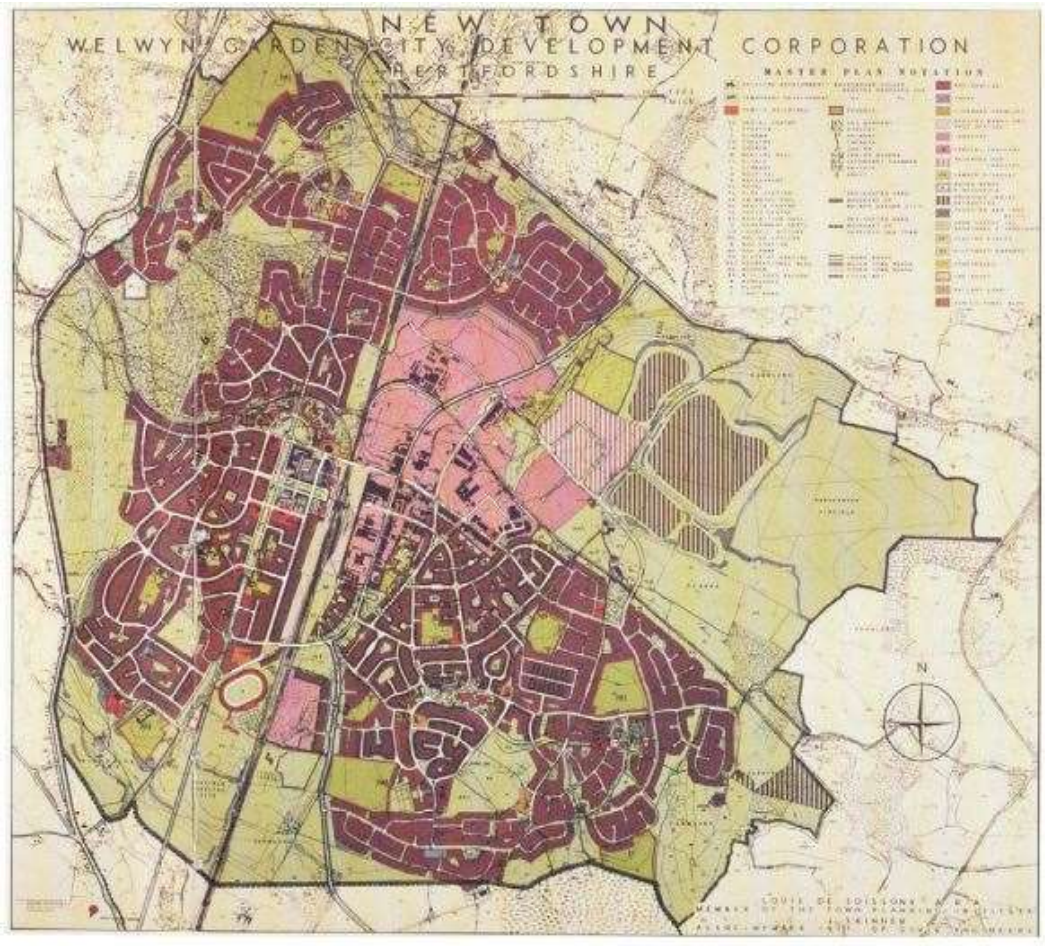


Figure 5.8 1949 De Soissons' master plan for Welwyn Garden City New Town ('*Welwyn Garden City: A Town Design for Health Living*', by Maurice De Soissons).

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At that time, most of the working population of both garden cities came to them because of the wide range of job opportunities there were in both industrial estates coupled with the attractiveness of their striking living conditions, whose combination forged the place for "living and working" that the early publicity of Welwyn Garden City promised. This precept was the town's hallmark even after it became a New Town, what partly offset the early objections and mistrust about the development of the town during the New Town period. It is true that the New Town Programme mainly aimed at developing the town to relocate population from London after the war, although it did not preclude ensuring the self-containment of the town in terms of population and employment, as happened before that period. In 1949, De Soissons carried out a plan (Fig. 5.8) for the expansion of Welwyn Garden City to house a population of 36,500 people, whose target increased to 50,000 people in 1954. Even in terms of aesthetic, the new plan relied on the same neo-Georgian architecture that De Soissons designed and controlled since the outset of the town. In contrast, the New Town era was characterised by hastening housing development, in order to fulfil the high demand of houses for workers that most of the industrialists claimed and thus attracting mainly an influx of people who intended to live and work in Welwyn Garden City New Town.

By the 1960s:

> the 'dormitory' or 'season ticket' element is", according to Osborn, "negligible at Letchworth. At Welwyn it amounts to 15 per cent, and these residents came to the town because they liked it, or at least liked the houses they could get in it; they work mostly in London offices (Osborn, 1969, p. 115).

By 1968, the commuters who worked outside Welwyn Garden City represented 6½% of the, at that time, 45,000 inhabitants, whereas at Letchworth the proportion of commuters was 2½% of its 28,500 inhabitants (Official Census Report, 1968). In addition, it is worth noting the socio-territorial significance of both garden cities with regard to their interchange of workers with neighbouring towns and villages. This territorial network demonstrated that the garden city scheme went beyond its own boundaries and succeeded in creating links with other settlements, by somehow constituting the territorial scheme of Howard's Social Cities, or in words of Frederic Osborn, "Cluster Cities". In the same year, the territorial scope of Letchworth and Welwyn Garden City, together with their surrounding towns and villages, reached a

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population of about 150,000 and 100,000 people respectively, within which about 90% of them worked in the garden cities. In short, 60 years after the establishment of Letchworth and 40 years after the establishment of Welwyn Garden City, more commuters came into the garden cities daily than went out (Osborn, 1969).

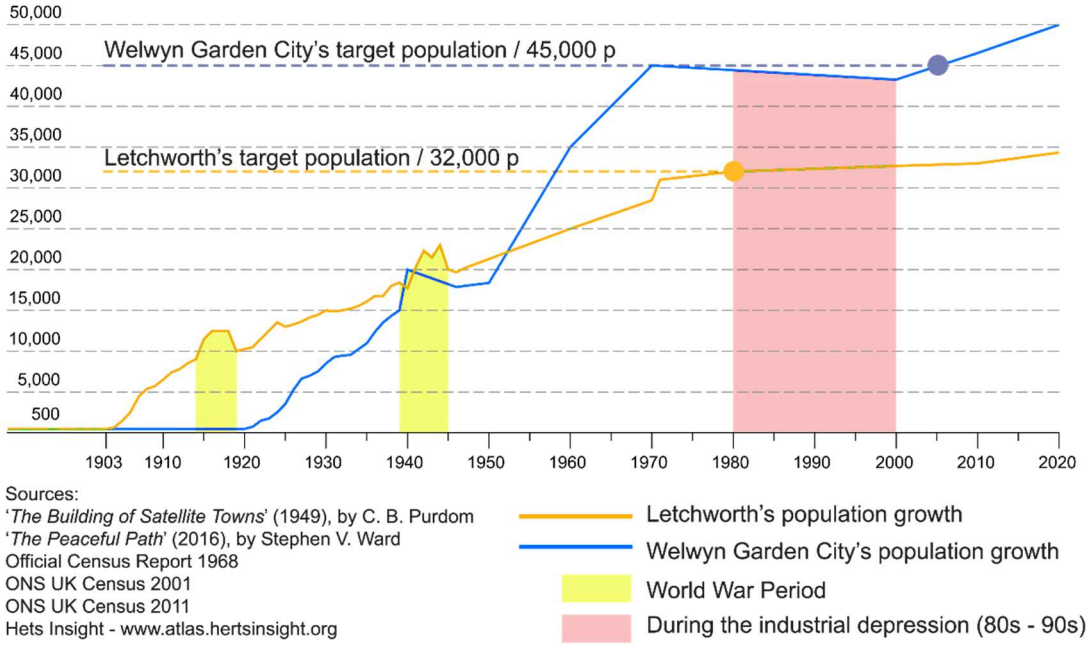


Figure 5.9 Letchworth and Welwyn Garden City's population growth graph (Drawn by the author in 2020).

Nowadays, the number of commuters who come daily into Letchworth, for example, is still bigger than those who work outside the garden city, but the difference has significantly fallen. By 2011, Letchworth's total employment residents were 15,000 people, of whom 28.6% lived and worked in the town, whereas 71.4% worked outside the town. Furthermore, Letchworth's total workplace population comprised 27.2% of workers who lived in the town and 72.8% of workers who commuted into the town, of whom 18% lived elsewhere in North Hertfordshire, 14% in Central Bedfordshire and 7% in Stevenage. On the other hand, the commuters who worked outside the town were 14% working elsewhere in North Hertfordshire, 11% in Stevenage and 10% in London and other towns (Office for National Statistics, 2011), thanks to the good territorial connectivity and proximity of the town with these settlements, which still facilitates significant commuting between each other. In the case of the district Welwyn Garden City – Hatfield, the number of commuters was 53% in 2011 (Office for National Statistics, 2011), which, although that number was far lower than Letchworth, had

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significantly grown since the 60's. This situation was mainly due to the economic changes that both garden cities experienced by the 1980s and the 1990s, what led long-established main manufacturing industries to shut down (Ward, 2016).

In spite of the current number of commuters being currently too high as 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 house to most of their inhabitants for more than five decades at least. There were many shortcomings at the outcome of both towns due to their companies' lack of capital to build enough houses and industrial facilities, what hampered the influx of people and industries, and led to seek other alternatives that in some cases were far from Howard's tenets. 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 the 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, the state helped, albeit indirectly, to develop both towns. Therefore, the use of private funding did not preclude the implementation of public policies, that somehow represented a very fruitful combination for the establishment and growth of these towns, in order to fulfil the needs of shareholders, industrialists, workers and residents, without undermining the independence of the companies to control the development of the garden cities.

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5.2 THE INVISIBLE ARCHITECTURE

A large part of Howard's book was aimed at demonstrating the feasibility of the garden city model through its financial system to achieve the economic self-sufficiency of the garden cities, without any government expenditure on infrastructure. According to Howard, the financial system of a garden city should rely on a co-operative system, in which a company, community or municipality would purchase the land and develop the garden city (Fig. 5.10), thanks to the revenues raised by rents charged for the use of the soil (Howard, 1902). In addition, he proposed that the municipality should own the land of the estate in trust to secure the affordability of the scheme. This way, the municipality, as a collective, would control the price of land to avoid land speculation (Howard, 1902). Such a combination of proposals, derived from the ideas of Thomas Spence, Herbert Spencer and Henry George[12], represented at the end of the nineteenth century and even now, a radical alternative to the real-estate development of urban and urbanized areas. In short, Howard's economic strategy was aimed at fostering a self-financing system that could provide affordable housing and low prices, in order to encourage people and industrialists to become pioneers of experimental new settlements built in the countryside.

5.2.1 The Howardian scheme

To achieve a self-financing system, Howard proposed to save the increment derived from the transformation of agricultural land into urbanised land for public purposes, after payment of the interests and debentures on the purchase and development of the land (Howard, 1902). Such increment would come from the rents of the tenants, who would indirectly contribute to defray all the expenses of the municipality, both in paying the capital previously invested and providing more capital for new improvements and grants for the community. Therefore, instead of having taxes or rates for public purposes, Howard's scheme would provide the enough capital to build a tax-free garden city without any kind of public expenditure on its development. According to his calculations, in 1902, the average sum contributed by each man, woman and child in England and Wales for public purposes was about £2 a year and the average contribution for ground rent and local rates was about £4 yearly, whereas a garden city inhabitant

[12] See Part 2 – chapter 3 '*Beyond the Garden*'.

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would only pay around £2 a year to cover the rents and the cost of public works (Howard, 1902) (Fig. 5.11). This way, the rents paid up by the tenants of the garden city could be deemed, according to Howard, as "rate-rents", which would cover the interest on debentures or "landlord's rent", would refund the money spent in the purchase of the estate or "sinking fund" and would be devoted to public purposes or "rates" (Howard, 1902, p. 14).

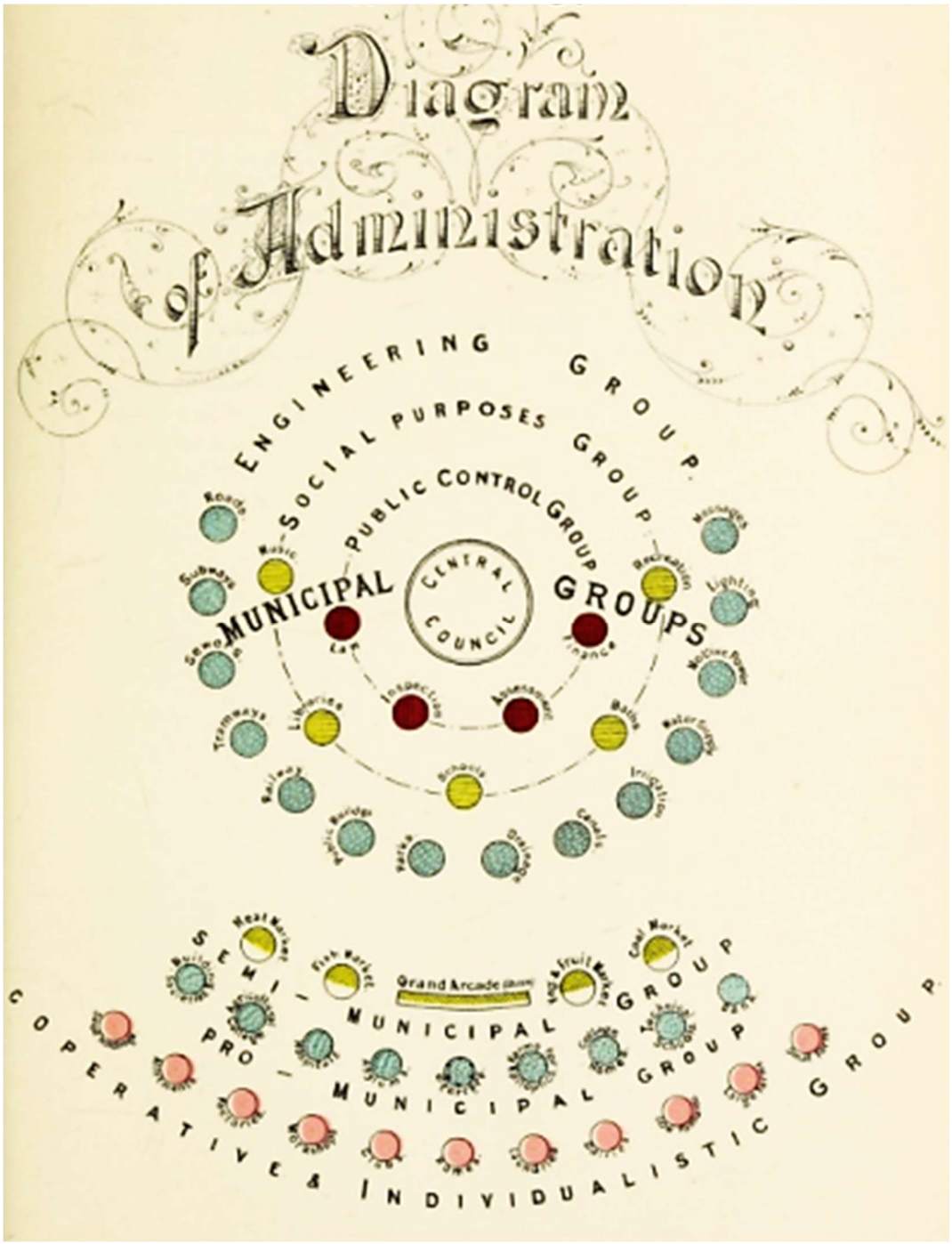


Figure 5.10 Diagram of Administration devised by Ebenezer Howard ('*Garden Cities of To-Morrow*', by Ebenezer Howard).

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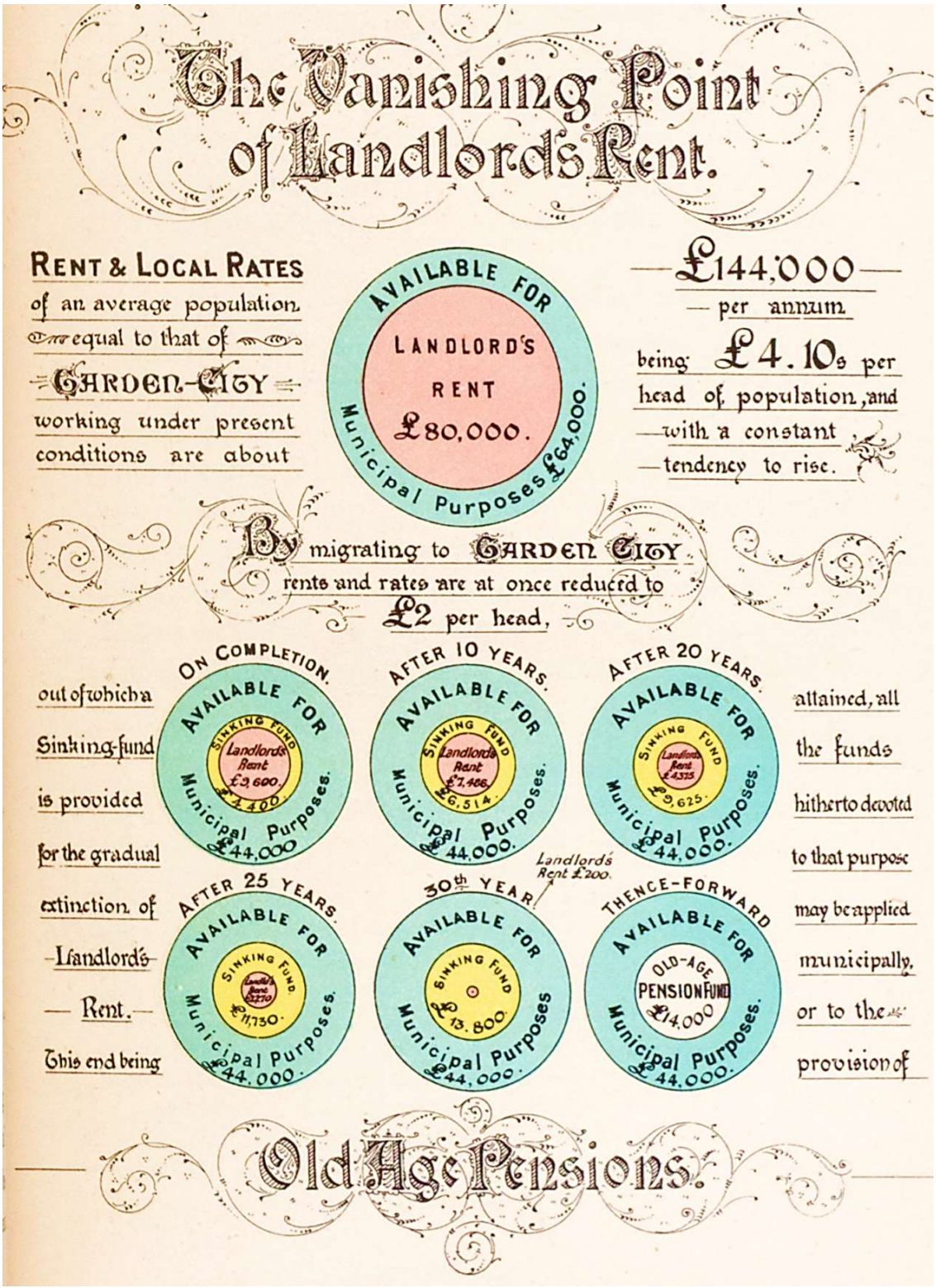


Figure 5.11 Diagram of "rent-rates" devised by Ebenezer Howard ('*Garden Cities of To-Morrow*', by Ebenezer Howard).

5.2.2 Letchworth's financial system

The First Garden City Ltd was the first joint-stock company putting into practice Howard's financial system in the building of the garden city of Letchworth, though with

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a few changes regarding the implementation of a "rate-rent" system. To give effect to Howard's idea, the company decided to implement a leasehold system of tenure, in which the rents should be collected by two means: the implementation of a "fixed-ground rent" that would represent a fair proportion of the purchase price of the land and other expenses related to it; and the implementation of a "rate-rent" that would represent the cost of the public works (Purdom, 1949, p. 165). The company adopted the leasehold system not just to provide the means to redeem the purchase value of the estate and debentures, but mainly to attract population and retain control over the property[13] (Purdom, 1949). This way, the company concurred with Howard that a leasehold system of tenure should be implemented in Letchworth, in order to ease the migration of people to the town, by avoiding land speculation, securing the affordability of houses and thus providing a cheap way of getting a house by renting rather than buying by mortgage loans (Turnbull, 2016).

To achieve that goal, the company deemed necessary to secure the increased value of the land, derived from the transformation of agricultural land into urbanised land, for the benefit of the future community (Purdom, 1949). The original economic basis of the garden city model was, according to Howard, based on the principle that the community should take over the "unearned increment" derived from the development of land for public purposes (Howard, 1902). In this regard, the company established a limitation upon the respective dividend among its members of a maximum of 5% per year, so that a large part of the profits would be, according to the article 129 of the Memorandum of Association of the First Garden City Ltd:

> devoted to the provision of traffic facilities, water supply, lighting, drainage, markets, hospitals, libraries, baths, or otherwise for the embellishment of the town, the provision of means of education, recreation, or amusement for the people, or for any other purpose which the company or its directors may deem for the benefit of the town and its inhabitants (Purdom, 1949, p. 147).

In addition, the company designed an administrative structure to act as a trustee for the future community, both in collecting the rents and distributing its profits, in order

[13] Apart from those reasons, "the company adopted the leasehold system", according to the former chairman of the company Sir Edgar Bonham-Carter, because "if leased for 99 years, the landlord can, at the termination of the lease, get the buildings rebuilt or reconstructed to meet the changed conditions of the time" (Bonham-Carter, 1951, p. 364).

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to repay the paid up capital by the company and make up cumulative dividends of 5% per year among the shareholders of the joint-stock company (First Garden City LTD, 1903). Thus, the appropriation of the so-called "unearned increment" by the company directly benefited the garden city inhabitants, instead of distributing such an increment through public taxation or private investors. In short, such economic scheme under the land tenure model that the company implemented in Letchworth blended elements of a tenant cooperative and limited dividend company, whose aim was to balance interests between the community, tenants, and the shareholders (Birchall, 1995).

Despite Letchworth has lost its original duplex property rights to provide affordable housing and means to finance the maintenance of the town at the present time, the First Garden City Ltd demonstrated, according to Dr Christopher Søren Shann Turnbull[14], "how the uplift in land values from adding services to land augmented by the value added by private investment in leasehold improvements makes urban development self-financing" (Turnbull, 2016). The root of the temporary self-financing system of the company came from the fact that a large part of the capital invested in the purchase of the estate was provided by shareholders.

In 1903, the First Garden City Ltd was registered with an authorised capital of £300,000 through the issuance of ordinary shares, by means of 59,400 ordinary shares of £5 each and 3,000 ordinary shares of £1 each, in addition to issuing 16,000 shares of £5 each through the first prospectus of the company (First Garden City LTD, 1903). However, among the shareholders there were just friends of the scheme and the own directors of the company[15], which was, according to C. B. Purdom, a complete failure by the company in not persuading people unrelated with the garden city movement to participate financially in such joint undertaking (Purdom, 1949). Such lack of interest among the general public was partly because of the experimental character of the undertaking, but also because the ordinary shares were issued to a public more concerned about philanthropic objectives, who would not have equity and could "afford to wait an investment which will prove a sound one" (First Garden City LTD, 1903, p. 3). According to C. B. Purdom, "ordinary shares devoid of equity make no appeal to investors, and it is likely that no one with money to invest who took financial advice was encouraged to put

[14] Dr Christopher Søren Shann Turnbull (1934) is an Australian serial entrepreneur and economic reformer, who has developed the theory and practice of sustainable self-reliant community economic systems.
[15] Indeed, all the Directors had to become shareholders of the Company, in order to comply with the article 95 of Association of the Company, which specified that "the qualification of a Director shall be the holding of 20 ordinary shares of £5 each in the Company of £100 stock" (First Garden City Ltd., 1903, p. 6).

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in a penny" (Purdom, 1963, p. 15). In short, the limitations imposed by the Company regarding dividends and profit distribution discouraged rather than motivated firms and investors to participate in the development of Letchworth (Hall, 2014). As a result of such a failure in attracting a large number of shareholders, the Directors of the Company decided to create a series of debentures, loans and mortgages to cover the expenses on the development of the town from the beginning. In 1904, the ordinary share capital of the company was £100,692, whereas the figure of mortgages, loans and debentures was £83,934, showing the lack of share capital at the outset of the town. In parallel with its financial system, at the early stages of development, the Company lowered the ground rents with the intention of attracting population (Purdom, 1949), which led to an incidental redistribution of the revenue account for the development of the town (Purdom, 1963).

This economic situation caused a delay both in reaching a profit balance on the revenue account of the Company and, therefore, paying the dividend to the shareholders. From the beginning of the town, the Company tried to persuade shareholders to trust the economic success of Letchworth[16], but they received the first dividend of 1% in 1913. However, as Purdom pointed out, this chain of circumstances came from a mistaken system of accountancy, which did not show the gross profit that the Company obtained from the outset of the town, only showing the losses derived from using the revenue account for the development of the town rather than for paying dividends and public purposes.

Within this background, it seemed that the so called "unearned increment" was disappearing at the lack of enough capital to develop the town and the initial low price of the ground rents. On the other hand, it is worth noting that such circumstances were, according to Purdom, the result of a "time factor and the high burden of charges in the early years" (Purdom, 1963, p. 9) that Howard did not take into account when he devised the garden city model. Likewise, such initial undercapitalisation did not allow the Company to be able to build houses, industrial facilities, shops, or public buildings for over ten years (O'Sullivan, 2016). In other words, Howard's economic scheme could represent a valid formula when the town was almost completed, or half built at least.

[16] In 1908, the directors of the Company estimated that "if (…) the whole share capital of the company was subscribed, and the mortgages paid off, the Company would be in position to pay a dividend in all probability next year" (First Garden City Ltd., 1908, p. 1).

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Despite all these financial shortcomings at the outset of the town, also known as, according to Purdom, "The Years of Struggle (1903-1915)" (Purdom, 1963, p. 11), Letchworth overcame its stagnation, but entered a process of inertia marked by several attempts to make Letchworth a New Town (Purdom, 1949). Despite all the efforts of the Company to keep control of the development of Letchworth, the Town and Country Planning Act, 1947, nationalized the development values in all the land, thus removing the economic basis of the garden city (Purdom, 1963). Since then, the so called "unearned increment" upon which the Company funded the development, betterment and maintenance of the town became taxable up to 100 per cent. This action represented the first blow to the Company, which was followed by the alteration of the Memorandum of Association in 1949 regarding the redistribution of the surplus of the net profits[17]. In the same year, the Company gave formal consent to proceed with the ultimate transfer of the company to a public body acting as a trustee, "when the development of Letchworth is substantially completed" (Letchworth Garden City Corporation Bill, 1962). However, before attempting to reach that stage, the alteration of the Memorandum Association was questioned by groups of stockholders, the Urban District Council, the Town and Country Planning Association and the inhabitants of Letchworth due to the threat of property speculation in the garden city, as a result of the removal of the limitation of dividends among the members of the Company in 1956[18] (Letchworth Garden City Corporation Bill, 1962). It is worth noting that such a chain of events was the result of the concentration of power that the company acquired from its foundation as a landlord, development Company, and local authority[19] (Miller, 1989). This way, for better or worse, any modification in the economic architecture of the Company implied a partial or complete structural change in every way.

From 1903 to 1956, the Company adhered to the economic principles upon which the garden city of Letchworth was founded. However, the national acts indirectly contributed to the dismantling of the company's socio-economic tenets. Such alterations of the Memorandum of Association were possible thanks to the Companies Act in 1947,

[17] In case of the winding up of the Company, the changes included the distribution of the surplus of the capital among the members of the association, rather than only paying 10 per cent of the capital.
[18] According to Purdom's calculations, the removal of the limitation of dividend led to a rapid process of speculation. For instance, in 1956 the dividend that the members received was 4%, whereas in 1959 the divided received was 11% (see Figure 48) (Purdom, 1963).
[19] With regard to the structure of the company, during an extraordinary general meeting held in April 1956, the then chairman of the Company Sir Eric Macfadyen concluded that a joint stock company was "a very inappropriate method of carrying out a social experiment" (Purdom, 1963, p. 44).

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that allowed the altering of the companies' articles without the intervention of any court order, thus leaving the door open to modify the foundational principles of the Company without hindrance[20] (Companies Act, 1947). Previous to this situation, an unsuccessful attempt to sell all the assets of the Company by a group of stockholders took place, in view of a possible nationalization of the undertaking by the Government. The promoters of such initiative feared that the nationalization of the estate would have an impact in the value of the equity, which might have resulted in receiving less money than the money they might have received from a private company. In this context of increasing turmoil among members of the Company and shareholders, some proposals aimed at preserving the affordability of the estate were issued by the Urban District Council and the Company to offer the undertaking to a public or private body, respectively. After several annual general meetings held by the Company from 1956 to 1960, together with additional meetings between the Urban District Council and the Company characterised by heated discussions among individual shareholders, "The Years of Danger (1956-1960)" (Purdom, 1963, p. 41) became more evident and finally ended with two letters sent to the Company in November 1960.

The first letter was sent by Mrs Amy Rose on behalf of Hotel York Limited, as an offer to purchase the estate with the intention "to ensure the future of Letchworth as a unified estate in accordance with the principles on which the town has been developed since its foundation by (the) Company in 1903" (Letchworth Garden City Corporation Act, 1962). The second letter was sent by political parties and the Urban District Council, as a complaint regarding the rapid process of property speculation of Letchworth after the change of course of the Company, coupled with an appeal to the Government to take over the estate. The latter stated that "if the experiment is to be preserved and carried through to fulfilment, if the lessees, if the inhabitants of the town are to be protected, then action on the part of the Government, or some public body, is essential" (Purdom, 1949). The Council proposed the creation of a trustee body of a non-political nature to acquire all the assets of First Garden City Ltd,

[20] The part III, section 76 of the 1947 Companies Act, on the alteration of Company's object, says: "a resolution under section five of the principal Act passed after the coming into force of this section for altering the provisions of a company's memorandum with respect to the objects of the company shall not require confirmation by the court".

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> thus preventing speculators from taking the profit of the increased values in the town created by the investment not only of the earlier stockholders but in particular of the lessees, the traders, the industrialists, and, not least, by the local authority on behalf of the ratepayers (Purdom, 1949).

This letter was published in many national newspapers, whose impact in public opinion boosted the interest of Letchworthians to attend a meeting held by the Urban District Council to address the question of the future of the town. The conclusion of the attendants in such meeting was in line with the Urban District Council, who petitioned the Minister of Housing and Local Government, First Garden City Ltd and the Urban District Council to take action against the ever closer release for sale of the town and establish a public trust through a private Bill (Purdom, 1963).

Despite all the efforts of the Urban District Council to discourage Mrs Rose to acquire the estate and promote a Bill in Parliament to take over the estate, which was received with great enthusiasm by the inhabitants of Letchworth, one of the stockholders of the Company – Raglan Property Trust Limited – disposed of its shares to Mrs Rose. This action was followed by Mrs Rose's offer to acquire the rest of shares and the invitation of the Company to take her seat on First Garden City Ltd's board in December 1960 (Purdom, 1963). The effects of Mrs Rose's take-over started to be noticed in the following months, such as the offer for auction of freehold land for housing development in June 1961 and the possibility of leaseholders of residential properties to become freeholders in November 1961[21] (Purdom, 1963). In response to the removal of Howard's socio-economic model, the Urban District Council promoted Letchworth Garden City Corporation Bill in order to transfer and confer powers to that Corporation, as a public authority, the undertaking of First Garden City Limited, which was approved by House of Lords and became an Act in 1962 (Letchworth Garden City Corporation Act, 1962).

Through this act, the Corporation could borrow any sum of money from the state for the purposes of transferring the undertaking of the Corporation and the payment of compensation after the assets' acquisition, within a repayment period of 60 years. Such

[21] However, there were some inhabitants who refused the Company's offer to become freeholders of their properties. According to C. B. Purdom, "a lessee, Mr J. W. Collings, gave evidence that in 1947 he had bought his house subject to a £3 ground rent on a ninety-nine year lease, dating from 1906, and that in December 1961 First Garden City Limited had offered him the freehold reversion for £738. He did not accept the offer because he thought that it was against the principles of the garden city" (Purdom, 1963, p. 84).

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power to borrow money under the mentioned conditions, together with the power for the Urban District Council to lend to Corporation, represented a good incentive to proceed with the transfer of the undertaking aimed at recovering the original garden city ethos. Regarding this, the nature of the revenue received by the Corporation was not just conceived for the payment of:

> any working, establishment or maintenance expenses properly chargeable to revenue incurred by the Corporation (…), the payment year by year of the interest accruing on any moneys borrowed by the Corporation (…)", but also for "any balance may in whole or in part be devoted to the provision of traffic facilities, lighting, drainage, markets, libraries, baths or otherwise for the embellishment of the undertaking of the Corporation, the provision of means of education, recreation or amusement for the people or for any other purpose which the Corporation may deem to be a requisite public service[22] (Letchworth Garden City Corporation Act, 1962).

