

Urban Community Land Trusts and their contribution to Sustainable Lifestyles



A sustainable pathway
and influencers

Acknowledgements

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All images are the authors' unless stated otherwise.

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Acronyms

AMI	area median income
BVCLT	Beverly Vermont CLT
CHT	Champlain Housing Trust
CLT	Community Land Trust
CLTB	Community Land Trust Brussels
CRSP	Cooperative Resources & Services Project
ELCLT	East London Community Land Trust
HUD	Housing and Urban Development
LA	Los Angeles
LAEV	Los Angeles EcoVillage
UK	United Kingdom
US	United States
USTU	Urban Soil-Tierra Urbana

Preface: Community Land Trusts as a Catalyst for Sustainable Lifestyles

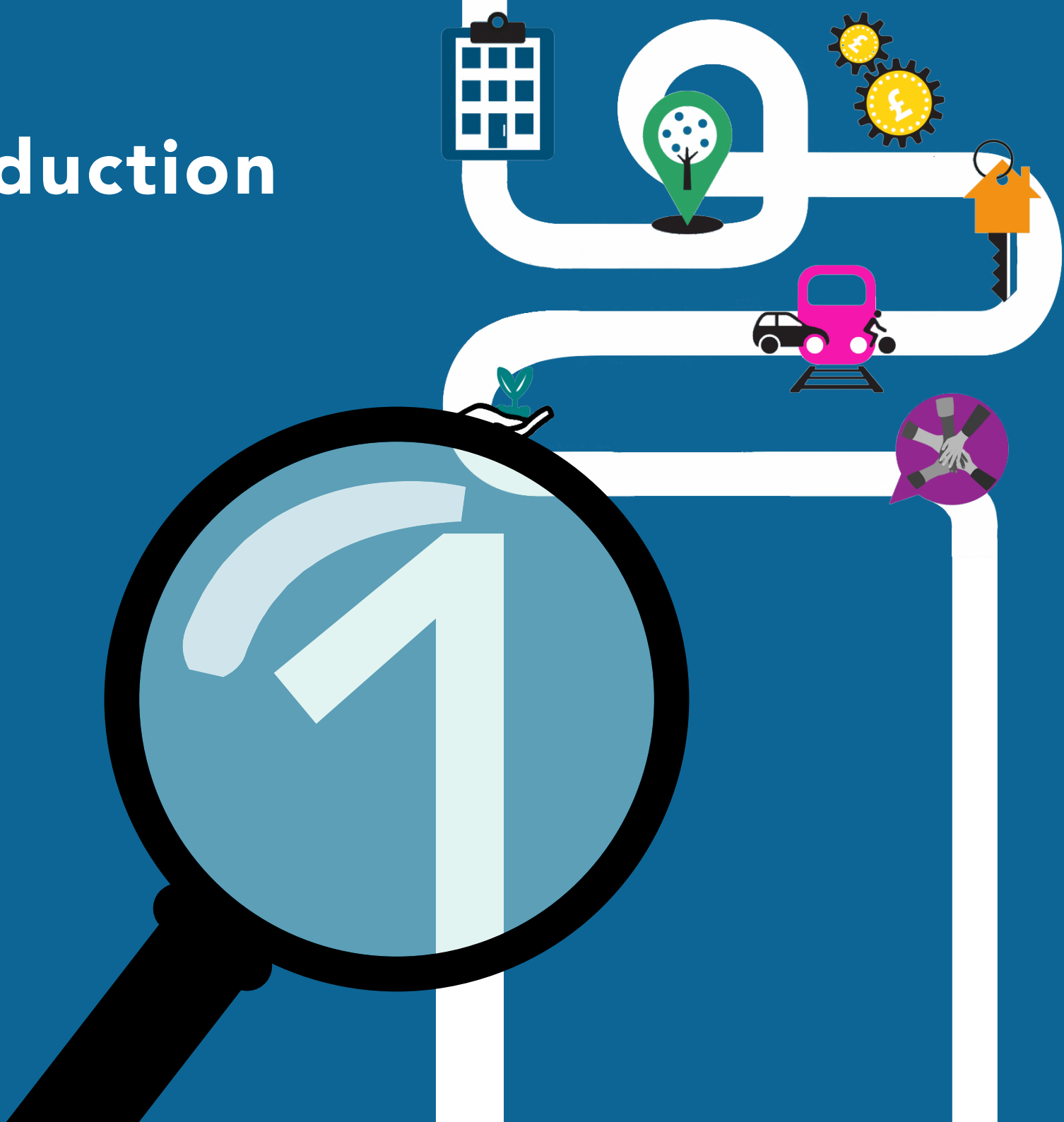
People make many decisions during their lifetime - for the fortunate, those decisions are guided by ample opportunities shaped by their environment. The lifestyles we end up living, willingly or forcefully, have a profound ripple on the opportunities we are able to grasp, our personal and communal health and happiness, the free time we have, the housing choices we can afford to choose, the health of our planet and much, much more.

How we choose to live collectively - what resources we choose to share or commodify, what buildings we choose to build or reuse, what type of transport we choose to use, what we choose to integrate or segregate - will have an immense impact on the trajectory of the lives of individuals, communities and places.

This research presents CLTs as an alternative institution to spark a progressive solution to the many urban environment challenges, namely housing affordability and social and environmental equity that shape our lifestyles. This is not meant to dictate what the ultimate sustainable lifestyle looks like, but instead it can help CLTs guide a variety of design outcomes that enable lifestyle choices that contribute to sustainability.

Word count: 11,409

Introduction



1.1.

Research Background and Problem

Currently, 50% of the world's population live in urban areas with an expected steady increase to 80% by 2050 (The Human Scale, 2012). In light of this growth, how will cities continue to shape our livelihoods? While reflecting on city planning, Jan Gehl argued

“ nobody knew that the way we build cities had any influence on lifestyles.

The Human Scale, 2012

As cities increase in population and in their cost of living, a common pressure is resounding worldwide – the affordable housing crisis. Long term quality affordable housing provides the opportunity for people to build their livelihoods and their location ultimately dictates the opportunities they have for employment, schools, transport, health facilities, family support, amenities and ultimately building a sense of community. However, the disparities of income to housing cost ratios in urban centres worldwide has caused a substantial and sustained overpricing of property (UBS Editorial team, 2019). As a result, the trickling affect of overpriced property too often results in the gentrification of neighborhoods and the displacement of communities who are priced out of the area.

The community land trust (CLT) model has become a powerful response to addressing the increasingly dysfunctional housing system by providing the legal platform that ensures its housing stock is affordable in perpetuity. The CLT movement emerged in the United States (US) from the civil rights movement with civil rights activists establishing the first CLT, New Communities Inc. in 1969 to create the opportunity for long-term economic and residential independence for African Americans in the rural south (David, 2010). Its inspiration came from historic precedents, including collectively owned lands of indigenous people, the Israeli moshav ovdim collective settlements, the Mexican ejidos where land is state owned with the community having usufruct rights, the Tanzanian Ujamaa Vijijini collective settlements, the Indian Gramdan villages where land is held by a village council and leased to farmers, the Canberra, Australia government owned land and the English Garden Cities mixed ownership scheme proposed by Ebenezer Howard where the municipality leased its land (Davis, 2010; Davis, Algoed and Hernandez-Torrales, 2020; National Community Land Trust Network and Davis, 2020). These precedents only had the basic approach to CLT ownership (land) but lacked the organizational (community) and operational (trust) features of CLTs which make the model dynamic. The concept of “trustery” defined the CLT movement's fundamental principle that

“ no man or government has a moral title to the earth's ownership. If it is to be used, and we have to use it in order to live, then it has to be treated as a trust. We have to hold the earth in trust.

National Community Land Trust Network and Davis, 2020

CLTs focus on the problem of preserving affordable housing and the revitalization of residential neighborhoods by serving and engaging with disadvantaged individuals and communities (Davis, 2010) through a democratic decision-making process that aims to place them at the forefront of positive change. CLTs vary substantially in how their “organizations are structured, how their lands are utilized, how development is done, and how the stewardship of housing is operationalized” (Davis, Algoed and Hernandez-Torres, 2020, p. xxiv). This has enabled CLTs to be adaptive to fit the conditions, needs, priorities and legislation of their respective environment and communities. As such, a working definition for CLT is

“community-led development of permanently affordable housing on community owned land.

—
Davis, Algoed and Hernandez-Torres, 2020, p. xxx

This is achieved by providing alternative land and home ownership benefits that traditional models cannot offer in terms of long-term equity. By separating the ownership of a house from the land it sits on, the home remains affordable in perpetuity as the CLT retains long-term ownership of the land and residents lease the land from the CLT through a long-term renewable lease that outlines sale restrictions on assets on its land (Davies, 2010). CLTs provide the necessary platform to strengthen communities that live, work, play, care, invest or connect to a particular place by enabling local

community stakeholders to be part of the decision-making process (MacLennan, Bijoux and Courtney, 2015).

However, as Olivia R. William highlights the underlying issue with the current use of the CLT model is that it is increasingly “being perceived and promoted by housing advocates and practitioners as primarily an economically efficient affordable housing strategy, rather than an organizational approach that empowers poor, working-class, and marginalized people to take control of the land they occupy” (Davis, Algoed and Hernandez-Torres, 2020, p. 407). This singular issue approach to such a powerful community-based model overlooks the power the CLT model has in defining and dictating lifestyles for the disadvantaged. This approach stems from many financial factors and as Olivia R. William identifies it is the result of lesser established CLTs dependency on external funding which ultimately forms a top-down financial accountability structure to funders. Additionally, “most public and private funders of CLTs are concerned primarily with the number of affordable homes that are being produced and preserved for lower-income people, not the ways that residents are engaged after they become the occupants of those homes, nor the needs that residents may have for non-housing development in their neighborhoods” (Davis, Algoed and Hernandez-Torres, 2020, p. 411). Although access to affordable housing is fundamental to establishing sustainable lifestyles, there are many more aspirations beyond affordable housing to sustain a thriving community. These are investigated in depth in this research within the parameters of CLTs by using a mix of international cities, including global cities due to their high living cost and the steady increase of people moving to urban areas globally.

“ Without a continued focus on community control in CLTs, we lose opportunities to build and to cultivate multi-faceted CLTs with neighbourhood amenities beyond housing.

Davis, Algoed and Hernandez-Torres, 2020, p. 414

1.2. Research Questions, Aim & Objectives

Figure 1.2 illustrates the research questions, aim and objectives.

By synthesising the lessons learnt from existing urban CLTs, this research highlights the long-term impacts CLT developments have on their respective urban fabrics that ultimately shapes their communities' lifestyles. The sustainable pathway breaks down the interdependencies of urban design products and wider processes that facilitate sustainable lifestyles within urban CLTs. Wider processes are key to understand how urban CLTs facilitate sustainable lifestyles due to the mutually reinforcing components of the CLT model, as illustrated in figure 1.1.

Further detail regarding the structure of the report is outlined in the following section.

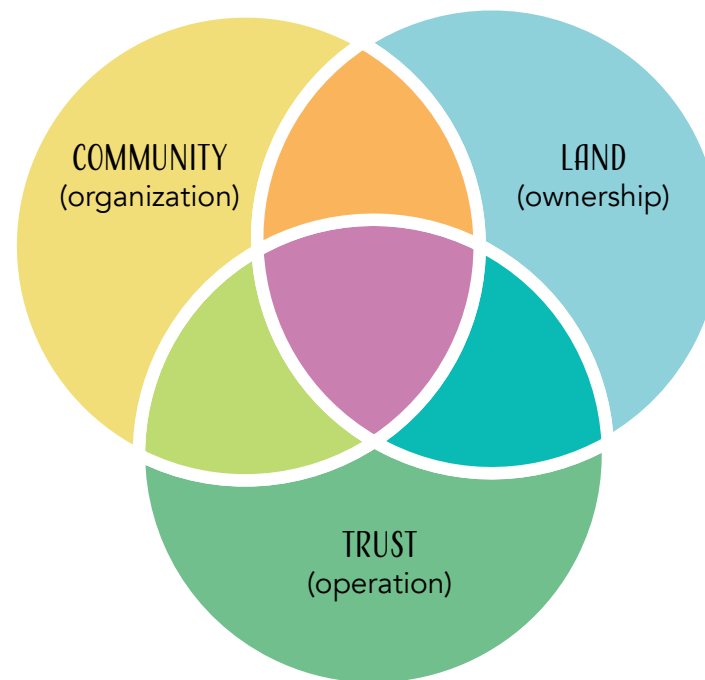


Figure 1.1. Components of a CLT model (Davis, Algoed and Hernandez-Torres, 2020)

1.3. Research Structure

The research questions, aim and objectives posed in figure 1.2 have structured how this research has been carried out, as described in figure 1.3. Notably, each chapter has an illustrative icon which will be used in each chapter to illustrate the methodology route and sources of information used from previous chapters.



RESEARCH QUESTIONS: How could urban design influence sustainable lifestyles within urban CLTs? Are there unique qualities in urban CLTs that enhance sustainable lifestyle outcomes?

OBJECTIVES:

1. Define sustainable lifestyles in relation to urban CLT developments.
2. Develop a framework to analyse urban CLT developments urban design and wider qualities that support sustainable lifestyles.
3. Apply the framework to a series of international CLT case studies to identify prevalent themes in the form of a sustainable pathway that outlines design recommendations which facilitate sustainable lifestyle outcomes in urban CLTs.
4. Validate the sustainable pathway with professionals to understand its underlying successes and areas for improvement.

RESEARCH AIM: To provide a practical pathway to designing opportunities for sustainable lifestyles within urban CLT sites which stimulate wider community benefits.

Figure 1.2. Research questions, aim and objectives

Relevance & Contribution

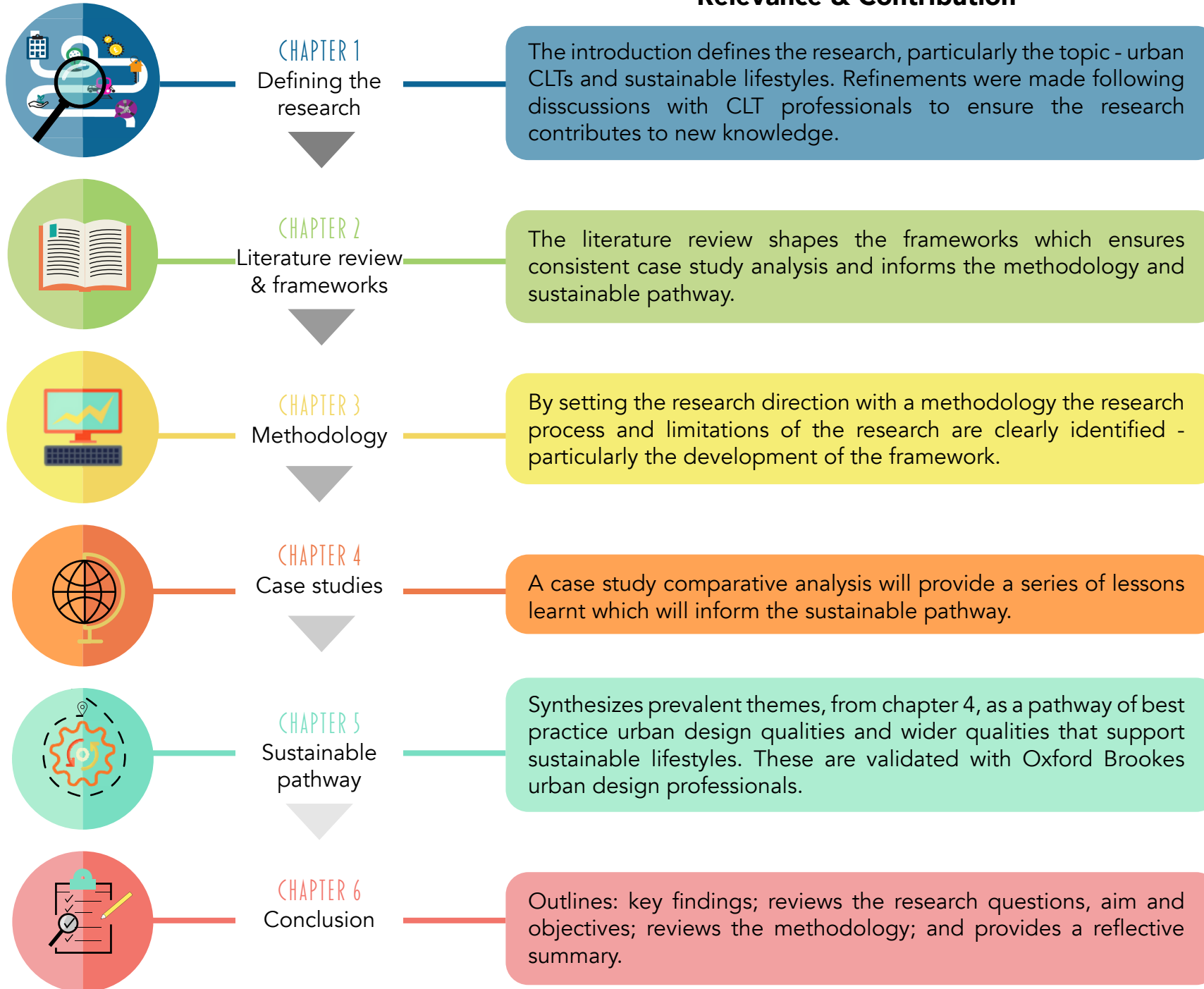


Figure 1.3.
Research structure

1.4. Relevance of Research

Over the past 40 years urban CLTs have operated in the US and have inspired their growth in the United Kingdom (UK) in the early 2000s and most recently CLTs have become established in Belgium, France, Italy, Australia, Kenya, Canada and New Zealand (Habitat Worldmap, 2019; National Community Land Trust Network and Davis, 2020; Rose, 2018). In the US, there are 260+ CLTs with a housing stock of 5,000+ homes, whereas the UK has 300+ CLTs with a housing stock of 935 homes (Davis, Algoed and Hernandez-Torrales, 2020; National CLT Network, 2012; National Community Land Trust Network, 2020a). Their development success is dependent on many factors, as illustrated in figure 1.3. Due to the nature of CLTs their failure in development is largely a result of limited finances and / or too many stakeholder reservations - be it political, landowners or financial institutions. This research aims to mitigate these challenges in future by highlighting the dynamic opportunities CLTs have in shaping sustainable lifestyles that have far reaching benefits to the wider community.

Additionally, the de-privatization of land and other assets CLTs hold allow its users to democratically be

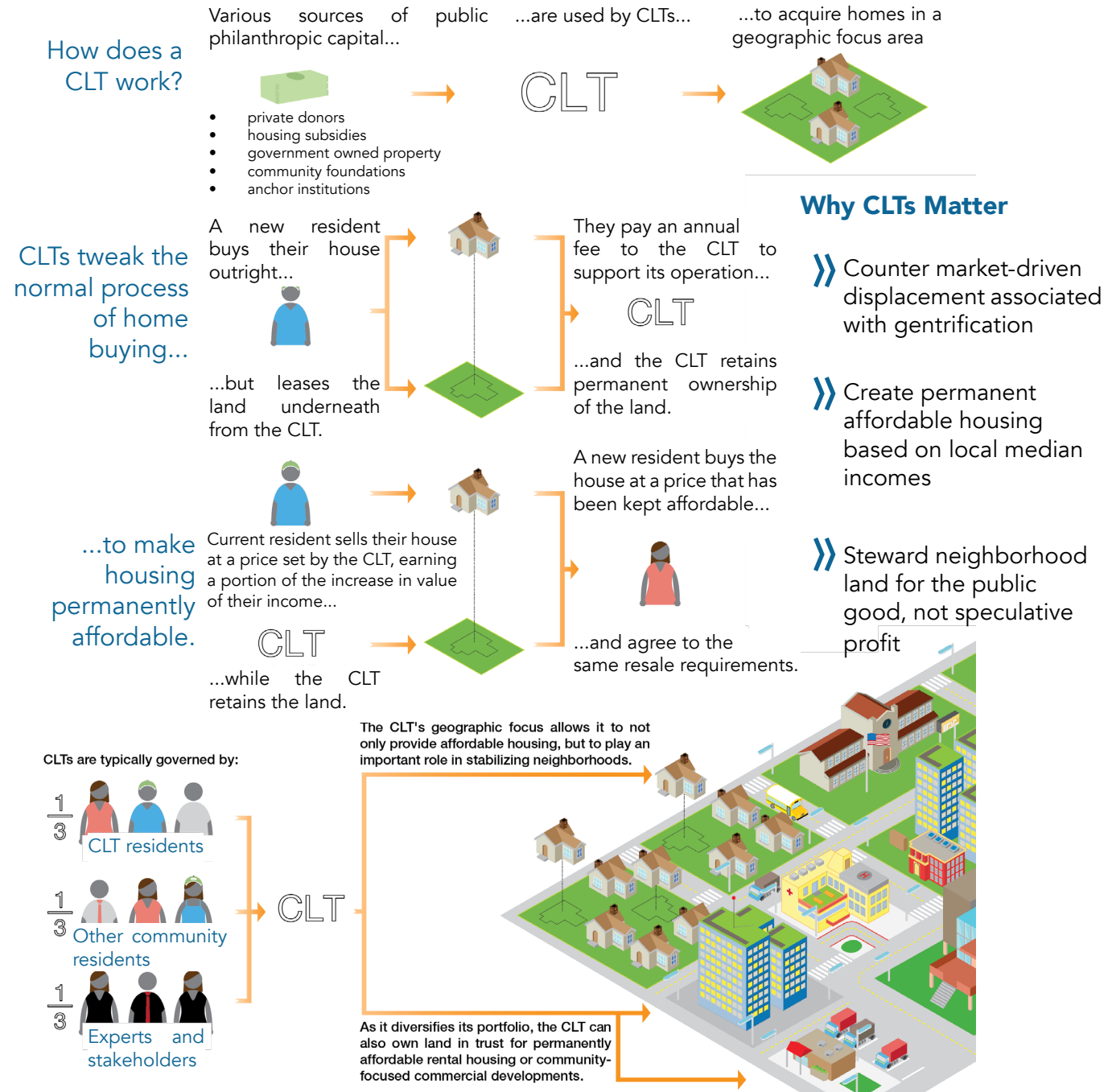


Figure 1.3. The classic CLT model infographic (Yi, 2014)

involved in decisions thereby ultimately shaping their own lifestyles. As Verena Lenna emphasises, CLTs have the ability to foster the spatial conditions for cooperation to happen by facilitating the possibilities of spontaneous encounters amongst communities to react to oppressive conditions and generate innovative approaches and answers to emerging needs (Davis, Algoed and Hernandez-Torres, 2020). She identifies that “the morphological qualities of a site and a building provide the form and envelope for specific uses, pushing [stakeholders]... to work together not only so they can coexist, but also – and most importantly – so the project’s resources can be preserved” (Davis, Algoed and Hernandez-Torres, 2020, pp. 422-3). The rights and governance behind CLT developments are generally consistent from site to site, but each is unique in its site specificness, including its users that have different needs, expectations and the socio-spatial conditions within a given context and moment in time. As a result, CLTs have the capacity of transforming a city both introvertly (within its development site) and extrovertly (outside its development site) (Davis, Algoed and Hernandez-Torres, 2020). These far reaching transformative benefits, that CLTs have the ability of engendering, can be delivered in a multitude of ways and this research highlights these alongside their contribution in supporting sustainable lifestyles. As Verena Lenna highlights the interweaving of CLT developments within its wider urban fabric also known as the porous perimeters

“ of a CLT’s projects provide the physical and relational conditions to revive the existing urban fabric.

