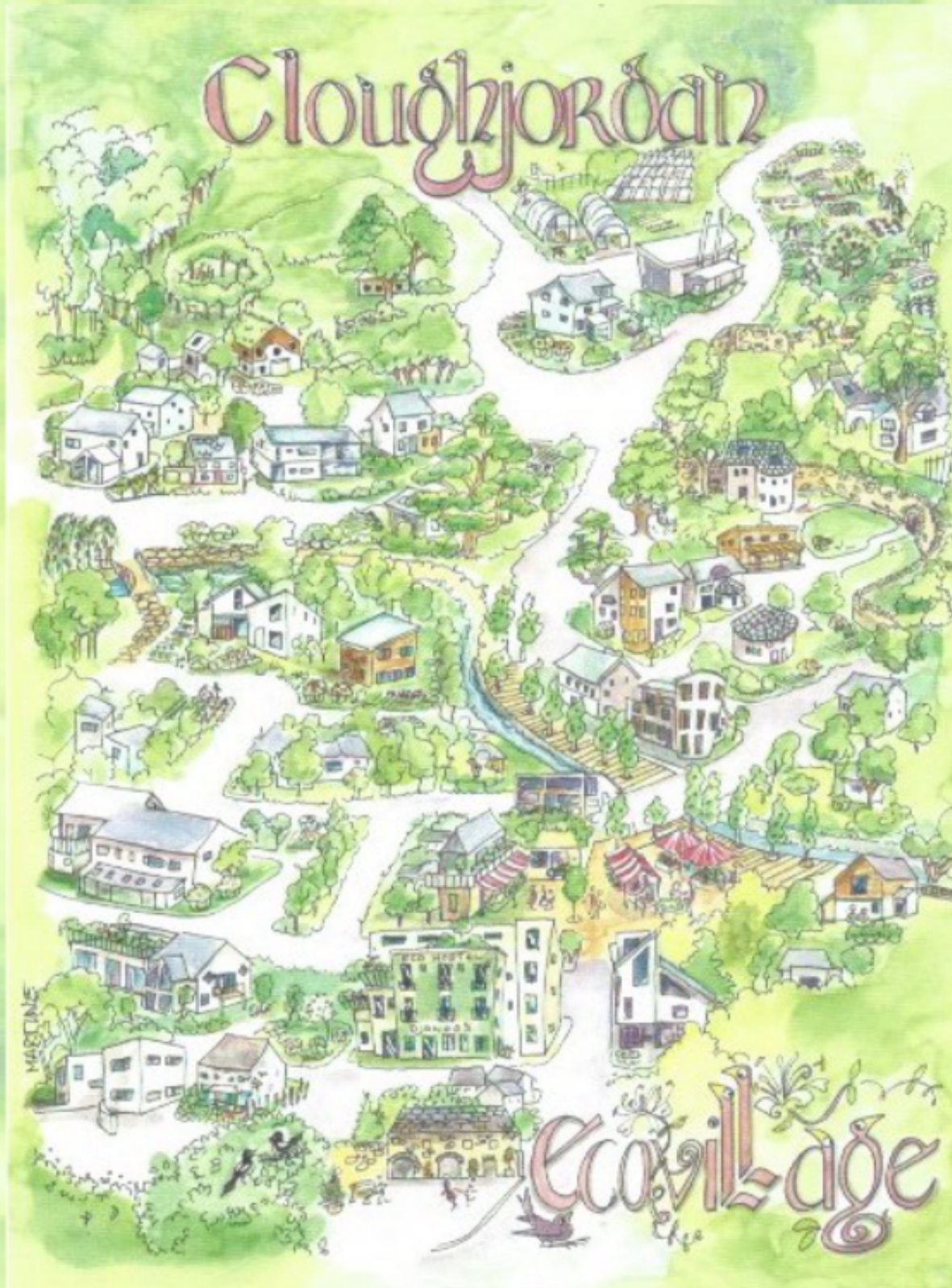# The Production and Liveability of Space in Cloughjordan Ecovillage

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ABSTRACT

Today, ecovillages house over 100,000 people worldwide. This growing movement represents a reaction to the social and environmental degradation in contemporary society. By looking at the space in Cloughjordan Ecovillage, the unique example of an ecovillage in Ireland, this research aims at understand how this space was produced, utilising Henri Lefebvre's spatial trialectics in order to assess its liveability using Jane Jacobs characteristics of a 'good place'. Built onto an existing village, less than half the sites of Cloughjordan Ecovillage have been developed 10 years after construction began. The project was gravely impacted by the 2008 financial crisis and the ambitious design, driven by an environmentally sustainable ethos, is barely visible today. Conflicts and an inability to make and enforce decisions within the internal voluntary governance structure (the Viable Systems Model) have caused a partial breakdown of the governance structure and community cohesion. This is manifest in its space and the 'objective liveability' of Cloughjordan Ecovillage is certainly below average, however the 'subjective liveability' is high and the environmental impact is far lower than national average.

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Abbreviations	
GEN	Global Ecovillage Network
CEV	Clouhjordan Ecovillage
SPIL	Sustainable Projects Ireland Clg.
PAG	Primary Activity Group
TCC	Tipperary County Council
LUG	Land Use group
VERT	Village Education, Research and Training
TCC	Tipperary County Council
OMC	Owners Management Company
DHS	District Heating system
SUDS	Sustainable Urban Drainage system
EVS	European Volunteer Service
PO	Participant Observation Notes
MUD	Multi-Unit Development act
BER	Building Energy Rating
OECD	Organisation for Economic Co-operation and Development

CHAPTER 1: INTRODUCTION

1.1. Point of departure

Today ecovillages are estimated to house 100,000 people worldwide, in 10,000 communities (Global Ecovillage Network, 2019), brought together by a common environmental consciousness and a drive to be the catalysts for real change. According to the Global Ecovillage Network (2019) or GEN, they self-identify as "living models of sustainability, and examples of how action can be taken immediately. They represent an effective, accessible way to combat the degradation of our social, ecological and spiritual environments". These communities represent pioneers in truly sustainable living, attempting to demonstrate how an alternative way of life is possible, all the while keeping within our earth system boundaries. They represent holistic experiments of systems, designs and technologies which attempt to tackle the multifaceted challenges faced by our planet.

Ecovillages are a sub-category of intentional communities. Intentional communities are communities "designed and planned around a social ideal or collective values and interests, often involving shared resources and responsibilities." (dictionary.com). Ecovillages specifically combine the notion of communitarianism with environmentalism and ecological sustainability.

Cattaneo (2015) provides a holistic description of what characterises ecovillages. He states that they are generally small in size, numbering in and around one hundred people. Situated in "rural areas, where access to natural means of production is easier and rent and property cheaper. Participants practise small-scale organic agriculture and permaculture, craft and workshop production, self-construction or DIY practices and favour renewable energies or energy-conserving means of production and transport... Materials and production processes tend to be low impact and often items are recycled from waste or reused or repaired. The conjunct of these types of agriculture and material and service provisioning expresses the idea of convivial places where the means of production are held in common. Ecovillages can be considered both material and immaterial commons because they manage land and physical resources commonly while, at the same time, set norms, beliefs, institutions and processes that empower a common identity which in turn contributes to the provision and reproduction of the community." (Cattaneo, 2015)

1.2. Gap in literature & problem statement

Although their numbers globally continue to increase, academic literature about ecovillages is still today relatively scarce. It was identified, through extended research of both intentional communities and ecovillages, that there is a distinct lack of literature regarding whether these are vital places to live, or, in other words, their 'liveability'. Ecovillages constitute experiments for alternative, more sustainable ways of living, and assessing their can liveability is an important contribution to the existing literature. Although not directly addressing liveability, the urban planning of ecovillages has been studied from various perspectives including: housing, sustainable development (Boyer, 2014, 2015), water resource management (Leite et al, 2016), green design (Holtzman, 2014) and environmental impact (Carragher & Peters, 2018).

However, an investigation of liveability alone would produce a report that risks remaining simply 2D. It is *why* a degree of liveability exists in a space that is of greater interest. In order to understand why these spaces are the way they are today, and by extension why varying degrees of liveability exist, how these spaces were produced, must be understood. Central to this production of space, is the question of governance; who and why certain people have influence or agency in a space's development.

Emirbayer and Mische (1998) define "human agency as [a] temporally embedded process of social engagement, informed by the past (in its habitual aspect), but also orientated towards the future (as a capacity to imagine alternative possibilities) and towards the present (as a capacity to conceptualise past habits and future projects within the contingencies of the moment)". When applied to urban planning, agency or "appropriation includes the right of inhabitants to physically access, occupy, and use urban space" but also, "to produce urban space so that it meets the needs of inhabitants." (Purcell, 2003,)

Brown (2002) states that "Intentional communities differ from the society that surrounds them because they are intentional and they are communal. Because they are intentional, people that live in them are not neighbours by happenstance, they have chosen to live together. Because they are communal they share things that neighbours do not usually share, such as wealth, property, labor, food and sometimes even spouses". Because of this alternative way of living, they also generally govern themselves in unconventional ways, compared to normal society. Their origins in communitarianism and altruistic beliefs correlate with organisational structures in opposition to the dominant hierarchical ones. Surprisingly, research of ecovillage's governance systems is almost non existent, with exception of Esteves (2017), and no research has yet been done on, the influence of these systems on space.

1.3. Context

This year Cloughjordan Ecovillage (CEV) celebrates 20 year since initial conception. Mooted by a group of activists who, "were sick of being against everything" (Resident no. 18), and decided to create a place which represented what they were "for". They embarked on a journey to build Ireland's first ecovillage, in County Tipperary, in the midlands, on a 67 acres site attached to the preexisting settlement of Cloughjordan. This intentional community began construction just over 10 years ago, and although development was halted by, among other things, the 2008 financial crash, today CEV houses approximately 100 adults and 35 children.

Figure 1: Localisation of Cloughjordan Ecovillage

1.4. Aims and objectives

The aim of this research is to understand how the environmental ethos (the particularity which differentiates ecovillages from other intentional communities), and a unique governance structure, have shaped the space produced in an ecovillage setting. It also seeks to understand whether these unique contextual factors, produce a space which is liveable and therefore do ecovillages represent viable demonstrations of how humans could live in a vital place, while preserving the environment for future generations.

1.5. Research questions

How do residents have agency in the production of liveable space in Cloughjordan Ecovillage?

Sub-Questions

1. How residents have, have not, or have attempted to exert agency and appropriate the space in CEV? What influence do the environmental regulations have on this.

2. Do residents feel controlled or restricted by these regulations and are these easily accepted thanks to the VSM? And, is the enforcement of decisions regarding space without conflict while increasing the sense of enfranchisement?

3. Does a focus on environmental sustainability, from the development's conception, successfully produce liveable space? And are Jane Jacobs' characteristics of a 'good place' observable?

4. Are neighbourhoods, which are conceived by future inhabitants, free from a conflict between Lefebvre's (1991) 'le conçu' and 'le vécu'? Does having future inhabitants involved in a development's conception mitigate Salama and Wiedmann's (2013) inference that there is an "intense struggle for identity and a relatively low degree of influence by inhabitants on development decisions" in newly constructed urban areas?

1.6. Academic relevance

Each ecovillage has its own unique origins, organisation, design and sets of beliefs. CEV was chosen as the case study for this research for three main reasons. Firstly, it represents an "extreme or unique case" according to Yin (2008). It is the first, and only example of an ecovillage in Ireland, and as context plays an important role in their spatial development, this case was of academic interest. Secondly, CEV is unique in its situation. Most ecovillages are located in relative isolation, unlike CEV is built on to the existing village of Cloughjordan, a settlement of 511 people according to the last Irish census (CSO, 2019). This proximity to an existing settlement will have influenced its spatial development and the governance of space, also being of academic interest. Finally, CEV is embarking on the preparations for a second phase of development, which will more than double the population and dramatically alter its space. An analysis of how its space is produced and how liveable it is, will hopefully be beneficial to the community, in moving forward with this new development phase.

The academic interest this case represents is evident from the existing literature it has been the subject of. It covers a range of disciplines including geography (Campos, 2013), political economics and degrowth (Kirby, 2016), agriculture (Moore et al. 2014), housing markets (Cunningham, 2014), operational research (Espinosa & Walker, 2013), discourse analysis (Casey, n.d.) and of course sustainability (Winston, 2012, Casey et al, 2017 , Salte, 2017). However, research regarding its urban planning in general is absent and in particular the production and liveability of its space.

1.7. Research outline

The following chapter, presents the theoretical framework which will be used to analyse the production and liveability of space in CEV. Chapter 3 describes the qualitative research strategy and its case study design. The methods of participant observation, interviews and document analysis for data collection are presented, and the operationalisation of the theoretical framework and data analysis are explained. Chapter 4 presents the results of the data collected and Chapter 5 discusses these results in relation to the theoretical framework in order to answer the research questions. The conclusion in Chapter 6 explains the limitations to this research as well as presenting recommendations for future research as well as to ecovillages at various stages of development.

CHAPTER 2: THEORETICAL FRAMEWORK

In this chapter an analytical framework will be presented. It will be used as a guide for this research. Firstly, the work of Henri Lefebvre will be presented as a framework to understand the production of space in CEV. Following this, Jane Jacobs' work on the characteristics of a 'good place' will be presented to serve as a measure of CEV's liveability.

2.1. The Production of Space

2.1.1 Trialectic spatial framework

Following in the tradition of French anarchist geography, Lefebvre, a self-proclaimed marxist, published, in 1974, *'La Production de l'Espace'* or *'The Production of Space'* (1991). Here he argued that space is inherently political. It is not something "out there", just a container of meaningless matter, but is actually produced, full of social meaning and social power relations. He suggests that space is composed of three distinct spaces in constant interaction which he outlines in a triadic spatial framework.

Firstly, *'le conçu'* (also known as conceived space or representations of space), is the space conceived by scientists, planners and social engineers. These are abstract spaces, rooted in these 'experts' plans, beliefs and visions, which are imposed on the space (Salama & Wiedmann, 2013). Lefebvre believed this was produced by the ruling class to maintain social divisions, relations of production and order, not neutral nor objective, as is often portrayed. This is dominant space. (M.K. Ng et al., 2010).

