

Summary

Key words: Inclusionary Housing, Community Land Trust, Affordable Housing, long-term (durable) housing-affordability

The thesis looks at Inclusionary Housing approach and Community Land Trust approach in parallel in order to compare the productivity of affordable housing units, the durability of affordability of homes produced by each approach and the locational advantages where the units are situated in. The reason to choose the two approaches to compare is firstly that Inclusionary Housing and Community Land Trust, each of them, have been discussed in academia as gradually emerging instruments for affordable housing provision during the last four decades. Since their inceptions in United States and their first practices in the 1970s, each approach has been spread beyond the geographical boundary to mainly English speaking or European countries as well as some other non-industrialised countries. Secondly, there is a need to indentify the pros and cons of each approach in order to allocate limited public resources, such as public land available to transfer, fiscal subsidies, fee waivers or expedite planning permission granting, for the best outcomes from the perspective of public policy.

The necessity of the three dimensional comparison in terms of the productivity, the ensuring of affordability in successive times and the locational trend comes from the history of affordable housing delivery directly or facilitated by the public. When the market failed to meet the need for affordable housing, the public came in. However, it was likely that affordable homes did not remain affordable through subsequent resale being exposed to the market. Otherwise, affordable homes could remain affordable because their locations were so remote that there was no incentive for the price to go up. Or, the absolute amount of affordable homes produced was far short of demand. Thus, the three main factors could be an objective window to review the two affordable housing provision approaches as all the three factors need to be satisfied at the same time.

For the comparison of Inclusionary Housing approach and Community Land Trust approach from the perspective of which one is more productive, more permanent in terms of affordability, and better situated, England was chosen due to the geographical vicinity to visit for data collection and the condition that both approaches are available and also actively facilitated by the public bodies. For the productivity aspect, one rural jurisdiction, Cornwall unitary county in South West region and one urban jurisdiction, Lambeth borough in London region were chosen and the volume of affordable housing production by each approach since 2004 was compared. For the aspect of durability of affordability, each tenure type, which was linked to a disposal method of affordable homes produced by each approach, was identified. Following that, each tenure type's computed formulae were applied for model-based standardized calculation of each tenure type's appreciation rate. For the aspect of locational advantages, total two sites from each approach were chosen from the two fore-selected jurisdictions and each site's average distance to key facilities was measured.

As a result, Inclusionary Housing approach turned out absolutely exceeding the productivity of Community Land Trust approach. Two reasons for that can be stated; one is because Inclusionary Housing is entailed by market developments. The stronger measure in order to make the provision of affordable homes sure is used in the case of Inclusionary Housing approach. However, for the case of Community Land Trust approach, it is not necessarily so. The other is because Inclusionary Housing approach is a combination of already existing strong institutions such as market-driven developers, housing associations and a combination of various funding sources. In the case of Community Land Trust approach, supporting and implementing bodies have been developing in the recent years, which has a relatively short history than the practicing history of Inclusionary Housing approach in England.

In terms of the durability of affordability, Community Land Trust approach ensures a longer period of affordability, in other words, lower appreciation rate in general. However, unlike the standardized formula which sets the initial market price as same between the two approaches, Inclusionary Housing approach in practice might provide affordable homes at the low price as Community Land Trust approach does. On top of that, when there is a ceiling on rent appreciation which could work quite similarly with resale covenant or other variables such as mortgage rate were taken into account, the durability of affordability of Inclusionary Housing might not be so less than Community Land Trust. This result is created in the context of English planning system with relatively strong regulations than United States. Further researches on the refined affordability comparison and the scrutiny into genuine strength of Community Land Trust approach might need to be developed.

In terms of the locational advantages of each approach's affordable homes, both approaches turned out having no significant difference. The location of the site is likely to depend on the scale of development, in other words, the number of built homes, rather than whether it is built by Inclusionary Housing approach or by Community Land Trust approach. The fewer homes are built, the remoter the site is likely to be situated. The more homes are built, the nearer the site is likely to be situated to a downtown. Yet, this can be generalized in rural area. In highly urbanized area, even the scale of development does not make a big difference because main facilities for living are already spread across the area and they are well connected to each other.

In a nut shell, Inclusionary Housing approach is a stronger tool to enlarge the volume of production of affordable houses because it utilizes planning obligations borne by market developers for the production of affordable homes. Contrarily, Community Land Trust approach often lacks such an obligatory framework for getting access to land. Still, Community Land Trust approach can ensure long-term affordability than any other model. At the same time, the location of affordable housing sites is depending on accessibility of land through land use regulations and planning regulations which apply to both approaches on the same basis in general. In that sense, it could be recommended that Inclusionary Housing approach as a tool to ensure the initial supply and Community Land Trust approach as a tool to ensure the long-term affordability can better be combined and facilitated by the public in a mixed form.

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> Vitnarae Kang, 7 September 2011 Rotterdam, the Netherlands

Abbreviations

ADP Approved Development Programme

AR Appreciation rate per annum

CCLT Cornwall CLT (Community Land Trust) Limited

CLT Community Land Trust
CPI Consumer Price Index

CRHA Cornwall Rural Housing Association

DCLG Department for Communities and Local Government

DPDs Development Plan Documents published by the Cornwall Council including

The Cornwall Core Strategy

The Affordable Housing DPD

The Travelling Communities DPD

Waste and minerals plans

HA Housing Association

HCA Homes and Communities Agency

HPI House Price Index

HSSA Housing Strategy Statistical Appendix

IH Inclusionary Housing

LA Local Authority

NAHP National Affordable Housing Programme

OMV Open Market Value

PPS3 Planning Policy Statement 3 (which sets out the Government's national policies on aspects of planning in England and the national planning policy framework in relation to housing provision and delivery.)

RSL Registered Social Landlord

RC Resale price Covenant

RICS Royal Institution of Chartered Surveyors

RP Registered Provider
RPI Resale Price Index

S106 Section 106 (Agreements)

SO Shared Ownership

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Chapter 1: Introduction

1.1 Background

This thesis is to compare and to contrast two affordable housing provision approaches which are recently more highlighted as main solutions addressing affordable housing shortage especially in English-speaking countries, namely, Inclusionary Housing (hereafter, IH) and Community Land Trust (hereafter, CLT). These two have different historical roots in which each was called to be publicly promoted, different mechanisms to produce affordable housing and to keep produced affordable housing units affordable for next users and, consequently, different outcomes in terms of productivity of affordable housing units, sustainability of affordability of produced affordable housing units, the way a neighbourhood is shaped in which produced affordable housing units are situated and different behaviour-patterns of involved stake-holders with different motivations and different incentives for each involved stake-holder group.

1.1.1 Inclusionary Housing Approach

IH approach is summed up in that affordable housing production is made possible by that governmental authorities require private housing developers to set aside a certain portion of the housing units they develop as affordable housing units, which is entailed for the housing developers as condition to be granted planning permission from the authorities. In other words, IH approach is by public authorities to mobilize resources from market-driven housing development to create affordable housing. In that sense, affordable housing production by IH approach depends primarily on availability of market-driven housing developments and secondly on institutional capacity of public authorities to make it sure that private housing developers produce affordable housing units (Calavita & Mallach 2010, pp. 9). Based on this principle, there are subsequent variations in practices of this approach.

For example, the percentage of the housing units which are disposed below market price can be in wide range of 10% up to 100% of whole developed housing units, which can be either obligatory according to what is set by law or negotiable between public authorities and private developers depending on each practicing country and each municipality (Lambeth Council 2007, pp. 3). Affordable housing production by IH can be either on site of original development or outside of the site. According to the design, it is allowed in some cases that private housing developers offer approximate amount of money or land to public authorities in lieu of actual construction of affordable housing units, which is supposed to be used for affordable housing provision (Calavita & Mallach 2009, pp. 15; 2010). Maintenance of affordability of housing units which are once delivered at a certain level of affordability is also different depending on affordability control periods in which disposal at market price is banned or limited at certain level, or on different tenure modes which are attached to defined affordable housing units.

Inclusionary housing, this term, was coined as the antipodal to exclusionary zoning in USA. Its approach was put in use during the early 1970s around San Francisco and Washington, DC as response to ever widening housing-affordability gap between haves and have-nots and also to socio-economic and ethnic segregation which was visible in spatial pattern of residential occupation (Calavita & Mallach 2010). Firstly from USA, IH approach has been spreading to other countries, including Canada, England, France, Spain, Italy, Ireland, South Africa, Israel, India, New Zealand, Colombia, Malaysia, South Korea and most recently the Netherlands, generally within the context of privatization, deregulation and social reaction against spatial

segregation and soaring housing prices unreachable for low-income population (Calavita & Mallach 2010, pp. 3).

1.1.2 Community Land Trust Approach

CLT approach is designed to address social need for affordable housing as IH does. However, it is different in a sense that affordable housing production is made possible primarily by mobilized resources from civil society, defined as a community of 'non-profit organizations' or 'the totality of voluntary social relationships and institutions' which is distinguishable, being called the third sector, from the public sector referring the structures of a state and the private sector referring commercial institutions of the market (ed. Anheier & Seibel 1990).

A classical CLT approach has three outstanding features as each word of 'Community Land Trust' refers to. Firstly, in terms of 'Land' ownership, a classical CLT separates ownership of land from ownership of constructions on that land. In other words, land belongs to a CLT so that land is permanently put outside of the market and under the governance of the CLT as a 'common heritage' and leased out in individual plots for serving a community's needs, while constructions on that land are held by individual homeowners, workshop owners or housing cooperatives (Davis 2010). The CLT has a pre-emptive right to repurchase any constructional improvements on that leased land by a formula ensuring the affordability of the construction to low income households for generations. Secondly, in terms of 'Community' organization, a non-profit corporation with a corporate membership which is open to any residents within a CLT's geographically defined "community area", owns the land and the governing body is composed of equal number of representatives respectively from the CLT's lessees, the community area's residents and the general public realms (Davis 2010). Thirdly, in terms of 'Trust' operation, a CLT gives priority to de-privileged population to lease land and to own home on the leased land, which is regarded as 'moral responsibility' the CLT is entrusted to carry out by initial arrangement.

The foresaid typical CLT approach with a historical root of strong emphasis on the public character of land such as from the idea of Henry George (1839-1897) promoting 'Single Tax', the idea of Ebenezer Howard (1850-1928) promoting 'Garden City', has been invented by Bob Swann, Ralph Borsodi and their colleagues at the Institute for Community Economics (ICE) and brought into practice through the first CLT in 1978 in East Tennessee, USA. The number of CLTs which was around a dozen in the early 1980s became over 240 in the United States in 2011, annually with a dozen new ones being created for the last 15 years (Dubb 2011, pp.6). CLTs are being incubated in Canada, England, Scotland, Australia, Belgium, and Kenya, also (Dubb 2011).

1.2 **Problem Statement**

As it is foresaid, the IH approach is depending on availability of the private sector's marketdriven developments while the CLT approach is depending on availability of the third sector's volunteer initiatives. The question is which should be given a priority of support from the public sector.

1.2.1 The need to identify effective public policy

The question is underpinned firstly by the fact that state policy implies governmental action to solve or mitigate a specific problem in order to bring about intended and planned change in the existing status quo or to sustain the existing status quo if it is desirable (Mullins & Murie 2006). Thus, the state needs to identify the most right actions which are expected to bring desired outcomes. State-intervention at the national, regional and local levels to provide incentives and disincentives and to guide important resources in a desired direction when it comes to involving stakeholders with different characteristics such as the private sector or the third sector has a significant influence on secured provision of affordable housing. Therefore, if the policy goal of a state is to ensure more provision of affordable housing, the state is expected to know which provision approach is more effective to achieve its policy goal in terms of ensuring quantity and quality of available affordable housing units. Publicly recognized policy as effective one and worth being supported should be a policy of which approaches are closely able to achieve its policy goal.

1.2.2 The call for public policy due to the market failure to provide affordable housing

Based on the nature of state policy, it is appreciated to mention hereunder briefly the reason that housing affordability has emerged as one of the issue which should be addressed by a government intervention. It is derived from the market failure. In the ideal market, supply and demand match each other in equilibrium as increasing supply results in decreasing price by competition among suppliers to sell their goods and decreasing price induces increasing demand to purchase goods in the lower price. In a nut shell, supply and demand respond to each other, allocating resources efficiently. It is, however, hardly seen in the housing market. For the elasticity of land supply is limited due to its immovability, thus, fixed location in ultimate and housing development often takes time longer than any other manufactures, land with housing on it is often held from available supply for appreciating housing demand while land and housing price is going up. Or, land in primary location with conveniences for living is preferentially taken for those with higher payment capacity at a raised price than original residents with limited payment capacity, of which the phenomenon is also called 'gentrification' (Shaw 2008). It is often observed that the market mechanism of supply and demand combined with the attributes of land and housing as special commodities, contributes to oversupply of high-end housing and relative scarcity of low-priced housing in spite of relatively bigger demand for it by low-income population because the market finds no incentives to supply housing particularly at prices affordable for low and middle income households in order to realize the maximum and best use of land in fiscal terms.

1.2.3 Previous approaches taken by the public for affordable housing and main issues

Previously, particularly during the 1950s and 1960s, Western European countries of which the most are currently practicing IH approach, tried to figure out the market failure by producing affordable housing for low-income population by direct governmental intervention, namely, constructing low-income housing by the public sector. It has, however, turned out to be the government failure for following reasons. Firstly, it led to spatial segregation from the rest of the city and residualization of low-income residents with poverty being spatially concentrated (Calavita & Mallach 2010) in a large social housing complex. Public housing in the United States, council housing in Great Britain, Spain's *polígonous de viviendas*, and France's grands ensembles have become tokens of such outcomes. As a root cause of the first reason, such low-income housing massively built by the public was hardly desired by low-income population due to its inconvenient location since public funding sought for available

inexpensive land in order to save cost which was generally located at the urban fringe or outside of the city with poorly serviced public transportation and distant job opportunities (Byrne 1984; Power 2000). Secondly, affordable housing once created by public funding was found to be eroded in the market, which could not be affordable any more through recurrent sales in the market (Jacobus & Brown 2007).

Next to direct production of affordable housing by the public, demand-side's market approach has also been taken such as housing voucher programme, upfront subsidy or tax abatement for first home-buyers among low-income population. Such methods which help housing purchasing power or rent payment capacity of low-income population to rise by providing direct or indirect subsidies, however, showed limitation in that in highly appreciating housing market, public money invested in such subsidies should be continuously growing as housing price going up in order to maintain the level of public devotion to the same proportion of low-income households as before (Cohen 1994).

To conclude, the main issues of affordable housing provision are to ensure affordability in long term in desirable location for targeted population. By the market only, housing is not affordable for low income households. In the history of housing policy, it appeared that affordability was not durable if affordable housing was secured by the public investment. If it was durable, the location was not good, which was not desired in the market so that the price could stay cheap (Calavita & Mallach 2010). In that sense, the discussion of affordable housing policy formulated by the public is focused on affordable housing provision in good location with a guarantee of durability of the affordability in a scale that can mitigate a shortage of affordable homes for low-income population in the market.

1.2.4 Common Distinguishable features of IH approach and CLT approach; Why both two; Minimum public support

With the foresaid background, two approaches, Inclusionary Housing approach and Community Land Trust approach, were introduced. IH is highlighted in that it mobilizes resources from the market development by mandating or allowing planning authorities to extract affordable housing from private developers using the planning system so that affordable housing could be delivered mixed within market-driven developments. IH resolves the issue of bad location of affordable housing, its spatial agglomeration and involved poverty concentration. CLT is also highlighted in that it mobilizes resources mainly from non-profit organizations, the third sector outside of direct intervention of the public to produce affordable housing, and it ensures durability of its housing affordability by dual ownership design of land and housing. They share in common that they have to work with minimum government support because they have become outstanding primarily in the public realm's tendency of growing 'public and private partnerships', 'privatization' and 'deregulation' based on the public consensus upon strong market or increasingly prevailing 'neo-liberalism'.

1.2.5 Need for prioritization of public support; need for a comparison between two approaches

Either IH approach or CLT approach has an inherent mechanism which is different from each other, resulting in different scale of production of below-market rate housing units, different quality of neighbourhood, different pattern of location, and different extent of how long and how affordable the price of those affordable housing units is guaranteed. In that sense, it

affects a state's goal to address affordability gap in housing markets by increasing affordable housing units available for the poor and intermediate income groups.

Moreover, the public sector has limited resources to allocate and sometimes the allocation is even excludible for one against the other. It means that one cannot get public support when the other has already taken public resources which are available in limited amount. For affordable housing provisions, there are generally four major resources to be allocated by the public sector. One is 'approval of land development' because the public sector generally has an authority to grant planning permission which implies access to land. If the public sector does not grant planning permission on a certain site to the private sector, it implies that the third sector could attain an opportunity to access the site. It is vice versa. Planning permission includes the aspect of speed, also, in that expedited process of planning application for one development might lead to delays for other development due to limited human resource in the public sector (Mallach & Calavita 2010, pp. 37). The second is 'public property', either land alone or land and construction together, which are disposed by the public sector. This is similar with the first in terms of issue of access to land but still different in a significant sense because the public sector can set a schedule of disposal, decide to whom it will transfer and control over the price of transferred property such as asking market price or below-market rate. Thus, transferring of public property is more active support. The third is tax or chargerelated; fee waivers or exemptions of a certain tax, tax abatement or tax increment financing. The fourth is financial subsidy which is linked to maintenance of affordability of housing units which were once delivered as below-market rate units. Regarding subsidy, there are two approaches; subsidy recycle and subsidy retention.

In summary, the problem is to identify which one between IH approach and CLT approach more deserves public support which has the limit, in order to optimize the cost of public support for achieving a state's policy goal; secured provision of affordable housing.

1.3 Research objectives

The main objective of the research is to identify which approach between IH and CLT is more apt for affordable housing delivery based on evidence in practice. This is for adding knowledge to help define which one should be given a priority of public support. Therefore, this research looks at both sides; the scale of affordable housing provision, the durability of affordability of housing units once delivered at below market rate and the quality of location in which affordable housing either by IH and by CLT is situated. Therefore, the comprehensive research objective is:

- To compare how different results each IH approach and CLT approach makes due to the nature of each approach embedded in its foundational arrangements in interaction with the local context and the public sector's support

The specific research objectives are:

- To compare the productivity of the IH approach and that of the CLT approach regarding creating affordable housing units
- To compare the durability of affordability of housing units once delivered at below market rate
- To compare the quality of location in which affordable housing delivered by IH and by CLT
- To identify how public support and local condition affect on the differences of results from foresaid comparisons

1.4 Research questions

Overall research question:

Which one should be given a priority of public support between Inclusionary Housing approach and Community Land Trust approach?

Specific research questions:

Which one produces better results considering

- 1. How different is the productivity of IH approach from that of CLT approach?
- 2. How different is the durability of affordability of once delivered housing units by IH approach from that of CLT approach?
- 3. How different is the quality of general location of housing by IH approach from that by CLT approach?
- 4. How does the inherent mechanism each of IH approach and of CLT approach to deliver below-market rate housing units affect the different results of the foresaid comparisons?
- 5. How did public support affect the different results of the foresaid comparisons?

1.5 Significance of the study

This study is significant for the reason that there is no comprehensive comparative research on IH approach and CLT approach. Yet, IH approach and CLT approach both have emerged in international discourse on governmental policies as a practical approach to deliver affordable housing since its origins both in the 1970s in the United States. As foresaid, IH approach has been adopted by Canada, United Kingdom, Ireland, France, Spain, Italy, Finland, the Netherlands, Germany, South Africa. Australia, New Zealand, Malaysia, Israel, India, and Colombia (16 countries), which is according to what Calavita and Mallach reported in 2010. While CLT approach has been less diffused internationally than IH approach, it is recently being welcomed and researched for feasibility of adoption in new other countries than the United States. Above all in United Kingdom, CLT approach has been nationally facilitated since 2010 with some pioneering CLTs initiated already on a voluntary base since the 1980s. The number of localities where CLTs are being practiced or growing is approximately 80 in England and Wales according to the report of National CLT Network. In Scotland, even community based land reform has been ongoing since 2003 by the the Land Reform Act 2003 underpinning 'Community Right to Buy', which is strongly combined with vigorous local efforts to establish CLTs. CLT approach has been tried or under development in Canada, Australia and Kenya, also.

In the context of international spread of IH and CLT, IH and CLT became a part of lexicon in discussion of affordable housing provision schemes mobilizing required resources mainly outside of the public sector, though IH, this term, is more popular than CLT. In spite of the extent these two approaches have diffused, IH and CLT have been analyzed separately in academia not being described in a relation to each other. When similarities and differences of IH approach and CLT approach are clearly analyzed and stated and when each approach's pros and cons are more deeply understood, public policy formulators, affordable housing advocacies, local affordable housing activists and other housing policy decision makers may better decide how to use each approach as an instrument to achieve a defined affordable housing provision policy goal in a clearer picture.

In that sense, this research addresses IH approach and CLT approach as a package of components in a country-specific context, which is a unique way to look at IH and CLT. The

components of each approach in the process of producing and ensuring affordable housing units are such as legal framework to make each approach get access to land, arrangements of each approach to finance below-market rate housing units, and tenure-designs which are attached to disposal of affordable housing units. There have been researches to argue for the strengths of homeownership schemes applied to disposal of CLT's housing units to keep housing affordable in perpetuity over other affordable home ownership programmes (Lauria & Comstock 2007). CLT is also looked in a framework of public subsidy-recycle versus public subsidy retention (Cohen 1994) or a framework of individual-based approach versus property-based approach (Curtin & Bocarsly 2008). IH is generally viewed from a framework of governmental direct production of social housing versus governmental mobilizing of private sectors' resources to ensure affordable housing delivery (Mallach & Calavita 2010). There is also a research to explore the possibilities and the scope of municipal support for CLT approach and to argue for justification of such support, namely the City-CLT partnership (Davis & Jacobus 2008). However, no research is yet found that explores which one should be given a priority between IH approach and CLT approach when both two options are on the desk of policy formulators and decision-makers or on what kind continuum both two approaches can be combined together. However, the latter question would be answered firstly when there is an answer available on 'similarities and differences' and 'pros and cons' of one approach defined in comparison and contrast to the other.