Davis, Algoed and Hernandez-Torres, 2020, p. 426

This research acknowledges the limited resources and opportunities CLTs have to deliver sites and therefore it seeks to provide a practical pathway to design sustainable lifestyles that have far reaching benefits within and around urban CLTs. In doing so, the value of the research seeks to aid urban CLTs to “go to scale” and be more widely known, understood and accepted. This would benefit communities (by engaging them in decisions impacting their day-to-day lifestyle), land (using it responsibly ensuring socio-spatial equity) and CLTs (becoming more financially autonomous).

Literature Review



2.1.

Theoretical framing of sustainable lifestyles from a built environment lens

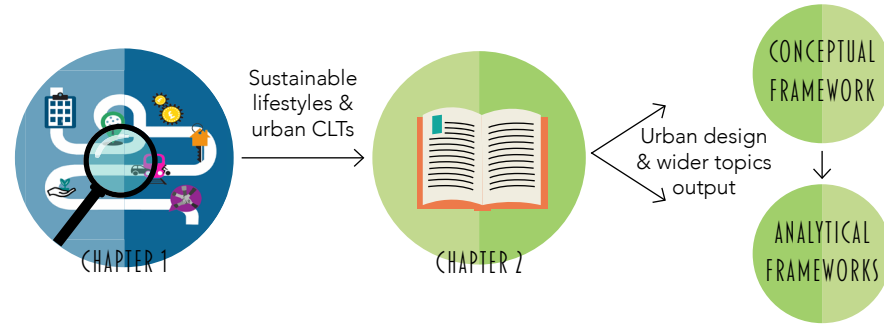


Figure 2.1. Methodology route and sources of information used for chapter 2

Research joining the fields of sustainable lifestyles and the built environment is an emerging study area, particularly with respect to the complexity of our growing urban centres and lifestyle choices. That said, this research has sought to review theory from a mix of perspectives and years - such as, Carmona (2018); Carmona *et al.* (2003); Portney (2013) among others - in order to understand the current challenges but also acknowledge built environment issues from the past, seen in both Jacobs (1961) and Roger (1995), which are still relevant today. Additionally, the use of CLT literature has also been used - such as Bunch (2013); National CLT Network (2012); Kamizaki (2016) - which have tailored the findings within this chapter to be applicable to urban CLT developments.

The scope of this review has been acknowledged as there are a large number of studies for holistic urban design approaches that support sustainable lifestyles worldwide. However, since the focus of this research is on urban CLT developments, wider scope literature has not been reviewed in detail, such as Carmona *et al.* (2003); Dellenbaugh-Losse, Zimmermann and De Vries

(2020); Rogers (2018). Moreover, CLT developments tend to be small scale development, usually no larger than a block and often only a few plots, therefore the review has been tailored appropriately.

By grounding this research on a variety of existing literature this chapter aids in defining urban design and wider topics associated with urban CLTs that facilitate long term sustainable lifestyles. These findings inform the conceptual and analytical frameworks. To put the literature into context, the following section sets the parameters regarding "sustainable lifestyles."

2.2. Sustainable Lifestyles Context

In order to critically analyse the influence of urban design on facilitating sustainable lifestyles, it is paramount to first define what is meant by "sustainable lifestyles."

First there is the aspect of sustainability and the symbiotic nature of its three pillars - planet (environmental aspects), people (social aspects) and profit (economic aspects) - as illustrated in figure 2.2. Secondly, there



Figure 2.2. "Sustainable" put into the context of its three pillars (Dalibozhko and Krakovetskaya, 2018)

are the measurable sustainable goals that are used by many municipalities and in the case of the US focus on a variety of topics as Portney (2013) outlines:

- » Climate action;
 - » Energy conservation;
 - » Renewable energy;
 - » Green economic development;
 - » Improved land use;
 - » Green building;
 - » Smart growth;
 - » Urban agriculture;
 - » Sustainable food systems;
 - » Green jobs;
 - » Increased use of alternative transportation;
 - » Public health; and
 - » Resiliency
- Newer concerns include:
- » Environmental and social equity;
 - » The political empowerment of the community;
 - » Economic development; and
 - » Effective collaboration with the surrounding metropolitan areas to drive sustainable goals

These topics have been adopted and implemented with a variety of policies and programs that promise to make large population centres more sustainable and liveable than in the past and include denser and transit-oriented development, producing greater energy efficiency and reducing private vehicle reliance (Portney, 2013). Thirdly, there are the sustainable design principles and associated sustainable design actions in relation to various spatial scales, as illustrated in tables 2.3 and 2.4.

Table 2.3. Matrix of sustainable design principles (Layard et al., 2001 cited in Carmona et al., 2003)											
	Michael Hough (1984)	Ian Bentley (1990)	Commission of the European Community (1990)	Michael Breheny (1990)	Andrew Blowers (1993)	Graham Haughton and Colin Hunter (1994)	Hugh Barton (1996)	URBED (1997)	Richard Rogers (1997)	Evans et al. (2001)	Hilderbrand Frey (1999)
STEWARDSHIP	Enhancement through change		Integrated planning	Town centre rejuvenation				A sense of stewardship	A creative city		
RESOURCE EFFICIENCY	Economy of means	Energy efficiency	Reducing travel/energy reduction, recycling	Public transport, combined heat and power systems	Land/minerals/energy resources, infrastructure and buildings	Economy of means	Energy efficiency movement, Energy strategy	Minimal environmental harm	An ecological city	Resource conservation	Public transport, reduce traffic volumes
DIVERSITY & CHOICE	Diversity	Variety, permeability	Mixed development	Mixed use		Variety, Permeability		Integrated, Permeability, A rich mix of uses	A city of easy contact, A diverse city	Permeability, variety	Mixed-use, hierarchy of services and facilities
HUMAN NEEDS		Legibility			Aesthetics, Human needs	Security, Appropriate scale	Human needs	A framework of safe/legible space	A just city, A beautiful city	Legibility	Low crime, Social mix, Imageability
RESILIENCE	Process and change	Resilience				Flexibility		Ability to adapt and change		Resilience	Adaptability
POLLUTION REDUCTION		Cleanliness	Ameliorating pollution through planting		Climate/water/air quality		Water strategy			Freedom from pollution	Low pollution and noise
CONCENTRATION		Vitality	Compact development	Containment/intensification		Concentration	Linear concentration	A critical mass of activity	A compact, polycentric city	Vitality	Containment, Densities to support services
DISTINCTIVENESS			Regional identity		Heritage	Creative relationships, Organic design		Sense of place		Distinctiveness	Sense of centrality, Sense of place
BIOTIC SUPPORT			Open space	Urban greening	Open space, Biodiversity		Open space networks			Biotic support	Green space-public/private, Symbiotic town/country
SELF-SUFFICIENCY	Environmental literacy				Self-sufficiency	Democracy, Consultation, Participation	Self-sufficiency				Some local autonomy, Some self-sufficiency

Table 2.4. Sustainable design by spatial scale (Layard *et al.*, 2001 cited in Carmona *et al.*, 2003), part 1 of 2

	Buildings	Spaces	Quarters	Settlements
STEWARDSHIP	Responding to and enhancing context Design for easy maintenance	Responding to and enhancing context Managing the public realm Allowing personalisation of public space Traffic calming	Design for revitalisation Developing a long term vision Investing necessary resources	'Joining-up' governance regimes - design, planning, transport, urban management Governance that supports stakeholder involvement
RESOURCE EFFICIENCY	Using passive (and active) solar gain technologies Design for energy retention Reduce embodied energy - local materials and low energy materials Use recycled and renewable materials Design for natural light and ventilation	Layouts to allow sun penetration Spaces that reduce vehicle speeds and restrict vehicle circulation Design spaces that reduce wind speeds and enhance microclimate Using local, natural materials Capture and recycle water	Reduced parking standards Urban block depths that allow sun and natural light penetration and which encourage natural ventilation Using combined heat and power systems Local access to public transport	Investing in public transport infrastructure Utilise more efficiently before extending the established capital web (infrastructure)
DIVERSITY & CHOICE	Provide opportunity to mix uses within buildings Mix building types, ages and tenures Build accessible, lifetime homes and buildings	Mix uses along streets and in blocks Design for walking and cycling Combat privatisation of the public realm Remove barriers to local accessibility	Mix uses within quarters Design a fine grained street and space network (micro scale) Support diversity in neighbourhood character Localise facilities and services	Integrate travel modes Connect route networks (macro scale) Centre hierarchy to boost choice Variety in services and facilities between centres Remove barriers to accessibility
HUMAN NEEDS	Support innovation and artistic expression in design Design to a human scale Design visually interesting buildings	Provide high quality, legible, public spaces Combat crime through space design and management Enhance safety by reducing pedestrian/vehicle conflict Design for social contact and for safe children's play	Design visually interesting networks of space Enhance legibility through landmark and space disposition Socially mix communities Support social capital	Enhance legibility through quarter identity and disposition Promote equity through land use disposition Build settlement image foster sense of belonging
RESILIENCE	Build extendible buildings Build adaptable buildings Build to last Use resilient materials	Design robust spaces, usable for many functions Design spaces able to accommodate above and below ground infrastructure requirements Design of serviceable space	Design to allow fine grained changes of use across districts Robust urban block layouts	Build a robust capital web - infrastructure to last and adapt Recognise changing patterns of living and work
POLLUTION REDUCTION	Reuse and recycle waste water Insulate for reduced noise transmission - vertically and horizontally On-site foul water treatment using SUDs	Reduce hard surfaces and run-off Design in recycling facilities Design well ventilated space to prevent pollution build-up Give public transport priority	Match projected co2 emissions with tree planting Plant trees to reduce pollution Tackle light pollution	Question 'end-of-pipe' solutions to water/sewerage disposal Control private motorised transport Clean and constantly maintain the city
CONCENTRATION	Design compact building forms to reduce heat loss i.e. terraces Bring derelict buildings back into use Consider high buildings where appropriate	Reduce space given over to roads Reduce space given over to parking Increase vitality through activity concentration	Intensify around transport intersections Raise density standards and avoid low density building Build at densities able to support a viable range of uses, transport and facilities Respect privacy and security needs	Enforce urban containment and reduce expansion Intensify along transport corridors Link centres of high activity
DISTINCTIVENESS	Consider surrounding architectural character when designing Enhance locally distinctive building settings Retain important buildings and heritage	Reflect urban form, townscape and site character in design Retain distinctive site features Design for sense of place - local distinctiveness Retain important building groups and spaces	Reflect morphological patterns and history - incremental or planned Identify and reflect significant public associations Consider quarter uses and qualities	Protect any positive regional identity and landscape character Utilise topographical setting Preserve archaeological inheritance

BIOTIC SUPPORT	Provide opportunities for greening buildings Consider buildings as habitats	Design in robust soft landscaping Plant and renew street trees Encourage greening and display of private gardens	Provide minimum public open space standards Provide private open space Create new or enhancing existing habitats Respect natural features	Link public (and private) open space into a network Green urban fringe locations Integrate town and country Support indigenous species
SELF-SUFFICIENCY	Demonstrate sense of public sector civic responsibility Encourage private sector civic responsibility Provide bicycle storage Connect to internet	Encourage self-policing through design Providing space for small-scale trading Provide bicycle parking facilities	Build sense of community Involve communities in decision making Encourage local food production - allotments, gardens, urban farms Pay locally for any harm	Encourage environmental literacy through example and promotion Consultation and participation in vision making and design

Fourthly, the UK legal definition of CLTs

“ The body is established for the express purpose of furthering the social, economic and environmental interests of a local community.

Legislation.gov.uk, 2010

Overall, all four of these sustainable development references aid in establishing both the inputs and outputs of design and wider topics that facilitate sustainable lifestyles outcomes. Notably, table 2.4 clearly outlines sustainable design action which aid in understanding how to mitigate design gaps / processes to ensure sustainable outcomes - these findings are used in section 2.3. More significantly, is the fact that all four sustainable development references are dynamically interdependent. Their respective complexity also demonstrates that there are no specific universal sustainable principles or actions that can be applied anywhere. Instead by using figure 2.2 and the UK legal definition of a CLT a more generalized application of sustainability in the context of CLTs is defined and

illustrated as a conceptual framework in figure 2.3.

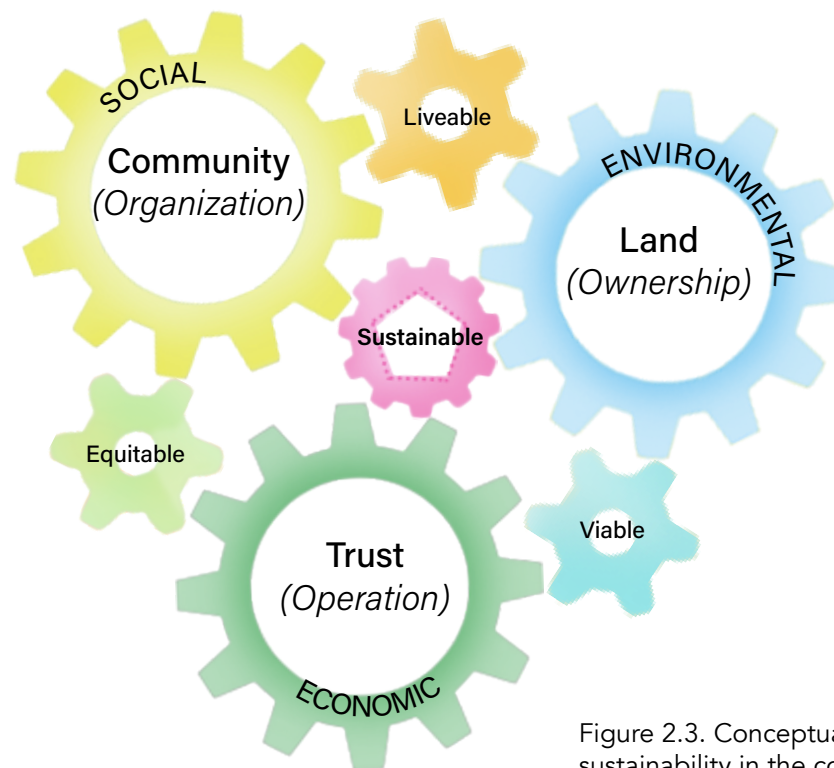


Figure 2.3. Conceptual framework, sustainability in the context of CLTs identified by research findings

That said, the research aim seeks to establish a sustainable design pathway for urban CLTs that is adaptable rather than a one size fits all design tool.

To deepen this research further, the following literature review animates the conceptual framework, in figure 2.3, by shedding light on how places and people shape each other.

2.3. Influencing Sustainable Topics: design products and wider processes

“First we shape our cities, then our cities shape us.

~ Jan Gehl

The Human Scale, 2012

Jan Gehl made a compelling argument with the above statement that sets the stage for this section. Cities are composed of many places - places to live, work, eat, socialize, study, relax - and development sites such as a CLTs form part of this picture. By investigating literature from a mix of perspectives, both the complexity of the built environment and CLTs, the sustainable topics listed define the scope of this research.

The sequence the review has been subdivided by urban design and wider topics with a summary of prevalent design types and methods of mitigating

design gaps / processes which facilitate sustainable lifestyle outcomes. These topic specific summaries highlight key literature findings that inform the case study analysis (chapter 4) and sustainable pathway tools (chapter 5) by providing design action options. Notably, some topics highlight prevalent CLT case studies / processes which ensure the literature review is relevant to the research questions. Although topics are discussed separately, these are not in any specific order as they are interdependent and should be read in relation with each other.

2.3.1. Vision Statement

The CLT Handbook identifies a vision statement as a starting point for CLT's to communicate their "purpose to the wider community, to capture their imagination and enthusiasm, and to other stakeholders who will need to be behind the CLT for it to succeed" (National CLT Network, 2012, p. 19). Although this is common practice with any development design process, the uniqueness with CLTs is that the vision draws from the community's skills and interests to sow the initial seed to stewardship.

Summary

- » Design types: Community gardening, young families to live and work in a city, sustainable living visions have been the focus of some CLTs. A review of multiple community planning strategies including CLTs in Parkdale, Toronto identified 7 key wellbeing indicators as illustrated in figure 2.4.



Figure 2.4.
Parkdale, Toronto wellbeing indicators
(Kamizaki, 2016)

- » Mitigating design gaps / processes: The purpose and related design outputs of a CLT should aim to achieve a robust, interdependent approach to reaching specific goals, such as Parkdale's wellbeing indicators.

2.3.2. Community-led Resources

Community-led resources are any resources run by its users in a non-profit oriented, prosocial and participatory process of accessing, managing and developing a resource (Dellenbaugh-Losse, Zimmermann and De Vries, 2020). In contrast privatization, by appropriating urban land, removes from most citizens the ability to access and use its resources. As the definition of trustery and figure 1.3 illustrates the CLT model aids in the deprivatization of land while delivering community-

led resources, however further resource opportunities can be incorporated to maximize CLTs benefits. As Verena Lenna emphasizes, CLTs have the potential of being laboratories where community-led resources are fostered by providing the space for interactions and collaboration amongst its users (Davis, Algoed and Hernandez-Torrales, 2020). Beyond housing, the CLT network has identified two predominant assets that communities in the UK are considering including community energy generation and food and farming (National Community Land Trust Network, 2020a).

Public space is a type of community-led resource which "should belong to and, as much as possible, be looked after and animated by the public...too much neglect will kill the public realm. But too much control – or indeed too much design and 'curation' – can do the same. The art lies in designing and running spaces so that we feel empowered to look after them ourselves" (Rogers, 2018). Similarly, the mutually reinforcing components of the CLT model as illustrated in figure 2.3 and its governance structure as listed in figure 1.3 seek to deliver a similar outcome - community empowerment. Ben Rogers (2018), director and founder of Centre for London, identified principles to follow for London's public realm which have been consolidated to reflect a smaller CLT scale as follows:

- » Re-purposing historic spaces;
- » Plan and design for outdoor activity;
- » Plan for small businesses;
- » Design and manage road on shared space principles;
- » Landscape public space;
- » Engage the public; and
- » Consider developing with new technologies and consideration for an aging population.

The bottom-up nature of CLTs presents them with a valuable tool to define which community-led resources should be designed into their developments either pre, during or post development.

Summary

- » Design types: housing; renewable energy generation; urban agriculture; community gardens; public space; shared mobility; arts and culture.
- » Mitigating design gaps / processes: Resources should be mixed and multi-purpose where possible to ensure its lasting sustainable benefits. Therefore, CLTs should strive to incorporate many types of resources at various stages of development.

2.3.3. Activate Spaces / Social and Natural Infrastructure

As Jane Jacobs (1961) highlights, the level of activity in spaces, particularly public spaces is directly interlinked with:

- » Density;
- » The mix of activities;
- » Walkability; and
- » The opportunities for a diverse mix of visitors, residents and businesses to co-exist

Similarly Parkdale, Toronto's community-led planning

project identified the socio-spatial inequality of the city needed to be addressed through the provision of "diverse affordable housing stock...enhanced by the proximity and walkability to Parkdale's social infrastructure...[which] has played a critical role in retaining a healthy mixed income neighbourhood while also mitigating displacement pressures" (Kamizaki, 2016, p. 27).

Additionally, Carmona *et al.* (2003) argue for a temporal dimension in designing places that ensure activation by accounting uses during the day and night, summer and winter, long and short term. An application for a pilot idea is meanwhile uses which provide the opportunity for an idea to permanently use a space if successful (Milliken, 2013). Options for meanwhile use of space should be assessed, some design ideas based on Edgar and Gregory (2013) research include:

- | | |
|--------------------------------|---|
| » Markets; | » Organic food growing training for marginalised communities; |
| » Café; | » Sport facilities; |
| » Restaurant; | » Gym; |
| » Specialist shop e.g. baking; | » Cultural learning exchange; |
| » Recycling hub; | » Museum; |
| » Workshop space; | » Gallery; |
| » Urban agriculture; | » Playground; |
| » Urban beach; | » Skate park; and |
| » Artist use; | » Energy station |
| » Performance space; | |
| » Skills exchange; | |

By designing multifunctional spaces and buildings, assets become adaptable and more resource efficient, such as Le Nid - a CLT development with a multifunctional courtyard and building used by many users at different

times of day and year and for different purposes (Davis, Algoed and Hernandez-Torrales, 2020).

Similarly Los Angeles (LA) EcoVillage, a CLT and cooperative with an intentional community that has shared interests in sustainable urban living (Los Angeles Eco-Village, 2020), demonstrates ideas for activating spaces - based on Los Angeles Eco-Village (2020); Pialucha (2018) - including:

- » Bike kitchen (a place for repairing bikes and is dedicated to getting more people on bikes through advocacy work or implementing a bike sharing scheme such as Bratislava's Bike Kitchen (Dellenbaugh-Losse, Zimmermann and De Vries, 2020));
- » Café;
- » Time bank (a bartering system for people to exchange services in exchange of service time credit, not money, and credit can be used on goods or services);
- » Community gardening;
- » Food lobby (a members only buying club for bulk buying organic and local produce and goods that functions without membership payment and instead requires members to work shifts – membership is open to anyone interested);
- » Tool library for tool sharing amongst residents;
- » Sewing workshop;
- » Temporary street painting;
- » Mix land uses;
- » Intergenerational and intercultural living.

Los Angeles Eco-Village (2020); Greenfield (2018) describe their natural infrastructure including:

- » Greywater recycling for landscape use;
- » Permaculture for permanent agriculture;
- » Rainwater harvest;
- » Community composting; and
- » Chicken coop

Summary

- » Design types: Mix of housing types and tenures; live / work units; permeable street networks; small blocks; density to create the critical mass required to attract and support social infrastructure; mix of land uses; flexible spaces; many doors and windows facing streets; spaces to linger; art; intergenerational and intercultural living; food security through urban agriculture; swales; attenuation basins; rain gardens; water recycling; rainwater harvesting; green roofs; and species rich landscapes.
- » Mitigating design gaps / processes: CLTs should strategically design developments to incorporate as much diversity as possible while ensuring walkability is not impacted. Low cost temporary or permanent design interventions can be incorporated to strengthen the area's sense of community and partnership working (such as the local parks / business improvement district, local authority etc.) to kick start the project can build lasting relationships that are mutually beneficial. Subject to the CLT site and acquisition conditions, CLTs have the potential of incorporating meanwhile uses of the space that can strengthen their vision and promote wider CLT support. In order to maximise the benefits of activated spaces,

any intervention can be improved by ensuring users use the space for more than one activity.