Secondly, 'l*e perçu'* (perceived space or spatial practice). This consists of the space where movements and interactions take place, where networks materialise and develop. Daily routines at an individual level as well as "urban realities such as the networks that link places designed for work, pleasure and private life" (Salama & Wiedmann, 2013), or in other words "the multifarious processes, actions, and routines through which society secretes space" (Whitehead, 2002).

Finally, *'le vécu'* (lived space or spaces of representation) the "unconscious non-verbal direct relation between humans and space" (Whitehead, 2002). Whitehead referred to it as "clandestine spaces of resistance", appropriated by citizens. This space is passive and dominated. Lefebvre asserts that it is through the "dialectical interaction of these three different manifestations of space that urban space was realised and produced" (Lefebvre, 1991).

Lefebvre (1991) took greatest interest in the interactions between 'le vécu' and 'le conçu', the latter constantly dominating the former.
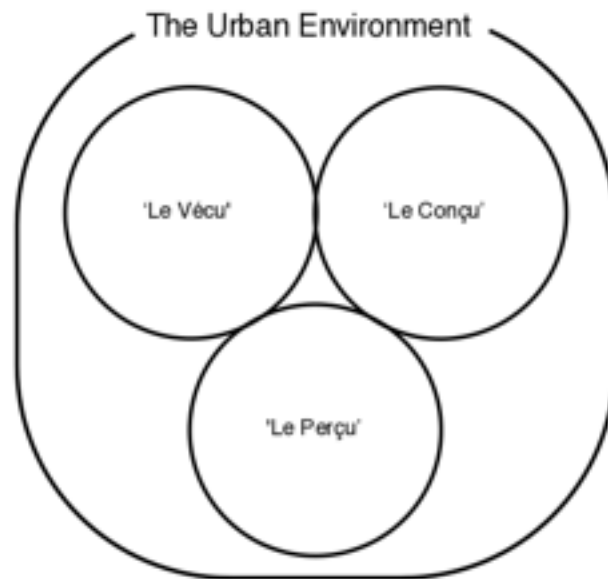
Figure 2: Framework for investigating the production of urban space based on Henri Lefebvre (1974), Source: Author

According to Harvey, Lefebvre argued that space must be understood as being path-dependant, "nothing but the inscription of time in the world, spaces are the realisations, inscriptions in the simultaneity of the external world of a series of times…I suggest to you the idea that the city will only be rethought and reconstructed on its current ruins when we have properly understood that the city is the deployment of time" (Harvey, 2000). The production of space must be viewed in the context of time, being the product of its history but also by the anticipations of alternative futures. (Cunningham, 2010)

Lefebvre's framework has been utilised extensively in academic research. In direct relation with this research topic, it has been used in research on the of production of space in contemporary urban developments such as by Salama & Wiedmann (2013) and M.K. Ng et al. (2010) to name but a few. They found that this tension between 'le conçu' and 'le vécu' is amplified in modern developments. In well established urban areas, lived space is often neglected "due to the implicitness of its existence" (Salama & Wiedmann, 2013). However, this "implicitness" is not present in contemporary developments, "ideally Spatial Practice is lived directly before it is conceptualised" (M.K. Ng et al., 2010). In contemporary developments, there is a "lack of lived space [and it] is expressed in the form of an intense struggle for identity and a relatively low degree of influence by inhabitants on development decisions." (Salama & Wiedmann, 2013)

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2.1.2. The right to the city debate

Lefebvre's work has inspired many academics and sparked what has today become known as 'the right to the city' debate. He highlights two principal rights for urban dwellers, namely the right to participation and the right to appropriation. Writers such as Mark Purcell (2003), acknowledge the relevance of Lefebvre's work, however raise several fundamental critiques.

Firstly, the right to genuine participation. Purcell questions how much empowerment should be given to urban dwellers and what character this should have. He demonstrates that it is "the agenda of those empowered that will determine the social and spatial outcomes of the right to the city and its politics of scale." (Purcell, 2003). Equally, questions arise surrounding what constitutes 'inside' and 'outside'. Who is allowed to participate and on what scale? He states that Lefebvre "proposes a political identity ['citadins' or inhabitants] that is both independent of and prior to nationality with respect to the decisions that produce urban space" (Purcell, 2003). This comes into confrontation with the principle of Westphalian sovereignty, or in other words the modern international system of nation-states that have exclusive sovereignty over their territory. How is a city's boundary defined and equally its citizenship? However, Dikeç (2003) states that the merit of Lefebvre's writing does not derive from the formal idea of participation but rather, the reclamation of the city as a political space, "the very possibility of the formation of voices, of political subjectivization it generates in and around urban space." (Dikeç, 2003).

Secondly, appropriation of urban space. Lefebvre insists that urban dwellers not only have the right to "occupy already-produced urban space. They also have the right to produce urban space so that it meets the needs of inhabitants." (Purcell, 2003). This clearly prioritises the 'use value' of urban space over its monetary value, as private property or a commodity, the foundation of capitalist class relations.

"Lefebvre's vision of the right to the city is therefore one of radical transformation of urban social and spatial relations. It would transform both current liberal-democratic citizenship relations and capitalist social relations" (Purcell, 2003). What Purcell and many others highlight is that Lefebvre's works bring to the fore key issues regarding urban space's democracy, and enfranchisement. It does not however constitute a practical guide to fix cities multifarious problems. 'The right to the city' debate, and citizen ownership of space in today's neoliberal economic context would give inhabitants a voice at the corporate table which today is instrumental in the production of space.

This narrative, as well as Lefebvre's calls for revolutionary change, have been widely integrated into the de/post/zero-growth and circular economy literature, over the past decade. This body of literature combines Lefebvre's ideas surrounding governance with contemporary issues such as climate change and environmental justice.

From this body of literature, authors Tim Jackson (2017) and Paul Chatterton (2018) illustrate contemporary examples of Lefebvre's narrative and how it have been expanded upon. Chatterton (2018) underlines the potentialities of a return to the "commons" system, which he defines today as "much more than simple bounded territories. It also encompasses physical attributes of air, soil, water and plants as well as socially reproduced goods such as knowledge, languages, codes and, importantly, information." (Chatterton, 2018) 'Commoning' sets itself against various traits central to capitalism. It erodes the exchange value of commodities, private property relations and individualism, sitting between public and private ownership. However, "the biggest challenge is land" (Chatterton, 2018) and housing. Building this urban commons would require going beyond familiar forms of representative democracy and hugely increasing participation in decision-making. More holistic and horizontal approaches to organisational structures and consensus-based decision-making can, according to Chatterton (2018), enhance deliberative democracy and encourage extra parliamentary activities, direct action and civil disobedience. This also play an important role by keeping in check authoritarianism and unjust laws and bringing us closer to the paradigm shift Lefebvre calls for.

Underpinning all of this is a fundamentally different economic model based on radically different principles that counter the individualism, competition and profit of the business-as-usual economic machine, unquestionably measured by GDP. Jackson (2017) outlines the flaws that the GDP measurement incorporates and advocates for a future which better measures prosperity currently unaccounted for, named the 'care economy'. It incorporates free exchange like community economic activity, activism and household labour, such as raising children, predominantly done by women. (Jackson, 2017)

These authors' projections for better and, as they stress, achievable futures make reference to the idea of utopia, without necessarily daring to utter the word. Lefebvre asked 'Who [of progressive thinkers] is not a utopian today?' (Lefebvre, 1996) rejecting anti-utopian sentiment as being fatalistic and accepting of a status quo. Utopian thinking is undoubtedly intertwined with the formation of radical goals. "Without a vision of utopia there is no way to define that port to which we might want to sail" (Harvey, 2000). However, this utopian outlook was strongly contested by Jane Jacobs. Although both Jacobs and Lefebvre represent radical alternative thinkers of their respective epoch's, both contesting institutional norms and presenting people centred urban theories, Jacobs held a robust antipathy towards utopian-inspired urban theory. She saw these as attempts to "force urban citizens into preconceived moulds, often responding to technocratic, bureaucratic and economic exigencies" (Cunningham, 2010), embodied in Charles Fourier's Phalanstery and works by Le Corbusier and Ebenezer Howard, which echo even earlier utopians like Thomas More and Tommaso Campanella. (Cunningham, 2010)

2.2. Characteristics of a 'good place'

Although Lefebvre's framework is useful for understanding the process by which a space is produced, when it comes to actually assessing and operationalising Lefebvre's ideas, Jacobs' framework of the characteristics of a 'good place' is invoked.

Jacobs stood up to the modernist movement and the paternalistic planners of 1960's North America. Jacobs, unlike the authors cited above, did not emerge from the academic realm. Her book *'The Death and Life of Great American Cities'* presented a particularly people-centred approach, using multiple case studies of different American cities and their neighbourhoods. She outlined what concrete characteristics were necessary to produce 'good' neighbourhoods.

2.2.1. Diversity

The most fundamental characteristic Jacobs' identified was 'diversity'. In urban discourse "diversity has been addressed as having multiple meanings that include mixing building types, mixing physical forms, and mixing people of different social classes, racial and ethnic backgrounds." (Salama & Wiedmann, 2013).

Firstly, Jacobs (1961) states that diversity in the 'functions' of an area - referred to today as 'mixed use' - is important. An area must give people choice, "insure the presence of people who go outdoors on different schedules and are in the place for different purposes, but who are able to use many of the facilities in common" (Jacobs, 1961). Additionally she states that diversity in functionality should incorporate diversity in temporality, through festivals, markets etc.

Secondly, diversity in population, various cultures, backgrounds and social-strata. This "primarily serves the concept of 'see and be seen', by allowing people to socialise and interact." (Salama & Wiedmann, 2013).

And finally, diversity in the physical setting. According to her short blocks and designing an area around pedestrians, encourage social interaction and community cohesion. Architectural diversity, in terms of size and style, is particularly paramount as it caters for different tastes (Jacobs, 1961).

Jacobs identified how the three forms of diversity specifically influence the sense of safety in a space. She identified that it is maintained, not by police but "is kept primarily by an intricate, almost unconscious, network of voluntary controls and standards among the people themselves and enforced by people themselves" (Jacobs, 1961).

She underlines that defining spaces' purpose provides people with an understanding of the types of interactions and demeanours which are appropriate. It must be easily identifiable whether a space is private - within which one is a guest, the space is for car use - where

one must be cautious, or the space is intended for recreation - where one may be at ease. Jacobs states that trust is the governing force in public spaces, "[There] must be eyes upon the street!" and adding that "good lighting is important" because it increases the field of vision (Jacobs, 1961). She argues for high population density, so that a public space has users in it fairly continuously.

2.2.2. Liveability

Critics of Jacobs' contend that she presents "a vision laced with nostalgia" (Page and Mennell, 2011), and point out that there are contradictions in her thought (Martindale, 2012), leading them to question the validity of her findings, and her lack of formal academic research training. Today, however, many of Jacobs' key theories have been integrated into everyday planning discourse (van den Berg, 2018). Already in 1990 David Harvey saw as the norm, the pursuit of "organic" and "pluralistic" urban planning strategies, to create a "collage" of differentiated spaces and mixtures, instead of "grandiose plans based on functional zoning of different actors" (Harvey, 1990, van den Berg, 2018).

Jacobs' characteristics of a 'good place' are considered to be at the origin of the notion of 'liveability'. This concept has been widely debated in academic literature (Fainstein, 2004; Gummer, 1995; Jacobs, 1961; Jacobs and Appleyard, 1987; Jones et al, 2007; Talen, 2006;) and is considered a "determining factor" in order to create a vital urban space. (Salama & Wiedmann, 2013). Many of her observations have been expanded upon. 'Eyes on the street' and the importance she gave to safety was taken up by Oscar Newman's in his work on 'Defensible Space' (1972) which outlines how spatial design can reduce crime. Similarly, Jacobs is credited for being an inspiration for the New Urbanist movement centred around pedestrian-centric spaces and 'walkability' (Laurence, 2006).

Liveability referee to ones' quality of life in relation to a given space, essentially if it is a 'good' or vital place to live. Today, the term liveability is most often heard in conjuncture with 'index'. The 'liveability index' is a quantitative measurement of objective factors, influencing people's quality of life in cities. Each year a number of private companies produce rankings of cities liveability, based on factors such as climate, level of crime, housing cost, access to public transport and numbers of schools and hospitals. International organisations such as the OECD produce similar rankings. The OECD's 'Better Life Index' attempts to integrate both subjective and objective factors. These include the following subjective factors: personal likes and dislikes, feelings of connection to others and spirituality, measured using life-satisfaction surveys. It is more challenging to measure, quantify and therefore compare these subjective factors, but their importance is obvious.

"The social and emotional perception is as valuable as it ensures that users and visitors will invest their efforts, time, and emotions; it is important to satisfy their needs, freedom,

and most important the sense of 'individuality within collectiveness' (Salama & Wiedmann, 2013). Jacobs was among the first to underline how fundamental social cohesion and identity are in creating vital space. The important role of community is today encompassed in the notion of 'placemaking'.

In conclusion, the theoretical framework outlined above was used to identify several themes of exploration which will help to understand the production of space and its liveability. From Lefebvre 'time', 'participation' and 'appropriation' will be investigated as well as 'diversity' and 'safety' from Jacobs. Finally, although not taken directly from the above theoretical framework, because it is their environmental ethos that represent ecovillages' uniqueness and contemporary academic relevance, how this ethos influences the production and liveability of space will constitute the final theme in creating the following conceptual model.