1.6 Scope and limitations

The research is limited in the perspective of land development strategies, which means the research looks at IH approach and CLT approach firstly with the focus on how land for each approach is made available through the planning system and resources mobilized from the private and the third sector. Thus, this is related to productivity of each approach to provide affordable housing units because there is less affordable housing when available land is less. The second focus is landownership; how each approach defines ownership of land which affordable housing units are delivered on, in other words, how affordable homeownership is designed and how the answer to the former question is related to securing affordability as time goes on. The third focus is the quality of location of land on which each approach delivers affordable housing. From the past of housing policy practise, it was obviously recognized that social housing delivered by governmental intervention often meant housing on relatively remote area where transportation to workplace or to school is inconvenient and tedious or excluded from the rest of a city or a town. This is a part of the reason why IH approach was introduced in the United States in order to incorporate below-market rate housings with other market housing on relatively primary location with relatively higher land value so to create mixed-income neighbourhood. However, this inclusion of land for below-market rate housing in an area with relatively higher land value is not sure for the case of CLT approach when a CLT has to buy land, which gives financial challenges to the CLT, or when affordable housing development by CLT approach is spatially excluded from the market sector's housing development.

What the research does not cover are the aspects of architectural value of affordable housing delivered by each approach and the process in which the neighbourhood is spatially organized. Also, the research does not compare how different drive or motive of each different sector, the private market sector on the side of IH approach and the civil volunteer sector on the side of CLT approach, results in different physical quality of buildings and their maintenance. These questions are more related to physical housing management, the relation between housing governance structure and place-shaping. There are arguments by CLT advocates that CLT

approach guarantees better neighbourhood and the quality of place because by its governance structure, a defined community area's needs are reflected on using land belonging to a CLT and local residents can participate more actively and collectively in deciding over use of the land owned by the CLT (Aird 2009a, pp. 17-18). They also claim that a CLT is more concerned about investing in energy efficient building materials and eco-friendly design because it is a producing body of affordable housing units at the same time maintainer. Contrary in IH approach, the private housing developers leave their developed area after the completion generally not staying in charge of maintenance of housing so they are less motivated to invest in such building constructions in order to reduce costs and to maximize profits within the boundary not forced by law. For IH approach, it is reported that belowmarket units are incorporated on site of market housing development by incentives of density bonus or in the middle of large scale new housing development. However, physical quality of produced housing units or quality of place where the houses are situated, which is partly variable depending on IH approach or CLT approach due to its endogenous factors.

Even though the foresaid issues are related to choose one to give a priority of public support between IH approach and CLT approach, it is out of scope of the research because those cannot all be measured and assess in this thesis which requires too many concepts to define each variable.

The geographical boundary of the research is limited to England. When it comes to a evaluation of due priority for giving public support between IH approach and CLT approach, based on each approach's pros and cons, it is impossible to avoid discussing the area-specific planning environment and regulation in which housing development takes place. For that reason, the close observation and description on the uniformed planning environment formulated by the national law and regulations will be given substantially in the research and be interwoven with an explanation of how IH approach and CLT approach work, which seems undue to be all generalized except some basic principles of each approach. In that sense, England was chosen in the research as one unit of planning environment. Jurisdictional differences of how planning law and regulations are applied in IH approach and CLT approach will be discussed later.

1.7 Description of the Research Area and the Justification

England was chosen firstly because there is less research done how IH approach and CLT approach can be compared and contrasted in the case of England. There are only two countries at the moment in the world from which the presence of both IH approach and CLT approach is reported. For the cases of CLTs in the United States, numerous researches were done by institutes such as Lincoln Institute of Land Policy. Literatures on IH practices in the United States have also been accumulated in large numbers. However, studies on CLTs in England are not accumulated as much as in the United States yet in academic journals because CLTs have been growing explicitly since 2008, which quite recent, when "an official definition of the CLT was included for the first time in the national Housing and Regeneration Act" (Aird 2009b).

1.8 Thesis structure

In the following chapter, literature review on IH approach and CLT approach based on the proposed research questions will be presented. In the literature review, the understanding on IH approach and CLT approach is not limited to England but both approaches are understood

from the point of their general attributes by each inherent mechanism how it works in relevance to answering the research questions. The discussion of national commonalities and differences in practicing each approach will thus be combined with the general description of each approach from the aspects of each approach's productivity, durable affordability and desirability of location.

In the third chapter, research methodology will be discussed. In the forth chapter, the context of English planning system in relevance to English practices of IH approach and CLT approach will be explained. In the fifth chapter, the analysis of collected data based on the research methodology explained in the third chapter will be presented in the connection to the forth chapter on the country-specific context. In the sixth chapter, the conclusion and the final answers to the main research question will be presented.

Chapter 2 Literature Review

2.1 Inclusionary Housing; how it works

This section explores how Inclusionary Housing works among its practiced countries in the worldwide. Through looking at variations of IH approach according to different localities, it is possible to decompose IH approach in several factors for pragmatic analysis and to find its comparing and contrasting points to CLT approach. The definition of IH as a generic term means a public approach by using the planning system to recapture land value that is created by public decisions on land use change and to induce private housing developers to set aside a certain portion of their developments for creating affordable housing mainly by constructing affordable units on the same development sites or by giving approximate land or cash for affordable units somewhere else but in a mixed income development.

2.1.1 How productive IH approach is to create affordable housing

The productivity is differentiated firstly according to the land rights regime of a country or a locality where IH approach is practiced. Secondly, the productivity is differentiated according to the market condition. Thirdly, the productivity is differentiated partly or largely according to the presence of public incentives.

The first is about whether land value increment caused by planning permission or land-use change granted by governmental authorities can be mobilized by the public or such land value mobilization can be regarded legitimate by the population and in a legal system. This question leads to whether IH approach is mandate or voluntary based.

In Spain and Ireland, inclusionary housing is mandate by national legislation. In England and France, a national regulatory system enables local planning authorities to use the IH. In the United States and Canada, IH is relied upon a wide range of legal and regulatory settings at a state or provincial level and again at a municipal or county level due to its highly decentralized land use regulation (Calavita & Mallach 2010, pp. 8).

In Europe, there is stronger tradition than in the United States that land value increment is considered by planners, policy makers and common sense as what the public action on land use and the whole society's efforts such as population growth or general productivity improvement brings about so landowners are not entitled to own such land value increment in principle. This understanding affects the land rights regime in terms of how to deal with land value increment's public recapture. In the United States, land or housing is generally illustrated as individual's asset from which individual is entitled to benefit. Thus, the right to

benefit is included more in individual owner's rights to claim in the United States but more in public rights to claim in European countries. Moreover, if the development right is regarded more as publicly owned, it is more justified by the public to require private housing developers to incorporate more affordable housing units on the site because the development right originally belonged to the public and now private housing developers get to be granted such right. In the process of granting the development right which was originally owned by the public to private housing developers, a room is created for give and take. What private housing developers pay in return of the development right granted is to build affordable units which are less expensive than the market rate.

Thus, the differentiation of the productivity of IH or the scale of IH approach's affordable housing provision is obviously seen from a practicing country to another practicing country. England and Spain has strong planning tradition to recognize the recapture of land value increment which is regarded to be resulted largely from public planning actions and society's common efforts as an important duty borne by the public. In Spain, for example, the 1978 Constitution is enshrined that housing is a right and that the public should benefit from land value increment resulting from public decisions. Since 2007 the 30% of inclusionary housing has become nationally mandate in Spain. In England, 10 to 30 % of whole residential units in designated planning area is required to be secured as affordable units based on negotiation between a developer and local authority; while it is in Spain set by national mandate approximately 30% of the floor area on the remaining land left from 50% set aside public land of publicly designated planning areas.

Ireland with explicit but limited recapture tradition requires 20 percentage of the planning gain to be used for creating affordable units from new housing development, which can be translated to about 7% of the development's units. While the minimum inclusionary housing in Spain is 30% of the floor area of a development, the maximum in Ireland is 20% of the planning gain of a development. In order to covert the land value increment into a considerable percentage of affordable units, public subsidy is needed in Ireland.

France and Canada has implicit or ambiguous recapture mechanism. So, In France, unlike England, the system of the national government to enable local governments to practice IH approach does not work well. Canada shows fluctuating numbers of affordable housing produced by IH approach from a municipality to a municipality. The United State has no recapture concept as a part of the planning culture. IH is at a state level approved by the state legislation and brought into practice by counties. The most productive state in terms of creating affordable housing by IH approach is California.

In England, the percentage of affordable housing produced by IH approach was 10% of the whole newly produced housing units in 2007. In Ireland, it was 50% in 2007. However, affordable housing stock, itself, accounts for a very limited portion of the whole housing stock unlike England where affordable housing accounts for 20% of the whole housing stock. In the United States, it is reported that affordable housing produced by IH approach in the California state was 10% of the whole newly developed housing in 2006. In France, it was 10% in 2008. Spain, it is difficult to get recent data for IH approach has been nationally approved since 2008. Yet, the projected number of affordable housing produced by IH approach would take a very higher proportion of all newly built housing units in Spain than any other foresaid countries.

In Conclusion, the country where IH approach is mandate with strong planning tradition in which land value recapture is legitimate and the development right is deemed to be public can produce more inclusionary housing units.

On the relation between the market condition and IH approach, it is clearly observed in Ireland when housing development is in general frozen, the production of affordable housing by IH approach also drops dramatically. It was 20% combined with public subsidy in 2006 before the financial crisis but 5% in 2008 after the financial crisis. Also, where the market does not find the advantage of the economic scale of housing development, such as rural areas, affordable housing provision by IH approach is not feasible. It is the case of England because there is special regulation called 'Rural Exception Site' where housing newly built should be below the market rate. Housing developers does not want to build housing on such site because it is difficult to make it financially feasible, without the possibility to cross subsidy affordable housing constructing from market housing selling.

Public incentives can also enhance the productivity of affordable housing provision by IH approach. Generally speaking, public incentives offered by authorities are density bonus which is granted if affordable units are included in the development; lower standard to be tolerated such as relaxed parking requirements or less building-material related requirements; tax incentives such as tax exemptions for the construction of affordable units, VAT reduction or property tax reduction for a certain period; lessening administrative costs such as expedited permit approval; direct subsidies such as financial grants or land transfers from public assets.

It is not clear whether public incentives necessarily increase the productivity of affordable housing by IH approach because there is a case in Davis, the United States that without public incentives unlike other counties housing developers still wanted to build affordable housing accompanied with market housing developers. Where the land rights regime is more inclined to recapture land value increment, the extent to require affordable housing in parallel with the extent of land value increment is acceptable and practicable without public incentives which are favourable for developers' profits and less encourages reducing land price. It is because more costs of development such as affordable housing building required by regulation are transferred to landowners in ultimate who receive less compensation of land due to reduced residual value of land or to housing purchasers up to the level of their purchasing power in the case of housing supply scarcity who have no other option than paying asked price by housing developers.

It is also seen in Ireland, with state's subsidy, affordable housing production by IH is still less amount than the case of England; 5% of total affordable housing stock in Ireland while 20% in England. In Canada, housing developers are resistant to attend to the public's requirement to incorporate affordable housing in their development sites even with density bonus or they ask more public incentives, which are observed in Vancouver and Montreal through public dialogues in the councils discussing making ordinance on IH.

2.1.2 How durably IH approach is to provide affordability of once delivered affordable housing units

The durability of affordability of once delivered affordable housing units by IH approach matters because public investment involved in inducing private developers to incorporate affordable housing units or public attempts to created mixed income neighbourhoods are not achieved when original affordable units created by IH are eroded in the market. It is related to the disposal methods of those units, the tenure types attached to those units and resale control periods.

For example, in San Francisco, the United States, the tenure type was shared equity and public subsidy was supported to first home buyers for the upfront payment of affordable housing purchase which was produced by IH approach. When those buyers sell their

affordable housing, it is mandated for them to repay public subsidy by the amount they get from the next buyers of their units. In the appreciating housing market, it is easy for them to repay because housing price increment in the market is high enough to go beyond the previous price of their housing. The problem is that the appreciated price of affordable units to the next users is not affordable anymore because the price is already exposed to the market. Otherwise, the public subsidy required to support the same income level of candidate affordable housing buyers becomes rising also because the percentage of public subsidy of affordable housing price remains same while the net price is increasing. Thus, even though the public recaptures its investment when subsidy receivers repay the subsidy, the public comes to need more quantity of money for subsidy for the next subsidy receivers

In Ireland, there is a resale control period for example, if affordable housing dwellers sell their units before a certain period of residence, the proportion they have to repay to the public becomes different according to the length of their residence. If an affordable home is resold within 20 years, the percentage of the sale price discounted by the local authority should be paid back to the local authority by the seller from the proceeds of the re-sale of the property. The amount payable will be reduced by 10 in respect of each complete year after the 10th year during the purchaser's occupancy (Meath County Council 2011). By the resale control period design, it is possible to prevent affordable housing dwellers from benefitting all from the appreciating housing price in line with other surrounding housing, thus, to block speculation with affordable housing units.

In England, there are two types of tenures applied to affordable housing produced by IH; one is social rental and the other is intermediate. The intermediate is divided again into intermediate rental, and low cost ownership which encompasses 'shared ownership' and 'shared equity'. In England, the most of local planning authorities designate 75% to social rent and 25% to intermediate housing among whole affordable housing stocks (Monk 2010, pp. 144). Affordable housing is defined in England as the following.

Affordable housing

Affordable housing includes social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Affordable housing should:

- Meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and local house prices.
- Include provision for the home to remain at an affordable price for future eligible households or, if these restrictions are lifted, for the subsidy to be recycled for alternative affordable housing provision.

Social rented housing is:

Rented housing owned and managed by local authorities and registered social landlords, for which guideline target rents are determined through the national rent regime. The proposals set out in the Three Year Review of Rent Restructuring (July 2004) were implemented as policy in April 2006. It may also include rented housing owned or managed by other persons and provided under equivalent rental arrangements to the above, as agreed with the local authority or with the Homes and Communities Agency as a condition of grant.

Affordable rented housing is:

Rented housing let by registered providers of social housing to households who are eligible for social rented housing. Affordable Rent is not subject to the national rent regime but is subject to other rent controls that require a rent of no more than 80 per cent of the local

market rent.

Intermediate affordable housing is:

Housing at prices and rents above those of social rent, but below market price or rents, and which meet the criteria set out above. These can include shared equity products (e.g. HomeBuy), other low cost homes for sale and intermediate rent but does not include affordable rented housing.

These definitions replace those given in previous editions of PPS3 (2006 and 2010) and related guidance such as Delivering Affordable Housing 2006.

The definition does not exclude homes provided by private sector bodies or provided without grant funding. Where such homes meet the definition above, they may be considered, for planning purposes, as affordable housing. Whereas, those homes that do not meet the definition, for example, 'low cost market' housing, may not be considered, for planning purposes, as affordable housing.

Box 1 Definitions of affordable housing according to Planning Policy Statement 3: Housing, Annex B (Communities and Local Government 2011)

The problem is that share ownership model, which means in British terms that owner pay a part of the housing price as upfront payment or by a mortgage and pay the rest of the price as monthly rental. It was intended to reduce the possible financial burden of candidate buyers to pay lump-sum or lump-sum interests monthly attached to the mortgage of the whole housing price. However, shared ownership model does not guarantee affordability durably for dwellers because housing price is appreciating which causes the required amount of the rental, as rest of the already partly paid housing price to increase, also. Or, housing price is already very high so the partial upfront payment of the housing prices does not raise affordability of intermediate class. It is seen, for example, in the case of an area in East Portlemouth where the average housing prices are £1,500,000 while average local wages are £17,000 per annum (Aird 2009b, pp. 451).

2.1.3 Where IH approach provides affordable housing

The location of affordable housing produced by IH approach is, in theory, situated in the sites of market housing developments. There are three factors affecting location in the framework of IH. The first is the enforcement of on-site affordable housing development. The second is the threshold of market housing units developed which the incorporation of affordable housing units or the contribution of land or cash for affordable housing units are mandated with. The third is the regional contexts favourable for or against market housing development and land price.

In the United States, developers often choose to pay cash or give approximate land elsewhere if they are free to choose between on-site affordable units' provision and off-site in-lieu payment. In California, the law was even enacted to enforce counties to spend out fund raised by housing developers based on the IH mandate for actual affordable housing development within a defined period of 5 years after fund has come in. The amount of affordable housing fund accumulated without being spent out was 100 million US dollar in the financial year of 2005 in Orange County, California. It is because of private housing developers' preference to separate affordable housing units from market housing units for it is often regarded by the developers that the presence of affordable units undermines the property values of

surrounding market units or market unit purchasers do not want to live next to the low-income households. Therefore, it is possible to say without strict regulation, supervision and means of enforcement by the public over private housing developers, actual affordable housing delivery mixed with market housing units is not feasible.

Regarding the second factor, English case is a good example. In England, the threshold for the national indicative minimum site size which IH approach is applied to is 15 dwellings, which means single detached housing construction on separated sites are not asked to incorporate affordable housing units. But in rural area or in such exceptional circumstances, lower threshold may be acceptable. The issue is availability of such land for housing development which is spacious enough to accommodate at least 15 dwellings. If an area is full or available land is scare due to green belt or any other land use regulation, housing development accompanied with IH requirements can hardly take place. For example, in rural areas, private housing developers are not willing to undertake large scale of housing development because it is difficult to make such development financially profitable due to the restriction posed by the planning system that newly built houses "may not be sold on the open market, but must be sold at "affordable" levels set by the local authority (Aird 2009b) while developers have to rely on open market sales to fund affordable units if they want comply with Section 106 agreement. Or, the brownfield redevelopment in an inner city can be difficult to make affordable housing units by IH approach if it is mainly renovation of existing buildings, not building newly after demolishing existing stock. If housing developers are segmented on a connected large new development site, it can also be difficult to require and coordinate the incorporation of affordable housing units because local authority then needs to negotiate one by one with each private housing developer. In conclusion, rural areas can easily be excluded from the candidate area where IH approach's affordable housing production can take place because of its size of available land restricted by green belt and also the restriction that newly built homes must be sold below the market rate in general.

2.1.4 How the inherent nature of IH approach influences the productivity, the durability, the targeted served population, and the quality of location

Since IH approach can be practiced only when there is market housing development and when the recapture of land value increment or the sharing of a part of profits both induced by housing development is large enough to fund building affordable homes, IH approach's productivity in terms of producing affordable units is highly influenced by the dynamic in the market place.

"The stronger a region's housing market, the greater the profitability of development relative to fixed costs and the higher the land value increment associated with rezoning or planning approvals". (Calavita & Mallach 2010, pp. 383)

The productivity is also depending on the legal status of the approach; how strong the recapture of land value increment in form of obliging developers to construct affordable homes on their development as a part of the total home-units is justified in legal system.

The durable affordability of IH approach-produced affordable homes is influenced mainly by disposal methods; whether once produced affordable units are allowed to be exposed to open market or not. If there is no restriction on resale and no restriction on allowing dwellers of those affordable units to own appreciated value of land and construction as their own, affordability of those affordable units will be eroded in the market as the time goes on.

The quality of location where affordable units produced by IH approach are located is depending on the prospect of market housing development and the legal enforcement of IH approach as similarly discussed in the matter of productivity. Affordable housing units wholly funded from market housing developers or partly from them are not always built on site. In some cases, developers are allowed to pay cash in lieu of construction on site and local planning authorities which collect those payments might or might not be able to spend the fund for incorporating affordable home-units in mixed-income neighbourhood. When affordable units are built within market housing development sites, the location within the sites can be varied, also. Since developers might not want affordable units to affect the marketability and profitability of market-rate units in selling, they adopt strategies such as making appearance of affordable units as close as possible to market-rate units so that market housing dwellers might not recognize the difference or clustering affordable units "in one part of a mixed-income structure" or "configuring as one or more spatially distinct buildings" so that:

"those units may be visually integrated but physically separate from the rest of the market rate homes. The latter is common in Irish Part V developments as well as many such projects in the United States and England." (Calavita & Mallach 2010, pp. 381)

2.1.5 How and what public support IH approach is given and what is the result

Possible public incentives for IH approach to be facilitated are

- To give Density bonus if affordable units are included in the development
- To allow Lower standard; relaxed parking requirements or less building requirements
- To give Tax incentives; tax exemptions for the construction of affordable units, VAT reduction or property tax reduction for a certain period
- To lessen administrative costs; expedited permit approval
- To give direct fiscal subsidies as supplement to invested costs in producing affordable units
- To grant land use change to residential zone or to grant access to publicly disposed land

It is not sure the more public incentives are offered, the more affordable units are built. For it is the aim of adopting IH approach in many practicing countries to produce affordable units with the minimum of public support in the context of budget cuts on direct social housing funding, deregulation and privatization. In the United States, it is reported that in the city of Davis, IH approach is successful considering its strict implementation not giving extra incentive to market housing developers such as density bonus (Drdla 2010).

2.2 Community Land Trust; how it works

2.2.1 How productive CLT approach is to create affordable housing

CLT approach is largely depending on civil society's initiatives which are out of the scope of public funding and governmental bureaucratic procedures. Thus, in principle, there is no production of affordable units by CLT approach if there are no civil groups who fund acquiring land and building homes. At the initial stage of CLT developments in the United State in the 1970s, CLTs were situated away from cities in remote rural areas and accommodation of people with housing need was very limited (Davis 2010, pp. 13-18). It was more like enclave with like-minded people for their social ideology. In the early 1980s, CLTs

in the United States was only a dozen or so. However, in 2011, in the United States, the number of CLTs is over 240 with the growth rate of about 10 new CLTs being created annually since 1990s. At the same time, the scale of affordable housing development a CLT accommodates has been enlarging. For example, in Burlington, the CLT "now owns 65 parcels of land with 215 owned and 152 rented units on them" (Canada Mortgage and Housing Corporation 2011). Behind such number, a strong cooperation of the CLT with the municipality is observed. Davis, who has edited CLT Reader, witnesses that regionalization and municipalisation are the trends of CLTs in the United States. CLTs are serving relatively larger areas than occurred in the initial spreading of a CLT approach. Chicago and Cleveland are such examples that the city's land banks are combined to CLT approach (Dubbs 2011; Community-wealth 2011).

In England, since the incorporation of the first official definition of CLT into the national Housing and Regeneration ACT in 2008, CLT approach is promoted by Salford University's research group, Community Finance Solutions, National CLT Network and affordable housing practitioners. In 2006, "there were only one or two recognized CLTs in the entire country" and "they were virtually unknown among government officials" (Aird 2009). At this moment, the number of CLTs under development is more than 80 throughout the entire England.

One of the spurs for such growth of CLTs and more affordable homes produced by CLT approach is recognized better performance of CLT approach on ensuring affordability over times.

2.2.2 How durably CLT approach is to provide affordability of once delivered affordable housing units

CLT approach is generally regarded more secure to keep affordability of delivered units affordable throughout generations because CLT approach puts land outside of the market so that land belongs to trust and homes built on it belong to their dwellers. In that way, CLTs do not realized all the appreciated value of land according to the market rate but can keep land price low or tailor-made for dwellers' income level.

