Cities, Communities, Homes

Is the Urban Future Livable?

AMPS Proceedings Series 10.1
Cities, Communities and Homes: Is the Urban Future Livable?
INTRODUCTION

This publication is the product of the conference *Cities, Communities and Homes: Is the Urban Future Livable?* held at the University of Derby in 2018.

The premise of the conference and this publication is that the forces shaping life in cities are complex. The economies they are based on are multiple. Some are growing exponentially, others are shrinking. Some take pride in their architectural heritage, others are seeking to build and rebrand. Some are old, some are new. Inevitably their urban fabrics vary.

The communities that live in these places reflect these conditions. Some are long-standing, others are new and in-formation. Sometimes they are active, with a sense of community. But more generally they are diverse. These communities need, and want, a say in their futures. Some are well connected and affluent, others suffer deprivation and social exclusion. A constant in the mist of this complexity is their need to be housed – whether by themselves, the market, or governments.

The conference and this subsequent publication seek to explore how the three issues of city development, sense of community and housing need, all combine to make lives in our cities livable – or not. How will our urban environments change in the near future? Are the cities we live in now likely to contract or expand? How will these changes impact on communities and the way they are housed? Will new technologies facilitate community engagement with planning? Will resident voices be heard by planners? Will unaffordable housing turn some cities into enclaves of the wealthy, or will the private sector and personal preference gate our communities?

These proceedings, and the conference which it documents, were organised by the research organisation AMPS, its academic journal Architecture_MPS, and the College of Engineering & Technology at the University of Derby. It formed part of the AMPS program of events, Housing – Critical Futures.
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REVITALISING URBAN TISSUE AND COMMUNITIES THROUGH BIOPHILIC PARTICIPATORY DESIGN: NORMANTON PEARTREE AREA, DERBY, UK

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INTRODUCTION
Today the greatest goal for any city worldwide is to become livable. The concept of livability not only covers the urban design, but also the structure of elements which could be influential to the city growth and its financial prosperity. According to the dictionary, livable means:
1. Worth living; enjoyable.
1.1 (of an environment or climate) Fit to live in.¹
A livable city encourages people to participate actively to its development. Hence, in general a livable city is also a sustainable one. We consider a livable city as the city of the future. We find out that such a city contains a few identifiable neighbourhoods with each one of them having its own character. As a matter of fact, a livable neighbourhood is compact, sustainable, diverse, green, healthy and accessible. The most important dynamic of a livable city is the community. When making a city, we always consider community needs and necessities, and also potential hazards. Thus, a livable city is more often a resilient city as well. However new approaches to city form in urban design are often limited to preserve its existent urban morphology or ‘urban tissue’ without any radical transformation of it.² However, there is often lack of citizens’ energetic participation during proposed changes. We often distinguish newest urban tissue or growth of cities from their purely geometrical extension of the roads, containing unstoppable car traffic and less pedestrian path lines or dangerous bicycle routes with no protection from speeding vehicles. Many theorists believe that urban morphology or the study of change in the physical form and shape of human settlements focuses mainly on pre-determined regular (man-made ‘ideal grids’) or irregular (‘deformed grids’)- based on pedestrian movement and influenced by topography) patterns.³
However some urban designers – mainly academics – define urban design as “the processes of making better places for people than would otherwise be produced.”⁴ However, since 2011 the author of this paper has been involved in research with other members of the International Society of Biourbanism, thus, professes ideas of design of cities which are rigorously supporting well-being of citizens and public health in general. Being based on theories and practices of professionals who believe that “A city is not a tree,”⁵ the author has reinforced her research with live projects and case studies in which, her students at all levels develop concepts to support growth of local vulnerable communities, such the area described further. She believes that cities are similar to live organisms which grow in a natural way, thus, complexity is a dominant element in her teaching and practical
applications of complexity theories, and models based upon harmonious Fractal Growth, and also Constructal Law of Physics.