2.3. Operationalisation

The themes identified in the previous section have been operationalised to form conceptual model to guide this research. The terms used within it are explained below.
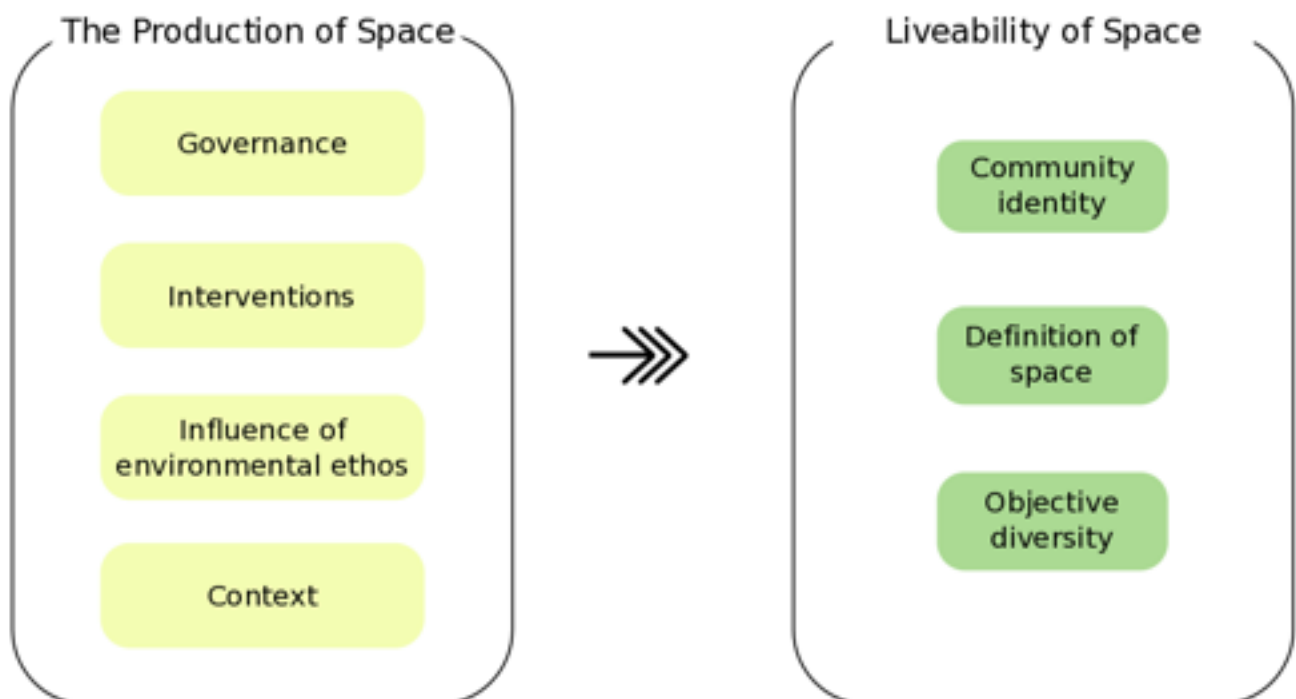
Figure 3: Conceptual model

Concept: Time

Investigated topic: *Context*

From Lefebvre's concept of 'time' being the determining factor in the production of space, the national context surrounding CEV's spatial development will be studied, incorporating, historic and social, but in particular economic contexts into the analysis.

Investigated topic: Governance

Concept: *Participation*

From the concept of 'participation', put forward by Lefebvre, governance in CEV will be studied. This concept incorporates the internal governance structure as wells as how it interacts with the external national governance structure. How does the internal structure impact residents' sense of enfranchisement and is the interaction between the internal and external structures with or without friction?

Concept: Appropriation

Investigated topic: *Interventions.*

Lefebvre's notion of 'appropriation', or making a space one's own, will be studied by understanding people's concrete interventions in space. Are these possible/ restricted and for what reasons?

Concept: *Diversity*

Investigated topic: *Objective diversity (Demographics,*

From Jacobs, diversity of the built environment, architecture and functions in CEV will be analysed as well as the population demographics. These represent some of the objective factors which influence liveability.

Concept: *Safety* **Investigated topic:** *Definition of Space*	Although 'safety' can be measured quantitatively (no. of incidents of crime of road traffic incidents), Jacobs also underlines the importance of how spaces uses are defined.

Concept: *Placemaking* **Investigated topic:** Community Identity	In order to incorporate the more subjective aspects of a spaces liveability highlighted by Jacobs. The sense of 'connectivity' within the community will be analysed through an investigation of the presence of community identity in CEV. Specifically relevant in new urban developments as underlined by Salama and Wiedmann (2013).

CHAPTER 3: METHODOLOGY

3.1. Research design

Firstly, desk research of academic literature concerning ecovillages was conducted. This literature was consulted using the online search engine; Web of Knowledge and via the University of Amsterdam library. Using the key words ecovillage, intentional community, governance, planning and liveability and agency and appropriation in various sequences a gap in the existing literature was identified. From this a theoretical framework was chosen.

3.1.1. Case study

A case study approach was chosen for this research as it is best suited addressing "how" (Bryman, 2012) research questions such as the one under present discussion: How do residents have agency in the production of liveable space in Cloughjordan Ecovillage (CEV)? Other reasons were that no control or manipulation of behavioural events was possible, and that the focus of the research was based on contemporary events in Cloughjordan are very relevant to the research (Yin, 2008) (Baxter and Jack, 2008). Data collection was done through an exploratory research approach coupled with a single embedded case study design (Yin, 2008), although standard practice is to choose a holistic, rather than embedded, single case study design, the timeframe and word count available within the context of this Masters programme call for more refined and focused research aims in order to produce findings that are not simply generic. The choice of a single case study presents issues surrounding sampling and therefore representativeness of the study, subsequently disallowing the testing of causal relationships and competing hypotheses (Jacobson et. al, 2003). However Flyvbrg (2006) asserts that case study, and qualitative research methods in general, have a merit that does not need to be replicated to have value. He stipulates that to become an expert in something you must gain a very deep understanding of this specific case. "If people were exclusively trained in context-independent knowledge and rules, that is, the kind of knowledge that forms the basis of textbooks and computers, they would remain at the beginner's level in the learning process" (Flyvbjrg, 2006).

3.1.2. Data gathering

Qualitative research was chosen over quantitative as the research topic calls for the interoperation of words instead of numbers. It has the ability to study a target population's behaviour and its connection to the topic of research, allowing the underlying reasons, view points and perceptions to be uncovered. Subsequently an inductive qualitative

research allowed for the creation of new data rather than testing existing theory. (Bryman, 2012). Naturally qualitative research accumulates knowledge through interpretivism, which is the "understanding [of] the social world through the examination of the interpretation of that world by its participants" (Bryman, 2012). Additionally the research guidelines produced by CEV actually state that "face-to-face interviews are greatly preferable to questionnaires and the like." (Cloughjordan Ecovillage, 2016).

Qualitative data was collected using a mixed-method approach. This insured the absence of researcher bias, which can occur with a particular, favoured method being employed. A combination of data triangulation and investigator triangulation was used by conducting semi-structured interviews with different stakeholders as well as participant observation, and document analysis of grey literature (Thurmond, 2001). Triangulation provides a confluence of evidence that breeds credibility (Bowen, 2009). Corroborating findings across data sets reduced "deficiencies and biases that stem from any single method" (Mitchell, 1986) The goal was not to establish consistency across data sources, as Patton (2002) asserts that inconsistencies between sources should be seen as an opportunities to uncover deeper meaning in the data.

3.1.3. Sampling and ethical considerations

Once a research request was accepted by VERT February 2019, the research request, including a small blurb of the subject of the research was circulated to the 55 households in CEV. One of the households offered me accommodation free of charge for the two weeks of fieldwork which began on the 31st of March.

The substantive framework consisted of what Weiss (1995) describes as a "panel of knowledgeable informants" in the form of a "loose collectivity": These were the "residents of a neighbourhood" and the topic list was created from an extensive literature review.

A combination of convenience and snowball sampling were chosen as the sampling techniques. Convenience sampling was used initially. Knocking on people's doors, while conducting research, is prohibited as one of the conditions of acceptance of research by VERT, so interviews were secured by attending and participating in activities and social events as well as walking around CEV and approaching people outdoors. The more people saw me involved in the community, the more willing they were to be interviewed. From there, snowball sampling was used as an approach which avoids self-selection bias, even though, it also contains its own possibilities of bias in terms of anonymity. Thus I remained conscious that "ethically, snowballing increases the risk of revealing critical and potentially damaging information to members of a network or subgroup. Simply informing a respondent how one obtained a name or contact information demonstrates a particular kind of link." (Jacobson et. al 2003).

Over the course of the fieldwork it became evident that conflict had left scars within the community. There were residents who were highly critical of SPIL and some even refused to pay membership fees in protest over how the organisation was being run. This group of people, critical of SPIL, were extremely cautious of my presence as a researcher, likely because of my affiliation (although obligatory) to SPIL but also due to previous researchers ethical faux pas, leading to respondent's identities being easily decipherable by other residents.

Respondents who were overtly happy to be interviewed would likely consist of a biased group and therefore result in a biased sample. I was able to obtain my first interview with a person who held a critical view point of SPIL. In a distinctively Irish way, a chance encounter of a relative's colleague and their old school friend in Dublin resulted in receiving the contact details of a CEV resident. Through this interview I obtained names of other like minded individuals and built up a list of people who held somewhat opposing perspectives. It is also interesting to note how this illustrates how small and interconnected Ireland is as a whole, and one can clearly imagine how this interconnectedness is greatly increased in a small rural Irish setting.

I then combined convenience and snowball sampling. I would note residents' names, and sometimes even the approximate location of their home, during previous interviews. I subsequently approached them and requested an interview, in the street, all the while without revealing that they were specifically targeted. However this method too, had its limits. There were some residents which I could not 'bump into' either at social events or as I roamed the estate. For these individuals VERT sent interview requests by email, again without revealing that they were specifically targeted. An attempt was also made to have as large a range of ages within the sample, from persons who grew up in CEV to the most elderly residents.

After the two week onsite stay, I returned to Dublin, insuring that access to Cloughjordan was still possible should further interviews or observations be needed. In addition to the 22 resident interviews, two expert interviews were conducted. Ideally interviews are conducted until either empirical or theoretical saturation is reached, however the limited timeframe available meant that this was not possible.

Consent forms were signed before the interviews, always insuring that sufficient time was allowed for the respondent to read said form and for me to answer any questions they had. Respondents were informed that they may leave the research at any time and without any repercussions as well as that the interview would be taped.

Once the fieldwork period ended and 24 interviews were complete, the intention was for these tapes to be transcribed and sent to respondents to allow them to comment or clarify their content to increase transparency and avoid causing any additional conflict. However the average interview lasted over an hour, some almost two, which made full transcription

within the timeframe of this Masters impossible. Ten interviews were fully transcribed and sent for comment. The additional 14 interview's audio recordings were sent to respondents for feedback.

Naturally all names of interviewees were anonymised in the report, however due to the very small, tight knit nature of the community and the tensions which already exist, I also chose to avoid gender pronouns in the final report to increase anonymity. For the same reason, some sources of documents or images from documents are not cited.

Thank-you emails were circulated to the residents email on the list as well as to individual respondents with their transcriptions and audio recordings. A copy of the final report was sent to VERT at draft and final stages for comment. After the submission of the final report, the data gathered will be "stored securely and for a time period adequate to dealing with any issues that may arise, and ensuring that the research findings are disseminated in appropriate ways." (Cloughjordan Ecovillage, 2016)

3.2. Research methods

3.2.1 Participant observation

Firstly the ethnographic method of participant observation was conducted. An overt researcher role was mobilised (Bryman, 2012, Atkinson & Hammersley, 1994). An overt role was obligatory in order to gain access to CEV. An official research request form and Skype interview were conducted in February 2019 with a member of VERT, and, as stated above, CEV residents were fully aware of my role as a researcher and the topic of my research before my field work began. VERT also offered advice and support, "as a contribution to ensuring fruitful engagement with the project and its members, and valuable outcomes to the research." (Cloughjordan Ecovillage, 2016).

Participatory observation was initially undertaken individually, to avoid initial potential bias. by exploring the neighbourhood alone. Then I participated in the free tours which are given to the public on weekends and served as preliminary reconnaissance. Following this was a two week stay living with a residents couple in CEV. Emerson et al. (1995) state that immersion "Involves both being with other people to see how they respond to events as they happen" and as Goffman (1989) outlines "subjecting yourself, your own body and your own personality and your own social situation, to the set of contingencies that play upon a set of individuals". In other words I experienced a certain degree of resocialization.

As stated above I attended multiple community activities and events such as an Extinction Rebellion activist group meeting, traditional Irish music session, children's circus club show, theatre group script reading, first Friday of every month music session etc. I

attended several educational tours and participated, in a voluntary capacity, in activities such as farming. This allowed me to build a good rapport with community members and subsequently improved the chances of them accepting to be interviewed. Further participatory observations, in the form of 'walk-alongs' were done, asking residents to show examples of interventions and explain how each came about. This was particularly useful as members often only remembered an intervention when it was pointed out to them. The one they remembered themselves were usually contentious issues which involved lots of debate among residents. These interactions were recorded and photographs were taken. Field notes were taken in separate categories: 1) Descriptive: notes which avoided making statements that characterise or rely on generalisations, 2) Diary: my own personal impressions, interpretations, sensations and emotions, and Logbook: which included information such as location, time, date etc.

I was critically aware of the line between participant and observer being blurred at times, and naturally I wanted interviews to feel like conversations rather than interviews, as people speak substantially more freely. The common critiques of qualitative research being subjective and impressionistic may apply to this research. However, I was overtly aware of this tension and constantly questioned my convictions and impressions over the course of the fieldwork. I greatly endeavoured to interview the full spectrum of opinions within the resident population and tackle the possibility of having a biased sample.

3.2.2. Interviews

Secondly, semi-structured interviews were conducted (Beyers et al., 2014; Trinczek, 2009). This type of interview allowed the discussion of topics pertinent to the research questions while allowing the respondent to impart their viewpoint. A topic list was created from the core concepts contained in the research question and conceptual framework. This list, consisting of highly theoretical concepts, allowed the creation of questions in more everyday language, these were loosely followed in the interviews.

These interviews were approached as a partnerships, between interviewer and respondent. I attempted to build a good rapport and make the respondent feel comfortable in the situation by acknowledging their expertise on the topic and my gratitude for giving me their time. The questions consisted mainly of open questions. Bryman (2012) states that the advantages of this type of questioning are: "respondents can answer in their own terms; they are not forced to answer in the same terms as those foisted on them by the response choices; and they allow unusual responses to be derived". When elaboration of certain points were needed specifying questions were used. During the course of the interviews markers were kept, which allowed the respondent to speak uninterrupted, while not forgetting to address any topics. Care was taken to avoid leading questions. Questions of low tellability were also approached towards the end of interviews, once the respondent was at their most comfortable.