2.3.4. Low rise, high density

The density argument has shaped cities and their repercussions show that “low-density zoning perpetuates economic and racial disparity...we have come to recognize that dense settlement makes environmental sense” (Sand, 2020). To ensure dense developments also make social sense that connect communities a low rise, high density model is favoured by some theories. Dr. Jordan Sand (2020), a professor of Japanese history, highlights the urban design value of lessons learnt from Asian megacities particularly Tokyo in the 1960s which inhabited 40,000 people per square kilometre in 2 storey houses primarily single-family homes. Jane Jacobs (1961) also recognized the importance of low rise, high density urbanism with her observations of Greenwich Village, however the Japanese model is different in that the houses are simple, made from organic materials like bamboo and plots are small as illustrated in figure 2.5 resulting in little market value associated with the houses (Sand, 2020). This model was feasible due to Tokyo’s well-connected rail network that has expanded with housing growth which supports equity in terms of accessibility (Sand, 2020).

Richard Rogers (1995) also argues for the importance of the “Compact City,” which facilitates the social advantages of proximity while also promoting ecological benefits by designing to “increase energy efficiency, consume fewer resources, produce less pollution...



Figure 2.5. Bunkyo Ward, Tokyo, ca. 1968 - 40,000 residents/km² (Sand, 2020)

where economic and social activities overlap and where communities are focused around neighbourhoods” (Rogers, 1995, p. 33). This is accomplished with:

- » Transit-oriented development with mixed uses;
- » Enhanced active travel;
- » Proximity to good public space with natural landscape and urban technologies;
- » Multi-use public space;
- » Varied height buildings to enhance sunlight and daylight;
- » Use of landscape to absorb rain;

- » Local power generation and waste recycling;
- » Urban agriculture;
- » Encourage conviviality;
- » Social and environmental equity;
- » Involve citizens; and
- » Flexible buildings

Rogers (1995) findings, as listed above, provide sustainable design goals aspired to by many of the theorists already discussed that ultimately have a profound impact on communities lifestyle choices - such as, sense of community, walkability, food security, access to resources among many others.

Summary

- » Design types: small plots; co-living; transit-oriented development; infill development; serial vision; home zone street; mix use development; landscape infrastructure; maximize spatial opportunities for convivial living; flexible spaces; renewable energy generation; dedicated waste area; and smart technology.
- » Mitigating design gaps/processes: Notably Tokyo in the 1960s had 5 people per household (Statistics Bureau of Japan, 2018), which is not reflective of many household sizes today. Therefore, CLTs can consider co-living examples if residents are mainly single households. Financial limitations may arise due to the costs associated with smart technology, renewable energy generation and the fact that a well-connected site may not be financially viable for some CLTs as they acquire land and property in various ways (land donations and purchase with grant funding

or subsidies). Therefore, partnership working may unlock financial related limitations by consolidating multiple funding sources.

2.3.5. Reuse and redevelopment

Jane Jacobs (1961) and Carmona *et al.* (2003) highlight the need for old buildings due to their financial value, resource efficiency, aesthetic value and sense of place. The reuse and redevelopment of buildings provides CLTs with unique opportunities and in the case of St Clements, London CLT it provided a centrally located site within a grade II listed building (London CLT, 2017).

“By stimulating...[old] building[s], we can stimulate the neighbourhood – it’s a form of town renovation” (Berg, 2017).

Summary

- » Design types: Meanwhile space can provide a critical key to piloting ideas to reinforce ties people had with older buildings - particularly buildings that had a period of privatization or previous use with negative connotations. This was the case with St Clements, London CLT that redeveloped a former psychiatric hospital and as part of the process piloted a cultural festival.
- » Mitigating design gaps / processes: Although London CLT’s initial site bid was lost the owners of the site, Greater London Authority (GLA), asked them to collaborate with Galliford Try developers to take the site forward as a partnership which

secured the site and mutually benefited their respective goals (London CLT, 2017).

2.3.6. Time frame of change

This refers to urban design’s time dimension in terms of what stays the same, what changes over time and the management of change (Carmona *et al.*, 2003). Carmona *et al.* argue that many urbanists including Kevin Lynch (1972), Jane Jacobs (1961) and Tibbalds (1992) argue the importance of slow, steady and incremental urban growth which make for exciting more comfortable and acceptable change (Carmona *et al.*, 2003). Small scale developments are more organic and replicate how older urban environments have developed, pulling from Carmona *et al.*’s (2003) the time frame of CLT developments is noted as the time continuum of its milestones pre, during and post development.

In the case of Le Nid CLT, they maximized the use of their site during the long period between acquiring the site and redevelopment by using its existing building as an office, meeting and assembly space (Davis, Algoed and Hernandez-Torres, 2020).

Summary

- » Design types: Maximising site and context opportunities while integrating fine grain development with many owners enabling changes to be gradual and ongoing.
- » Mitigating design gaps / processes: Infill

development may fill the gap in site contexts that are not fine grain. Additionally, meanwhile uses within public, semi-public and semi-private spaces can aid in making more exciting, comfortable and acceptable changes.

2.3.7. Summary of Sustainable Topics

The six main topics described in this section illustrate the

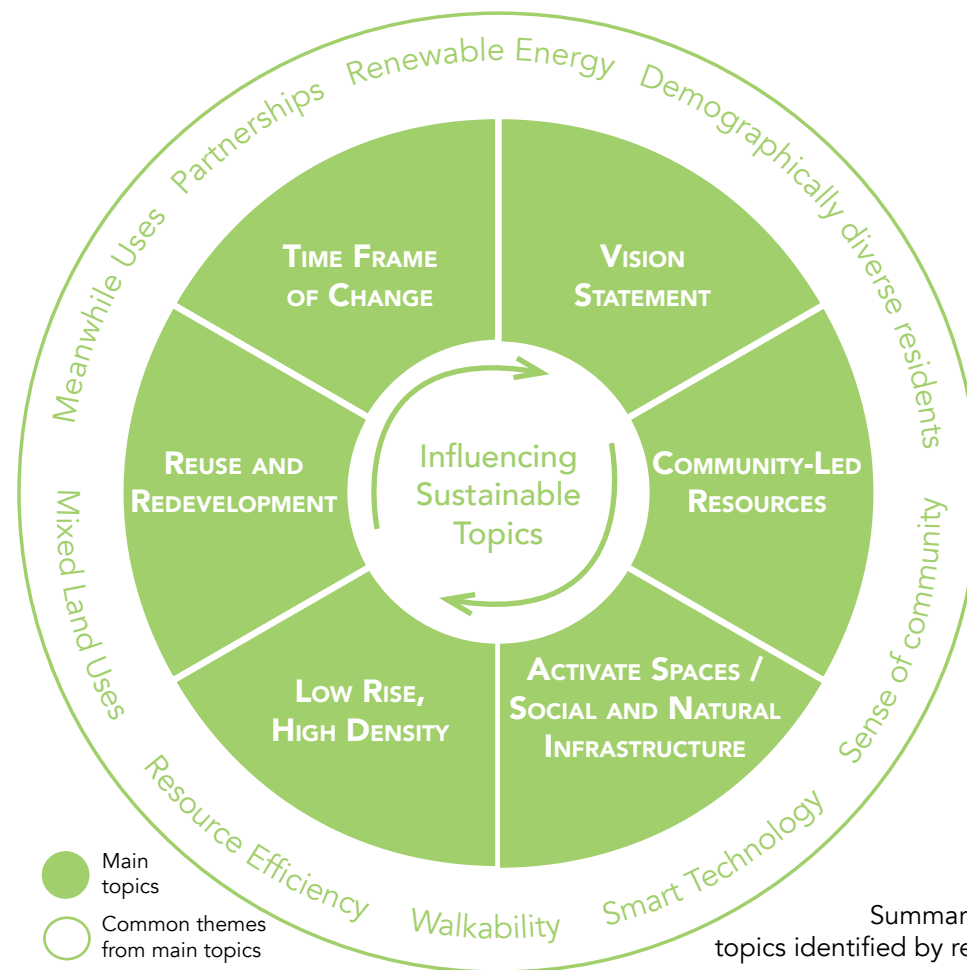


Figure 2.6. Summary of sustainable topics identified by research findings

overlaps and dynamic nature of the built environment's influence on sustainable lifestyles. By focusing on design products that are within the typical CLT development scale, a few plots to a block, and wider processes representative of the classic CLT model - these topics have consolidated research findings to be relevant to urban CLTs. Additionally, the use of CLT development examples has illustrated product and process related outcomes that have influenced lifestyle choices for the stakeholders involved.

Notably, some common themes have been derived, as illustrated in figure 2.6. These themes along with the six main topics form the research baseline that supports the subsequent sections of this report. This includes shaping the analytical framework within the scope of the research question, as outlined in the next section.

2.4. Analytical Framework

The prevalent topics and themes identified during the literature review have informed the analytical frameworks in table 2.5 and 2.6. Using these as a tool of case study analysis, a series of international case studies are critically examined within the scope of this research.

The temporal dimensions framework, table 2.5, enables CLT case studies to be analysed based on the time a physical intervention occurred, which includes pre / during / post development and the duration of time the intervention is available. Notably, an intervention may be maintained throughout all three periods of development such as a pilot project that proved to be

successful and was then implemented into the design of the development for long term post development use. The "development" category includes changes that go beyond the provision of housing with exception to strategic designs that integrate intergenerational living or any other intentional social connections.

The fixed topics framework, table 2.6, represents development planning decisions that are generally set early on in the development planning stage.

Both frameworks are a mix of design products and wider processes that influence sustainable lifestyles within the scope of this research. The questions within the tables highlight the criteria the research seeks to extract from the case studies, to ensure further consistency during the case study analysis.

“ Make a robust framework which allows life to take place.
~ Jan Gehl

—
The Human Scale, 2012



Table 2.5. Temporal dimension framework	
Topics	Pre-development  Development  Post development
	<i>Are interventions available day / night, seasonal, long / short term?</i>
Community-led Resource(s)	<ul style="list-style-type: none"> » Are these resources exclusive to CLT units, to other types of housing tenures or to the wider community? » List the community-led resource(s) relevant to the development period.
Social Infrastructure	<ul style="list-style-type: none"> » Has there been an integration of resources that contribute to social equity and promote any of the following: health, education, sense of community, play, youth, elderly, recreation, sports? » Are these available to the wider community or exclusive to residents? » List the social infrastructure relevant to the development period.
Natural Infrastructure	<ul style="list-style-type: none"> » Has there been an integration of green or blue infrastructure that promotes any of the following: biodiversity, urban agriculture, purify and store/reuse water, reduce urban stormwater runoff, on site composting? » Are these available to the wider community or exclusive to residents? » List the natural infrastructure relevant to the development period.
Meanwhile Use(s)	<ul style="list-style-type: none"> » Have there been any temporary / pilot projects on the site? » Are these available to the wider community or exclusive to residents? » List the meanwhile use(s) relevant to the development period.
Smart Technology / Renewable Energy Generation	<ul style="list-style-type: none"> » Does the CLT development integrate any smart technology or renewable energy generation? » Or are there explicit plans to do so in the future? » List according to development period.

Table 2.6. Fixed topics framework	
Vision Statement	» Is the mission of the CLT related to building sustainable lifestyles? Provide relevant details.
Partnership involvement	» Were any other public or private organizations involved that have retained a stake in the CLT site eg. registered providers / developers? This will impact how infrastructure is managed.
Density (people per hectare) & average storey height	» How many people live within the residential land use area of the site? Use CLT information if provided or use average household size census data. » Provide the average storey heights of the development to understand how the density has been distributed.
Land Uses	» Which land uses are within the site? Include both building uses (such as commercial, community, and residential) and open space uses (such as productive landscapes, play area and home zones).
Housing types, number of bedrooms and tenures	» What housing mixture is provided on the site, particularly: housing types (eg. terraces, flats, semi-detached, bungalows); what is the bedroom mix; and are there other tenures mixed into development. This will impact how resilient the development is in term of attracting a mix of residents with different incomes, household size needs and accessibility needs (eg. to accommodate those with reduced mobility).
Accessibility	» Map analysis, with a buffer radius of 800 meters from site, highlighting block dimensions, permeability and access to multi-modal transportation and mixed uses within and around the red line boundary.
Reuse and redevelopment, comprehensive redevelopment or infill development	» How is the built form developed? » Does it reuse / retrofit existing buildings, demolish and redevelop or is it infill development?
Cost of housing in relation to median incomes	» Include the financial conditions that must be met to reside within any unit that is stewarded by the CLT. Include any further relevant data. This is critical to establishing a sustainable lifestyle within a socio-spatial environment for people of all means.

2.5. Conclusion

The key findings of the literature review have been consolidated within the analytical frameworks in tables 2.5 and 2.6. The series of international CLT case studies in chapter 4 use these frameworks whilst the wider literature review informs potential design types and processes to look out for within the case studies. Overall, the theory and practical knowledge compiled within this literature review has provided a robust framework to assess urban CLT developments, urban design products and wider processes that influence sustainable lifestyle outcomes. Although these are not exclusive to urban CLT developments they seek to extract CLT specific outcomes to understand the dynamic nature of their various design products and wider processes, as illustrated in figure 2.3.

By drawing from the same fundamental principle of what CLTs do best, provide community led affordable housing based on local median incomes that is held in perpetuity, a more holistic understanding of the sustainable lifestyles they facilitate is analysed in the subsequent chapters.

Methodology



3.1.

Introducing the methodology baseline

A general overview of the methodology route and sources of information used for each chapter is illustrated in figure 3.1. The methodology sets the scene for how data has been identified, selected, processed and analysed. Fundamental to this is the devised conceptual frameworks which highlights the topics that must be interrogated throughout each case study. Its structure, as outlined in tables 2.5 and 2.6, sets the parameters to a variety of topics and associated questions to assess during the case study investigation in the following chapter.

Overall, the methodology has set the baseline for the data analysis rationale throughout this research, which has principally been shaped by the conceptual frameworks.

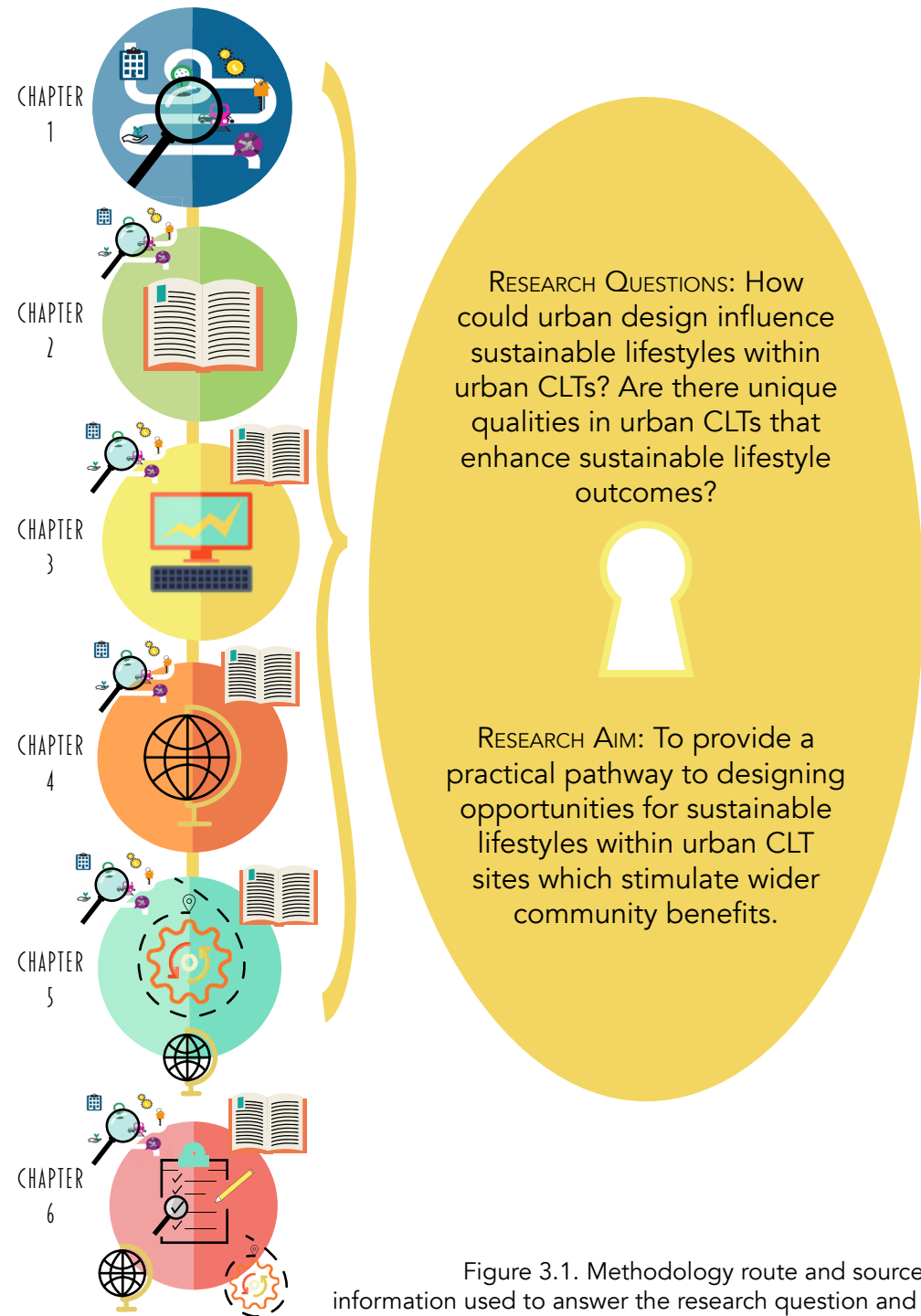


Figure 3.1. Methodology route and sources of information used to answer the research question and aim

3.2. Primary tool: conceptual frameworks

The chapter 2 conceptual frameworks have been further detailed in tables 3.1 and 3.2. These outline each topic's associated data gathering avenue employed. Using this along with the questions that seek to extract specific criteria from each case study ensures consistent data analysis and ultimately collect key findings that influence sustainable lifestyles. The data collected within these frameworks is used to answer the research question and aim in chapters 5 and 6.

As a variety of data has been used to inform the whole research process. The following section outlines each in depth.

Topics	Pre-development → Development → Post development <i>Are interventions available day / night, seasonal, long / short term?</i>	Methodology for data gathering
Community-led Resource(s)	<ul style="list-style-type: none"> » Are these resources exclusive to CLT units, to other types of housing tenures or to the wider community? » List the community-led resource(s) relevant to the development period. 	Evidence from: CLT / community group websites and published documents, local authority published documents, academic papers and published books
Social Infrastructure	<ul style="list-style-type: none"> » Has there been an integration of resources that contribute to social equity and promote any of the following: health, education, sense of community, play, youth, elderly, recreation, sports? » Are these available to the wider community or exclusive to residents? » List the social infrastructure relevant to the development period. 	Photographic evidence Site visit (St Clements CLT only) Other evidence from: architect / developer / CLT / community groups websites and published documents, planning application documents, academic papers and published books
Natural Infrastructure	<ul style="list-style-type: none"> » Has there been an integration of green or blue infrastructure that promotes any of the following: biodiversity, urban agriculture, purify and store/reuse water, reduce urban stormwater runoff, on site composting? » Are these available to the wider community or exclusive to residents? » List the natural infrastructure relevant to the development period. 	Other evidence from: architect / developer / CLT / community groups websites and published documents, planning application documents, academic papers and published books
Meanwhile Use(s)	<ul style="list-style-type: none"> » Have there been any temporary / pilot projects on the site? » Are these available to the wider community or exclusive to residents? » List the meanwhile use(s) relevant to the development period. 	Evidence from: CLT / community group websites and published documents, local authority published documents, academic papers and published books
Smart Technology / Renewable Energy Generation	<ul style="list-style-type: none"> » Does the CLT development integrate any smart technology or renewable energy generation? » Or are there explicit plans to do so in the future? » List according to development period. 	Evidence from: CLT / community group websites and published documents, local authority published documents, academic papers and published books

Table 3.2. Fixed topics framework methodology		
Topics	Questions for assessing case studies	Methodology for data gathering
Vision Statement	» Is the mission of the CLT related to building sustainable lifestyles? Provide relevant details.	CLT website
Partnership involvement	» Were any other public or private organizations involved that have retained a stake in the CLT site eg. registered providers / developers? This will impact how infrastructure is managed.	Evidence from CLT / local authority websites and published books
Density (people per hectare) & average storey height	» How many people live within the residential land use area of the site? Use CLT information if provided or use average household size census data. » Provide the average storey heights of the development to understand how the density has been distributed.	Evidence from: CLT website, planning application documents, census data Photographic evidence Site visit (St Clements only)
Land Uses	» Which land uses are within the site? Include both building uses (such as commercial, community, and residential) and open space uses (such as productive landscapes, play area and home zones).	Evidence from: CLT / architect / developer websites, planning application documents, academic papers and published books
Housing types, number of bedrooms and tenures	» What housing mixture is provided on the site, particularly: housing types (eg. terraces, flats, semi-detached, bungalows); what is the bedroom mix; and are there other tenures mixed into development. This will impact how resilient the development is in term of attracting a mix of residents with different incomes, household size needs and accessibility needs (eg. to accommodate those with reduced mobility).	Photographic evidence Site visit (St Clements only)
Accessibility	» Map analysis, with a buffer radius of 800 meters from site, highlighting block dimensions, permeability and access to multi-modal transportation and mixed uses within and around the red line boundary.	Morphological analysis using ordnance survey maps and referencing local public transportation / cycling route maps and land uses in Google maps
Reuse and redevelopment, comprehensive redevelopment or infill development	» How is the built form developed? » Does it reuse / retrofit existing buildings, demolish and redevelop or is it infill development?	Evidence from: CLT / architect / developer websites, planning application documents, academic papers and published books
Cost of housing in relation to median incomes	» Include the financial conditions that must be met to reside within any unit that is stewarded by the CLT. Include any further relevant data. This is critical to establishing a sustainable lifestyle within a socio-spatial environment for people of all means.	CLT / local authority websites and published documents

3.3. Methodological Approach

The nature of this research is qualitative, it is directed at understanding urban CLT developments and their design products and wider processes that have influenced sustainable lifestyle choices. This is done through a series of objectives, as outlined in table 3.3.

By investigating this under-researched topic, this dissertation produces a practical sustainable pathway tool for those involved with urban CLTs and provides design recommendations that have rippling benefits on sustainable lifestyle outcomes.

Table 3.4 has organized the sourced material with the type of data collected and an explanation of its importance.