The author affirms that: Urban space is often related to information theory, as its use is in agreement with information context, which initiates from surfaces rising from the ground; this information can be perceived as logic signal and also be accepted by human beings, navigating through it, by means of pedestrian and often preferential pathlines (urban navigation indicators). Successful spaces should offer perceptible hints from local structural emergences; standing and seating signals, for example, may determine the most advantageous pedestrian paths and nodal points associated with them. Hence, human life in cities emerges during connectivity via geometrical continuity of grids and fractals, via path connectivity among highly active nodes, via exchange/movement of people and, finally via exchange of information (networks).

ARCHITECTURAL DESIGN EDUCATION AT THE COLLEGE OF ENGINEERING AND TECHNOLOGY AT THE UNIVERSITY OF DERBY, UK

The University of Derby is a modern UK university located in the East Midlands, England and is rated Gold in the Teaching Excellence Framework (TEF). In the official web pages of the University of Derby we find that there is a close relationship between Derby City and the University for many years:

The University of Derby consists of three campuses in Derby, Buxton and Chesterfield; an exciting range of courses at the University of Derby offer to students full-time, part-time or online study. You can explore our campuses and the City via our ‘virtual campus’. The University offers a vast range of foundation, undergraduate, postgraduate or research courses through a choice of subjects in its Colleges: College of Arts, Humanities and Education, College of Business, Law and Social Sciences, College of Engineering and Technology, College of Health and Social Care, College of Life and Natural Sciences, and Hotel, Resort and Spa Management in Buxton. In our College of Engineering and Technology the aspirations are high:

Our aim is to inspire and empower students to do well in their studies. We provide an innovative teaching curriculum with a balanced programme of scientific theory and vocational skills. Our academics are recognised, practicing experts in their areas and are actively contributing to advances in their fields through their research.

Our architectural design programmes belong to the Department of Mechanical Engineering and the Built Environment. Our programmes include: Architectural Studies FdSc, Architectural Technology and Practice BSc (Hons), Architectural Design Joint Honours, Interior Architecture and Venue Design BA (Hons).

The module about which we refer to in this paper is Project Research and Urban Design at Level 6 of BA (Hons) Interior Architecture and Venue Design, which is accredited by the Chartered Society of Designers. Our students gain valuable experience on industry placements, like Sara Butkiewicz, for example, who went to Los Angeles for hers, and she worked in Beverly Hills and Bel Air. Sara’s project for this module experience (in Project Research and Urban Design) has been included in this paper as Case Study 1 (See further below). We've got a fantastic employment record with many graduates finding jobs both abroad and in the UK - such as with national or local architectural and
interior design practices or local authorities. The course is presented to perspective students as follows:

During this course you'll be constantly challenged to conceptualise, investigate and develop the design of three dimensional spaces, understanding the ways that architectural and interior design histories and theories and the existing physical and cultural context can inform design processes, programmes and proposals. You'll be encouraged to develop an ethos of producing socially, culturally and environmentally responsive design proposals, drawing upon the best practice and expertise within the Department.

The course covers a wide range of venue designs that offer exciting areas of study, ranging from interior architectural design of bars, restaurants and multipurpose venue spaces to the design of hotels, resorts and residential developments. You'll look at planning and design of live performance spaces, social and community places, exhibition spaces, galleries, brand retail and museums to name a few.12

DERBY BECOMING A CITY

Derby has got a very long history, developing from a small Roman fort to an engineering and manufacturing giant.13 The Romans established their first fort at about 2,000 years ago; they named their settlement Derwentium. The Vikings, later settlers named it Djúra-by, ‘Village of the Deer’. During the Saxon period and after the Vikings, Derby thrived becoming important for trade and craft with both a mint and a market.14 Its population grew steadily during the medieval period, with a prominent wool and leather industry alongside an array of other craftsmen. Derby’s central location and accessibility via road and river were vital to its further growth. Later new industries appeared, including cloth making, brewing and clock making. Derby grew rapidly in the industrial era with the opening of the world’s first water powered Silk Mill in 1717 by John Lombe and George Sorocold. Derby’s engineering heritage begins during the nineteenth century with the North Midland Railway establishing itself in the heart of the town in 1840. We find that:

Following several mergers, the newly-formed Midland Railway was headquartered in Derby four years later, placing it at the centre of the British rail industry. The Midland Railway measured their railway empire from Derby and mileposts across the network record the distance from Derby station. The first of these can still be seen at the end of Derby station main platform and is marked D 0, meaning 0 miles from Derby.15

Derby still remains a major rail manufacturing, design and development centre to this day. In 1907, Rolls-Royce opened a car and aircraft factory in Derby, invigorating Derby further. The town was awarded city status in 1977 by Queen Elizabeth II.