From the interviews a list of interventions was created. These were then categorised by the reason behind the intervention, whether it was officially or unofficially done, accepted or rejected, how contentious it was and if so how the issue was concluded as well as a its localisation and the reason for its localisation.

Interview numbers	Respondent type	Location	Date (2019)	Interview format	Duration
1	Resident	CEV	31st March	Part sit down, part walk-along	1hr 28mins
2	Resident	CEV	4th April	Sit down	1hr 1min
3	Resident	CEV	4th/5th April	Part sit down, part walk-along	2hrs 7mins
4	Resident	CEV	4th April	Sit down	37mins
5	Resident	CEV	4th April	Part sit down, part walk-along	53mins
6	Resident	CEV	5th April	Sit down	1hr 21mins
7	Resident	CEV	6th April	Sit down	49mins
8	Resident	CEV	6th April	Sit down	32mins
9	Resident	CEV	8th April	Part sit down, part walk-along	56mins
10	Resident	CEV	9th/10th April	Part sit down, part walk-along	1hr 43mins
11	Resident	CEV	9th April	Sit down	42mins
12	Resident	CEV	10th April	Sit down	53mins
13	Resident	CEV	10th April	Sit down	1hr
14	Resident	CEV	11th April	Part sit down, part walk-along	37mins
15	Resident	CEV	11th April	Part sit down, part walk-along	1hr 44mins
16	Resident	CEV	11th April	Sit down	1hr 18mins
17	Resident	CEV	12th April	Sit down	35mins
18	Resident	CEV	12th April	Sit down	1hr 1min
19	Resident	CEV	12th April	Part sit down, part walk-along	1hr 39mins
20	Resident	CEV	12th April	Part sit down, part walk-along	2hr 3mins
21	Resident	Dublin	18th April	Sit down	56mins
22	Expert	Dublin	17th April	Sit down	43mins
23	Expert	Dublin	18th April	Sit down	28mins
24	Resident	By phone	19th April	By phone	34mins

Table 2: List of Interviewees

3.2.3. Document analysis of grey literature

Thirdly a document analysis was conducted of associated grey literature in order to fully understand the decision-making process, as well as the design and evolution of the space, (see appendix: 2).

Document analysis was planned following O'Leary (2014) eight-step method. During the course of the interviews documents of interest were noted as well as their location.

Their bias and credibility were acknowledged, and ethical issues surrounding the confidentiality of certain documents noted. They were also analysed by taking into account their latent content (O'Leary, 2014). The document's completeness, it's original purpose and target audience (Bowen, 2019) as well as whether its is a first or second hand

source's were noted. Documents which could not be accessed were also considered. Documents were the thematically coded,, giving them voice and meaning around the research question (Bowen, 2009). All three primary documents types advanced by O'Leary (2014) were analysed: public records, personal documents and physical evidence.

3.2.4. Coding

Each data collection method was coded individually and then integrated together in order to conduct thematic analysis, which identifies and analyses patterns of meaning in a dataset (Braun & Clarke, 2006). This illustrated which themes were important in the description of the phenomenon under study (Daly et al., 1997). Themes were created using both an inductive and deductive approach. Deductively, the theoretical framework influenced interview questions asked and therefore also respondents answers, and inductively, interviewees imparted additional knowledge, which were both utilised. The end result was a lengthy spread sheet highlighting the chief patterns of meanings presented in the data, including both manifest content, which is directly observed in interviews, and latent content, which is referred to implicitly. Manifest themes were identified and often indicated more latent levels of meaning. This required interpretation. (Joffe & Yardley, 2004).

Additionally detailed sketches and photographs were taken, in order to produce maps of the ecovillage using GIS software to allow a spatial understanding of the space in the ecovillage and the distribution resident interventions (see figure: 11)

3.2.5. Limitations of methods

There are a number of limitations in the methodology adopted for this research. As with qualitative research generally the data collected must be considered though the paradigm of interpretivism.

From the outset there is was bias in the selection of the case study. CEV's selection was based on ecovillages known to me, and which would accept to be researched during the given research period.

Due to the preexisting conflicts which have impacted the community in CEV a high degree of transparency was required of this research. Transcribing and sending these transcripts, and audio recordings, to respondents for review, reduced the number of interviews possible and period of time available for their analysis. Although all efforts were made to make the final report be fully anonymous. This is virtually impossible in this particular context. The community is small and tight knit. Spending two weeks fully immersed and living with a couple of residents meant that residents would be aware of who was interviewed, simply by seeing me walking in and out of houses and seeing me speaking to people in the street.

Finally, not all relevant stakeholders were interviewed. TCC's perspective is most notably absent and in order to overcome this, its perspective is inferred based on the data collected from interviews with other respondents as well as the documents analysed particularly the 'Site Resolution Plan'.

CHAPTER 4: RESULTS

This chapter will present the data collected and answer each of the subquestions of this research. It will begin by exploring CEV's urban design and how it has evolved to its current form taking into account external factors. Secondly, the internal and external governance structure will be outlined, followed by a discussion on how conflicts and the environmental ethos have influenced the space in CEV. Finally Jacobs' framework will be utilised to discuss the spaces' liveability.

4.1. Evolution of space

In order to understand the space in CEV today, firstly, one must retrace its evolution over time, taking into account the changing contexts. To begin with, 'le conçu' behind CEV will be presented. Following this, the contemporary situation will be presented, outlining the most decisive external factors

4.1.1 CEV design: 'le conçu'

Figure 4: 3D block diagram of envisioned Ecovillage, with possible future extension to East and West.

In the early 2000's, SPIL's membership (of the time) worked with an architecture firm in a lengthy consultation process, to come up with an ambitious spatial design for CEV, incorporating "eco-building, green design, alternative energy, renewable energy, sustainable agriculture" (Resident no. 1), and following principles of Permaculture.

"All the things that go wrong in housing estates - i wanted to be the opposite to what we were doing here." (Expert no.1). The unique design divided the estate into thirds, locating spaces used most frequently closest to dwellings and those used more irregularly, further North (Resident no.20). The 67 acres green field site was divided into the "agricultural, horticultural and orchard areas" to the North-East, the "woodland and wildlife areas" to the North-West and to the South the "private houses and community with integrated green areas", which linked CEV to the existing village's main street. (see figure:4) This area constitutes the main focus of the research and will be referred to as the 'urban quarter' (due to the contemporary division into quarters of the estate).

Figure 5: CEV Landplan (2007)

A series of swales, part of the sustainable urban drainage system (SUDS), incorporated climate adaptation into the design (see Appendix 2). A reed-bed system would treat the estates' grey water and reduce sewage waste. Energy and heat would be provided by a District Heating System (DHS) and a solar panel farm, located at the entrance of the ecovillage would allow CEV to be 'off-grid'.

The urban quarter (Figure: 5) is comprised of high density, 2 or 3 story buildings with mixed use central civic space and is subdivided into 10 'clusters', of houses orientated for "favourable solar access" (Architecture and town planning report, 2004), and a self-managed community green garden. A preexisting drainage ditch was redirected, to give the estate a 'little Venice feel' (Resident no. 10), of high density buildings broken by water, bridges and paths

In an effort to "discourage car use" (Resident no.21) vehicular access was limited, roads were unconventionally narrow to reduce speeds, and a single parking space was allocated per household. Traffic would be "treated as 'guests' following the home zone model" (Architecture and town planning report, 2004). Pedestrian paths were separated

from roads, and used environmentally friendly materials like wood, stone or gravel rather than tarmac.

Walls or fences, commonplace in Irish housing estates, were discouraged (except in the case of pets). Instead, "We prefer to have it open, on the biodiversity principle that a hedgehog should be able to start at one edge of the village and walk all the way to the other end without being impeded by any walls." (Resident no. 2). This was also intended to bring CEV's residents together and "promote social interactions and the concept of communal living in the estate" (PO, 3/4/19, CEV).

Infrastructure was built collectively via SPIL, but the construction of buildings was up to individual members or groups of members who had freehold on their sites. No developers were to be involved to insure no profit would be procured from constructions. Once the infrastructure was finished, the building of houses would roll out cluster by cluster to insure people were not living beside building sites for long periods of time.

4.1.2. From design to present day

Ten years of rigorous preparation, meetings, debates, consultations, hundreds of thousands of euros of members' money and millions in loans was invested into this pioneering project (Resident no.3). However today, regrettably, CEV's ambitious design is far from complete. With less than half the 132 homes initially envisioned built "You can't see that there is a design underneath this at all - it look so hodge-podge and thats a big regret." (Expert no.1)

Figure 6: Urban quarter design and present day form. Source: Author

24

Figure 7: Contemporary estate layout. Source Author

Figure 8: Areal photo of CEV (2019). Source GoogleEarth

The project development was influenced by a number of external factors, undoubtedly the most important of which is the impact of the 2008 financial crash. It had a wide reaching and multi faceted effect on the project and this report will only touch the surface. What must be understood is that the project was conceived during the late 1990's; a time when Ireland was experiencing an unprecedented economic boom, dubbed the 'Celtic Tiger'. It was in this context that the project plans were produced, and construction began. The financial recession struck Ireland particularly hard, time was very much of the essence as the government cut public sector wages, property prices plunged and the private sector laid off employees. Financial difficulties pushed many members to drop out of the project completely. This exodus, in turn, effected SPIL's finances and money ran out, leaving some of the key design features unfinished. Namely, the solar panel farm, which have left CEV on the grid, and it's 'eco'-credentials in question. (PO, 31/3/19)

Those members who remained couldn't wait for other clusters to be built ahead of theirs, so construction began where it could and as a result, the completed houses are scattered around the estate. Many of the multi-unit buildings, such as terraces or apartment buildings did not go ahead because they required the cooperation and financial stability of a group of members to be realised. If one member pulled out, the whole build fell through. These building types were concentrated in the centre of the urban quarter, which was intended to have the highest density. Today, paradoxically, this area is a large, open, undeveloped space.

Home type	No. envisigoned	% of total envisigoned	No.completed	% of total completed
Apartment	8	15	28	21
Terraced	6	12	55	42
Semi-detached	8	15	24	18
Detached	30	58	25	19

Table 3: House types comparison. Source: Architecture and town planning report, 2004 and today
Source:Author

How the chosen build model played out under the financial crisis was very instrumental in creating the space in CEV today. CEV was built using the self-build model. This is the practise of constructing a building for ones' own use. This varies from doing the actual building oneself to fully contracting out the work to a builder, architect or building package company. Self-building is significantly slower than the more common model of developer builds, and because time was of the essence many "houses appear to still be under construction" (PO 2/4/19). Although self-builds are common place in rural Ireland they are relatively rare in hight density urban developments such as CEV. "The concentration of completed homes on peripheral sites is likely due to their being designed for larger

detached homes being the most sought after sites for sed builders" (PO, 10/4/19) ideal for building their "dream homes" (Resident no.10).

Self-builds are also more costly, as they do not benefit from economies of scale, yet self-builders often spending far over market value because they don't generally intend on ever selling their houses, this translates in a very high quality of building materials and design. The houses in CEV are undeniably unique and quirky.

4.1.3. Influence of external factors

Tipperary County Council (TCC) represents the external governance system, to which CEV's space is subject. It has influenced both the design and development of CEV. Although CEV is a private estate and in theory self-manages its land, it must still abide by Irish planning law and the external governance structures. The relationship between TCC and SPIL has been described by residents as both good and bad over the course of the years and compromises regarding spatial development were made on both sides. Initially very supportive of the project, TCC had the difficult position of abiding by existing rules and regulations while also allowing SPIL to integrate innovative design and practices.

One example of TCC's influence is the size of the houses, something that regularly "surprises visitors" (Resident no. 3). Many are 3 stories, and in stark contrast to the typical rural Irish bungalow. There is a debate within CEV about why this is. Many believe that during the planning stage this was a requirement made by TCC, in order to "remain in the 'vernacular' of the existing village." (Resident no.10). Although others explain that this is a "myth" (Resident no.3), stating that no applications for smaller houses were submitted, which correlates with public planning record. Unusually, the main street of the existing village is generally comprised of 3 story terraced buildings. Three stories is a rather rare sight in rural towns and exists here as a result of a historic concentration of wealthy Protestants in the area, who remained after Irish independence, given the town the nickname 'Little Belfast', evocative of religious tensions. The 'vernacular' therefore was interpreted as meaning that buildings should be of equal hight, regardless of the change in gradient. As a result the buildings at the southern edge of the urban quarter, where the ecovillage and existing village meet, 4 stories buildings tower above the pedestrian entrance.

As the development ran into difficulties, relations with the council deteriorated. Under Irish planning law the residents of a private housing estate may, if they so chose, vote on having the local county council take over the maintenance and management of said estate. This would mean that TCC could be asked to take over CEV, although one resident remarked that this would happen "over our dead bodies" (Resident no.3) and invest heavily to bring "infrastructure above board" (Resident no.3) referring to the absence of things like street lights and serious problems with the sewage system. In an effort to force SPIL to carry out these works, four years ago TCC imposed a planning embargo, halting

any further development until these issues were resolved. Currently SPIL and TCC are in negotiations outlined in the Site Resolution Plan (2017), a document produced by SPIL outlining how they intend to do this.

Another external institution which has affected the physical environment in CEV is the role of banks and insurance companies. Homes built using mortgages are subject to banks control. According to Resident no.16, "banks insisted that the houses were designed to be in line with what the local housing market wanted", in case repossession were required, restricting experimental design and material choice.

Similarly, several houses in the ecovillage had difficulty securing home insurance due to the use of, then, novel materials (Resident no15). This fact has, and will continue to, discourage experimentation in future builds. However, it must be noted that there are many more examples of experimental design in CEV than in the average housing estate in Ireland, and one wonders "what would this place look like if these external controls weren't there (PO, 11/4/19)?

To conclude this section, it can be seen that the factors outlined above have created a space which is dramatically different from the original plans. Now that we have a picture of what the space in CEV has gone through in terms of external factors, we will explore how internal factors have shaped the space and in particular the role of its people's agency.