2.2.3 Where CLT approach provides affordable housing

CLT approach can provide affordable units wherever land is available to be acquired. Thus, the location of such affordable units is depending on the fund the CLT has. In some cases, CLTs convince municipalities or make a strategic partnership with municipalities so that they are transferred public land from the municipalities. Then, location of homes can be inner city centre or designated area at an urban fringe. Traditionally, CLT approach was developed in rural areas and deemed to be rural development strategy. However, nowadays, there are quite a number of urban CLT models in the United States and in London, England, urban CLTs are being developed. Thus, there is no restriction depending on rural or urban.

2.2.4 How the inherent nature of CLT approach influences the productivity, the durability, the targeted served population, and the quality of location

CLT is absolutely less productive than IH approach because CLTs find niches in the market for available land depending on the organizing capacity of civil groups. So where the market housing developments are prevalent, people are not familiar with the concept of landownership subject to Trust, creation of affordable homes by CLT approach is less feasible. However, once affordable homes are delivered, affordability can be ensured throughout the generations as long as the CLT exists and has control over land by its ownership. Location is again depending on the availability of land possible to be acquired and the funding capacity of the CLT.

2.2.5 How and what public support CLT approach is given and what is the result

CLTs can be facilitated by following incentives.

- Tax incentives; tax exemptions for the construction of affordable units, VAT reduction or property tax reduction for a certain period, exemptions from income tax on rent revenues
- Lessening administrative costs; expedited permit approval
- Direct subsidies
- Land grants
- Exemption from leasehold enfranchisement

The results have been positively reported because the same amount of public supports can be more effectively used by CLT approach in affordable home provision than any other forms of public investment such as housing voucher, subsidies which are supposed to be invested over and over again whenever the housing price is appreciating in the market.

Chapter 3 Research Design and Methods

3.1 Revised research questions

The following is the theoretical framework for the revised research questions.

Which factors should be considered when it comes to accessing the priority of each approach to be given public support?

- → Which one is a better approach to deliver affordable housing?
- → What should be taken in account when it comes to identifying a better approach?
- 1) Productivity: if the quantity or the produced volume of affordable units by each approach is too insignificant or too limited by its nature, it cannot be reserved as granted for receiving public support because the coverage of the approach does not reach to meet the need for affordable housing.
- 2) Affordability: each approach should be able to produce housing units that are affordable by its nature of the approach.
- 3) Durability of affordability: It is often observed in the past of governmental intervention addressing the problem of affordable housing that it is not kept affordable throughout the times though houses are once delivered at affordable price for the low-income. In other words, when affordable units are resold, its affordability is eroded in

- the market. So, it is important to identify how far the affordability of once delivered affordable housing units is guaranteed by each approach's inherent design.
- 4) Location of affordable units: If affordable housing is delivered and remains continuously affordable, it is often because location is not good. If location of affordable housing development is isolated from the rest of a city or situated in a remote area where public transportation is poorly served and job opportunities are scarce, it is relatively easy to create affordable housing because land is inexpensive in such location but such location is not desired by the low-income. That is why it is important to see whether affordable housing is able to be delivered in a desirable location where people want to reside in with conveniences of living by each approach.

Which one should be given a priority of public support between Inclusionary Housing approach and Community Land Trust approach?

The Rephrased main research question

→ Which one produces better results to address the problem of affordable housing considering the productivity of each approach and the durability of affordability of once produced affordable units by each approach and location of those housing units?

Specific Research question

- 1) Which is more productive in creating affordable housing units between IH approach and CLT approach?
- 2) Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?
- 3) Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

3.2 Operationalization: variables, indicators

3.2.1 Which is more productive in creating affordable housing units between IH approach and CLT approach?

Hypothesis: In urban areas where new market housing development more takes place, IH approach's productivity in creating affordable housing units would be higher. In rural areas where new market housing development is scare and land available for the large scale of housing development is limited, CLT approach's productivity would be higher. Because in urban areas there are more incentives for private housing developers to develop housing by strong demand due to the influx of immigrants for example. So IH approach which is accompanied with private housing development by its nature can take place more. However, in rural areas, private developers would not find it financially viable to build affordable units because demand for new housing is less and available site for new buildings is often limited on a small scale (Aird 2009b, pp. 452).

Variables: The primary independent variable to answer this question is the type of affordable housing provision approach discussed in this research; IH approach or CLT approach. The secondary independent variable is the nature of locality where each affordable housing provision approach takes place; rural area or urban area. The definition of rural and urban follows the definition of Office for National Statistics of UK (Office for National Statistics 2011).

- Major Urban: districts with either 100,000 people or 50 per cent of their population in urban areas with a population of more than 750,000
- Large Urban: districts with either 50,000 people or 50 per cent of their population in one of 17 urban areas with a population between 250,000 and 750,000
- Other Urban: districts with fewer than 37,000 people or less than 26 per cent of their population in rural settlements and larger market towns
- Significant Rural: districts with more than 37,000 people or more than 26 per cent of their population in rural settlements and larger market towns
- Rural-50: districts with at least 50 per cent but less than 80 per cent of their population in rural settlements and larger market towns
- Rural-80: districts with at least 80 per cent of their population in rural settlements and larger market towns

The year of completion or planning permission granted is also an independent variable. The range of years is between 2004 and 2010 because of the financial crisis. After the financial crisis, new market housing developments have generally been frozen up. Thus, if the productivity of each approach's affordable housing provision is observed in the time of real estate boom as well as in the time of real estate burst, the observation would be fair, looking also at whether how much each approach is subject to the general housing market condition in terms of its productivity.

The total number of affordable housing completed annually between 2004 and 2010 is also an independent variable because it is the control group in order to contrast IH approach's and CLT approach's productivity and also to see how much proportion each approach accounts for in the total affordable housing creation and how meaningful each approach's scale of affordable housing production is.

The dependent variables in order to answer this question are the number of annual units which are given planning permission and the number of annual units of completion.

	Rural, 2004-2010		Urban, 2004-2010)
Inclusionary Housing	The number of annual units given planning num	annual units	The number of annual units given planning num	annual units
Community Land Trust	The number of annual units given planning num	The number of annual units completed	The number of annual units given planning num	

Indicators: Thus, the indicators of this question are the numbers of annual production of affordable housing units by each approach and the ratio of difference of each approach's annual productivity.

3.2.2 Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?

Hypothesis: Affordability of once delivered affordable housing units by CLT approach would be more durable than those by IH approach because CLT approach puts land entirely out of the market so that it can tailor-design the price of housing units appropriate according to dwellers' income level while IH approach is more exposed to the market by 'right to buy' or

'right to enfranchise' applied to affordable units produced by IH approach and by its different resale formula than CLT approach's resale formula.

Variables: The independent variables to answer this question are types of tenure and disposal methods of affordable units produced by each approach, which are differentiated according to different tenures or resale formula applied to each approach's affordable units. For affordable units produced by IH approach, there are five categories of different tenures and different resale formulas; social rented, intermediate rented, shared ownership (part buy part rent), shared equity (Shared-ownership.org 2011) and low cost units for discounted sale. For affordable units produced by CLT approach, there are more variations of tenures; resale covenant, equity mortgage or rent (Aird 2009a).

The dependent variables are estimated appreciation rates of affordable units produced by each approach which are different according to each approach's different disposal methods and the gap between the average appreciation rate of IH approach's units and that of CLT approach's units. The estimation model of such appreciation rates will be formulated in the chapter 4 based on each type of tenure, its disposal method and its formula for housing price calculation which all need to be identified in details as a part of data collection.

Indicators: The gap between the annual appreciation rate of IH approach's units and that of CLT approach's units from 1996 to 2011

3.2.3 Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

Hypothesis: Location of affordable units produced by IH approach would have better accessibility to work, school and conveniences of living than those by CLT approach. Since in principle, the location of affordable units produced by IH approach is aimed to be within mixed communities (Crook et al. 2002, pp.1). According to DCLG Circular 05/2005, a developer is required to provide a certain proportion of affordable housing when the size of the development is over a threshold which is differently set by individual local authorities, yet commonly 15 units. When housing development is at the bigger scale than 15 units, it means that it is generally recommended by local authority for its developer to include at least more than 1 unit in the development. However, under the framework of S106 agreements, planning obligations borne by a developer may be roads, schools or parks which cover generally needed public infrastructures, so not necessarily affordable housing. On top of that, the required affordable housing may be on-site or off-site according to each case. Though it is not clearly shown in annual housing statistics by DCLG and in the general operation of S106 agreements whether affordable housing created by IH approach is delivered on the same site with open market housing, affordable housing units provided by IH approach are generally intended by local authority to be delivered in the environment of mixed community by its policy guide.

Contrary, the location of affordable units produced by CLT approach would not be necessarily in existing or developed settlements because land available for CLT is depending on the amount of donation and availability of small sites or remote sites which could reduce the first cost to acquire land.

Thus, it is more likely that the general location of affordable housing units by IH approach would be better than that by CLT approach in the hypothesis.

Variables: In order to operationalize the concept of desirable location, the independent variable is location of housing development by each approach. The dependent variables are

average distances to selected key facilities for convenience of living, which can show an availability of such facilities as local shops, schools, workplaces in proximity to affordable units produced by each approach.

Indicators: The average distances between an affordable housing development site by each approach and selected key facilities for convenience of living are indicators for answering this question. It can be assumed that the shorter distance indicates that the location is better since the more convenience of living is expected in the affordable housing site. The farther distance means the opposite.

3.3 Sample size and selection

3.3.1 Which is more productive in creating affordable housing units between IH approach and CLT approach?

The sample area for answering this question is one urban area and one rural area. The criteria to choose the target area are as the following:

- i. The availability of both IH approach's affordable housing production and CLT approach's affordable housing production in a single jurisdiction respectively as one urban and one rural so that the comparison of the two approaches is made possible within the identical local context.
- ii. The_housing affordability gap of the area which is one of the national tops so that there is more need for affordable housing delivery than other areas which might in turn lead to more affordable housing production in practice.
- iii. The representativeness of each urban and rural area's nature.

As the urban area, Lambeth Borough of London Region is selected. Due to the big population of London, it is impossible to cover all boroughs in London because London itself is categorized as a region. The population of Lambeth is 272,000 while the population of Greater London region is 7,753,600. In Lambeth, an urban CLT called Brixton Green has been under development and there is a proposed scheme to create more than 300 affordable homes. Also, there are vigorous practices of IH approach through S106 agreements to deliver affordable homes by the Lambeth Borough Council. It is an intended selection of a sample to use Lambeth Borough for the comparison between affordable unit production by IH approach and by CLT approach. Housing affordability index, the ratio of lower quartile house prices to lower quartile earnings in London region, was 9.8 in 2002 and 11.4 in 2004 (Government for the East of England 2005). The density 26,508.3/sq mi (10,234.9/km²). It is defined as Major Urban (Office for National Statistics 2011).

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¹ In the planning system of England, there is a category of a region which covers all the councils in a certain geographically defined area for the process of statistics regarding communities and local governments; North East, North West, Yorkshire and Humberside, East Midlands, West Midlands, East of England, London, South East and South West (9 regions) (DCLG 2008)

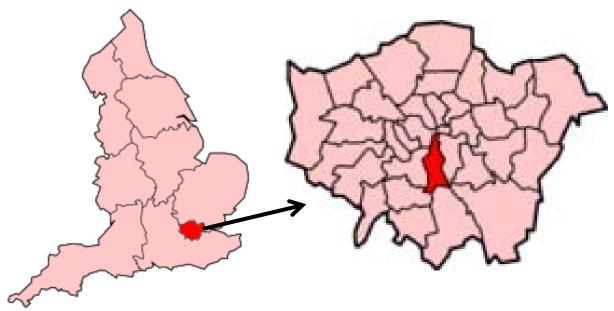


Figure 1 Left: Map of London region (red) in England, Right: Map of Lambeth Borough (red) in London (Wikipedia 2011b)

As the rural area, Cornwall County Council is selected which belongs to South West Region. Cornwall has 499,399 in total population and is defined as Rural 80 meaning that it has at least 80 per cent of their population in rural settlements and larger market towns. In Cornwall, there were 85 affordable housing units reported in 2009 including all completed, given planning permission or being developed, which has been made possible by CLT approach (Aird 2009a). At the same time, there are



more than 29 affordable housing units reported in the 2010 Housing Strategy Statistical Appendix N, only by developers' contribution (DCLG 2010). Housing

affordability index, the ratio of lower quartile house prices to lower quartile earnings, was 9.5 in 2002 and 12.7 in 2004.

Figure 2 Left: Map of Cornwall County in England, Right: Map of Cornwall County (Wikipedia 2011a; St Just Town Council 2011)

The sample size for data collection relevant to this question covers all housing units produced by each approach in each defined entire urban and rural area during the fiscal years 2005 to 2010 (1st April 2004 to 31st March 2010) or in the future where it needs to identify the prospective affordable housing production units such as the case of an urban CLT by which no housing units have been granted planning permission but those are only expected in a scheme by the CLT. In such case, the comparison of affordable housing production volume between IH approach and CLT approach is incomplete. However, it is possible to set the base line at least to contrast the two by paralleling the affordable housing production volume by IH approach during the period of 2005 to 2010 and that by CLT approach in the latest times and the near future whenever affordable homes created by a CLT is identified in the selected jurisdiction even though the two time lines are not completely equivocal to compare each other. Again, it is still possible to compare the scale of each approach's productivity for creating affordable housing by such utilizing the existing data and focusing on how each approach has worked in practice so far.

3.3.2 Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?

Because the extent that affordable housing units are exposed to general market housing appreciation can be different between urban and rural, it is representative to select each one of urban and rural jurisdictions as two main sample areas. The selection criteria for answering the second question are basically same with the selection criteria of the first specific question's samples.

Urban samples: Thus, from Lambeth in London, Brixton Green CLT is chosen to extract resale formula of affordable units produced by CLT approach. Since Brixton Green CLT has not realized any proposed units yet, the proposed resale formula which is intended to be applied to the built units will be used for calculation of annual price appreciation rate. For sampling of resale formula applied to affordable units produced by IH approach, the number of each tenure type's affordable units produced by IH approach in Lambeth is identified and according to the proportion of each tenure type in entire affordable units produced by IH approach, one or two actual units per each tenure type among 'social rented', 'intermediate rented', 'shared ownership (part rent part buy)' and 'shared equity' will be selected to extract resale formula and to calculate annual price appreciation rate.

Rural samples: From Cornwall in South West region, resale formula used by CLTs in Cornwall will be identified. According to the type of resale formula and each tenure type, annual price appreciation rate of affordable units produced by CLT approach will be calculated. For sampling of resale formula applied to affordable units produced by IH approach, the number of each tenure type's affordable units produced by IH approach in Cornwall is identified and according to the proportion of each tenure type in entire affordable units produced by IH approach, one or two actual units per each tenure type among 'social rented', 'intermediate rented', 'shared ownership (part rent part buy)' and 'shared equity' will be selected to extract resale formula and to calculate annual price appreciation rate.

Overall, the time range of annual unit appreciation rate by each approach is from 1996 to 2011. It is a non-biased selection of a period to be observed and simulateed in terms of resale price calculation based on each disposal method and resale formula because throughout the years from 1996 to 2011, housing boom and bust both took place so that it is possible to see whether annual appreciation rate is affected much by both two extreme market conditions and to get an average rate over the multiple-years..

3.3.3 Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

Selection criteria:

- i. basically same with the criteria proposed in the first question
- ii. Especially, the representativeness of each urban and rural area's nature.
- iii. The representativeness of the scale of housing development site: In urban case, one site by each approach with less than 53 affordable units and one with more than 53 affordable units
 - In rural case, one site by each approach with less than 30 affordable units and one with less than 30 affordable units

Urban samples: For an urban case, Brixton Green's proposed sites for building affordable housing units will be used for the assessment of the location's convenience for living. Since there is no urban CLT which has been wholly realized in units built in England but many urban CLT cases being under the development, the selection of Brixton Green in Lambeth can be representative for some extent as urban CLT approach's affordable housing development. As Brixton Green is proposing only one site for its housing development, the single site will be used for the measurement.

For accessing the location's convenience for living in the case of affordable housing development sites by IH approach, one site with less than 53 affordable homes and one site with more than 53 affordable homes are chosen to avoid bias as much as possible in identifying the locational advantages of IH approach's affordable housing developments within the given time of data collection. The threshold of 53 affordable homes is determined as the average number of the affordable homes on a single site calculated based on the sites whose number of affordable units are published on the annual 'Section 106 Year End Report's from 2006/07 to 2009/10 (Lambeth Council 2007; 2008; 2009; 2010). On the website of Lambeth Council, 'Section 106 Year End Report's are available from the year 2005/06 to 2009/10. In the available reports except the report of 2005/06, Lambeth Council reports the number of affordable housing units negotiated with private developers in the year as on-site affordable housing provision mixed with open market units with the number of market units and the percentage of affordable units. The average of affordable housing units is calculated based on the number of affordable homes on the reported sites (addresses). Thus, the total home units or the number of open market homes are not taken into account in the calculation but only the number of affordable homes on a single development among the reported on-site provision.

Rural samples: For a rural case, one site with less than 30 affordable homes and one site with more than 30 affordable homes are chosen for accessing the location's convenience for living in the case of affordable housing development sites by IH approach. The threshold of 30 affordable homes is determined as the number of the affordable homes on a single site calculated based on the sites whose number of affordable units is published on the website of Cornwall Council. Unlike Lambeth Council, Cornwall Council does not publish annual

reports on how Section 106 agreements are implemented. Instead, Cornwall Council introduces the prospective or the recently completed affordable housing units on the web site in order to connect local residents in housing need to the proposed housing options. Thus, there is no historic and organized data base available on affordable housing development sites by S106 agreements in Cornwall and their number of affordable housing units. The sites of affordable homes which were presented on the website of Cornwall Council as available at the date of 17 August 2011 (Cornwall Council 2011a; 2011b; 2011c) were assessed for the calculation of the average number of affordable homes on a mixed site with open market homes. 30 is the average number of affordable homes on a single development calculated from 21 sites. Based on the threshold, two sites whose post code is already identified are selected in the end.

In the case of affordable homes by CLT approach in Cornwall, one site with the maximum number of affordable homes among the developments realised through CCLT and one site with the minimum number of affordable homes among the developments realised through CCLT so far are selected for the assessment of the locational convenience of the sites. The maximum is 30 units and the minimum is 4 units when counting only CCLT units except CRHA units which also build social rental units in the partnership with CCLT on a same site.

3.4 Validity and reliability

3.4.1 Which is more productive in creating affordable housing units between IH approach and CLT approach?

Validity: The measuring of the productivity of each approach in terms of affordable housing units is ensured to be consistent and to cover all aspects of the concept of productivity by looking at data of both the numbers of units annually completed and given planning permission from 2004 to 2010 respectively in urban and rural settings. In that way, the changing tendency of the productivity can be identified according to the time variable from which the impact of general housing market condition on each approach's productivity can be supposed and also to the local planning condition's variable which is justified because urban and rural setting in England has different implications on planning regulations. However, the main comparison is the productivity. Other external factors' influence on the productivity is not the question to be asked here, but helps understand a background of such comparison from the point of view regarding time and spatial or planning regulatory dimension of the productivity. The detailed operationalization and differentiation of independent and dependent variables ensures answers to be get as asked by the question.

Reliability: There are several sources available to check whether the data I use is reliable. First, the primary data from the excel spreadsheets showing affordable housing production by each policy approach including contribution from developers to producing affordable units according to each council and each region is available being offered as annual Housing Strategy Statistics Appendix by Department of Communities and Local Government of England on its website. The secondary processed data are also available from journal articles related to affordable housing policy in England on the volume of produced affordable housing by IH approach. By cross-checking whether the calculation of raw data and once processed data match each other, it can be ensured the calculation is reliable. For example, a journal article which interprets affordable housing delivery by Section 106 agreement generally interprets that contribution from developers to production of social rented, intermediate rented and shared-ownership which includes both 'part buy part rent' and 'shared equity' is IH approach's units. Thus, by definition of IH approach's produced affordable units, the data is

collected based on the number of each segment of affordable units by IH approach. For CLTs, the number of all housing units completed and given planning permission annually, which is given by National CLT Network will be compared to the number given by other CLT research institutes such as Community Finance Solutions (CFSs) or by each CLT's website.

3.4.2 Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?

Validity: The indicators, each annual appreciation rate of affordable units produced by IH approach and that by CLT approach and the gap between the two different rates, measure exactly what is intended to measure because the price appreciation rate would be lower if affordability is more durable or it would be higher if affordability is less durable.

Reliability: The modeling of a calculation formula of each tenure type's price appreciation rate will be grounded on various sources of information from relevant websites such as housing mortgage information offering websites, governmental agency websites such as Shared-ownership.org as and Community Finance Solutions. By triangulation and cross-checking of data and information for modelling each tenure type's price appreciation formula, the reliability of the measurement for this question can be secured.

3.4.3 Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

Validity: The desirability of location in this question is defined as general advantages of housing location. It is assumed that it would be more convenient for dwellers to have more shops such as grocery, post-office or bookstore, schools or workshops as near as possible. That is why an average distance between a selected site and nearest locations selected within the 9 categories around the site is measured. The farther the nearest locations are found, the longer the average distance are calculated.

Reliability: An average distance between a selected site and near locations is not calculated arbitrarily but by using the Google-map (http://maps.google.co.uk). For a selected housing site developed by IH approach or by CLT approach, an average distance to the 9 nearest facilities within the 9 categories will be calculated. The reason to use 9 categories is to capture various possible aspects of the site location and to avoid biased judge. For a site in Lambeth, an urban area, the 9 categories of key-facilities are 'shop, school, clinic, company, industry, office, market, workshop and shopping centre'. Since Lambeth is an urban area, 'shopping centre' was included. For a site in Cornwall, a rural area, the 9 categories of key-facilities are 'shop, school, clinic, company, industry, office, market, farm and hotel'. Since Cornwall is a rural area and receiving many tourists for its beautiful scenery, 'hotel' as a livelihood or employment was included. When the nearest locations are not detected up to 9 different kinds on the Google-map or when an inserted keyword and the research result do not match each other, for example a factory detected for the category of hotel, such cases are manually reflected to adjust the proper calculation of an average.