This way, the Corporation included on its agenda the main aim of Howard's vision, which, according to Frederick J. Osborn, was not about establishing cheap prices, but to use the surplus revenue for public benefit (Osborn, 1969). Osborn, on behalf of the Town and Country Planning Association, did not agree with the Company's shift in removing the limitation of dividend in 1956 and the subsequent attempt to break up of the town as a unitary freehold[23] (Purdom, 1963).

When the Bill was read a second time in the House of Lords in June 1962, Lord Molson highlighted "that when people engage on certain understandings, and with certain rules laid down, those rules are not to be changed to their disadvantage before the end of the contract" and he concluded that "this idea of perpetual freeholds is of special interest" (Letchworth Garden City Corporation Bill, 1962, column 1072). Despite twenty years earlier there was no intention by the government to nationalize the land of Letchworth, thus refusing to designate Letchworth a New Town, the idea of preserving the original principles of the garden city model prompted the creation of a corporation to take over

[22] Taken from Letchworth Garden City Corporation Act 1962, Part IV - Finance, article 32 on Application Revenue.
[23] A circular was issued by Mrs Rose, in which she asked the shareholders to sell their shares to Hotel York Limited.

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the estate. After all mentioned circumstances, the government considered that the garden city principles were being abandoned in favour of shareholders and the Company. In this regard, some politicians like Lord Silkin, who promoted the takeover of Welwyn Garden City to become a New Town, thought that it was the right moment to take over the estate (Letchworth Garden City Corporation Bill, 1962). However, the act did not make Letchworth a New Town, but maintained its character as the first garden city, due to the fact that the new corporation – Letchworth Garden City Corporation – was an independent public enterprise not under government control (Purdom, 1963). Therefore, Letchworth did not meet the same fate as Welwyn Garden City, which became a New Town in 1949.



Figure 5.12 WGC Urban District Council rent cards dating between 1932 to 1963 (WGC Heritage Trust).

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5.2.3 Welwyn Garden City's financial system

After twenty-nine years of development in the same way as Letchworth was invested and managed[24], Welwyn Garden City was taken over by the government under the New Towns Act, 1946. Unlike Letchworth, Welwyn Garden City fulfilled the conditions to become a New Town because of its early development, its proximity to London and the possibility of merging with Hatfield to relieve overcrowding in London and accommodate about 36,500 people (Purdom, 1949). The beginning of the takeover of the estate began in 1947, when the Minister of Town and Country Planning Lewis Silkin decided to acquire the garden city for the previously mentioned purposes. In such circumstances, Welwyn Garden City Limited tried desperately to convince the government to permit "the Company to go forward to the completion of the work[25] which it undertook many years ago on a basis (…) to be entirely consistent with the policy of the government" (Chambers, 1947). However, the Company was not part of the Minister's plans to develop the estate, because, according to the Minister, "the Company is answerable only to its shareholders and to no one else (…) It would be just what the Company would like and not what the people would like. This is opposed to any sense of democracy" (Silkin, 1947). Silkin refused any proposal of coexistence between the Company and a development corporation and offered the Company to purchase the estate, as the only way to transfer the estate (Welwyn Garden City's Handbook, 1948). This situation led Theodore Chambers to emphasize that the success of Welwyn Garden City was the result of the hard work of the Company and the patience of its shareholders[26], thus trying to demystify the preconceived ideas about the joint stock company that founded Welwyn Garden City (Chambers, 1947).

In spite of the resistance of the Company to the takeover, it was not possible to both revert the intentions of the government regarding the acquisition of the assets by a development corporation and allow the coexistence between the Company and a development corporation (Purdom, 1949). After several attempts to convince the Minister

[24] The early years of Welwyn Garden City were also quite similar to the earliest stages of Letchworth, by suffering the lack of enough capital for housing development, the removal of the limitation of dividend and the nationalization of the "unearned increment" in 1947.
[25] The Company intended to sell the whole of the freehold land required for the new town to the government when the development of the town was substantially completed - 95% at least (Chambers, 1947).
[26] The shareholders received the first dividend of 2% in 1936, 3% in 1937, 4% in 1938 and 5% in 1939. However, during the war years 1939-1945 the shareholders went from receiving no dividends from 1940 until 1941, to 2% for each of the next four years (Purdom, 1949). "The shareholders", according to Theodore Chambers, "have not only temporarily given up rights to half a million pounds in consequence of a reconstruction in 1934, but have suffered the deficiency of interest during the last twenty-eight years amounting to not less than three-quarters of million pounds" (Chambers, 1947).

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to reconsider his position regarding the Company, Welwyn Garden City Limited was wound up and Silkin appointed a corporation for the development and expansion of Welwyn Garden City in June 1948. 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 allows 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.

In short, 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. On the one hand, 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). The other factor was that, 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". Within this background, "small wonder Howard's economic ideas have been suppressed" (Thomas, 1998).

5.2.4 Letchworth Garden City Heritage Foundation

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[27]. Letchworth Garden City Heritage Foundation, which was founded in 1995, has a large portfolio of residential, industrial, and commercial assets

[27] As defined by the Letchworth Garden City Heritage Foundation, "we are a registered society under the Co-operative and Community Benefit Societies Act 2014, with charitable status, registered number 28211R. Our charitable aims are set up in the 1995 Act and its governing document, The Rules of Letchworth Garden City Heritage Foundation' (Letchworth Garden City Heritage Foundation, 2019, p. 24).

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valued at approximately £100 million. Such portfolio generates an annual yield of about £9 million (Fig. 5.13) of which £4 million are reinvested for the development and maintenance of a free local transport network, a free health treatment centre, a four-screen art deco cinema, a garden city study centre, etc (Lewis, 2013).

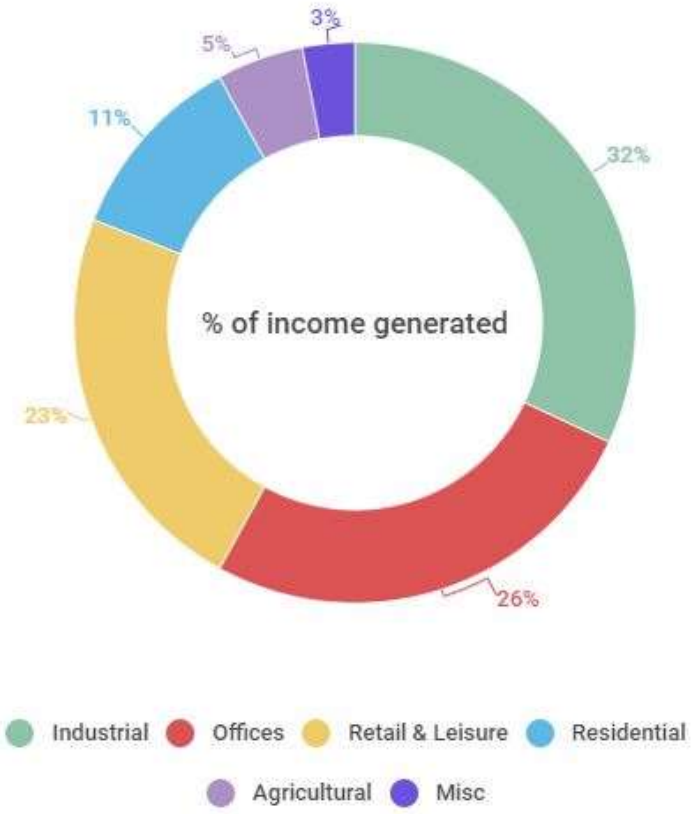


Figure 5.13 Diagram about how LGCHF's portfolio generates income (Letchworth Garden City Heritage Foundation).

Likewise, the Foundation 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 of expenditure on investment property management and charitable activities. Such net income is good evidence of the successful garden city economic scheme, which is not just fulfilling the socio-economic needs of Letchworth, but also provides a resulting

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surplus of capital that increases year by year[28] (Letchworth Garden City Heritage Foundation, 2019). In short, this reinvestment model is nothing new, but, according to the former Chief Executive of Letchworth Garden City Heritage Foundation John Lewis, "what makes Letchworth unique is that this operational model has not been replicated on this scale anywhere else" (Lewis, 2013, p. 2).

5.2.5 Cooperative Land Banks

Despite the two garden cities have lost their original land tenure system, the example of Letchworth heavily inspired economists like Dr Christopher Søren Shann Turnbull, who developed the concept of "Cooperative Land Banks" (Turnbull, 1983). A Cooperative Land Bank consists of, according to Turnbull, 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 garden cities' self-financing system (Turnbull, 2018). In this regard, the dual land tenure system of a CLB is based on the garden city model, which separates the ownership of the land from the ownership of buildings (Turnbull, 1983). Likewise, the ownership in 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. 71). In other words, Turnbull's proposal is to tailor the garden city's land tenure system to modern realities beyond the boundaries of the English garden cities.

However, unlike the garden cities' management structure, the shares of a Cooperative Land Bank should be held by residents rather than by the investors, thus complying with Howard's self-governance scheme (Turnbull, 1992). In this regard, as Turnbull points out, "Howard did not design ways for the invisible structures of ownership and control to be localized to facilitate self-governance. As a result, the Letchworth Corporation became the target of a take-over bid from a corporate raider in the 1970's" (Turnbull, 2008, p. 5.14), which prompted the nationalisation of the development corporation. To avoid such situation, Turnbull proposes to distribute shares among the pioneer homeowners and future inhabitants in proportion to the area occupied and time of permanence[29] (Turnbull, 2018). In addition, adult residents would have one

[28] Whereas in 2019 the net income represented a surplus of capital of £234,000, in 2018 the net income represented a deficit of £40,000 (Letchworth Garden City Heritage Foundation, 2019).
[29] E.g. one share per square meter.

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vote each[30], so that the Cooperative Land Bank could take the role of a "Community Land Trust", in the form of a local government body (Benello C. G,, Turnbull, S., and Morehouse, W., 1997). This way, a homeowner in a CLB disposes two types of equity, the building or apartment where s/he lives, and the community shares related to the land (Lewis, 2011). Likewise, thanks to this system, "it could be possible", according to Turnbull, "that residents would not need to pay any rent/rates while also obtaining dividends from their Cooperative Land Banks shares" (Turnbull, 2007b, p. 9).

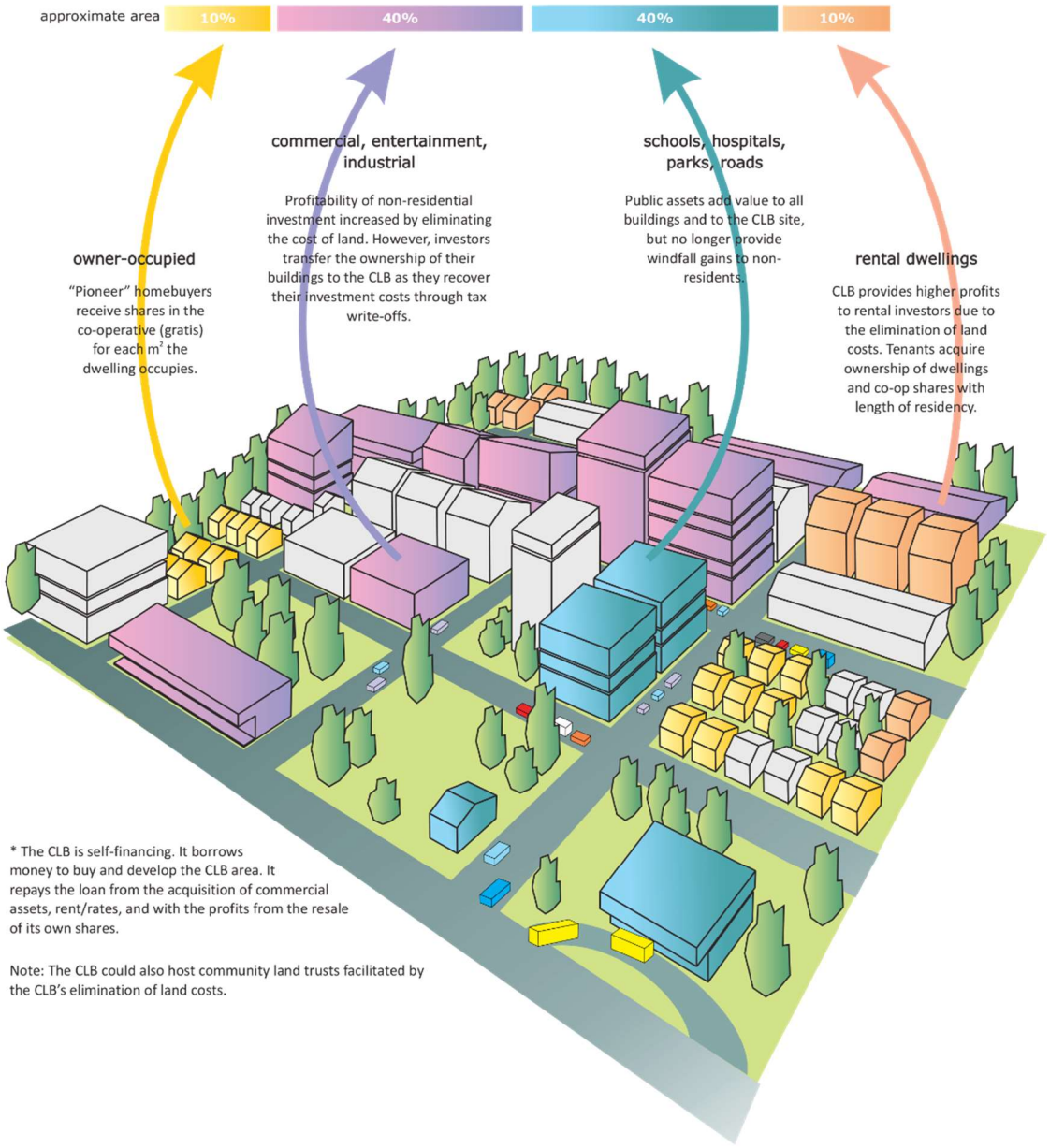


Figure 5.14 Diagram of a Cooperative Land Bank ('*The Resilience Imperative*', by Michael Lewis. Illustration by Don McNair).

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

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Just like the garden city's economic model was thought as a barrier against land speculation and to secure the affordability of residential, industrial and commercial assets, the cooperative land bank 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, S., Archer, R. W., Tanpmphat, S., and Wegeun, E. A., 1983). Therefore, self-financing communities under the above-mentioned economic scheme need to eliminate the loss of economic value from, according to Turnbull, "(i) imports exceeding exports; (ii) migration of its citizens; (iii) wages, salaries, and fees paid to guest workers; (iv) rents, profits, dividends, royalties, and fees paid to external property owners, and; (v) interest payments to external lenders" (Turnbull, 2007a, p. 3). To achieve that goal, a cooperative land bank should represent a neighbourhood or a community of 3,000 to 50,000 people (Angel et al., 1983), so that there would be enough people to facilitate and maintain such economic system. Apart from the quantitative aspects of a cooperative land bank, the inhabitants could obtain shares in the cooperative and in all common areas, depending on the area occupied by their leasehold improvements (Angel et al., 1983). In addition, they could sell their shares and lease to third parties, being able to negotiate the price of the property with the buyer. However, the price of their shares would be determined by the land bank to maintain the affordability of the land in the form of shares (Angel et al., 1983). In short, what Turnbull proposes is in many ways similar to the structure of First Garden City Ltd or a condominium, but in a more participatory and less restrictive way, by letting the residents to obtain shares in the CLB and sell them to others (Angel et al., 1983).

Regarding the self-financing system of a cooperative land bank, a CLB could capture cash flow from land development profits and reinvest the profits for the benefit of the community. Such self-financing or reinvestment system should, according to Turnbull, arise from a wide and varied range of income sources, such as the income generated from commercial enterprises, proceeds from the sale of shares, savings on community improvements and rent-rates (Angel et al., 1983). This way, residents would gain equity from the development of the entire community, instead of just from the land they occupied. This could be possible thanks to the issuing of some concessions and restrictions to secure "operating profits" to invest in community amenities, either from housing or commercial development. On the one hand, if a resident wanted to rent his/her home within a CLB, the incoming tenant would become a co-owner at 4% per year, thus encouraging to sell rather than becoming a landlord. On the other hand, if a commercial

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or industrial investor wants to invest in non-residential developments of a CLB, they would get a tax deduction of 4% per year until they recover their investment costs. After that stage, the industrial and commercial facilities would be transferred to the CLB, thus taking over the "unearned increment" or "surplus profit" of investors as "operating profits" for the community (Lewis, 2011) (Fig. 5.15).

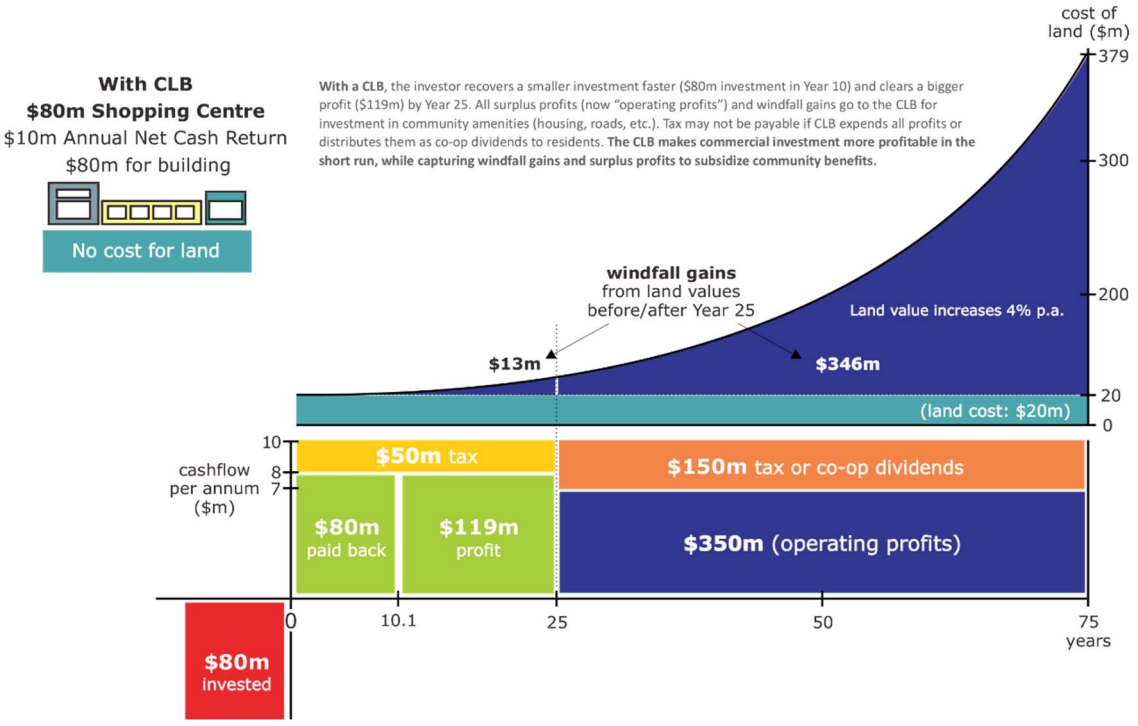


Figure 5.15 Example of a commercial investment with CLB ('*The Resilience Imperative*', by Michael Lewis).

While untested, the cooperative land bank model could be applied to the building of a new community, as well as to the redevelopment of a deprived area, brownfield or abandoned settlements. 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 could become the key to success in revitalising rural communities in decline, by capturing rising property values for the benefit of the villagers, while preserving the housing affordability, and thus attracting people and means of production to start from scratch in rural areas.

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Despite all the economic and financial changes suffered by the two garden cities over time, the achievement of Letchworth and Welwyn Garden City lies in the fact that their original self-financing model boosted and verified the most difficult stage of any experimental project, its beginning.

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5.3. DECONSTRUCTING A DISURBANIST MODEL

Just as any city is shaped by certain urban patterns related to sanitary, cultural, or geographical issues, a garden city is shaped by similar approaches but adapted to a rural context, both in terms of aesthetics and lifestyle. Indeed, the rural environment is the main factor that determines the housing density, the height of buildings, the distances, the daily activities, the ways of production, or even the spirit of place of any rural settlement. Blending all these aspects, the garden city model acquires a rural character that differs from any urban settlement, by encouraging a spirit of co-operation, providing a picturesque townscape, and establishing green buffers between residential, commercial, and industrial areas. This formula, whose order of factors 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.

As we have seen in Chapter II of Part II, the garden cities' urban form came from the combination of urban and rural aspects through the practice of "rus in urbe", such as its urban formality to perceive and frame the rural landscape. From the picturesque village, the garden city model took the rural informality through the combination of variety, intricacy and play of outlines within the residential areas. From the industrial village, it took the combination of residential, recreational, and industrial areas located within the same rural settlement. From the suburban garden community, it took the implementation of private gardens, as well as the preservation of existing mature trees. And from the industrial garden village, it took the use of the cluster of houses as a residential unit with inner gardens, whether allotments or recreational grounds. In short, these precedents were the result of several attempts to introduce traditional rural aspects within urban and rural environments, as a chain of overlapping revivals of rural imagery, which led to the inception of the garden cities' urban form, either to frame bucolic landscapes or embody the spirit of place.

Therefore, such "disurbanist model", if thoroughly applied, could represent a reference to regenerate and expand small rural communities in decline. No matter the difference of scale between a garden city or a village when the elements that shaped the first are sensibly adapted and applied to the second. However, before defining the guidelines to achieve such improvements in rural communities, this chapter will explore the potential of the garden cities' planning schemes to restore the spirit of co-operation,

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enhance the rural landscape and foster the regeneration of common areas in existing rural communities.

5.3.1 Fostering the spirit of cooperation among residents

In Letchworth and Welwyn Garden City, the spirit of co-operation can be found in the layout of village greens, cul-de-sacs, and allotments at the core of some residential clusters. As we have seen in Chapter IV Part II, the implementation of village greens in residential areas was the result of the reinterpretation of the traditional British village green, in order to create a strong sense of community in the domestic realm of garden cities. In both Letchworth and Welwyn Garden City, such planning practice had the success that the co-operative housekeeping examples did not, because it did not imply the imposition of a co-operative way of life but provided a way to lay out the houses according to co-operative principles (Pearson, 1988). In this regard, Unwin stated:

> that 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 its aesthetic aspects, a village green can be used as a multifunctional public space by nearby residents, in the form of a gathering place, a playground for children, a picturesque picnic site, or even a park. On the other hand, apart from the wide range of activities that can be performed there, a village green can provide a green buffer zone between the buildings and give more openness and intricacy to residential roads. Likewise, its implementation can enhance a sense of individuality among the residents and encourage the spirit of co-operation alike. In this regard, the layout and distribution of buildings play an important role in achieving these perceptions, in addition to obtaining sunlight and open views towards the common village green. According to Parker and Unwin:

> The arrangement that should be adopted to obtain the best result, would depend entirely on the nature of the site. If it were on the ridge of some rising ground, probably the best plan would be to group the houses at each side of a good broad

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roadway, taking the wide village street as the suggestion; while on a good southern slope, the most successful plan might be to gather the houses and other buildings on three sides of an open space, adopting the village green as the model (Parker and Unwin, 1901, p. 97) (Fig. 5.16).

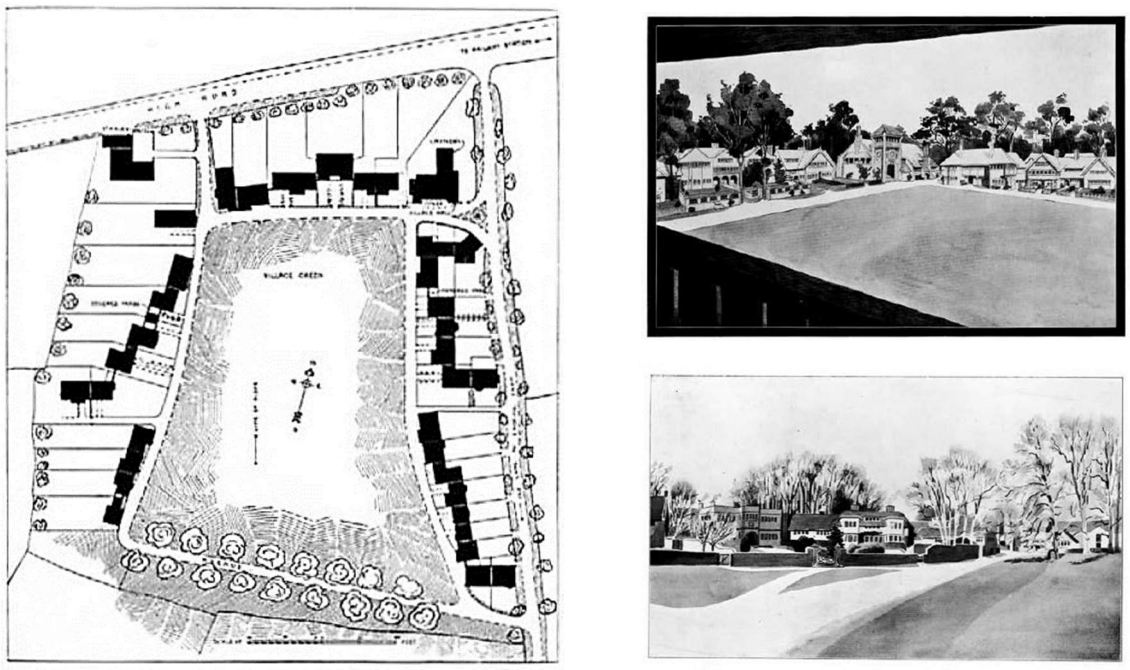


Figure 5.16 Plan and sketches for a village green designed by Parker and Unwin ('*The Art of Building a Home*', by Barry Parker and Raymond Unwin).

Following these principles, architects Parker and Unwin designed most of Letchworth's village greens, such as those located at Eastholm, Westholm, Bird's Hill Estate, Common View, Cromwell Green, Glebe Road and Green Lane. Parker and Unwin laid out these open village greens as "kneecaps" between the roads and the cluster of houses, either facing a park or another group of houses. This combination provides a dual perception of the housing schemes as the houses form residential blocks which are in turn composed by small open groups of houses. This curious dual perception of residential blocks is due to the ad hoc nature of Letchworth's residential development, where, unlike the industrial garden villages of Port Sunlight and Bournville, the layout of roads took precedence over the layout of residential blocks. For instance, Parker and Unwin laid out Bird's Hill Estate by implementing a cul-de-sac and a village green, where the cottages have open views towards Ridge Road to avoid creating awkward angles in the street scene and adapt to the site conditions (Unwin, 1909) (Fig. 5.17).

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Figure 5.17 1927 postcard showing groups of cottages at Ridge Road (Garden City Collection).

One of the precedents related to this housing scheme was the planning of New Earswick (Fig. 5.18), where Parker and Unwin laid out a series of open clusters of houses in the form of cul-de-sacs scattered along the roads to avoid back projections throughout the village (Parker, 1923). According to the British architectural writer Lawrence Weaver:

> The plan of the village is on open lines, but that does not mean extravagant lines. Intelligent planning of sites and roads, moreover, actually saves cross-roads without reducing the number of houses per acre and yields vistas and street pictures instead of a dreary uniformity (Weaver, 1925, p. 1 and 2).

As in New Earswick, Parker and Unwin implemented the same housing schemes at Letchworth, in order to shape the residential areas as a group of small villages along the roads (Fig. 5.18; 5.19). It is worth noting that this informal lay-out was, at that time, a reaction to the monotonous and unhealthy terraced houses built by speculative builders, who, according to Barry Parker, "accepted as a matter of course that the lay-out of every estate (they) developed should be practically the same irrespective of what the physical characteristics of each estate were" (Parker, 1923, p. 3). This way, the cul-de-sacs and

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village greens in the form of small parks or playgrounds became the hallmark of the garden cities of Letchworth and Welwyn Garden City alike, by providing housing schemes of infinite variety throughout their residential areas and achieving a feeling of enclosure around the open quadrangles (De Soissons and Keynon, 1927).

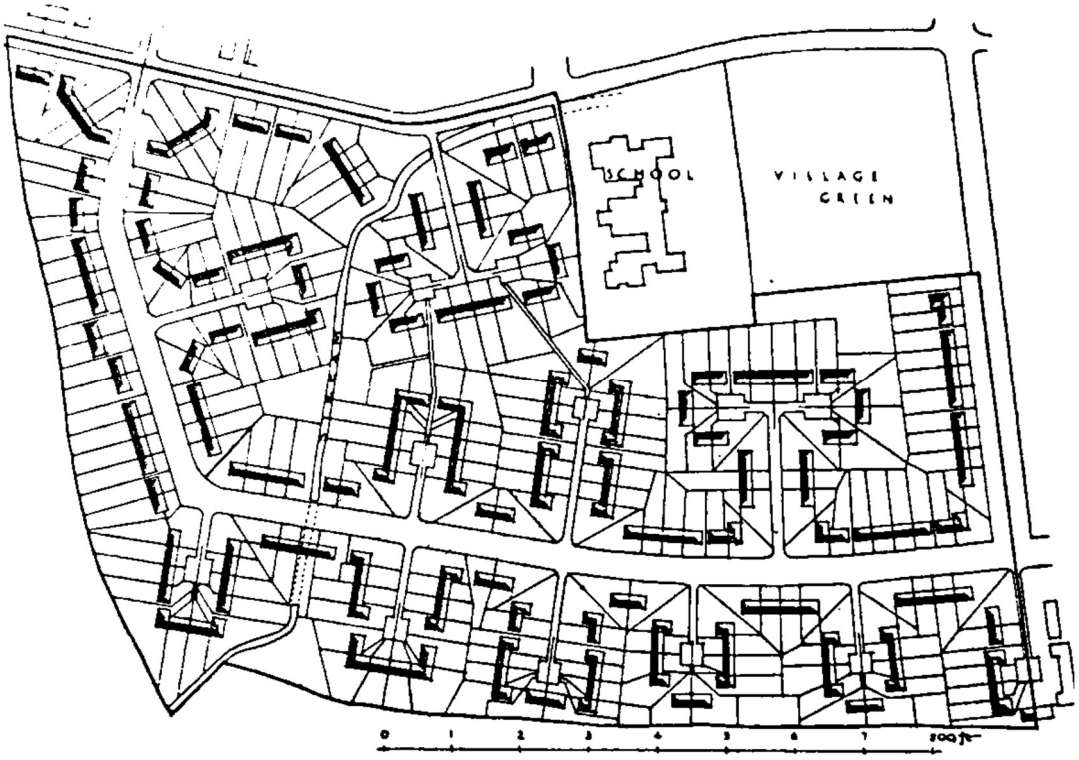


Figure 5.18 1902 Parker & Unwin's plan for New Earswick ('*Site Planning as Exemplified at New Earswick*', by Barry Parker).



Figure 5.19 A village green at New Earswick (Taken by the author in 2022).

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Therefore, beyond the economic reasons of implementing cul-de-sacs rather than through roads in garden cities, their layout was equally important to foster a strong sense of community in these open residential clusters. At Welwyn Garden City, Louis de Soissons experimented with a wide range of different cul-de-sacs, in order to provide a varied townscape across the residential areas of the garden city.

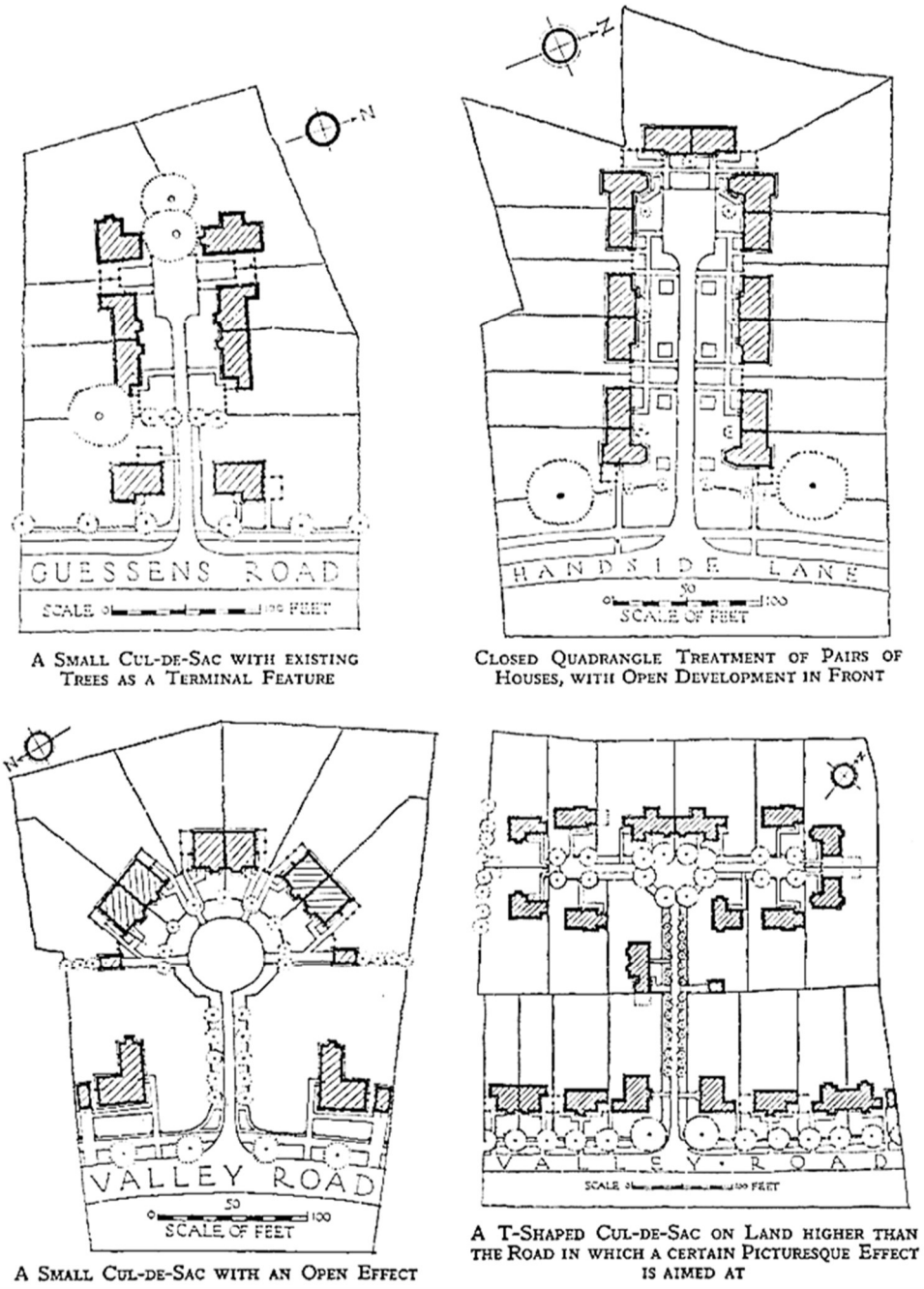


Figure 5.20 Street layout plans illustrating types of cul-de-sacs of Welwyn Garden City ('*Site Planning in Practice at Welwyn Garden City*', by L. de Soissons and A. Kenyon).