4.2 Agency in space

In order to understand how the space in CEV has been influenced by people's agency, it is important to understand 'who' has agency in this space? As outlined in the theoretical framework, the notion of participation is central to the formation of space: why certain people have influence and others do not. This bring us the complex and contentious issue of governance: how people organise themselves, how decisions are made and how these are enforced. Agency, also encompasses the appropriation of space, this will be discussed in a following section.

4.2.1 Internal governance and organisational structure

CEV has integrated an additional, hyper localised, level within the existing governance systems in Ireland. Not dissimilar to a residents association, except with far greater authority and responsibility, because CEV is a private estate. The ongoing management of the space in CEV has been reclaimed from TCC and lies with the members of SPIL.

CEV operates not dissimilarly to a cooperative, with a non-hierarchical organisational structure called the Viable Systems Model (VSM). Designed by Stafford Bear in 1972, the VSM is modelled on the human body. It divides an organisation into two parts; the

operation and the metasystem. The operation is made of a number of groups called the 'primary activity groups' (PAG), these preform the basic tasks, the body's organs if you will. Just as the kidney maintains the body's blood vessels, CEV's PAG, the 'Land Use Group' (LUG), is in charge of the maintenance of, among other things, the estate's paths and roads. PAG's have essentially been given devolved responsibility and operate largely independently. The metasystem deals with higher order issues such as policy orientation. "Everyone must be pulling in the same direction…It provides the ground rules and the means of enforcing them" (Walker, 2018). This is the role of CEV's board of directors.
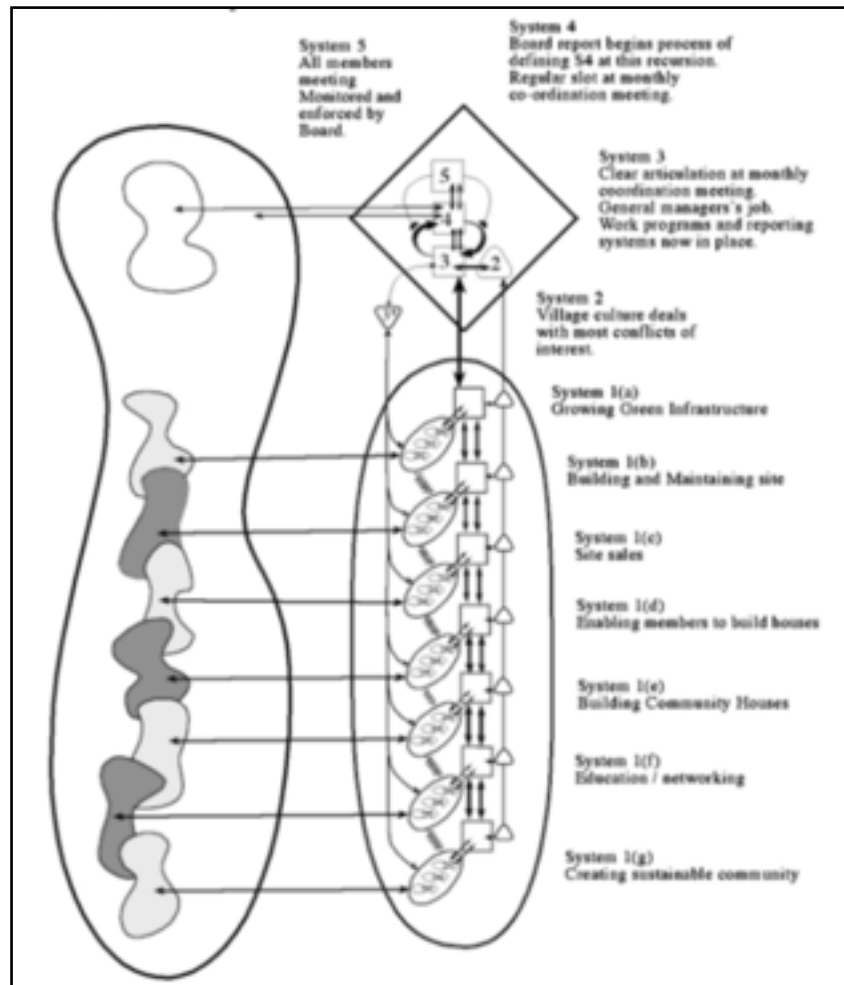
Figure 9: VSM diagram of CEV,(2009) Source: Espinosa & Walker

Although a paper by Espinosa & Walker (2013) outlines 6 PAGs, today only two PAGs were identified as being in regular operation; VERT and LUG (PO, 18/04/19). There are also several subgroups in semi-regular operation, and temporary task groups which remain in operation until their given task is completed.

4.2.2 Decision-making and enforcement

Because some PAG's have been abandoned, and others cautious around contentious decisions, their devolved responsibility is simply moved on to the entirety of the SPIL membership, who hold monthly meetings. Here, decisions are made by consensus: 100% agreement must be reached for a proposal to pass. "The idea is that the person who objects and the person who made the proposal, would have a discussion and agree between themselves, some form of compromise" (Resident no.19). However, the theory and reality are far from congruent.

One resident (no.3) eloquently remarked that "the problem with consensus is you get nowhere. One of the problems is that it is actually [a] veto. You can stand aside from any consultative process; you can let other people do all the work and then when you sense the decision is going to be made you come to the meeting and say no. The point is that everything is talked through until you reach a point, a decision that everybody can live with, if not actively support but not oppose it. But if things are contentious, you just never get to that. There are great advantages in it because you know you take time to listen to the objections, hear what people's reservations are, to try and find compromises that often work and it does help with community unity. But it does drive people mad. Because it takes so long to make decisions. Sometime people just give up.... Important things are dropped". An example of such issues will be explored in following sections.

During the recession, the longer it took to make decisions, the more precarious the financial situation of SPIL and its members became. The staff were laid off and the organisation became fully voluntary. How polarising issues have played out within consensus-based decision-making and the entirely voluntary membership of SPIL, organised using the VSM, has led to a partial breakdown of the organisational structure. Many members complain about the number of meetings held, and turn out is far from 100%. The continued high level of participation required by the VSM compounded by its partial breakdown seems to have caused a form of participatory burn-out (PO, 8/04/19).

Another related issue is the fact that, as one resident (no.1) put it "we have never been good at enforcing anything". Although some attempt at integrating an enforcement mechanism was made using SPIL membership contracts, because no one wants to take legal action and go to court to force their neighbour's compliance in whatever matter, even though it has "come close". The only enforcement mechanism contemporarily operating is peer pressure. It must be noted that the majority of decisions made are respected and enforced, albeit at a leisurely pace, however, as eluded to above, conflicts have a pronounced impression and this has definitely visible in the space today.

4.3 Conflict in space

The below illustrations were drawn by ecovillagers to show the problems they were experiencing in their organisation. The governance issues, outlined in the previous section, find their origins in the wide variety of divergent viewpoints. In the section that follows the two central themes of conflict and influence of environmental ethos will be explored.
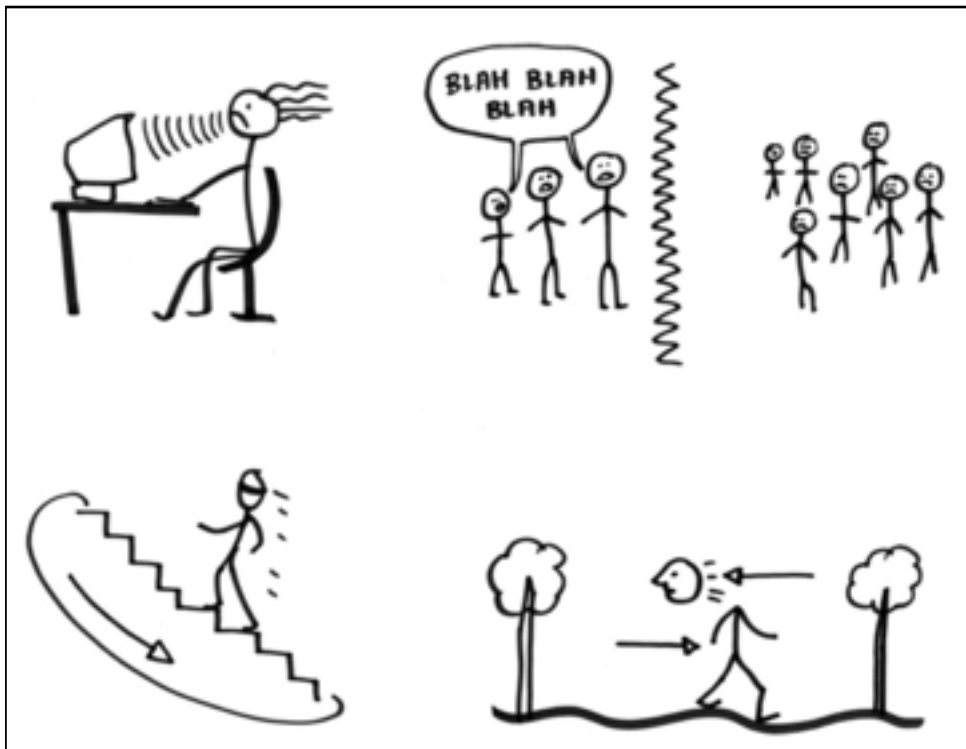
Figure 10: Cartoon of ecovillage problems (2007), Source: Espinosa & Walker

4.3.1. Spectrum of viewpoints

There are several topics on which a spectrum of beliefs exist. Of course, as with any community there is a spectrum of political views. CEV originated from a group of leftist activists, and this ideology is still dominant. That said, there is a mix of political views in the community. Founding members tend to have strong left wing ideals and others refer to them as "radicals" (Resident no.6), while people who joined later on, have more mixed political views, including some very conservative. Resident (no. 20) remarked that "after a major crisis (the 2008 economic crash) people divide between left and right. At our village level, some knew it was important to go to the rule book and run things properly. Others felt the rules no longer applied and we had to look after people first. They're both strong moral instincts but they don't sit together well. For the best of reasons people fell out with each other."

These differences in ideologies interlink people regard for rules. Some people are "like one of these German's…I follow the rules, that's me, you know, so, I'm not one for twisting the rules and doing my own thing because then you have got chaos" (Resident no.24). On the other side of this spectrum are people who "go ahead and do what they want to do and ignore the rules" (resident no.24). This disregard for rules, applies to internal rules set by SPIL, as well as for national laws and is often justified by the pioneering nature of the project. Although the German-types say yeah these stances are inconsistent and people play "moral gymnastics" (Resident no. 24).

Founding members and some of the newer members have different motivations for joining the project. Older members joined for strong ideological reasons while more recent members, may simply have joined because "it was the only house for sale at the time" (resident no.8). This creates a spectrum of peoples understanding of the projects goals and ethos, as well as their sense of ownership of the space.

Finally, varying degrees of 'green-ness' exist within the community. "Some people don't own cars, some people are members of the car club and some use the car every day" (Resident no.5). Some people wash their dishes with "hot water, vinegar and just a bit of baking soda" (Resident no.4), while others use conventional dishwashing detergents. This range of views is central to numerous conflicts in CEV.

4.3.2 Influence of environmental ethos

Theoretically, the projects environmental ethos is outlined in the Ecological Charter. This is a "living document" (Resident no.1), although it has not been updated since 2007, was created prior to the construction of the estate. It outlines the "rules and guidelines for design of dwellings and communal facilities" (Ecocharter, 2007). It outlines what members should aspire to regarding: energy use, renewable energy supply, general environmental matters, water, solid waste, construction materials and light and air (Ecocharter, 2007), although most respondents view it as simply a guide "to what building materials to avoid as much as possible" (Resident no.1). The document is only "aspirational" (Resident no.4) it does not contain strict rules. Because it's out of date and not binding it is held in casual regard and almost never consulted.

With specific regard for how this influences space, Resident (no.17) explained that the body, specifically tasked with the "stewardship of the land" - LUG does not consult it before it makes its decisions and "most interventions by residents, are done without ever consulting the eco-charter" (PO, 7/4/19). It is estimated that its contents and ethos are generally known by members and the internal environmental awareness of individuals is part of most, if not all, decisions made. But because the ecocharter does not define the extent of this environmental ethos, specifically regarding common areas, things like cutting grass has been a source of conflict. Some believe it is detrimental to biodiversity and electric or fossil fuel run lawn mowers shouldn't be allowed, while others dislike the

"unkempt" (Resident no.6) look of the estate, and are "embarrassed of how it looks" (Resident no.15). Often this ties in with peoples personal views on aesthetics and what they define as beautiful or ugly. Many times the 'eco' in ecovillage has contributed to conflicts, specifically in areas considered part of the 'commons'.

4.3.3. Conflict

The 'commons', what exactly it represents and this lands ownership has been a huge source of conflict in CEV. This issue is highly interconnected with another very polarising issue, which is who should be allowed have membership of SPIL.