3.5 Data collection methods

3.5.1 Which is more productive in creating affordable housing units between IH approach and CLT approach?

For the number of affordable units by IH approach, annual Housing Strategy Statistics Appendices (HSSAs) are used which are available in the format of excel spreadsheet on the website of Department of Communities and Local Governments. For the number of affordable units by CLT approach, National CLT Network's documentation is used which is accessible by asking the national coordinator of the Network to make the internal data available for this research. On the website of National CLT Network, the map showing the current level of CLT activity is available with some indicators of affordable housing units under development but not all of the CLTs do state their portfolios clearly. It requires more manual cross-checking than the number of units by IH approach does. For one rural and one urban area are selected as sample area, each CLT director in those areas were approached via email for an interview. In the CLT Network Training Event on 11th July 2011 held in Cambridge, the researcher also participated in.

3.5.2 Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?

The main data collection methods for obtaining the indicators to answer this question are to visit CLT directors, Local real estate agents, local planning authorities' officials who has an experience to work with CLTs and an understanding on Section 106 agreement's operation and dwellers of selected units. The main data to ask them are types of disposal methods, resale formula and unit prices at its initial disposal and at its resale.

3.5.3 Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

The main data collection on the density will be done by using Google-map to identify targeted facilities in the defined surrounding areas. The calculations of average distances will be done by using excel spreadsheets.

Overall, Interviews done for data collection were as the following.

- 1. A full-time director of CCLT was interviewed and necessary data were gathered on the 27th July.
- 2. A Research and Development Manager of L&Q Housing Association which is active in London region was interviewed for data collection especially on different tenure types of affordable homes produced by IH approach via email and face-to-face on the 26th July.
- 3. A director of Brixton Green was interviewed on the 11th May and subsequently via emails
- 4. A director of East London CLT was interviewed via email since the National CLT Network Training Event in Cambridge in July.

3.6 Data analysis methods

3.6.1 Which is more productive in creating affordable housing units between IH approach and CLT approach?

The main data analysis method for the first question is through a comparison of the annual number of produced units, both completed and planning permission-given. By using excel spreadsheets; graphs and conversion of the numbers into the percentage are made to clearly show the gap of each approach's annual productivity in each defined area.

3.6.2 Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?

The main data analysis method for the second question is through a comparison of the annual increase rate of affordable units' price produced by each approach according to its own tenure types and disposal methods. By using excel spreadsheets; it is possible to make such comparison presented in charts.

3.6.3 Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

The main data analysis method for the third question's distance indicator is through a comparison of an average distance between selected 9 categories' nearest location and a selected housing site developed by each approach. By using the Google-map, it is possible to detect nearest locations belonging to the foresaid 9 categories around a selected site. Each distance per each detected location will be re-grouped and calculated in order to get an average on the Excel-spread sheets.

Chapter 4 Presentation of data and analysis

In this chapter, the quantitative data collected from person to person interviews and by the secondary data search will be presented and analyzed. Person to person interviews with those who work for housing development were to confirm whether what are described in literatures work in practice and how they work, to understand the context of statistics, mainly concerning the operations of IH and CLT housing development and to get numerical data which is unpublished, thus unavailable via other sources but remains within the interviewed institutions. However, such numerical data was not easy to get since they were a part of the business strategies of housing developing organizations, such as housing associations which are transferred affordable housing units from a private developer's housing development or umbrella community land trust organization. Thus, collected data here are mainly derived from the re-processing of the secondary data which are already published by relevant institutions and available on their websites. Every data which is relevant to answering the three research questions as stated in the previous chapter will be presented here according to the sequence of the questions with its original source either from an interview or from a secondary data.

4.1 The volume of affordable housing production

Before going to look at the data on the housing production volume by IH approach in each selected jurisdiction, it is necessary to explain briefly the process of re-processing of the secondary data. The volume of affordable housing production by IH approach, namely Section 106 agreements, is taken by reprocessing of Section N under the subject of 'Provision

of Affordable Dwellings' in 'Housing Strategy Statistical Appendix (Hereafter, HSSA)' which has been published annually since 2001 in a slightly different format each time by 'Department for Communities and Local Government' of the UK government.

It should be mentioned that housing developed by Section 106 agreements is defined in the annual HSSA as all housing funded either solely or partly by developer contribution. The heading is 'Provision of affordable housing, funded by developer contributions through planning obligations' in the fiscal year 2010, 2009 and 2008 and 'Provision of additional affordable housing, funded by developer contributions through planning obligations' in the fiscal year 2007 and 'Provision of additional affordable housing through planning policy (PPG3and Circular 6/98)' in the fiscal year 2006, 2005. The fiscal year of the UK government runs from 1st April to 31st March. Thus, when 2005, for example, is stated in the following statistics of IH approach's production volume, it means the fiscal year running from 1st April 2004 to 31st March 2005.

There are five categories of affordable housing funded by developer contributions according to its funding mixture produced by IH approach in England. The terms for the same category have been changed in different words as the following.

	Term used for each category	Year
1)	Developer contribution plus NAHP (National Affordable Housing Programme)	2007~2010
	only	
	Units completed and funded through ADP (Approved Development Programme)	2005~2006
2)	Developer contribution plus LA (Local Authority) Support only	2007~2010
	Units completed and funded through LASHG (Local Authority Social Housing	2005~2006
	Grant) only	
3)	Developer contribution plus NAHP and LA	2007~2010
	Units completed and funded through ADP and LASHG	2005~2006
4)	Developer contribution only	2007~2010
	Units with no support	2005~2006
5)	Mixed funding	2007~2010
	Mixed funding	2005~2006

Table 1 The 5 categories of Affordable Housing produced by IH approach according to its type of funding from 2004/2005 to 2009/2010

(DCLG 2005; 2006; 2007; 2008; 2009; 2010)

There are five types of tenure for affordable housing funded by developer contributions, which are all included in totalling affordable housing production by IH approach. The terms for the same category have been changed in different words as the following.

1)	Local Authority	2007~2010
	Local Authority	2005~2006
2)	RSL (Registered Social Land Lord) – social rented	2007~2010
	RSL – rented units	2005~2006
3)	RSL – intermediate rented	2007~2010
	(No equivalent for this category)	2005~2006
4)	RSL – Shared ownership	2007~2010
	RSL – Shared ownership	2005~2006
5)	Non LA/RSL	2007~2010
	Units for sale on discounted basis	2005~2006
6)	Other (e.g. tenure unknown)	2007~2010
	Other units (e.g. tenure unknown)	2005~2006

Table 2 The 5 categories of Affordable Housing produced by IH approach according to its type of tenure from 2004/2005 to 2009/2010

(DCLG 2005; 2006; 2007; 2008; 2009; 2010)

In the table, 'Local Authority' is meant for units which are owned by local authorities. The rest of tenure categories will be more explained in details under the sections of the 2^{nd} question on durability of affordability.

The inclusion of the foresaid categories in inclusionary housing was done also when the volume of inclusionary housing production was counted in another research on inclusionary housing in England (Monk 2010, pp. 147-148).

4.1.1 Urban housing production volume by IH approach in Lambeth

In the selected jurisdiction, Lambeth borough in London region, such amount of affordable housing by IH approach as the following has been produced during the financial year 2005 to 2010 (1st April 2004 to 31st March 2010). 'Completed' denotes units which were completed in the appropriate year. 'Granted Planning Permission' means units which were granted planning permission in the appropriate year, which shows that a lot of units were designated to be built but usually not delivered immediately in the following years since then.

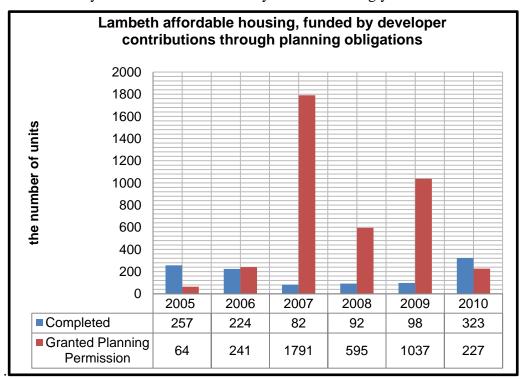


Chart 1 The volume of affordable housing production by IH approach in Lambeth from 2004/2005 to 2009/2010

(DCLG 2005; 2006; 2007; 2008; 2009; 2010)

The same number of completed units funded by developer contributions through planning obligations is shown by its tenure type as the following.

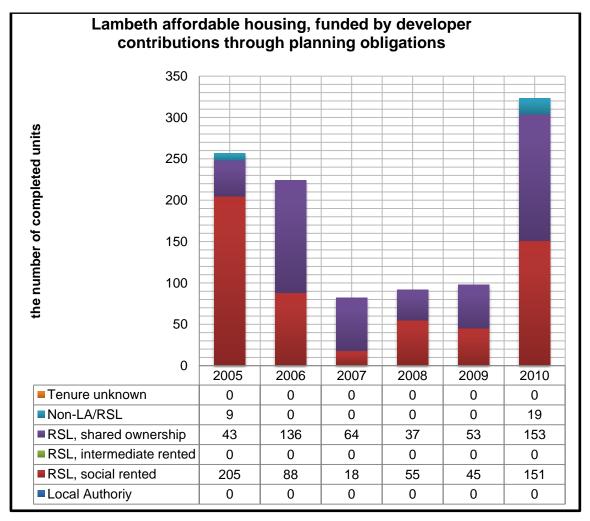


Chart 2 The volume of affordable housing production by IH approach in Lambeth from 2004/2005 to 2009/2010, categorised by tenure types (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

As shown in the chart above, 'shared ownership' and 'social rented' are the major tenure types of affordable housing funded by developer contributions in Lambeth.

4.1.2 Urban housing production volume by CLT approach in Lambeth

In the selected jurisdiction, Lambeth borough in London region, such amount of affordable housing by CLT approach is prospective as the following.

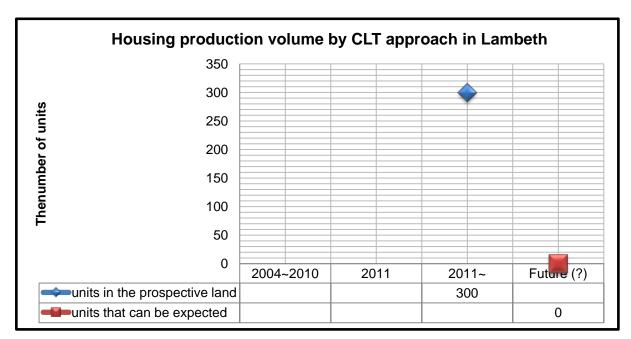


Chart 3 The volume of affordable housing production by CLT approach in Lambeth (Brixton Green 2011)

According to the director of Brixton Green Community Led Development (Hereafter Brixton Green) which is an only CLT organization existing in Lambeth borough, a site near Brixton underground station which is as big as approximately 1.4 hectares is expected to be acquired in the phase one 2012 to 2014 for over 300 residential units. Detailed schemes cannot be published here according to the director of Brixton Green since land acquisition and affordable housing building are all depending on negotiations and detailed work with Lambeth borough council and local residents, by which detailed information is politically sensitive to reveal at this embryonic stage.² For acquisition of the prospective site by Brixton Green CLT, negotiations with Lambeth borough should be done, which involves a lot of uncertainties. That is why over 300 residential units are prospective and further units are completely uncertain. Beside the current prospective site, there is no candidate site which could be dedicated to Brixton Green CLT for affordable housing units in the area of Lambeth borough so far. That is why beside the over 300 residential units, it is uncertain to speculate the future production volume by CLT approach in Lambeth at all.

The uncertainty on future affordable housing production by CLT approach in Lambeth is largely due to CLT's dependency on external factors in order to acquire developable land such as councils' public land transfer, benevolent supports which make land acquisition costs at below-market level, or funds for land acquisition in the market. Generally, an urban CLT may find it difficult to acquire land without such external factors since land in fully developed urban area is all costly for 'not-for-profit organisations'. However, land for affordable housing by IH approach is made available whenever commercial housing development takes place in the market due to that IH approach depends on legal binding force of S106

² This was same when approaching the director of East London CLT. The director said that due to the imminent tender for the former St Clements Hospital site on Bow Road, it was impossible to share some information which could be very sensitive to reveal to counter-bidders in any case. In this case, East London CLT was expecting the number of between 250~300 homes on the site, among which a 35-50% would be an affordability component (East London CLT 2011). However, the director also said that it would take at least 4 years to get its planning permission granted and the site completed according to the HCA (Homes and Communities Agency) in a document guiding the housing development on the site with Tower Hamlets borough council.

agreements between local authority and a developer and that S106 agreements cannot be avoidable for all market-driven housing developments.

4.1.3 Rural housing production volume by IH approach in Cornwall

In the selected jurisdiction, Cornwall in South West region, such amount of affordable housing by IH approach as the following has been produced during the financial year 2005 to 2010 (1st April 2004 to 31st March 2010).

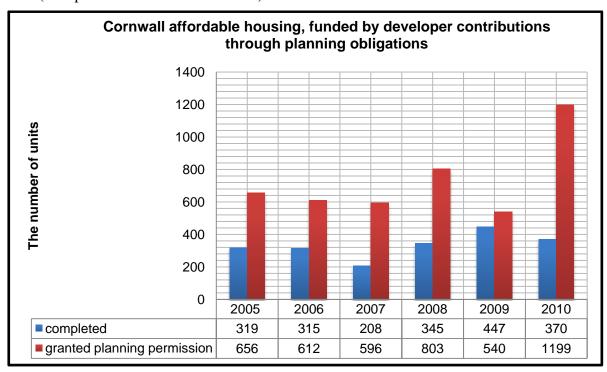


Chart 4 The volume of affordable housing production by IH approach in Cornwall from 2004/2005 to 2009/2010

(DCLG 2005; 2006; 2007; 2008; 2009; 2010)

Since Cornwall County Council was created on 1 April 2009 by merging the six borough and district councils in Cornwall - Caradon, Carrick, Kerrier, North Conrwall, Restormel and Penwith, the six councils' housing statistics were totalled for the calculation of affordable housing production volume by IH approach in Cornwall in the fiscal years from 2005 to 2009.

The same number of completed units funded by developer contributions through planning obligations is shown by its tenure type as following:

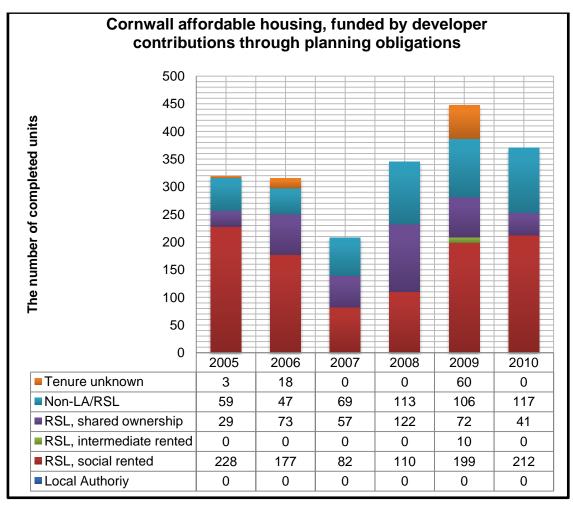


Chart 5 The volume of affordable housing production by IH approach in Conrwall from 2004/2005 to 2009/2010, categorised by tenure types (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

As shown in the table, shared ownership and social rent administered by RSL are the major tenure types of affordable housing units produced by IH approach in Cornwall. Unlike Lambeth, Non-LA/RSL is also included in the major tenure types, which is shown from that the significant number of affordable housing units built by IH approach is sold on the discounted price to local people and that the number of Non-LA/RSL units have been likely to grow year by year.

4.1.4 Rural housing production volume by CLT approach in Cornwall

In the selected jurisdiction, Cornwall in South West region, such amount of affordable housing by CLT approach is produced as following:

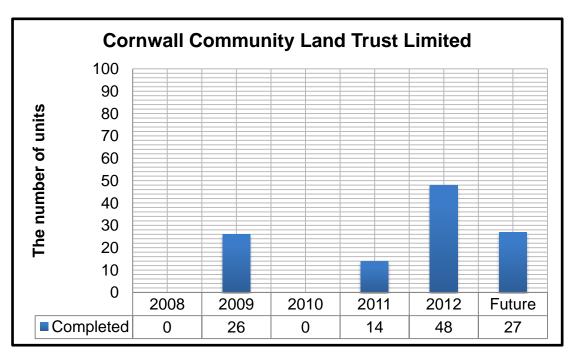


Chart 6 The volume of affordable housing production by CLT approach in Cornwall from 2007/2008 to 2011/2012 and in the near future (Cornwall CLT 2011)

Cornwall CLT Limited (Hereafter CCLT) was established in 2007 as a charitable organisation and an umbrella CLT body in Cornwall County in order to develop affordable housing either by itself or by facilitating local CLTs to be set up through consultations and guidance. By the assisting of CCLT, St Minver CLT Limited in 2006, St Just in Roseland CLT Limited in 2007, St Ewe Affordable Homes Limited in 2008, Camelot Community Interest Company, Lands End Peninsula Community Land Trust in 2010 and Luxulyan Community Land Trust, Percy's Meadow were set up and developed affordable housing on each site. CCLT developed affordable housing directly on the Percy's Meadow site in Blisland in 2009, the Brambleside site in St Teath in 2011, the Redmoor Parc site in Kelly Bray in 2011, the Blunts site in 2011. Housing developments on the Nacledra site and on other two sites are also ongoing under the supervision of CCLT.

One important point to mention here, the calculation of annual completed affordable housing units by CCLT was done according to the fiscal year. It means that 2008 stands for 1st Aprial 2007 to 31st March 2008. Thus, actually it can be written 2007/08. The number of completed units in 2012, the fiscal year 2011/12 means all the units which are expected to be completed till 31st March 2012 or were already completed from 1st March 2011 to 27th July 2011. The number of completed units in 'Future' is actually equivalent to the number of units granted planning permission or which will go through further detailed planning-permission-granting process. Since it is uncertain when those units are completed, the number of units which requires detailed planning permission was put in 'Future'. The total number of the completed and prospective affordable housing units by CCLT is 115 so far. According to the CCLT business plan from the 13th September, 2011 to 2014, the projection of the affordable housing production is 19 homes in 2012, 20 homes in 2013 and 20 homes in 2014 based on a real prospect of funding and obtaining planning permission. (The year stated in the business plan is different from the fiscal year used for calculating affordable housing production volume here.)

Land available for building affordable housing is acquired by CCLT or other local CLTs in Cornwall County primarily through negotiations with the council or with landlords. Since

land is used for affordable housing, Cornwall County disposes its council-owned land to CLTs at lower prices than the market value or the price of 1 pound in which land is virtually free and held by the council ceremonially. Or individual landowners also dispose land at lower price usually when their land would be held by CLTs so that there is no possibility that built homes on it are sold on the open market. In the previous time, when 'Right to Buy' was subsequently adopted in the 1980s, homes built by housing associations or local authorities on land which was previously acquired at an affordable price were lost to the open market and not replaced. The new homeowners could claim subsequent land value increments since then which took place in the open market. The landowners who had sold their land for a discounted price found that their land traded in the open market for unrestricted profits was unfair (Aird 2009, 452). This led to a general distrust of housing associations or affordable housing building on the place which 'Right to Buy' is applied to. However, CLTs avoid the way by putting land permanently belonged to CLTs.

Currently, The National CLT Network of Britain and CDS Cooperatives, the largest cooperative housing agency in London and the south of England are together campaigning for an amendment of the Localism Bill that exempts the homes built on the land owned by a CLT from 'Leasehold Enfranchisement' when the CLT wishes to apply the exemption (National CLT Network 2011). By eliminating the risk that land once acquired by a CLT is lost on the open market, CLTs try to be given as much as trust from willing landowners, be they private or public, that CLTs would guarantee the acquired land to serve those in housing need in the community in perpetuity. In that way, CLTs could make some land in rural areas open for affordable housing which would not come into availability otherwise. Thus, as long as there is developable land available for CLTs in Cornwall County, CCLT is active in commencing new affordable housing development and local residents have desire to develop housing within the framework of CLT, it is promising to have more affordable housing development in the future. Still, it is not sure that the volume of affordable housing produced by CLT approach could exceed that by IH approach due to the reasons presented when discussing land acquisition matters in case of a CLT in Lambeth.

4.1.5 Comparison of the volume of affordable housing production between IH approach and CLT approach

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³ The 'Right to Buy' is a policy introduced in the United Kingdom in 1980 that gives tenants of council housing the right to purchase the home in which they are living.

⁴ Enfranchisement; Leasehold Enfranchisement means that;

[&]quot;Leaseholders who own a shared of their home on land owned and provided by a CLT have the right to buy the freehold of the land under the Leasehold Reform Act 1967. At present, only homes built in a small number of rural area that have Protected Area status, where homes are deemed hard to replace, are exempt from these enfranchisement rights" (National CLT Network 2011).

4.1.5.1 IH versus CLT in Lambeth

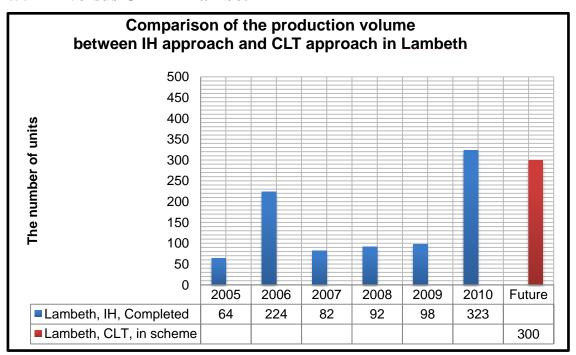


Chart 7 Comparison of the production volume of affordable housing between IH approach and CLT approach in Lambeth from 2004/2005 to 2009/2010 and in the near future

The number of affordable housing units completed in the fiscal years from 2005 to 2010 by IH approach in Lambeth is 883 in total. The number of affordable housing units created by CLT approach is expected to be over 300 based on the scheme of Brixton Green. The CLT's 300 units in future is 34% of the 883 units produced by IH approach from 2005 to 2010 in Lambeth.

Comparing to the average annual production volume by IH approach which is 147 units from 2005 to 2010, the number of 300 units is not negligible. However, there is no guarantee or any concrete prospect that land for CLT housing will further be found available beside the current prospective site by Brixton Green.