Table 3.3. Research objectives and methodology

Objectives	Methodology
1 Define sustainable lifestyles in relation to urban CLT developments.	Overview within section 2.2, used academic papers and journals, published books and national legislation. Detailed topics within section 2.3 to 2.3.7, used academic papers and journals, published books, CLT websites and published documents, websites and published reports from credible sources (including government and built environment professionals which have been cross checked).
2 Develop a framework to analyse urban CLT developments urban design and wider qualities that support sustainable lifestyles.	Literature review, within section 2.2 to 2.3.7, used academic papers and journals, published books, national legislation, CLT websites and published documents, websites and published reports from credible sources (including government and built environment professionals which have been cross checked).
3 Apply the framework to a series of international CLT case studies to identify prevalent themes in the form of a sustainable pathway that outlines design recommendations which facilitate sustainable lifestyle outcomes in urban CLTs.	Case study data, within chapter 4 which informed chapter 5, please reference tables 3.1 and 3.2 for details.
4 Validate the sustainable pathway with professionals to understand its underlying successes and areas for improvement.	CLT professional feedback was sought (through one semi-structured interview via video call with Victoria Paykar and Charlie Fisher respectively) early in the research process to refine the research topic and focused on the US and UK perspective. This ensured the research was relevant and contributed something new to the field. As the sustainable pathway tool is focused on the built environment, feedback was sought from built environment academics, including: dissertation supervisor reviews (through video calls, emails and shared Google drive reviews), video call sessions with peers to the practice viva presentation (further details in appendix 4) and seek urban design advice and a formal viva presentation with focused urban design workshop (video call and further details in appendix 5) - all of which primarily assisted in providing constructive urban design input.

	Sourced Material & References	Type of Data Collected	Importance
Primary Data	CLT professionals (Victoria Paykar and Charlie Fisher); and Peer Review from academics (Doctors: Laura Novo De Azevedo, Regina Lim, Georgia Watson, Brian Goodey; Post graduates: Soham De; Roland Wong; Peers: Urban Design MA '19-'20 group of 11)	Please reference table 3.3 methodology column for objective 4.	
	Site Visit: St Clements, London CLT	Photographic evidence and observations, please reference appendix 3	As the development is relatively recent (with mapping from summer 2020 still showing the former development) the site visit provided critical data that was missing within secondary sources, including: building heights, natural and social infrastructure details, public to private sequences, building types, building front and backs, internal movement routes and type and the developments integration into the wider morphological setting.
Secondary Data	Journals: (Bunce, 2013); (Carmona, 2009); (Carmona, 2018)	These original sources were cited in other sourced material	As professionals in their respective fields (CLTs and the built environment) these sources supported the relevance of this research.
	Academic papers: (Milliken, 2013); (Pialucha, 2018)	Qualitative & quantitative findings and photographic evidence	Research topics investigated sustainable topics and CLTs identified in the research.
	CLT websites / published documents: (Arkin, 2013); (Beverly Vermont Community Land Trust, n.d.); (Blumgart, 2016); (Boulanger and Pialucha, 2019); (Champlain Housing Trust, 2020a); (Champlain Housing Trust, 2020b); (Community Land Trust Brussels, 2020); (Davis and Renegade Economists, 2019); (Despart, 2015); (Greenfield, 2018); (Habitat Worldmap, 2019); (Kamizaki, 2016); (Linton, 2009); (London CLT, 2017); (Los Angeles Eco-Village, 2020); (National CLT Network, 2012); (National Community Land Trust Network, 2020a); (National Community Land Trust Network and Davis, 2020); (Schneider, 2019); (Sustainable Housing for Inclusive and Cohesive Cities, 2019a); (Sustainable Housing for Inclusive and Cohesive Cities, 2019b); (Sustainable Housing for Inclusive and Cohesive Cities, 2020) (Sustainable Housing for Inclusive and Cohesive Cities, n.d.); (Yi, 2014)	Qualitative & quantitative findings and photographic, video and podcast evidence	This data was critical in informing the relevance of the research including the problem, questions, aim and objectives - as outlined in table 3.3 - while it also extracted the necessary data during the case study analysis - as outlined in tables 3.1 and 3.2.

	Sourced Material & References	Type of Data Collected	Importance
Secondary Data	Published books: (Carmona <i>et al.</i> , 2003); (Davis, 2010); (Davis, Algoed and Hernandez-Torrales, 2020); (Dellenbaugh-Losse, Zimmermann and De Vries, 2020); (Jacobs, 1961); (Portney, 2013); (Rogers, 1995)	Qualitative & quantitative findings and photographic evidence	The collected data was used frequently throughout the whole of the research, directly supporting chapters 1, 2 and 4. These sources cover current successes and challenges in the built environment and CLTs and also acknowledge built environment issues from the past, seen in both Jacobs (1961) and Roger (1995), which are still relevant today.
	Census: (Office for National Statistics, 2017); (Organisation for Economic Co-operation and Development, n.d.); (Statistics Bureau of Japan, 2018)	Quantitative data	Data informed the density calculations of the research.
	Maps: (Datawrapper, n.d.); (ESRI, n.d.); (Google Maps, n.d.); (Transport for London, n.d.)	Ordnance survey maps referencing local public transportation / cycling route maps and land uses in Google maps	The maps created in chapter 4 use this data to visualize the CLT site's urban morphology and accessibility contexts.
	Other websites / published documents from credible sources (including government and built environment professionals which have been cross checked): (Berg, 2017); (Dew Construction, 2015); (DEW Construction, 2020); (Donnelly and Sassorossi, 2015); (Duncan Wisniewski Architecture, 2014a); (Duncan Wisniewski Architecture, 2014b); (Duncan Wisniewski Architecture, 2016); (Edgar and Gregory, 2013); (Gay, n.d.); (Greater London Authority, 2018); (Jin, 2013); (JTP, 2019); (Legislation.gov.uk, 2010); (Los Angeles Department of City Planning, 2013); (Program Parameters and Research Division, HUD, 2020); (Project for Public Spaces, n.d.); (Rogers, 2018); (Rose, 2018); (Sand, 2020); (The Human Scale, 2012); (Vermont Business Magazine, 2017); (Vermont Community Garden Network, 2020); (Vermont Housing Finance Agency, 2020a); (Vermont Housing Finance Agency, 2020b); (Villanueva, 2013); (Wells, 2014)	Qualitative & quantitative findings and photographic & video evidence	This data was critical in informing sustainable lifestyles from a built environment perspective, as well as providing further CLT data from the developers, architects, local authorities and community groups involved which directly supported chapters 1, 2 and 4.

Table 3.4. Research objectives and methodology, part 3 of 3			
	Sourced Material & References	Type of Data Collected	Importance
Secondary Data	<p>Other sources which have not been referenced within the dissertation but have assisted with refining the research early on: (Archer, Green and Fisher, 2019); (Bernard, 2018); (Buchholz, 2020); (City of Berkeley, 2019); (City of Oakland, 2019); (Cox, 2020); (Crabtree <i>et al.</i>, 2012); (Dalibozhko and Krakovetskaya, 2018); (Desjardins, 2018); (Ehlenz, 2014); (Federal Reserve Bank of Richmond, 2012); (International Cooperative Alliance, 2020); (MacLennan, Bijoux and Courtney, 2015); (Metcalf, 2015); (Miceli, Sazama and Sirmans, n.d.); (National Association of Counties, 2019); (National Community Land Trust Network, 2020b); (National Multifamily Housing Council, n.d.); (Pointe Michel Limited, 2020); (Raguso, 2019); (Share to Buy, 2018); (Spotts, Hale-Case and Abu-Khalaf, 2017); (UBS Switzerland AG, 2019)</p>	Qualitative & quantitative findings and photographic & video evidence	Data acknowledged: Housing cost comparisons (CLT vs other tenures); CLT processes to acquiring land; rural CLTs; community led housing overview; and housing costs in global cities. This was important to ascertain the relevance of the research topic and ensure it contributed to an under-researched area.

Notably, the methodology used throughout the research gathered descriptive data without controlling variables in order to understand existing urban CLT developments and the lessons that can be learnt, as described in the following section.

3.4. Case Studies Identified for Analysis

A total of four case studies, two from the US, one from the UK and one from Belgium, have been used to identify the key successes and opportunities for improvements for urban CLT developments.

Other case studies were reviewed in Canada and the US (northern California); however following discussions with CLT professionals and reviewing Canadian legislation these were not suitable for the research as too many constraints existed to delivering the classic

CLT model in Canada and CLTs in northern California generally focused on preserving existing single detached homes spread across a large geographical area. CLTs in other countries were not selected due to the CLT model being newly introduced, rather than tried and tested as is the case with the US, UK and Belgium.

The four CLTs have been selected as they deliver various visions and represent differing levels of established CLTs: from the mature field in the US, including the largest CLT Champlain Housing Trust and a sustainable focused Beverley Vermont CLT to newer CLTs including London CLT and CLT Brussels. Additionally, their national governments have shaped perspectives on affordable housing from a libertarian perspective (US), socialist perspective (Belgium) and conservative governments in the 1980s which withdrew the majority of the public sector affordable housing (UK) (Davis, Algoed and Hernandez-Torrales, 2020; Pialucha, 2018).

These mixed international perspectives to affordable housing provided objectively to the research.

Specifically the selected case studies:

- » Burlington, Vermont, US;
- » LA, California, US;
- » London, UK; and
- » Brussels, Belgium

are comparable as they all aid in mitigating the under-supply of genuinely affordable housing in a centrally located area of each respective city and adapt the CLT model to fit their unique contexts. This includes having varied morphological settings, having varying levels of political support, delivering CLT homes with other housing tenure types, delivering various scales of development and supporting sustainable lifestyles at varying degrees. Additional case study details are outlined in chapter 4.

Further methodological considerations and limitations have been acknowledged as outlined in the subsequent sections.

3.5. Wider Considerations

Ethical standards have been followed during semi-structured interviews with individuals - a research ethics form has been appended as appendix 2.

Philosophical considerations regarding the nature of the CLT model were acknowledged, particularly their output of safeguarding affordable housing in perpetuity

based on local median incomes and their community-based structure.

The output of this dissertation (a written thesis with a supported sustainable pathway and influencers in designing urban CLTs) is the best output for the research problem and question, as a critical understanding of existing CLT sites is needed to grasp the various design products and wider considerations used and to build upon these with design recommendations. A design focused research output was investigated, but it was concluded that this would spread the research too thin, due to the time constraints to the project, and take away from the fundamental aspect of CLTs in which communities involve themselves in the design process.

3.6. Limits of the Research

Various obstacles to the research were identified and addressed accordingly. This included the maintained objectivity of the author throughout the research process. By outlining the methodology along with the various data sources and case studies, multiple perspectives are taken into consideration to ensure sound research.

Moreover, this research has been conducted during the 2020 Covid-19 global pandemic which has imposed several restrictions against traveling and face to face socialization amongst other things. Therefore, it was not conceivable to conduct site visits, aside from the UK, or use in person interviews or surveys nor gather hard copy source information from libraries. This obstacle was overcome by designing the research methodology to conduct research remotely.

3.7. Conclusion

This chapter has structured the research methodology, its sourced material and importance for the use of a variety of data sources along with wider considerations and research limitations that have aided in answering the research questions, aim and objectives. Overall, this applied research has developed techniques (frameworks), products (design recommendations - sustainable pathway tool) and procedures (methodology) to solve a practical problem.

Case Studies



4.1.

Introduction

The unique design products and wider processes of CLT developments set the baseline for what is conceivable in terms of facilitating sustainable lifestyle outcomes. Therefore, a selection of international CLT case studies, as illustrated in figure 4.2 and table 4.1, have been analysed to assess the CLT model's versatility across many different contexts and diverse communities. The varying types of lifestyles CLTs facilitate are formed by what Jane Jacobs (1961) would describe as organized complexity with many variables that are interrelated creating and contributing to the whole of the city. This chapter seeks to present the variables that have contributed to urban CLTs facilitating sustainable lifestyle outcomes.

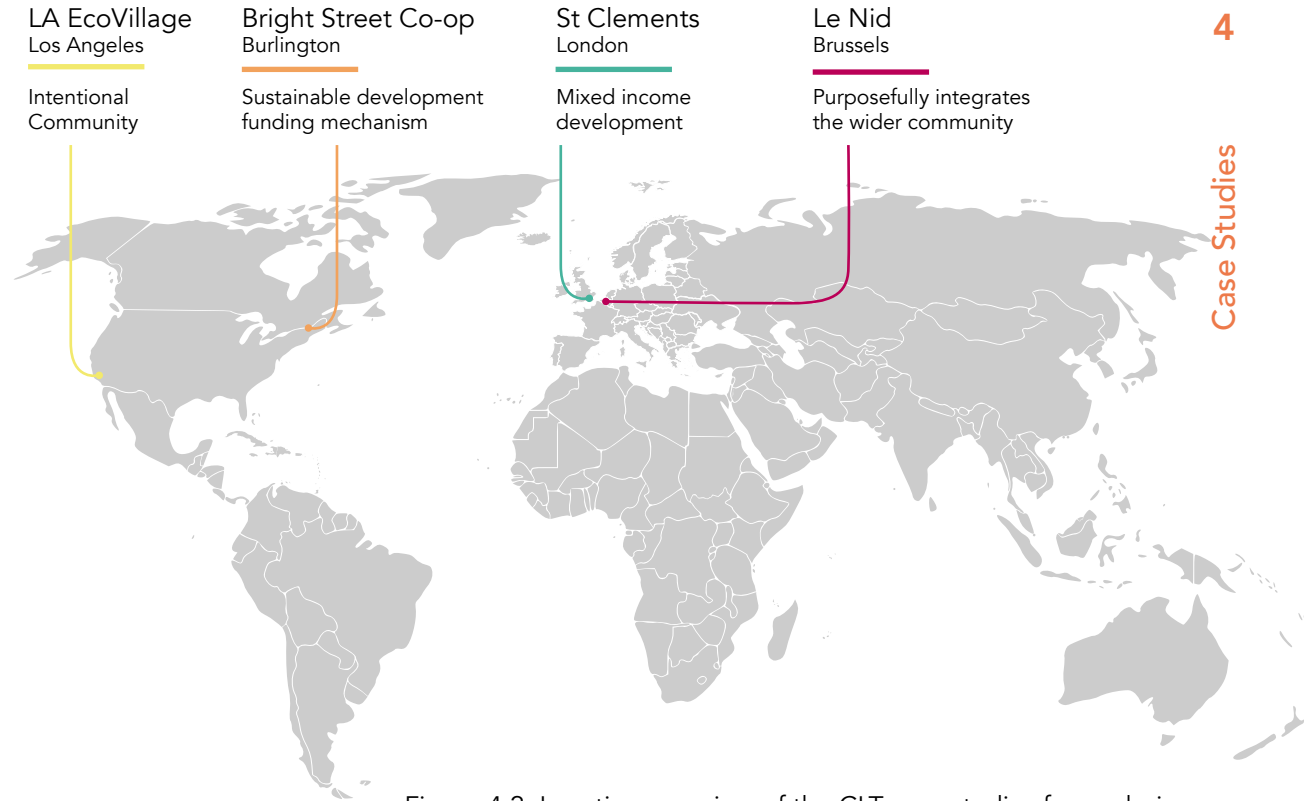


Figure 4.2. Location overview of the CLT case studies for analysis

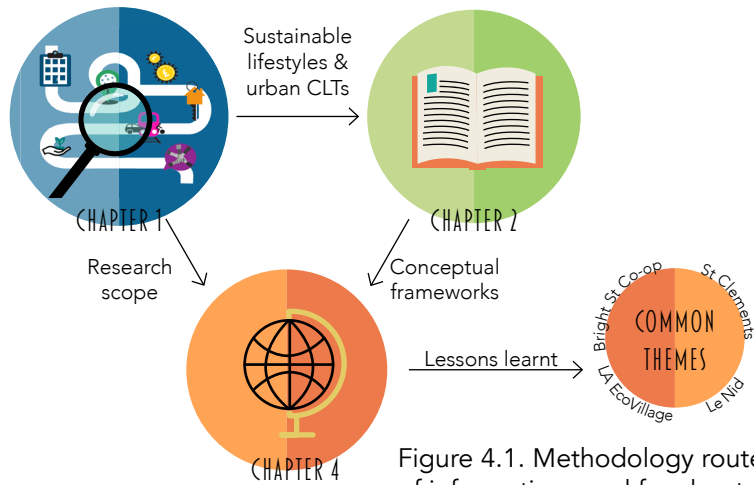


Figure 4.1. Methodology route and sources of information used for chapter 4

4.1.1. Case Study Overview

Further to section 3.4, the case studies as outlined in table 4.1 were specifically selected to represent a mix of development scales and are relevant to the research by delivering various design products and wider processes. This provides objectivity to the research and aids in producing research findings that can be used across a variety of CLT contexts in terms of: the scale of the site, development funding mechanism, integrating diverse communities, facilitating intentional communities and various urban morphological conditions.

	Bright Street Co-op, Burlington, Vermont, US	LA EcoVillage, Los Angeles, California, US	St Clements, London, UK	Le Nid, Brussels, Belgium
CLT steward and involvement	Stewarded by Champlain Housing Trust which is the largest CLT worldwide (Schneider, 2019). Its housing stock consists of 3,000 homes and also oversees several non-residential buildings (Davis, Algoed and Hernandez-Torrales, 2020).	Beverly Vermont CLT stewards the land the mixed-use development occupies, including a learning garden (Pialucha, 2018).	Stewarded by London CLT and is the first CLT site in London (London CLT, 2017). It is now the largest CLT in the UK (Davis, Algoed and Hernandez-Torrales, 2020).	Stewarded by the CLT Brussels who initiated the spread of the CLT model to mainland Europe (Davis, Algoed and Hernandez-Torrales, 2020).
Development Scale: Number of assets	40 CLT homes, completed in 2016 (Champlain Housing Trust, 2020b).	Overall the scheme provides 61 homes with 4 CLT homes and the remainder are limited equity cooperatives (Los Angeles Eco-Village, 2020). Additionally, it provides 2 community units), 10 commercial co-op spaces, 1 learning garden and further community urban agriculture gardens on the CLT land, substantially complete in 1993 but Beverly Vermont CLT became involved in 2007 (Pialucha, 2018; Villanueva, 2013).	Overall the scheme provided 253 homes with 58 for social rent and 23 CLT homes, completed in 2017 (London CLT, 2017).	7 CLT homes, common areas, 1 semi-public garden, 1 multipurpose space and 1 office space completed in 2019 (Community Land Trust Brussels, 2020; Davis, Algoed and Hernandez-Torrales, 2020).
Relevance to research	Established CLT with sustainable funding mechanisms that has enabled them to be more financially autonomous than lesser established CLTs. Therefore, it has the potential of delivering more than just affordable housing as there are fewer external factors to development.	Sustainable urban living model centred around its intentional community that demonstrates the process ecologically, economically and socially (Los Angeles Eco-Village, 2020). Other aspects include: integration into multi-modal transportation; reuse of buildings; located in a global city; and involvement with the city's People Streets programme that activates underused land (Villanueva, 2013).	Mixed-income development; integration into multi-modal transportation; reuse of building; community and commercial uses; public space provision; and located in a global city. Therefore overall, the scheme has several key urban design qualities that promote sustainable lifestyles.	Reuse of building; meanwhile uses; multipurpose space; convivial activities designed into the space; and provides resources for the wider community.

SECTIONS	Background of the CLT organization	Context of the CLT development	Frameworks from chapter 2, temporal dimension and fixed topics, with collected data on the design products and wider processes that facilitate sustainable lifestyle outcomes.	Conclusion synthesizing the CLT's unique features and lessons learnt in delivering environmental, social and economic benefits that stimulate sustainable lifestyle outcomes.
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Bright Street Co-op

Burlington

4.2. Background

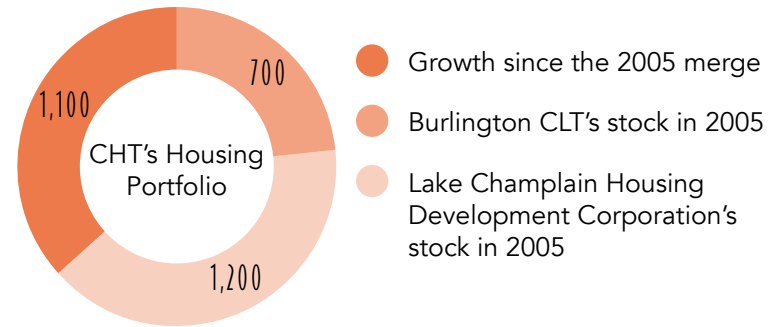
Champlain Housing Trust

“Creating the first municipally funded community land trust in the nation is one of my proudest accomplishments as Mayor of Burlington...The land trust model works, and must be part of the solution to the national housing crisis.

~ Bernie Sanders, 2012

Cited in Blumgart, 2016

Favourable political appetite, finance, partnerships and wider support have been present for Champlain Housing Trust (CHT) to thrive to today's largest CLT. It took root in the 1980s as Burlington CLT in response to urban gentrification, high mortgage rates, limited federal funding and diminishing housing affordability and quality (Davis, Algoed and Hernandez-Torres, 2020). The progressive agenda that Mayor Bernie Sanders set promoted the ethos of CLTs, of actively involving systematically disempowered citizens into city planning and public funding decisions. With city government seed funding of \$200,000, Burlington CLT became the first municipally initiated and supported CLT in the US (Davis, Algoed and Hernandez-Torres, 2020). In 2005, Burlington CLT merged with Lake Champlain Housing Development Corporation due to scarce funding streams and portfolio assets that were not large enough to be truly sustainable – their merge



Of the 5,000+ CLT homes in the US, 3,000+ are stewarded by CHT

Data collected from (Blumgart, 2016); (Davis, Algoed and Hernandez-Torres, 2020); (National CLT Network, 2012); (National Community Land Trust Network, 2020a)

Figure 4.3. CHT's housing portfolio breakdown

became CHT (Davis, Algoed and Hernandez-Torres, 2020).

Every year CHT generates \$100 million in development capital that goes towards operational costs, managing properties, making loans and developing new housing and commercial uses (Blumgart, 2016). "Because of the size of our portfolio we are much more self-sufficient. We have developed some of our own capital to take risk in the market to get properties. A lot of organizations can't compete like that" - Brenda Torpy, CHT chief executive officer (Blumgart, 2016). This has enabled their sites to be larger than most CLTs, as is the case with Bright Street Co-op described in the following section.

Overall development



Post development view from Bright Street, taken 2016



Figure 4.4. Bright Street Co-op development (Duncan Wisniewski Architecture, 2016; Google Maps, n.d.)

4.2.1. Context

Bright Street Co-op

Bright Street Co-op is the largest co-op in CHT's portfolio – its residents rent and manage the property collectively (Champlain Housing Trust, 2020b; Despart, 2015).

Formerly a brownfield site, Bright Street Co-op enabled the revitalization of Burlington's Old North End by replacing vacant businesses, foreclosed and neglected properties and decontaminating a 1.1 acre industrial site which required significant remediation before redevelopment (Duncan Wisniewski Architecture, 2014a; Vermont Business Magazine, 2017).

It received the national Audrey Nelson Community Development

Achievement Award for CHT's partnership with local government to assist low to moderate income people and demonstrated exemplary use of community grant funding (Vermont Business Magazine, 2017). Its delivery provided homes for a mixed income and background community, including homeless, refugees, low-income people and market rate housing (Despart, 2015; Vermont Business Magazine, 2017; Vermont Housing Finance Agency, 2020a).