"SPIL was set up as an educational charity with the intention to create the ecovillage and manage it, in perpetuity" (Resident no.3). However, the multi-unit development (MUD) act, imposes that a developer may not manage a private estate once the development is finished, but must hand over control to the owners, whom would take over responsibility for maintenance of common areas, services etc. It is debated within the community whether this piece of Irish planning law actually applies to CEV, but in the absence of funds to seek concrete legal clarification in court, as well as being in line with most of the other conditions which the act outlines, it was assumed that it did apply and the Owners Management Company (OMC) was set up (Resident no.3). The OMC is made up exclusively of the ecovillage home owners. In terms of membership the two organisations are almost identical (their activities being different) however, SPIL also has members whom have not yet been able to build their homes in the ecovillage. Membership was described by one respondent as "particularly contentious and even less amenable to sorting out" (Resident no.10) than the issue of land ownership. (see figure:10)

Membership of SPIL, when the charity was created, was "future orientated" (Resident no. 3). One had to have the intention to build in the ecovillage to be a member, with no time limitation. This means that people who have not built a house in the ecovillage have a vote equal to resident-owners. Some of the resident-owners in the ecovillage believe non-resident members should not get an equal vote, because they have not delivered on their under taking to invest the capital to build and live in CEV, and do not pay towards shared services such as the DHS, which runs at a much higher cost than initially envisioned because fewer homes completed, spreads costs among fewer people, increasing the price per head. However, on the other side, non-resident members who have "given half [their] life to the project" and shown "by [their] continuing lifestyle and involvement [they] demonstrate that intention… how can anyone say that is not compliant?" (Resident no.3). Here we see the different perspectives emerge on monetary value. Whether membership should be decided by ownership and therefore personal wealth or by engagement.
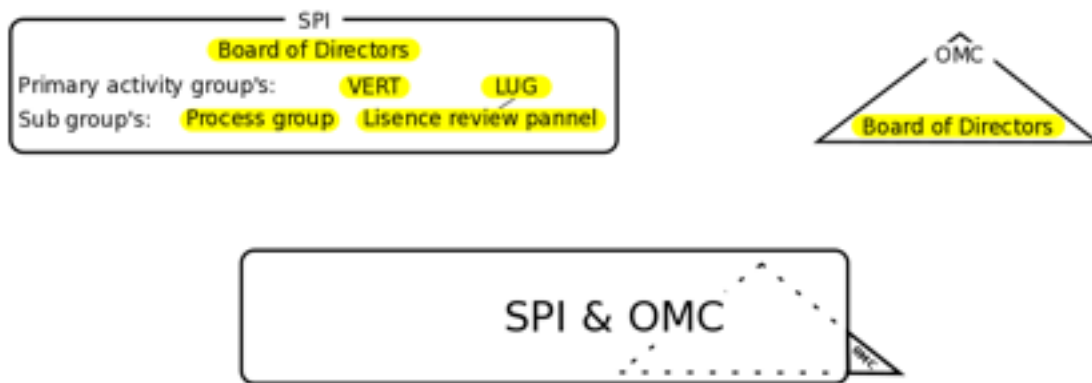
Figure 11: SPIL & OMC relationship

A parallel debate surrounding the idea of creating a form of associate membership has also added to tensions. This form of membership would be "so that people that are supporters of the project, many of whom live in Cloughjordan, might like to join and show their support for the project. Bring a bit of extra income in for us…" (Resident no.3)

Another unclear issue surrounding membership was whether it was by individual or by household. Membership was given by household but then the decision was taken, that it must be individual, as consensus-based decision-making dictated so. This added to tensions and members dropped out. Arrears built up over the years and "when you start going to people for 4 or 5 hundred euro …. I might rejoin but I'm not paying that.' (Resident no.3) So, then the company's response has been, well then, you're not rejoining. And there has been talk about an amnesty and getting everyone back in, forget the arrears. But then you have people going "well then - why am I paying my subs if they can get away with not paying and then rejoin." (Resident no.3) Complicating this is the fact that according to the SPIL constitution, if someone ceases being a member, they must sell their house. This condition which one respondent referred to as "batty", is both unenforceable and unconstitutional. All in all the issue is complex and emotive and "there are some very entrenched positions and it is very much tied up with attitudes to land ownership and property ownership." (Resident no.10).

Already having difficulty defining who could be a member, naturally the question arose, of what exactly constituted the 'commons' in question? And subsequently, what should be transferred from SPIL to the OMC? Did it include the farm land and the woodland? This issue again polarised the resident population. On one side of the debate were the people who felt that this land was not to be transferred to the service company, but was part of SPIL - the educational charity's, operations. On the opposing side were the people who felt that this land was theirs, that when they bought their site they also bought a share of these common lands and that it should therefore be transferred over to the OMC.

Land ownership as Chatterton (2018) stated is always the biggest issue. In the Irish context this is particularly true where for historical reasons sensitivities around land ownership are obtuse and the idea of having land 'taken' away from an Irish person can be emotive. As one member put it "it has been really divisive ,because it has set up the service company [OMC] as opposed to SPIL", even though these organisations are comprised of almost exactly the same people, they became opposing organisations for people with opposing views on how the ecovillage should operate.

After a long process of debate, and the intervention of outside mediators, lasting over several years it was agreed that 10 acres of land would be transferred to the OMC, while the remaining 30 or so acres would stay in the ownership of SPIL. Although this has been agreed, the transfer has not yet taken place, for reasons still unknown.

The combination of the above issues has resulted in, residents dropping out of membership. "I would say about a 1/5 of households would be non-members, it might not be that high but it's certainly not full, and then the number had tended to grown." (Resident no.3) Residents become disengaged and SPIL's legitimacy questioned.

4.3.4. Interventions

A direct democratic system like the VSM should, theoretically, increase sense of ownership and therefore increase level of appropriation. However, in CEV this is more nuanced and the effects of the issues outlined previously can be observed through the lens of appropriation or in more concrete terms: interventions in space.

Officially, interventions in the common areas of CEV must go through the Land Use Group, (LUG), for permission. This voluntary board is made up of a group of SPIL members and answerable to the SPIL board. Like the other PAGs, it operates largely autonomously, except in the case of larger or more permanent changes to the common areas which are brought in front of the entirety of SPIL's membership. For certain types of interventions, namely those proposed by non-members, or if profit will be procured from the intervention, a formal licence is needed, which is a legally binding document. These licences include ones granted to: the community farm, the bee keepers, the local scout troop and Cloughjordan Arts, among others. Although most proposed interventions, being small in scale and impact, simply require the consent of LUG.

Legend

—	Ecovillage boundary
(brown marker)	Soft paved paths and intentional pedestrian area's
(magenta)	Finished houses
(dark red)	DHS
(lime green)	Enterprise centre
(blue)	Undefined swales
(blue line)	Stream
(white/irregular)	Paved roads and parking areas
(green)	Semi-developed community gardens
⊠	Incomplete playground
X	Incomplete bridge
(yellow light)	Singular street light

Interventions:

1. Unbuilt site used as central green for sports

3. Proposed forest garden location

2. Proposed wild-flower meddow

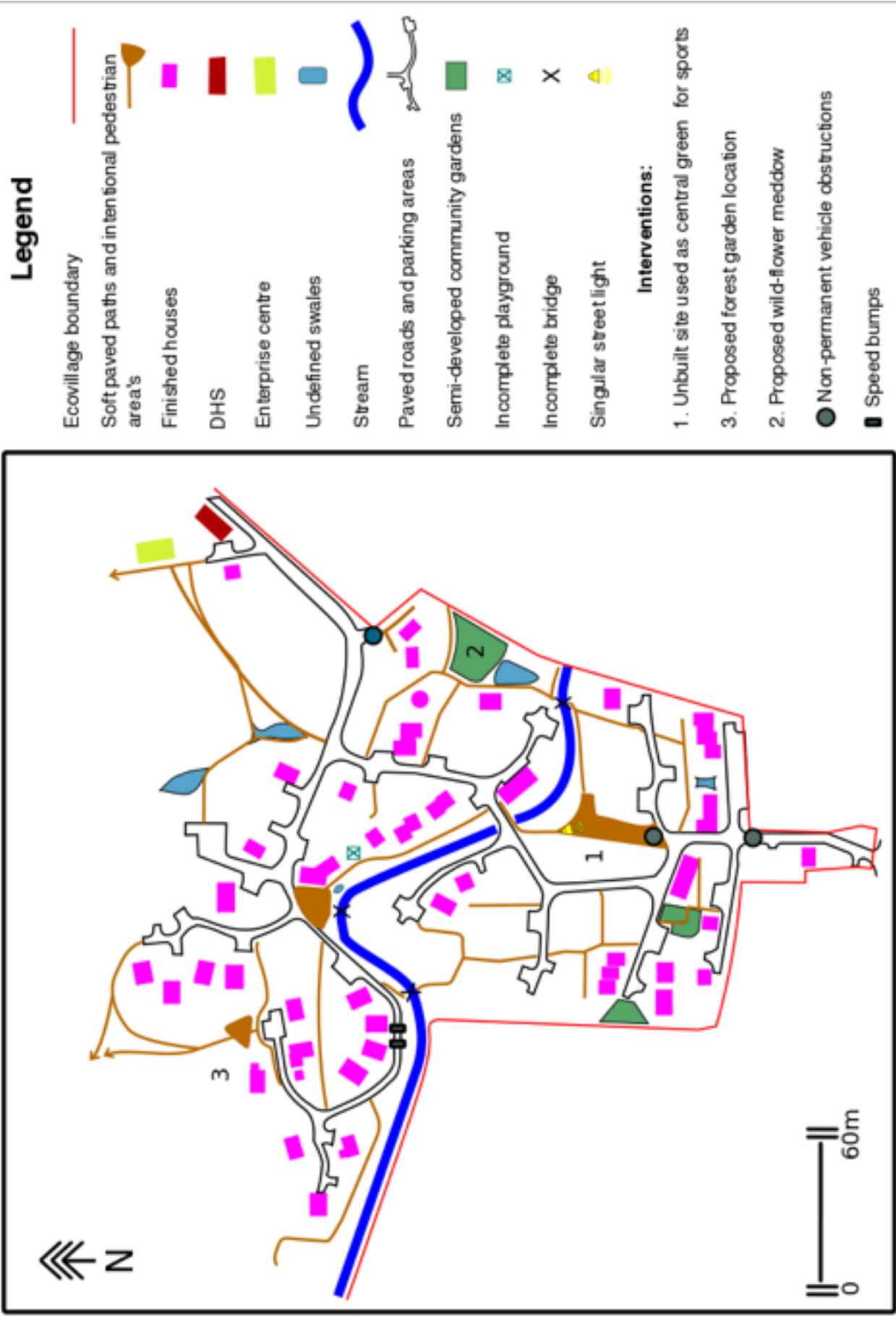● Non-permanent vehicle obstructions

▮ Speed bumps

Figure 12: Urban quarter map. Source: Author

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One recent and particularly illustrative example of how governance conflicts effect space in CEV, is the licence application to creating a 'forest garden' at the North-Western edge of the urban quarter. The application was never processed because "the board of Sustainable Projects Ireland is not signing licences with people who are required to be members of the charity but who are not maintaining their membership in line with our current constitution" (SPIL letter of correspondence, 2017), in protest regarding issues surrounding membership and the management of SPIL. One resident (no.24) remarked "Who wins? If it doesn't get the license, the ecovillage loses because [it] doesn't have the forest garden". Other landscaping proposals have also been restricted, namely the community garden, which one resident wished to develop into a wild flower meadow at the east of the estate (see figure: 11)

Additionally, licence applicants complain about the length of time it takes for decisions to be made regarding their requests, in one case a year and a half (PO, 1/4/19). And this, among other things, has led to many interventions being done unofficially, one resident remarked they operated by "seek forgiveness not permission" (Resident no. 17). Interventions done unofficially tend to be small scale and non-contentious in nature. However, there are some examples of unofficial interventions which caused controversy, such as the installation of a bollard, preventing the usage of the pedestrian entrance by cars from the main street of the existing village (see figure: 12). It was installed by one individual citing "safety reasons" (Resident no.2), as the crossroad directly adjacent has very poor visibility and often children playing in the vicinity. Other residents disliked this as this forced them to use the vehicular entrance at the other end of the estate, increasing their fuel consumption. But the bollard was already in place, and with time has been accepted.

Figure 13: Pedestrian entrance. Source: Author

The most striking effect of resident disengagement and the participatory burn-out is the lack of maintenance of the 'commons'. Although some members say this is intentional, for biodiversity purposes (Resident no.17), it is likely that if there was less conflict among community members the estate would look greatly different. And one aspect which is particularly worrying is the lack of maintenance of the site services of undeveloped sites, visible by the blue tubes sticking out of the ground, seemingly at random.

However, it must be noted that numerous interventions, such as the installation of compost bins, vehicle obstructions, a bicycle shed and e-car charging stations, limited landscaping and lots of planting of various trees and hedges (Resident no.'s 2, 3, 9&11, PO, 2-14/4/19) have been done both officially and unofficially in the common areas without question. One intervention that is celebrated by the entirety of the community is the amphitheater (see figure:14). Created from the subsoil which was excavated during construction work, and piled together in a large mound. Once vegetation had covered the bare earth it created an artificial hill. Following another core principal of permaculture "let the problem be the solution" (Resident no.20) the hill now boasts an outdoor amphitheater complete with a stage and adjacent changing facilities, still under construction.

Figure 14: Exposed site services (left foreground) in undeveloped civic space. Source: Author

Figure 15: Community Amphitheater. Source: Author

Therefore, although conflicts surrounding governance and a spectrum of views on 'green-ness', has resulted in restrictions and cautious attitudes regarding interventions in space, this is offset by the high sense of ownership felt by residents and the high degree of participation, Resident (no.19) remarked that "the more you engage the more you feel like it's yours". In addition to this "the unfinished and wild look of the estate prompt interventions, and they are all quirky and unique." (PO, 4/4/19)

4.4 Liveability of space

Now that we understand how the space in CEV was produced, we turn to Jacob's characteristics of a 'good place' to assess its liveability. The following section will explore the notions of diversity, the definition of spaces and the community identity.

4.4.1 Diversity: built environment, population and function

Diversity in different forms is key ingredient in order to produce a liveable neighbourhood: diversity of built environment, diversity of population and diversity of function.

The architecture in the urban quarter is undoubtedly hugely diverse, both in terms of form and material. No two buildings are the same, for reasons outlined previously. Obviously, as this is a new development, most buildings are of similar age, with only one exception being the coach house, which serves as a collection point for the community farm's produce.

Figure 16: Architecturally diverse built environment. Source: Author

Figure 17: Two of CEV's cob houses

The population demographics within the estate are similarly to other ecovillages and intentional communities world wide, outsiders perceptions of what an ecovillage is and the population which inhabitants it can be perceived as intimidating or radical, creating a homogeneous population. As stated above self-building is a long and expensive process. In terms of socio-economics, young and poor people do not have the capital to engage in self-building, as it is seen as a riskier undertaking than buying a finished property. The economic context of Ireland when SPIL first applied for planning permission in 2005, was one of economic boom. SPIL had wished to incorporate some social housing into the project. However, there was little to no demand for social housing in Cloughjordan at this time and TCC instead asked for a donation to be used elsewhere. Today, the context is very different. Ireland grapples with a housing crisis and there is now a demand for social housing in Cloughjordan. CEV is sometimes nicknamed "T4", referring to a wealthy area in Dublin called D4 (PO, 3/3/19). The population is relatively homogeneous and middle class and very well edcuated. "Ecovillages are always middle class. Now you will get individuals in any ecovillage that don't fit that mould, but even then they are likely to be quite well educated, well to do people perhaps from more creative backgrounds... I would say there is considerably more than one degree per house hold" (Resident no.3)

In terms of the populations cultural background the ecovillage project has attracted lots of people to Cloughjordan, many of whom would like to live in the ecovillage itself but cannot afford to do so, or are cannot due to the planning embargo. Others come on a temporary basis through the European Volunteer Service (EVS) or Woofing website, some of whom decide to stay on. This injects a substantial number of young persons of different nationalities into the community. There are currently 8 EVS workers on the farm, the largest number to date and the farm would like to increase this number. However, the lack of single person dwellings and general availability of housing means that some have to live in rented accommodation outside the CEV itself. Although the available housing stock has limited this population influx, the cultural diversity within the ecovillage, and surrounding area is substantially greater because of it.