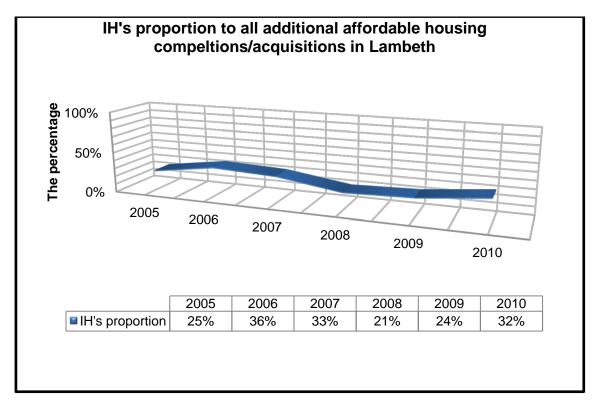


Chart 8 The proportion of affordable housing produced by IH approach to all additional affordable housing completions/acquisitions in Lambeth from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

	2005	2006	2007	2008	2009	2010
Total affordable housing outturn	257	622	250	428	410	1005
Number of units completed by IH	64	224	82	92	98	323
IH's proportion	25%	36%	33%	21%	24%	32%

Table 3 The total affordable housing outturn and the number of completed affordable units by IH approach in Lambeth from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

This shows the annual proportion of affordable housing units produced by IH approach to all affordable housing units produced in Lambeth. All additional/new affordable housing in annual HSSA includes, for example, affordable housing built by housing associations with HCA grants. Among the sub-categories of affordable housing in HSSA, affordable housing by IH approach means that affordable housing is either partly or wholly funded by developer contributions through planning obligations which means Section 106 agreements.

During the fiscal years from 2005 to 2010, affordable housing by IH approach in Lambeth accounts for 29% of the total affordable housing production volume in Lambeth as the annual average. The CLT-housing's contribution to the total affordable housing productions volume is difficult to discuss here because none of the prospective units has been delivered yet and there is no definite possibility for further CLT-housing development in Lambeth. It is enough to see affordable housing by CLT approach is just emerging, which is and would be unproportionally little comparing to the annual total affordable housing production in Lambeth.

4.1.5.2 IH versus CLT in Cornwall

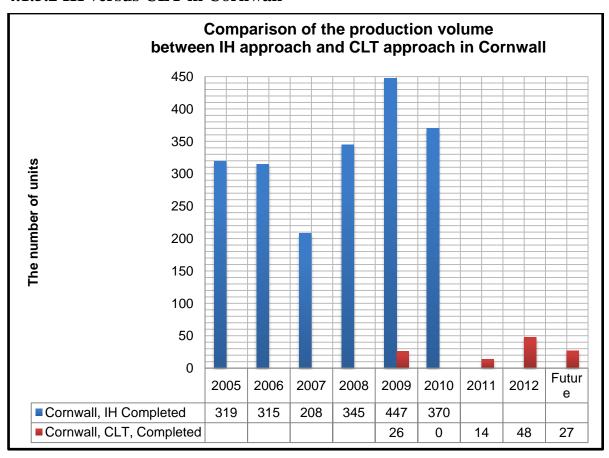


Chart 9 Comparison of the production volume of affordable housing between IH approach and CLT approach in Cornwall from 2004/2005 to 2009/2010 and in the near future

The number of affordable housing units completed in the fiscal years from 2005 to 2010 by IH approach in Cornwall is 2004 in total. The number of affordable housing units created from 2009 to 2012 by CLT approach in Cornwall is 88 in total. In the near future, CCLT is prospecting to develop 27 units. The total number of affordable housing units by CLT approach in Cornwall, 115, is the 6 % of the 2004 units produced by IH approach from 2005 to 2010 in Cornwall.

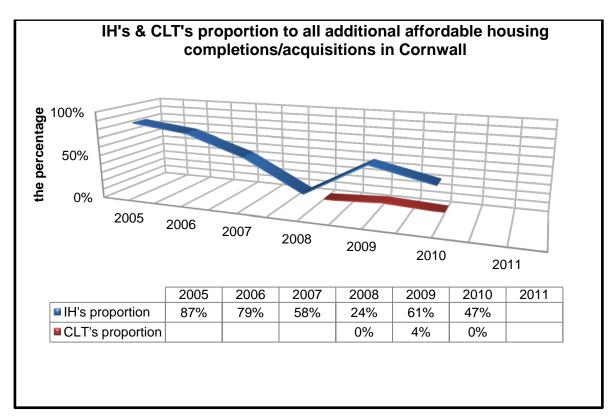


Chart 10 The proportion of affordable housing produced by IH approach to all additional affordable housing completions/acquisitions in Cornwall from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

	2005	2006	2007	2008	2009	2010
Total affordable housing outturn	368	398	358	1440	727	788
IH's proportion	87%	79%	58%	24%	61%	47%
CLT's proportion				0%	4%	0%

Table 4 The total affordable housing outturn and the proportion of affordable units completed by IH approach and by CLT approach in Cornwall from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

During the fiscal years from 2005 to 2010, affordable housing by IH approach in Cornwall accounts for 59% of the total affordable housing production volume in Cornwall as the annual average. The CLT-housing's contribution to the total affordable housing productions volume is 4% in the fiscal year 2009. Since there was no housing production by CLT approach in Cornwall in the fiscal year 2008 and 2010, the percentage is zero. In Cornwall, the IH approach's contribution to total affordable housing outturn is on average over 50%, which is higher than the 29% in the case of Lambeth. This shows Cornwall's dependency on IH approach, Section 106 agreements, in order to create affordable housing, while CLT approach in Cornwall yields a relatively high affordable housing outturn considering the small size of CCLT, an umbrella CLT body in Cornwall for facilitating local CLTs and initiating CLT housing development by its own, and that there are still many regions which do not have any CLT body at all throughout England. Considering that CCLT is run by a voluntary Board of Management and employs only one full time member of staff, CCLT may be regarded to work very efficiently within the tight budget. Yet, the volume of affordable housing production by CLT approach in Cornwall is far behind that by IH approach. Virtually it is difficult to compare the productivity of IH approach and CLT approach in absolute terms and to be conclusive based on the figures above since CLT approach is new and has a short history comparing to that of IH approach.

4.2 The durable affordability of produced affordable housing

In this section, the durability of affordability of produced affordable homes by IH approach and CLT approach will be compared to each other. Firstly, identified tenure types of affordable homes produced by each approach are presented. Then, according to the identified tenure types and their formula to calculate the appreciation of dwelling cost, the difference of the durability of affordability of each approach is presented.

4.2.1 Types of tenure and disposal methods of affordable homes produced by IH approach

When affordable homes are produced by S106 agreements, namely IH approach, those built units are delivered under the following types of tenure.

Social Rent

Intermediate Rent (Affordable rented housing)

Shared ownership (Intermediate affordable housing / Homebuy)

Shared equity (Intermediate affordable housing / Homebuy)

Discounted sales (Intermediate affordable housing / Resale price covenant)

Before going through each one of them in detail, it is important to look firstly at the governmental definition of types (or tenure types) of affordable housing.

The fourth edition of *Planning Policy Statement 3* published by Communities and Local Government in June 2011 defines affordable housing and its types as following in Annex B (Communities and Local Government 2011, p.25). It sets out a main outline of what kinds of tenure and disposal methods affordable homes produced by S106 enter into.

Annex B: Definitions

Affordable housing

Affordable housing includes social rented, affordable rented and intermediate housing, provided to eligible households whose needs are not met by the market. Affordable housing should:

- Meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and local house prices.
- Include provision for the home to remain at an affordable price for future eligible households or, if these restrictions are lifted, for the subsidy to be recycled for alternative affordable housing provision.

Social rented housing is:

Rented housing owned and managed by local authorities and registered social landlords, for which guideline <u>target rents</u> are determined through the national rent regime. The proposals set out in the Three Year Review of Rent Restructuring (July 2004) were implemented as policy in April 2006. It may also include rented housing owned or managed by other persons and provided under equivalent rental arrangements to the above, as agreed with the local

authority or with the Homes and Communities Agency as a condition of grant.

Affordable rented housing is:

Rented housing let by registered providers of social housing to households who are eligible for social rented housing. Affordable Rent is not subject to the national rent regime⁵ but is subject to other rent controls that require a rent of no more than 80 per cent of the local market rent.^{6,7}

Intermediate affordable housing is:

Housing at prices and rents above those of social rent, but below market price or rents, and which meet the criteria set out above. These can include shared equity products (e.g. HomeBuy), other low cost homes for sale and intermediate rent but does not include affordable rented housing.

These definitions replace those given in previous editions of PPS3 (2006 and 2010) and related guidance such as Delivering Affordable Housing 2006.

The definition does not exclude homes provided by private sector bodies or provided without grant funding. Where such homes meet the definition above, they may be considered, for planning purposes, as affordable housing. Whereas, those homes that do not meet the definition, for example, 'low cost market' housing, may not be considered, for planning purposes, as affordable housing.

Box 2 Definitions of affordable housing according to Planning Policy Statement 3: Housing, Annex B (Communities and Local Government 2011)

Phrases underlined by the author are important to later discuss the influence of certain restrictions levied on affordable housing under the PPS3-defined regime on the durability of affordable homes.

According to the above definition, **social rented housing** is equivalent to social rented units as it is, **affordable rented housing** is equivalent to intermediate rented housing, and **intermediate affordable housing** are equivalent to housing for shared ownership, shared equity or discounted sale.

4.2.1.1 Social rent

The affordable homes under this tenure are rented at below open rental market price. To qualify to dwell in social rental units, people need to register with the relevant jurisdiction's Housing Register run by its council. Social rental units can be run by either council or housing association. Once an applicant's name puts his/her name on the waiting list of Housing Register, the allocation of available rented housing in the jurisdiction is operated by the council. Each council has its own way of allocation, which is different from council to council. Nevertheless, the approach of allocation is based on the 'choice-based letting' model

⁵ The national rent regime is the regime under which the social rents of tenants of social housing are set, with particular reference to the Guide to Social Rent Reforms (March 2001) and the Rent Influencing Regime Guidance (October 2001).

⁶ Including service charges, where applicable

⁷ Local market rents are calculated using the Royal Institution for Chartered Surveyors (RICS) approved valuation methods. The Tenant Services Authority has issued an explanatory note on these: www.tenantservicesauthority.org/upload/doc/RICS_rental_valuation_note_20110118140714.doc

which promotes the choice of those who are on the waiting list and involves bidding in order to give a priority to the most needy according to the definition of each council. The arrangement of bidding is different from conventional ones in a sense that it does not involve any money but those on the housing waiting list need to register their interest in an advertise property by phone, text messages or the council website. The council will collect all the 'bids' from those who are interested and will invite the highest priority household (Lambeth Council 2011). Local connection, household size, special needs such as appliances for the disabled, and income level etc. are all considered in valuing the priority.

Social rents are now called 'target rents' in other words, which the government bound all social housing of housing associations and councils to set the rents according to a certain formula designed by the government in 1 April 2003 as the government's new social housing rent restructuring programme. Nearly all rents are required to reach 'target rent' using the formula by 31 March 2012. Before then, all local authorities and registered social landlords had its own way to set its rent. Now all rents increase or decrease by an amount moving towards target rent in order to standardize social housing rents to be fairer and to link rents and the quality which tenants value e.g. location and size closer.

Generally, the formula by which rents generally increase annually is 'RPI%+0.5%'. It means that rents increase by the 'RPI Year on year change %+0.5%'. RPI is an abbreviation of Retail Price Index and a measure of inflation published by the Office for National Statistics monthly and annually. Though the government has used the Consumer Price Index (CPI) as its main measure of inflation in the economy rather than the RPI since December 2003, RPI is used for social housing rent increases since RPI's year on year change tends to be generally around 1% higher than that of CPI. RPI measures monthly and annual change of the average shopping cost of retail goods and services.

Based on January 1987 = 100	Average RPI	Year on year change
2006	198.11	3.2%
2005	191.98	2.8%
2004	186.69	3.0%

Table 5 Examples of RPI year and year change (Hampshire County Council 2011)

Year	Month	RPI	Year on year %	СРІ	Year on year %
	January	229.0	5.1	116.9	4.0
	February	231.3	5.5	117.8	4.4
	March	232.5	5.3	118.1	4.0
2011	April	234.4	5.2	119.3	4.5
	May	235.2	5.2	119.5	4.5
	June	235.2	5.0	119.4	4.2
	July	234.7	5.0	119.4	4.4

Table 6 Examples of difference between RPI and CPI for a same month (Hampshire County Council 2011)

Target rent increases annually by the formula from a baseline which is set in consideration of local affordability and the value of the home a tenant live in which is valued by an

independent professionally qualified chartered surveyor. Thus, different local to local and different house to house, target rent is varied. For example, the Government has set maximum rent levels for all social housing based on the number of bedrooms considering average weekly national local authority rent, national weekly average earnings and national average local authority property value at the moment in 2006 (St. Leger Homes of Doncaster Limited 2006).

Number of bedrooms	Max. rent per week as Capping Limits		
Number of bedrooms	(Monthly rent)		
Bedsit	£97.82 (391.28)		
1 bedroom	£97.82 (391.28)		
2 bedrooms	£103.58 (414.32)		
3 bedrooms	£109.32 (437.28)		
4 bedrooms	£115.08 (460.32)		

Table 7 Maximum rents – 'Capping Limits (St. Leger Homes of Doncaster Limited 2006)

For example, with the 5% of PRI year on year change, the proposed maximum rents increase as following.

Number of bedrooms	Max. rent per week as Capping Limits (Monthly rent)	The formula	The 2 nd Year Monthly rent	The 3 rd Year Monthly rent
Bedsit	£97.82 (391.28)		412.8	435.5
1 bedroom	£97.82 (391.28)	Rent *	412.8	435.5
2 bedrooms	£103.58 (414.32)	[1+PRI(5 %)	437.11	461.15
3 bedrooms	£109.32(437.28)	+0.5%)	461.33	486.7
4 bedrooms	£115.08 (460.32)		485.64	512.35

Table 8 Examples of annual rent increased by 'target rent formula' (St. Leger Homes of Doncaster Limited 2006)

In Cornwall, the proposed average social rents delivered by CRHA in 2010 and their subsequent increased rents in the future are as the following:

Number of bedrooms	Average weekly rents in 2010 (Monthly rent)	The formula	Y2 Monthly rent	Y3 Monthly rent
Bedsit	£63.91 (255.64)		269.70	284.53
1 bedroom	£63.91 (255.64)	Rent *	334.10	352.47
2 bedrooms	£79.17 (316.68)	[1+PRI(5 %)	377.35	398.11
3 bedrooms	£89.42 (357.68)	+0.5%)	398.66	420.59
4 bedrooms	£94.47 (377.88)		269.70	284.53

Table 9 Examples of social rents in Cornwall and its annual increment (Cornwall Rural Housing Association 2010)

Annual Social rent formula: initial social rent per annum set by local planning authorities * $(1+PRI\%+0.5\%)^n$

N=the number of year since the initial rent setting of a social rent unit

4.2.1.2 Intermediate rent (Affordable rented housing)

The affordable homes under this tenure are rented above the Government's target rent levels for social rented housing but significantly less than open rental market price. For example, Cornwall Council suggests in 'Affordable housing Development plan document' that its local intermediate rented housing's rent level should be within:

"the level of upper quartile social rents and a percentage discount from the lowest price at which a household can access market housing – the entry level price threshold" (Cornwall Council 2010, pp. 21).

According to the guidance, Cornwall Council proposes two possible options.

Option 1:

- A lower intermediate rent which is set at the upper quartile of target rents
- An upper intermediate rent which should not exceed a 25% discount on the lowest entry level market rent

Number of bedrooms	Rent per week (Monthly Rent)			
Number of beardons	Upper quartile social rents	25% below market entry level rent		
1 bedroom	77.5 (310)	79.25 (317)		
2 bedrooms	81.25 (325)	97.5 (390)		
3 bedrooms	85.75 (343)	112.75 (451)		
4 bedrooms	95.25 (381)	142.75 (571)		

Table 10 Intermediate rented housing's price level, option 1 (Cornwall Council 2010, pp. 21)

Option 2:

- A lower intermediate rent which is set at 95% of target rents
- An upper intermediate rent which should not exceed a 20% discount on the lowest entry level market rent

Number of bedrooms	Rent per week			
Trumber of bedrooms	Upper quartile social rents	25% below market entry level rent		
1 bedroom	77.5 (310)	82.75 (331)		
2 bedrooms	86 (344)	104 (416)		
3 bedrooms	89.75 (359)	120.25 (481)		
4 bedrooms	95.25 (381)	152.25 (609)		

Table 11 Intermediate rented housing's price level, option 2 (Cornwall Council 2010, pp. 22)

The owners of intermediate rented homes managed by affordable housing providers from the public or private sector are required to enter into planning obligations to ensure that the properties remain affordable for future tenants. In order to fulfill the requirement, the Council reserves the right to make nominations for future occupants.

HCA defines affordable rent homes which will be made available at a rent level of up to 80% of gross market rents including any services charges (HCA 2011, p.15). When affordable rent (intermediate rent) is set as 80% of market rent for an equivalent property for that size and location, the calculation of the market rent is based on a residential lettings estimate for a property of the appropriate size, condition and area (Shapps 2010). PRPs (Private Registered Providers of social housing; equivalent to housing associations) should use a valuation of market rent consistent with the principles set by RICS (Royal Institution of Chartered Surveyors) and a RICS recognised method (TSA 2011, p.1). The maximum annual rent increase on an affordable (intermediate) rent property is RPI + 0.5 percent (HCA 2011, p.15).

Annual Intermediate rent formula: 80% of market per annum * (1+PRI%+0.5%)ⁿ

N=the number of year since the initial rent setting of a social rent unit

4.2.1.3 Shared ownership (Intermediate affordable housing / Homebuy)

The affordable homes under this tenure are partly owned by 'Registered providers', into which RSL (Registered Social Landlords, mainly housing associations) were changed and merged with other actors together, and partly owned by dwelling households. This tenure is designed for those who cannot afford to buy an open market home but still want to get on 'the housing ladder' which means that they want to own a property outright in the long term. A household can buy an initial share which is usually 25% to 75% of the whole property value and then pays monthly rent for the remaining share. Thus, a housing association or a developer claims the remaining equity of the property. Dwellers in shared ownership have two kinds of monthly payment to pay, one for the mortgage on their purchased share and one for the rent on the remaining share. Especially when the dwellers' saving are not enough to pay a certain percentage of the whole property value, they borrow the amount of money for purchasing a part of the whole equity. Still, their monthly housing costs tend to be lower than when they purchase the whole equity on the full mortgage in open market.

For a dweller in shared ownership housing, it is possible to staircase (scale up) the share which is owned by the dweller. It means that the dweller can acquire additional share of the whole property 5 years or 10 years later on since having entered into the initial contract. In the case of protected rural areas where land may be opened only for meeting local needs such as affordable housing, the stair-casing is limited to 80%. Should it be up to 100%, the housing association having owned the rest of the share is bound to make a covenant as a part of its planning obligation with the dweller that the housing association has a pre-emptive right to repurchase the home in order to ensure that the home can be occupied at an affordable price also by a next generation. This is applied to all 100% stair-casing of any rural leasehold dwelling regardless on identified settlements or on protected rural areas.

When the resale of a shared ownership unit takes place, its former dweller gets the percentage he/she owns from the whole property value. If the dweller's share was 70%, then, he/she gets 70% of the price of the resold unit. Thus, when two parties, a dweller and a RP resell the unit, they divide the appreciated value according to the share of each party. Also, whenever the dweller wants to staircase, the open market value of the unit is re-assessed by which the new rent on the remaining shared and the new equity held by the dweller are calculated. When the stair-casing of the dweller-owned share takes place e.g. from 50% to 80%, the dweller should pay 30% of the newly assessed property value at the time of stair-casing, not the value in the initial contract. It means that the open market value of shared ownership units is assessed newly whenever the dweller-owned share is stair-cased and the property appreciation is reflected on the rent on the remaining equity. Normally, over 5 years or 10 years, dwellers of shared ownership choose staircase. As long as a dweller in shared ownership stays in his/her

shared ownership home, the home price appreciation in the open market value is not taken into consideration of rent charged on the share held by the other party.

The total monthly housing costs of a shared ownership unit can be varied through negotiation between a developer and a council to ensure that they are compliant with PPS3 definitions of affordable housing. It means that the council controls over the monthly housing costs-level of shared ownership units through the power of granting planning permission. To make the monthly housing costs of shared ownership affordable in line with the income level of targeted households, the council will seek subsidy to reduce the level of equity purchased by a dweller or use planning obligations to limit the annual rent charged on the remaining equity of a whole property. Generally the annual rent charged on the remaining equity is recommended not to exceed 2.5% of the value by planning guideline.

Annual shared ownership housing cost formula: mortgage payment per annum on a share of equity held by the occupant +2.5% * the remaining share held by a housing association

4.2.1.4 Shared equity (Intermediate affordable housing / Homebuy)

The Government's scheme called **Homebuy** encompasses both 'shared ownership' and 'shared equity' for the first time home buyers. Shared equity refers to equity loan schemes such as FirstBuy and HomeBuy Direct. In the case of shared equity there is no co-owner unlike shared ownership, thus no rental payments for the first home buyer. The home-buyer takes 100% of the property from the outset as the single person on the deed but takes two loans for the property. One is a mortgage for a part of the whole equity and the other is an equity loan. Usually up to 20% of the purchase price is funded by the equity loan which should be repaid when the property is sold. A 5% of the purchase price as deposit is needed. The rest 75% to 80% of the whole equity is funded by the mortgage. If the property value declines by 5% from the initial purchase price, it is the deposit that is eroded at the time of resale.

Equity loan should be repaid to the party making the equity loan with a proportion of the equity increments that is same with the proportion of the equity loan to the initial purchase price when the property is sold. Equity loan is interest free for the first 5 years and thereafter with a low interest charged (1.75% for the 6th year and thereafter 1% over the rate of inflation).

Both FirstBuy and HomeBuy Direct are provided by the Government and the house builder. FirstBuy equity loan funds 20% of the purchase price to the home buyer. The equity loan is offered half by the Government and the other half by the house builder and available from September 2011 whereas HomeBuy Direct funded 30% of the purchase price and ended in January 2011. Both schemes are similar to each other except some differences in arrangements.

The main difference between 'shared ownership' and 'shared equity' is that a home buyer is likely to need a less deposit or a mortgage on 'shared ownership' with a 25% share as minimum required, which means the household pays rent on the remaining 75%, while on 'shared equity' the home buyer needs to fund a 80% of the whole equity with a deposit and a mortgage (Share To Buy 2011). Shared ownership is a part-rent-and-part-buy scheme whereas shared equity allows a home buyer to own 100% of the property partly funded by an equity loan which is payable on the sale of the property, called in different words 'a balloon payment type of mortgage'. Shared ownership is generally provided by housing associations and shared equity by national house-builders while some housing associations offer allocations for the FirstBuy equity loan scheme. Most shared-ownership homes are found in the major urban areas with big schemes in towns like Swindon and most concentrated in London in the form

of flats rather houses while shared equity is normally on houses. In rural areas, some shared equity schemes is capped with the maximum equity the occupant can redeem like in the case of shared ownership stair casing.