The frameworks that follow outline Bright Street Co-op's urban design products and wider processes that support sustainable lifestyle outcomes.

4.2.2. Frameworks

	PRE-DEVELOPMENT	DEVELOPMENT	POST DEVELOPMENT
Community-led Resource(s)	N/A due to decontamination of the site which benefited the health of the whole of the community.	Community room for co-op meetings and events exclusive to residents (Champlain Housing Trust, 2020b).	Bright Street community garden restricted to residential use and includes a teaching garden (Dew Construction, 2015; Vermont Community Garden Network, 2020). The whole site is a community led resource as residents are required to help manage the cooperative administratively and participate in clean-up tasks (Champlain Housing Trust, 2020b).
Social Infrastructure	Same as "community-led resource(s)" above - the site is held as a cooperative.		
Natural Infrastructure	N/A	Enhanced landscape biodiversity, consistent with surrounding area.	Urban agriculture overseen by residents and Vermont Community Garden Network which assists with teaching how to grow food (Vermont Community Garden Network, 2020).
Meanwhile Use(s)	N/A		
Smart Technology / Renewable Energy Generation	N/A		

Vision Statement	Aspirations related to supporting sustainable lifestyles: permanent affordability and community control; energy conservation and smart growth including fostering pedestrian and transit-oriented communities; transparency and accountability; diversity and inclusion; flexibility; and housing security and mobility (Champlain Housing Trust, 2020a).
Partnership involvement	<p>CHT partnered with state and local organizations for this scheme, including local and national government as well as "the Vermont Community Garden Network, Association of Africans Living in Vermont and local neighbors, in order to ensure the housing cooperative met the needs of diverse communities. Housing Vermont is a co-owner of the building and a critical partner in the success of the project" (Vermont Business Magazine, 2017).</p> <ul style="list-style-type: none"> » Management company: CHT » Legal owner: Bright Street Limited Partnership, Housing Vermont <p>(Vermont Housing Finance Agency, 2020a)</p>

Table 4.4. Fixed topics framework for Bright Street Co-op, part 2 of 2

<p>Density (people per hectare) & average storey height</p>	<p>40 total residential units x 2.32 people per household (Vermont Housing Finance Agency, 2020b) = 92.8 people on site 0.24 Hectares in residential use (Duncan Wisniewski Architecture, 2014b)</p> <p>» Density: 387 people per hectare</p> <p>3 storeys average height</p>
<p>Land Uses</p>	<p>Residential only</p>
<p>Housing types, number of bedrooms and tenures</p>	<p>Housing types: 35 apartments and 5 townhouses:</p> <p>13 one bedroom 15 two bedroom 5 three bedroom 1 four bedroom (Champlain Housing Trust, 2020b)</p> <p>Tenures: Cooperative which provides residents with the right to occupy their respective units subject to a legally binding agreement of fulfilling the obligations of the cooperative – residents are tenant-shareholders of the cooperative and do not own units outright but financially hold an interest in the property through the carrying/maintenance charge, a type of rental payment, they pay on a monthly basis (International Cooperative Alliance, 2020).</p> <p>This is subdivided to include both 36 below market and 4 market rate housing units (Despart, 2015). This includes 2 units for permanent supportive housing for the formerly homeless (Vermont Housing Finance Agency, 2020a).</p>
<p>Accessibility</p>	<p>Please reference figure 4.5.</p>
<p>Reuse and redevelopment, comprehensive redevelopment or infill development</p>	<p>Infill development and amalgamation of multiple parcels of land. The scheme required the demolition of six existing buildings.</p> <p>(Despart, 2015; Vermont Business Magazine, 2017).</p>
<p>Cost of housing in relation to median incomes</p>	<p>13 apartments are affordable to households earning less than 50% of the Housing and Urban Development (HUD) area median income (AMI); 21 affordable to households earning less than 60% of AMI; two targeted for households at less than 80% of AMI; and four apartments are unrestricted (Dew Construction, 2015). The median family income in Burlington is \$89,700 as of 2020 (Program Parameters and Research Division, HUD, 2020).</p> <p>When the scheme was completed in 2016, the rental costs for a two bedroom were between \$775 and \$1,200 a month, including heating and hot water - comparatively HUD determined fair market rent for a two bedroom apartment in the area as \$1,328 (Donnelly and Sassorossi, 2015).</p>

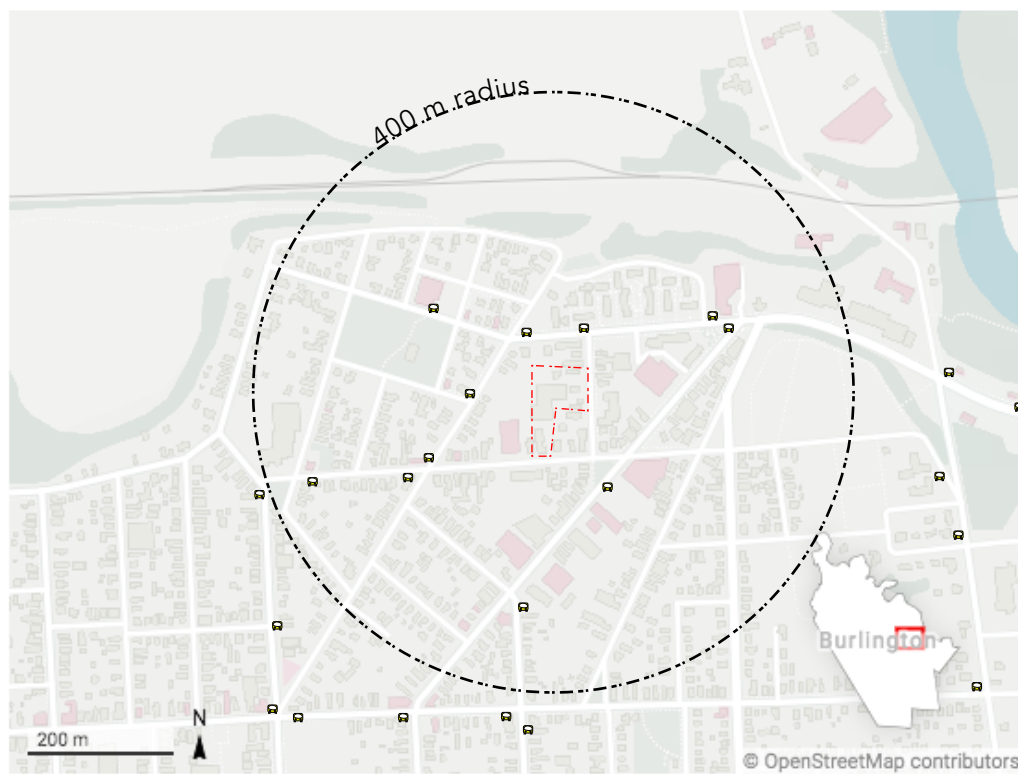


Figure 4.5. Accessibility map for Bright Street Co-op

4.2.3. Conclusion

Bright Street Co-op demonstrates how the most established CLT supports sustainable lifestyles through their site outputs. The 40 units are home to residents of mixed income and cultures, providing an inclusive and diverse community to actively participate in the management of their cooperative.

“While this project will bring long lasting housing and community development benefits to residents, the neighborhood, and the broader community, it also generates significant economic advantages,” said Housing Vermont President Nancy Owens. “It will create 118 on-site jobs and 177 off-site jobs while providing more than \$25 million in construction and indirect economic benefit” (Dew Construction, 2015).

Legend

- Site: Bright Street Co-op
- Commercial units
- Bus stops
- Walking distances: Every 400 m = 5 mins

Lessons Learnt

- » Cooperative housing used alongside the CLT model promotes long term community-led resources, thus ensuring residents are actively participating in decisions and management of their cooperative.
- » Partnership working was critical for the delivery and support of the scheme. It provided local community input from the outset to ensure the scheme met their needs while government support not only funded part of the scheme but also leveraged how community led housing and permanently affordable housing can successfully be delivered.

Overall, the scheme has several essential social aspects benefiting its residents and economic aspects benefiting its residents and the wider community that stimulates long term sustainable lifestyles. However, more urban complexity would stimulate further benefits, specifically in enhancing environmental aspects and ensuring the wider community benefits through public or semi-public space initiatives / activities.



LA EcoVillage

Los Angeles

4.3. Background

Beverly Vermont CLT

Beverly Vermont CLT (BVCLT) specialises in “permanently affordable sustainable housing” for people who are committed to living a sustainable lifestyle and have whose access to market rate housing is limited (Beverly Vermont Community Land Trust, n.d.). This has been achieved by creating pedestrian centred neighborhoods with mix use development that is economically and socially sustainable while also integrating nature into urban living (Beverly Vermont Community Land Trust, n.d.).

Unlike most CLT’s who are part of development from the outset, BVCLT became involved with LA EcoVillage (LAEV) over a decade after the site was established. This unconventional route is described in the following section.

4.3.1. Context

LA EcoVillage

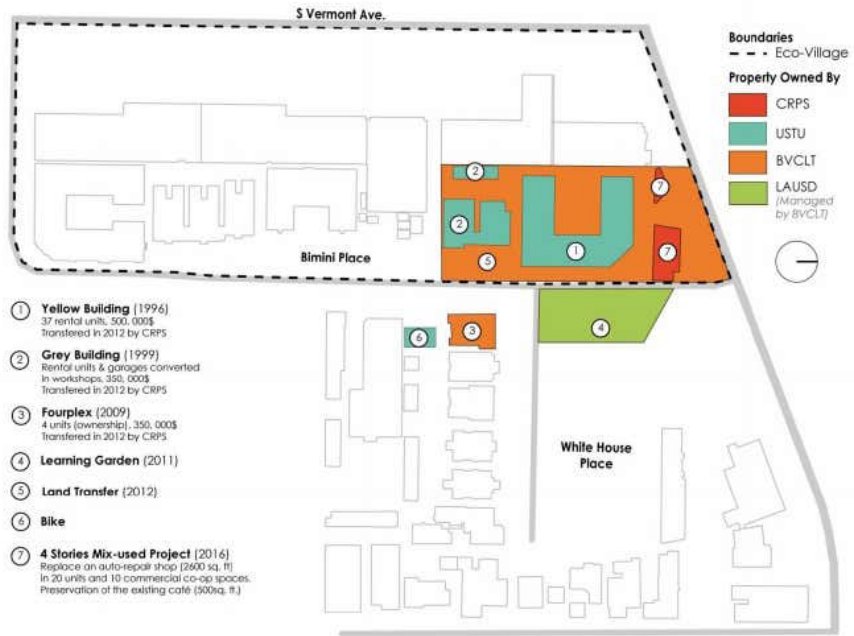
The concept for LAEV had been in the pipeline since the 1980s, and its original new build development concept on a vacant site was completely altered following LA’s Rodney King riots in 1992 (Villanueva, 2013) which resulted in much of the city literally being in flames. The wake of this civil unrest resulted in the abandonment of many of Downtown LA’s buildings. As a result, the community group behind LAEV reprioritized what sustainable living meant to them:

“Should we be developing a sexy new \$25 million development that will take decades to do, or should we do the LAEV as a retrofit of an old built-out neighborhood that was deeply affected by the riots, where all the infrastructure is in place, and where we might demonstrate that a very diverse community can get along?”

— Villanueva, 2013

The retrofit project was agreed on and opened in 1993 driven by the community that had committed to a vision, at the time they had not established a proper organization nor incorporated as a non-profit (Pialucha, 2018). In 2007, LAEV’s community members along with their partner and advisors on cooperative and ecological neighborhoods, Cooperative Resources & Services Project (CRSP), founded the BVCLT to steward the site’s land and in 2010 they founded Urban Soil-Tierra Urbana (USTU) a housing cooperative that rents units to cooperative members - residents of LAEV (Los Angeles Eco-Village, 2020; Pialucha, 2018; Villanueva, 2013).

The frameworks that follow outline LAEV’s urban design products and wider processes that support sustainable lifestyle outcomes.



Trust South LA members
 (Credit: intersectionssouthla.org)



Entrance of the Eco-Village
 (Credit: Diane Pialucha)



Street activities
 (Credit: laecovillage.org)



Inner Garden of the Eco-Village
 (Credit: Diane Pialucha)



Solar oven in the courtyard
 (Credit: Diane Pialucha)



LA&V tool shop
 (Credit: Diane Pialucha)



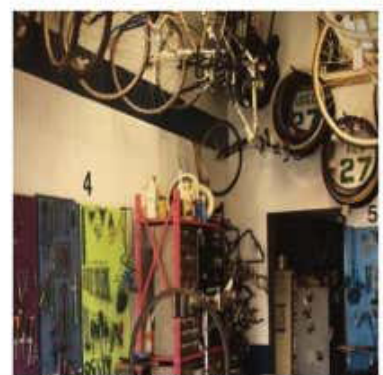
LA&V sewing workshop
 (Credit: Diane Pialucha)



The Learning Garden
 (Credit: Diane Pialucha)



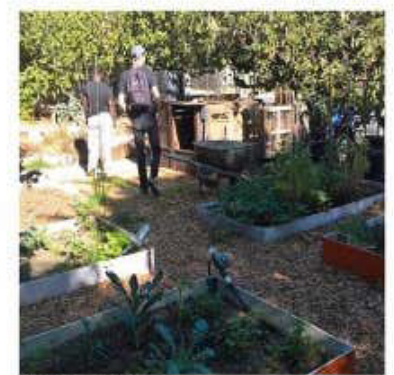
The community room
 (Credit: Diane Pialucha)



The Bike Kitchen by Jimmy Lizama
 (Credit: laecovillage.org)



The Food Loby
 (Credit: laecovillage.org)



Vegetable garden
 (Credit: Diane Pialucha)

Figure 4.6. LA EcoVillage development and community-led resources (Pialucha, 2018)

4.3.2. Frameworks

Table 4.5. Temporal dimension framework for LA EcoVillage, part 1 of 2

	PRE-DEVELOPMENT *LAEV reused existing buildings	DEVELOPMENT *LAEV developed over several years and it is unclear from research findings if some of the below came post redevelopment	POST DEVELOPMENT
Community-led Resource(s)	Preliminary landscaping, including fruit trees and small gardens with the help of the neighborhood community (Villanueva, 2013).	<p>Available to residents only:</p> <p>Social community-led resources: community buildings with a variety of activities such as, sewing workshop, tool library for tool sharing with residents and meeting spaces.</p> <p>Natural community-led resources: greywater recycling for landscape use; rainwater harvest; permaculture for permanent agriculture; native landscaping; community composting; chicken coop and beekeeping.</p> <p>(Greenfield, 2018; Los Angeles Eco-Village, 2020; Villanueva, 2013).</p>	<p>Established a neighborhood wide bike culture through their involvement in initiating:</p> <ul style="list-style-type: none"> » Onsite Bicycle Kitchen for bike repairs and bike sharing scheme » An off site LA County Bicycle Coalition and CicLAvia to enhance active travel » Relampago Wheelery (a bike shop) <p>All are available to the public; however the bike kitchen asks for a cooked meals or a suggested donation in exchange of their services when in use by non-residents.</p> <p>Car sharing amongst the LAEV community and rental discounts for households that do not own a car.</p> <p>Created a learning garden in partnership with the LA school district which local public schools use.</p> <p>Established several social enterprises available to the public such as: Cafecito Organico a cafe; food lobby for bulk buying food and household products; Arroyo Seco Network of Time Banks for exchanging talent/resources; LA Tenants Union; Kill Radio station; and LA Intentional Community Summit.</p> <p>Available to residents only: family child care; time banks</p> <p>Ad hoc public events include: "City Repair" (LAEV residents used art for traffic calming measures around the site and within the wider neighborhood); "People Streets," an LA program (LAEV residents transformed their adjoining roads into a People Street that repurposes road space into public plazas); LAEV site tours; and onsite art and music workshops.</p> <p>LAEV future aspirations: grow 50% of the food consumed by LAEV residents on-site by utilizing former parking lots, streets, rooftops, building sides, growing walls and window boxes; no waste water by implementing a neighborhood biological living machine to recycle grey and black water; no organic wastes by using composting toilets.</p> <p>(Linton, 2009; Los Angeles Eco-Village, 2020; Pialucha, 2018; Villanueva, 2013)</p>

Table 4.5. Temporal dimension framework for La EcoVillage, part 2 of 2

	PRE-DEVELOPMENT *LAEV reused existing buildings	DEVELOPMENT *LAEV developed over several years and it is unclear from research findings if some of the below came post redevelopment	POST DEVELOPMENT
Social Infrastructure	Same as "community-led resource(s)"		
Natural Infrastructure	Same as "community-led resource(s)"		
Meanwhile Use(s)	N/A	N/A	N/A
Smart Technology / Renewable Energy Generation	N/A	Solar energy (Los Angeles Eco-Village, 2020)	LAEV future aspirations: 100% renewable energy, including wind, solar, geothermal energy from human and animal waste (Villanueva, 2013)

Table 4.6. Fixed topics framework for LA EcoVillage, part 1 of 2

Vision Statement	Mission: Expand public awareness about sustainable urban living particularly focused around ecological, economic and social sustainability. (Los Angeles Eco-Village, 2020)
Partnership involvement	<p>Many partnerships have helped develop LAEV to its current state. However, the core partnerships include:</p> <ul style="list-style-type: none"> » CRSP helped found LAEV and now supports and finances LAEV's economic activities » BVCLT stewards the site's land assets to ensure permanent affordable housing, collects ground leases and acquires further properties. » USTU acts as the landlord and rents units to co-op members (these are LAEV's residents). <p>(Los Angeles Eco-Village, 2020; Pialucha, 2018)</p>
Density (people per hectare) & average storey height	<p>61 total residential units x 2.81 people per household average (Los Angeles Department of City Planning, 2013) = 171.41 people per hectare 0.22 Hectares in residential use</p> <ul style="list-style-type: none"> » Density: 779 people per hectare <p>2 storeys average height</p>

Table 4.6. Fixed topics framework for La EcoVillage, part 2 of 2

Land Uses	Residential led development with community spaces and 10 commercial spaces (Pialucha, 2018)
Housing types, number of bedrooms and tenures	<p>Housing types: 61 apartments</p> <p>Bedrooms: Unavailable</p> <p>Tenures:</p> <ul style="list-style-type: none"> » 57 Limited Equity Cooperative this differs from traditional cooperatives in that there are restrictions on the purchase price and resale of a membership share which ensures affordability. » 4 Owner-occupier <p>(Arkin, 2013; Pialucha, 2018)</p>
Accessibility	Please reference figure 4.7.
Reuse and redevelopment, comprehensive redevelopment or infill development	<p>The majority of the site reused existing assets and redeveloped where needed, this included:</p> <p>1996 and 2009 Reuse of existing buildings; 1999 Reuse / conversion of garages to workshop space 2011 Acquired land for learning garden 2016 Redevelopment of an auto repair shop for mix-use development</p> <p>(Pialucha, 2018)</p>
Cost of housing in relation to median incomes	<p>As of 2013:</p> <p>2 bedroom apartment £1,200 per month</p> <p>Eligibility criteria:</p> <p>Combined annual income of all people in the household</p> <ul style="list-style-type: none"> » Not less than \$29,000 » Not more than \$39,780 for a family of 2 » Not more than \$44,760 for a family of 3 » Not more than \$49,680 for a family of 4 <p>(Arkin, 2013)</p>

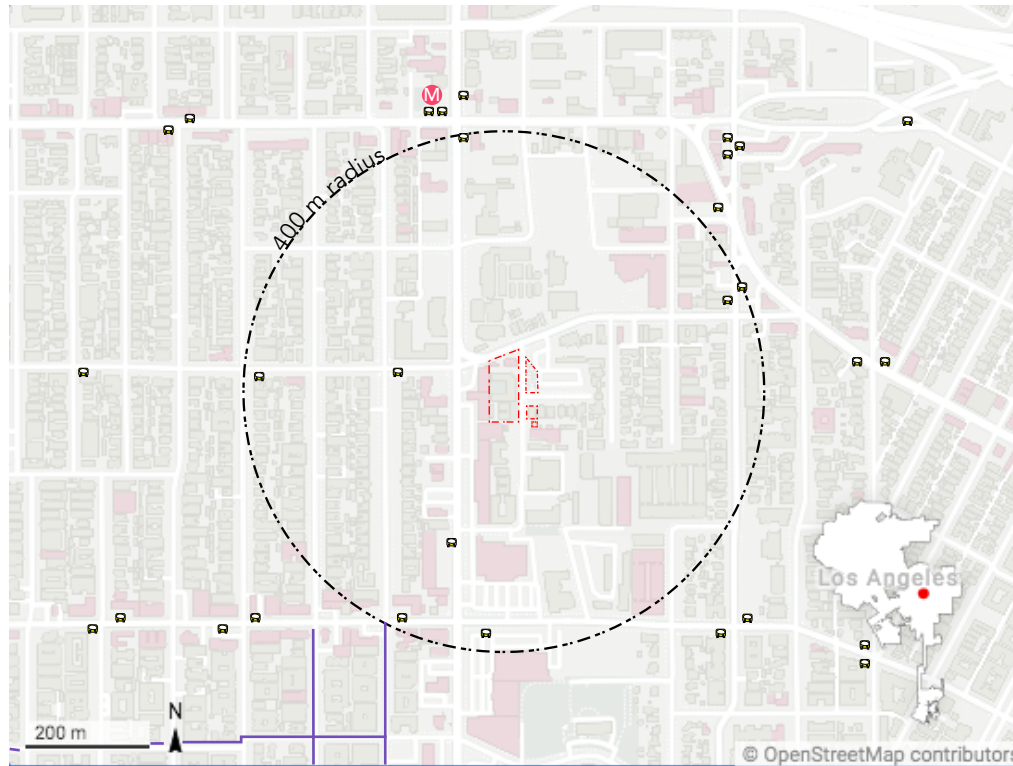


Figure 4.7. Accessibility map for LA EcoVillage

4.3.3. Conclusion

LAEV demonstrates how a grassroots approach aligned sustainable lifestyles with CLTs. George Villanueva, one of the founders of LAEV reflects on their accomplishments, stating:

“In its broadest sense, the LAEV vision was to reinvent how we live in the city by demonstrating the processes of living more ecologically and more cooperatively, thereby creating a higher quality of life at a much lower environmental impact. As we became increasingly aware of how to integrate the social, economic, and ecological processes and systems of the neighborhood, we grew more and more adept at walking our talk

without judgment and without self-righteousness. The fact that we have survived 20 years, as a thriving and diverse community with a well established culture of sustainable living, have significantly influenced public policy, and have a worldwide reputation for being among the most prominent urban ecovillages” (Villanueva, 2013) demonstrates the success of the sustainable ethos of the site.