DERBY AND ITS SUBURBS - THE NORMANTON PEARTREE MULTIFACETED SUBURBAN AREA SEEKING ITS OWN IDENTITY WITHIN THE INNER CITY

From January 2016, the author was invited and started attending meetings of a partnership action group, chaired by Derby City Council and with the active participation of representatives from several council services and organisations such as Derby Homes, social services, private landlord associations, etc. Because of her expertise in planning and her experience as an educator, the author has contributed to initial discussions and ideas related to the regeneration of rundown neighbourhoods, tackling issues of poverty and social exclusion and discrimination in Normanton Peartree area (suburban area of the city of Derby). In that particular area, Derby City Council is currently planning a series of interventions focusing to problems of housing, training/education and employment of youths, and public health. The area is characterised by migrant movements and flows since several decades; most families have been living in dreadful conditions in housing mainly offered
by private landlords. This had a negative result mainly towards the elderly and the very young who have been constantly disadvantaged. In most households, most members of a family do not even speak English and most of the youths have got limited education, because of continuous expulsions from schools. The youths can often speak and translate in English for the older members of their family, but it is likely that poverty draws them out of education very early. Thus, they may be easily steered towards criminal actions starting from the petty ones and finishing with serious illegal activities often leading to imprisonment.

The collaboration with Derby Homes/Derby City Council originated after few meetings had taken place between Dr Graham Cairns (AMPS), the author/expert in New Urbanism and academic at the University of Derby and the Derby councillor for Urban Renewal (in autumn 2015). After those initial meetings the author was invited to participate in the discussions between AMPS and other professional organisations and publishers in London in a meeting taking place on Friday, 25th September 2015; this Partner-Coordination Meeting with the title Housing Critical Futures was organised at Design Council/Cabe Offices and aiming at arrangements and organisation of a series of conferences hosted by Universities internationally. The meeting also clarified points about how each University and/or City Council and other organisations could be cooperating in the events during that series of conferences. After that specific meeting in London, Dr Cairns and the author discussed and made a decision about the title of the conference: Cities, Communities and Homes: Is the Urban Future Livable? Dr Cairns and the author were to be the main co-organisers, representing AMPS and the University of Derby respectively for that conference. In the call for the conference at Derby, it was made clear that:

The complexity of our cities is well documented. The economies they are based on are multiple. Some are growing exponentially, others are shrinking. Some pride themselves on architectural heritage, others are seeking to build and rebrand. Some are old, some are new. Inevitably their urban fabrics vary. The communities that live in these places reflect these conditions. Some are long-standing, others are new and in-formation. Sometimes they are active, on occasion homogenous. More generally they are diverse. These communities need, and want, a say in their futures. Some are well connect and affluent, others suffer deprivation and social exclusion. A constant in the mist of this complexity is their need to be housed – whether by themselves, the market, or governments. This conference seeks to explore how the three issues of city development, sense of community and housing need, all combine to make lives in our cities livable – or not.16