Generally, shared equity is for helping first time buyers, key workers working in the sector of education, health, emergency services, social works and community works and those who are on to the property ladder. Shared equity schemes are generally targeting the upper price range than shared-ownership homes thus less found in available stocks than those of shared ownership. Also in the classification of tenures in HSSA, 'shared equity' seems skipped or being categorised as Non-LA/RSL which includes homes for discounted sale and 'shared ownership' takes a separated category.

Annual shared equity housing cost formula (with 5% deposit):

Mortgage payment per annum on a 75% share of equity held by the occupant +

(1.75% * the amount of equity loan for the 6th year since purchase) or

[+ (1+RPI)/100) * the amount of equity loan from the 7th year since purchase]

4.2.1.5 Discounted sales (Intermediate affordable housing / Resale price covenant/ Low cost homes for sale)

The affordable homes under this tenure are different from low cost market housing and acceptable under PPS3 in that they are ensured to remain affordable for future occupiers. For example, in Cornwall, the planning authority defines affordable homes for discounted sales as housing sold at a discount from the market value with a resale covenant binding the owner and the subsequent owners to sell the unit at a price which remains fixed at a discount percentage of the open market value. Thus, reassessment of the open market value of the unit is done recurrently when resale of the unit takes place and regardless of the changes of an initial price of the unit, the percentage of the open market value at the time of resale is fixed to be applied to the subsequent resale prices.

"The council's evidence base demonstrates that in order to meet PPS3 requirement for homes to "meet the needs of eligible households including availability at a cost low enough for them to afford, determined with regard to local incomes and local house prices (Communities and Local Government 2006, pp. 9)", properties must be provided within specified price limits. Based upon the price at which intermediate sale products are sold, intermediate demand can account for between 25% and 42% of need. Affordability calculations estimate that initial sales values should be in a broad range between the top of target rents and a 20% from the open market:

- The level of upper quartile social rents and
- A percentage discount from the lowest price at which a household can enter the market the entry level price thresholds" (Cornwall Council 2010, pp. 23)

According to the guideline, the Cornwall Council suggests two possible options for maximum values of affordable homes for discounted sale. The lower intermediate price band of option 1 is calculated by using upper quartile target rent –the median of the upper half of target rents or the 75th percentile of target rents- and the upper intermediate price band by applying at 25% discount to the lowest open market values).

Option 1: Lower intermediate price band & Upper intermediate price band						
	1 bed dwelling 2 bed 3 bed 4 bed					

		dwelling	dwelling	dwelling
Lowest purchase price to	64,600	66,300	69,900	77,700
Maximum purchase price	~66,700	~83,900	~97,000	~122,800

Table 12 Price band of low cost homes for sale, option 1 (Cornwall Council 2010, pp. 23)

The lower intermediate price band of option 2 is calculated by using 95% of target rent and the upper intermediate price band by applying at 25% discount to the lowest open market values.

Option 2: Lower intermediate price band & Upper intermediate price band				
	1 had dyyallina	2 bed	3 bed	4 bed
	1 bed dwelling	dwelling	dwelling	dwelling
Lowest purchase price to	66,700	74,000	77,200	82,000
Maximum purchase price	~71,100	~89,400	~103,400	~131,000

Table 13 Price band of low cost homes for sale, option 1 (Cornwall Council 2010, pp. 23)

Annual costs of affordable housing for discounted sale: Mortgage payment per annum on an 80% of the lowest open market value

4.2.2 Types of tenure and disposal methods of affordable homes produced by CLT approach

Unlike the initial hypothesis that CLT would adopt a different disposal method and a type of tenure than those applied to affordable housing produced by IH approach, it turned out that CLTs in England basically have the same options with the affordable housing by IH approach. However, in order to assure permanent affordability, some of proposed disposal methods for CLTs will have different arrangements in details. The possible disposal methods for CLTs which were suggested by Community Finance Solutions (Doolittle et al 2007; Cobbetts 2011) are as the following.

Shared ownership

Equity mortgages

Resale Price Covenant

Co-ownership and Declaration of Trust

Among them, CCLT is adopting 'Resale price covenant'. Yet, Brixton Green has not decided on nor developed any concrete discussion of disposal methods, tenure types and any mixture of them appropriate for the prospective site. Based on an email interview with the director of Brixton Green, the reason for such uncertainties seems to attribute to the dependency of the scheme on available financing methods which have not been sorted out. Because the site is yet prospective, it makes sense.

4.2.2.1 Shared ownership

This can guarantee permanent affordability only in the case of "protected areas" designated by Communities and Local Government mainly in rural areas where Staircasing is limited to an 80% interest in the property. In urban areas, this method is not truly workable for CLTs since any occupant in shared ownership has right to staircase out and acquire a 100% interest in the property. Then, the unit is eroded in the market and a CLT cannot control over the

affordability for next dwellers any longer. Except the possibility of a dweller's 100% share-staircasing, this shared ownership can assure relatively more affordability than the case of market housing purchase because it reduces the amount of a mortgage payment by a share in a property held by the occupant. A rent payment on the unsold shared can also be reduced because CLTs can charge the rent at a lower rate. Basically, shared ownership for CLT homes means to grant a lease of a share in a property to a lessee for (usually) 125 years and the lessee pays a rent on the unsold share. The lease is at once paid to the CLT party as an upfront payment being funded by the lessee's mortgage. A rent is charged on the un-leased (unsold) share.

4.2.2.2 Resale price covenant

A buyer buys the property outright at a percentage of its open market which is usually 60 to 80% where a covenant is bound to be made between the buyer and a CLT that the buyer will sell the property at the same percentage of market value. When the property increase in value, the same percentage of market value applied to the initial purchase is still applied to the resale price. If the unit was priced at the 80% of market value, the resale price of the unit is still 80% of market value reassessed at the points of the resale. This method is to be easily understood by people due to its simplicity. In the case of CCLT homes, this method was applied to Percy's meadow site in Blisland as the following:

Bed size	Open Market Value (OMV)	70%8	Sale Price ⁹	% of OMV
2 bed	160,000	112,000	100,000	68.2%
3 bed	176,000	123,200	120,000	62.5%

Table 14 Examples of resale price of CLT homes with a resale price covenant (Source: Interview with the CCLT director by the author on the 27th July 2011)

Land was £1 provided by the Cornwall Council and developed in 2009. Because the Cornwall Council relinquished the land to CCLT, affordable homes developed on the site should be subject to planning obligations through Section 106 agreements, which means a permanent affordability by applying a resale price covenant to the homes.

4.2.2.3 Equity Mortgage

As explained under the section of shared equity, the main mechanism is same with it; the occupant acquires a 100% of ownership with mortgage from a High Street lender for e.g. 70% of open market value, the remaining 30% being held on a second equity mortgage by the CLT. The issue with this method is that the property buyer must have the legal right to pay off the mortgage and would be able to sell the property outright. When the redemption of the equity stake of the CLT party is made by the occupant prior to sale, the CLT will then hold cash rather than equity in the property. If housing appreciation rate is higher than inflation rate, the return on the cash for that period may lower down the CLT's ability to re-acquire an equivalent dwelling at the market price in the future. Therefore, this method is more suitable for rural exception sites or schemes where Section 106 agreements require homes to

⁸ The ceiling on the percentage of open market value for discounted sale. No more than 70% of open market value is allowed as a (re)sale price of homes delivered by S106 agreements.

⁹ The sale price was set after the consultation with local people on the price of 70% of the OMV.

permanently remain affordable, capping the percentage of the equity which can be redeemed by the occupant.

In appreciating housing market, the CLT's equity can grow, too. If the buyer redeem off the equity mortgage staked by the CLT, the CLT can still invest the repaid equity in another unit since the equity has risen in value in line with the appreciating market, only supposing that there is no long time gap between the equity redemption and the CLT's reinvesting of the cash paid by equity redemption. The CLT's equity percentage may be adjusted according to the CLT's financial needs and the occupant's situation, too.

For assuring permanent affordability, the use of equity mortgages requires a pre-emption agreement between the CLT and the occupant. The pre-emption agreement gives the CLT a 'first refusal' to reacquire a unit when it is sold and to transfer to its next selected occupant. Under the current rules, pre-emption rights may be unenforceable after a period of 21 years although the ground lease may continue for the full term of the lease. The 21 years period restarts on each subsequent disposal to future occupants with the grant of a new pre-emption agreement. After the 21 years of occupancy by one occupant, the occupant may choose to transfer the unit to a third party. When the CLT receives the redemption of its equity by the former occupant, the CLT can still use the cash for granting another equity loan to another property.

Unlike the equity mortgage arrangement, the CLT sustains no equity stake in the property. No staircasing of a shared of the equity held by the occupant nor redemption of the unsold equity work in the resale price covenant arrangement. At the time of resale, the former occupant is entitled to a share of the home value increments proportionate to a percentage of the purchased equity in the property at the time of initial sale. The discounted value is permanently locked in the CLT as an un-capitalized equity on the CLT's party. Although the CLT retains no equity share in the property, it can still enforce a resale price covenant for instance by acquiring a new deed of covenant from each subsequent purchaser spelling out on title that any disposal may not be registered by the Land Registry unless the CLT issued a certificate confirming compliance with covenant.

S106 agreements are influential both on the use of an equity mortgage and that of a resale price covenant. It is firstly because some S106 agreements have posed an exemption on the occupant's right to redeem the equity mortgage or accompanies an equity mortgage scheme for the homes built on the site. In other cases, S106 agreements stated that the property must be resold no more than a percentage of OMV at the time of first disposal. The percentage of discount reflects affordability level guided by the local planning authorities based on local income levels at the time of initial sale. Both in the case of an equity mortgage or a minimum/maximum discount level from OMV, the CLT needs to refer to local development framework and development plan documents and to negotiate on and comply with S106 agreements.

4.2.2.4 Co-ownership and Declaration of Trust

The Declaration of Trust arrangement is a 125 year lease by the CLT to both the CLT and the buyer with a declaration of trust regarding their respective shares in the property. This has many aspects similar with shared ownership such as the occupant pays rent on the other party's share. However, this is not restricted unlike shared ownership to set the maximum or minimum allowable share to staircase. The issue is that there is no track record that lenders made a loan for this method at this moment. Co-ownership is generally used for shared house purchase. In both cases, it is important to clearly spell out how far each shareholder has a

liability or responsibility for the mortgage payments. Pre-emption right by the CLT also needs to be coupled with the two schemes since each join owner can ask a sale and want to leave. In such case, the CLT is given 'first refusal' to acquire the equity share of the departing occupant.

The HCA Grant framework documents covering 2011 to 2015 stated that grant will only be available for sale units on shared ownership or equity mortgage. The grant of HCA will be not more available for S106 schemes. Without grant, a CLT may use one of the foresaid methods as it wants. A CLT is not kept from developing housing in conjunction with other provider selling outright sale units for cross-subsidising affordable units.

4.2.3 Comparison of durability of affordability between the tenure-type of IH approach and that of CLT approach

As described in details in the previous sections, there are no clear differences between affordable homes by IH approach and those by CLT approach in terms of tenure types and disposal methods. Shared-ownership, equity mortgage (shared equity), resale price covenant (affordable homes for discounted sale) can be available options for CLTs at the same time in the framework of affordable homes under S106 agreements, IH approach.

In practice, CCLT adopts the resale price covenant only for their built units because it can be simply understood by buyers for a marketing purpose, it is easy to arrange with the local planning authority, no equity loans accompanied with other detailed arrangements are required and the initial receipt of the initial disposal price to the CLT can be used for lowering down an average costs of new developments per unit by cross-subsidising the revenue from schemes with free land to schemes with lower cost of land. The most of sites were provided by the Cornwall Council (8 sites out of 12 sites, 67%) through transferring of council-owned land to CCLT. In this case, the Cornwall Council holds 1 pound of share for a ceremonial meaning that the sites are under S106 agreements ¹⁰ and that a resale price covenant is valid for subsequent sales of the housing units on the sites. The 4 sites out of 12 sites (33%) were lower costs in terms of land acquisition with a financial support provided by the Council in some cases.

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¹⁰ When rural exceptional sites are granted a planning permission or council-owned lands are released for affordable housing developments which otherwise cannot be given a planning permission, the local planning authority holds a control over arrangements of tenure types and disposal methods of the units built on such sites by negotiation with a housing developer and entering into S106 agreements.

4.2.3.1 Identified prevalent type of tenure and disposal method in affordable homes produced by each approach

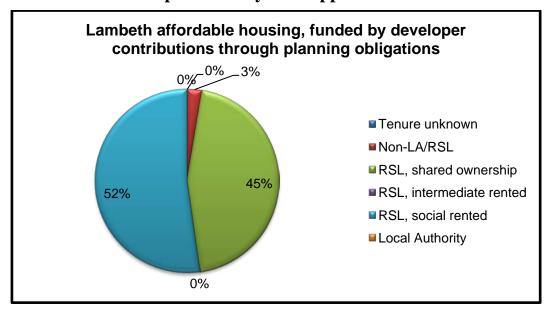


Chart 11 The total proportion of each tenure type of affordable housing produced by IH approach in Lambeth from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

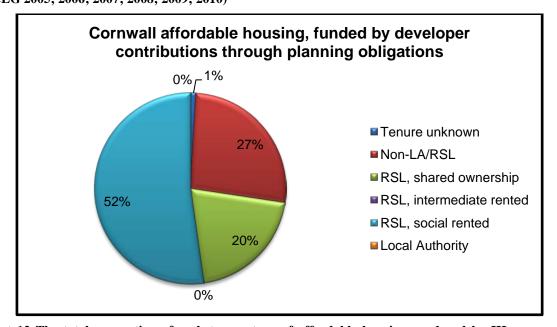


Chart 12 The total proportion of each tenure type of affordable housing produced by IH approach in Cornwall from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

As shown in the two charts above, Social rented units account for 52% both in Lambeth and in Cornwall, shared ownership units for 45% in Lambeth and 20% in Cornwall, non-LA/RSL units which are presumed to be equivalent to resale covenant model for 3% in Lambeth and 27% in Cornwall.

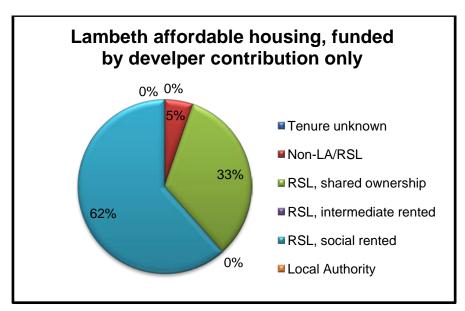


Chart 13 The total proportion of each tenure type of affordable housing produced by developer contribution only in Lambeth from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

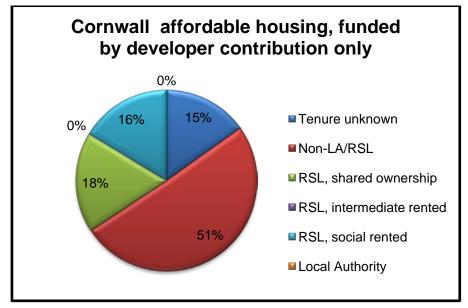


Chart 14 The total proportion of each tenure type of affordable housing produced by developer contribution only in Cornwall from 2004/2005 to 2009/2010 (DCLG 2005; 2006; 2007; 2008; 2009; 2010)

A share of each tenure type in the total number of affordable housing stock produced and funded wholly) by developer contribution only through IH approach from the fiscal year 2005(2004/2005) to the fiscal year 2010(2009/2010) according to HSSA 2005 to 2010

When affordable housing were provided by developer contribution only being not combined with any governmental grant such as NAHP or local authority's support between 2004 and 2010, social rented units were the most prevalent in the case of Lambeth and Non-LA/RSL(units for sale on discounted basis) in the case of Cornwall.

4.2.3.2 Comparisons of durability of affordability among social rent, shared ownership and a shared equity

For the comparison of durability of affordability of a different tenure type, the three tenure types are selected; 'social rent', 'shared ownership' and 'shared equity'. Shared equity in this section covers both units with a resale price covenant or in equity mortgages by definition in that a part of the property equity is lowered down for the purchase of a unit and in principle there is no interest charged on the equity unpaid by the occupant. Also, an equity loan can be a revolving fund for the next occupant.

Since the focus of comparison is on the appreciation of housing prices borne by the homeoccupant, not directly on measuring how affordable the housing prices are, an approximate annual appreciate rate of the prices borne by the home-occupant under each tenure type is calculated. The question is how permanently the initial affordability can be kept under each tenure type. As the initial purchase price of affordable homes is governed through planning policies at national and local level, the main concern here is that how the initial price for holding an affordable housing unit is appreciated year by year.

(April/Year)	Social rent AR	Cornwall(SO) AR	Cornwall(RC) AR	Lambeth(SO) AR	Lambeth(RC) AR
Y1996	2.90%	-3.20%	-2.05%	2.01%	1.29%
Y1997	2.90%	7.02%	4.50%	19.31%	12.36%
Y1998	4.50%	8.01%	5.13%	20.89%	13.37%
Y1999	2.10%	6.79%	4.35%	13.25%	8.48%
Y2000	3.50%	14.14%	9.05%	32.45%	20.77%
Y2001	2.30%	13.27%	8.49%	13.71%	8.77%
Y2002	2.00%	21.68%	13.88%	11.25%	7.20%
Y2003	2.00%	34.04%	21.79%	14.07%	9.01%
Y2004	1.70%	17.34%	11.10%	4.13%	2.65%
Y2005	2.40%	10.21%	6.54%	3.27%	2.09%
Y2006	2.50%	3.90%	2.49%	5.13%	3.29%
Y2007	3.30%	8.09%	5.18%	<u>17.53%</u>	11.22%
Y2008	3.50%	2.73%	1.75%	10.35%	6.63%
Y2009	2.80%	<u>-14.60%</u>	<u>-9.34%</u>	<u>-16.03%</u>	<u>-10.26%</u>
Y2010	4.20%	6.94%	4.44%	12.46%	7.97%
Y2011	5.00%	-3.03%	-1.94%	2.58%	1.65%
Average	2.98%	8.33%	5.33%	10.40%	6.65%

Table 15 Estimated Annual Appreciation Rates of the initial costs of holding an affordable housing unit under each tenure arrangement

AR: Appreciation rate per annum

SO: Shared ownership, RC: Resale price covenant

Average: average of annual appreciation rates for the period from 1996 to 2011.

HPI: House Price Index

 Y^n Social rent AR = RPI year on year change + 0.5% RPI year on year change: $(Y^n RPI - Y^{n-1} RPI)/Y^{n-1} RPI$

Cornwall/Lambeth(SO) AR = Cornwall/Lambeth HPI year on year change HPI year on year change: $(Y^n HPI - Y^{n-1} HPI)/Y^{n-1} HPI$

It is the appreciation rate for shared-ownership units. Since a part-buy and part-rent scheme is charged according to the full market value of a home, the full market value appreciation is taken into account in the appreciation rate of the costs borne by a occupant in a sharedownership scheme. A shared of the whole market value is bought by the occupant on a mortgage and on the remaining share of the whole property's market value which is held by housing associations, the occupant pays rent. A percentage of share held by the occupant and the rest percentage of share by housing associations does not matter crucially in valuing the appreciation rate since it is basically a open market value of the property, the full equity which mortgage payments and rent payments are arranged according to, even though the interest rate used for mortgage payment calculation and rent payment calculation would be different from each other. Whenever the occupant staircases or sells the property, a open market value of the property is revaluated for new setting of the amount of the two payments. That means the durability of affordability of shared ownership units is following the full trend of housing market appreciation generally. The higher the appreciation rate is, the less durable the affordability is for next generations. When the housing market enters into downturn, the loss of the equity of a share held by owners can also be more detrimental especially when the depreciation is more than the share held by the other party, a housing association. Then, a share-ownership occupant loses a part of his or her equity, which has not happened in the identified period. (The highest appreciation rate was 34.04% in Cornwall in 2003 and 17.53% in Lambeth in 2007 during the period. The highest depreciation rate was 14.6% in Cornwall and 16.03% in Lambeth both in 2009 during the period.)

Cornwall/Lambeth(RC) AR = year on year change in 80% of the equity of the Cornwall/Lambeth average house price

 $= (Y^{n} HPI * 80\% - Y^{n-1} HPI * 80\%)/Y^{n-1} HPI * 80\%$

It is the appreciation rate for shared-equity units or units bound with a resale price covenant. Since in these schemes, only a certain percentage of the property equity is paid by the occupant, the percentage is taken into account for calculation of the cost appreciation borne by subsequent occupants. For simplicity of the calculation, the percentage of the equity paid by the occupant is set by 80%. Whenever housing appreciates in value, the 80% of the market value increments at the moment is added to an initial disposal price as its resale price.

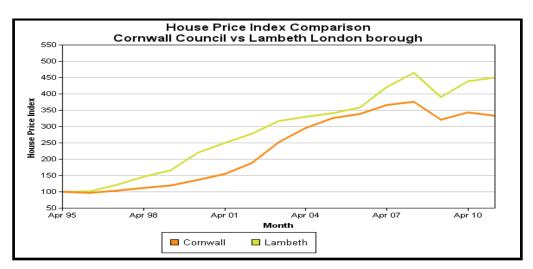


Chart 15 HPI Comparison between Cornwall Council and Lambeth London borough from April 1995 to April 2011 (Land Registry 2011)

Month	Cornwall Council		Lambeth London borough council		RPI Year on year
	House Price Index	Average Price (£)	House Price Index	Average Price (£)	change
Apr-95	100	55,369	99.5	75,024	3.30%
Apr-96	96.8	53,566	101.5	76,495	2.40%
Apr-97	103.6	57,347	121.1	91,306	2.40%
Apr-98	111.9	61,933	146.4	110,393	4.00%
Apr-99	119.5	66,139	165.8	124,995	1.60%
Apr-00	136.4	75,506	219.6	165,574	3.00%
Apr-01	154.5	85,537	249.7	188,293	1.80%
Apr-02	188	104,052	277.8	209,476	1.50%
Apr-03	252	139,491	316.9	238,963	1.50%
Apr-04	295.7	163,706	330	248,823	1.20%
Apr-05	325.9	180,393	340.8	256,975	1.90%
Apr-06	338.6	187,472	358.3	270,148	2.00%
Apr-07	366	202,627	421.1	317,485	2.80%
Apr-08	376	208,129	464.7	350,363	3.00%
Apr-09	321.1	177,766	390.2	294,201	2.30%
Apr-10	343.4	190,092	438.8	330,822	3.70%
Apr-11	333	184,374	450.1	339,337	4.50%

Table 16 Annual HPI & Average house price in Cornwall and in Lambeth, & RPI year on year change from April 1995 to April 2011 (Hampshire County Council 2011; Land Registry 2011)

Since HPI is available from 1995, the period from 1995 to 2011 is set as a simulation period of each tenure type's appreciation rate when each tenure type applies to resale or calls for rearrangement of housing payments. HPI is from Land Registry, a national government agency. RPI is from Hampshire County Council through which data available via National Statistics are reformulated.