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His book, '*Site Planning in Practice at Welwyn Garden City*', written and illustrated in collaboration with Arthur WM. Kenyon, depicts very well how the cul-de-sac embodies the spirit of place of the garden city. De Soissons designed squared, triangular, circular, and even T-shaped cul-de-sacs, whose shape was the result of integrating existing mature trees, orchards, and the contour of each area into the Welwyn Garden City's housing development (Fig. 5.20).



Figure 5.21 "The Quadrangle", one of the cul-de-sacs of Welwyn Garden City (Illustrated by Antonio Blanco Martínez in 2021).

In combination with the lay-out of houses and the preservation of existing trees, De Soissons was extremely thorough in tree planting to highlight the entrances, as well as assuring the privacy, comfortability, and safety from the main roads (De Soissons and Keynon, 1927). In short, the cul-de-sac system, either as a common green area or as a combination of open private gardens, can be considered to some extent as a small version of the traditional village green (Fig. 5.21). This way, the housing areas were laid out as, according to Victoria Axell, "villages in miniature, either curving away from the main roads or standing around square gardens" (Axell, 2018, p. 46). At the core of such closes, children can be found today playing together on the lawn, just as children did in the past.

During an interview conducted on 31st May 2021 by the author, Anne V. Woolmington, who is one of the oldest residents of the Quadrangle (Fig. 5.22), highlighted that she had a lovely childhood in the close playing together with other four children who lived there. Since the beginning of the first coronavirus lockdown in the UK, she received help from other neighbours of the Quadrangle to get food and supplies, as well as was able to do outdoor activities on the lawn when allowed. In addition, she

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and her neighbours organised some celebrations like the "D-Day Party" in the common garden to avoid crowds near the town centre. She concluded that the close is a fantastic place to live, as it offers the quietness and safety for children that other areas cannot offer. Other residents of Welwyn Garden City like Robyn P.P., who lived in Creswick Court, highlighted that she had also a "lovely childhood with lovely memories of friendship in the court" (Robyn, 2011).



Figure 5.22 Anne Woolmington holding an old sketch of The Quadrangle (Taken by the author in 2021).

These testimonies reflect the success of this planning scheme in encouraging the spirit of co-operation, reinforcing a strong sense of community among the residents, and providing a varied townscape. Good evidence of this was the recurrent use of this planning scheme at Welwyn Garden City over time, even after the death of Louis de Soissons. As stated in the '*Welwyn Garden City Official Guide 1970*', the Urban District

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Council "proposed to continue the policy of building houses in closes and cul-de-sac which gave the planning and architectural staff of the Corporation the opportunity to use a pleasing diversity of designs rather than the somewhat monotonous pattern formed by length of road" (Pike, 1970).

Beyond these front gardens and common gardens, some of the biggest residential blocks contain other common areas for domestic operations and leisure, such as kitchen gardens, playgrounds, sport courts or allotments. Despite the fact that 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 do sport, 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). This way, according to Unwin, "a sense of orderly design would at once be given to the ground, and the fences or hedges between the remaining portions of the garden plots would lose much of the ugliness arising from their concentration near the central point" (Unwin, 1909, p. 359) (Fig. 5.23).



Figure 5.23 Residential blocks with inner gardens at Letchworth (Illustrated by the author in 2021).

An example of this is a residential block at Letchworth (Fig. 5.23; "C") surrounded by Icknield Way, Archer Way, Saffron Hill, and Redhoods Way, where an orchard helps to avoid the concentration of fences in the core of the cluster. In addition,

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plenty of examples can be found at Letchworth and Welwyn Garden City with playing fields, playgrounds, and tennis courts at the back of the houses, which not only fill the gaps in between the residential plots, but also promote the spirit of co-operation among residents along the same lines as the shared front gardens (Fig. 5.21).



Figure 5.24 Plan and sketches of one block for the expansion of Letchworth (Letchworth Garden City Heritage Foundation).

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 clusters, such as playgrounds, sport courts, allotments, and orchard trees (Fig. 5.24). The urban design studio laid out these "spaces within the perimeter blocks (to) afford opportunities for urban food-production; and offer suitable spaces for active, relatively unsupervised play in outdoor green environments, with health and socialisation potentials" (Ecoresponsive Environments, 2018). Regarding this

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proposal, it is worth noting that during the '*Letchworth Four Conference*' held in February 2019 by the New Garden City Alliance and ConnectedCities, the speakers highlighted the suitability and sensibility of the winning proposal in providing a thorough planning of community facilities and allotments within the blocks.

5.3.2 The implementation of a picturesque townscape

Apart from the social impact of the common areas mentioned above, they help to shape the "accents" of the street scenes, forming a picturesque townscape full of surprises and variations throughout the residential areas. In addition to grouping some buildings into small open clusters, the townscape can acquire other accents by setting back some buildings, closing the view of the street or breaking the building line (Unwin, 1909). 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).

Nevertheless, the play of outline that can be perceived in the garden cities' residential areas did not only aim to create a varied townscape, but also give open forecourts to plant shrubs, flowers, and more trees in the street scene, thus achieving a charming and picturesque townscape alike. 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).

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) (see Figure 60). 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

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laid out along a pre-existing lane for economic reasons[31], 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. This way, according to Unwin:

> Where, for example, a road can be made to run alongside a well-grown old hedgerow a beautiful decoration and a special characteristic is at once secured for that road, and a sense of privacy for the gardens, which it would take perhaps many years to secure the new growth (Unwin, 1909, p. 290).

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.

Such 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". As Unwin stated, "where the street picture is closed by some terminal feature of special beauty and interest, a more simple and monotonous treatment may be permitted, and will even serve to enhance the effect by contrast with the more ornate centre" (Unwin, 1909, p. 254). This way, the sense of finitude and closure is always present when walking through the garden cities' roads, because at the end of each road there is usually a building or a group of buildings closing the view as "turning points" of the street scene. In other words, the principle of closure does not just provide the means to achieve a varied townscape, but also gives the "periods" and "paragraphs" to the garden city's (r)urban pattern. Jackman's Place is one of many examples at Letchworth where one can experience the above-mentioned principle of closure, either in junctions, village greens or cul-de-sacs, at the lack of unreachable vanishing points (Fig. 5.25).

[31] 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).

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Figure 5.25 1925 bird-eye view of Jackman's Place at Letchworth (Historic England).

Despite the preservation of long existing lanes may create the opposite effect, the garden cities' architects experimented different ways of integrating road junctions in pleasant balanced groups of buildings, in order to shape little "places" along the roads (Parker, 1937). Just as Parker and Unwin designed an octagonal grouping of houses around a road junction at New Earswick, they and other architects laid out similar examples in Letchworth, such as the hexagonal grouping of houses at Jackman's Place (D) or the quadrangular ones around some junctions located at The Crescent (F), Sollershott East (E) and Baldock Road (A) (Fig. 5.26). 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, according to Unwin:

> 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).

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Figure 5.26 Grouping of houses around some junctions highlighted in yellow at Letchworth (Illustrated by the author in 2021).

On the other hand, according to Parker, "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). Most junctions of Letchworth and Welwyn Garden City that comply with such principles are those shaped by the access roads to cul-de-sacs, where the groups of buildings opposite the cul-de-sacs are in some cases set back, by giving an even more effective result in terms of safety and spaciousness (Fig. 5.27).



Figure 5.27 Hexagonal junction of Jackman's Place at Letchworth (Taken by the author in 2021).

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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 emphasized 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 (Purdom, 1949).

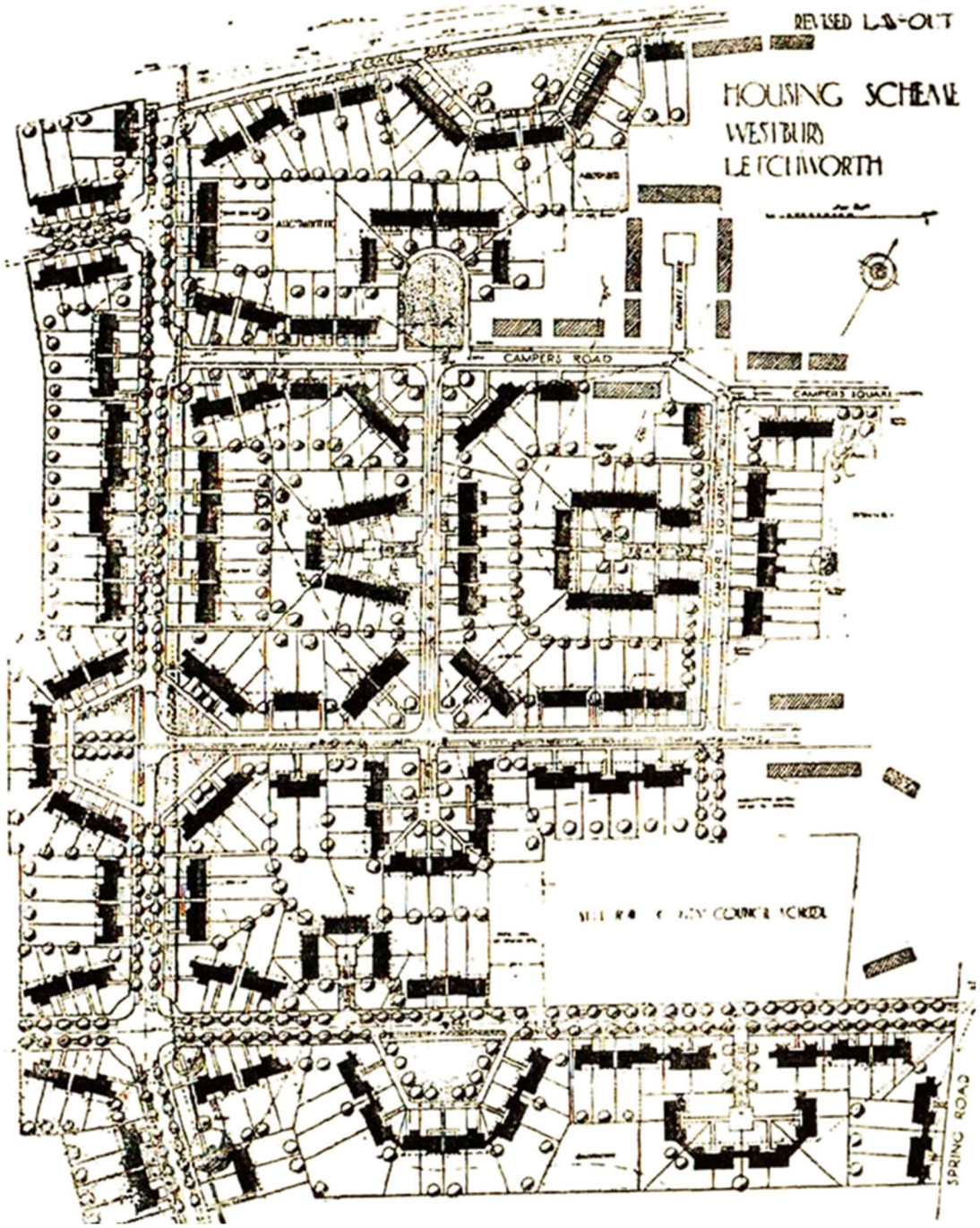


Figure 5.28 Housing layout of Westbury estate at Letchworth ('*The Building of Satellite Towns*', by C. B. Purdom).

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This way, each residential area at Letchworth has its own identity, partly because Parker and Unwin were unable to take control of the development of the town, which led many other architects to become involved in housing development at Letchworth. In this regard, it is worth highlighting some housing schemes designed by other architects, who laid out groups of buildings in a similar manner to Parker and Unwin's designs, such as the architects A. O. Cave & R. S. Bowers or Courtenay Crickmer & Allen Foxley.



Figure 5.29 A village green at Westbury state, Letchworth (Taken by the author in 2021).

The architects Cave & Bowers designed the housing scheme of Westbury by implementing a wide range of cul-de-sacs and village greens facing the road junctions, in the form of mini squares (Fig. 5.28). This way, Westbury's townscape is perceived as a combination of scattered residential groups along its inner roads, multiplying the effect of depth, wideness and surprise when walking through it. In addition to this, the play of outline of the building line helps to reinforce such a perception throughout that residential area. For example, in front of some grouping of buildings surrounding common gardens or cul-de-sacs, we can find some buildings slightly set back from the main building line or with chamfered corners in junctions, forming small residential groups along the roads. In addition to this, the location of trees emphasizes the layout of buildings and gardens, by framing the access to the closes and enhancing the junctions alike. Therefore, both

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urban and landscape design play an important role in giving a rural aspect to Westbury, by grouping buildings in junctions, breaking the building line to avoid rows of cottages, and spreading some village greens along the roads as little population centres (Fig. 5.29).

Apart from Westbury and other housing schemes like Pixmore Estate, Jackman's Place or The Crescent, there are also plenty of examples of play of outline along some of Letchworth's longest roads like Rushby Mead, Meadow Way, West View, Glebe Road and Common View. These above-mentioned roads are composed of a varied range of village greens, road junctions and cul-de-sacs located in between a few straight stretches of road. For example, from west to east, Common View can be described as a compound of two big village greens, a Y-junction and a third village green comprising a playground and an allotment, providing different scenes when walking along the road (Fig. 5.30).



Figure 5.30 Common View at Letchworth (Taken by the author in 2020).

Therefore, we can say that these roads contain all the ingredients that Unwin devised to get a picturesque townscape through street pictures. At Welwyn Garden City, Louis de Soissons implemented the same principles at Handside Lane and Valley Road, which, in addition to being pre-existing lanes of the town, these roads have several village greens in road junctions and cul-de-sacs, as well as pre-existing mature trees that help to enhance the picturesqueness of the street scene (Fig. 4.37).

5.3.3 The layout of green buffers

Towards the town centre of both garden cities, the townscape turns into a formal pattern of straight roads and wide common areas, as green buffers between the residential and the industrial areas. Both at Letchworth and Welwyn Garden City, the long pathways

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were laid out on plain grounds to get a sense of depth and magnificence when walking along Broadway and Parkway at Letchworth and Welwyn Garden City, respectively. In Letchworth, according to Unwin:

> From the centre it was important to secure main roads radiating towards different parts of the town; and the position was so favourable placed in relation to the remainder of the estate and the surrounding country that it seemed desirable to try and afford glimpses of the group of public buildings which would one day adorn that centre to those approaching the town from various directions, as well as to afford to those in the town glimpses of the country (Purdom, 1913, p. 228).



Figure 5.31. Nolli map of Letchworth and Welwyn Garden City (Illustrated by the author in 2021).

Nowadays, the views from the town centre towards the outskirts are full of trees, which, despite being located within the town, give the rural look that Unwin intended. This is made possible thanks to a continuum of green areas composed of tree-lined corridors, squares, parks, sport fields, allotments, and, beyond the town, the agricultural belt. In Letchworth, for example, these green areas comprise a continuous "green network" only interrupted by the train station, blocking out the views of the park of Norton Common from Kennedy Gardens (Fig. 5.31). However, whether from the town centre or from the farmland, green areas shape the main paths and nodes of the garden city, thus giving a garden-like look to the whole settlement and creating a boundaryless condition to the garden city (Livesey, 2020).

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Both in Letchworth and Welwyn Garden City, the railway stations, the town centres, and the 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 just significantly shorter than those using the traditional grid or "trellis", but also provides bucolic street pictures towards a central green area (Unwin, 1909). According to Unwin:

> If we examine the plans of old towns which have grown up more naturally, we find that to a very large extent they consist of main arteries branching out from the nucleus of the town in different directions – forming, in fact, an irregular radiating system; we find, further, that there has been a general tendency for cross roads to grow out from these main roads, approximately at right angles, and that these have in many cases been diverted or curved round to meet others; and that in the end a very irregular network of streets has grown up, the outline of which would be more nearly represented by a spider's web than by any other figure (Unwin, 1909, p. 235 and 236).

This example is distinctly traceable in the road network of Letchworth, which starts from a spider-web pattern in the town centre and turns into an irregular layout of roads the closer to the outskirts of the town, resulting in an organic road network throughout the whole town (Fig. 5.31).

At Welwyn Garden City's town centre, there are two boulevards on the west side of the town. Howardsgate and Parkway form a green buffer between the residential areas of the town, the station, and the factories, thus taking the same general scheme that Parker and Unwin implemented at Letchworth's town centre, but in a different way. Both boulevards have two carriageways and a central green promenade crowned by the crescent called the Campus, forming a T-shaped boulevard, which welcomes visitors and residents when leaving the station, as well as provides a pleasant walk towards any venue located on the west side of the town (Fig. 5.32). Just like in Letchworth, the T-shaped boulevard, in combination with additional radial roads like Brockswood Lane, Valley Road, Tewin Road, Ludwick Way, Digswell Road and Peartree Lane, shape an informal

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spider web connecting with the residential roads and other roads outside the town in all directions (Osborn, 1927) (Fig. 5.32).



Figure 5.32 Parkway at Welwyn Garden City (Taken by the author in 2019).

In addition to such green network, the garden cities have some parks nearby the town centres, as recreational grounds for residents. Both Norton Common at Letchworth and Sherradspark Wood at Welwyn Garden City were pre-existing woodlands that became the main parks of these towns. Thanks to the preservation of these green areas, both garden cities keep nature and magnificent ancient groves close to the community. In the case of Norton Common, it also includes several sport courts, bowling greens,

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playgrounds and two swimming pools[32] that reinforce the recreational character of the vast green area. At the outset of Letchworth's development, Norton Common was recognised as "an area of beauty, worthy of preservation" (North Hertfordshire District Council, 2015, p. 4), which led to the creation of some pathways to facilitate the access from the surrounding districts of the town (Fig. 5.33).



Figure 5.33 Norton Common at Letchworth (Taken by the author in 2019).

Nowadays, Norton Common is full of mature trees, black squirrels, starlings, flowers, and is flanked by three rows of cottages, whose green backyards merge into the groves. This "small forest" is currently used by locals for walking, picnicking, dog-

[32] These facilities were built between 1931 and 1936.

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walking, running, and many other outdoor activities like an outdoor exhibition held in April 2021[33].

Beyond the town centre, the garden cities have more common green areas located in between the housing areas and the farmland, such as golf courses, recreation grounds, allotments, and even airstrips for flight training. This way, these common gardens are embedded in the green belt or agricultural belt, working as a "catalyst" between the outskirts of the town and the rural landscape. Some hedge rows and trees delimit these recreation areas, thus providing more privacy from the houses located on the fringes of both garden cities and shaping a bucolic scenery along their surrounding roads.

In short, the "disurbanist" model of garden cities is the result of interweaving a series of planning schemes and common areas scattered across the settlements, through village greens, cul-de-sacs, and allotments to encourage the spirit of co-operation; through the preservation of existing mature trees, the creation of "accents" in the building lines, and the principle of closure to shape a picturesque townscape; and through pathways, parks, squares, sport courts, tree-lined corridors and open areas to bring nature closer to the daily flows of residents. This way, the deconstruction of such a "disurbanist" model could be the starting point for shaping a (r)urban design framework that defines a suitable housing density, (r)urban pattern, and planning schemes for existing rural communities, in order to regenerate and expand their existing settlements.

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[33] Letchworth's Outdoor Museum Norton Common.

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PART FOUR

6. GARDEN VILLAGES OF TOMORROW

6.1 DECENTRALISATION OF POPULATION AND MEANS OF PRODUCTION

One of the keys to success of the garden city model resides in its integration into a territorial network of pre-existing railway tracks, thus allowing a rapid and efficient decentralisation of people and means of production across the territory. However, while the British railway companies have the capacity to connect almost the whole country, the Spanish railway company (RENFE) has been gradually reducing the railway routes reaching about 8,000 kilometres of abandoned broad-gauge and narrow-gauge railway tracks in 1993 (Cuéllar, 2017). As a result, Fundación de los Ferrocarriles Españoles has prompted the development of 2,500 kilometres of "greenways" for hiking or cycling along abandoned railway tracks since then (García Mayor, E., Martí, P., Castaño, M., and Beranbeu Bautista, A., 2020). Therefore, 5,500 kilometres of railway tracks are still abandoned, along which we can find a large portion of rural communities in the depopulation process in the Spanish territory (Mojica and Martí-Henneberg, 2011). Looking at the Figure 6.1, we can see the scope of such dismantling process in different regions and provinces of Spain, where the current territorial isolation of inland towns and villages between the cities of Segovia, Valladolid, Soria, Burgos, and Zaragoza comprised a well-distributed and varied network of railway tracks that crossed the region of Castile and Leon in the past, for example.

Despite this, the Senate of Spain has recently approved the reopening of the railway route Madrid-Burgos (Moción 662/000099, 2022), through which some small villages like Riaza, Boceguillas or Campo de San Pedro will benefit from their re-connection with the rest of the territory (Fig. 6.4). This way, the economic and labour market recovery of small rural settlements located along these railway routes can be boosted thanks to the influx or commuting of people from urban areas, as well as the co-operation between cities, towns, and villages in terms of resource, commercial and cultural exchange at supra-municipal level. In addition to this, the re-opening of pre-existing railway tracks can give rise to the construction of new sidings for small settlements lacking train stations, like Barahona de Fresno or Bercimuel. Apart from the economic benefits, the re-opening of railway tracks can help reducing the use of the car

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and CO2 emissions, thus complying with the 2021 European Parliament's proposal for promoting the use of the train as an environmentally friendly, safe, and sustainable means of transport (European Parliament, 2021).

This strategy should go further and reach other regions of Spain with serious problems of depopulation, by starting from re-opening abandoned railway tracks. To do this, the first scope of action should reach those rural settlements located close to urban centres. Taking the large portion of urban communities in Spain into account, their proximity to cities can encourage people to move to the land, by allowing them in turn to commute to other settlements on the train for economic, educational or leisure reasons. According to this approach, the decentralisation of population and means of production can gradually begin spreading across the territory at different stages, without having to take the risk of moving to remote rural areas at early stage. In addition to this, the regeneration of villages near to urban centres can demonstrate the feasibility of the scheme, thus attracting the attention of the public and entrepreneurs in getting involved in the redevelopment of rural communities in decline.



Figure 6.1 A map showing misused railway routes throughout the Iberian Peninsula (Marinas, 2021).

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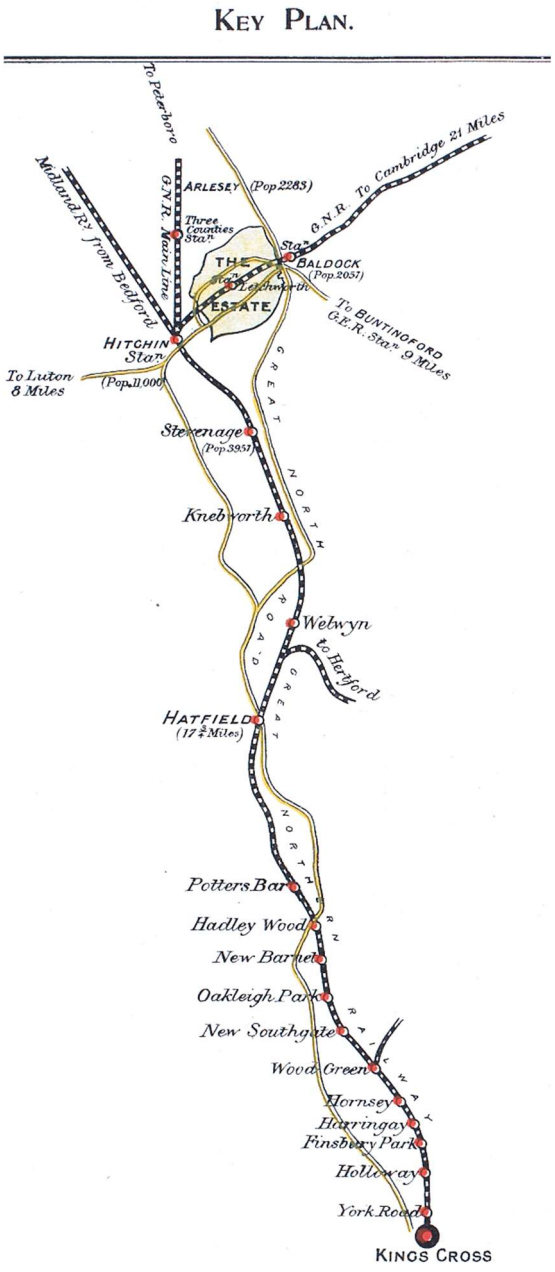


Figure 6.2 1903 proposal to develop Letchworth along pre-existing railway routes from King's Cross Station (Garden City Collection).

As we have seen in previous chapters, in the cases of Letchworth and Welwyn Garden City, the proximity of both settlements to the main metropolis had a great impact in their colonization, which allowed most of the first pioneers to keep their jobs in London at the early stages of development (Fig. 6.2). Thanks to this, the early residents of both garden cities were able to gradually leave their jobs in London and other settlements, while they were getting skilled, semi-skilled or unskilled jobs in the garden cities, depending on the situation and background of each person (Purdom, 1949; Ward, 2016). Even now, the railway routes between both garden cities and London are being crucial to get 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 big metropolis (Hertfordshire County Council, 2020). This way, the inhabitants of the garden cities can work there or elsewhere, instead of being forced to get a job in the small labour market of both towns.

6.1.1 Linear Shires

Just like the experience of the garden cities is good evidence of the suitability of developing rural communities close to urban centres, rural communities of today can be redeveloped following the same approach. Within this framework, the first rural

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communities to revitalise should be those located at less than one hour by train or car from urban centres or the equivalent of being located within a radius of fifty kilometres. Thanks to this, some urban settlements would be able to reduce the pressure on overcrowded urban centres, thus contributing to minimize the carbon footprint and enhance the living conditions of urban communities, whereas rural settlements can benefit the surplus of population of urban centres willing to live close to the countryside in the pursuing of a new hope of prosperity, affordability, health, and safety for them and future generations. Once this first stage is successful, other rural settlements located beyond that scope of action would be considered for developing a second stage, and so on. In addition to this, the national railway company might re-open those railway routes in better conditions as part of the first stage of development of rural communities, in view of reducing the economic risk involved in the development of a territorial infrastructure beyond urban areas. This way, the demonstration of the scheme, if successful, would lead the construction of new railway routes across the vast demographic desert of inland regions, and so developing step-by-step a feasible and sustainable growth of those rural communities in depopulation process. Only after the territorial transport conditions have been satisfied in a sustainable and practical way, the mobility of people and means of production to the countryside would be possible.

In parallel with the above mentioned first scenario, those rural settlements located far from big cities can be redeveloped as well, by identifying medium-sized towns located nearby small rural settlements and connected through existing railways. This idea comes from the project laid out by the association Connected Cities Ltd for redeveloping existing rural areas of Great Britain, as a modern version of the "Howardian Social City". However, 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. 6.3).

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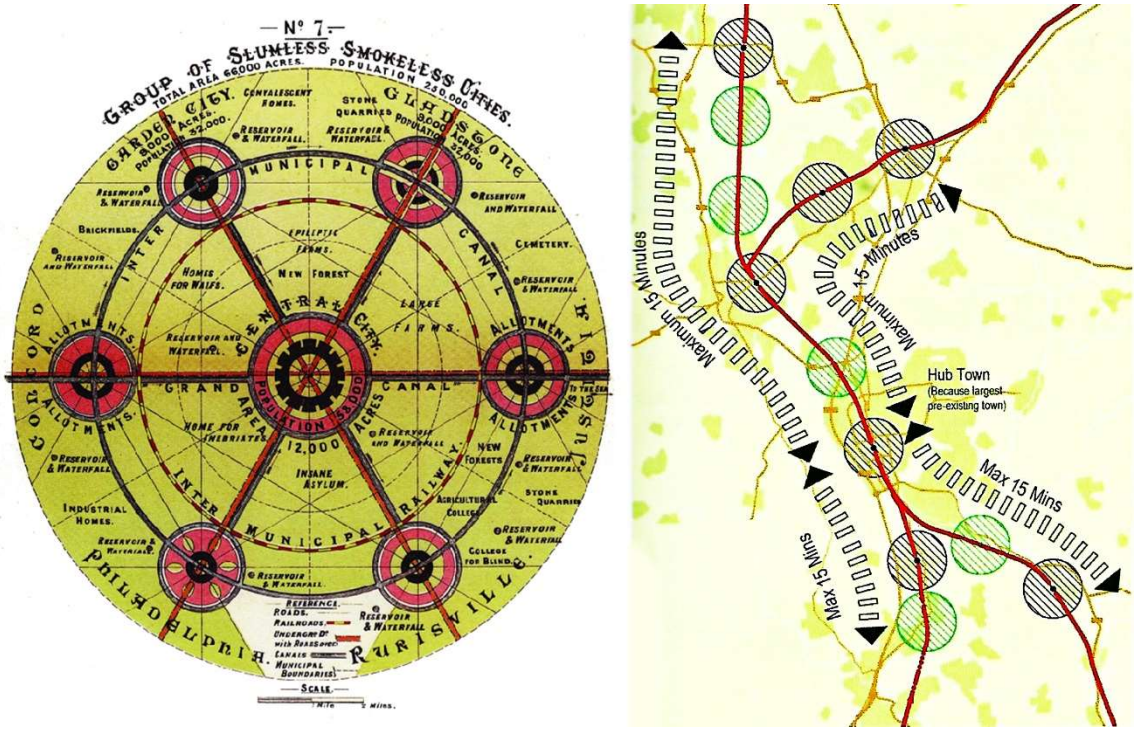


Figure 6.3 A comparison between Ebenezer Howard's social city and the Connected Cities diagram ('*Garden Cities of To-Morrow*', by Ebenezer Howard and '*Connected Cities*', by Connected Cities Ltd.).

Under this second scenario and following the method of the association Connected Cities Ltd, the first stage of development should be focused on identifying towns with a population over 10,000 on a railway to become "Large Hub Towns". The second stage should be focused on identifying all rural settlements with existing stations within fifteen minutes journey by train from the "Large Hub Towns", in order to form of 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 Towns". Within the Spanish context, this approach would match with the concept of "Centrality Areas" stated on Spanish regional planning documents like the former "Plan de la Costa del Sol Occidental", the aim of which is to develop those areas located within the scope of existing railway stations and take advantage of the opportunities offered by stations to urban development (Rando Burgos, 2021). Once the existing stations of "Large Hub Towns" and villages have formed "Large Connected Towns", the third stage should be focused on developing those groups of rural settlements of less than 10,000 population or "Small Hub Towns", from where "Small Connected Towns" of rural settlements might be formed by re-opening or constructing stations within fifteen minutes journey by train from "Small Hub Towns".

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Figure 6.4 Railway track of the route Madrid-Burgos at Barahona de Fresno (Taken by the author in 2020).

In addition to the 5,500 kilometres of abandoned railway tracks in the Spanish territory (Fig. 6.4), its railway network has about 1,000 kilometres of railway routes at risk of closure with different intensity, depending on the circumstances of each route and region. In this context, both abandoned railways and those about to close can benefit from the second scenario by establishing new sub-regional groups, either "Large or Small Connected Towns", in the form of "Linear Shires", by adapting the above-mentioned principles to the territorial and local conditions of each rural settlement and railway route.

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Figure 6.5 Railway route Valladolid-Ariza - number 71 in dark grey (Marinas, 2021).