Additionally, by establishing several organizations, such as BVCLT, USTU, Ecological Community Revolving Loan Fund and influencing and supporting others, such as Arroyo Seco Network of TimeBanks, CicLAvia and

LA County Bicycle Coalition, LAEV was able to deliver their vision and advocate for sustainable change in the wider LA context. By changing the status quo of how, what and where sustainable development takes place LAEV was able to deliver: a variety of activities which actively seek to integrate the wider community; socio-spatially equitable housing within Downtown LA; and innovate through progressive changes such as permaculture, bike kitchen and more generally all their community-led resources.

Lessons Learnt

- » Building congenial relationships from the outset including communities and organizations to commit to a shared mission that has survived for nearly 30 years.
- » The use of urban commons to ensure resources are sustainable for the long term to both residents and the wider community.
- » Temporal dimension enabled the organic growth of LAEV which benefited two key points. Firstly, from an operational point of view LAEV ensured sufficient finance and partnerships were established to acquire further properties and transfer them into a CLT and cooperative model. Secondly, the LAEV community developed and fine-tuned their goals for the site and wider advocacy mission, in terms of sustainable living, which benefited from organic growth that provided opportunities, change and enhancements.

- » Combining cooperative housing and the CLT model to ensure permanent housing affordability. The rental cash flow is sufficient to maintain the properties and provide on-going environmentally sensitive retrofitting (Los Angeles Eco-Village, 2020).

“It has fought hard against mainstream urban initiatives [that]...dehumanize our streets and communities through the privileging of automobile culture, and gentrification that has made the again-popular inner-city neighborhoods unaffordable for the working and middle classes.” (Villanueva, 2013)

Overall, LAEV is an example of how sustainable lifestyles can be enhanced by social, environmental and economic factors rooted by urban design that integrates the site into the wider area but also maximizes sustainable opportunities on site through mix use development including social enterprises, social spaces, urban agriculture and permanently affordable housing.



St Clements

London

4.4. Background

London CLT

St Clements became London CLT's flagship site, unlocking the first CLT in London which came with many hurdles and compromises but set the baseline for how the CLT model would adapt into the site's unique local and national circumstances (Davis, Algoed and Hernandez-Torres, 2020). Acquiring St Clements started from a "pipedream...from a well-meaning longshot to a viable proposition" (Davis, Algoed and Hernandez-Torres, 2020, p. 350) during the founding of East London CLT (ELCLT), since renamed London CLT.

The site was owned by the Greater London Authority (GLA) and was designated for housing led redevelopment as one of the pilot projects for the GLA's "Small Sites, Small Builders programme" (Greater London Authority, 2018).

“ Through my new small sites programme, I want to make more public land available to help contribute not only to tackling the housing crisis in London, but also to reinvigorating our small and medium-sized homebuilding sector. I also want to provide more opportunities for Community Land Trusts, which is why I have earmarked two sites specifically for community-led housing...I want to offer a real opportunity for small builders and community-led housing groups to play their part in building the new and genuinely affordable homes Londoners so desperately need.

~ Sadiq Khan

Greater London Authority, 2018

The programme unlocked the CLT site with the collaboration of several partners through a competitive bidding process that was lost, but such was the support for a CLT to be involved that the GLA granted them part ownership if they could partner with the winning bid developer (Davis, Algoed and Hernandez-Torres, 2020; London CLT, 2017). This partnership set the tone for how the CLT would adapt, as described in the following section.

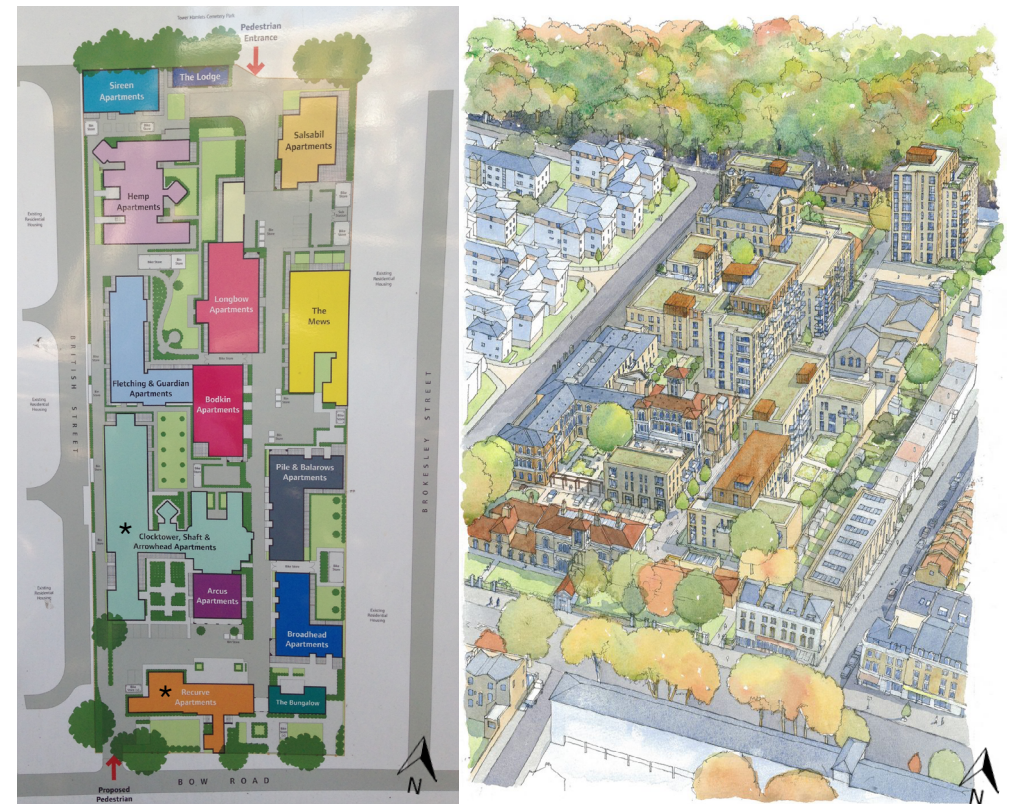


Figure 4.8. St Clements development. Left site map, "*" represent grade II listed buildings (author's) and right scale and massing (JTP, 2019)

4.4.1. Context St Clements

Prior to development a series of open meetings, where a hundred people participated with London CLT's board members, enabled an inclusive understand of what the community thought a CLT "must be," "could be" and "could not be" - their collective priorities included: "the CLT must deliver permanent affordability; the St Clements project should be based upon principles of community-led design...and the CLT's homes must not be controlled, managed, or owned by other parties" (Davis, Algoed and Hernandez-Torres, 2020). This set the platform for St Clements' community-led redevelopment to be on the outset of St Clements' redevelopment process. St Clements building is a grade II listed building within a conservation area and an ex-psychiatric hospital and had been in disuse since 2005 (Davis, Algoed and Hernandez-Torres, 2020; Wells, 2014).

The scheme won several awards including the Civic Voice Design Awards 2018, National Housing Awards 2014, Placemaking Awards shortlisted and high commended in 2013 and 2014 (JTP, 2019). Overall, London CLT campaigned for 12 years and shortlisted one in eight people who applied for one of the 23 CLT homes delivered through the scheme as part of a larger development (London CLT, 2017). London CLT target population for housing is the gap between "people qualifying for council property and people who can afford to buy their own home" (Boulanger and Pialucha, 2019).

The frameworks that follow outline St Clements' urban design products and wider processes that support sustainable lifestyle outcomes.



Semi-private resident's only courtyard overlooked by private balconies from a new build development.



Green roof on secure cycle store; mix of new build and redevelopment of the former hospital.



Home zone road, lined with play spaces and the ground floor entrances of flats.



Housing type: Semi-detached 2 storey unit in "The Lodge" in figure 4.8.



Housing type: Semi-detached bungalow unit in "The Lodge" in figure 4.8.



Housing type: Bungalow mews in "The Mews" in figure 4.8.



Resources: secure cycle store for resident only.



Resources: Play spaces in semi-public spaces.



Resources: Underground bin stores within semi-public space.

Figure 4.9. St Clements site visit, further details are appended in appendix 3.

4.4.2. Frameworks

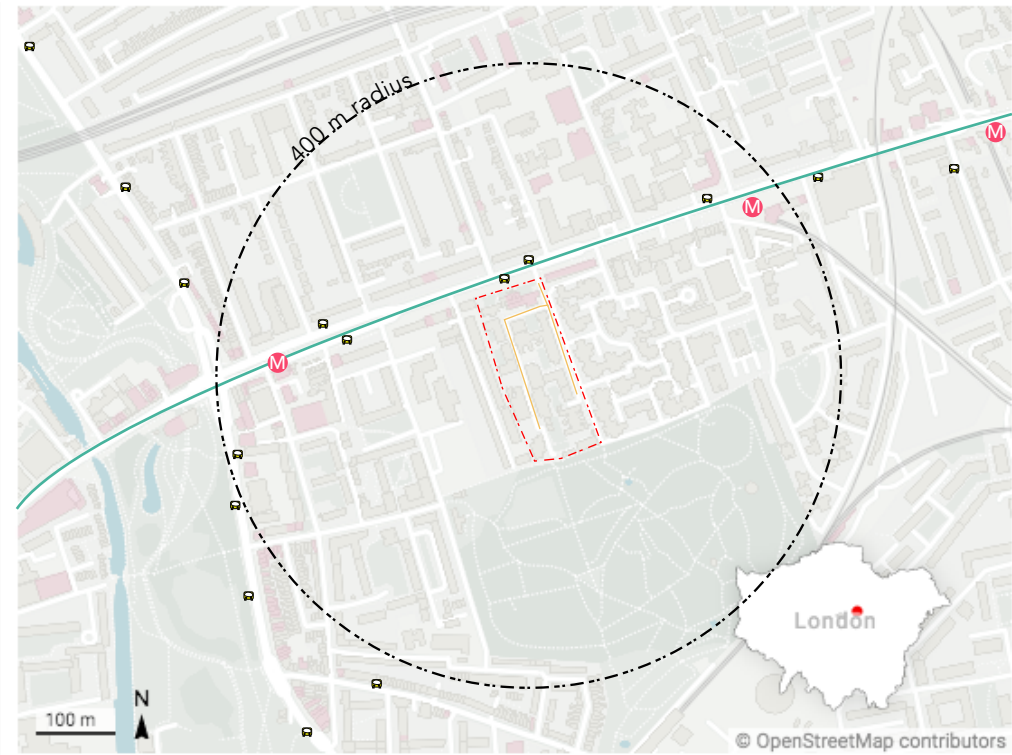
	PRE-DEVELOPMENT	DEVELOPMENT	POST DEVELOPMENT
Community-led Resource(s)	N/A	Permanent community space for events and activates which the residents will dictate how to run (Wells, 2014).	A residents association was set up for site management and has 6 appointed residents with 3 from CLT homes (Boulanger and Pialucha, 2019).
Social Infrastructure	Shuffle film festival that used culture to bring people together and enhance public space – it was a pilot project (London CLT, 2017) held over the course of a week, by opening the site for the festival it helped reengage the local community to reimagine the space and opportunities (Davis, Algoed and Hernandez-Torrales, 2020).	Partial removal of the former walled site and creation of public spaces including pedestrian and cycle entrance from Mile End Rd to Cemetery Park, public amenity spaces and play areas across the site (JTP, 2019). A café and 174 sq m of commercial space (Wells, 2014) 440 cycle parking (Jin, 2013)	All ground rents will be invested into “good works in the neighbourhood” by working with community organizations and local residents (London CLT, 2017).
Natural Infrastructure	N/A	Roof gardens on some buildings; and semi-public and semi-private communal gardens.	Future intention to create an edible garden, a type of mini allotment for local residents (Wells, 2014).
Meanwhile Use(s)	The meanwhile use group that was established for the site became known as Shuffle they started their programme of festival events on the site pre-development and continue to this day next door in Tower Hamlets Cemetery Park (London CLT, 2017).	N/A	N/A
Smart Technology / Renewable Energy Generation	N/A	Permanent on-site renewable energy generation by using passive design measures, communal heating system supplying heat from a common source and biomass fuel supply (Jin, 2013).	N/A

Table 4.8. Fixed topics framework for St Clements, part 1 of 2

Vision Statement	<p>Aspirations related to supporting sustainable lifestyles: permanent affordability; community led design; community control, management and ownership of homes (Davis, Algoed and Hernandez-Torres, 2020).</p> <p>London CLT has also partnered with Sustainable Housing for Inclusive and Cohesive Cities which seeks to support the establishment of more successful CLTs in cities across north west European regions to both develop more projects in London and share lessons learnt with European partners to spread the CLT movement (London CLT, 2017; Sustainable Housing for Inclusive and Cohesive Cities, 2019b).</p>																																																
Partnership involvement	<p>London CLT partnered with developers Galliford Try and Linden Homes, affordable housing developer Peabody, GLA, Citizens UK, Ricardo Community Foundation amongst many others.</p> <ul style="list-style-type: none"> » Freeholder of the site: Ricardo Community Foundation » Management company: Residents association <p>(Boulanger and Pialucha, 2019; London CLT, 2017)</p>																																																
Density (people per hectare) & average storey height	<p>252 total residential units x 2.4 people per household average (Office for National Statistics, 2017) = 604.8 people per hectare 1.08 Hectares in residential use</p> <ul style="list-style-type: none"> » Density: 560 people per hectare <p>4 storeys average height</p>																																																
Land Uses	<p>Residential led development with community (306m² floorspace), café (69m² floorspace) and commercial (174 m² floorspace) spaces (Jin, 2013).</p>																																																
Housing types, number of bedrooms and tenures	<p>Housing types: 252 flats (Observations during the site visit noted there were bungalows and semi-detached units, however an accurate breakdown was not established, further details regarding the site visit observations are outlined in appendix 3)</p> <table border="1" data-bbox="380 965 1489 1444"> <caption>Table 4.8.1. Housing mix for St Clements, bedrooms per unit and tenures (Jin, 2013)</caption> <thead> <tr> <th colspan="2"></th> <th colspan="2">Affordable Housing</th> <th>Market Rate Housing</th> </tr> <tr> <th colspan="2"></th> <th>Socially rented</th> <th>*CLTs</th> <th>Private Sale</th> </tr> <tr> <th>Bedrooms per unit</th> <th>Total units in scheme</th> <th>Units</th> <th>Units</th> <th>Units</th> </tr> </thead> <tbody> <tr> <td>Studio</td> <td>18</td> <td>0</td> <td></td> <td>18</td> </tr> <tr> <td>1bed</td> <td>75</td> <td>14</td> <td>5</td> <td>56</td> </tr> <tr> <td>2bed</td> <td>116</td> <td>15</td> <td>12</td> <td>89</td> </tr> <tr> <td>3bed</td> <td>38</td> <td>17</td> <td>6</td> <td>15</td> </tr> <tr> <td>4bed</td> <td>5</td> <td>5</td> <td></td> <td></td> </tr> <tr> <td>Total</td> <td>252</td> <td>51</td> <td>23</td> <td>178</td> </tr> </tbody> </table> <p>CLT Tenures: *CLT units: 22 owner occupier and 1 rental. Although all 23 homes were earmarked to be owner occupier properties, one prospective family was refused a mortgage last minute so the CLT opted to adapt their original terms and granted them the right to rent with opportunity to buy their home in future (Davis, Algoed and Hernandez-Torres, 2020).</p> <p>(Jin, 2013; London CLT, 2017)</p>						Affordable Housing		Market Rate Housing			Socially rented	*CLTs	Private Sale	Bedrooms per unit	Total units in scheme	Units	Units	Units	Studio	18	0		18	1bed	75	14	5	56	2bed	116	15	12	89	3bed	38	17	6	15	4bed	5	5			Total	252	51	23	178
		Affordable Housing		Market Rate Housing																																													
		Socially rented	*CLTs	Private Sale																																													
Bedrooms per unit	Total units in scheme	Units	Units	Units																																													
Studio	18	0		18																																													
1bed	75	14	5	56																																													
2bed	116	15	12	89																																													
3bed	38	17	6	15																																													
4bed	5	5																																															
Total	252	51	23	178																																													

Table 4.8. Fixed topics framework for St Clements, part 2 of 2

Accessibility	Please reference figure 4.10.
Reuse and redevelopment, comprehensive redevelopment or infill development	Refurbishment and restoration of the listed buildings, which provides 73 dwellings along with new build development (JTP, 2019)
Cost of housing in relation to median incomes	<p>When the scheme was completed in 2017, the purchase price for the CLT homes were:</p> <p>£130,000 for a 1 bedroom £182,000 for a 2 bedroom £235,000 for a 3 bedroom</p> <p>The average house price in the area was £500,000 and the area median income was £31,324</p> <p>Five eligibility criteria (weighted according to priority) were used to allocate the CLT homes:</p> <ul style="list-style-type: none"> » Connection – Minimum of five years’ connection to Tower Hamlets » Involvement – Belong to and participate in the local community » Finance – Priced out of the open housing market and able to afford a East London CLT and London CLT home » Housing Need – More suitable (than current) accommodation required » Supportive of the ELCLT and London CLT <p>(Boulanger and Pialucha, 2019; London CLT, 2017).</p>



Legend

- Site: Bright Street Co-op
- Commercial units
- Bus stops
- M Underground stations
- Cycle Highway (Route 2 - Stratford to Aldgate)
- Home Zone street
- Walking distances: Every 400 m = 5 mins

Figure 4.10. Accessibility map for St Clements

4.4.3. Conclusion

St Clements CLT demonstrates how the classic American CLT model has been adapted into the UK context. Notably its intention to distinguish itself from other prominent UK affordable housing types by keeping the “C” in CLT, which provided the unique community led opportunity that cooperatives and social housing types do not offer in the same way (Davis, Algoed and Hernandez-Torres, 2020). The national and local government parameters it adhered to aided in the delivery of a diverse development that promotes sustainable lifestyles by having a: mixed income community (reflected within its tenures types); variety of activities (reflected within its land uses, meanwhile use and social and natural infrastructure); and socio-spatially equity (reflected within its accessibility map and cost of housing). It innovated by ensuring the scheme delivered: environmentally friendly infrastructure (reflected within its renewal energy generation, natural infrastructure, density, accessibility and reuse of existing buildings); a joined-up approach to regeneration (reflected within its tenure mix, partnership working and community led initiatives); and community control and management (reflected within its urban commons and partnership outputs).

Lessons Learnt

- » The management of the site as a community-led resource, which was possible by adapting the CLT stewardship model to establish a residents association.

- » Creative mix of resources within semi-public and semi-private spaces enabled a mix of interlinked resources that benefit both the residents and the wider community.

“St Clements has never been just about delivering permanently affordable homes. More than that, it is about community, social justice and, quite simply, contributing to happiness in life and emotional well-being.” Dave Smith, Founding Executive Director of the London CLT (Davis, Algoed and Hernandez-Torres, 2020, p. 357).

Overall, the “strong emphasis on its non-housing activities...[ensure the] wider social justice mission is supported and sustained” (Davis, Algoed and Hernandez-Torres, 2020, p. 356), while delivering dynamic, interconnected resources designed throughout the scheme alongside CLT provision seems to be supporting sustainable lifestyles.



Le Nid

Brussels

4.5. Background

CLT Brussels

Le Nid is one of CLT Brussels (CLTB) pilot projects following the legal recognition of CLTs in Brussels in 2013 (Sustainable Housing for Inclusive and Cohesive Cities, n.d.). CLTB has been central in spreading the CLT model throughout Europe and has gained governmental support and finance (Davis, Algoed and Hernandez-Torrales, 2020). This includes CLTB receiving 2 million euros a year in government finance between 2014 through 2018 for development of new CLT projects (Davis, Algoed and Hernandez-Torrales, 2020, p. 364).

CLTB emerged from activists within existing housing and neighborhood associations (Community Land Trust Brussels, 2020) to alleviate the housing crisis. Currently, half of the Brussels population qualifies for social housing but only 7.5% of housing stock is dedicated to social housing (Davis, Algoed and Hernandez-Torrales, 2020, p. 361). CLTB is particularly active in low income areas such as Anderlecht (Community Land Trust Brussels, 2020) the location of Le Nid.

Le Nid launched in 2013 and CLTB identified its future residents within the same year (Davis, Algoed and Hernandez-Torrales, 2020), their involvement was central to the development as described in the following section.

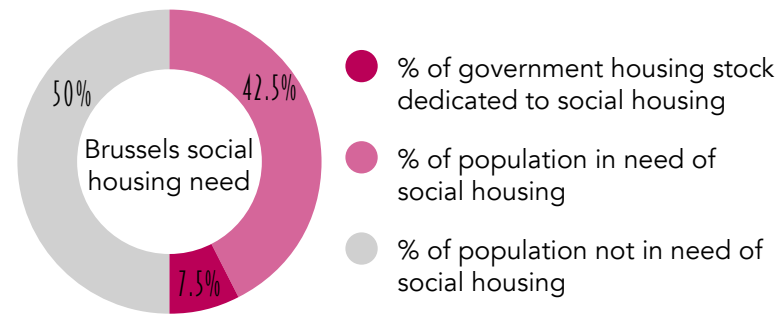


Figure 4.11. Brussels social housing need breakdown

4.5.1. Context Le Nid

Le Nid's residents were involved from the outset of the development. By forming a civil society entity with CLTB they were not only involved in the architectural aspects but also legal, organizational and operational aspects which included formal training to manage the site throughout all development stages (Community Land Trust Brussels, 2020).

The project redeveloped a disused church for a residential led mixed use development (Community Land Trust Brussels, 2020) which promoted the contribution of other community stakeholders that would use semi-public spaces. This ensured the wider communities needs were also met and that they too took part in stewarding the common resources the

site provided “in the long run for the common good of present and future generations” (Davis, Algoed and Hernandez-Torrales, 2020, p. 424). As Verena Lenna notes, to ensure the wider community also stewards common resources within a site a CLT must implement a participatory process focused on spatial issues as “a project’s spatial conditions are crucial to fostering exchange and encounter among the newly arrived households, user of the site, and the pre-existing urban fabric” (Davis, Algoed and Hernandez-Torrales, 2020, p. 424).

The frameworks that follow outline Le Nid’s urban design products and wider processes that support sustainable lifestyle outcomes.