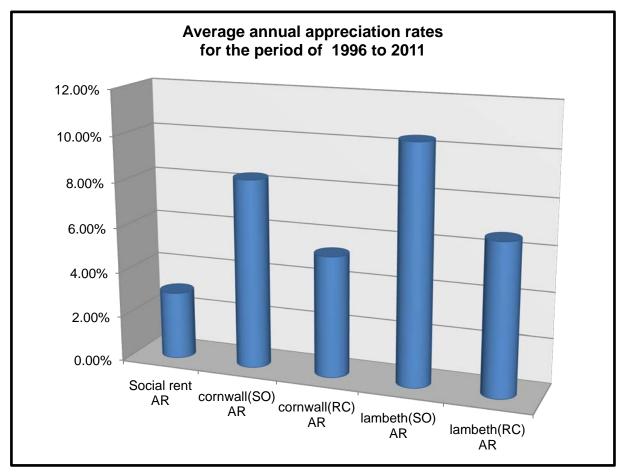


Chart 16 Estimated average annual appreciation rates of each tenure type's housing price for the period of 1996 to 2011 in Cornwall and in Lambeth

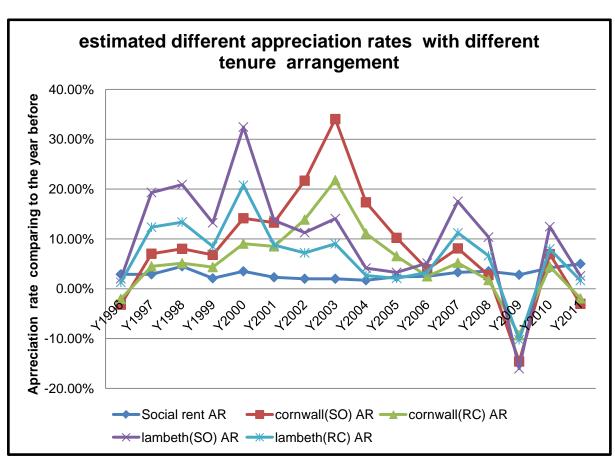


Chart 17 Estimated different appreciation rates of each tenure type's housing prices for the period of 1996 to 2011 in Cornwall and in Lambeth

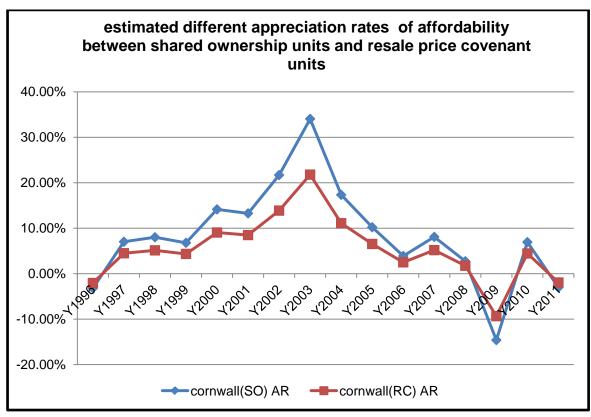


Chart 18 Estimated different appreciation rates of SO units and RC units for the period of 1996 to 2011 in Cornwall

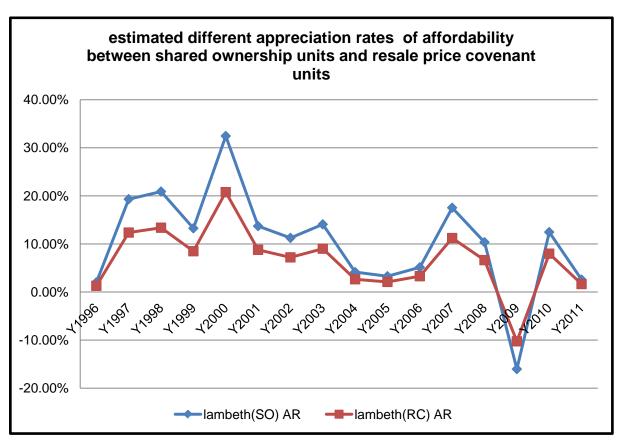


Chart 19 Estimated different appreciation rates of SO units and RC units for the period of 1996 to 2011 in Lambeth

4.2.4 Results of the comparisons

	Cornwall(SO)-(RC)	Lambeth(SO)-(RC)	Cornwall(RC)/(SO)	Lambeth(RC)/(SO)
Y1996	-1.15%	0.72%	64.00%	64.00%
Y1997	2.53%	6.95%	64.00%	64.00%
Y1998	2.88%	7.52%	64.00%	64.00%
Y1999	2.45%	4.77%	64.00%	64.00%
Y2000	5.09%	11.68%	64.00%	64.00%
Y2001	4.78%	4.93%	64.00%	64.00%
Y2002	7.81%	4.05%	64.00%	64.00%
Y2003	12.26%	5.07%	64.00%	64.00%
Y2004	6.24%	1.49%	64.00%	64.00%
Y2005	3.68%	1.18%	64.00%	64.00%
Y2006	1.40%	1.85%	64.00%	64.00%
Y2007	2.91%	6.31%	64.00%	64.00%
Y2008	0.98%	3.73%	64.00%	64.00%

Y2009	-5.26%	-5.77%	64.00%	64.00%
Y2010	2.50%	4.48%	64.00%	64.00%
Y2011	-1.09%	0.93%	64.00%	64.00%
Average	3.00%	3.74%	64.00%	64.00%

Table 17 Difference of between the appreciation rate of shared ownership housing prices and that resale price covenant housing prices & the latter's proportion to the former

Cornwall/Lambeth (SO)-(RC): Difference between the appreciation rate of shared ownership housing prices and that of resale price covenant housing prices

= the full market value appreciation rate - the appreciation rate of the 80% equity of a property

Cornwall/Lambeth (RC)/(SO): Proportion of the appreciation rate of resale price covenant housing price to that of shared ownership housing prices (the full market value appreciation of a property)

= (Cornwall/Lambeth) RC appreciation rate / (Conrwall/Lambeth) SO appreciation rate

As a result of comparisons, the housing cost appreciation rate of social rented housing turned out to be the most durable in assuring affordability as it is bound to RPI, similar to inflation rate and in that an annual inflation rate is likely to be lower than housing property appreciation rate in general. Shared equity schemes or discounted sale schemes with a resale price covenant applying to subsequent occupants turn out to ensure more permanent affordability than shared ownership schemes do. When a resale price for subsequent sales is fixed as an 80% of the open market value of a property, the annual appreciation rate of the 80% equity is equivalent to 64% of the annual housing appreciation rate in the open market. It shows that affordability is less eroded in the open market housing appreciation in the case of shared equity schemes than that of shared ownership schemes. So at the end of the day it is regardless of whether it is through IH or through CLT, the various options are determined with what is negotiated and approved when the planning permission is given.

It is important to notice that CLTs can guarantee longer to remain permanently affordable when CLTs are exempted from leasehold enfranchisement which is the right of leaseholders to buy the freehold of the land under the provisions of The Leasehold Reform Act 1967 (if their home is a house). By legal definition of CLTs and legal arrangement involved in CLTs, a CLT can guarantee the land to be permanently under the control by communities' concerns than any other housing providers if they are not exempted from the leasehold enfranchisement provisions. Apart from CLTs to be exempted from leasehold enfranchisement, the comparison formula above was used to define durability of affordability. The point is that the CLT's exemption from leasehold enfranchisement is to guarantee the use of a formula not the formula itself. What is under the control of the community is that they can apply a formula, but the formula is influenced by incentives and regulations not entirely under the control of the CLT. At the same time, affordable housing by IH approach is also under the influence of planning regulations and subsidies of the Government. A bottom line CLT might be another variation of what already exists in England.

4.3 The location advantages of produced affordable housing

4.3.1 The location advantages of produced affordable housing by IH approach in Lambeth

Chart 20 Distance between a selected affordable housing site developed by IH approach on a small scale in Lambeth and its surrounding key-facilities identified

Brief decription of the site with less than 53 affordable units: The 190-196 Kennington Park Road site is chosen as a stratified random sample from the group of affordable housing development sites by IH approach in Lambeth which are reported in the 'Section 106 Year End Report's from 2006/07 to 2009/10 and whose affordable homes are less than 30 units on a single site with open market homes. On this site, 11 of affordable units and 17 market units were negotiated in the fiscal year 2006/07 between Lambeth Council and the developer to be delivered (Lambeth Council 2007). The nearest underground station to the site is Kennington which is 0.2 mile away, taking about 4 minutes by walk.

The average distance to key facilities for living: From the 190-196 Kennington Park Road site, the average distance to the nine nearest shops detected on the googlemap is 0.17 mile. In the case of the nine nearest shools, the average distance is 0.45 mile. It is 0.28 mile in the case of the nine nearest clinics. In the case of the nine nearest companies, it is 0.57 mile. In the case of the nine nearest industrial sites, it is 0.31 mile. In the case of the nine nearest offices, it is 0.68 mile. In the case of the seven nearest markets including supermarkets, it is 0.46 mile. Though the nine nearest markets were identified with the key word of 'market' on the googlemap, the two among the search results are eliminated in the calculation of the average since they do not belong to the category of market in fact. In the case of the nine nearest workshops, it is 1.19 mile. In the case of the nine nearest shopping centers, it is 1.66 mile. The average distance between the 190-196 Kennington Park Road site and the selected nearest locations of the nine categories is 0.65 mile. On the googlemap, the address of 193 Kennington Park Road was used for searching the near locating key facilities.

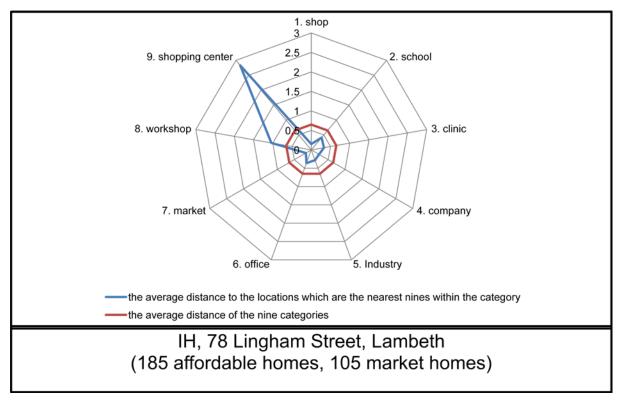


Chart 21 Distance between a selected affordable housing site developed by IH approach on a large scale in Lambeth and its surrounding key-facilities identified

Brief decription of the site with more than 53 affordable units: The 78 Lingham Street site is chosen as a stratified random sample from the group of affordable housing development sites by IH approach in Lambeth which are reported in the 'Section 106 Year End Report's from 2006/07 to 2009/10 and whose affordable homes are more than 30 units on a single site with open market homes. On this site with the adjacent 15 Stockwell Green site, 185 of affordable units and 105 market units were negotiated in the fiscal year 2006/07 between Lambeth Council and the developer to be delivered (Lambeth Council 2007). The nearest underground station to the site is Stockwell which is 0.3 mile away, taking about 6 minutes by walk.

The average distance to key facilities for living: From the 78 Lingham Street site, the average distance to the nine nearest shops detected on the googlemap is 0.25 mile. In the case of the eight nearest shools, the average distance is 0.26 mile. It is 0.30 mile in the case of the nine nearest clinics. In the case of the nine nearest companies, it is 0.37 mile. In the case of the nine nearest industrial sites, it is 0.31 mile. In the case of the nine nearest offices, it is 0.42 mile. In the case of the eight nearest markets including supermarkets, it is 0.33 mile. Though the nine nearest markets and the nine nearest schools were identified respectively with the key word of 'market' and 'school' on the googlemap, one from the search-results with the keyword 'market' and one from the search-results with the keyword 'school' are eliminated in the calculation of the average since they do not belong to the category of its keyword in fact. In the case of the nine nearest workshops, it is 1.02 mile. In the case of the nine nearest shopping centers, it is 2.52 mile. The average distance between the 78 Lingham Street site and the selected nearest locations of the nine categories is 0.65 mile.

4.3.2 The location advantages of produced affordable housing by CLT approach in Lambeth

Chart 22 Distance between a selected affordable housing site developed by CLT approach in Lambeth and its surrounding key-facilities identified

Brief decription of the CLT site: The site along Somerleyton Road which is proposed by Brixton Green as community-led development site including 'Creative hub', 'Street-facing homes' and and 'Community hub'. Creative hub means the place where Brixton-based art organisations, a chef school and post office or credit union are brough together. Community hub means the place where a children's nursery, hair & beauty training salon and a small community health centre with a general doctor and a dentist are situated, forming the alley connecting Mayall Road and Somerleyton Road. Street-facing homes means replacing the opposite side of the Somerleyton Road which is mainly indstrial units running down with street-facing good quality homes with frond gardens and family units on the ground floor (Brixton Green 2011). The majority of the site is owned by Lambeth Council. Brixton Green having over 600 local people as shareholders with 1 pound share of each person formulated the proposal, which has received a positive response from other local people, too. Brixton Green hopes to acquire the site by the end of 2012 and develop the project in Phase One (the Creative Hub) by the end of 2014. However, in the relation to acquiring land and negotiating with Lambeth Council, there are many factors involved influencing the pace of the project realization. The aim of the site re-development led by community is to strengthen the geographical and socio-economic cohesion of the town since the site is separated by the train line from Brixton town centre, having relatively lower economic activities and community safety than the other side of the train line. Having recognized the strategic importance of the Somerleyton Road site to the Brixton town, Brixton Green wants to lead community-led regeneration avoiding lack of job opportunities, consideration for young people but boosting the community cohesion. The nearest underground station to the site is Brixton which is 0.3 mile away, taking about 7 minutes by walk. Since the site encompasses multiple addresses/post codes, one representative post code suggested by the Brixton Green director is used for measuring the distance to key facilities on the googlemap.

According to the email interview with the director of Brixton Green, over 300 affordable residential units are prospected on the Somerleyton Road site to be delivered in the scheme. The exact number of affordable homes, the type of tenure, the home-price range and the design should be further defined in the process of getting planning permission from Lambeth Council.

The average distance to key facilities for living: From the Somerleyton Road site, the average distance to the nine nearest shops detected on the googlemap is 0.15 mile. In the case of the eight nearest shools, the average distance is 0.41 mile. Though the nine nearest schools were identified with the key word of 'school' on the googlemap, one from the results of the keyword 'school' is eliminated in the calculation of the average since it does not belong to the category of its keyword in fact. It is 0.33 mile in the case of the nine nearest clinics. In the case of the nine nearest companies, it is 0.23 mile. In the case of the nine nearest industrial sites, it is 0.28 mile. In the case of the nine nearest workshops, it is 1.04 mile. In the case of the nine nearest shopping centers, it is 2.83 mile. The average distance between the Somerleyton Road site site and the selected nearest locations of the nine categories is 0.65 mile.

4.3.3 The location advantages of produced affordable housing by IH approach in Cornwall

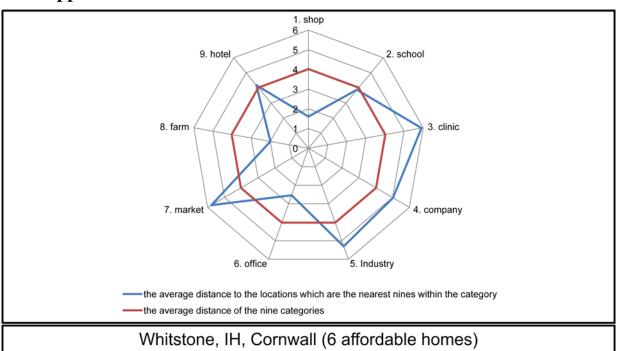


Chart 23 Distance between a selected affordable housing site developed by IH approach on a small scale in Cornwall and its surrounding key-facilities identified

Brief decription of the site with less than 30 affordable units: The St Annes Close Whitstone site is chosen as a stratified random sample from the group of affordable housing development sites by IH approach in Cornwall which are introduced on the website of Cornwall Council under the section of 'Details of Affordable Homes currently available' in Cornwall (Cornwall Council 2011a; 2011b; 2011c). The site has 6 shared ownership homes as affordable units which are 3 bed family houses at the price range from 38,750 to 60,000 requiring 25% share of the whole home price as minimum share. It is uncertain to identify

based on the promotion by South West Home, a governmental HomeBuy and FirstBuy intermediary agency whether the site is mixed with open market units. The Whitestone site is situated in the East of Cornwall. The applicants for the shared ownership units on the site need to prove that they are local to the parishes such as Whitestone, Boyton, Marhamchurch, Week St Mary, North Tamerton, Bridgerule and Pyworthy as well as they can not affordable suitable open market homes.

The average distance to key facilities for living: From the Whitestone site, the average distance to the nine nearest shops detected on the googlemap is 1.61 mile. In the case of the nine nearest shools, the average distance is 3.88 mile. It is 5.91 mile in the case of the nine nearest clinics. In the case of the nine nearest companies, it is 5.03 mile. In the case of the nine nearest industrial sites, it is 5.30 mile. In the case of the nine nearest offices, it is 2.54 mile. In the case of the nine nearest farms, it is 1.99 mile. In the case of the nine nearest hotels, it is 4.18 mile. The average distance between the Whitestone site site and the selected nearest locations of the nine categories is 4.02 mile.

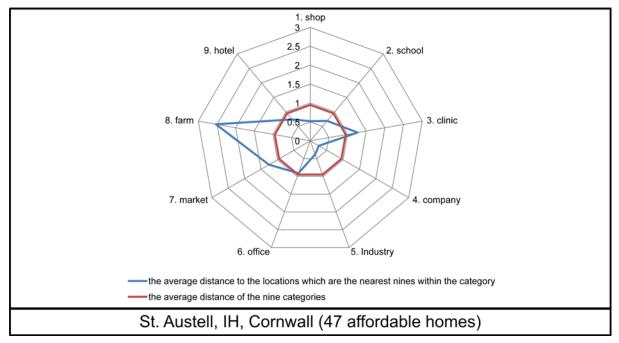


Chart 24 Distance between a selected affordable housing site developed by IH approach on a large scale in Cornwall and its surrounding key-facilities identified

Brief decription of the site with more than 30 affordable units: The Golphin Farm Treverbyn Road St Austell site is chosen as a stratified random sample from the group of affordable housing development sites by IH approach in Cornwall which are introduced on the website of Cornwall Council under the section of 'Details of Affordable Homes currently available' in Cornwall (Cornwall Council 2011a; 2011b; 2011c). The site has 31 affordable homes for discounted sale, 16 for social rent and 60 for open market sale. In total, the site has 106 dwellings. 2 bed apartments are priced at 78,861, 2 bed houses at 80,000, 3 bed houses at 97,688 and 4 bed houses at 124,375. The St Austell site is situated in Mid Cornwall. The applicants for the affordable homes on the site need to prove that they are local to the areas such as firstly parishes of Treverbyn and St Austell, secondly the former borough of Restormel and thirdly the whole Cornwall County.

The average distance to key facilities for living: From the St Austell site, the average distance to the nine nearest shops detected on the googlemap is 0.52 mile. In the case of the nine nearest shools, the average distance is 0.69 mile. It is 1.27 mile in the case of the nine nearest

clinics. In the case of the nine nearest companies, it is 0.26 mile. In the case of the nine nearest industrial sites, it is 0.38 mile. In the case of the nine nearest offices, it is 0.91 mile. In the case of the nine nearest markets including supermarkets, it is 1.26 mile. In the case of the nine nearest farms, it is 2.53 mile. In the case of the nine nearest hotels, it is 0.74 mile. The average distance between the St Austell site site and the selected nearest locations of the nine categories is 0.95 mile.

4.3.4 The location advantages of produced affordable housing by CLT approach in Cornwall

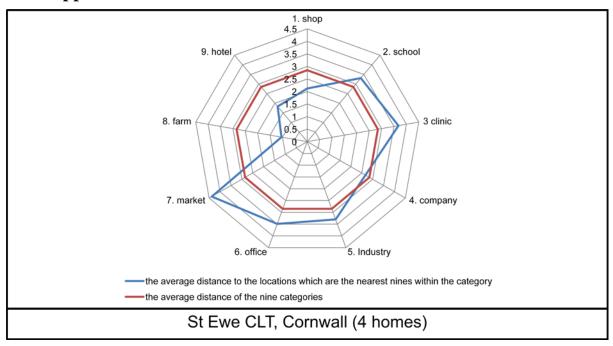


Chart 25 Distance between a selected affordable housing site developed by CLT approach on a small scale in Cornwall and its surrounding key-facilities identified

Brief decription of the small affordable housing site developed by CLT approach: Being facilitated by CCLT, St Ewe Affordable Homes Limited was registered as a Charitable Company Limited by Guarantee in April 2008. St Ewe Affordable Homes Limited acquired land at a cost of 7,500 pound per plot, of which all land was paid by Restormel Borough Council as financial support. On the site, 4 CLT affordable homes for discounted sale and 2 CRHA affordable homes for social rent were completed in January 2011 in the partnership with CRHA. The total number of CLT affordable homes on the site is 4.

The average distance to key facilities for living: From the St Ewe site, the average distance to the nine nearest shops deteceted on the googlemap is 2.12 mile. In the case of the nine nearest shools, the average distance is 3.31 mile. It is 3.68 mile in the case of the nine nearest clinics. In the case of the nine nearest companies, it is 2.67 mile. In the case of the nine nearest industrial sites, it is 3.30 mile. In the case of the nine nearest offices, it is 3.49 mile. In the case of the eight nearest markets including supermarkets, it is 4.38 mile. Though the nine nearest markets were identified with the key word of 'market' on the googlemap, one from the results of the keyword 'market' is eliminated in the calculation of the average since it does not belong to the category of its keyword in fact. In the case of the nine nearest farms, it is 1.04 mile. In the case of the nine nearest hotels, it is 1.83 mile. The average distance between the St Ewe site site and the selected nearest locations of the nine categories is 2.85 mile.