As an example, among the misused railway lines in the Spanish territory, there are some railway routes in good conditions for being upgraded and re-opened in the short-term and go through some rural settlements with problems of depopulation like the route Valladolid-Ariza (see Figure 6.5), which closed in 1993. Along this route, Aranda de Duero might become a "Large Hub Town" (LHT), since it has a population of 33,084 and natural population growth (NPG) 0,01% decline. Beyond the boundaries of that town, there are six rural settlements reachable within fifteen minutes journey by train, such as on the western side the villages of Roa de Duero (1) with 2,196 population and NPG 0,22% decline, Berlangas de Roa (2) with 180 population and NPG 18,52% decline, and Castrillo de la Vega (3) with 648 population and NPG 0,24% decline; and on the eastern side the villages of Langa de Duero (4) with 719 population and NPG 1,65% decline, La Vid y Barrios (5) with 239 population and NPG 2,62% decline, and Vadocondes (6) with 369 population and NPG 4,76% decline (Instituto Nacional de Estadística, 2022), which might form a "Linear Shire" with Aranda de Duero as "Large Hub Town" (Fig. 6.6).

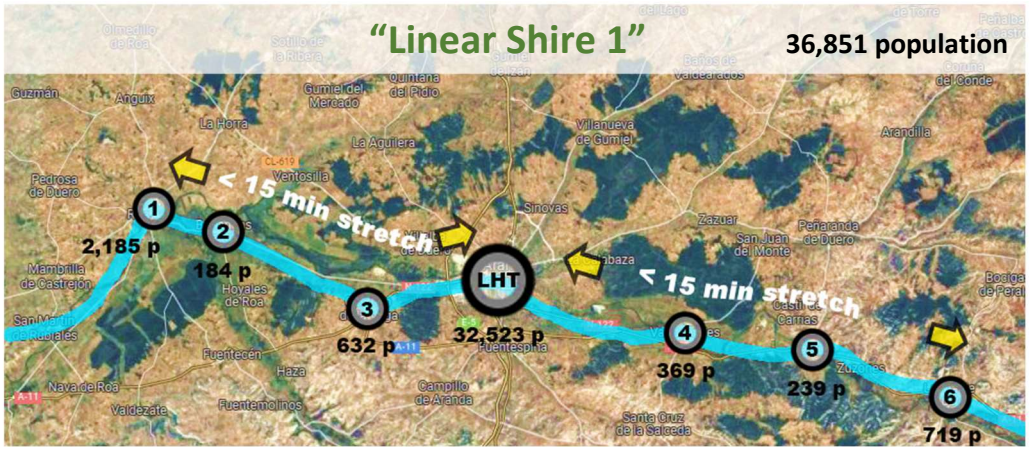


Figure 6.6 Simulation of a "Linear Shire" between Roa de Duero and Langa de Duero (Illustrated by the author in 2022).

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In a sub-regional level, all these settlements would comprise a population of 37,435 people, which can be comparable with the garden city of Letchworth, in terms of population. However, instead of expanding each village to become a town or building new towns in between, this second scenario would allow to preserve the status quo of rural settlements, by redeveloping their existing settlements and improving different kind of amenities, services, or infrastructure, according to the scope of action, distance, and population density of these rural settlements.

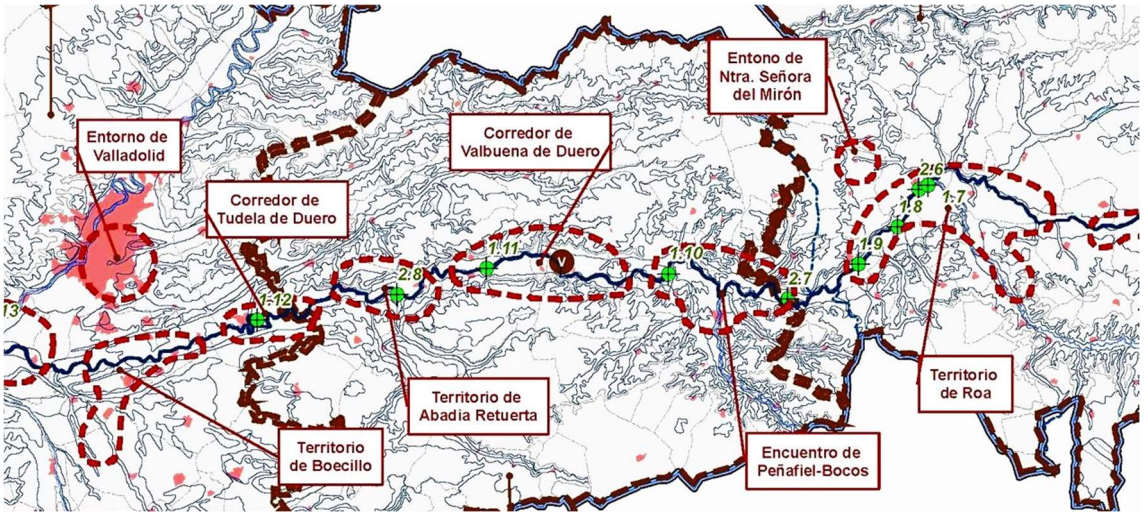


Figure 6.7 Opportunity areas laid out by the PRT Valle del Duero (PRT Valle del Duero).

6.1.2 Opportunity areas

Within this approach, the first scope of action should cover a supra-municipal level, through the development of opportunity areas located in between rural settlements, in order to provide a series of large facilities for different purposes related to production, amenities, services, education, healthcare or infrastructure. Thanks to this, instead of each village developing industrial, commercial, sport, medical or agricultural facilities within the municipal boundaries, all the rural settlements of the "Linear Shire" would co-operate in the development of common facilities, thus contributing to the preservation of the surrounding landscape of each village and the burden-sharing of developing and maintaining large facilities for economic and social welfare purposes. In this regard, the '*Plan Regional de Ámbito Territorial del Valle del Duero*' defines in its article 7 the opportunity areas or "AODs" as "significant areas with the potential to set the basis to develop activities related to the aims and objectives of PRT Valle del Duero" (Decreto 21/2010, p.44266). Likewise, the document highlights that "the interventions in AODs

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will comply with some of the following premise (…) their location in areas of social and/or economic vulnerability" (Decreto 21/2010, p. 44266). Among all the functions to be implemented in AODs, they might include "industrial, commercial, infrastructures, logistic, specific environmental activities, leisure, tourism, or mixed-use zoning of regional interest" (Decreto 21/2010, p. 44266). According to these principles, the Plan sets out several AODs along the river Duero, some of them located nearby the above-mentioned municipalities like Roa de Duero or Langa de Duero (Fig. 6.7), which would help to boost this hypothetical "Linear Shire", by taking advantage of the AODs already laid out by the PRT Valle del Duero and reinforcing such a Plan with the use of an existing railway infrastructure for enhancing the mobility across the territory.



Figure 6.8 Two women riding a Rail Bike on the railway track Valladolid-Ariza (www.soyrural.es).

In other words, the railway might represent a sustainable and rapid means of transportation to let people go to work, shopping or go to college, within a few minutes from home, without precluding the possibility of getting on a train and go further to big cities like Valladolid in less than an hour. Regarding this, it is worth noting that the article 10 of the PRT Valle del Duero recommends "to improve the existing infrastructures in the countryside to enhance the capacity to fight against rural depopulation and promote endogenous, economic, social and environmental resource development" (Decreto

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21/2010, p.44269). Additionally, the article 14 on the integration of the existing railway network in the regeneration of Valle del Duero stresses the territorial importance of the misused railway route Valladolid-Ariza, saying that "the railway route Valladolid-Ariza goes through the river Duero from west to east, which was closed on the 1st of January 1985, and the permission to be dismantled was issued on the 20th of October 1995, thus stopping being a railway route and becoming a heritage resource of ADIF. There are several tourist-nature initiatives to take advantage of the corridor, therefore the railway route should be preserved, as well as its adjoining facilities" (Decreto 21/2010, p.44272) (Fig. 6.8).

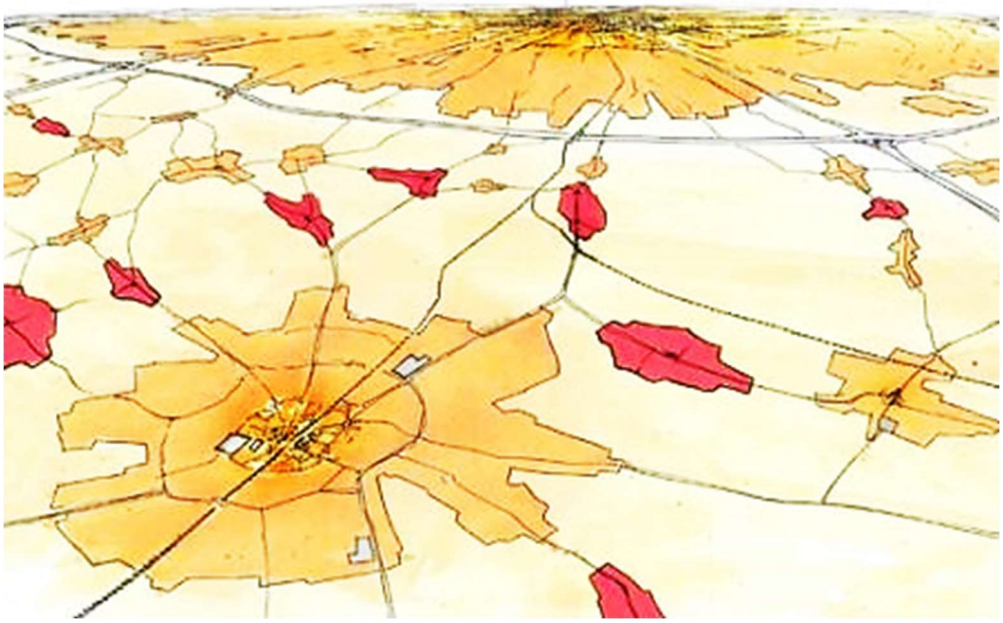


Figure 6.9 A scheme on opportunity areas (in red colour) between rural settlements (University of Hertfordshire).

Thus, the preservation of the railway route by the PRT Valle del Duero fits the purposes set out in this document, which would allow the regeneration of the rural settlements located along this route, if reopened, in the short term. In parallel with developing some strategies at supra-municipal level, it would be necessary to assess in a local level the existing conditions of the rural settlements and calculate all the improvements they need to achieve the sustainability and self-reliance of this "Linear Shire", through the Spanish national legislation on this field. This way, basic amenities such as health centres, sport courts, primary schools, community centres or day-care centres would emerge to fulfil the needs of villagers at neighbourhood level. To this end, these amenities and services might be in the opportunity areas already laid out by the PRT

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Valle del Duero together with others that might be developed along the railway route Valladolid-Ariza, so that the municipalities that make up the "Linear Shire" can co-operate in providing common facilities for the benefit of villagers by considering the "Linear Shire" as a town, in terms of size and population.

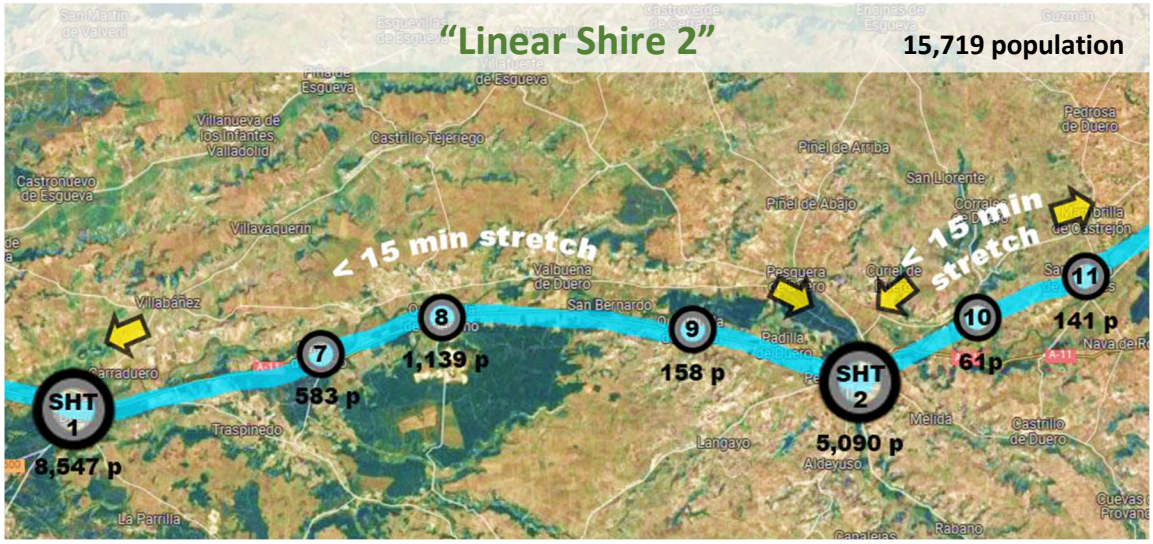


Figure 6.10 Simulation of a "Linear Shire" between Tudela de Duero and San Martín de Rubiales (Illustrated by the author in 2022).

According to the document '*Sistema de Indicadores de Ciudades Grandes y Medianas*', "all the basic urban services: amenities, public transport networks, commercial premises and greenery should be within 10-minutes' walk (at less than 600 meters from home)" (Ministerio de Fomento, 2012, p.22). In the case of a "Linear Shire", these parameters might be also found in the network formed by existing villages, railway tracks and the opportunity areas, as the size of the rural settlements set out in this document range from 500 to 1,000 meters radius. In addition to this, the document '*Sistema de Indicadores de Ciudades Grandes y Medianas*' defines a series of surface parameters to fulfil the needs of people in providing cultural, sports, sanitary, educational and social amenities according to the number of people at neighbourhood or municipal level. Following the parameters of the document, the "Linear Shire of Aranda de Duero" should have 15,975 square meters of cultural amenities, 99,535 square meters of sports amenities, 134,506 square meters of educational amenities, 14,188 square meters of sanitary amenities and 17,173 square meters of social amenities, comprising a total of 281,377 square meters. However, considering that some municipalities like Aranda de Duero or Roa de Duero have existing amenities within their municipal boundaries, the

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resulting surface to fulfil the needs of the inhabitants of the "Linear Shire of Aranda de Duero" would be 13,167 square meters of cultural amenities and 74,983 square meters of educational amenities, comprising a total of 88,150 square meters of basic amenities for the "Linear Shire" spread over one or several opportunity areas along the railway route between Roa de Duero and Langa de Duero (Fig. 6.12).

Beyond the "Linear Shire of Aranda de Duero", there are some medium towns with less than 10,000 population with abandoned railway stations in good conditions like Tudela de Duero (8,547 population), Peñafiel (5,090 population), Burgo de Osma (4,926 population) and Almazán (5,526 population), which might become "Small Hub Towns" of other "Linear Shires" along the same railway route. Following the same principles of "Large Connected Towns", these "Small Connected Towns" might form other "Linear Shires" with some rural settlements located within fifteen minutes by train from the above-mentioned "Small Hub Towns". On the one hand, the "Linear Shire of Tudela de Duero-Peñafiel" might include the rural settlements of Tudela de Duero (SHT1) with 8,547 population, Sardón de Duero (7) with 583 population, Quintanilla de Onésimo (8) with 1,139 population, Quintanilla de Arriba (9) with 158 population, Peñafiel (SHT2) with 5,090 population, Bocos de Duero (10) with 61 population and San Martín de Rubiales (11) with 141 population, which would comprise a population of 15,719 (Fig. 6.10). On the other hand, the "Linear Shire of Burgo de Osma" might include the villages of San Esteban de Gormaz with 3,010 population, Burgo de Osma with 4,926 population, Quintanas de Gormaz with 154 population and Berlanda de Duero with 877 population, which would comprise a population of 8,967. Finally, the "Linear Shire of Almazán" might include the rural settlements of Rebollo de Duero with 30 people, Barca with 103 population, Almazán with 5,526 population, Morón de Almazán with 200 population, Monteagudo de las Vicarías with 193 population and Ariza with 1,139 population (Instituto Nacional de Estadística, 2022), which would comprise a population of 7,191.

In short, four "Linear Shires" might emerge from the misused railway line Valladolid-Ariza if reopened, the impact of which would provide the basis to improve the rural development of the above-mentioned rural settlements, as well as might encourage the decentralisation of population and means of production of urban centres across the fields of Castile and Leon. This way, those rural settlements with population of 60 or 200, for example, would be able to grow until reaching the maximum of population for a village according to the Instituto Nacional de Estadística, 2,000 population (Instituto Nacional de Estadística, 2022), so that they can have enough population to develop

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essential local amenities comparable with those found in the districts or neighbourhoods of cities.

In other words, this assumption exemplifies how the reopening of misused railway routes or the maintenance of railway routes at risk of closure in the Spanish territory might lead the creation of a new sub-regional approach in fulfilling the needs of existing villagers and attracting urban population to work and live in the countryside. To achieve that, both scenarios should be coupled with 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. 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 employment opportunities for locals and future rural population.

6.1.3 The development of cooperatives at the local level

Once assured the basis to encourage people and means of production to remain in rural settlements or move to them from urban areas through railway lines and ICT technology, the co-operation 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 new rural realities. Just like the garden city model prompted the establishment of co-operative companies to finance, develop and manage the building of new settlements in the absence of public funding, co-operatives might be a feasible alternative for rural 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.

Nowadays, there are more and more credit, agricultural and worker co-operatives in rural areas of Spain, which demonstrate the high levels of co-operation in the Spanish rural context. According to Giagnocavo 2012, "cooperatives in Spain have played a very important role in the development of rural economies". Whereas agricultural co-operatives help smallholders to improve their economy by gathering the production in a common market, worker co-operatives help manufacturers to avoid the risks of scattering the production in the countryside by sharing the burdens and benefits of running the companies. Despite the difficulties of running co-operative companies, these kinds of co-operatives have been more successful in those rural areas where the lack of investment

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has led their inhabitants to co-operate for investment, commercial and/or employment reasons (Juliá and Marí, 2002). Within this context, the co-existence of rural co-operatives in the Spanish rural context has led to the establishment of synergies between different kind of co-operatives. For example, the role of credit co-operatives in rural areas of Spain has been crucial in the development of agricultural co-operatives, as they have gone beyond the traditional provision of credit. Since their establishment during the dictatorship period in Spain, credit co-operatives have been very committed to fulfilling the needs of smallholders by investing in management training for co-operatives boards, specialist agricultural courses, new technologies, etc. (Giagnocavo, Gerez and Sforzi, 2012; Giagnocavo, 2020), which is indeed the raison d'être of these co-operatives in rural areas. This way, the synergies established between agricultural and credit co-operatives has not just transformed individual farmer risk into shared co-operative risk, but also has promoted community building in those rural areas that, according to Giagnocavo 2012, "had been left socially shattered and institutionally barren by the long dictatorship".

Therefore, in view of promoting and preserving the spirit of co-operation of rural communities of today in terms of investment, employment, development, and management, it is necessary to set up closer links among existing and future villagers through improving their skills in new fields of expertise from an early age. In Welwyn Garden City, a big part of its success in attracting population was due to the deliberate migration of less advantage 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 (Ward, 2016). Thanks to this strategy, the companies of Welwyn Garden City were able to grow their workforce very quickly and a big part of those who went to the town ended up becoming inhabitants of Welwyn Garden City (Tyrwhitt, 1939). Following this strategy, rural communities of today should promote the creation of co-operatives by holding workshops or courses on professional training by taking advantage from European, national, regional, or municipal policies on employment, so that young people can meet others with similar interests and skills, thus encouraging them to work together in running agricultural, worker or housing co-operatives in the countryside.

This was the case in the village of Cortes de la Frontera in the 1990s, where a group of rural developers who came from the north of Spain established a workshop school to teach professional training in carpentry, stone carving and metal trade with

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European Regional Development Funds (Fig. 6.11). Thanks to this workshop school, the young unemployed of the village and surrounding villages were taught in new professions that previous generations never developed in the area. Likewise, it contributed to strengthen the ties of partnership among the students, which led to the establishment of a series of worker co-operatives after completion of training. According to the members of the timber construction and carpentry worker co-operative Cañada Real PERFIL S.C.A., the key to success of their company relies on the formative courses they attended at the workshop school from an early age and the opportunity to meet others with similar skills and commitment to running a co-operative, which has now more than twenty years of experience in the Serranía de Ronda (Cañada Real PERFIL S.C.A. 2022, personal communication, 2nd April).



Figure 6.11 Facilities of the timber construction and carpentry worker co-operative Cañada Real PERFIL S.C.A. in Cortes de la Frontera, Málaga (www.carpinteriaperfil.es).

Nowadays, it is still possible to get some funding from the European Union to implement workshop schools in rural areas through the Next Generation EU Fund, which is bringing additional funds to other European programmes of funds like FEADER, the aim of which is to promote rural development and overcome the impact of Covid in rural areas alike. Therefore, within this framework, the pioneering effort of villagers and future villagers of urban background might be supported by public policies on rural development, thus achieving a good balance between getting public funds for educational and formative activities and promoting the use of private capital to develop co-operatives companies. To do this, the educational and formative activities should integrate some additional activities aimed at instructing students to finance, develop, and manage co-operative companies, so that students are trained to run co-operative companies as a bottom-up strategy to create job opportunities in the absence of public or private

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companies in the countryside. This way, the public administration would take the role that credit co-operatives or non-governmental organizations have played so far in teaching people to run co-operative companies in the countryside.

Likewise, in parallel with the promotion of worker co-operatives, the labour market of rural communities should be updated to new rural realities as well. Just like the garden city model opted for the implementation of a diversified economy, rural communities of today 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 rural economy, a diversified economy has the potential to attract population and means of production that agriculture or livestock alone cannot. This way, a diverse rural model might revitalise the economy of rural areas, by establishing synergies between the traditional rural economy and alternative forms of production and employment, including non-agricultural activities, small industries, cottage industries, research centres or telework in existing rural settlements.



Figure 6.12 Opportunity areas laid out by the '*PRT Valle del Duero*' for productive and economic activities (in green colour) overlapped on the proposed "Linear Shire 1" (Illustrated by the author in 2022).

In addition to local development, the development of opportunity areas for production purposes might play an important role in reinforcing the synergies between different labour sectors of different rural settlements within clusters in a supra-municipal level (Fig. 6.12), since their main aims are to go through municipal boundaries and develop strategic locations with the ability to concentrate existing economic activities of

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surrounding areas and promote the arrival of new ones in a shared place (Rando Burgos, 2020). Within this framework, both villagers and urban communities willing to move to rural areas might find in new industrial or technological estates similar working conditions to those found in urban centres, thus giving work to skilled, semi-skilled or unskilled workers with different backgrounds and areas of expertise working together within the same labour market in the countryside.

In addition to worker co-operatives, housing co-operatives can be also an alternative to refurbish and supply accommodation for villagers, either because the development corporations involved in the acquisition of the properties and plots did not have enough capital to build houses or co-operative housekeeping schemes did not have financial support from traditional real estate companies. As we have seen in Part 3 Chapter 1, several housing co-operatives (Fig. 6.13) were established at the early stages of development of Letchworth like Garden City Tenants Ltd. and Letchworth Cottages and Buildings Ltd., which were crucial in providing accommodation to the first waves of colonizers. However, it is worth noting that both housing co-operatives did not come out from nothing. While the former was born from the first industrial company and worker co-operative 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 co-operatives had tight ties to worker and development co-operatives of the town and helped to promote co-operative values among the members of all these companies who were inhabitants of Letchworth in turn. In short, the co-operative 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. Following these precepts, deprived rural communities of today might be redeveloped through promoting the rising of rural co-operatives at the early years, rather than just hoping for the arrival of philanthropic investors or politicians concerned about the future of these communities.

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Figure 6.13 Meadow Way Green (one of the co-operative housekeeping schemes of Letchworth), designed by Courtenay Crickmer in 1915 for the housing co-operative Howard Cottage Society Ltd (Taken by the author in 2021).

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 (Purdom, 1949). This way, the issuing of national, regional and/or municipal policies on affordable housing might find a new field of action beyond urban centres aimed at easing the mobility of people and means of production by reducing the economic impact in rents and sale price of properties thanks to lowering or cutting taxes on the refurbishment or construction of buildings in deprived rural areas. In addition to the implementation of public policies, the use of endogenous resources for the construction or refurbishment of buildings might help 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. 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). Nowadays, this sustainable strategy might be coupled with the re-using of building materials, thus promoting the development of a circular economy aimed at minimizing the economic and environmental impact of housing development in the countryside.

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As defined by the European Parliament:

> The circular economy is a model of production and consumption that involves sharing, renting, reusing, repairing, renewing and recycling existing materials and products as many times as possible to create added value. In this way, the life cycle of the products is extended (European Parliament, 2021, p.2).

Under this premise, circular economy systems can be found in rural or urban areas, using waste and endogenous resources, in order to generate energy, lower production costs and/or reduce the ecological footprint due to the reduction in imports of production sources from other regions and countries. Through circular economy methods, heterogeneous means of production can be benefited, being able to enhance in turn to the economic diversification of producers at the local level. In other words, the circular economy method can help to concentrate in the same community the use of waste that a production sector usually generates during its production, use, transport or disposal for the same sector or other sectors within the same community, either directly or indirectly, through the contribution of inputs in the form of raw materials, energy or complements to production.

In this regard, the materials and waste derived either from the housing, manufacturing, farming or extractive industry can give rise to the establishment of a circular economy in the places close to development, extraction, or production, guaranteeing their maximum use and thus minimizing the scarcity of raw materials, mineral resources, environmental pollution, and the carbon footprint. Due to the massive consumption of energy in housing, manufacturing, and extractive industry, in terms of water resources, energy and chemical products, the application of a circular economy in these sectors has in turn great potential in terms of its profitability, both in the short and long term. In short, the implementation of a circular economy can contribute to preserve the rural environment and improve the economy of villagers alike, thus setting a local production basis towards the self-containment of rural settlements, in terms of production, labour, economy and mobility.

To do this, the combination of all the strategies outlined in this chapter, through the development of "Linear Shires" and opportunity areas along pre-existing railway routes, the promotion of agricultural, worker and housing co-operatives, and the benefits of a diversified and circular economy, represents a general framework to combat the

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dependence of rural settlements on external inputs and promote the emergence of local markets in the countryside. However, this updated Howardian model to decentralise population and means of production across the territory requires additional initiatives to achieve the self-containment of rural settlements in terms of investment, by tailoring the Howardian financial structure of garden cities to new rural realities in the Spanish rural context.

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6.2 SELF-FINANCING SYSTEM AND AFFORDABLE HOUSING

To demonstrate the feasibility of the garden city model, Howard endeavoured to outline some economic guidelines towards the self-sufficiency of building garden cities in the countryside. Indeed, large part of 'To-morrow' is mainly focused on providing economic tools to achieve a self-financing system without any kind of public expenditure on infrastructure, industrial or housing development (Howard, 1902). In general terms, Howard proposed a co-operative financing system as an alternative to real estate companies, landlords or the public administration to avoid land speculation, preserve the affordability of houses and other premises, and reinvest the surplus of capital for the maintenance and development of the garden cities, thus avoiding the existence of taxes for public purposes.

As has been seen in previous chapters, the development companies of Letchworth and Welwyn Garden City established a dual land tenure system where the land was owned by the development companies and the properties were owned or rented by tenants, defined a limit on dividends of shareholders, and promoted a leasehold system, in order to fulfil the above-mentioned aims. This way, the Howardian scheme gave rise to a self-reliant system to build new rural communities from scratch.

6.2.1 Cooperative Land Banks

Nowadays, this system has been updated by Dr Shann Turnbull either to build new settlements or redevelop existing ones through Cooperative Land Banks (CLB) (Turnbull, 1983). According to Robert Swann, the CLB model provides:

> a means by which a community organization (i.e., non profit or for profit corporation representing the entire neighborhood section of a city with a population of 1,000 to 30,000 persons, or an entire town) can purchase all the land and property within its territory for the benefit of the entire community virtually without the need for outside financing. This is called the self-financing principle (Benello et al., 1997, pp. 47).

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Likewise, the CLB model provides:

> a means for retaining within the community the value (a measured in money) created by the community through its efforts at collective and individual development, and a means of distributing or transferring this value to both the individual members of the community and to the community as a whole on a more equitable basis. In this sense, the CLB is a substitute, on a local level (and without the bureaucracy), for efforts by national governments to transfer wealth through tax and welfare systems (Benello et al., 1997, pp. 47-48).

Despite the CLB concept is more related to urban communities, Turnbull considers that CLBs could also be applied in rural communities in the same way as the Community Land Trusts (CLTs) have been used in North America (Benello et al., 1997). While the CLT is aimed at establishing self-sufficient rural communities on a dual land tenure system where the land is owned by the Trust and the use of the land can be transferred, the CLB is aimed at combining the CLT model with the issuing of shares among its members. In short, the difference between the CLT and the CLB systems lies in the kind of equity derived from the common assets. Therefore, the CLB concept can be a feasible alternative to revitalise rural communities in decline, as it provides the implementation of a dual land tenure system in combination with the possibility to redistribute the profits of shareholders for public purposes, in order to avoid land speculation, reduce the existence of taxes and ensure long-term housing affordability and community engagement. Likewise, the self-financing structure of the CLB is especially important in low-income areas, like deprived rural areas, because it can provide land without cost to the first pioneers who want to build or buy a house with the security of tenure provided by the CLB's perpetual lease. In addition to this, the CLB can provide a means to institutionalise and reinforce the informal social cohesion of scattered rural settlements, which often have a strong internal organisation and sense of community (Turnbull, 1983).

Just like 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 (Purdom, 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

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to the building of a new community, as well as to the redevelopment of a deprived area, brownfield or abandoned settlements. 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 revitalising rural communities in decline, by capturing rising property values for the benefit of the villagers, while preserving the housing affordability, encouraging citizen participation, and thus attracting population and means of production to start from scratch in rural areas. This way, residents can manage the benefits and burdens derived from housing, agriculture, and industrial development for the maintenance and development of the rural settlements.

Although there is no precedent of a CLB in the Spanish context nor internationally, the CLT model is attracting more and more the interest of Spanish scholars and NGOs, who are introducing CLT aspects in the development of a collaborative housing sector, focused on cession-of-use housing cooperatives. Furthermore, the City of Barcelona has expressed great interest in the CLT model to provide affordable housing, which has led representatives from Barcelona and New York to participate in the 2018 and 2019 CLT conferences in the United States (Interreg Europe, 2020). In parallel, the City of Barcelona strongly supports the establishment of housing cooperatives to cope with the lack of affordable housing in the metropolitan area, with more than 500 zero-equity cooperative housing units through long-term leaseholds on public land, as part of the City's Right to Housing Plan 2016-2025 (Housing Europe, 2020).

Within this context, the CLB model can be equally welcome in the Spanish context, as it can achieve the same goals of ONGs, institutions and citizens in the development of housing cooperatives and CLTs in recent years. Additionally, the CLB model can provide a self-financing system towards, according to Turnbull, a "social capitalism" system with the capacity to "become financially independent of higher levels of government" (Turnbull, 1983, p. 6). Furthermore, the CLB model can forge a local government structure on a decentralised democratic basis, through which all individuals who meet residency requirements can obtain one vote each, regardless of the shares they have in the CLBs. Thus, the CLB model can go beyond other initiatives and promote a

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bottom-up strategy aimed at encouraging citizen participation in those rural communities willing to implement such a self-reliant system.

To do this, a company should be registered for the purpose of operating a CLB, thus allowing the issuing of preferred shares under cooperative principles. To establish a housing cooperative, it is therefore necessary to comply with the requirements and obligations reflected in the law '*27/1999, de 16 de julio, Ley de Cooperativas*', which defines the framework to establish any kind of cooperative society in the Spanish territory. Given the nature of a CLB, it should be formed as a second-degree cooperative, because, according to the member of Confederación de Cooperativas de Viviendas y Rehabilitación de España (CONCOVI) Julio A. Gutiérrez, it can be composed of several cooperatives, private companies, and individuals, in order to better develop the co-management of land during the management stage.

The above-mentioned law states the second-degree cooperatives must be constituted by two cooperatives at least, and all the entities being part of the second-degree cooperatives must be classified into the same category, i.e., housing cooperatives (Ley de Cooperativas, 1999). According to article 89.2 of '*Ley de Cooperativas*', "the housing cooperatives will be able to acquire, divide into plots and urbanise, and, overall, develop all activities and work to fulfil their social nature" (Ley de Cooperativas., 1999, art.88.2).

This way, a CLB as a housing cooperative can be vested with powers to purchase land of existing rural settlements at their existing use value for development or redevelopment purposes. Once the land has been purchased, the CLB can proceed with the re-zoning of the land for development, so that the increased value can be captured by the CLB for public purposes. If the CLB did not have enough capital for building or refurbishing houses, the land can be mortgaged to finance the development or redevelopment of the rural settlement. In addition to this, the CLB acquires the ability to issue leases and shares to tenants and shareholders respectively (Lewis, 2011).