Although plans had incorporated mixed-uses, within the ecovillage today, the primary function is residential. There is a hostel and the recent construction of the Enterprise Centre has brought some commercial activity as well as hosting many educational activities and other events such as a national extinction rebellion meeting. Many people work from home and several businesses operate from private residents such as a bakery and a cosmetic goods company. A large proportion of residents commute to either Dublin (150km) or Limerick (60km). The increase in population that the ecovillage project has brought to Cloughjordan has had a beneficial impact on the local schools and economy. In terms of temporality of function, CEV has hosted several seasonal festivals including an annual permaculture gathering and féile na n'úll (the apple festival).

4.4.2 Defining space

According to Jacobs, defining space provides users with an understanding of how they should engage with and within it, creating a level of comfort and safety.

There is very little clear demarkation of public and private spaces in the urban quarter. This unclear distinction was partially intended by the project's original plans, discouraging fences and walls would increase biodiversity and theoretically bring the community together. The large amount of unsold sites, undistinguished from common areas, and a lack of maintenance of both, creates a level of discomfort for irregular users. The paving, or lack there of, pedestrian paths is particularly problematic. Intending to differentiate pedestrian from car spaces, soft pavings like light gravel and stone was chosen. However due to a lack of maintenance of these paths they appear to be either "peoples private garden paths or 'desire paths'" (PO 3/4/19). This is distinctly an issue for visitors or occasional users and it restricts access. "No idea if I'm walking through someones garden" (PO 2/4/19) Being unaware of where is acceptable or unacceptable to go restricts access and in the case of this meant that the full exploration of the estate may not have been attained. This issue was also identified by CEV members when visiting student tour groups would wander into gardens and infringe on residents privacy (Resident no.17). As a result now tours must be accompanied at all times by guides. More regular users, or ecovillage's residents, report conflicts in regard to where their site's boundary lies for landscaping and storage of building materials for unfinished houses (Resident no.11). The presence of walls or fences sometimes indicates a point of conflict. People wishing to create a more private space for themselves, and remove themselves slightly from the 'commons' and other residents (Resident no.2).

Demarking spaces using vegetation, which was the intention of the design, naturally, takes longer to achieve and it is common that when a construction project comes under financial difficulties, landscaping is the first thing to be abandoned. So a clearer definition of space will likely be realised in the future, at least between public and private spaces.

Figure 18: Unmaintained pedestrian paths

Another way to demark a space is by defining it's function, for example by using urban furniture. There is a distinct lack of urban furniture in the common spaces in CEV. There are no bins or benches and only a single, solar powered, street light in the market square. (see figure:18) The reason for this is, unclear. Financial constraints certainly play a major role, however, arguments against both street lights and bins are commonplace.

Bins are absent from the entirety of the estate. When asked about this respondents spoke about not having bins because (QUOTE from Resident no.3) it makes people question where they put their litter and take responsibility for it. This seems to be functioning as the estate, and urban quarter in particular, are litter-free. A pronounced sense of ownership by residents also plays a role, and people will pick up others' litter. However the organisation of bin collections also seems to be a deterrent. Maintenance in general is an issue and this would just add to the workload.

The most notable piece of urban furniture which is lacking is street lighting. There is one single solar powered street light in the market square, which provides light for a fraction of the dark hours and makes occasional feel unsafe, particularly with the presence of an open stream and undefined paths. Residents themselves have grown accustomed to this lack of normal infrastructure and carry torches at night, but generally acknowledge that it is needed in some form although any installation has been halted because many members object to regular street lighting because they would like CEV to apply for dark skies status. A compromise has been reached and a form of low level street lighting will be installed when SPIL's financial situation allows.

Another noticeable component missing from the urban quarter and the market square in particular are benches. Home made benches have come and gone from this space in the past. Again a lack of maintenance is a factor in this but also they have been associated with attracting antisocial behaviour in the past.

Antisocial behaviour is somewhat of an issue in CEV and the farm in particular, which sees semi-regular incidents. Last year a barn was burnt down and while conducting research there was one robbery and one attempted robbery. There are no fences or gates around the farm or the wider estate. Even though it is a private estate, access is open to all.

Green spaces are important factors in the liveability of a neighbourhood and as one would expect of an ecovillage, CEV has a huge amount of green spaces. The main green spaces are located outside the urban quarter and only the woodlands are remarked by a small fence. As designated by the original design, within the urban quarter there are only small pockets or green communal spaces scattered among the cluster in the form of community gardens, their development managed by that clusters residents. However due to the large amount of undeveloped and not clearly distinguishable sites, today, the urban quarter appears to be predominantly made up of green space with houses dotted in between. Some of the undeveloped sites have been completely obscured by the spontaneous growth of vegetation such as a goat-willow trees. The most notable of undeveloped sites is the green directly west of market square (see figure 18) referred to by one resident (no.7) as "sniper-ville". This area is widely used by CEV's children for sports particularly during the summer months. Namely last summer when one resident erected a temporary volleyball net. Eventually when the estates development is complete this area will be built on, removing the only green space which exhibits 'intricacy', 'centreing', 'sun', and partial inclosure, as well as being large enough for sports within the urban quarter. Many residents would prefer this space to remain undeveloped. Parents express concern that sports activities will then have to move outside of the urban quarter and therefore children will no longer be within their line of sight.

Figure 19: Market square, with the singular solar panelled street light and the incomplete deck which was to form the central civil space in the foreground

Similarly road safety is a concern for parents. Cars can enter CEV unrestricted, but must abide by a 20km/hr speed limit. This is enforced by residents and it is commonplace to see them actively stopping cars who are exceeding this speed limit (PO, 6/4/19). Several speed bumps have also been implemented in particularly low visibility areas. Although the estate is obtusely pedestrian centric in its design, the lack of maintenance of pedestrian paths encourages people to walk on roads, which were built narrower than conventional standards and in particular the road leading from the vehicular entrance towards the urban

Figure 20: non-permanent vehicle obstructions

quarter, which was designed to reduce traffic speeds, but due to the unfinished housing lines, cars tend to drive more quickly. Residents have even intervened by laying speed bumps on a road where visibility is particularly low (see figure:17).

A debate exists around the access vehicles should have around the estate. Dissimilarly to other ecovillages, which have car access limited to the peripheries of the estates, in CEV they have parking in close proximity to housing. However, due to the unclear distinction of spatial functions, non-permanent vehicle obstructions have been implemented by residents (see figure: 19).

Nonetheless it must be said that residents perceive CEV as a very safe place. This is demonstrated by the fact that, incredibly, most residents do not lock their doors, in some cases their cars or businesses and children wonder freely and unsupervised. Crime within its urban area is almost unheard of, regardless of the fact that police patrols are very infrequent and the closest station is 26km away.

4.4.3. Community

CEV's mantra is " Building . Sustainable . Community" and residents openly admit that the most challenging aspect of this has been building the community. One respondent reflected that "I thought the main objective was to bring 10 or so disparate methodologies together: eco-building, green design, alternative energy, renewable energy, sustainable agriculture… in a living community…That work is pretty easy compared to the work of having to do things with people that you don't actually share values, moral view or politics with….And so, I see now, a major piece of the work is how do we stay in dialogue? How do we act together without necessarily sharing the same values. And how do we mediate

conflict and stop when it happens or try to resolve it when it's happening? How do we keep people together - that's the work I think." (Resident no.1).

Because of conflicts, social cohesion is nuanced and as a result the community which exists in CEV is more aptly described as "a community of communities" (Resident no. 1). Generally speaking those ecovillagers who spoke positively about CEV and their experience of living there would constitute one community and when speaking about the project generally say "we" decided or "we" did etc.

On the other side of this, are those who refer to SPIL as "the developer", these residents are so unhappy with the project that "If I could sell my house and move it into the field over there then I would do it in a heart beat" (Resident no.6). However, "you know if I went to sell it today, I would get half of that…. you are stuck here … only rich people can afford to walk away from the loss that they will incur, because anyone that would be a mortgage here will be tied here for the rest of their lives" Members with views like these, constitute a minority and would not identify as being part of the same community, however this group would consider that they have a "group of friends" (Resident no.13) in the ecovillage and so constitute an other community.

However, it must be said that community does not stop at the boundary of CEV. The integration of ecovillage members and Cloughjordan residents is impressive considering the development is just over 10 years old. There are lots of social events and activities that integrate both groups and this broader community of Cloughjordan was described as being "sometimes overwhelming" (Resident no.1). There are activities every day: trad sessions, jamming sessions, theatre group meetings, a popup Gaeltacht (Irish language groups), doomer meet ups, Italian food and conversation evenings, walking groups, running groups, yoga, a circus club for children (PO, 1-14/4/19) and the list goes on and on.

The following chapter will discuss the results presented above in relation to the theoretical framework outlined in chapter 2.

CHAPTER 5: DISCUSSION

5.1. Changing economic context

"Space is nothing but the inscription of time in the world" (Harvey, 2000)

Lefebvre underlined the importance of time and therefore context in the production of space. The Ireland that saw the birth of CEV, was one of unparalleled prosperity and possibilities. The project was imagined to serve this time, and the people, with their specific world views, who inhabited it.

As outlined in the previous section, the time within which the research was conducted is vastly different from that of the conception and development phase of CEV. Time has profoundly altered the trajectory of CEV. For example, if we look at the role that car use played in the spatial design. Discouraging car use was central to how the urban area was designed, separating car space from pedestrian space and narrowing their width. This was a time when work was plentiful, the state was prospering and decisively investing in public transport. Cloughjordan was chosen for the site's close proximity to an existing settlement and the services which came with that, including a train station with links to Dublin and Limerick. Many residents imagined they would be able to work from home, without the need to commute. However today, in a vastly different economic context, local employment is scarce and the train services have been greatly reduced pushing people back to individual car use and a commuter lifestyle. The spatial design of CEV does not support high volumes of car use and without an increase in the regularity of public transport, a new development phase will have to address this major issue.

5.2. Conceived versus lived space

The Lefebvreian theory that there is always a confrontation between 'le conçu' and 'le vécu' in space is partially applicable to CEV. Firstly, it must be noted that CEV is far from complete, so the concept was not realised as it had been imagined. However, many of the problems regarding space in CEV are likely to have arisen, possibly to almost equal measure, had the concept been fully completed.

'Le conçu' behind the spatial organisation of CEV was attempting to design people into a way of living and into a community, which is the main critique of the modernists such as Le Corbusier. This approach produced spaces like the Belmermeer in Amsterdam which exemplifies a space where conflict between 'le conçu' and ' le vécu' led to the eventual failure of the development. However, the lesson learnt in the Belmermeer - involving future residents in a development's design - was integrated in CEV. Only to a certain extent however. There is a distinction between people who were involved in early stages of

planning versus those who joined later, even though this dichotomy is not rigid Those involved at early stages are more content with life and space in CEV. Whereas newer members have more rapidly grown discontent. One of the causes of this is that the full ethos of the project does not seem to have been conveyed to these newer members. It was never written down and only became known to newer members as problems arose and were dealt with in certain ways, reflecting the ethos, with which they did not necessarily agree. The conflicts regarding land ownership and membership, which have brought to the fore opposing viewpoints and political views, although undeniably amplified by the strains caused by the 2008 recession, would eventually have manifested themselves regardless.

Contrary to the findings of other applications of Lefebvre's spatial trialectics in new develop (Salama & Wiedmann, 2013, Ng et al, 2010), an absence of lived space is not present in CEV. It appears that the hyper localised level of governance, organised using the VSM, guarantees that there is in fact a high level of influence by inhabitants.

5.3. External governance

CEV has integrated much of what Lefebvre advocates. The VSM acts as a localised, user-dominated level of governance of space. The lengthy negotiations between SPIL and TCC and, subsequently, the fact that residents built their own home, delayed the construction phase. This slow process was further reinforced by a period of economic recession. Both factors fundamentally altered the space as it had been conceived.

SPIL had the explicit ambition to be "mainstream-able" (Resident no.1) and therefore integration it into the existing governance structures was central to the projects' goals. The choice of a site on the outskirts of an existing settlement, increased the influence of TCC because Cloughjordan now needed to be taken into account. A more isolated site would potentially have come with less planning conditions. "We're doing the ecovillage where we are connecting to services, bigger settlement rather than 20 hippies in a field – quite an interesting social experiment but they're going to stay marginal, they're not gonna accelerate the transition we need to make in such a time frame." (Resident no.1)

The planning compromises between TCC and SPIL are visible in CEV space. Remaining in accordance with the vernacular of the existing settlement meant that buildings are surprisingly tall, to correlate with the existing village main street's buildings. As previously stated, the unusually large height of these buildings is as a result of a historic concentration of wealthy protestants in the area. Although the influence of TCC will, theoretically, end when the estate is finished, it would seem that requiring houses in CEV to follow in this tradition demonstrate the continuation of the "hegemony of the ruling class" (Lefebvre, 1996).