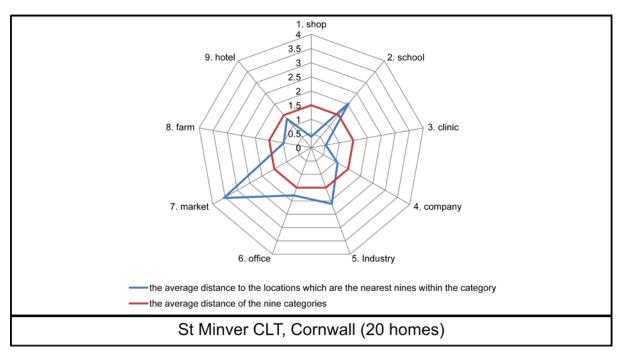


Chart 26 Distance between a selected affordable housing site developed by CLT approach on a large scale in Cornwall and its surrounding key-facilities identified

Brief decription of the big affordable housing site developed by CLT approach: Being facilitated by CCLT, St Minver CLT Limited was registered as a Charitable Company Limited by Guarantee in December 2006. St Minver CLT Limited acquired land and made a start on site on 1st October 2007. North Cornwall District Council at the moment (Now it was merged to Conrwall Unitary County Council) provided both a setting up grant and also development finance by way of a secured interest free loan. 12 two or three bedroom bungalows for local people through a self-build scheme were complted on time and within budget in December 2008 as a first phase. A second phase started on site during March 2010. This time, 8 CLT homes were completed in 2010. In the partnership with CRHA, 4 social rental homes are due to be completed in October 2011 as CRHA units. Thus, the total number of CLT affordable homes on the site is 20. Land cost 10,000 per plot.

The average distance to key facilities for living: From the St Minver site, the average distance to the nine nearest shops deteceted on the googlemap is 0.39 mile. In the case of the eight nearest shools, the average distance is 2.04 mile. Though the nine nearest schools were identified with the key word of 'school' on the googlemap, one from the results of the keyword 'school' is eliminated in the calculation of the average since it does not belong to the category of its keyword in fact. It is 0.52 mile in the case of the nine nearest clinics. In the case of the nine nearest companies, it is 1.07 mile. In the case of the nine nearest industrial sites, it is 2.11 mile. In the case of the nine nearest offices, it is 1.79 mile. In the case of the eight nearest markets including supermarkets, it is 3.55 mile. Though the nine nearest markets were identified with the key word of 'market' on the googlemap, one from the results of the keyword 'market' is eliminated in the calculation of the average since it does not belong to the category of its keyword in fact. In the case of the nine nearest farms, it is 0.98 mile. In the case of the nine nearest hotels, it is 1.33 mile. The average distance between the St Minver site site and the selected nearest locations of the nine categories is 1.50 mile.

4.3.5 Comparisons

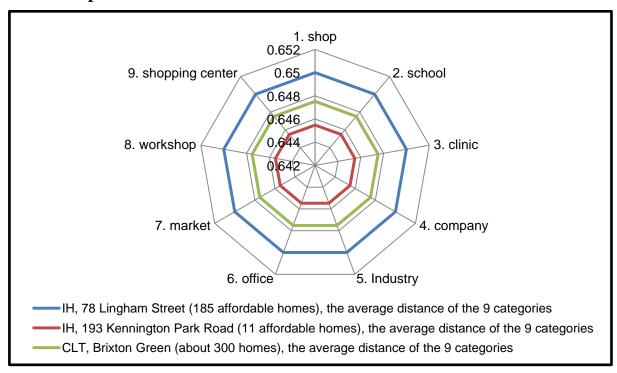


Chart 27 Comparison of average distance between each selected site developed by IH approach or by CLT approach in Lambeth and its surrounding key-facilities identified

In Lambeth selected as urban area, the 193 Kennington Park Road site selected as a small scale affordable housing development site by IH approach has 0.65 mile (presicely, 0.645475) as the average distance from the indentified nearest locations of the nine categories on the googlemap. The 78 Lingham Street site as a big scale affordable housing development site by IH approach also has 0.65 mile (precisely, 0.651418) as the average distance from the indentified nearest locations of the nine categories on the googlemap. The Brixton Green's Somerleyton Road site as affordable housing development site by CLT approach has 0.65 mile (precisely, 0.647514) as the average distance from the indentified nearest locations of the nine categories on the googlemap. As a result of the measurement of the average distance between each site selected and the indentified nearest locations of the nine categories - shops, schools, clinics, companies, industries, offices, markets, workshops and shopping centres - on the googlemap, it turned out that there is no significant difference between the selected location of affordable housing development by IH approach and that by CLT approach. The difference of 0.002039 between the CLT site and the Kennington Park Road site and that of 0.003904 between the CLT site and the Lingham Street site are negligible.

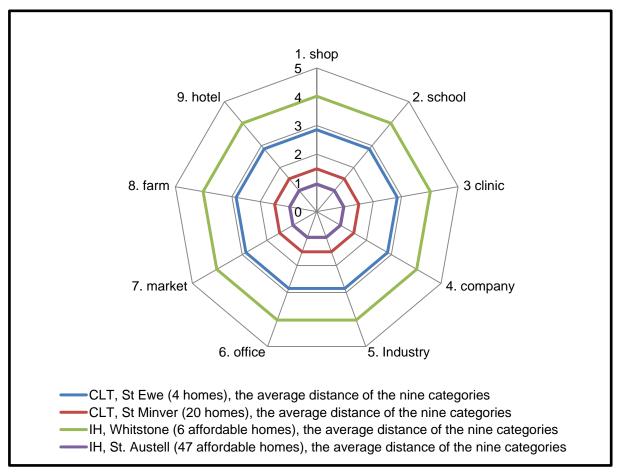


Chart 28 Comparison of average distance between each selected site developed by IH approach or by CLT approach in Cornwall and its surrounding key-facilities identified

In Cornwall selected as rural area, the Whitestone site selected as a small scale affordable housing development site by IH approach has 4.02 mile as the average distance from the indentified nearest locations of the nine categories on the googlemap. The St Austell site as a big scale affordable housing development site by IH approach has 0.95 mile as the average distance from the indentified nearest locations of the nine categories on the googlemap. The St Ewe site as a small scale affordable housing development site by CLT approach has 2.85 mile as the average distance from the indentified nearest locations of the nine categories on the googlemap. The St Minver site as a big scale affordable housing development site by CLT approach has 1.5 mile as the average distance from the indentified nearest locations of the nine categories on the googlemap.

4.3.6 Results of the comparisons

As a result of the measurement of the average distance between each site selected and the indentified nearest locations of the nine categories - shops, schools, clinics, companies, industries, offices, markets, farms and hotels - on the googlemap, it turned out that the biggest site among four, St Austell site by IH approach with 47 affordable homes, has the shortest average distance (0.95 mile) from the identified key-locations and the second smallest site, Whitestone site by IH approach with 6 affordable homes in shared ownership tenure, has the greatest average distance (4.02 mile) from the identified key-locations. St Minver site by CLT approach with 20 affordable homes has the second shortest average distance (1.49 mile) and St Ewe site by CLT approach with 4 affordable homes (when including 2 social rental

units delivered by CRHA in the partnership, 6 affordable homes in total in the site) has the second greatest average distance (2.85 mile).

Based on the result, it might be possible to conclude it does not make a significant difference in locational conditions of affordable housing development whether the development is initiated by IH approach or by CLT approach. However, it seems that the size of the development is more related to generally favorable location of affordable housing development in that the small scalse of affordable housing development tends to be situated more away from a downtown, where land for residential use is available in small amount. Contrary, the bigger the scale of affordable housing development in rural area is, the nearer to a downtown or key-facilities serving convenience for living the development site is situated. Yet, this can be generalized only in rural area. In highly urbanized area, even the scale of development does not make a significant difference because main facilities for living are already spread across the area and they are well connected to each other as urban attributes.

Based on the result, it might be possible to conclude that IH approach and CLT approach does not make a significance difference from each other in terms of getting land in convenient locations for living. However, the size of development matters in rural areas but it does not even matter in the case of urban areas. Then, it is possible to assume that CLT approach might be located in a remoter site than IH approach especially in rural areas since the scale of housing development by CLT approach tend be a small scale in comparison to that by IH approach. Still, it is difficult to be conclusive due to the presence of planning regulations and land use planning in England which are relatively stronger than USA or other Non-EU countries and due to the exisistance of local-authority-owned land.

Land use planning such as designating land for residential or for other purposes and planning regulations which impose restriction on possible housing tenure types on a site and the presence of public ownership of land are all highly influentional on both IH and CLT approaches. They do not stand in a different land market from each other but all in the same land market. If land is too remote to be built on with housing, it would not be granted planning permission for residential otherwise both a commercial developer and a CLT developer would not want to build housing on it because it is not financially viable. In the end, land for affordable housing by both approaches tends to be situated near a core of an area, anyway either by IH approach or CLT approach as long as funding in the form of capital loan, land donation or governmental subsidies are available.

Chapter 5 Conclusions

5.1 Answering the research questions

This research started by supposing the need to identify the priority of public support among two different affordable housing provision approaches, namely, Inclusionary Housing and Community Land Trust. Then, the identification of the priority of public support is proposed to base on three factors; productivity, permanent affordability and right location of housing development.

The main research question was 'which one produces better results to address the problem of affordable housing when taking the productivity of each approach, the durability of affordability of once produced affordable units by each approach and the location of those housing units into consideration?'.

In order to answer the main research question, three specified questions were casted.

1. Which is more productive in creating affordable housing units between IH approach

and CLT approach?

Productivity: If the quantity or the produced volume of affordable units by each approach is too insignificant or too limited by its nature, it cannot be reserved as granted for receiving public support because the coverage of the approach does not reach to meet the need for affordable housing.

2. Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach

Affordability: Each approach should be able to produce housing units that are affordable by its nature of the approach.

Durability of affordability: Once produced affordable housing should remain permanently affordable for next generations because otherwise public funding invested in affordable housing provision is eroded in the fluctuating housing market and the more amount of funding would be required in the future to meet the need for affordable housing in the appreciating market environment.

3. Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

Location of affordable units: The location of affordable housing should be convenient for living. Affordable housing in remote areas because land is cheap is not real solution for those in housing need with low income and wanting to stay local with job opportunities.

5.1.1 Which is more productive in creating affordable housing units between IH approach and CLT approach?

IH approach is more productive than CLT approach. In Lambeth, IH approach which finances affordable housing through developer contributions accounted for average 29% of the annual affordable housing production in total for the period 2005 to 2010 (as fiscal year, thus April 2004 to March 2010), while CLT approach is merely taking a first phase to develop a site of approximate 1 acre (0.4 hectare) at the moment. In Cornwall, IH approach which finances affordable housing through developer contributions accounted for average 59% of the annual affordable housing production in total for the period 2005 to 2010 (as fiscal year, thus April 2004 to March 2010), while CLT approach 4% in the year 2009. CLT approach is new compared to IH so one cannot be conclusive about its productivity yet in numerical terms. Still, it is clear that even if CLT approach reaches a stage as mature as IH approach in England, IH approach would probably still win because IH approach harnesses the marketdriven force of developers which produce more housing in absolute terms than the third sector and especially legal binding power of planning obligations to enforce affordable housing production while CLT approach does not have such resources and is more voluntary basis. CLT approach mainly depends on availability of transferable public land, donation, public subsidy and planning regulations for lowering down the price of land acquisition. The point would be even obvious when considering the experience of USA that there are 6,000 affordable homes reported in total as of March 2009 in 45 states across the USA after about 40 years of its CLT-history (Rocky Mountain CLT 2011).

5.1.2 Which is more durable in securing affordability of once delivered affordable housing units between IH approach and CLT approach?

The durability of affordability of affordable housing produced either by CLT approach or by IH approach depends on a type of tenure it adopts and on a disposal method arranged. 'Social rent', 'Intermediate rent', 'Shared ownership', 'Shared equity' and 'Discounted sale' bound to

a resale price covenant and a pre-emption right granted to LAs or RPs are available options applying both to CLTs homes and IH approach-produced homes.

- Social/Intermediate rent is supposed to remain permanently affordable as it annually increases by RPI plus 0.5% under the national affordable 'target rent' regime.
- The issue is that the initial starting rent level prior to applying 'target rent' regime is affordable for targeted incomes groups and candidate tenants. However, rent setting is guided by each local authority's development plan and the National PPS. Since affordable 'social rent' setting is made possible by local planning authority binding developers to provide social rent case by case, by a council or HCA allocating grants for such housing development.
- Shared ownership is less durable than shared equity schemes in terms of affordability since both the full market value appreciation and the depreciation are directly reflected on the amount of two kinds of payments on shared ownership. One is rent for s share held by housing associations and homebuilders. The other is mortgage repayment for the share held by the occupant. 'Rural exception sites' and 'protected areas' designated by Communities and Local Government where a maximum share in which a home-dweller can buy an interest is limited to 80% of its open market value allow a property to remain more affordable for a certain degree than scaling up of the ownership of share is allowed up to 100% of the property. Still, the affordability of total housing costs on a property can be less durable in this case of capping on a maximum staircasing percentage if the rent is charged on the remaining share unsold to an occupant. Shared ownership is just lowering down some interest payment than the full mortgage's interest payment borrowed for the full equity in property.
- Shared equity schemes ensure affordability more permanently than shared ownership schemes because it takes out a part of the property equity out of the market. Equity loan is usually first 5 years interest free and can be redeemed by the home-occupant in governmental equity loan schemes. Private equity loan schemes vary in details of arrangements. Affordable homes provided by CLTs mainly use a discounted sale scheme with a resale price covenant rather than equity loan. In this case, CLTs do not capitalize the part of the equity which the home owners cannot claim but the part of the equity is permanently locked in CLTs' assets. When affordable homes produced under S106 agreements are disposed, shared equity and shared ownership schemes both can apply. However, discounted open market sale also known as resale covenant housing is rarely used in Lambeth, urban area, accounting for only 3% of the total affordable housing production by IH approach in the identified period while shared ownership schemes for 45%. In Cornwall, rural area, discounted open market sale of homes with a resale price covenant accounts for 27% while shared ownership for 20%.
- Fixed equity schemes also known as Retained equity, equity loan schemes with interest free (a type of balloon payment mortgage), discounted open market sale also known as resale covenant housing (with a resale price covenant) and mutual ownership by CLTs have an effect to take a part of the property equity from the market so that a certain percentage level of the equity held by an home occupant applies to subsequent buyers, too.

According to simulation based on modeled formulas, shared equity related schemes depending on arrangements and low cost housing with a resale price covenant which take an 20% of the full equity of a property out of the whole housing prices borne by an occupant have an appreciation rate equivalent to 64% of the appreciation rate of housing prices involved in shared ownership schemes which reflect a full appreciation rate of the

open market value of a property, when the entire market appreciation rate in a region is under the same conditions.

In conclusion, affordable housing provided by CLT approach is likely to be more permanently affordable than affordable housing provided by IH approach but not necessarily always so because it is possible for IH approach to guarantee the same durability of affordability as CLT approach when it adopts a resale price covenant or an equity loan which would be recycled for next occupants whenever the equity is redeemed. With different legal approaches and arrangements, it is possible to achieve the same result, 'durable affordability' in the planning system of England. Thus, the durability of affordable housing by IH approach is depending on a tenure type and a disposal method each unit is arranged with but a substantial percentage of affordable housing produced by IH approach does not adopt a more permanently affordable arrangement of such tenure type and disposal method as discounted sale with a resale price covenant. Ensuring durable affordability is not exclusive to CLT approach but also possible with IH approach because some tenure mode arrangements interwoven with IH approach can create a same effect in the end with taking a part of property equity out of the market through planning obligations and regulations. IH approach is operated within the strong planning regulation regime of UK and in the entire planning policy framework that bring public intervention and controls both on production (supply side by S106 agreements) and disposal (demand side by government-subsidizing mortgages) of affordable homes produced by IH approach. If such intervention and controls do not exist, then, an appreciation rate of those homes produced by IH approach would be higher.

5.1.3 Which one delivers affordable housing in more desirable locations between IH approach and CLT approach?

Contrary to the initial hypothesis that IH approach would deliver affordable housing in more favorable location than CLT approach would, it turned out that there is no significant difference between IH approach and CLT approach in terms of acquiring land in more favorable location. In Lambeth, it is because all surrounding area is fully developed as its urban attributes. In Cornwall, location of affordable housing is under the planning regulation regime so if the land use is residential it means that it is appropriate for living. In combination with other instruments, a control system of residential location based on planning permission power of local authority works in order to keep the market from producing affordable homes in disadvantageous locations. Thus a variable whether a site is acquired by IH approach or CLT approach does not make a difference but the size of a site matters. There is a slight tendency in rural; the larger the site is, the nearer to an already developed downtown it is likely to be located- and the smaller the site is, the smaller settlements it is likely to be located in which means the location is farther away from a larger downtown. In urban area, the size of a site does not matter significantly since all area is likely to be developed fully in urban. Again, local authority's planning controls are the most influential on location of affordable homes in both approaches so that the quality of location tends to be not too varied.

5.2 Final answering the main research question in the linkage to the literature and recommendations

The research findings answering the three specified questions are linked to the initial main research question.

'Which one produces better results to address the problem of affordable housing when taking the productivity of each approach, the durability of affordability of once produced affordable units by each approach and the location of those housing units into consideration?'

In order to answer the questions based on the specified research findings concluded above, it is necessary to link those findings to the context of two approaches found in the literature as following.

Firstly, CLT approach is far weaker approach than IH approach in respect of magnifying the affordable housing production because the organising power, institutional history, and available supporting grants are not as strong as already existing housing associations and main registered housing providers. Yet, some small CLTs might work more efficiently in terms of housing production within the tight budget than the equivalent organisational size of housing association does. However, the productivity of CLT approach is also depending on local planning authority's willingness to back up this relatively new approach. Especially in the case of some urban CLTs which are being incubated, the fact that local planning authority is unfamiliar with all new type negotiations involved in granting planning permission to a CLT and reluctant to try a new thing could work as impediments in affordable housing production by CLT approach. The point is that it is difficult to be conclusive on comparison of productivity between IH approach and CLT approach due to all additional instruments in planning policy coming into play.

Secondly, some affordable housing of IH approach can also be ensured to remain as permanently affordable as that of CLT approach by arrangements under the British planning system. The reason for that CLT approach's housing development are not spreading in scale in comparison to IH approach's housing development although the number of newly set-up CLTs across England recently increases fast by stimulation and facilitation of the national CLT network seems to relate to that it is in doubt in practice whether CLTs necessarily provide very distinguishably permanent affordability to affordable housing unlike other affordable housing generally delivered by IH approach. If the distinction of CLT approach in terms of guaranteeing permanent affordability is not very clear enough for the people to choose this relatively brand new name of CLT housing, they would not be attracted necessarily to CLT approach for solving the problem of lack of affordable housing since through already existing planning regulations it is possible to guarantee a permanent affordability at a degree which is approximate with that of CLT approach.

Thirdly, affordable homes delivered by CLTs are not necessarily located in a more remote place than those by IH approach for lowering down land acquisition costs. Land acquisition costs can be excluded from the equation of total development costs because land is often transferred to a CLT at a lower price than its open market value or donated freely. A CLT might approach to local planning authority to be transferred council-owned land with an agreement that the CLT uses the planning gain for delivering affordable housing which is lower in price than open market value. Such dependency of CLT approach on the availability of transferable public land, benevolent donations or public subsidies would not be endless without more public intervention and backing-up as in case of IH approach which harnesses the resources from the market housing development proactively.

The main finding based on the answers to the three main questions is that CLT approach in England is actually overlapped with IH approach in that CLT homes can be a complete subset of affordable homes under S106 agreements (by IH approach). Affordable homes by IH approach and CLT homes forms an intersection. Because IH approach is in England interpreted as a mechanism to mobilize planning gain for creating affordable homes, CLTs are also regarded as a developer under the framework of IH approach. Ensuring CLTs to utilize

its equity in housing for permanent affordability and backing up its legal feasibility by the legal framework of S105 agreements are a part of IH approach in England. That is the part where IH approach and CLT approach forms an intersection. Not all of CLT homes are in the frame of IH approach but can target a slight different income group than that of IH approach such as the price level of lower intermediate market housing.

Then, which should be given a priority of public support between IH approach mobilizing planning gains from developers to create affordable homes by laws and CLT approach mobilizing community power to mobilize resources to create affordable homes? The answer is that both of them are fine for the purpose of guaranteeing a permanent affordability because it can be guaranteed enough depending on a tenure arrangement and an adopted resale method in both approaches. However this conclusion is based on the context of planning policy and planning regulation regime of England. In England, IH approach is being supported by price-restriction, subsidies and planning obligations working in S106 agreements so it is already getting public support. On the other hand, CLT approach is getting public support, too, by being given local-authority-owned land or land at below market price. Both are today not free from public supports. Without all those supports, CLT approach would be far more permanently affordable than IH approach while IH approach would not be able to produce a number of housing as today it does.

Considering CLTs and Inclusionary zoning in USA, the foresaid point would be clearer. IH approach are often lamed in terms of its effectiveness, sometimes due to its optional enforcement or sometimes due to absence of price-control and the public pre-emption right to repurchase affordable units created by IH approach or due to no public intervention in tenure modes of subsequent occupants, while CLT approach preserves affordability permanently yet with a very small proportion of its stock to the entire stock of affordable housing across the USA.

Based on precedent discussions, the recommendations for maximizing the effectiveness of affordable housing provision is that IH approach and CLT approach could be better combined together in a way that IH approach under strong public regulation and implementation could maximize the production of affordable housing compatible with the commercial housing development, at the same time, CLT approach could preserve affordability more durably. For proper location of residential land use, the public body needs to intervene in both approaches under a consistent planning policy framework. The elements of CLT approach were already found in England to work in IH approach and that it has been actually working well in English planning system. However, the more proactive linkage of IH approach and CLT approach can still be sought in the future in a way that affordable units produced by IH approach can be transferred to local CLTs, for example.

	The core of IH approach	The core of CLT approach
Elements to be combined with each other between two approaches	-Harnessing the market driven force of developers	•
	-Obliging developers to deliver a certain portion of affordable housing with their market housing development	- Taking land, a part of the property equity, out of market and putting on the hands of community
		(land is designated for affordable homes, not being eroded in the market)
	-Planning regulations and intervention	- Pre-emption right to repurchase affordable homes by Community

Table 18 Elements of IH approach and those of CLT approach to be combined

The distinction between IH approach and CLT approach for other aspects should be better sought and identified also in terms of community engagement and the comparison of institutional organizing power between already long existing housing associations and CLTs emerging newly as one of housing providers, which could not be covered in this research and can better be left for further research questions.

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