Unlike a garden city or new settlement, those villages with problems of depopulation have a complex network of plots, which should be merged to form CLBs regardless of the distance, urban pattern, or use of the plots. Despite this and the tough task of encouraging people to participate in the building of a CLB, the entity can also acquire land from those who are not willing to be part of the CLB. In this regard, the CLB can be formed to create not just two types of equity through the duplex land tenure system, but also, according to Turnbull, "may wish issue redeemable participating non-voting

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preference shares in exchange for land and/or its improvements" (Turnbull, 1983, p. 7). This way, the CLBs would not need to pay cash for acquiring land and the vendors of land could participate in the development of profits but not in the management of the CLBs. Likewise, if the vendors are in financial hardship and their houses are not in good conditions, the CLBs can offer new houses in the cooperatives to relocate them. In both cases, the CLBs would not need to pay cash by exchanging property rights instead. This method exemplifies how the CLBs can acquire land in existing rural communities by encouraging existing landlords to directly or indirectly cooperate and participate in the development of the CLBs, as a means to improve their economy and standard of living alike.

Another mechanism to acquire land is where the land is already acquired and is owned by one owner or the government, which is the most suitable starting point to establish a CLB. In this case, the entity would not need to cope with the complexity and difficulties of several owners with different ethos and willingness to cooperate. Rather, the CLB would be in better position to convince the government, for example, to avoid giving freehold tenure for self-built housing to less-advantage communities as an incentive to attract population, because this kind of initiative has, in some cases, led tenants to speculate against the value of the land and sell the improvements and/or properties built on former public-owned land to improve their individual economy. In contrast, the CLB model would help to reduce the temptation to sell the land, as its self-financing structure can provide equity to tenants and shareholders in the long term.

There is even a third mechanism for a CLB to acquire land, which was devised by Shann Turnbull and is called the "dynamic tenure". In general terms, the dynamic tenure can be used as a means to acquire land when property rights flow from one party to another at a prescribed date. According to Turnbull, "the pragmatic effect of such an arrangement is to ensure that all residents of a cooperative land bank will automatically, with the passage of time, become owners of leasehold improvements in the cooperative" (Turnbull, 1983, p. 8).

In short, the land of those rural communities suffering from depopulation should be brought into public ownership, either by agreement or under compulsory purchase powers.

According to the association *ConnectedCities*, the principles of which were at the core of Howard's original thinking, there are similar methods like the CLB, where the shares are distributed to residents' pro-rata to the area occupied by their dwelling. This

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way, ownership in a dwelling or commercial building takes the form of shares in the CLB and a transferable lease from the CLB. Leases on dwellings are perpetual. Those for other buildings are time limited.

Likewise, residents gain equity in the entire site, not just the area occupied by their dwelling. The CLB is a company with shares, but there is one vote per resident no matter how many shares they may hold. 'Pioneer' homebuyers are issued their share gratis. Later buyers purchase the dwelling from the previous owner and the shares for the land from the CLB.

According to the association *ConnectedCities*, the route should be as follows:

- CLB buys the land freehold at compulsory purchase values.
- Commercial sites are sold on 99-year leases – providing funding source for infrastructure.
- Housing sites are not sold but made available free to builders under contracts requiring the corporation to grant a 3000-year lease of each completed house.
- The builder can be a self-builder, a small builder or a volume house builder, but has to start building on the land in accordance with the CLB guidelines within two years and complete within three or the contract lapses.
- The CLB owns the land in perpetuity and is prevented from selling housing plots by its constitution.
- The lease provides for the payment of a ground rent for the enjoyment of the land, the value of which remains with the corporation. The ground rent is tied to an appropriate index, so it rises with inflation.
- The builder sells each completed house to purchasers (or the self-builder completes his house) and calls on the corporation to grant the 3000-year lease. The lease is granted to the purchasers.
- First-time buyers can be allowed a rent holiday of a number of years, during which they only have to pay mortgage instalments. This gives time for their income(s) to rise and the real cost of their mortgage payments to reduce due to inflation.

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- The house may become forfeit in the event of non-payment of the ground rent, so house owners and their mortgagees must both ensure that this does not happen.
- When house owners want to move, they sell the lease on the open market and the new purchasers then pay the ground rent.
- The CLB borrows against future rental income to fund infrastructure investment.
- When the CLB has repaid the land acquisition costs it is wound up and the ground rents go to the council to be used for the benefit of the community (Connected Cities Ltd, 2022).

This method:

- Allows developers and self-builders to begin building immediately, without having to pay for the land or obtain planning permission.
- Ensures that developers' profits come from the value added by constructing the dwellings, exactly as a manufacturer's profit is made.
- Breaks the link between house prices and land prices, providing a rapid supply of housing.
- Allows the development corporation, when fixing the ground rent, to share the uplift in value with purchasers and thus make all the housing affordable (Connected Cities Ltd, 2022).

As the ground rents will continually rise with inflation, they are a reliable source of future income against which, even before they become payable, the CLB can borrow. Once the land has been acquired by the CLB through any of the above-mentioned mechanisms, a dual land tenure system should be implemented, in order to ensure the control of the land by the CLB before starting to redevelop any kind of existing rural settlement. Thanks to this, the land would be separated from the existing buildings built on it, so that those interested to buy or rent a house in the countryside do not have to purchase the land, but only purchase the building and pay rents for the land at rates well below market value on a long-term tenancy agreement. In other words, the tenants would

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be owners or leaseholders of the properties and users of the land on a rental basis at the same time, whose equity would differ depending on their involvement in the CLB. For example, if a tenant is a member of the CLB, his/her equity would be the result of the improvements of the land acquired and the dividends derived from the rents paid up by him/her and the other tenants. This way, the unbundling of property between the land and its improvements does not only contribute to secure the affordability of properties by means of the control of the land by the CLBs, but also contributes to set the basis of a self-financing system where the tenants can be users and recipients of the redevelopment of existing rural settlements.

Therefore, a dual land tenure system represents a feasible alternative to revitalise rural communities in decline, as it represents an incentive to encourage people to buy/rent houses at low price in the countryside at the outset of the regeneration of the settlements, as well as keep the conditions for the affordability and self-reliance of the rural communities over the course of time. In order to get some funds from the duplex property rights of land ownership and use for the development and maintenance of the community, on the one hand, the CLBs should create two types of rents in those buildings owned by the CLBs, such as "fixed ground rents" linked to the land acquired by the CLB and "rate-rents" linked to the improvements built on the land. On the other hand, those buildings which are not owned by the CLBs should create "fixed ground rents" at least. As happened in Letchworth, the "fixed ground rents" should represent a fair proportion of the purchase price of the land and other expenses related to it, such as technical expenses, and the "rate-rents" should represent the cost of building all kind of improvements on the land, as well as public works, such as infrastructure development and technical support (Purdom, 1949, p. 165).

In this way, the CLBs can secure the increased value of the land, derived from the refurbishment of abandoned houses, the upgrading of infrastructures, the implementation of essential amenities and/or the transformation of agricultural land into urbanised land, for the benefit of the community. In other words, the "unearned increment" of land would belong to the community through the CLBs and would contribute to get funding to finance the development and maintenance of the rural communities. Thus, the dual land tenure system can provide a dual impact on the rural development of existing rural settlements, as it can secure the control of the land by the CLBs and provide the economic means to carry out the regeneration of rural settlements in the long term.

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In parallel, this system can contribute to avoid the existence of taxes for public purposes, by defraying their absence thanks to the rents paid up by the future tenants. Such advantage represents an additional incentive to encourage urban communities to move to rural areas, because it can alleviate the economic burdens of families or less advantage people who are in search of a prosperous future in the countryside. Therefore, instead of paying annual taxes for amenities, infrastructure, or the maintenance of the public space, the CLBs can also provide the economic means to update the infrastructures of rural communities in decline and can go beyond the provision of accommodation and employment. In short, the net profits from buildings for sale or rent, in combination with the profits from rate-rents and fixed ground rents, should cover all the expenses in the development and maintenance of the regeneration of rural settlements, thus establishing the self-financing system of the CLBs.

However, to do this, the CLBs should define some limitations on dividends among the shareholders, in order to get as much capital as possible for the above-mentioned purposes. Unlike regular investment companies, the CLBs are not especially aimed at obtaining high returns to be distributed among the shareholders of the company but are mainly focused on saving money for the benefit of the community. This goal matches the goals of a cooperative company, and even more if the shareholders of a cooperative company are recipients of the CLBs and tenants of the properties. In that case, the interests of the CLBs would be tightly connected with the interests of the community, which can be a real advantage when defining the terms and conditions of the cooperative company for the regeneration of existing rural settlements.

In this regard, the development company of Letchworth established a limitation upon the respective dividend among its members of a maximum of 5% per year, so that the remaining portion was devoted to the development and maintenance of the infrastructures, public buildings, amenities, and even for the embellishment of the town (Purdom, 1949). After fifty years of development, the dividend that the shareholders of the First Garden City Ltd. received exceeded 10% per year, which led to the removal of the limitation of dividend and the subsequent and rapid process of speculation. In the case of Welwyn Garden City, its development company established a limitation of dividend of a maximum of 7%, which, according to the Memorandum, represented a matter of public importance and was established for the benefit of the town (Welwyn Garden City Ltd., 1920).

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Thanks to the experience of Letchworth and Welwyn Garden City, the CLBs should provide for the payment of between a 5 to 10% cumulative dividend to the shareholders, so that the balance of the net profits can be applied for the benefit of the rural community, as well as the affordability of houses and other premises can be guaranteed.

Notwithstanding, the CLBs should define additional strategies to build affordable houses in combination with the limitation of dividend of the shareholders. Just like the development companies of Letchworth and Welwyn Garden City used public policies on affordable housing, the CLBs should promote the building of accommodation in rural areas with the use of local, regional, and national public policies aimed at providing affordable houses. This strategy, as well as the use of other public policies, should not reduce the level of independency of the CLBs from external interferences, although the building or refurbishment of accommodation by the CLBs should be done according to the requirements of any public policy in terms of accommodation conditions and services, at least. For example, the regulations contained in the "*Real Decreto 42/2022, de 18 de enero, por el que se regula el bono alquiler joven y el plan estatal para el acceso a la vivienda 2022-2025*" requires compliance with the provision of a series of amenities, accessible measures, sustainable solutions, accommodation size, etc., in order to guarantee the best conditions to let younger people to get decent accommodation with the minimum of essential services serving the future population (Real Decreto 42/2022, 2022). These requirements, which match the criteria of CLBs in terms of living conditions and the provision of amenities, can be easily achieved in the regeneration of a rural settlement, because the scope of action would cover large part of rural settlements, thus allowing the re-zoning of the land for implementing all the amenities that modern rural communities can need. As a result, the re-zoning of the land would not only comply with the above-mentioned requirements, but also would lead to increase the value of residential land, the profits of which would be devoted for public purposes, such as the provision of additional accommodation, public works, infrastructure, amenities, etc.

According to the law '*Ley de Cooperativas'*, the decision about how to distribute the net profits of the CLBs should lay in the shareholders of the cooperative societies (Ley de Cooperativas, 1999). However, Turnbull proposes to give one vote to each adult resident, so that the CLBs can take the role of CLTs, as local governmental bodies (Turnbull, 1983). In this regard, the law '*Ley de Cooperativas*' only allows shareholders of second-degree cooperatives to give votes to either private companies or individuals

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(Ley de Cooperativas, 1999), which, coupled with Turnbull's idea of distribution of voting rights, complies with Howard's self-governance scheme. In this way, the CLBs can be established in the Spanish territory by registering as second-degree cooperatives under the law '*Ley de Cooperativas*', which confers the rights to form cooperative development companies without precluding the participation of residents to take part in the redevelopment and/or expansion of their existing rural settlements.

In short, despite there is no precedent of CLBs in Spain, the Spanish legislation provides the means to set the basis to establish CLBs as second-degree cooperatives, both to merge several cooperatives, private companies, and individuals, and give votes to all the actors involved in the redevelopment of existing rural settlements, in order to better develop the co-management of land after completion of their development and infrastructures. However, all the decisions about the development and management of the CLBs should be the result of a consensus reached among all the actors after discussing the suitability of each strategy before voting to avoid division and friction in the CLBs. Therefore, the development and management of existing rural settlements under the CLB scheme would lead their members to arrange regular meetings, which would in turn contribute to strengthen the ties of cooperation between cooperatives, private companies, and residents.

Likewise, the establishment of second-degree development cooperatives can encourage the raising of other second-degree cooperatives, such as worker cooperatives, agricultural cooperatives, credit cooperatives, etc., if the cooperatives, private companies, and individuals that form the second-degree cooperatives belong to the same kind of cooperative and share the same purpose (Ley de Cooperativas, 1999). In this way, the two alternatives aimed at regenerating the labour market and redeveloping the living conditions of existing rural settlements can promote the establishment of additional cooperatives, in order to improve the local economy of villagers and their self-reliance in terms of investment, development, management and planning.

In this regard, the establishment of cooperative development companies in the redevelopment of existing rural settlements does not only have the potential to achieve a self-financing system, but it is also a feasible alternative in those small rural communities where the spirit of cooperation and commitment can be easily found and even more in those communities with existing working cooperatives operating there. Therefore, the suitability of implementing such cooperative approach in small rural communities represents an opportunity for those rural settlements at risk of depopulation, where any

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alternative is welcome to overcome the stagnation of their social and economic development in the countryside.

To do this, the combination of all the strategies outlined in this chapter can provide the means to get funds and secure the housing affordability of the scheme, thus representing a feasible economic alternative without public intervention. However, it does not preclude the use of public funding for housing development, for example, as long as the independency of the cooperative development companies can be ensured to avoid the existence of taxes for public purposes and land speculation. Thus, the public administration can take part in the revitalisation of rural communities in decline and become a stakeholder of the CLBs, either by selling land to the cooperative development company or transferring the use of land. Nowadays, most Spanish councils have plots of non-residential land that are aimed at temporarily providing affordable housing to people hit by the coronavirus pandemic's economic impact under the Decree Law '*Real Decreto-ley 26/2020, de 7 de julio, de medidas de reactivación económica para hacer frente al impacto del COVID-19 en los ámbitos de transportes y vivienda*'. This public land bank for residential development is more and more demanded by housing cooperatives for affordable housing, as it is in line with the cooperative principle of "social economy", which usually attracts those residential development companies with similar ethos and social goals.

Within this context, the public land bank of those rural municipalities at risk of irreversible depopulation can also be integrated into CLBs in association with other cooperatives, private companies, and individuals, in order to avoid developing small pieces of land in the revitalisation of rural settlements. Thanks to adding as much land as possible, the CLBs can also proceed with the re-zoning of the land for residential, industrial, recreational, and farming purposes, as the public land bank allows to use non-residential land for other purposes. This way, the so-called "unearned increment" derived from the re-zoning of the use of the soil can be captured by the CLBs for public purposes. To achieve that, the CLBs should comprise most of the land of the rural settlement, so that the cooperative development companies can make a good return to support the redevelopment and maintenance of the rural community in the long term.

In the case of Letchworth, the First Garden City Ltd. had to purchase fifteen land holdings, which were taken, according to Professor Stephen Ward, "without compulsory purchase powers, complete secrecy (…) to prevent the price rising excessively" (Ward, 2016, p. 36). According to Purdom's figures:

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> The purchased land consisted of 3,822 acres, obtained by private treaty from fifteen different owners for £152,751, and costing, after payment of legal expenses, etc., and the costs of the pioneer company, a total of £160,378, or an average of £42 per acre" (Purdom, 1949, p. 54).

Previously to the building of Letchworth, the estate was comprised by the village of Letchworth with twelve cottages, a manor house, a church, and rectory; Norton village consisted of two houses, a few cottages and farmhouses, a vicarage, church, inn, and a population of 200; the village of Willian with a population of about 200; and part of the village of Radwell (Purdom, 1949). Despite the risks of purchasing a wide and varied range of agricultural plots and buildings, the company was able to overcome the early frictions between the developers and the existing landowners, thanks to the involvement of the tenant of the largest farm of the estate in the development of the town (Purdom, 1949).

This situation can also be found in those rural communities of today with 200 population or less and it is equally worth adding as many plots as possible to the CLBs, in order to achieve the financial target of the cooperative development companies and redevelop their settlements as a whole. To avoid frictions between the CLBs and the existing landowners who are not willing to take part in the cooperatives, the CLBs should encourage them in participating in the scheme through getting profits from the redevelopment of land and guaranteeing the preservation of all their improvements on the land to be integrated into the final layout of garden villages of tomorrow.

In short, the application of the wide range of potentialities of CLBs in the revitalisation of rural communities at risk of irreversible depopulation can offers a window of opportunities not only to establish a self-financing system or assure the affordability of houses and other premises without public investment on infrastructure, but also complies with the same goals set out in the previous chapter. For example, the use of endogenous resources for construction or refurbishment helps to reduce the carbon footprint and lower the construction costs, thus contributing with the building of sustainable and affordable housing. In this way, the affordability and economic feasibility of the scheme, in combination with the territorial strategies outlined in this document, can become a magnet to attract people and means of production to move to the countryside.

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However, such territorial and economic initiatives should be underpinned by some design principles that can make up a (r)urban design framework to regenerate and expand existing rural settlements by preserving the existing natural elements and buildings in the field of architectural, urban, and territorial planning.

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6.3 (R)URBAN DESIGN PRINCIPLES

Among all the different kind of settlements located in remote and intermediate rural regions of Spain, 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, D., Rasmussen, R. O., Ensign, P., Huskey, L., and Taylor, A., 2011). Although the garden city model was thought to design rural communities from scratch, its design principles can also be adapted for regenerating and expanding existing rural settlements, 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. On the other hand, scattered rural areas can also give rise to a new village or town in the form of connected villages around a civic centre, just like Letchworth was devised by Parker and Unwin, as well as they can be integrated to the "Linear Shires" of other rural settlements, as outlined in Chapter I of Part IV.

Therefore, no matter the difference of scale between a garden city or a village when the elements that shaped both case studies can be sensibly adapted and applied to rural communities of today. 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 rural communities, in order to regenerate and expand their existing settlements.

In this regard, it is worth noting that Letchworth and Welwyn Garden City have already had a great impact in the field of urban planning, as they were two of the early examples of planning new towns from scratch. So far, the influence of the first two garden cities has prompted the development of other garden cities, garden villages and garden suburbs. However, such an influence has been more about aesthetic aspects, rather than systemic. In contrast, since those rural settlements suffering from depopulation need something more than aesthetic improvements, all the architectural and urban design principles involved in the regeneration of existing rural settlements should be tightly connected to other strategies, so that the resulting scheme goes beyond the visual perception and reinforces the social and economic dimensions previously defined. Within this background, the revitalisation of declined rural communities can become a new

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territory where implementing the design principles of the garden city model, which comprises a varied and wide range of design principles based on socio-economic aspects.

As we have seen in Chapter III of Part III, the "disurbanist" model of garden cities was the result of interweaving a series of planning schemes and common areas scattered across the settlements, through village greens, cul-de-sacs, and allotments to encourage the spirit of co-operation among residents; through the preservation of existing mature trees, the creation of "accents" in the building lines, and the principle of closure to shape a picturesque townscape that integrates the pre-existing natural elements within the urban fabric; and through pathways, parks, squares, sport courts, tree-lined corridors and open areas to bring nature closer to the daily flows of residents.

Either for the regeneration of existing rural settlements or their expansion, the implementation of the above-mentioned principles is not only aimed at reinforcing the socio-economic principles outlined in previous chapter but can also contribute to reinforce the spirit of place of those rural communities lacking a strong local identity. Thus, the revitalisation of rural communities in decline under the umbrella of the garden city's design principles can offer a varied and wide range of guidelines to develop opportunity areas in a supra-municipal level, as well as to regenerate and/or expand existing rural settlements at local level, through the layout of green buffers, the development of a picturesque townscape and the enhancement of the spirit of co-operation in the field of architectural and urban planning.

6.3.1 The development of opportunity areas

In relation to the territorial strategies outlined in Chapter I of Part IV, the development of opportunity areas can provide the basis to establish most of means of production on a series of available plots for production purposes located between and beyond the boundaries of different rural settlements in a supra-municipal level. Thanks to this strategy, the inhabitants of a Linear Shire would be able to go to work in common areas beyond their settlements at less than fifteen minutes journey by train, thus contributing to prevent from the high risk of economic fragmentation and dispersal on small rural communities. The development of opportunity areas at the supra-municipal level also contributes to preserve the natural environment of small rural settlements for the use and benefit of people and animals, as such opportunity areas would be close enough to the villages thanks to their location along pre-existing railway routes, but far enough from the surrounding natural environment of the settlements to prevent from any

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kind of environmental damage, thus forming wide green belts around the villages. Within this framework, the rural settlements of a Linear Shire would not need to modify their existing urban fabric nor suffer from noise or air pollution for developing commercial or production facilities, as this kind of development would be built away from the urban environment. This idea comes from the combination of the Owenite model community and the adaptation of the Howardian Social City (Fig. 6.14), in order to strengthen the ties of cooperation between different rural communities in terms of production; provide large plots for business, industrial or technology parks; and preserve the urban fabric of existing rural settlements.



Figure 6.14 A view and plan of the villages of unity and mutual co-operation, described in Robert Owen's report on the poor, 1817, with production sites highlighted in orange on the background (www.urbanplanning.com).

To design the opportunity areas at the local level, account should be taken of the high levels of risk involved in the establishment of the first pioneer companies wanting to move to the countryside, so that all the improvements built on opportunity areas have a high level of flexibility and resilience to accommodate different kind of industries, laboratories, research centres, etc. As we have seen in Chapter III of Part III, the architect Louis de Soissons designed sectional factories at Welwyn Garden City, the advantage of which is splitting or merging all the premises according to the kind of industries to accommodate there and their growth over time. Nowadays, it is even easier to achieve a high level of architectural flexibility in the construction of industrial facilities, by using

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movable walls that allow to split or merge the inside enclosures. This way, big sectional facilities can accommodate from start-ups to established international firms under the same roof and share common areas, such as restaurants, recreational grounds, terraces, parking areas, etc. (Fig. 6.15). Thanks to this, those small or medium industries wanting to move to rural areas would have the opportunity to run their companies in a conservative manner, by renting small premises at the early stages of development.



Figure 6.15 A proposed sectional facility for the village of Alfarnatejo in Spain (Tan et al., 2021).

In general terms, the development of opportunity areas of a Linear Shire is quite similar to the development of traditional industrial or technology parks, coupled with the capability of adapting their available rooms for different kinds of activities with different sizes over time. In addition to this, part of the soil of the opportunity areas should be aimed at generating sustainable energy for production purposes, either by using solar panels, hydropower, windmills, or geothermal energy, in order to minimize the environmental impact of decentralising means of production across the countryside. This way, the surplus energy of all the opportunity areas would be used by those rural communities located within the scope of the Linear Shires. Thus, the economic and environmental impact derived from the regeneration, development and maintenance of public lighting, amenities, and infrastructures of rural settlements can be rewarded by

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using clean, green, and cheap energy produced in a supra-municipal level for local development.

In addition to accommodating production facilities in a regional level, the opportunity areas might include cultural, leisure, infrastructure, commercial educational and/or sport facilities that the rural communities of the Linear Shires cannot develop by themselves, either due to their lack of available land or their willingness for sharing common activities beyond local boundaries. For example, the development of educational centres on opportunity areas can benefit from this scenario, as the grouping of some rural settlements in a sub-regional entity can provide a bigger population figure to ensure the long-term existence of primary and secondary schools, workshops and even universities in the countryside. Within this framework, the opportunity areas of a Linear Shire would have the capacity to fulfil the needs of villagers in terms of employment, leisure, energy, provision of livelihoods, education, etc., thus contributing to shape a territorial network of existing rural settlements around new developments and the regeneration and expansion of them in a local level.

Within this context, most of the rural communities suffering from depopulation throughout the Spanish territory have similar issues like population shrinkage, lack of production, shortage of amenities, bad infrastructure, no Internet access, and aging population. However, their living conditions with abandoned buildings, brownfield areas, empty plots and neglected spaces stand out against the above-mentioned problems, causing a vicious circle of abandonment and discouragement among residents and outsiders alike. Therefore, the regeneration of the existing rural settlements suffering from depopulation should be addressed in parallel with the strategies outlined in previous chapters aimed at developing Linear Shires and implementing CLBs in Spanish rural areas. Otherwise, the economic and territorial strategies would fail in the absence of high-quality public space, infrastructures, services, and accommodation.

6.3.2 The layout of green buffers

Just like Parker, Unwin and de Soissons designed the greenery of Letchworth and Welwyn Garden City respectively to enhance the daily walks of residents, from residential areas to the factories, and bring nature to the core of both towns, the landscape design of rural settlements of today should be composed of boulevards or pathways along existing riverfronts, groves, allotments, parks, lakes, farmland, etc., in order to comply with the above-mentioned aims. The idea of integrating pre-existing natural elements into

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the layout of new streets and boulevards has on the one hand the economic advantage of being cost effective and, on the other hand, the aesthetic advantage of having mature landscaping from the very beginning. Furthermore, the preservation of pre-existing infrastructures and buildings would contribute to integrate them into the final landscape design of existing rural settlements, thus achieving an effective marriage between the old and the new.



Figure 6.16 Broadway at Letchworth (Taken by the author in 2021).

In the case of Letchworth, Parker and Unwin located the station in the core of the town, in between of the pre-existing park of Norton Common and the three pre-existing plane trees, of which just two remain today. Through the preservation of these natural elements and the station, the architects laid out a big public network with a tree-lined corridor and a big square, as a means to connect all the main roads from residential and industrial areas (Fig. 6.16). Following this approach, the layout of new paths for existing rural settlements can be addressed by identifying those natural and man-made elements that are part of the local identity of the site, either in the form of nodes or landmarks. Thanks to the preservation of these elements, new paths can be formed to make up a

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unique townscape based on the local heritage of the site, as well as establishing some networks between the significant places of the settlement and its surrounding rural landscape. Within this framework, train stations, public buildings, religious buildings, schools, or recreation grounds, together with allotments, groves, woodlands, or riverfronts can become the component parts of the scheme.

However, instead of using the Letchworthian spider-web as urban pattern for the building of new paths throughout the above-mentioned elements, the urban form should come from what is already there, by taking into consideration existing routes and any kind of infrastructure, just like Parker, Unwin and de Soissons laid out Broadway at Letchworth and Parkway at Welwyn Garden City respectively. Nonetheless, the resulting layout of new green networks on existing rural settlements should not be necessarily similar to those found at Letchworth or Welwyn Garden City, but the result of using the same starting point in terms of order and composition.



Figure 6.17 Proposed linear park for the village of Barahona de Fresno in Spain (Lin, X., et al., 2020).

As an example, the students of the Master of Architecture and Urbanism (MA A+U) at the Manchester School of Architecture carried out an academic project for revitalising the Spanish village of Barahona de Fresno in Segovia, which was supervised by the author in 2020. In view of regenerating the infrastructures and urban fabric of the village, the students proposed the layout of a linear park along the Barahona river, so that the existing settlement, the church, the barns, as well as the proposed research centre,

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recreational areas and railway station are tightly connected throughout a new green corridor, as a "catalyst" between the settlement, its surrounding farmland, and woodlands (Fig. 6.17).

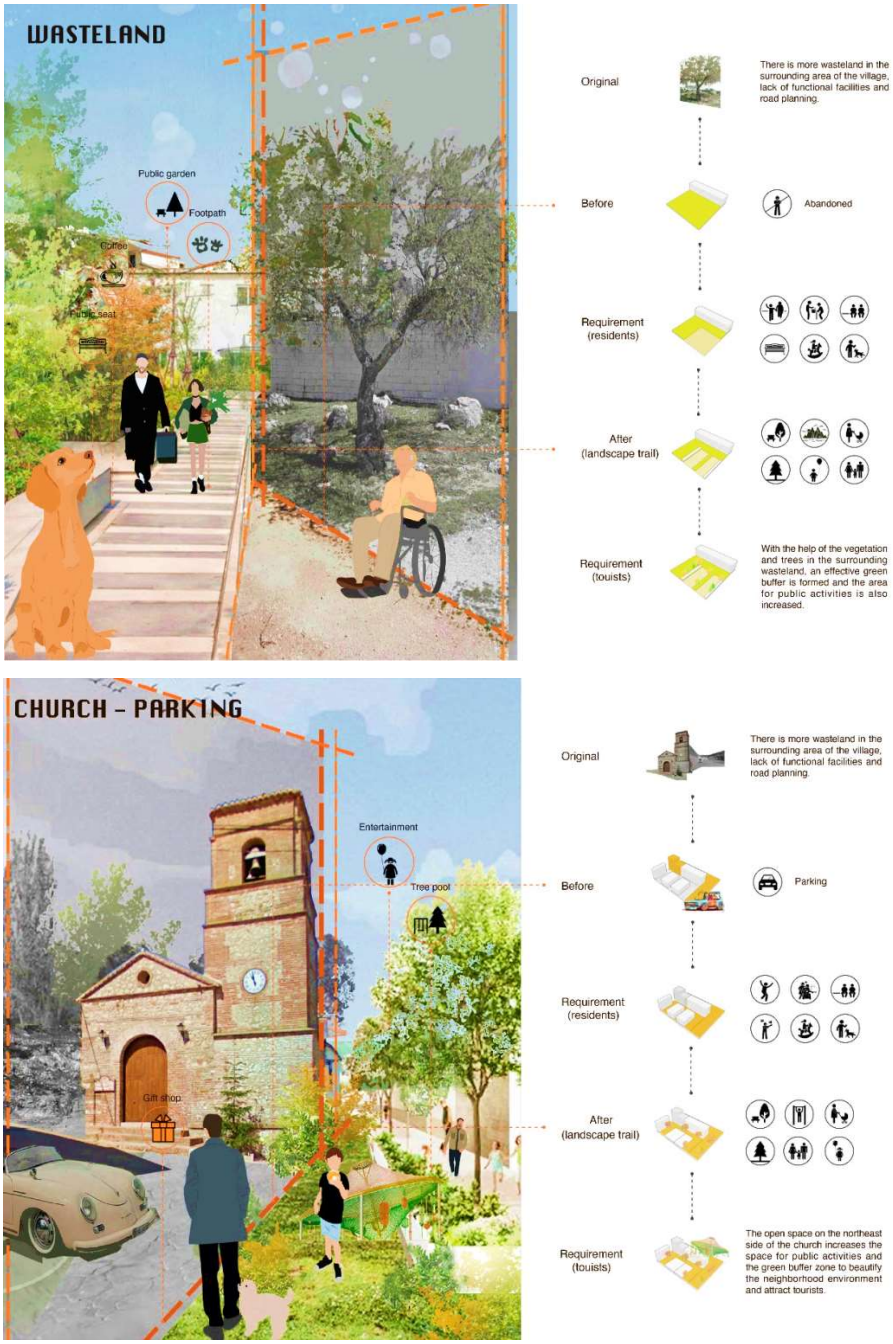


Figure 6.18 Proposed green pathways for the village of Alfarnatejo in Spain (Tan et al., 2021).

At the local level, other students of the MA A+U proposed the regeneration of neglected spaces, parking areas and empty plots to establish some pathways within the Spanish village of Alfarnatejo in Málaga, as part of an academic project supervised by

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the author in 2021. In this case, the new green corridor goes through the existing urban fabric of the village, in order to create several recreation grounds and open areas for common activities, in the form of parks, village greens or squares scattered throughout the whole settlement (Fig. 6.18).

Despite the differences in form, both academic projects are aimed at establishing green buffers through the preservation of mature trees, old routes and existing heritage, giving an insight into how the garden city's design principles might be implemented in rural communities suffering from depopulation without having to replicate the same formal patterns used in the case studies of this document.

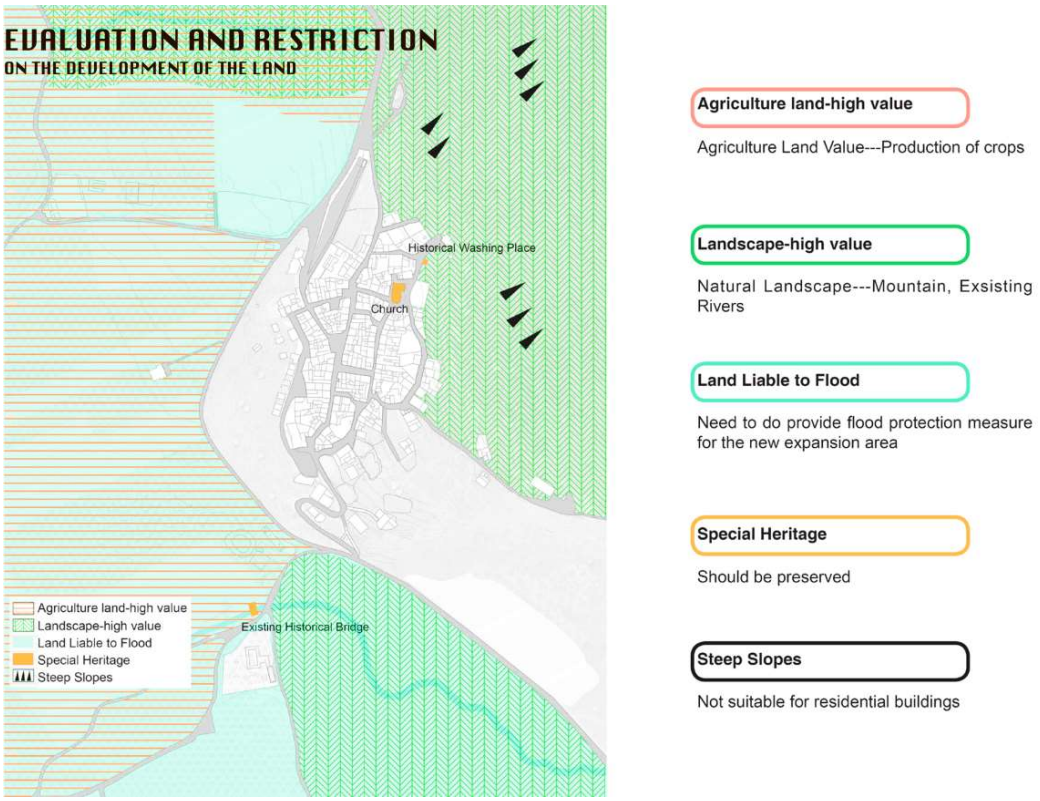


Figure 6.19 Evaluations and restrictions on the development of land at the village of Alfarnatejo in Spain (Tan et al., 2021).