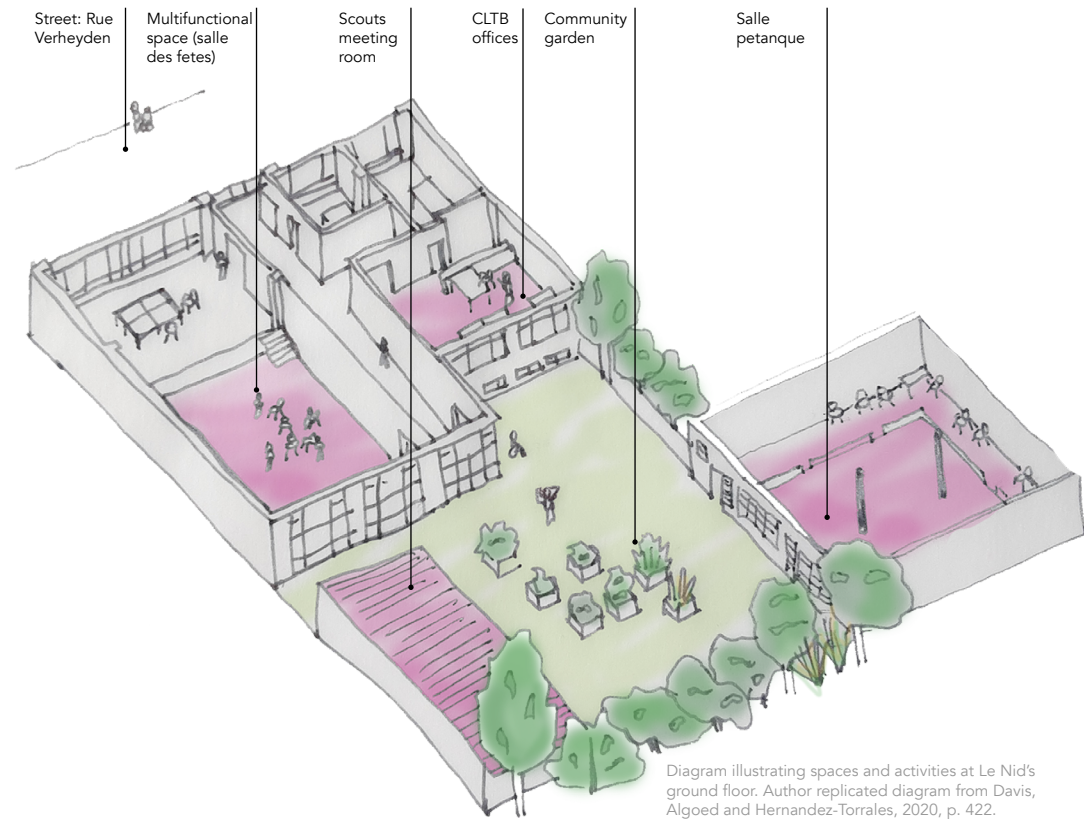


Diagram illustrating spaces and activities at Le Nid's ground floor. Author replicated diagram from Davis, Algoed and Hernandez-Torrales, 2020, p. 422.



Front view of Le Nid, pre-development
Credit: (Gay, n.d.)



Front view of Le Nid, post development
Credit: (Gay, n.d.)



Rear view of Le Nid, post development
Credit: (Sustainable Housing for Inclusive and Cohesive Cities, 2020)

Figure 4.12. Le Nid development and site context

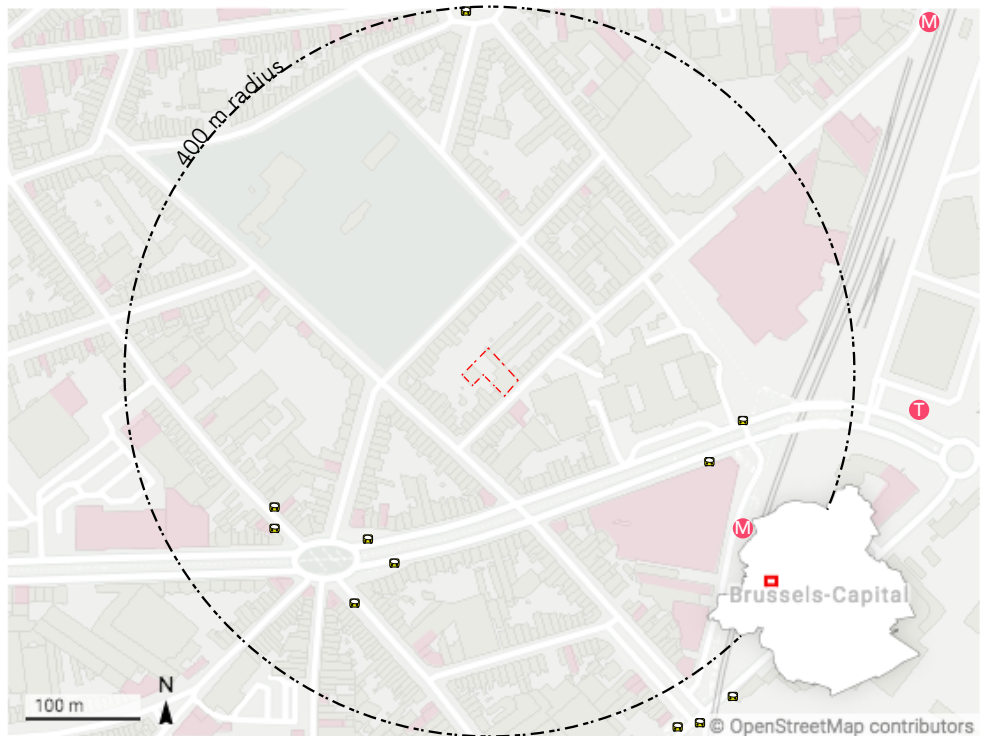
4.5.2. Frameworks

	PRE-DEVELOPMENT	DEVELOPMENT	POST DEVELOPMENT
Community-led Resource(s)	<p>As illustrated in figure 4.12, the sites morphological qualities allowed for following spaces and activities:</p> <p>CLTB established its office space within the disused church, spaces were also used for other local associations and community needs. Aside from office space other uses included community: meetings; assemblies; and gardening. Due to the morphological setting - the site's courtyard became readily used as semi-public space, overlooked by the temporary office buildings and linked to the public street by a long hallway. Future residents and meanwhile users of the space gathered after working hours, building and developing social networks within this convivial courtyard that provides seating, tables and a community garden.</p> <p>(Davis, Algoed and Hernandez-Torrales, 2020)</p>	<p>Available to the CLTB residents and the wider community: courtyard with a community garden; and the salle petanque was renovated for multi-functional community building space</p> <p>Communal spaces for residents only: laundry room and playroom</p> <p>Available to local associations staff: office space</p> <p>(Community Land Trust Brussels, 2020; Davis, Algoed and Hernandez-Torrales, 2020)</p>	<p>Although there are no future community-led resources identified, all existing shared resources, including the courtyard and salle petanque are managed and maintained by its users - residents, CLTB and the wider community. The main building with residential and office space is stewarded by CLTB, Convivence (a partner organisation) and residents. The long-term aim is to handover the site to the residents to steward independently.</p> <p>(Community Land Trust Brussels, 2020; Davis, Algoed and Hernandez-Torrales, 2020)</p>
Social Infrastructure	Same as "community-led resource(s)"		
Natural Infrastructure	Same as "community-led resource(s)"		
Meanwhile Use(s)	Same as "community-led resource(s)"		
Smart Technology / Renewable Energy Generation	N/A	N/A	N/A

Table 4.10. Fixed topics framework for Le Nid, part 1 of 2

Vision Statement	<p>CLTB places value in creating sustainable lifestyles by interweaving different uses within their CLT sites. By proactively introducing community-managed facilities they foster social cohesion of neighborhoods and stimulate the local economy (Community Land Trust Brussels, 2020).</p> <p>CLTB took the initiative of starting Sustainable Housing for Inclusive and Cohesive Cities which seeks to support the establishment of more successful CLTs in cities across north west European regions to both develop more projects in Brussels and share lessons learnt with European partners to spread the CLT movement (Davis, Algoed and Hernandez-Torrales, 2020; Sustainable Housing for Inclusive and Cohesive Cities, 2019b).</p>
Partnership involvement	<p>CLTB key partner throughout Le Nid's development was Convivence asbl, who specialise in housing assistance and renovation advice.</p> <ul style="list-style-type: none"> » Co-ownership of Led Nid: CLTB and Le Nid's residents » Site management: CLTB, Convivence and Le Nid's residents with future prospects of handing over the management of the site to Le Nid's residents. <p>(Community Land Trust Brussels, 2020)</p>
Density (people per hectare) & average storey height	<p>7 total residential units x 2.3 people per household average (Organisation for Economic Co-operation and Development, n.d.) = 16.1 people per hectare 0.02 Hectares in residential use</p> <ul style="list-style-type: none"> » Density: 805 people per hectare <p>3 storeys average height</p>
Land Uses	<p>Residential led development with common areas, 1 semi-public garden, 1 multipurpose community building and 1 office space.</p> <p>(Community Land Trust Brussels, 2020; Davis, Algoed and Hernandez-Torrales, 2020)</p>
Housing types, number of bedrooms and tenures	<p>Housing types: 7 apartments, one of which accommodates those with reduced mobility.</p> <p>The breakdown by number of bedrooms is unknown.</p> <p>Tenures: All 7 CLT homes are owner occupied</p> <p>(Community Land Trust Brussels, 2020)</p>
Accessibility	<p>Please reference figure 4.13.</p>

Table 4.10. Fixed topics framework for Le Nid, part 2 of 2	
Reuse and redevelopment, comprehensive redevelopment or infill development	Reuse and redevelopment of a former church.
Cost of housing in relation to median incomes	<p>Average price per square meter in the private market: €2,800 –€4,000 (Brussels City)</p> <p>CLTB price per square meter: €1,650 on average</p> <p>Targeted population:</p> <ul style="list-style-type: none"> » Most deprived households, majority of migrants » Eligible for social housing » Maximum income ceiling (pers. alone): €22,560 per year <p>(Sustainable Housing for Inclusive and Cohesive Cities, 2019a)</p>



Legend

- Site: Le Nid
- Commercial units
- Bus stops
- M Underground stations
- T Tram stop
- Walking distances: Every 400 m = 5 mins

Figure 4.13. Accessibility map for Le Nid

4.5.3. Conclusion

Le Nid demonstrates how space can interweave individual and collective needs thus creating a pool of common resources that on the whole increases the CLTs sustainability (Davis, Algoed and Hernandez-Torres, 2020).

“Shaped by design preferences, space...[creates] the conditions under which different users will practice their rights; space determines the possibilities for interacting and collaborating around shared responsibilities to preserve a common pool of resources” Verena Lenna (Davis, Algoed and Hernandez-Torres, 2020, p. 425)

Lessons Learnt

- » The importance of community involvement and inclusion from the outset to secure common resources are designed into a site and later managed by its users.
- » Maximize a site’s unique morphological setting to allocate semi-public spaces that is positioned near public space and is overlooked by the permanent users of the site – residents and office workers.
- » Allow for flexibility in who, when and how spaces are used. Such as providing multifunctional community buildings and outdoor space used by many people (such as residents, wider community and local organisations) for different purposes (such as community meetings, office space, gardening,

socializing and leisure) and at different times (including day / evening, seasonal, long / short term uses).

Overall, the integration of semi-public to private spaces within Le Nid encourages different users to use its courtyard, salle petanque, office space and housing units to promote a network of collaboration and cooperation amongst diverse users, thus fostering the critical condition for sustainable coexistence of differing activities and needs to be met (Davis, Algoed and Hernandez-Torres, 2020). As a result, sustainable social lifestyles have been engendered through “the peculiar morphological of the plot and building, a factor that...[played] a critical role in realising Le Nid” (Davis, Algoed and Hernandez-Torres, 2020, p. 424).

4.6. Case study conclusion

Based on the case study examples from the US, UK and Belgium - CLTs have commonalities in supporting sustainable lifestyles when the following qualities, which are advocated within the wider literature review in chapter 2, are present:

1. Community-led Resources

- » Co-created collectively managed resources plant the seed to engendering community ownership and stewardship of these resources.

2. Demographically diverse residents

- » The opportunities for demographically diverse residents are fostered when the integration of a mix of tenures - that caters to permanent affordable housing, social housing and market rate housing - are provided to meet their needs, particularly their diverse socio-economic housing requirements located within a socio-spatial equitable location.

3. Concentrated mixed land uses and housing types

- » Interweaving land uses and housing types create robust neighborhoods that promote walkability and resource efficiency, but for CLTs it uniquely promotes social enterprises within their sites.

4. Accessibility

- » Multimodal transport options for low to medium income households are critical to ensuring a city's resources are shared equitably while creating resilience and self-sufficiency.

Notably, these qualities are not exclusive to CLTs however their value lies in the unique inputs and outputs of achieving each, while their interdependency of achieving a holistic approach to designing opportunities for sustainable lifestyles is also critical. Chapter 5 synthesizes these findings into a pathway to designing opportunities for sustainable lifestyles within urban CLT sites.

Urban Design Pathway



5.1.

The need to create a sustainable pathway

Not all places are created equally and this includes urban CLTs that have many design output variations, but uniquely stimulate sustainable lifestyle outcomes. This chapter frames a sustainable pathway, informed by chapters 1, 2 and 4, for delivering well designed urban CLT sites that have many interdependent benefits. That said, a design will not be enough – the ultimate goal is to create a place (Project for Public Spaces, n.d.) that shapes lifestyle outcomes and facilitates opportunities for local communities to shape them and propel them forward over time.

Designers and non-designers, such as CLT community stakeholders, making design decisions should aim to understand the ripple effect of their decisions across all three sustainability pillars (environmental, social and economic). Figures 5.2 and 5.3, aim to make this process simple to ensure a holistic design approach that engenders places with purpose that shape sustainable lifestyle outcomes.

5.2. Design pathway tool

Figure 5.2 synthesizes chapter 4's commonalities amongst the case studies, these are in white text, in an illustrative pathway all of which have also been

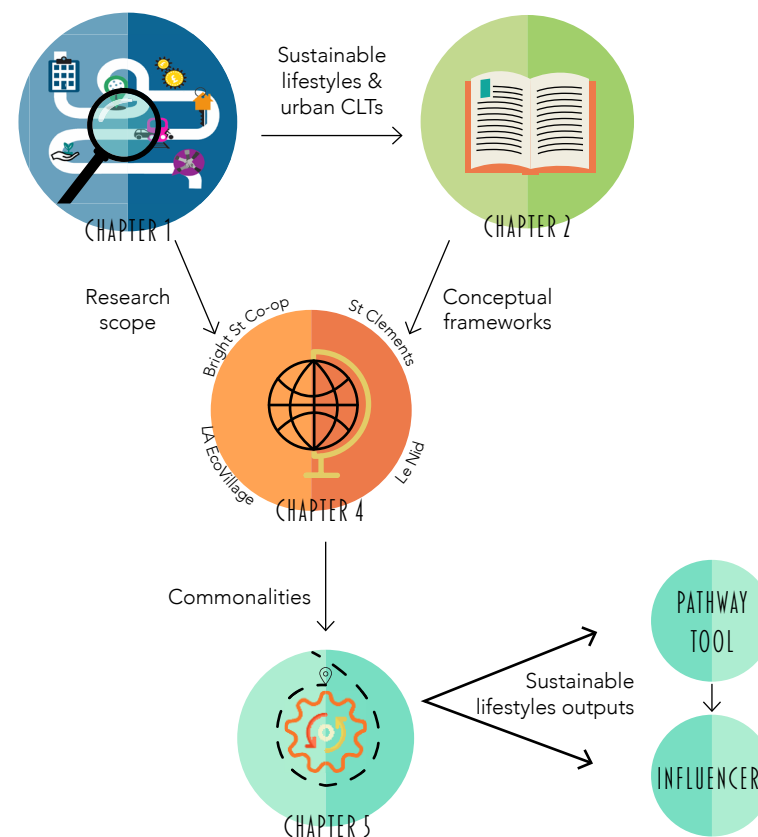
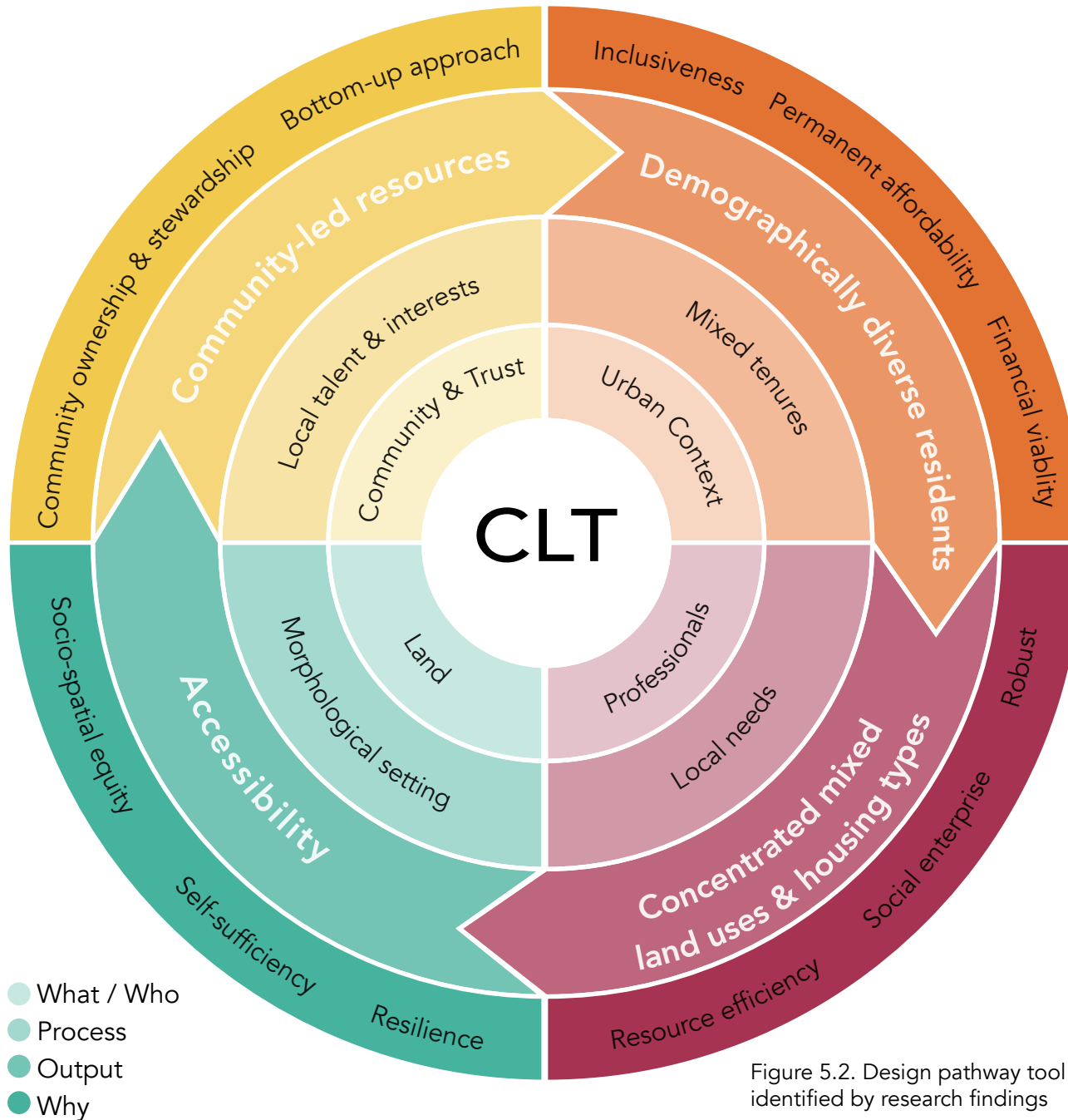


Figure 5.1. Methodology route and sources of information used for chapter 5



informed by chapters 1 and 2. Each coloured quadrant represents a single path for designing opportunities for sustainable lifestyles within urban CLT sites – the path is linear either viewed from the inner circle outward or vice versa. The key is that each quadrant builds upon each layer by identifying how to get the output (the white text layer). By making reference to the legend, this is done by identifying **what / who** is required from the outset, then the **process** they need to investigate (which is context sensitive) being mindful to enhance varied options to ensure the **output** is delivered that creates places cared for and livened by its communities diverse needs. In doing so the **why** factor is simultaneously achieved and reciprocally benefits the what / who and the wider community.

As a whole, the four quadrants together are interdependent and overlap on each other to deliver opportunities for sustainable lifestyles within urban CLT sites. Once familiarized with the pathway tool, it can also be used diagonally (eg. “socio-spatial equity” and “mixed tenures”) to illustrate further specific interdependencies.

The following caveats should be noted for the terminology used in figure 5.2.

5.2.1. Caveats

- » “Community & Trust”: trust in this context means the “T” in CLT, the operation, which classically is composed of CLT residents, the wider community and professionals (such as, CLT specialists, local officials and funders) and ensures the CLT operates to achieve, maintain and grow its unique vision while permanently stewarding the site to primarily safeguard permanent affordability of its properties.
- » “Mixed Tenures”: tenures in this context mean market rate, socially rented, intermediate housing, CLTs, cooperatives and cohousing.
- » “Permanent Affordability”: based on local median incomes can only be achieved with CLTs.
- » “Resilience”: is the ability to withstand or recover from difficult external conditions.
- » “Robust”: is the ability to adapt to change internally eg. to things that are directly controllable.

5.2.2. Pathway Tool Supplement

The following section supplements the pathway tool, figure 5.3, by outlining design recommendations and how these influence the three pillars of sustainability based on the chapter 4 case studies.

5.3. Sustainability Influencers

Each output category in figure 5.3 is a consolidated synopsis of the chapter 4 case studies and overall illustrates the ripple effect of design decisions in achieving sustainability across all three pillars. Notably the design decisions are not a one size fits all model but are there to provide some best practise examples.

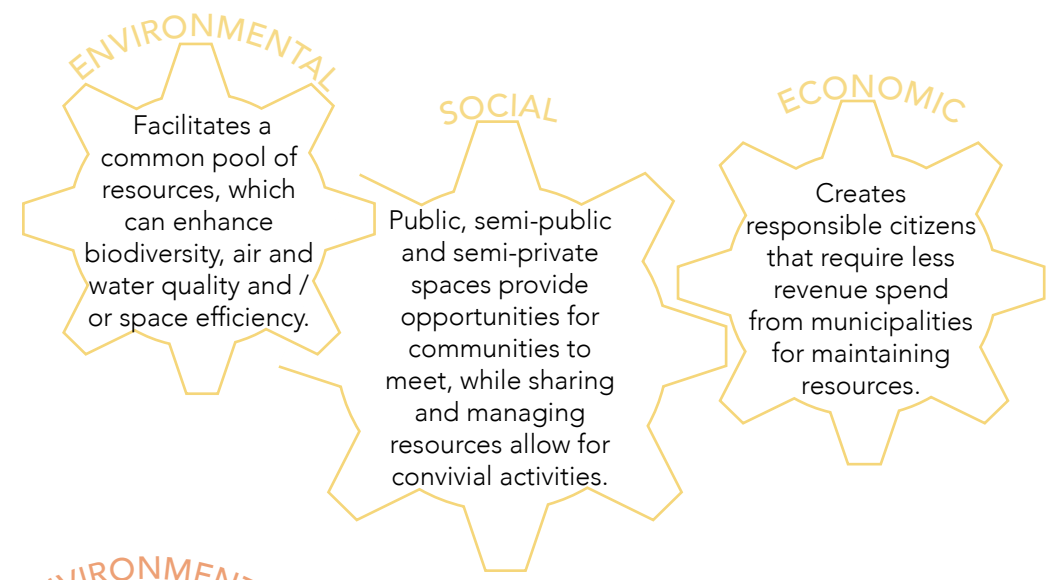
Figure 5.3 serves as a detailed supplement to the pathway tool in figure 5.2 to further assist designers and non-designers making design decisions for urban CLTs. These individuals can use figure 5.3 as a collaborative tool to evolve with context specific information as their CLT develops.