5.4. Internal governance

The 'boundary' critique of Lefebvre's theory by Purcell (2003) is exemplified by the membership issue in CEV. What allows people to consider themselves 'inside' - being a member of SPIL - has been central the problems faced in CEV. The portion of CEV's population who believe that membership should be reserved for those who fulfilled the requirement to build a house, therefore base 'inclusion' on financial investment. However, although this issue is not fully resolved, most interviewees believed that long-term participation in the project had equally merits inclusion. This exemplifies a conscious valuation of the 'care economy' advocated by Jackson (2017). Just as Chatterton (2018) stated "land is always the biggest issue", this polarised the population along political lines. "After a major crisis people divide between left and right. At our village level, some knew it was important to go to the rule book and run things properly. Others felt the rules no longer applied and we had to look after people first. They're both strong moral instincts but they don't sit together well." (Resident no.19)

The VSM has, most definitely, reclaimed the urban space as a political one, giving voice to those directly impacted by its development in accordance with Dikeç's (2003) defence of Lefebvre. However, the combination of the VSM with a consensus-based decision-making process during the economic crisis has led to an inability to resolve controversial issues, participatory burn out and breakdown of community cohesion. When decisions are arrived at the follow through or enforcement of these is based solely on peer pressure. Resident no. 1 remarked that "I don't think we have ever been good at enforcing anything. So we have a voluntary code …but we don't enforce it. We don't even monitor it. We just expect that people will do that". Although the VSM is credited for increasing organisational efficiency (Walker, 1991), it would seem that it functions poorly on voluntary basis over the long term.

The results of this have manifested themselves in space in the lack of maintenance, likely which had been seen as the responsibility of SPIL staff, or to be subcontracted out, if financial difficulties had not occurred. Ill maintenance of common areas have seriously impacted on the liveability of space by creating a space whose functions are unclear. Pedestrian paths in particular, but also green spaces indistinguishable from undeveloped sites have seriously impacted on the space's liveability, especially for irregular users.

As a new development phase approaches - which all interviewees were in favour of - the issues surrounding internal governance system - which have in recent times been left unaddressed - will need to be brought to a conclusion. The most influential element on the development of space in CEV is not the environmental ethos but the influence of the VSM and the consensus-based decision-making process. This confirms Lefebvre's theory that space is socially produced.

It is clear that many of the objective physical characteristics of a 'good place' outlined by Jacobs are not present in CEV. However, the subjective characteristics are of fundamental importance. The sense of connection identified in the wider community - Cloughjordan village and ecovillage - is high regardless of important conflicts within the ecovillage. There is a palpable convivial atmosphere and particularly the children growing up there are playing a key role in mending the community just as they played an important role in the integration with the wider Cloughjordan village community.

CHAPTER 6: CONCLUSIONS

6.1. Recommendations

The following chapter will outline the policy recommendations extracted from this research, which apply to CEV and more generally to other ecovillages at various stages of development.

> 1) Introducing a mix of both self-built and developer-built homes

This would reach a wider spectrum of society and increase population diversity. As outlined previously the build model chosen has had lasting implications on both the physical appearance and population demographics of CEV. The self-build model increases the diversity of built environment and promotes experimental and innovative practices as well as producing above market-value, high quality buildings. It followed CEV's ethos and limited the interaction with contemporary capitalist model of building for-profit property. Promoting, just as advocates by Lefebvre, the prioritisation of use value over monetary value. Although original designs integrated different sized dwellings, as well as a social housing component to increase population diversity, the choice of the self-build model contributed to what is today a socioeconomically homogeneous population in CEV. The economic recession had an amplifying impact, but the model itself excludes certain segments of society.

> 2) Exercising extreme caution around legal documents and comprehensively laying out the ethos on paper.

This would help to mitigate future conflicts. Great rigour and clarity within stated project ethos and legal documents has contributed to conflict in CEV, and this conflict has greatly influenced how the space itself has developed. Using great precision in defining terms specifically what qualifies one for membership. Documents like the Ecocharter addressed short term issues without giving due consideration to long term ones. It must be said that CEV is a pioneering project in the Irish context and issues arising from Irish legislation such as the MUD act could not be foreseen or mitigated.

> 3) Integrating an enforcement mechanism

It is understandable that SPIL did not wish to integrate some form of penalties into their operational structure. CEV was founded on radical leftist ideals, which positioned themselves against the dominant discourse of contemporary society. It was an attempt to move away from how society is structured, governed, and those capitalist values it holds highest. Penalising members, especially financially (the most common form of penalty) would contradict the core ethos of the project. However, the central word in CEV's mantra

is 'sustainable'. A lack of enforcement mechanism has contributed to a degree of social breakdown, severe financial difficulties and the near failure of the project in its entirety. Resident (no.2) remarked "you can talk sustainability till you are blue in the face but if you can't sustain yourself then it's not sustainable." If an enforcement mechanism helps to sustain the project's viability then it would seem to be a necessary compromise.

4) Monitoring and regularising voluntary work

Today, there is already "a voluntary code that says we are gonna give 100 hours a year each, as members to the company, but we don't enforce it. We don't even monitor it. We just expect that people will do that. Many don't and many do that and many more hours a month probably" (Resident no.1). Granted, as SPIL is a voluntary organisation enforcement is a challenge. However, today online resources may be able to aide in this, without positioning any one member as an 'enforcer'. An online resource, which outlines a list of the tasks to be completed in the common areas, in terms of hours, say per month or few months, and by each individual member. Once completed the member logs their hours. Towards the end of the given period if a member has not completed their given share, an automated message would be sent as a reminder. Of course this still relies on individuals' honesty, but this system would act as a reminder and help to insure that specific vital tasks are completed. This would help increase the level of maintenance of common areas but also increased participation would help with giving a sense of ownership to newer members.

5) Defining spatial uses

Identifying low maintenance solutions to help define space's functions and ownership would dramatically increase CEV's liveability, particularly for occasional users. Installation of urban furniture and ongoing planting of vegetation to demark public from private areas, spaces which are part of the SUDS, car use, pedestrian use and recreational use will increase the space's liveability. Choosing low-maintenance solutions and materials is particularly helpful for voluntary organisations.

It must be noted that current issues such as street lighting and maintenance of paths, have already been identified by the community in CEV and are addressed in the site resolution plan. This is a document that responds to the requests by the county council to bring the estate up to normal national standard. Once this is completed the embargo on planning permission will be lifted and the new development phase can commence.

6) Integrating a central green space in project planning

Although CEV will more than likely have to build on the green area adjacent to the market square for financial reasons, other ecovillages would likely benefit from the addition of a green space central to their urban quarters. Although the division of space following

permaculture principles may be functional for adults, it would seem that the use of space by children calls for a space where 'eyes on the street' (Jacobs, 1961) is present, for their safety. Although the CEV wished to differentiate itself from other Irish housing estates which commonly have a central green, it would seem that this component, does have merit and will be lost when CEV is fully developed, regrettably pushing children outside of their parents' line of sight.

6.2. Limitations of research

The limited timeframe within which this research was conducted impacted the choice of methods selected. Firstly, a holistic investigation of the liveability of CEV would necessitate a quantitative measurement of liveability, such as that used by the Economic Intelligence Unit (EIU) and other private companies. Given that CEV is not currently complete, and is likely to move into a new development phase in the very near future, it was estimated that CEV's liveability would be investigated in a secondary capacity, using the qualitative, more localised, framework put forward by Jacobs (1961), of the 'characteristics of a good place'. The production of space, comprising the more substantive element of the analytical framework will continue to be pertinent, even after the development has evolved from its current state and requires a qualitative methodology. The use of exclusively qualitative methods allowed the concurrent investigation of both the production of space and the characteristics of a good place. However, a holistic assessment of liveability would be of interest and is a possibility for future research. Additionally, although literature surrounding intentional communities may have been pertinent the timeframe of this research regrettably, did not allow their use.

The preexisting conflicts in CEV created unique challenges and limitations for this research. Firstly, many of the interviews were quite emotionally charged. I was, at times, used as a means for venting people's frustrations. This made some interviews challenging, as I had no experience in how to interpret this from a sociological perspective nor time to inform myself of how to do so.

The scars which exist in the community and the contentious nature of the common areas central to them limited the willingness of residents to participate and speak freely. The caution required, to insure that the report has the highest level of anonymity possible, in order to avoid creating further tensions within the community, made the actual writing of the report challenging. And it must be noted that some potentially pertinent information, including some photographs, may have been lost in the process. However, upholding a high ethical standard is an important offset.

Similarly, some members may not have been willing to be openly critical of CEV or SPIL because of the impending new development phase. Many members have greatly invested time and money into the project and because it is not complete, and sites still need to be sold and developed, they may have been worried about 'bad press' regarding the project

and how it will be marketed to, and perceived by potential buyers, impacting current residents, both financially and emotionally.

6.3. Concluding remarks

In conclusion, the objective liveability of CEV is certainly below normal Irish standards and major investments in both time and capital are required to bring this estate's physical space above board. There is a distance still to be traveled regarding internal governance. Although understandable under the contextual conditions of the Celtic Tiger, it appears the project was over ambitious in adopting a direct democracy organisational structure with 100% consensus-based decision-making. The organisational efficacy of the VSM under a fully voluntary organisation in the long term also appears to be questionable. Governance problems have definitely impacted on CEV's liveability, specifically in objective terms. However the subjective measures of liveability such as sense of connection are certainly present, once the broader community of Cloughjordan is taken into account.

In terms of 'eco', some residents feel that the on-the-grid status takes away from the projects' eco-credentials, however Carragher & Peters' (2018) assessment of the ecological footprint of CEV residents is less than half the national average and just above what is necessary for global sustainability. As the project edges closer to completion this footprint will continue to decrease.

One resident (no.18) remarked that "what we have now is a moment on a long road". As legal proceedings, which are delaying the completion of the half-finished solar panel farm and the sewage system, among others, come to conclusions, the financial situation of the project should be more viable. Better financial conditions for both SPIL and the community will greatly ease tensions. The two main issues of contention: land ownership and SPIL membership arose from lack of clarity in legal documents, greatly aggravated by the financial crash of 2008. Although somewhat detrimental to the projects success to date, these types of issues are unsurprising due to the pioneering nature of the project, specifically regarding Irish planning legislation.

The much-talked-about new development phase, which is in negotiations currently, will force dormant conflicts to be readdressed and resolves and with the same organisational structure and voluntary participation this will be challenging even with all residents being in favour.

Finally, it is important to recognise that the 2008' financial crisis had, and continues to have, a profound impact on CEV. The resilience shown by the community in the face of such a huge crisis is inspirational and although the liveability of the space needs to be addressed, CEV represents a vast store of knowledge regarding truly sustainable living. As Winston Churchill once said "never let a good crisis go to waste". The opportunity presented by the unfinished state of the urban quarter should, and no doubt will, be

harnessed and seen as an opportunity to learn from the past in order to create a more liveable space in the future.

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APPENDIX

Appendix 1: Interview Questions

- How long have you lived here?
- Why did you choose to live here?
- Have your ecological sensitivities changed? How? Why?
- Do you like or dislike the space here ? why?
- Would you change anything? what ? why?
- Have you ever changed anything/intervened? what ? why? where?
- Did you consult the ecological charter directly before you intervened?
- Do residents always consider environmental impacts before intervening/proposing interventions?
- Did you seek permission for this intervention? From who?
- How was this decision made?
- Is the ecological charter directly consulted before decisions are made?
- How are their decisions enforced?
- Does the county council interact with CEV space?
- How is the relationship between CEV residents and the county council?
- Do people who do not live in Cloughjordan village have a say in what happens in CEV
- Are they ever consulted about interventions?
- Is there a clear distinction between public and private space in CEV? why is this?
- Is there a clear boundary between CEV land and other public or private land?
- Can anyone enter CEV?
- Do cars have restricted access in CEV?
- Is CEV a safe place? why ?
- Have there been times when police were called? for what reasons?
- Does CEV have a clear center and clear peripheries?
- Is CEV a more lively or quiet neighborhood? why?
- Do people here have the same working schedules or different ones?
- What businesses are located in CEV?
- Are there seasonal festivities, or weekly activities in CEV?
- Is the population in CEV diverse? (background and culture)
- Is CEV a wealthy area or a poor area?
- Is there a tangible community identity here?
- Is this due to proximity or common values? or both?
- Are there conflicts between founding members and new comers regarding their homes?
- Are there conflicts between founding members and new comers regarding their use of space?
- Is conflict common here?
- How are these resolved?
- Is CEV an enjoyable place to live? Why yes? Why not? What aspects are enjoyable/ not?

- Is CEV an aesthetically pleasing place to live?
- Is the architecture here diverse?
- Are there any old buildings?
- Is there a difference in the architecture of the first buildings built and the ones being built today?
- Are there additional restrictions on buildings architecture (other than environmental) in CEV (as opposed to elsewhere in Tipperary)? If so, how were these decided?
- Do residents participate in decisions regarding new constructions in CEV?
- Additional interview with CEV founding member and resident:
- Had the 2008 financial crash not happened how do you think the project would look now?
- Do you think resident intervention has been more or less possible due to the changes to plans the 2008 crash had?
- Do you think resident intervention has been more or less accepted due to the changes to plans the 2008 crash had?
- Have high environmental standards been difficult/easy for members to accept?
- If you could re-do CEV's spatial design again how would you change it?
- Is there ever conflict between founding and non-founding members regarding space?
- Were Cloughjordan residents consulted about the projects spatial design?
- Were certain things contested?
- Are technological innovations easily accepted?
- Was social mixitie achieved here?
- Is there anything you would like to add?

Thank you

Appendix 2: Grey literature analysed in document analysis

<u>Public Records</u>
- North Tipperary Development plan (2004)
- Site resolution plan and scope of works agreement for Cloughjordan ecovillage (2017)
- Architectural design Guidelines for outline plan
- Architecture and Town Planning report (2004)
- Riverbed and Swale planting detail
- Greenway planting detail
- Road planting detail
- Revised site parking map (2013)
- Individual resident's Ecological footprint report (2015)
- Folio checklist
- Ecovillage Sustainable Urban Drainage System Layout Plan (2011)
- Ecological charter (version 5) (2007)
- SPIL constitution (2016)
- Site map (2007)
- Cloughjordan ecovillage original Landplan
- LUG meeting minutes
- County council planning application's

<u>Personal Document</u>
- License Application and subsequent communication
- RTE Nation wide television programme
- Ecovillage promotional video

<u>Physical evidence</u>
- Educational tour group powerpoint (2019)
- Cloughjordan ecovillage postcard
- Cloughjordan ecovillage sales flyer