6.3.3 The implementation of a picturesque townscape

In parallel with the provision of green networks on existing rural settlements, their surrounding natural and geographical features can offer a wide range of possibilities to provide more accommodation and/or services beyond their current boundaries. According to Andrew Thornburn, when analysing the evaluations and restrictions on the development of land for the expansion of a village, account should be taken of the

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agriculture-land high value, the landscape high value, the land liable to flood, the special heritage, and steep slopes (Thornburn, 1971), in order to know what would be preserved and what would be intended for future development (Fig. 6.19). Those natural features to preserve can be integrated into the layout of green networks to achieve a rapid mature look. However, the land for future development, either for agriculture, housing, industrial, commercial, or mixed-use development, usually lacks natural features or existing buildings, so it is necessary to implement some design principles to give the expected picturesque townscape of a rural settlement.



Figure 6.20 Pre-existing mature trees along Handside Lane at Welwyn Garden City (Taken by the author in 2019).

This does not mean that a simulation of the picturesqueness of a village should be necessarily implemented, but some guidelines should be followed to design the expansion of a small village, paying special attention to a series of natural features like existing trees, contour lines, livestock trails, etc. In this way, the layout of new roads can be the result of, for example, preserving old tracks, barns, hedgerows and/or mature trees, just like Louis de Soissons laid out Handside Lane at Welwyn Garden City. When strolling down

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Handside Lane from Bridge Road, one can still see those pre-garden city features along that road, such as its original irregular layout, some old cottages dated from the early eighteenth century, some big mature trees and two old barns between the houses (Fig. 6.20). The integration of these natural features is highly remarkable, as some pre-existing trees were surrounded by cottages in the form of cul-de-sacs or village greens, thus shaping the residential area as a group of hamlets. Likewise, the old cottages as housing accommodation and one of the barns as a theatre called Barn Theatre (Fig. 6.29) were also integrated into the final housing layout of Handside Lane. Following this approach, the resulting townscape can be summarised as an evolution of the original site and its coexistence with the implementation of additional rural patterns to create accents in the building lines and develop the Unwinian principle of closure.

According to Randall Arendt, "unlike most planners today, who generally have been educated primarily in policy matters and secondarily in design issues (if at all), Unwin and others of his generation emphasized the significance of building locations and road arrangements in terms of creating visually interesting town designs" (Arendt, 2017, chapter 4). Although Unwin's design principles are more than one hundred years old, his timeless approach can still be used for the regeneration and/or expansion of rural communities of today.

To do this, according to Unwin, "sufficient reasons will generally be found on the site itself to cause or suggest irregular buildings and interesting accidental features" (Unwin, 1909, p. 293). Once the natural features have been considered for the layout of new roads, the grouping of houses or housing schemes can play an important role in providing, according to Unwin, "terminal features in the street pictures; an arrangement which adds to the beauty of the roads themselves, while making the houses more attractive on account of their more extended views" (Unwin, 1909, p. 332). In this regard, we can take from Letchworth's housing schemes some ideas for placing buildings along new roads, by combining the houses into groups at certain points of the roads, such as junctions and curving roads. For example, the housing developments of the Garden City Tenants, Ltd., Bird's Hill Estate and Pixmore Hill (Fig. 6.21), designed by Parker and Unwin at Letchworth, comply with the above-mentioned principles by creating accents in the building lines, although in a different manner. While the former has an irregular layout to suit the hilly topography of the site, the latter is more regular than the other. However, in both cases the architects tried to avoid using the urban grid to place some allotments and recreation grounds within the residential blocks, as well as village greens marking the

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turning points of the street pictures. In this way, the resulting townscape comes from the preservation of trees and groves, coupled with the implementation of village greens and groups of cottages, which frame beautiful pieces of landscape around and throughout the residential areas.

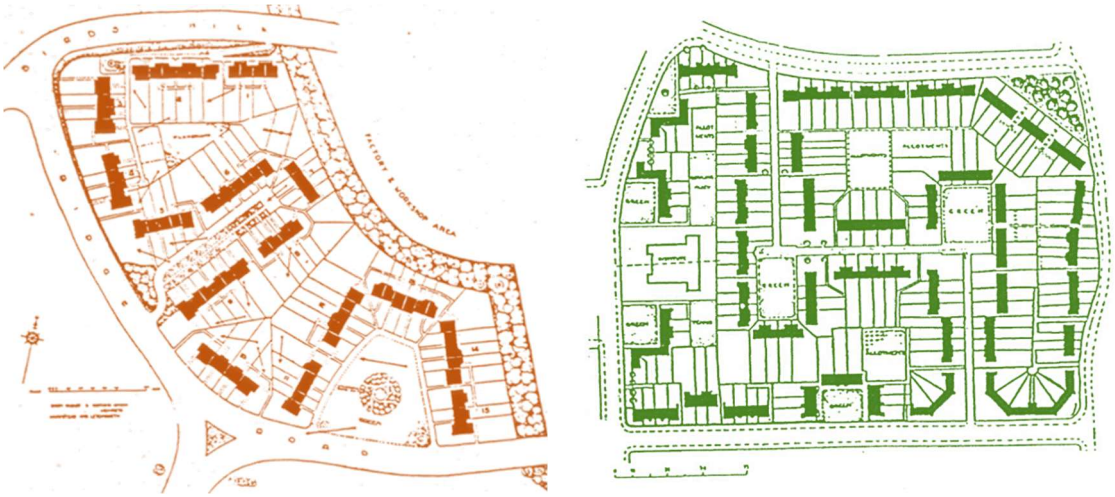


Figure 6.21 Parker and Unwin's master plan for Bird's Hill Estate and Pixmore Hill at Letchworth ('*Town Planning in Practice*', by Raymond Unwin).

The adaptation of this method in existing rural communities can offer plenty of different housing schemes, depending on the natural features to preserve, the orientation of buildings and the street scene. Thanks to this, the picturesqueness of small villages would extend beyond their existing boundaries in an organic and rational way, by indirectly implementing the variety, intricacy and play of outline of most unplanned villages.



Figure 6.22 Morphological analysis of the village of Alfarnatejo in Spain (Tan et al., 2021).

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When planning the expansion of a village, account should be taken of the urban fabric of the existing settlement, so that a concise analysis of its morphology can give some urban patterns for future development. As an example, the students of the MA A+U proposed for the expansion of Alfarnatejo the implementation of some existing urban patterns of the village, such as open squares, enclosed courtyards, backyards, and Y-shape junctions, to use part of the local identity of the village to design its expansion (Fig. 6.22).

Within this framework, the combination of all these patterns can be the origin or the result of a series of housing schemes with different housing typologies, thus helping to provide more variety to the townscape. For instance, in the case of Letchworth's townscape, its variety is reflected in the different groups of semi-detached houses along the residential roads. This way, to avoid a sense of monotony along the roads, Parker and Unwin designed groups of houses to create different sequences of single cottages, blocks of three cottages, pairs of cottages, blocks of four cottages, and so on (Fig. 6.23). "Also in the spacing of buildings", according to Unwin, "some variety may be obtained, the pairs forming the individual group being kept nearer together and a sufficient break being arranged before the commencement of the next group" (Unwin, 1909, p. 351).

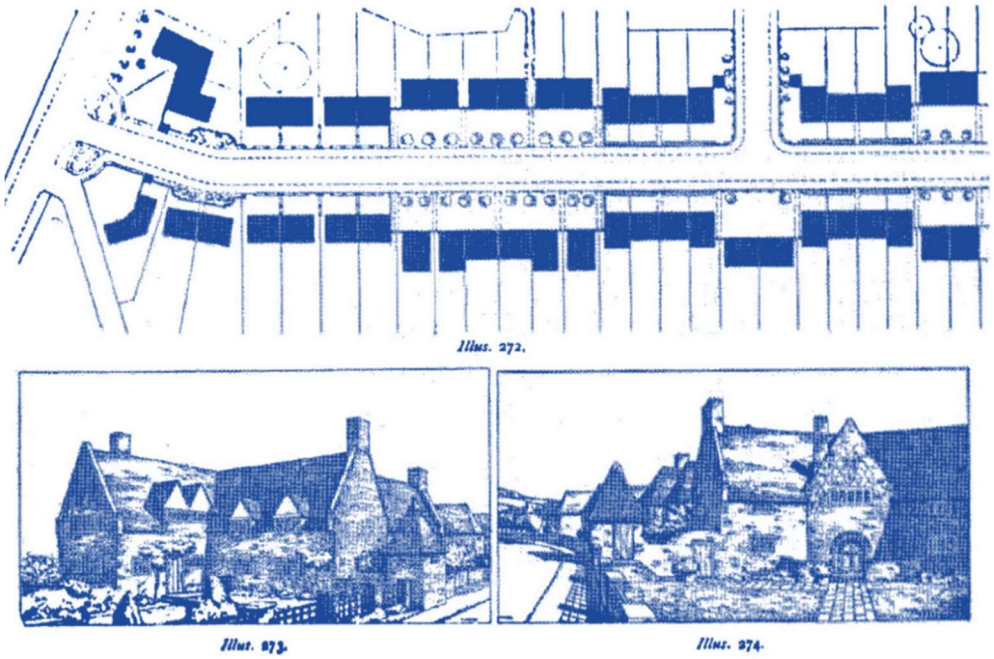


Figure 6.23 Example of arrangement of buildings on a road ('*Town Planning in Practice*', by Raymond Unwin).

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However, the combination of the variety of buildings and their play of outline along the building lines can produce even more variety and interest in the street pictures, thus giving more space for the arrangement of a continuous green in front of them, for example, or the widening of the street for tree planting on such road sections. The play of outline in the building lines can be achieved by the set-back of groups of cottages at certain sections of the road, like in junctions or corners, but always in accordance with the opposite building lines of each section to give a sense of balance in the street scene. In Letchworth, this method was used by Parker, Unwin, and other architects to lay out most of the residential roads of the town, in order to assure some degree of cooperation in planning groups of houses around greens.

Therefore, a picturesque townscape can also be shaped from other design principles aimed at encouraging the spirit of cooperation among residents. We can find some examples of it within the residential areas of Letchworth and Welwyn Garden City, like Meadow Way Green at Letchworth (Fig. 6.24), where the set-back of groups of cottages on both sides of the road gives a quadrangular shape that reinforced the cooperative housekeeping scheme of the residential group in the past.



Figure 6.24 Meadow Way Green at Letchworth (Taken by the author in 2021).

6.3.4 Fostering the spirit of cooperation among residents

In the absence of cooperative schemes like Meadow Way Green and Sollershott Hall at Letchworth or Guessens Court at Welwyn Garden City (Fig. 6.25), a certain degree of cooperation can be implemented in the planning of groups of cottages around allotments, village greens, sport courts, playgrounds, and any kind of recreation ground, either in the form of front gardens, inner gardens, cul-de-sacs, or small squares. According to Unwin, "this method is likely to be useful where the land adjoins an open space, park, river, or other feature affording a desirable outlook" (Unwin, 1909, p. 355).

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Figure 6.25 Guessens Court at Welwyn Garden City (Taken by the author in 2021).

Together with the provision of common areas within and outside the residential blocks, the integration of natural features like trees, shrubs, groves, rocks, ponds, rivers, etc. in the design of such common areas can give rise to some irregular housing schemes from where all the pre-existing natural elements can be perceived and framed. This method was used by Louis de Soissons in Welwyn Garden City when planning the residential areas of Barleycroft Green or the Quadrangle, by preserving big mature trees and integrating them into two village greens surrounded by cottages. Therefore, despite the scarcity of natural features on farmland for new development, a few trees can help to break the formality of the residential blocks and give some accents in the street picture of a rural settlement. In addition to this, the development of village greens throughout the residential areas encourages residents to do outdoor activities on the lawn, thus helping to forge the distinguishing strong sense of community of a rural settlement.

As we have seen in Chapter III of Part III, the development of inner gardens for domestic activities hidden from the surrounding public space can also encourage the spirit of cooperation among families and residents. Thus, the implementation of allotments and playgrounds within the residential blocks, either in scattered groups or in only one plot of land, should also be part of the planning of new housing development on an existing rural settlement. In this way, some residents wanting to cultivate vegetables for self-consumption, others wanting to do team sports, as well as others wanting to have a meeting point for playing or chatting can enjoy their spare time in a common place close to their dwellings (Fig. 6.26).

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Figure 6.26 Runnalow allotments at Letchworth (Taken by the author in 2021).

As an example of how to import this model into a Spanish village, the students of the MA A+U proposed for the village of Alfarnatejo the implementation of some communal areas within the residential blocks, by taking some references from the garden city of Letchworth. As a result, they proposed a reinterpretation of enclosed courtyards, which came from the shape of the traditional Spanish courtyard building and the residential blocks at Letchworth with inner gardens, either allotments or recreation grounds (Fig. 6.27).

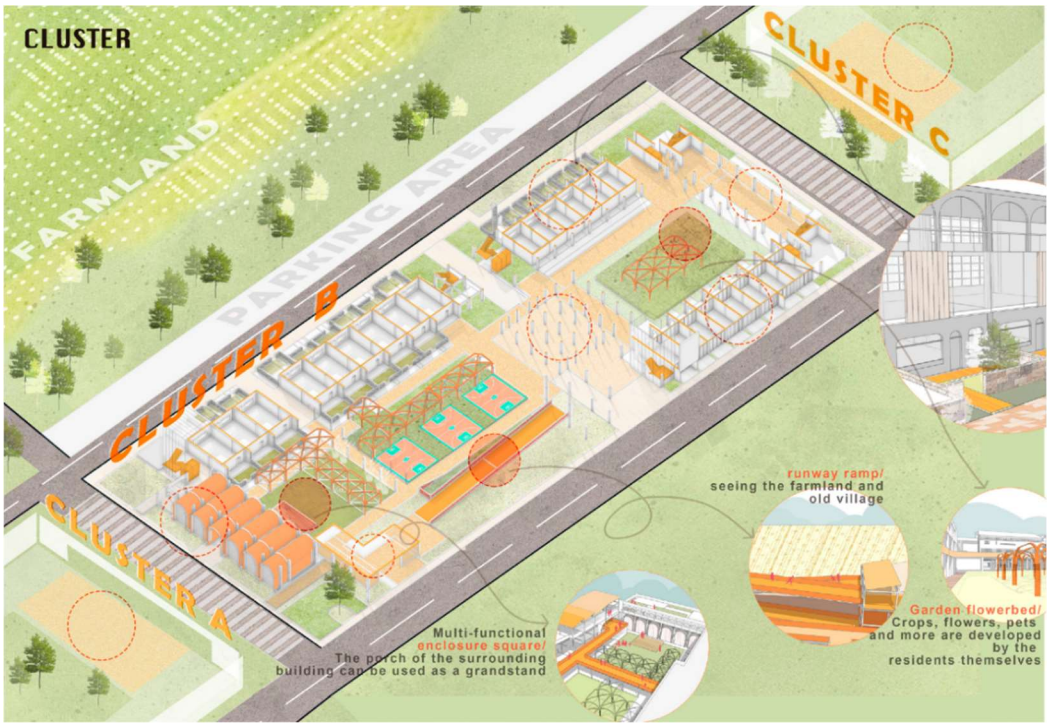


Figure 6.27 Proposed residential cluster for the village of Alfarnatejo in Spain (Tan et al., 2021).

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According to the students of the MA A+U, "communal gardens can provide a place for people to planting vegetables, gather together, chatting and sharing food". They concluded that "communal garden residential type can be used in the new expansion area for young workers, tourists, and new villagers to live together" (Tan et al., 2021, p. 22). Following this approach, the students designed new residential blocks with allotments, community centres, outdoor stages, sport courts and playgrounds for residents, so that children and elderly people can perform outdoor activities in a car-free and therefore safe place in the core of the residential clusters.

Despite the cooperative housekeeping schemes of Letchworth and Welwyn Garden City failed at the beginning of the Twentieth century, nowadays the concept of "co-living" is more and more implemented in developed and developing countries to fulfil a real demand of housing with affordable common services for young people and disadvantage communities. Therefore, rural communities suffering from depopulation can become a new experimental field for co-living schemes to attract those who want to share expenses and activities with others. In this regard, the architectural typologies used in the cases of Sollershott Hall, Meadow Way Green or Guessens Court can also be taken as a reference to define modern versions of cooperative housekeeping schemes for new rural realities. In all these cases, the quadrangle is the shape that gives form to the layout of accommodation and common indoor areas, framing inner gardens in the same way as a cloister. However, the implementation of the compact and hermetic nature of Sollershott Hall and Guessens Court in rural communities of today might not suit all users, as these examples look like hotels or student halls of residence. Instead, the layout of Meadow Way Green is not only more suitable for the provision of co-living units in the countryside but is also a guarantee that the scheme can last beyond its own fate. This is mainly due to the open nature of the planning scheme, which in turn complies with the above-mentioned design principles to encourage the spirit of cooperation among residents.

Notwithstanding, an updated version of the quadrangular shape of the cooperative housekeeping schemes found in the garden cities can also set the basis for the architectural design of public buildings with common areas in existing rural settlements. In this regard, account should be taken of giving a high level of permeability to avoid the sense of enclosure of the traditional quadrangle blocks. For instance, the students of the MA A+U designed a school for Alfarnatejo in the form of a village green with some gaps to create several nodes and paths between the courtyards and the surrounding farmland (Fig. 6.28). In parallel, the use of this pattern can contribute to shape a picturesque townscape as well.

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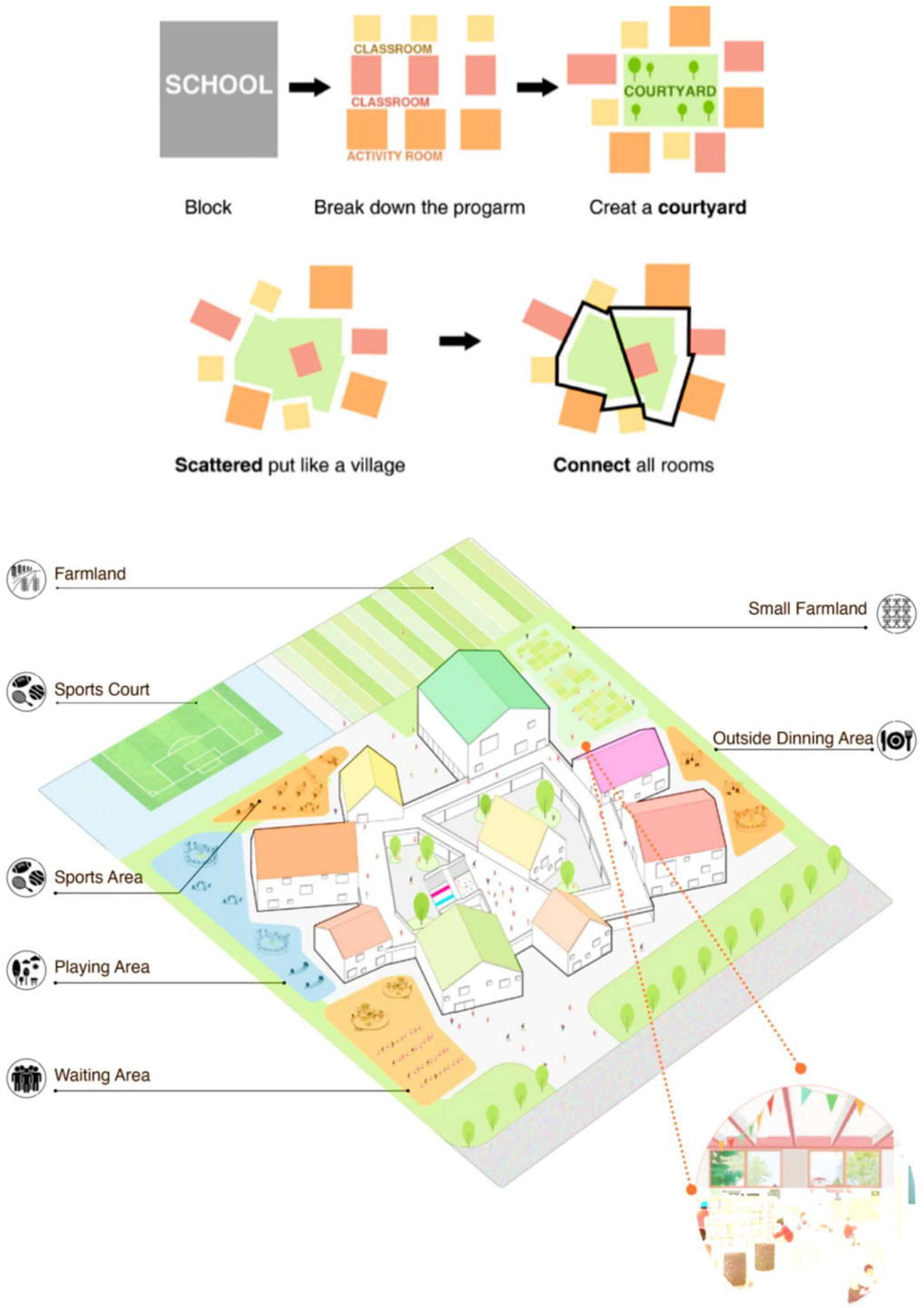


Figure 6.28 Proposed school for the village of Alfarnatejo in Spain (Tan et al., 2021).

Thus, the irregular layout of buildings can reinforce the variety of the townscape; the architecture of buildings in different vernacular styles, heights and colours can enhance the intricacy of the school; and the inner edge can create a play of outline that multiplies the effect of depth and surprise of the resulting picturesque townscape. In this

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way, the planning of a public buildings, either schools, sport centres, office buildings or commercial centres, under the above-mentioned design principles can fit the traditional townscape of a village in terms of order and design.

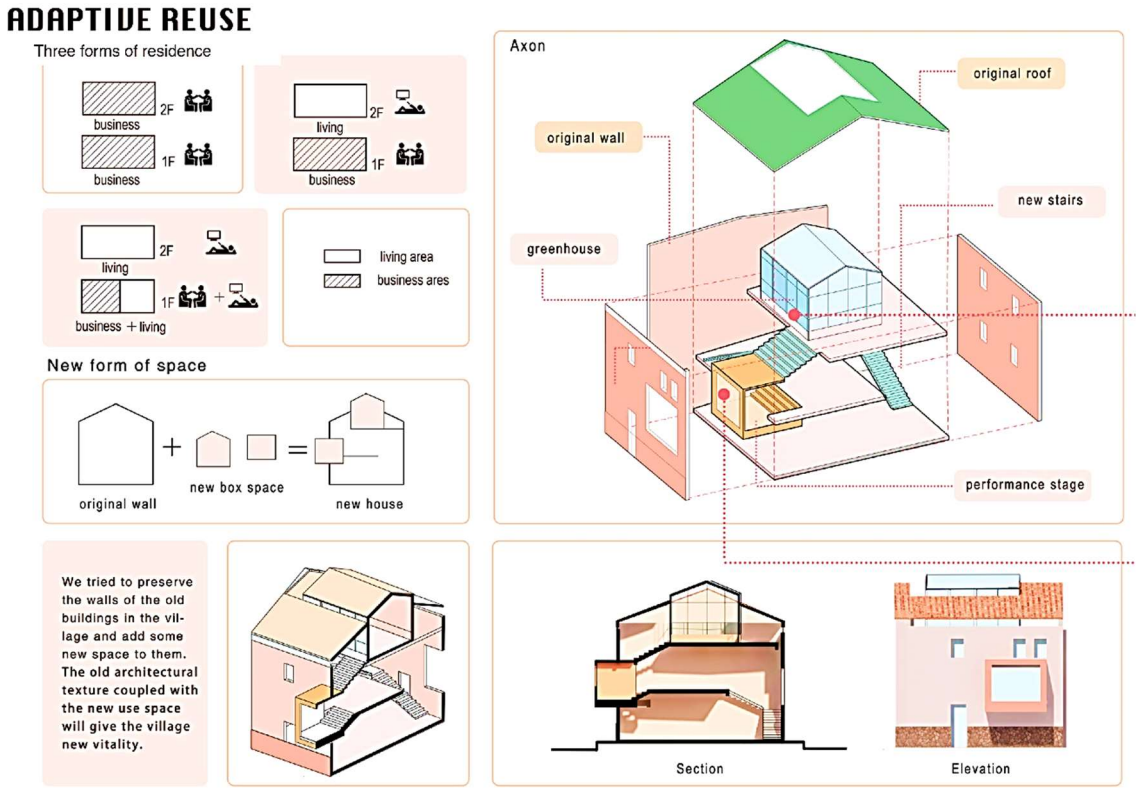


Figure 6.29 Example of adaptive reuse at the village of Alfarnatejo in Spain (Tan et al., 2021).

Apart from the picturesque effect of grouping the buildings along the roads, the different groups of houses can also offer a high level of flexibility to accommodate all kinds of families, by merging or splitting the residential units, according to the family size. For example, a block of four cottages can provide four households for four families of four members, or two households for two families of eight members. In this way, groups of semi-detached houses can provide multiple combinations, without affecting their overall structure. Therefore, the layout of different groups of houses for the regeneration and expansion of existing rural settlements would not only be very useful to shape a picturesque townscape throughout the residential areas, but also to assure the provision of accommodation for any kind of family size and single people.

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Figure 6.30 Barn Theatre, an example of adaptive reuse at Welwyn Garden City (www.welwyndramafestival.com).

Likewise, abandoned buildings, either old houses or barns, can achieve a high level of flexibility to accommodate population as well, through adaptive reuse projects. This way, the architectural heritage of rural communities can become more than a picturesque element of their future townscape and provide shelter for future villagers (Fig. 6.29) or any kind of public amenity, just like Barn Theatre at Welwyn Garden City (Fig. 6.30).

In short, the deconstruction of the "disurbanist" model of the garden cities can give some (r)urban design principles to develop "sectional facilities" on the opportunity areas to achieve a high level of flexibility in terms of size and affordability, producing sustainable energy for production and local purposes, and developing any kind of services

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or amenities to fulfil the needs of the surrounding settlements in a supra-municipal level. In addition to this, the regeneration and expansion of existing rural settlements through the layout of green buffers by preserving natural features, the provision of a picturesque townscape for an organic and suitable environment within and beyond the existing urban fabric, the promotion of the spirit of cooperation among residents in the residential blocks and the architectural flexibility in accommodating population according to their needs, can achieve a high level of affordability, rural design and rural lifestyle that contributes to repopulate those rural communities suffering from depopulation in a sustainable and conservative manner. Thus, thanks to the implementation of the (r)urban design principles taken from the garden city model, the revitalisation of rural communities can have an alternative and holistic framework, encompassing social, economic, and aesthetic dimensions.

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7. DISCUSSION

As seen in Part One of the thesis, the current situation of rural communities suffering from depopulation in the Spanish territory is so complex and difficult to address by one single strategy that it requires a more holistic approach based on a multi-layered scheme with the capability to combat territorial, socio-economic and planning aspects as a whole or individually, depending on the conditions and background of each case. Within this context, the garden city model can offer a wide range of strategies to attract population and means of production to the countryside, implement a self-financing system, ensure the affordability of houses, and develop planning schemes for the regeneration and expansion of existing rural settlements.

In this regard, the garden city model can be adapted into a new rural scheme for the revitalisation of small rural communities, as outlined in Part Four of the thesis. This way, instead of replicating the garden city model, this thesis sets out a new branch of such a model for existing rural realities, by providing a series of specific strategies adapted to modern times in the Spanish rural context but inspired by the experience of the two British case studies analysed in this work.

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 (Purdom, 1949). Nowadays, instead of building new rural communities from scratch under this approach, the redevelopment of rural settlements, with problems of depopulation on pre-existing railway routes, offers an alternative method to encourage the population's mobility to the countryside in the Spanish rural context of today like those examples outlined in Chapter One of Part Four of the thesis.

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), today's rural communities can be redeveloped following the same approach. Within this framework, both rural communities located near railway tracks and those without railway infrastructures should be integrated into a sustainable territorial network alike. While the former should reopen or build sidings or stations to be part of such a territorial network, the latter should implement a bus network linked to train stations to ease the population's mobility throughout the territory. In this way, urban communities would have the opportunity to move to rural communities, either to get a job, housing or commute every

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day. Thanks to this, cities, towns and small rural communities would not only be more connected in terms of employment and accommodation, but also more connected in terms of resource, commercial and cultural exchange at the territorial level.

However, while the British railway companies can connect almost the whole country, other European countries like Spain have been gradually closing railway routes, along which we can find a large portion of rural communities in a depopulation process (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 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 the territorial and local conditions of each group of rural settlements and railway routes. Thanks to the development of "Linear Shires", small rural settlements would not need to grow, but just keep the original size. This way, the inhabitants of each village would be able to reach by foot any part of the village in which they live, in the form of a neighbourhood that, together with other rural settlements connected between each other along railway routes, can contribute to reduce the use of car within and outside the rural settlements alike. Furthermore, the reopening of railway tracks can help reduce the use of the car and CO_2 emissions, thus complying with the 2021 European Parliament's proposal for promoting the use of the train as an environmentally friendly, safe, and sustainable means of transport (European Parliament, 2021).

Additionally, this territorial strategy can be coupled with the development of opportunity areas located in between rural settlements to provide a series of large facilities for different purposes related to production, amenities, services, education, healthcare or infrastructure (Rando Burgos, 2020). This way, those rural settlements with no chance of growing due to environmental or economic reasons, can find a share place to construct new buildings for different purposes far enough away from their boundaries to preserve the surrounding natural landscape of each village and close enough to work at less than fifteen minutes by public transport. In addition to this, those rural settlements with very little financial capacity to develop the necessary infrastructures for the provision of large facilities can benefit from this scenario, as they would join forces to develop opportunity areas on a co-financing basis. To achieve that, both scenarios should integrate the implementation of information and communication technology (ICT) along these routes to minimise the risks of spreading that technology across the countryside and give rise to

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job opportunities related to urban areas. Further, this could help urban communities develop an interest 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 employment opportunities for locals and future rural populations.

Once the basis to encourage people and means of production to remain in rural settlements or move to them from urban areas through railway lines, opportunity areas, and ICT is assured, the territorial cooperation between different rural communities should reach local-level approaches in the form of worker cooperatives. Nowadays, the number of credit, agricultural, and worker cooperatives in rural areas of developed and developing countries is more and more increasing, which demonstrates the high levels of cooperation in the rural context. Similar to how 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 Spanish rural communities like Barahona de Fresno or Alfarnatejo, thus minimising the risks of moving to the countryside, both companies and population, without precluding the indirect participation of the public administration in terms of employment and development.

Just like governmental policies on employment were implemented in Welwyn Garden City to attract population to live and work there, today's rural communities suffering from depopulation should benefit from the implementation of national or regional policies for the same purpose. This way, those who were interested to be trained in similar disciplines would be encouraged to establish worker or agricultural cooperatives in rural communities. Thanks to this, such a practice would extend beyond educational and formative activities and contribute the economic development of rural communities of today to promote their colonisation for a long term.

Furthermore, the development of opportunity areas can contribute to strengthen the ties between different means of production in a shared place at the supra-municipal level (Rando Burgos, 2020). Thus, opportunity areas can provide similar working conditions to those found in urban centres, giving work to people with different areas of expertise working within the same labour market in the countryside. 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 between urban and rural areas can promote the implementation of the knowledge economy in the countryside in the form of industrial

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and technological estates aimed at attracting highly qualified urban communities and encouraging rural communities to live and work close to their hometown.

Once the first houses are built or refurbished, a marketing campaign can be carried out to promote the affordability of houses in rural settlements. Just like the Cheap Cottages Exhibition at Letchworth and the Daily Mail Model Home Village Exhibition at Welwyn Garden City, the main aim of that kind of exhibitions would be to attract urban communities to visit those rural communities willing to be revitalised on the basis outlined in this document, so that they can see by themselves some examples of affordable houses, as well as familiarise with the kind of production, transportation and economic model.

This marketing strategy would engage architects and other professionals to design projects that represent the future of affordable housing in the countryside, either by constructing new houses or refurbishing buildings through adaptive reuse projects. This way, the architectural heritage of rural communities can become more than a picturesque element of their future townscape and provide shelter for future villagers or available space for production purposes.