CHAPTER 4, CASE STUDY EXAMPLES

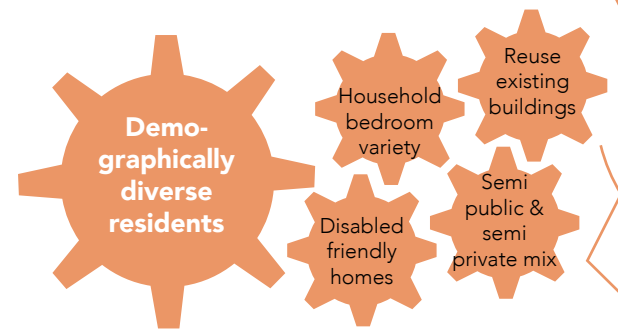
Rippling Benefits

OUTPUTS

DESIGN DECISIONS



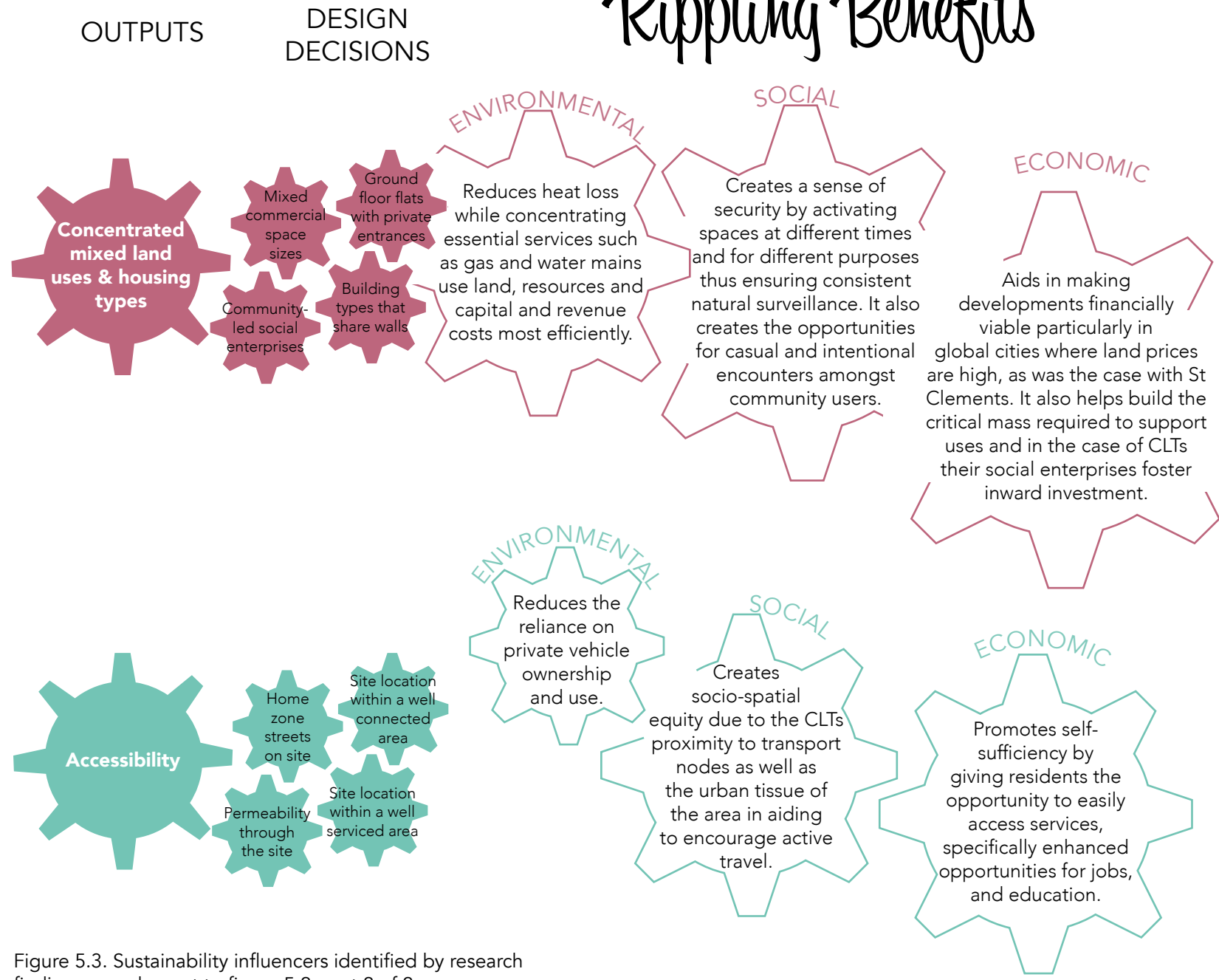
LA EcoVillage and Le Nid case studies exemplify this in particular through the integration of the wider community, while St Clements and Bright Street Co-op focus on resident resources.



St Clements delivered this at a large scale while Bright Street Co-op delivered this at a smaller scale and Le Nid and LA EcoVillage demonstrated this primarily from their socio-spatial positioning.

Figure 5.3. Sustainability influencers identified by research findings, supplement to figure 5.2, part 1 of 2

Rippling Benefits



Le Nid demonstrated the multifunctionality of how and when spaces are used; St Clements demonstrated an overall concentration of mixed land uses and housing types; LA EcoVillage demonstrated innovative and mixed land uses; and Bright Street Co-op demonstrated a mix of housing types.

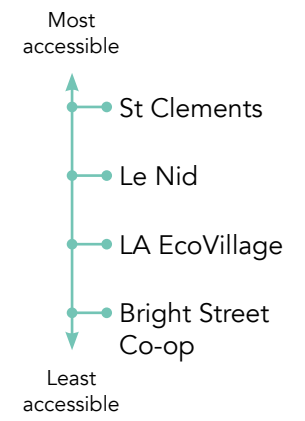


Figure 5.3. Sustainability influencers identified by research findings, supplement to figure 5.2, part 2 of 2

5.4. Conclusion

The interdependency of the many best practice components that facilitate sustainable lifestyles within urban CLTs, supported by research findings, has been brought together in this chapter to diagrammatically provide a practical pathway for designing opportunities for local communities to live more sustainably. These tools require collaboration amongst stakeholders and users to holistically deliver sustainable lifestyle outcomes. Notably its outputs provide the opportunity for choice and variety, thereby ensuring flexibility and adaptability of CLT sites to remain practical over the long term particularly to respond to the many challenges influencing urban environments, sustainability and lifestyle outcomes. Uniquely, urban CLT sites distinctively provide options that are facilitated by how the CLT model functions, such as social enterprises, stewarded community led resources and permanent housing affordability. As John E. Davis argues

“when it comes to sustainability, preserving affordably priced homeownership in the face of market pressures and changing conditions...[CLTs] cannot be matched by other approaches to stewardship...[which] allow a CLT to continue doing good even when things go bad.

Davis, Algoed and Hernandez-Torrales, 2020, p. 33

Conclusion



6.1

Concluding Notes

This dissertation demonstrates that sustainable lifestyle outcomes and urban CLT developments are inherently linked with good urban design playing part of the role. There is more than just design to influence lifestyles – the underlying motives for design decisions and the long term stewardship of a place are equally as important to understand the ripple effect across the environmental, social and economic sustainability of CLTs. The recent CLT narratives presented in this report, including the international CLT case studies and Davis, Algoed and Hernandez-Torrales (2020) have reflected this complex phenomenon. The following sections provide a synopsis of these research findings and a reflective summary on the effectiveness of this dissertation.

6.1.1 Key Findings

Research findings have drawn a parallel to the international literature, from Carmona (2018, 2003), Gehl (*The Human Scale*, 2012), Jacobs (1961), Rogers (1995) and many more, which highlight that our everyday engagement with places have a profound influence on the lives we are able to lead by acting as constraints or enablers to the decisions we make. Urban design relates to this, but is only part of the picture, as the research findings suggest.

This has acknowledged the original research questions, from chapter 1, as outlined below:

Research Questions: How could urban design influence sustainable lifestyles within urban CLTs? Are there unique qualities in urban CLTs that enhance sustainable lifestyle outcomes?

Questions Answered: This research has failed to extract unique urban design products within CLTs, but unique findings regarding their wider processes have demonstrated their value of facilitating sustainable lifestyle outcomes. This includes, social enterprises, stewarded community-led resources and permanent housing affordability based on local median incomes - thereby enabling the longevity and liveliness of urban CLTs. By providing a pathway - in chapter 5, which guides urban CLTs in making collaborative design decisions that facilitate sustainable lifestyle outcomes – as a best practice guiding framework with freedom to adapt it to fit context specific needs - then the benefits of the whole of a CLT (community, land and trust) on the wider sustainability arena (environmental, social and economic) are facilitated thus safeguarding the long term success of places benefiting all.

“ The CLT movement, above all else, starts and ends with people and their lives – not housing, or resale formulas, or anything else.

—
Davis, Algoed and Hernandez-Torrales, 2020, p. 357

Figure 6.1 illustrates the dissertation’s objectives and the findings linked to each.

Overall, by recognizing the theories that facilitate sustainable lifestyle outcomes and their practices in urban CLT developments, this dissertation’s wider ambition is to raise awareness of the benefits of CLT developments to help them scale up and be more widely known, understood and accepted as a tool for transformative sustainable change that ensures a city’s opportunities are shared by all.

6.2 Reflective summary

This research has used a variety of methods to understand the complex nature of urban design influences on sustainable lifestyle outcomes in urban CLT developments. Due to time constraints, the research was unable to assess more case studies nor scrutinise results of the pathway in-depth. Scrutiny was based on extracting design related topics from successful urban CLT developments, but has not completely scrutinized legislations, political structures nor financial backgrounds which have a pivotal influence on the built environment’s ability to facilitate sustainable lifestyles and particularly the use of the CLT model. Therefore, additional methods that would add value to this research are:

- » More case studies to analyse in chapter 4 - to confirm if there are any further prevalent design products or wider processes;

Objectives

Output overview



Figure 6.1. Research objectives overview

- » Site visits to more than one of the case study sites - to gain in person observations of the site itself and the wider area;
- » Interviews with CLT residents and / or the CLT organizations - to understand how the residents' daily lives have changed or stayed the same i.e. do residents now have opportunities such as employment or educational opportunities by living in the CLT that would have been jeopardized if they would have been forced to live elsewhere in the area; and
- » Test the pathway tool at a live CLT design workshop session - to be able to fully scrutinize its success or failings within the context it is meant to be used.

Further research that could deepen the findings within this dissertation includes:

- » The perceptions of sustainable lifestyles from CLT residents;
- » The role of planning policy in facilitating CLT developments and sustainable lifestyle outcomes i.e. the use of zoning that segregates land uses vs. mixed use development; and
- » The role of alternative forms of community-led housing affordable housing, such as cooperatives, self-build and cohousing in facilitating sustainable lifestyle outcomes.

Appendices

Appendix 1

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Appendix 2

Ethical Approval

DocuSign Envelope ID: 8559863A-EC67-4821-8FBF-E2A91F6E5AD2

DocuSign Envelope ID: 8559863A-EC67-4821-8FBF-E2A91F6E5AD2



TDE Form E1

Faculty of Technology, Design and Environment - Ethics Review Form E1

- This form should be completed jointly by the **Supervisor and Student** who is undertaking a research/major project which involves human participants.
- It is the **Supervisor** who is responsible for exercising appropriate professional judgement in this review.
- Before completing this form, please refer to the University **Code of Practice for the Ethical Standards for Research Involving Human Participants**, available at <http://www.brookes.ac.uk/Research/Research-ethics/> and to any guidelines provided by relevant academic or professional associations.
- Note that the ethics review process needs to fully completed and signed **before fieldwork commences**.

- (i) **Project Title: Community Land Trust's Impact on Sustainable Lifestyles Dissertation**
- (ii) **Name of Supervisor and School in which located: Laura Novo De Azevedo, School of the Built Environment**
- (iii) **Name of Student and Student Number: Sylvia Ramos, 19033489**
- (iv) **Brief description of project outlining where human participants will be involved (30-50 words): As part of the methodology for the dissertation, human participation may be involved (subject to their agreement to participate):**
- Residents from St Clements CLT, London
 - CLT professionals
 - UD MA group sessions for a pilot presentation

		Yes	No
1.	Does the study involve participants who are unable to give informed consent (e.g. children, people with learning disabilities)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	If the study will involve participants who are unable to give informed consent (e.g. children under the age of 18, people with learning disabilities), will you be unable to obtain permission from their parents or guardians (as appropriate)?	N/A <input type="checkbox"/>	N/A <input type="checkbox"/>
3.	Will the study require the cooperation of a gatekeeper for initial access to groups or individuals to be recruited (e.g. students, members of a self-help group, employees of a company)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Are there any problems with the participants' right to remain anonymous, or to have the information they give not identifiable as theirs?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5.	Will it be necessary for the participants to take part in the study without their knowledge/consent at the time? (e.g. covert observation of people in non-public places?)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	Will the study involve discussion of or responses to questions the participants might find sensitive? (e.g. own traumatic experiences)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7.	Are drugs, placebos or other substances (e.g. food substances, vitamins) to be administered to the study participants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	Will blood or tissue samples be obtained from participants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	Is pain or more than mild discomfort likely to result from the study?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.	Could the study induce psychological stress or anxiety?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.	Will the study involve prolonged or repetitive testing of participants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12.	Will financial inducements (other than reasonable expenses and compensation for time) be offered to participants?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13.	Will deception of participants be necessary during the study?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14.	Will the study involve NHS patients, staff, carers or premises?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Signed:		Supervisor
Signed:	<small>DocuSigned by:</small> Sylvia Ramos <small>BAAD2BC80FF42E...</small>	Student
Date:		

What to do now:

- If you have answered 'no' to all the above questions:
 - The student must **send** the completed and fully signed E1 form to their **Dissertation Module Leader**.
 - The student must keep a copy of the E1 form which must be bound into their dissertation as an appendix.
 - The supervisor must keep a copy of the E1 form as they are responsible for monitoring compliance during the fieldwork.
- If you have answered 'yes' to any of the above questions:
 - The supervisor and student must complete the TDE E2 form available at <http://www.brookes.ac.uk/Research/Research-ethics/Ethics-review-forms/>
 - Note that the information in the E2 must be in **sufficient detail** for the ethical implications to be clearly identified.
 - The signed E2 and signed E1 Form must be emailed to Bridget Durning (bdurning@brookes.ac.uk) who is the Faculty Research Ethics Officer (FREO) for review. Please allow **at least two weeks** for this review process.
 - If/when approved the FREO will issue an E3 Ethics Approval Notice.
 - The student must send the E1, E2 and E3 Notice **to the Dissertation Module Leader**.
 - The student must also keep copies which must be bound into their dissertation as an appendix.
 - The supervisor must keep a copy of documentation to monitor compliance during field work.

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- If you answered 'yes' to any of questions 1-13 and 'yes' to question 14, an application must be submitted to the appropriate NHS research ethics committee. This is an onerous and time consuming process so the supervisor should liaise early with the FREO if the student is considering this.

Appendix 3 St Clements Site Visit

Table A3. St Clements, London, UK - Site Survey

Objectives

Public - Private Sequences (where do the commercial and cafe units sit on the site; and generally how does are spaces activated from the public realm to as far as the private realm I can observe)	Built Form (mix of housing types; and building heights)	Site Infrastructure (including natural and social infrastructure; and any fly posts of upcoming public activities on the site/in the community building)	Movement Routes	Integration into the wider morphological setting
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Commercial and cafe units are still being refurbished (within the listed building) within "Recurve Apartment" building and/or "The Bungalow" which appeared to be a temporary construction site office.

The remainder of the site appeared substantially completed.

3 semi-private enclosed (with gates) courtyards bounded by the backs of flats and their respective private amenity space (on ground floor and balconies) - as photographed below.

The fronts of dwellings faced semi-public space including: homezones; pedestrian/cyclists routes; parking areas and other dwelling frontages.

The backs of dwellings back onto semi-private/private space including: semi-private courtyards; private amenity space; and the retained wall around parts of the site.

People observation: no one using semi-private courtyards, but several using their private amenity space.

Mixed housing types: terraced bungalows (approximately 10 units, as photographed below), and two storey single unit semi-detached house (1 unit) within "The Mews" and "The Lodge" buildings. Remainder were flats with direct ground floor entrances into ground floor flats.

Heights: single storey - 8 storey. Older buildings have higher floor to ceiling heights, so a 3 storey building in an older building is the same height as a 4 storey building in a newer building. Notably, a variety of heights are layered throughout.

Several secured residents only bike store areas - green roofs over top.

Several underground bin stores within semi-public space.

Children's play areas within semi-public space.

Pocket gardens throughout within semi-public space and the courtyards are larger semi-private garden space.

Landscaping throughout aids in enclosing seating areas, play areas (as photographed below) and buffers private windows while budging at corners helping to reduce vehicle speeds.

People observation: Urban agriculture (just tomatoes) tended to by adjoining residents.

1 vehicle entrance/exit into the site

3 pedestrian/cyclist entrance/exit into the site

3 home zone routes (one is in the photo below)

Several pedestrian/cyclist routes within the site.

Pedestrian/Cyclist permeability is greater than vehicle permeability.

Route that adjoins the cemetery is for pedestrian and cyclists only.

People observation: dog walkers and runners traversing the site, so the new linkage from the Bow Rd to the cemetery appears to be readily used even though the hoarding (refurbishments on Recurve Apartment") dominates the main access from Bow Rd which narrows the main pedestrian entrance.

Former hospital wall is retained along Brokesley St and British St, as illustrated in the below photo.

Pedestrian and cyclist permeability into the wider area is only possible through the site from Bow Rd to the cemetery.

Super highway route 2 aka cycle highway (6.8 km Aldgate to Stratford) adjoins the site frontage along Bow Rd.

Public transportation options (bus and underground) available: bus stop available adjacent to "Recurve Apartment" and a 4 min walk either west or east are underground stations and further bus stops.



This site visit was conducted on 22 July, 2020 from 11:30-12:00. The list of objectives are specific to the site and areas of added value that were not evident in literature findings. Please note, access was gained into semi-private space as gates were propped open, gates operate by fob key/key, I had no personal inactions with anyone onsite.

Appendix 4

Pilot Viva Presentation Notes

Held: Zoom conference call 4 August 2020 from 2:10pm - 2:50pm
Present: Regina Lim, Daima, Avantika, Amira, Abhishek, Uvaraj, Federico, Trishana, Rachel, Deborah & Astrid.

Discussion points throughout my presentation:

(Q = questions that form part of the presentation; A = answers given by the group)

Q: How would you define sustainable lifestyles?

A: resilience; healthy; green networks; quality living; adaptive

Q: How can urban design influence sustainable lifestyles?

A: moving about; connected; people first; address tomorrow's crisis

Q: What opportunities / challenges might an urban setting present in relation to sustainable lifestyles?

A: pollution; opportunity for diversity; job opportunity

Q: Have you heard of community land trusts? If so, what is your understanding of community land trusts?

A: a group with shared interests; co-living

Q: (Present research topics from my framework and discuss) Are there any other design topics that might aid in how CLTs facilitate sustainable lifestyles? Any questions, comments, recommendations?

A: No commentary on framework/design topics.

Overall feedback:

(F= feedback; A: how will I action)

F: Look into planning policy to implement CLTs

A: Following research findings, this would have minimal value in establishing CLTs as legislation and supported policy from country to country is vastly different. The long existing housing affordability crisis still exists and is growing even with planning policy in place. Also, my aim is not planning policy related but

rather to drive the value of CLTs from a strategic point of view using urban design as a "hook." Political support, based on research, aids in unlocking funding and sites and this is partly where I am targeting my "hook."

F: Links to gear diagram

A: Place reference diagrams (sustainability and CLT venn diagrams side by side with relevant information provided).

F: Can see the value CLTs bring, particularly through their evolution in terms widening the movement to ensure economic sustainability. The presentation should target the aim both the output (e.g. design principles) but in particular my wider ambition of spreading the CLT movement with my research which breaks down the value of CLTs and their importance in creating sustainable lifestyles.

A: Touch on why CLTs aren't more readily available, reference John E Davis's work, and the key factors that must be overcome for their success in delivering sites.

A: the key "take home" headline of what CLT sites have the potential of achieving - urban design focused.

Based on the groups engagement, it was noted that:

(O = observation; E = enhancements to be made)

O: The posed questions began engagement, but only a select few individuals participated in the discussion.

- E: Review questions with tutors to ensure the questions stimulate a balance of both pre existing knowledge and potentially new knowledge discussion points.
- E: Add questions within slides, so audience can read them along as I present each.

O: A good general group understanding of CLTs was achieved after sharing what they are and what they facilitate - for those that voiced their understanding of it following my presentation. Some enhancements can be made:

- E: use an infographic to highlight: CLTs can be used with non housing assets too; management structure; governance structure

Appendix 5

Viva Presentation

Pre-presentation summary

Urban Community Land Trusts and their contribution on Sustainable Lifestyles

By Sylvia Ramos

Background

The presentation I will give on the 18th of August will be in the form of an interactive workshop. Therefore, it should be noted that my theoretically driven dissertation will not be presented in its entirety.

Instead this workshop session will be used as an opportunity for me to gain your professional feedback on the prevalent urban design topics that have been derived from my research.

The workshop session will last approximately 30-40 minutes with me continually presenting and engaging you, the audience, with relevant background information on topics and posing the below questions. Based on our discussion these questions may not be presented verbatim and I may make slight modifications subject to our discussion.

Presentation questions

The below questions will be asked during the workshop, please note these are only provided for reference but should not be investigated in advance of our workshop.

These questions will set the stage to our main discussion and are intended to be quick discussion points:

- 1 Please list 3 ways urban design can influence sustainable lifestyles.
- 2 Have you heard of a community land trust? If so, what is your understanding of community land trusts?

Recorded presentation

Present during the viva on the 18th August 2020:

- Doctors: Laura Novo De Azevedo, Regina Lim, Georgia Watson, Brian Goodey;
- Post graduates: Soham De; Roland Wong

https://zoom.us/rec/share/_vAvBpP_701lf4X3tUjkepwZlb3Heaa81XMYr_VYnxk26iorEbaCpTYD0JJam3DW?startTime=1597741287000

These questions are more critical to aiding with my research outputs, please note that information in parentheses has been vague here to not influence your feedback:

- 3 Are there any discrepancies in how the layers interconnect (in research findings "pathway" graphic)?
- 4 How can ("pathway" graphic) be used as a tool for designers and non-designers making design decisions?
- 5 How can we get (people) to support CLTs more often? General discussion – time permitting.

What to bring

Paper & pen to annotate your feedback during the presentation.

Throughout the workshop I would like you to participate in the discussion and for you to annotate your feedback, particularly in response to the above questions. Your feedback will form part of my primary data and aid in fine tuning and / or validating my research.

Please send your feedback to me on 19033489@brookes.ac.uk