In parallel with the development of production facilities at the supra-municipal level, those rural settlements which do not have good living conditions or enough residential units to accommodate new inhabitants can promote the development of housing cooperatives at the local level. Just like the housing cooperatives were crucial at the outset of Letchworth in providing accommodation to the first waves of colonisers (Purdom, 1949), today's rural communities suffering from depopulation can refurbish or supply accommodation for villagers following the same approach. In this way, the development corporations and housing cooperatives can work independently but sharing the same goal: to assure the affordability of houses as an incentive to attract population to the countryside at the lack of public funding for such a purpose. Notwithstanding, the development of housing cooperatives does not preclude the use of public policies on 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).

Likewise, the use of endogenous resources and re-use of local materials for building or refurbishing buildings in combination with the development of housing cooperatives can contribute to the building of affordable housing in existing rural communities. In addition to the economic advantages of using endogenous resources and

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re-using local materials, such a practice can also contribute to reduce carbon footprint and give an aesthetic identity to the rural settlements, just like the red brick buildings of Welwyn Garden City are still part of the local identity of the town (Rabbitts and Jeffree, 2021). Furthermore, this economic strategy can give rise to the development of a circular economy aimed at minimising the environmental and economic impact of the real estate sector in today's rural communities.

Another economic strategy to achieve affordable housing can be an adaptation of the garden city's land tenure system into existing rural communities, as a barrier against land speculation to assure the affordability of houses or production facilities (Purdom, 1963). However, instead of taking the financial and management system of Letchworth and Welwyn for the regeneration of existing rural settlements, Turnbull's CLB scheme is more suitable for such a purpose, because it can establish a self-financing system and assure the affordability of houses and other premises without public investment on infrastructure, as well as complies with Howard's self-governance scheme. In this way, the implementation of the CLB model in existing rural areas would allow residents to manage part of the net profits derived from the rents paid up by tenants for public purposes, such as the development and maintenance of a public transport network, amenities, lighting, gardening, cultural activities, or grants. While untested, 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). In addition, the self-financing system of LGCHF can be a reference to the development and maintenance of assets, public transport, infrastructure, and public space as well as to the provision of grants to residents. In this way, the surplus of the net profits can be used for multiple cultural and social purposes thanks to the above-mentioned self-financing system, which could also be implemented in existing rural communities in decline for the same purpose as it can provide means for the redevelopment and maintenance of their settlements without any kind of public expenditure on infrastructure, amenities and so on.

Among all the different kinds of settlements located in remote and intermediate rural regions of Spain, some are not in good living conditions, and others are not large enough to accommodate a minimum 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 rural communities from scratch, its design

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principles can be adapted for regenerating and expanding existing rural settlements alike, depending on the existing scenario from which to work.

For example, 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 they can be integrated into a "linear shire" of other rural settlements. To do this, the regeneration and expansion of existing rural settlements should comprise a series of planning schemes such as the layout of green buffers like parkways, parks, squares, sport courts, tree-lined boulevards and open areas to bring nature in the core of the villages; the implementation of the "Unwinian principle of closure", the creation of accents in the building lines and the preservation of existing mature trees to shape a picturesque townscape; and the layout of village greens, cul-de-sacs and allotments within and/or outside the residential blocks to encourage the spirit of cooperation among residents.

Just like Parker and Unwin integrated the pre-existing woodland of Norton Common and three plane trees into the master plan of Letchworth to create a green network throughout the town (Purdom, 1913), today's rural communities can take advantage of their pre-existing natural elements for the same purpose. This way, mature landscaping can give a rapid mature look to the expansion and/or regeneration of a rural settlement, as well as provide bucolic street pictures with groves along pathways or roads. Likewise, such an economic and aesthetic strategy is intended to preserve the natural heritage of rural areas, which complies with the sustainability principles of today's urban design practice.

Thus, the natural elements of small villages can become parks, village greens, cul-de-sacs and recreational areas of master plans for the regeneration and/or expansion of rural settlements, thus bringing nature to their core from the surrounding rural landscape. To do this, any intervention on a rural settlement should be relied on its natural heritage, either to design its recreational areas or the layout of residential blocks, the shape of which would come from the preservation of existing trees, livestock trails, ponds, orchards, etc. For example, big trees can be integrated into the future townscape of the urban regeneration scheme of a village, by grouping houses around them or breaking the building lines along the roads, just like Louis de Soissons did in the residential areas of Welwyn Garden City (De Soissons and Keynon, 1927). Under this approach, the layout of buildings would be result of the preservation of natural elements, which if combined

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with the grouping of buildings and their set-back at some points of the roads would reinforce the picturesqueness of rural settlements.

In addition to this, the arrangement of buildings should create little places along the roads to reinforce the sense of community among residents. In Letchworth, Parker and Unwin conceived the street scene of the residential roads as a series of different sequences, in order to give a sense of intricacy to the townscape (Unwin, 1909). Such sequences are made up of building lines, junctions, village greens, squares and groupings of buildings, which provide spatial subdivision of the residential area into little places of community scattered throughout the settlement. Within this context, although some cooperative schemes may not be successful in the revitalisation of rural communities in decline, the layout of buildings might encourage the spirit of cooperation among residents at least. For example, Meadow Way Green at Letchworth is a little place of community on Meadow Way, despite the cooperative housekeeping scheme of Meadow Way Green ended in the 1970s (Brightwell, 1997).

At the domestic level, the spirit of cooperation can be achieved within the residential blocks, either by rearranging existing residential plots to add common areas for the community or developing inner gardens within new residential blocks. This practice is still latent at Letchworth, where the expansion of the town will comprise residential blocks with inner gardens, whether allotments or recreational grounds for residents. Such a residential scheme can also fit small rural communities in Spain, as it comprises some traditional features of the vernacular architecture of Spain, in terms of scale, height and the use of courtyards for outdoor activities. Although the aesthetic features of the two British case studies differ from the Spanish rural architecture, the adaptation of the garden cities' urban design principles used for residential blocks can contribute to assure the privacy of the residential units and provide common areas for the community alike.

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8. CONCLUSION

This study focuses on the analysis of the garden city model because it comprises a multidimensional approach with the potentiality to fulfil the needs of existing rural communities in decline, in the absence of enough public funding and suitable urban design principles for the regeneration of deprived rural areas in the Spanish context. Likewise, instead of taking ideas from subsequent movements like the New Towns Movement, which was based on a public financing system and had utterly different design principles to rural communities, the findings of this study present the garden city model as a suitable scheme with the capability to be adapted into existing rural 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, socio-economic and urban planning strategies, thus forming a multi-layered scheme to combat a wide range of issues in rural communities suffering from depopulation, as a whole or individually, depending on the conditions and background of each case. Thus, the garden city model offers a wide range of strategies to attract population and means of production to the countryside, implement a self-financing system, ensure the affordability of houses, and develop planning schemes for the regeneration and expansion of existing rural settlements.

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 rural communities under the same umbrella of co-operativism, self-reliance and ruralism that gave rise to the Garden City Movement more than 120 years ago. It does so through the development of "linear shires", opportunity areas and ICT along pre-existing railway routes, employment policies for young population, diversification of the rural economy and exhibitions on affordable housing; the promotion of housing cooperatives and the implementation of cooperative land banks in rural areas; and the layout of green buffers, the implementation of a picturesque townscape and the enhancement of the spirit of cooperation among residents for the regeneration and expansion of existing rural settlements (Fig. 8.1 and Table 2).

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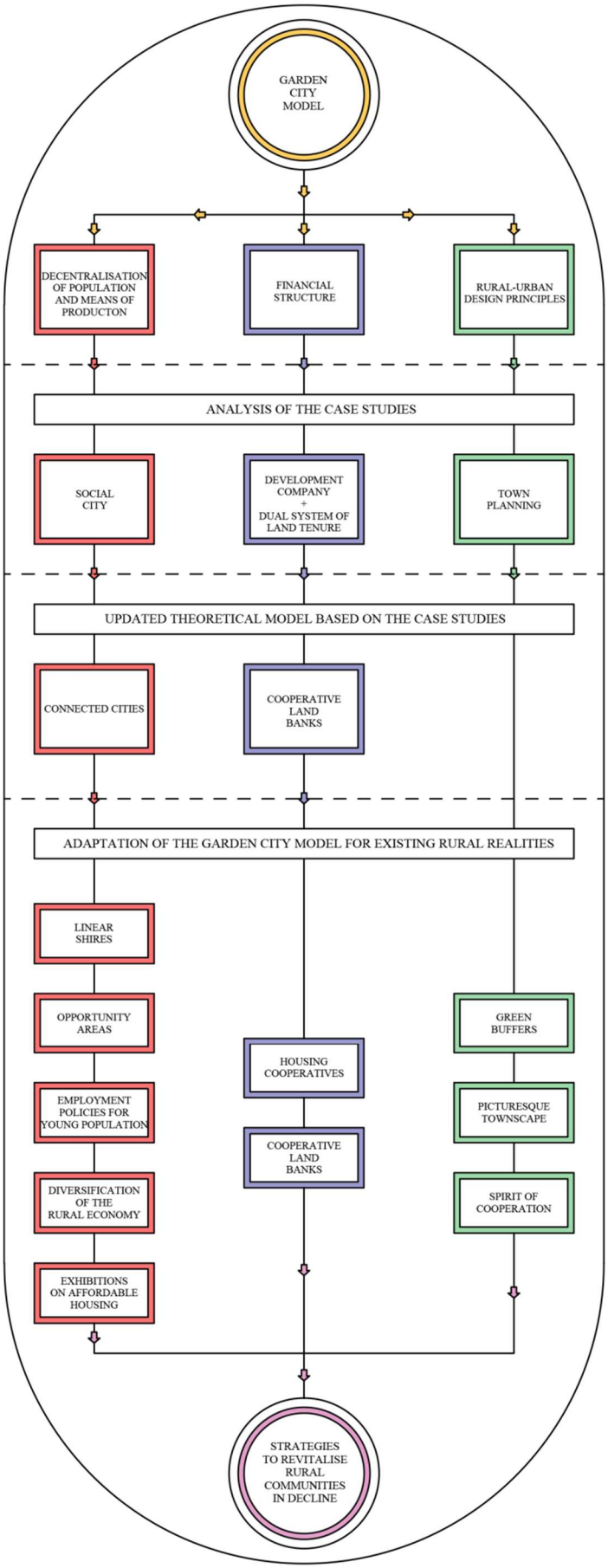


Figure 8.1 Conceptual framework (Illustrated by the author in 2022).

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Garden city model	Adaptation of the garden city model for existing rural communities in decline	Comparative analysis
New settlements located in the countryside with 32,000 people each.	Existing small rural settlements ranging from 100 to 2,500 people. At the subregional level, those small rural settlements can create a territorial and socio-economic network with medium-sized towns, thus forming "Linear Shires" ranging from 10,000 to 50,000 people.	Instead of building new settlements in the countryside, the resulting model comes from the combination of the Howardian "Social City" and the "Connected Cities" model, thus forming groups of existing rural settlements within fifteen minutes journey by public transport.
Railway connection.	The proposed "Linear Shires" can be formed, either by: a) Reopening misused railway routes and constructing new sidings along existing railway routes. b) Implementing bus corridors in those locations where a railway network is not easily reachable.	The construction of new railway routes is very expensive and, thus, not desirable, at the lack of enough population to maintain that infrastructure. However, the reopening of misused railway routes is more convenient, because of the infrastructure and stations are already there, and bus corridors can help to fill the gaps along such a territorial network, especially on mountainous regions.
Economic system based on industrial and agriculture activity.	Economic system based on: a) Revitalisation of agriculture and livestock industry to fulfil environmental and production needs. b) Telework. c) Knowledge economy based on TICs. d) Opportunity areas for production purposes.	Due to the industrial decline in developed countries like Spain, modern means of production can boost the mobilisation of urban communities into rural areas, without precluding the use of agriculture and livestock in establishing synergies with other economic sectors. In this way, the development of opportunity areas at the supra-municipal level can help to preserve the natural environment of existing rural settlements, by establishing production premises beyond their boundaries.

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Financial structure based on development companies and dual system of land tenure.	Financial structure based on: a) Housing cooperatives. b) Cooperative Land Banks.	Instead of creating development companies to redevelop and/or expand existing rural settlements, the combination of housing cooperatives and cooperative land banks can provide a bottom-up approach with the capacity to promote a self-financing system based on a self-governance scheme.
A "disurbanist" model based on the town planning practice of Letchworth and Welwyn Garden City.	Rural design principles based on: a) The layout of green buffers. b) The implementation of a picturesque townscape. c) The promotion of the spirit of cooperation among residents.	Thanks to the deconstruction of the "disurbanist" model of both case studies, the garden cities' design principles can be adapted into existing rural communities, by bringing nature into the core of the settlements, preserving existing natural features, and encouraging the life in community.

Table 2. Comparative analysis between the garden city model and its adaptation for existing rural communities in decline (Illustrated by the author in 2023).

In parallel with the revitalisation of rural communities in decline, such an adaptation of the garden city model has the potentiality of creating a new housing market for low-income families; a financial structure that encourages citizen participation; a management structure that ensures the provision of capital for the redevelopment and maintenance of existing rural settlements; production areas at the supra-municipal level that can preserve the natural environment of rural areas; a planning scheme that contributes to promote the sustainable development of the expansion and regeneration of existing rural communities; and an economic model based on the rural diversification of different production sectors. This way, this study comprises a series of strategies that promotes the rural development at different levels in accordance with contemporary approaches on urban regeneration and regional planning.

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

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varied mixed methods research. On the other hand, the applicability of the garden city model to existing rural realities outlined here has not yet been put into practice in existing rural areas to prove its validity. Likewise, there is no precedent of CLBs in rural areas, 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 rural areas and adapt such a framework to south-south theory, the de-colonial debate and developing country's landscapes different to the predominantly European spatial landscapes.

Within this context, this reinterpretation of the garden city model for the revitalisation of rural communities in decline 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 rural 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 rural settlements, without precluding the combination of other initiatives or more comprehensive approaches adapted to specific rural contexts in the Spanish territory.

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8. Conclusion

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11. APPENDIX

INTERVIEW WITH THE MAYOR OF ALFARNATEJO, MR. DAVID BENÍTEZ (4/11/2021)

(Summary of the information given by Mr. Benítez)

Usual activities in the village: Hiking, bike riding, walks on the park, going for a beer and tapas…

Events: local music band, Christmas market, chestnuts and chocolate at the plaza, fundraising walks, local and different visiting choirs, classical music, etc. All provided within a limited budget.

New local venture that started during the pandemic: sharing the local gastronomy with the locals by inviting the tourists for lunch in their own houses. Up to 3 buses of visitors per day, Monday to Sunday.

One of the threats: There is a risk of flooding around the swimming pool area

A challenge: If there is a boom in sports attractions for tourists, this could be a challenge, since there are only 3 restaurants and are always full; there are only 2 hotels that can lodge up to 16 people only, plus some rural accommodation and a new Bed & Breakfast, but this may not be enough.

Inhabitants: Older people work on construction, agriculture, and farms. Younger people tend to be highly educated, mainly in areas like sports, and they don't want to work in agriculture. They usually study or work away from the village but will return in the weekends. The council provides a social lounge for all the local youngsters to be able to socialize and feel part of the community.

Climbing company: They do open house events for the youngsters to get to know their activities and work methods, and they have been very successful around young people, who are very interested in taking courses.

School: The school in the village closed 4-5 years ago. Since then, aproximately 26 children travel to Alfarnate to go to school.

Alfarnate is only 2 km away from Alfarnatejo, but its landscape is very different, consisting of plain areas mainly, as apposed to Alfarnatejo, much more mountainous. The latter having half the population, this is around 500 people.

In Alfarnate we find many immigrants coming from Morocco who work in the fields (around 90). All kind of vegetables grow in the plains.

On the contrary, in Alfarnatejo we only find olive and almond trees.

Here, the altitude varies between 900 and 1600m. The weather is very hot in the summer and quite cold in the winter (1ºC), colder than London.

Area UR4 in the map: areas with fincas of private ownership that must nevertheless abide by the Municipal Land Planning.

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Camping area (25000m2). It was once a cohousing project for German people, now it's on sale.

In one generation, the village will become completely depopulated if no measures are taken.

Axarquia region is largely unknown, and together with Ronda, also within Malaga province, are 2 fantastic areas with beautiful scenery that are usually less visited by the current visitors that travel to Malaga in search of sun and beach destinations.

It is important to focus on the following:

-Generate more **parking spaces**. They are already constructing some extra spaces but will not be enough.

-Develop hand in hand:
1. Increase **touristic activity**
2. Increase **urban expansion**
3. Improve the **camping area,** especially for climbers.

-Create a structure to provide **jobs for young people** and encourage them to settle in Alfarnatejo.

This structure will require the opening of new restaurants and hotels, hence new parking spaces needed as well.

At this moment, there are 25 ongoing projects related to sport tourism. These projects will require young people to work as guides for the different activities planned.

PLAN OF LOCAL COUNCIL:

1. Develop the **sports infrastructure** (300 climbing routes and 1 via ferrata already in place)
2. This will create **jobs linked to the sports activities**
3. Enlarge the camping area for **coworking or/and cohousing**
4. Collaboration **agreement with the Climbing company**
5. Collaboration **agreements with other sports clubs** (already in collaboration with one of Malaga's handball clubs)

HOW TO DO IT:

-Develop the tourist complex further (gym, swimming pool, paddle-tennis courts, sports center, restaurants)

-New picnic area, caravan parking, bikes repair shop, tourist information office

-Vía Ferrata (iron structure for climbing) inside the complex

-Cohousing, coliving, and coworking projects

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12. SUMMARY OF THE THESIS IN SPANISH

RESUMEN

El fenómeno de la despoblación rural está ocasionando una serie de desequilibrios socioeconómicos y territoriales en países europeos como España, siendo necesario implementar un variado y amplio abanico de estrategias en las comunidades rurales existentes con problemas de despoblación. A través de un análisis teórico y empírico del modelo ciudad jardín, esta tesis explora las potencialidades de dicho modelo para proporcionar un enfoque multidimensional basado en estrategias territoriales, socioeconómicas y urbanísticas, ofreciendo así una serie de políticas para combatir una amplia gama de problemas en las comunidades rurales que sufren despoblación en territorio español. Hasta ahora, el modelo ciudad jardín ha sido analizado y adoptado por académicos, urbanistas e instituciones para diseñar new towns y barrios jardín en todo el mundo. En cambio, este estudio aporta un nuevo enfoque sobre el modelo ciudad jardín, a través de los casos de estudio de las ciudades jardín de Letchworth y Welwyn Garden City, así como de modelos actualizados derivados de ambos ejemplos, con la finalidad de conformar un nuevo esquema rural con capacidad para fomentar en zonas rurales la descentralización de la población y los medios de producción, desarrollar cooperativas para lograr un sistema de autofinanciación y vivienda asequible, y aplicar los principios de diseño de las ciudades jardín para la regeneración y expansión de los asentamientos rurales existentes hacia un futuro sostenible, atractivo, autosuficiente y próspero más allá de los centros urbanos.

Palabras clave: Ciudad jardín, comunidades rurales, autosuficiencia, desarrollo rural, regeneración urbana.

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1. INTRODUCCIÓN

En la actualidad, el medio rural está experimentando un lento pero constante proceso de despoblación, alimentando indirectamente el proceso de urbanización en los países desarrollados y en vías de desarrollo. Por ejemplo, en China, la población urbana superó a las comunidades rurales en 2011, con un 61% de población urbana (The World Bank Group, 2021a) frente a un 39% de población rural (The World Bank Group. 2021b). A escala mundial, el futuro parece aún más pesimista para el desarrollo rural. Según las proyecciones de Naciones Unidas para 2050, China alcanzará un desequilibrio territorial similar al que actualmente experimentan la mayoría de los países occidentales (80% de población urbana frente al 20% rural), mientras que otros países que actualmente tienen una población mayoritariamente rural, como India o Pakistán, tendrán una población mayoritariamente urbana para el año 2045 (Naciones Unidas, 2018).

En Europa, las regiones que están experimentando un descenso de población en las zonas rurales son las del Este, tales como Alemania y los países bálticos, así como países mediterráneos como Portugal, España, Italia, Grecia, Bulgaria y Rumanía (AECT ESPON, 2018). En este contexto, la distribución demográfica de España se enfrenta a una de las situaciones más dramáticas, con densidades municipales que oscilan entre los cinco y los diez habitantes por kilómetro cuadrado (Instituto Nacional de Estadística, 2022).

Como consecuencia, los entornos rurales despoblados de países europeos como España, distintos de las zonas rurales que se encuentran cercanas a los grandes núcleos urbanos, sufren marginación financiera, falta de servicios, declive agrícola, malas infraestructuras, edificios abandonados y degradación del patrimonio arquitectónico, urbano y cultural (Paniagua, 2011). Como resultado, han surgido una serie de iniciativas para superar estos problemas, tales como la influencia de las redes sociales, la migración selectiva, el desarrollo turístico o el ofrecimiento de vivienda gratuita para parejas jóvenes (Al-Saffar et al., 2022; Cáceres-Feria et al., 2021; Collantes y Pinilla, 2013; Pérez-Morote et al., 2021; Pinilla y Sáez, 2016; Onitsuka, 2019), las cuales no han tenido un impacto significativo a la hora de alentar a poblaciones urbanas a trasladarse al medio rural y crear una comunidad fuerte y diversa en las regiones del interior.

La situación actual de las comunidades rurales que sufren despoblación en el territorio europeo es tan compleja y difícil de abordar con una sola estrategia, que requiere de un enfoque holístico basado en un planteamiento multidimensional con capacidad para combatir aspectos territoriales, socioeconómicos y de planificación en su conjunto o

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individualmente, dependiendo de las condiciones y antecedentes de cada caso. Como alternativa, el modelo ciudad jardín puede ofrecer un amplio abanico de estrategias para atraer población y medios de producción al medio rural, implantar un sistema de autofinanciación, garantizar la asequibilidad de las viviendas y desarrollar la planificación urbanística necesaria para la regeneración y expansión de los asentamientos rurales existentes, cumpliendo así los tres pilares de la sostenibilidad: social, económico y medioambiental (Brundtland, 1987).

Las dos ciudades jardín británicas de Letchworth y Welwyn Garden City aplicaron dichas estrategias en el pasado, convirtiéndose así en dos ejemplos de colonización interior en el ámbito europeo e impulsando la migración de comunidades urbanas e industrias hacia zonas rurales, con el fin de aliviar los grandes centros urbanos superpoblados de Gran Bretaña (Purdom, 1949; Ward, 2016; Warren, 1930). En términos generales, el modelo ciudad jardín se diseñó para hacer frente a los problemas sociales, económicos y medioambientales derivados de la Revolución Industrial del siglo XIX, combinando las ventajas de los asentamientos urbanos y rurales en nuevos asentamientos en el medio rural.

A finales del siglo XIX, la economía rural del Reino Unido alcanzó un alto nivel de diversificación, desarrollando actividades no vinculadas con la agricultura o la ganadería. Dicha diversificación económica provocó la desaparición de la Inglaterra rural, pero dio paso a otros modelos urbano-rurales, como el modelo ciudad jardín, orientado a revitalizar áreas rurales en suelo británico. El modelo ciudad jardín fue concebido por Ebenezer Howard como una alternativa a las ciudades metropolitanas industriales y superpobladas como Londres, con acceso a mejores condiciones de vida, bienestar y prosperidad mediante la combinación de desarrollo residencial e industrial sobre nuevos asentamientos. Esta alternativa social no sólo representó una nueva forma de vida para las comunidades urbanas de la época, sino también un experimento territorial que fomentaba la descentralización de población y medios de producción en el campo. Para ello, el modelo ciudad jardín se configuró mediante un sistema productivo basado en la industria, que se diferenciaba de los modelos de producción tradicionales del medio rural basados en la agricultura y la ganadería; un modelo de inversión y desarrollo basado en un sistema de autofinanciación; y un modelo de planificación derivado de la puesta en práctica de aspectos urbanos y rurales. Estos principios se pusieron en práctica en la construcción de dos ciudades jardín en el Reino Unido - Letchworth (1903) y Welwyn

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Garden City (1920) -, permitiendo así la aplicación del modelo ciudad jardín durante más de cien años de desarrollo.

A través de la experiencia de Letchworth y Welwyn Garden City, este estudio se centra en el análisis del modelo de ciudad jardín por comprender un enfoque multidimensional basado en principios territoriales, socioeconómicos y de diseño urbano. Sin embargo, en lugar de proponer la construcción de ciudades jardín en todo el vasto desierto del territorio español, este enfoque es totalmente novedoso, ya que se centra en la adaptación del modelo de ciudad jardín para la regeneración de los asentamientos existentes, en lugar de construir otros nuevos.

Tras la publicación de '*To-morrow: A Peaceful Path to Real Reform*' en 1898, Ebenezer Howard y seguidores del movimiento Ciudad Jardín aportaron diferentes métodos para construir ciudades jardín en el medio rural (Osborn, 1918; Purdom, 1917; Unwin, 1909). Estos antecedentes teóricos impulsaron la construcción de Letchworth y Welwyn Garden City, que han sido minuciosamente analizadas por numerosos estudiosos, bien para aportar datos relevantes sobre el desarrollo de ambos casos de estudio a lo largo del tiempo, como para promover la construcción de más ciudades jardín en el futuro (Adams, 1905; Lewis, 2013; Miller, 1983; Osborn, 1969; Purdom, 1913, 1949, 1963; Tyrwhitt, 1939; Ward, 2016; Warren, 1930). Sin embargo, el modelo ciudad jardín ha dado paso a la construcción de new towns, barrios jardín o principios de la planificación urbanística en todo el mundo, debido al auge del urbanismo como disciplina y a la pérdida de las líneas cooperativas, la financiación privada y los principios de diseño rural/urbano del modelo ciudad jardín original (Purdom, 1963; Thomas, 1998; Ward, 2016). Hasta ahora, este modelo no ha sido tomado por académicos ni instituciones como una alternativa para combatir la despoblación rural. En este sentido, la situación actual de las comunidades rurales que sufren problemas de despoblación y crecimiento negativo podría convertirse en un nuevo campo donde adaptar el modelo ciudad jardín, ofreciendo así una serie de alternativas que fomenten la descentralización de la población y los medios de producción en todo el medio rural, promover un sistema de autofinanciación en ausencia de inversores o financiación pública, y desarrollar un modelo de planificación para asentamientos rurales existentes. El objetivo principal de este trabajo es analizar la viabilidad potencial del modelo ciudad jardín como alternativa para la revitalización de comunidades rurales en declive.

Para ello, esta investigación se realiza desde tres ámbitos de análisis, respondiendo a las siguientes preguntas de investigación:

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Ámbito territorial - ¿Cómo podría fomentarse la descentralización de la población y de los medios de producción hacia las zonas rurales?

Ámbito socioeconómico - ¿Cómo podrían las comunidades rurales conseguir un sistema de autofinanciación y viviendas asequibles sin ningún tipo de financiación pública?

Ámbito urbano/arquitectónico - ¿Cómo podrían conservarse, transformarse y actualizarse los asentamientos rurales existentes para satisfacer las necesidades de las futuras comunidades rurales?

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2. METODOLOGÍA

La metodología de investigación de este estudio está formada por una investigación historiográfica, sociológica y de planificación de dos casos de estudio, Letchworth y Welwyn Garden City, con objeto de ofrecer un análisis actualizado de dicho modelo y esbozar un marco general con capacidad de revitalizar asentamientos rurales existentes en el mundo contemporáneo.

Este estudio se centra en el análisis de Letchworth y Welwyn Garden City porque ambos casos de estudio son los principales epítomes del Movimiento Ciudad Jardín, donde el esquema howardiano se ha aplicado a lo largo del tiempo, a través de sus aspectos socioeconómicos, territoriales y de planificación. Así pues, en lugar de tomar ideas de casos de estudio posteriores como las New Towns, que se basaban en un sistema de financiación pública y tenían unos principios de diseño totalmente distintos a los de las comunidades rurales, este estudio analiza el surgimiento y desarrollo de Letchworth y Welwyn Garden City, con objeto de estudiar las potencialidades del modelo de ciudad jardín y aportar conclusiones sustanciales con capacidad para configurar un marco para la revitalización de las comunidades rurales a través de las tres dimensiones anteriormente mencionadas.

La aplicación de esta metodología establece una serie de estrategias derivadas de los casos de estudio de Letchworth y Welwyn Garden City, que se analizan y discuten para su futura aplicación en el objeto de estudio, a través de políticas territoriales para fomentar la descentralización de las personas y los medios de producción en las zonas rurales; el desarrollo de cooperativas para lograr un sistema de autofinanciación y viviendas asequibles en las zonas rurales existentes; y la aplicación de los principios de diseño de las ciudades jardín para la regeneración y expansión de los asentamientos rurales existentes.

Para ello, este estudio ha contado con trabajo de campo realizado desde 2018 hasta 2021 para analizar la morfología urbana de los casos de estudio y su paisaje urbano, paisajístico y arquitectónico; investigación de archivos en Garden City Collection realizada desde 2019 hasta 2021, Library of Birmingham en 2020 y Manchester Metropolitan University Library desde 2018 hasta 2021 a fin de recopilar datos históricos, estadísticas y planos e imágenes sobre la planificación y el desarrollo de ambas ciudades jardín; conversaciones informales con residentes para saber más sobre la historia de ambos casos de estudio y sus experiencias viviendo en una ciudad jardín; notas de campo

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y dibujos para la realización de ilustraciones de la tesis; y dos proyectos académicos realizados por estudiantes del Máster de Arquitectura y Urbanismo de la Escuela de Arquitectura de Mánchester en 2020 y 2021 respectivamente, con objeto de explicar cómo implementar los principios de diseño del modelo ciudad jardín, constituyendo los principales métodos de investigación cualitativa para explorar la evolución de ambos casos de estudio a lo largo del tiempo en términos de colonización, economía y planificación. El principal objetivo de ambos proyectos académicos fue el de proporcionar estrategias para atraer población a los pueblos mediante la exploración de las potencialidades del modelo de ciudad jardín en términos de diseño, planificación y economía. Para ello, los estudiantes recibieron algunas presentaciones sobre los principales hallazgos de esta tesis, a fin de comprender cómo aplicar el modelo de ciudad jardín para la regeneración y expansión de los asentamientos rurales existentes, así como también se les enseñó a realizar análisis de emplazamientos, análisis DAFO, encuestas, modelos 3D, mapas cognitivos, visiones seriadas, secciones de valle, etc. Asimismo, los estudiantes del Máster de Arquitectura y Urbanismo obtuvieron información y datos mediante la distribución de encuestas, la celebración de reuniones con residentes y la comprobación de información gráfica sobre ambos emplazamientos, con objeto de elaborar un plan urbanístico en cada caso. El estudio cuantitativo se ha llevado a cabo utilizando estadísticas regionales y locales, así como datos recopilados por otros investigadores en diferentes etapas del desarrollo de Letchworth y Welwyn Garden City hasta la actualidad (Censo del condado de Hertfordshire, 2020; Informe oficial del censo, 1968; ONS Censo del Reino Unido, 2001, 2011; Purdom, 1949; Ward, 2016), que han constituido la base para dibujar un gráfico de crecimiento de la población (Fig. 5.9) y apoyar el análisis de cada caso de estudio.

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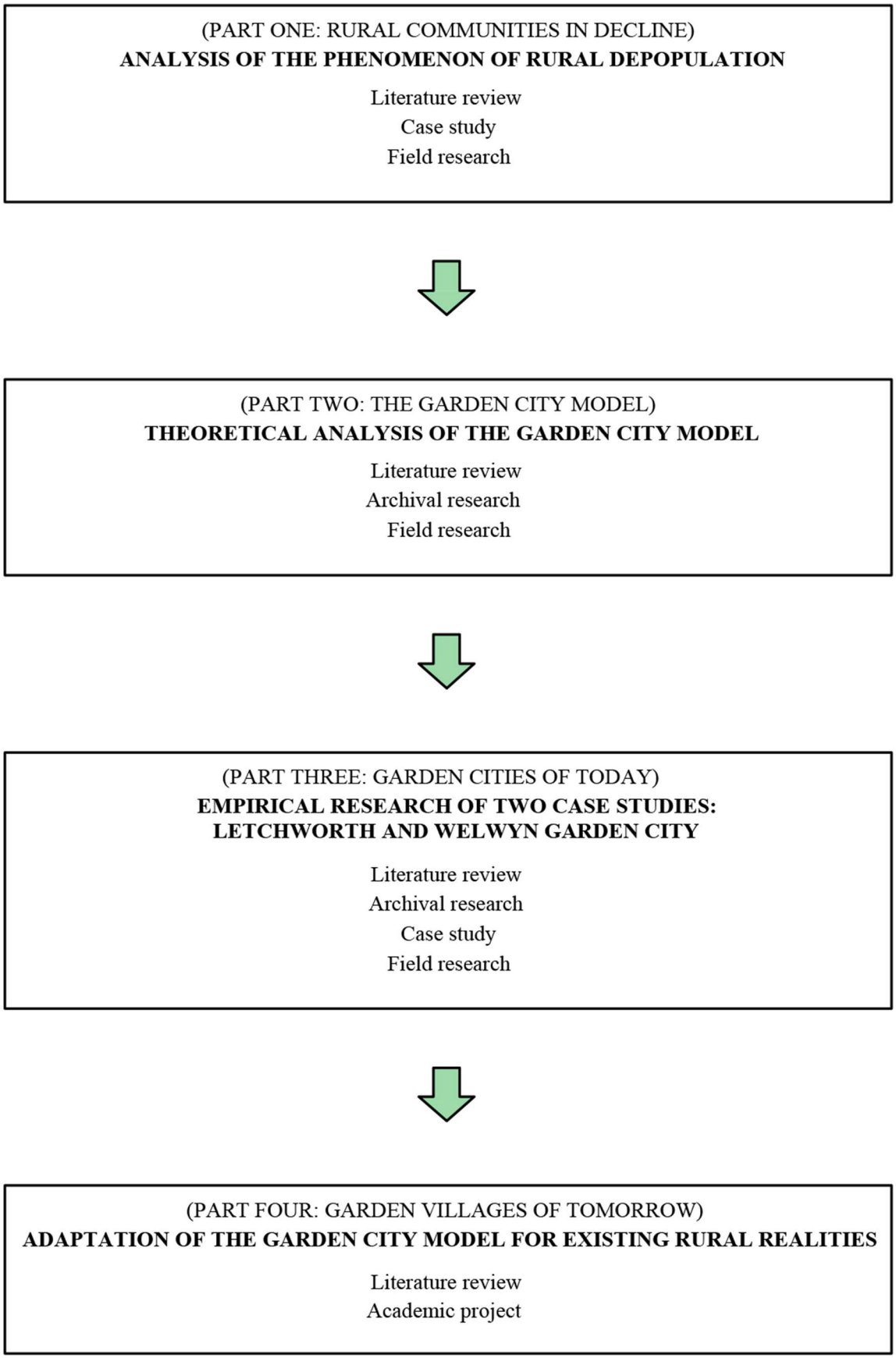


Figura 2.1 Métodos de investigación de cada parte de la tesis (Ilustrado por el autor en 2022).

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Para desarrollar este estudio, sus resultados se han dividido en las cuatro partes siguientes: (Primera parte) comunidades rurales en declive; (Segunda parte) el modelo de ciudad jardín; (Tercera parte) ciudades jardín de hoy; (Cuarta parte) pueblos jardín del mañana.

En primer lugar, la primera parte es un análisis historiográfico de las causas, circunstancias y situación actual del proceso de despoblación de las zonas rurales en el contexto mundial, europeo y español, junto con un análisis comparativo de dos estudios de caso en España. En segundo lugar, la segunda parte comprende una introducción al modelo de ciudad jardín, un análisis historiográfico de sus antecedentes teóricos y su bagaje estético y la planificación de las dos primeras ciudades jardín. En tercer lugar, la tercera parte es una investigación en profundidad sobre la fundación y el desarrollo de Letchworth y Welwyn Garden City a través de sus estrategias para fomentar la descentralización de la población y la industria, su estructura financiera y sus principios de diseño urbano. Por último, la cuarta parte comprende una adaptación del modelo de ciudad jardín a las realidades rurales existentes, mediante un enfoque polifacético basado en estrategias territoriales, socioeconómicas y de planificación urbana para comunidades rurales que sufren despoblación.

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7. DISCUSIÓN

Tal como se ha visto en la primera parte de la tesis, la situación actual de las comunidades rurales que sufren despoblación en el territorio español es tan compleja y difícil de abordar mediante una única estrategia, que requiere de un enfoque holístico basado en un esquema multidimensional con capacidad para combatir aspectos territoriales, socioeconómicos y de planificación en su conjunto o individualmente, dependiendo de las condiciones y antecedentes de cada caso. A este respecto, el modelo ciudad jardín tiene la capacidad de ofrecer un amplio abanico de estrategias para atraer población y medios de producción a zonas rurales, implantar un sistema de autofinanciación, garantizar la asequibilidad de las viviendas y desarrollar esquemas de planificación para la regeneración y expansión de asentamientos rurales existentes.

En este sentido, el modelo ciudad jardín puede adaptarse a un nuevo esquema rural para la revitalización de pequeñas comunidades rurales, como se expone en la cuarta parte de la tesis. De este modo, en lugar de replicar el modelo de ciudad jardín, esta tesis plantea una nueva ramificación de dicho modelo para las realidades rurales existentes, aportando una serie de estrategias específicas adaptadas a los nuevos tiempos en el contexto rural español e inspiradas en la experiencia de los dos casos de estudio británicos analizados en este trabajo.

Una de las claves del éxito del modelo ciudad jardín para atraer población reside en su integración dentro de una red territorial de vías férreas preexistentes, permitiendo así una rápida y eficaz descentralización de la población y de los medios de producción en el territorio (Purdom, 1949). En la actualidad, en lugar de construir nuevas comunidades rurales desde cero bajo este planteamiento, la revitalización de asentamientos rurales con problemas de despoblamiento sobre trazados ferroviarios preexistentes ofrece un método alternativo para fomentar la movilidad de la población en el contexto rural español actual, tomando como ejemplo los casos expuestos en el capítulo primero de la cuarta parte de la tesis.

Al igual que Letchworth y Welwyn Garden City son una buena prueba de la idoneidad de desarrollar estos asentamientos cerca de grandes centros urbanos (Ward, 2016), las comunidades rurales actuales pueden ser revitalizadas siguiendo el mismo planteamiento. Así pues, tanto las comunidades rurales situadas cerca de vías férreas como aquellas que carecen de infraestructuras ferroviarias podrían integrarse por igual en una red territorial sostenible. Mientras que las primeras tendrían que reabrir o construir

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apeaderos o estaciones para formar parte de dicha red territorial, las segundas deberían implantar una red de autobuses vinculada a las estaciones de tren para facilitar la movilidad de la población por todo el territorio. De este modo, las comunidades urbanas tendrían la oportunidad de desplazarse a asentamientos rurales, ya fuese con objeto de conseguir un empleo, una vivienda o para desplazarse a diario. Gracias a ello, las ciudades, los pueblos y las pequeñas comunidades rurales no sólo estarían más conectados en términos de empleo y alojamiento, sino también en términos de intercambio comercial y cultural a escala territorial.

Sin embargo, mientras que las compañías ferroviarias británicas pueden conectar casi todo el Reino Unido, otros países europeos como España han ido cerrando progresivamente rutas ferroviarias, a lo largo de las cuales podemos encontrar una gran parte de las comunidades rurales españolas que se encuentran en proceso de despoblación (Mojica y Martí-Henneberg, 2011). En este contexto, tanto las vías férreas en desuso como aquellas que están a punto de cerrarse pueden beneficiarse de este escenario, identificando ciudades medias situadas en las proximidades de pequeños asentamientos rurales para establecer nuevos grupos subregionales, ya sean "Grandes o Pequeñas Ciudades Conectadas" (Connected Cities Ltd, 2016), a modo de "Comarcas Lineales", como adaptación de la "Ciudad Social Howardiana" a las condiciones territoriales y locales de cada grupo de asentamientos rurales y rutas ferroviarias. Además, la reapertura de vías férreas en desuso puede contribuir a reducir el uso del automóvil y las emisiones de CO_2, cumpliendo así con la propuesta del Parlamento Europeo de 2021 que está centrada en promover el uso del tren como medio de transporte respetuoso con el medio ambiente, seguro y sostenible (Parlamento Europeo, 2021).

Asimismo, dicha estrategia territorial puede ser combinada con el desarrollo de áreas de oportunidad dentro del ámbito supramunicipal, con la finalidad de proporcionar una serie de instalaciones de producción, de servicios, educativas, sanitarias o de comunicación (Rando Burgos, 2020). De esta forma, aquellos asentamientos rurales sin posibilidad de crecimiento por motivos ambientales o económicos, pueden encontrar un lugar común donde construir nuevas edificaciones para diferentes fines, desarrollándose lo suficientemente lejos de sus límites como para preservar el paisaje natural circundante de cada pueblo y lo suficientemente cerca como para estar a menos de quince minutos en transporte público entre el lugar donde se vive y se trabaja. Por otro lado, aquellos asentamientos rurales con poca capacidad financiera para el desarrollo de las infraestructuras necesarias y la dotación de grandes equipamientos pueden beneficiarse

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de este escenario, ya que la cooperación entre varios municipios ayudaría a unir esfuerzos para desarrollar áreas de oportunidad en régimen de cofinanciación. Para ello, ambos escenarios deberían integrar la implantación de tecnologías de la información y la comunicación (TIC) a lo largo de estas rutas, para minimizar los riesgos de dispersión de dicha tecnología en el medio rural y dar lugar a oportunidades de empleo relacionadas con el ámbito urbano. Además, esto podría contribuir a que las comunidades urbanas se interesen por nuevos campos de actuación en el ámbito rural, ya que la movilidad de las personas por el territorio y los métodos de trabajo a distancia pueden ofrecer una amplia y variada gama de oportunidades de empleo a la población local existente y a la futura población rural.

Una vez asegurada la base por la que fomentar la permanencia de la población y los medios de producción en los asentamientos rurales o el traslado a ellos desde las zonas urbanas a través de las líneas ferroviarias, las áreas de oportunidad y las TIC, la cooperación territorial entre las distintas comunidades rurales debería alcanzar planteamientos de ámbito local en forma de cooperativas de trabajo asociado. Hoy en día, el número de cooperativas de crédito, agrícolas y de trabajo asociado en las zonas rurales de los países desarrollados y en desarrollo es cada vez mayor, lo que demuestra los altos niveles de cooperación en el contexto rural. De forma similar a como el modelo ciudad jardín impulsó la creación de empresas cooperativas para financiar, desarrollar y gestionar la construcción de nuevos asentamientos en ausencia de financiación pública, la creación y fomento de cooperativas pueden ser también una alternativa factible para pueblos españoles como Barahona de Fresno o Alfarnatejo, minimizando así los riesgos del trasladarse al medio rural, tanto por parte de empresas como por parte de la población, sin excluir la participación indirecta de la administración pública en materia de empleo y desarrollo.

Al igual que en Welwyn Garden City se aplicaron políticas gubernamentales en materia de empleo para atraer a poblaciones urbanas para vivir y trabajar en dicha ciudad jardín, las actuales comunidades rurales que sufren despoblación podrían beneficiarse de la aplicación de políticas nacionales o regionales que compartan la misma finalidad. De este modo, se animaría a todos aquellos que se estén formando o estén formados en disciplinas similares a crear cooperativas de trabajo o agrícolas en las comunidades rurales. Gracias a ello, dicha práctica se podría extender más allá de las actividades educativas y formativas, llegando a contribuir con el desarrollo económico y colonización de zonas rurales en declive a largo plazo.

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Además, el desarrollo de áreas de oportunidad puede también contribuir a fortalecer los lazos entre diferentes medios de producción en un lugar compartido en el ámbito supramunicipal (Rando Burgos, 2020). A tal efecto, las áreas de oportunidad pueden proporcionar condiciones laborales similares a las que se encuentran en los centros urbanos, generando oportunidades de empleo a personas con diferentes áreas de especialización para trabajar dentro del mismo mercado laboral en el medio rural. Del mismo modo que los polígonos industriales de Letchworth y Welwyn Garden City dieron trabajo a otros asentamientos de los alrededores y consiguieron atraer a poblaciones urbanas a instalarse en ambas ciudades jardín (Tyrwhitt, 1939), el desarrollo de áreas de oportunidad puede promover la implantación de una economía del conocimiento en el medio rural en forma de polígonos industriales y tecnológicos, destinados a atraer a comunidades urbanas altamente cualificadas y a fomentar que las comunidades rurales vivan y trabajen cerca de su lugar de origen.

Una vez construidas o rehabilitadas las primeras viviendas, se puede llevar a cabo una campaña de marketing que fomente el desarrollo de vivienda asequible en asentamientos rurales. Al igual que la '*Cheap Cottages Exhibition*' en Letchworth y la '*Daily Mail Model Village*' en Welwyn Garden City, el principal objetivo de este tipo de eventos se centraría en atraer a comunidades urbanas para que visiten aquellas comunidades rurales dispuestas a ser revitalizadas sobre las bases expuestas en este documento, de modo que puedan ver por sí mismas algunos ejemplos de vivienda asequible, así como familiarizarse con el tipo de modelo de producción, transporte y economía.

Dicha estrategia de marketing implicaría a arquitectos y otros profesionales en el diseño de proyectos que representen el futuro de la vivienda asequible en el medio rural, ya sea mediante la construcción de nuevas casas o la rehabilitación de edificios a través de proyectos de reutilización adaptativa. De este modo, el patrimonio arquitectónico de las comunidades rurales puede convertirse en algo más que un mero elemento pintoresco de su futuro paisaje urbano, y así ofrecer alojamiento a todos aquellos interesados en trasladarse a vivir allí.

Paralelamente al desarrollo de instalaciones productivas en el ámbito supramunicipal, aquellos asentamientos rurales que no dispongan de buenas condiciones de habitabilidad o de suficientes unidades residenciales como para acoger a nuevos habitantes pueden promover el desarrollo de cooperativas de vivienda a nivel local. Al igual que las cooperativas de vivienda fueron cruciales para proporcionar alojamiento a

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las primeras oleadas de colonizadores durante los primeros años de desarrollo de Letchworth (Purdom, 1949), las comunidades rurales actuales que sufren despoblación podrían rehabilitar o suministrar alojamiento siguiendo el mismo planteamiento. De esta forma, las compañías de desarrollo y las cooperativas de vivienda podrían trabajar de forma independiente pero compartiendo el mismo objetivo: asegurar la asequibilidad de las viviendas como incentivo para atraer población al medio rural, ante la falta de financiación pública para tal fin. No obstante, el desarrollo de cooperativas de vivienda no excluye el empleo de políticas públicas de vivienda asequible, del mismo modo que los consejos de distrito rurales y urbanos de Welwyn Garden City aplicaron los Housing Acts de 1919, 1923 y 1924 para construir viviendas asequibles para las clases trabajadoras de la ciudad jardín (Ward, 2016).

De forma conjunta al desarrollo de cooperativas de vivienda, el uso de recursos endógenos y la reutilización de materiales locales para construir o reformar edificios puede contribuir a la construcción de viviendas asequibles en las comunidades rurales existentes. Además de las ventajas económicas de utilizar recursos endógenos y reutilizar materiales locales, esta práctica también puede contribuir a reducir la huella de carbono y dar una identidad estética a los asentamientos rurales, al igual que los edificios de ladrillo rojo de Welwyn Garden City siguen formando parte de la identidad local de la ciudad (Rabbitts y Jeffree, 2021). Por otro lado, dicha estrategia económica puede dar lugar al desarrollo de una economía circular, destinada a minimizar el impacto medioambiental y económico del sector inmobiliario en las comunidades rurales actuales.

Otra estrategia económica para conseguir viviendas asequibles puede ser la implementación del sistema de tenencia de la tierra del modelo ciudad jardín en las comunidades rurales existentes, como barrera contra la especulación del suelo y medio para asegurar la asequibilidad de las viviendas o las instalaciones de producción (Purdom, 1963). Sin embargo, en lugar de tomar el sistema financiero y de gestión de Letchworth y Welwyn Garden City para la regeneración de los asentamientos rurales existentes, el modelo del Cooperative Land Bank de Turnbull resulta más adecuado para el objeto de este trabajo, ya que puede dar lugar a un sistema de autofinanciación, asegurar la asequibilidad de las viviendas y otras instalaciones sin inversión pública en infraestructuras, y cumplir con el esquema de autogobierno de Howard. De este modo, la implantación del modelo CLB en comunidades rurales existentes permitiría a los residentes gestionar parte de los beneficios netos derivados de los alquileres pagados por los inquilinos para fines públicos, tales como el desarrollo y mantenimiento de la red de

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transporte público, equipamientos, alumbrado, jardinería, actividades culturales o subvenciones. Aunque no está probada la implantación del sistema CLB, otros casos de asociaciones que son propietarias del suelo, como el Bournville Village Trust de Lightmoor o el Parks Trust de Milton Keynes, pueden tomarse como referencia para lograr un sistema dual de tenencia del suelo en asentamientos nuevos y existentes (Henderson et al., 2017). Además, el sistema de autofinanciación de LGCHF puede ser igualmente tomado como una referencia para el desarrollo y mantenimiento de activos, transporte público, infraestructuras y espacio público, así como para la concesión de subvenciones a los residentes. De este modo, el excedente de los beneficios netos puede utilizarse para múltiples fines culturales y sociales gracias al sistema de autofinanciación mencionado, que también podría aplicarse en comunidades rurales en declive con el mismo fin, pudiendo así proporcionar medios para la revitalización y el mantenimiento de sus asentamientos sin ningún tipo de gasto público en infraestructuras, equipamientos, etc.

Entre los diferentes tipos de asentamientos localizados en regiones rurales remotas e intermedias de España, algunos no se encuentran en buenas condiciones de habitabilidad, otros no son lo suficientemente grandes en tamaño y población como ser considerado un pueblo, tales como aldeas o zonas rurales dispersas, y otros comparten ambas circunstancias (Carson et al., 2011). Aunque el modelo de ciudad jardín se pensó para diseñar comunidades rurales desde cero, sus principios de diseño pueden adaptarse tanto para regenerar como para ampliar asentamientos rurales ya existentes, dependiendo del escenario del que se parte en cada caso.

Por ejemplo, las zonas rurales dispersas pueden formar un nuevo pueblo o ciudad como aldeas conectadas en torno a un centro cívico, del mismo modo que Letchworth fue ideado por Parker y Unwin, o pueden integrarse en una "Comarca Lineal" formada por otros asentamientos rurales. Para ello, la regeneración y expansión de los asentamientos rurales existentes debería comprender una serie de planes de ordenación en los que se incluyan el trazado de zonas verdes intermedias en forma de rutas verdes, parques, plazas, pistas deportivas, bulevares arbolados y espacios libres para introducir la naturaleza en el núcleo de los pueblos; la aplicación del "principio unwiniano de cierre", la creación de acentos en las líneas de edificación y la preservación de los árboles preexistentes para conformar un paisaje urbano pintoresco; y la disposición de zonas verdes, callejones sin salida y huertos dentro o fuera de los grupos residenciales para fomentar el espíritu de cooperación entre los residentes.

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Al igual que Parker y Unwin integraron el bosque preexistente de Norton Common y tres grandes plátanos en el plan urbanístico de Letchworth, con objeto de crear una red verde en el corazón de la primera ciudad jardín (Purdom, 1913), las comunidades rurales actuales pueden conservar sus elementos naturales preexistentes para el mismo fin. De este modo, un paisaje urbano formado por elementos preexistentes puede dar un rápido aspecto de madurez a la expansión y/o regeneración de un asentamiento rural, así como proporcionar bucólicas imágenes con arboledas a lo largo de caminos o carreteras. Dicha estrategia económica y estética ayudaría a preservar el patrimonio natural de las zonas rurales, lo cual se ajustaría a los principios de sostenibilidad de la práctica urbanística actual.

Así, los elementos naturales de las pequeñas aldeas pueden convertirse en parques, zonas verdes de las aldeas, fondos de saco y áreas recreativas de los planes urbanísticos de regeneración y/o expansión de asentamientos rurales, introduciendo así la naturaleza del paisaje rural circundante al corazón del núcleo urbano. Para ello, cualquier intervención sobre un asentamiento rural debería apoyarse en su patrimonio natural, ya sea para diseñar sus áreas recreativas o el trazado de las manzanas residenciales, cuya forma vendría dada por la conservación de los árboles existentes, las vías pecuarias, los estanques, los huertos, etc. Por ejemplo, los grandes árboles pueden integrarse en el futuro paisaje urbano del plan de regeneración urbana de un pueblo, agrupando las casas a su alrededor o rompiendo las líneas de edificación a lo largo de las carreteras, tal y como hizo Louis de Soissons en las zonas residenciales de Welwyn Garden City (De Soissons and Keynon, 1927). Según este planteamiento, la disposición de los edificios sería el resultado de la preservación de los elementos naturales, cuyo efecto, combinado con la agrupación de los edificios y su retranqueo en ciertos puntos de las carreteras, ayudaría a reforzar el pintoresquismo de los asentamientos rurales.

La disposición de los edificios debería estar formada por pequeños grupos residenciales a lo largo de las carreteras, con objeto de reforzar el sentido de comunidad entre los residentes. En el caso de Letchworth, Parker y Unwin concibieron la escena urbana de las calles residenciales como una serie de secuencias diferentes, con el fin de dar una sensación de complejidad al paisaje urbano (Unwin, 1909). Dichas secuencias se componen de líneas de edificios, cruces, zonas verdes, plazas y agrupaciones de edificios, que proporcionan una subdivisión espacial de la zona residencial en pequeños lugares de comunidad dispersos por todo el asentamiento. Aunque algunos planes cooperativos no tengan éxito en la revitalización de comunidades rurales en declive, la disposición de los

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edificios podría fomentar al menos el espíritu de cooperación entre los residentes. Por ejemplo, Meadow Way Green, en Letchworth, sigue siendo un pequeño lugar de comunidad en Meadow Way, a pesar de que su modelo de vivienda cooperativa finalizó en la década de 1970 (Brightwell, 1997).

No obstante, el espíritu de cooperación puede lograrse también dentro de los grupos residenciales, ya sea reordenando las parcelas residenciales existentes para adaptar zonas comunes para la comunidad o desarrollando jardines interiores dentro de los nuevos grupos residenciales. Esta práctica sigue latente en Letchworth, donde la expansión de la ciudad jardín comprenderá grupos residenciales con jardines interiores, ya sean huertos o zonas de recreo para los residentes. Un esquema residencial de este tipo también puede encajar en pequeñas comunidades rurales en España, ya que comprende algunas características tradicionales de la arquitectura vernácula española, tanto en términos de escala, altura y uso de los patios para actividades al aire libre. Aunque las características estéticas de los dos casos de estudio británicos difieren de la arquitectura rural española, la adaptación de los principios de diseño urbano de las ciudades jardín utilizados para los grupos residenciales puede contribuir a asegurar la privacidad de las unidades residenciales, así como proporcionar zonas comunes para la comunidad al mismo tiempo.

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8. CONCLUSIÓN

Este estudio se centra en el análisis del modelo de ciudad jardín por disponer de un enfoque multidimensional con la potencialidad de satisfacer las necesidades de las comunidades rurales existentes en declive, a falta de financiación pública suficiente y de principios de diseño urbano adecuados para la regeneración de zonas rurales deprimidas en el contexto rural español. Asimismo, en lugar de tomar ideas de movimientos posteriores como el modelo "new town", basado en un sistema de financiación pública y principios de diseño totalmente diferentes a los de las comunidades rurales, las conclusiones de este estudio presentan el modelo ciudad jardín como un modelo adecuado con capacidad para adaptarse a las realidades rurales existentes, tanto en términos socioeconómicos como de diseño.

El análisis de los estudios de caso responde a las preguntas de investigación de la sección Introducción, ya que proporciona estrategias territoriales, socioeconómicas y de planificación urbanística, formando así un modelo de múltiples capas para combatir una amplia gama de problemas en las comunidades rurales que sufren despoblación, en su conjunto o individualmente, dependiendo de las condiciones y antecedentes de cada caso. En resumen, el modelo de ciudad jardín ofrece un amplio abanico de estrategias para atraer población y medios de producción al campo, implantar un sistema de autofinanciación, garantizar la asequibilidad de las viviendas y desarrollar esquemas de planificación para la regeneración y expansión de los asentamientos rurales existentes.

En definitiva, la combinación de todas las estrategias mencionadas supone una reinterpretación del modelo ciudad jardín para abordar los problemas de las comunidades rurales actuales bajo el mismo paraguas de cooperativismo, autosuficiencia y ruralismo que dio origen al Movimiento Ciudad Jardín hace más de 120 años. Esto se puede conseguir, dentro del ámbito territorial, mediante el desarrollo de "Comarcas Lineales", áreas de oportunidad y TIC a lo largo de rutas ferroviarias preexistentes, políticas de empleo para la población joven, diversificación de la economía rural y exposiciones sobre vivienda asequible; dentro del ámbito económico, a través de la promoción de cooperativas de vivienda y la puesta en marcha de bancos cooperativos de tierras en zonas rurales; y, dentro del ámbito urbanístico, a través del trazado de zonas verdes intermedias, la implantación de un paisaje urbano pintoresco y la potenciación del espíritu de cooperación entre los residentes para la regeneración y expansión de los asentamientos rurales existentes (Fig. 8.1 y Tabla 2).

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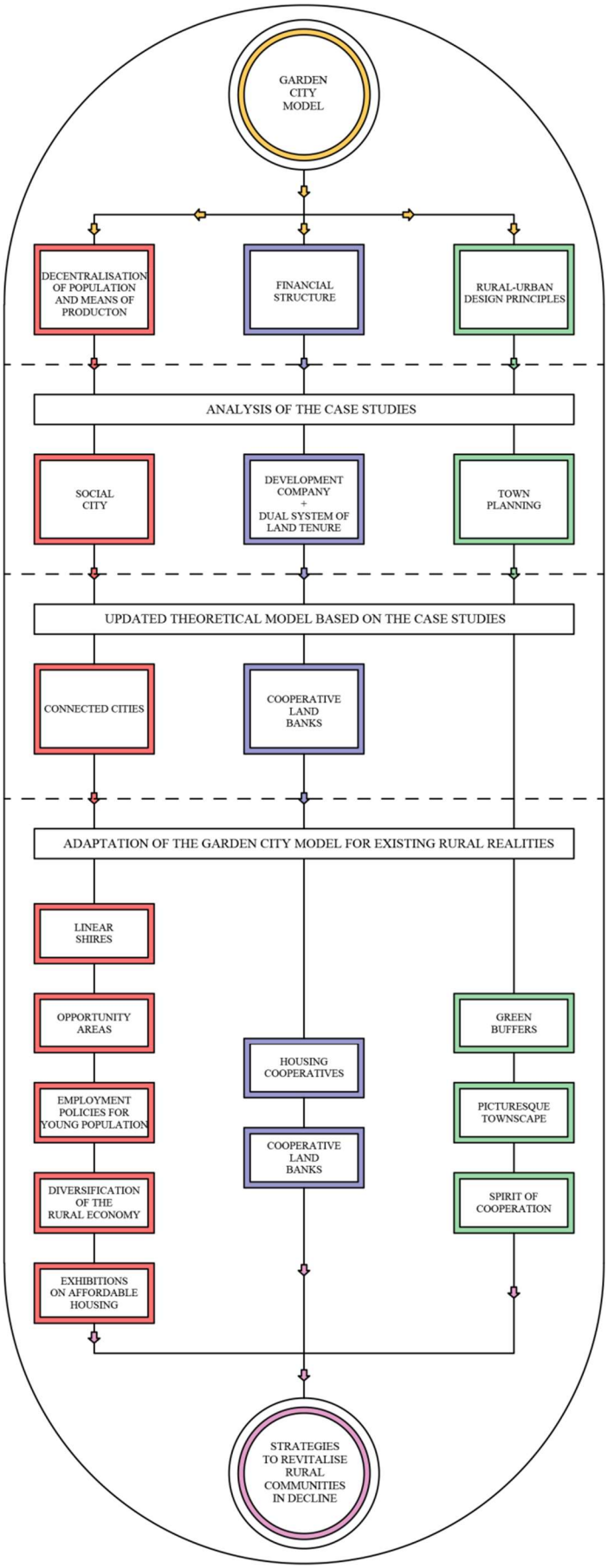


Figura 8.1 Marco conceptual (Ilustrado por el autor en 2022).

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Modelo Ciudad Jardín	Adaptación del modelo ciudad jardín para las comunidades rurales existentes en declive	Análisis comparativo
Nuevos asentamientos situados en el medio rural con 32.000 habitantes cada uno.	Pequeños asentamientos rurales existentes de 100 a 2.500 habitantes. A nivel subregional, esos pequeños asentamientos rurales pueden crear una red territorial y socioeconómica con ciudades de tamaño medio, formando así "Comarcas Lineales" de 10.000 a 50.000 habitantes.	En lugar de construir nuevos asentamientos en el medio rural, el modelo resultante procede de la combinación de la "Ciudad Social" howardiana y el modelo de "Connected Cities", formando así grupos de asentamientos rurales ya existentes a menos de quince minutos de viaje en transporte público.
Conexión por ferrocarril.	Las "Comarcas Lineales" propuestas pueden formarse mediante: a) La reapertura de rutas ferroviarias en desuso y construyendo nuevos apartaderos a lo largo de las rutas ferroviarias existentes. b) Implantando corredores de autobuses en aquellos lugares donde no sea fácil acceder a una red ferroviaria.	La construcción de nuevas rutas ferroviarias es muy costosa y, por tanto, no es conveniente, ante la falta de población suficiente para mantener esa infraestructura. Sin embargo, la reapertura de rutas ferroviarias en desuso es más conveniente, porque la infraestructura y las estaciones ya están allí, y los corredores de autobuses pueden ayudar a llenar los vacíos a lo largo de esa red territorial, especialmente en las regiones montañosas.
Sistema económico basado en la actividad industrial y agrícola.	Sistema económico basado en: a) Revitalización de la agricultura y la ganadería para satisfacer las necesidades medioambientales y productivas. b) Teletrabajo. c) Economía del conocimiento basada en las TIC. d) Áreas de oportunidad productiva.	Debido al declive industrial en países desarrollados como España, solo modernos medios de producción pueden impulsar la movilización de las comunidades urbanas hacia las zonas rurales, sin impedir el empleo de la agricultura y la ganadería en el establecimiento de sinergias con otros sectores económicos. De este modo, el desarrollo de áreas de oportunidad a nivel supramunicipal puede contribuir a preservar el entorno natural de los asentamientos rurales existentes, mediante el establecimiento de instalaciones de producción más allá de sus límites.

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Estructura financiera basada en empresas de desarrollo y sistema dual de tenencia de la tierra.	Estructura financiera basada en: a) Cooperativas de viviendas. b) Bancos cooperativos de tierras.	En lugar de crear empresas de desarrollo para reurbanizar y/o ampliar los asentamientos rurales existentes, la combinación de cooperativas de viviendas y bancos cooperativos de tierras puede proporcionar un enfoque ascendente con capacidad para promover un sistema de autofinanciación basado en un modelo de autogobierno.
Un modelo "desurbanista" basado en la práctica urbanística de Letchworth y Welwyn Garden City.	Principios de diseño rural basados en: a) La disposición de corredores verdes. b) La implantación de un paisaje urbano pintoresco. c) La promoción del espíritu de cooperación entre los residentes.	Gracias a la deconstrucción del modelo "desurbanista" de ambos casos de estudio, los principios de diseño de las ciudades jardín pueden adaptarse a las comunidades rurales existentes, introduciendo la naturaleza en el núcleo de los asentamientos, preservando las características naturales existentes y fomentando la vida en comunidad.

Tabla 2. Análisis comparativo entre el modelo ciudad jardín y su adaptación para comunidades rurales existentes en declive (Ilustrado por el autor en 2023).

Paralelamente a la revitalización de las comunidades rurales en declive, esta adaptación del modelo ciudad jardín tiene la potencialidad de crear un nuevo mercado de viviendas para familias con bajos ingresos, una estructura financiera que fomenta la participación ciudadana, una estructura de gestión que garantiza la provisión de capital para la reurbanización y el mantenimiento de los asentamientos rurales existentes, áreas de producción a nivel supramunicipal que ayudan a preservar el entorno natural de las zonas rurales, un esquema de planificación que contribuye a promover el desarrollo sostenible de la expansión y la regeneración de las comunidades rurales existentes, y un modelo económico basado en la diversificación rural de diferentes sectores productivos. De esta forma, este estudio comprende una serie de estrategias que promueven el desarrollo rural a diferentes niveles de acuerdo con los enfoques contemporáneos sobre regeneración urbana y planificación regional.

Sin embargo, este estudio tiene algunas limitaciones. Por un lado, no se han realizado cuestionarios sobre la actualidad de los residentes o partes interesadas de

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Letchworth y Welwyn Garden City, lo que habría contribuido a apoyar el análisis y desarrollo de un método de investigación más variado. Por otra parte, la aplicabilidad del modelo ciudad jardín a las realidades rurales existentes aún no se ha puesto en práctica en zonas rurales existentes para demostrar su validez. Asimismo, no existen precedentes de CLB en zonas rurales, y tampoco se han desarrollado en otros casos "Comarcas Lineales" acompañadas de áreas de oportunidad a escala subregional. No obstante, este documento ofrece una versión actualizada del modelo ciudad jardín en forma de marco general, que puede ser utilizado por futuros académicos para analizar otros casos de revitalización de zonas rurales existentes y adaptar dicho marco para la promoción de la cooperación Sur-Sur y a los paisajes de los países en desarrollo diferentes de los paisajes espaciales predominantemente europeos.

Esta reinterpretación del modelo ciudad jardín para la revitalización de comunidades rurales en declive puede proporcionar una serie de estrategias diferentes, que podrían aplicarse en su totalidad o parcialmente en función de las condiciones regionales y locales de cada asentamiento rural. Por lo tanto, este esquema representa un marco flexible que puede ofrecer estrategias sociales, económicas y de diseño derivadas de tres dimensiones diferentes para abordar problemas estructurales o concretos de los asentamientos rurales existentes, sin excluir la combinación de otras iniciativas o enfoques más globales adaptados a contextos rurales específicos del territorio español.

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