The author proposed a team to be formed by her and students in Year 3 who were to pursue studies in the Module Project Research and Urban Design in spring 2017; the students were presented with findings from the author’s initial research (from January 2016 and until January 2017) and data provided by other members of the Normanton Peartree Action group. Further investigation, analysis of data and preparation of ideas and scheme projects for the regeneration of neighbourhoods in Normanton area took place until May 2017. All these ideas were presented to some members of the action group during a special presentation; additional feedback was given to students to be able to prepare an exhibition of their work for the Conference on 22-23 June 2017. The ‘Cities, Communities and Homes: Is the Urban Future Livable?’ Conference brought together scholars from New Zealand, Australia, the UK, Spain, the United States, Portugal and many more places across the world. They shared best practices on a range of related themes including housing design, urban planning, role of landscape design in creating healthy communities, community engagement in regeneration debates, environmental and social sustainability and more. And the most important thing was that all students had the opportunity to attend and get feedback from such a great community of scholars.
THE MODULE TITLE AND BRIEF
The assignment brief title presented to students for the module Project Research and Urban Design in spring 2017 was: “Derby City Centre Urban Identity and links with suburban neighbourhoods under urban renewal.” The learning outcomes are:
1. Critically analyse aspects of theoretical and contextual research relevant to your project proposal and evidence it in your concept development.
2. Research, critically evaluate and select appropriate technologies, materials, media, techniques, methods, and tools in accordance with design proposal.
3. Produce a distinctive portfolio of work, which involves primary and secondary research material, demonstrating independent thought and engagement with innovation.

The individual assignment was mainly to follow the guidelines below:
This part of the assignment requires students to research and evaluate current and future trends in innovative developments in urban design and use designs and technology of human scale oriented proposals, concepts and/or functional solutions. The end result of research and evaluation of findings could be a proposal of design. Your work would consider current literature and frameworks supporting collective wellbeing; you may also wish to evaluate the impact of emerging legislative and other frameworks, such as participative projects and their applications or current planning legislation. You should create individual design solutions for a specific environment by proposing and evaluating your solution inside a set of contemporary urban regeneration and new development context in terms of its sustainability; you should explore innovative approaches (and their likely outcomes). Your focus should be to enhance the urban value of all sites/areas offered by the brief by allowing the users and visitors to enjoy an attractive public space at all times.

Fourteen students presented their ideas and most of them exhibited their portfolios and boards during the conference. For this paper the author has selected four schemes/case studies, which also the panel thought that they had proposed useful and affordable solutions, and especially those which could offer the opportunity to Normanton Peartree area citizens to identify easily links between their local communities and Derby City Centre. The identity of the centre should be attractive to the people living in peripheries. Local communities in the suburbs should be the owners of their city’s values and also active participants to any changes to landscapes and neighbourhoods. They should be ready to understand that communication between the core area and the suburbs should be kept uninterrupted at all times; people need to socialise and communicate during all their day-to-day activities. Seclusion means boundaries which always create and reinforce so many problems, including those of mental health and criminality at the top.

CASE STUDY 1: Is Derby City a livable city?
Sara Butkiewicz-Stepień explored ideas related to what makes a city livable by researching on recent developments in some European cities; she was particularly attracted by Copenhagen. At the very front of her work shown in her folder, Sara declares that this project has offered her the opportunity to discover new ideas for life. She affirms that “the stimulation of our senses is the key to enjoy the world we live in and appreciate everything it has to offer. The design field is one of the most powerful tools to achieve it. Staying conscious as a designer is necessary to be able to create useful spaces that can make people happier.”

The student acknowledges that working on urban regeneration ideas for Derby has been a great journey; she says that she has tried to show to the people the beauty of this city and encourage them to enjoy what is in offer as well. She claims: “I believe that Derby is a place with a great potential to become a livable city.” She thought that this should be a valued outcome for the entire Derby society,
including all communities and people of all ages. The student wants to attain aim and objectives of the project, as they have been introduced in the module and assignment handbooks. She refers to one main issue raised by primary research carried out by the entire team (tutor and all students-participants): lack of connection between the city centre and its immediate suburbs.

Sara feels strong about this and she believes that it is also important for the following reasons:

- Connecting the suburbs to the city centre should make it easier for people living in the outskirts to commute and enjoy social and cultural life.
- Whereas connecting the city centre to the suburbs should give access to citizens to quiet green areas; it would be an opportunity to discover other surrounding areas of Derby, which finally could add value to its centre itself.
- Communities should be encouraged to take part in Derby social and culture life through nature, technology and/or leisure focused activities.
- Derby should be explored and enjoyed as a fully accessible and pleasant city.

Sara has explored the livability of Derby by focusing on and summarizing main statements which describe a livable city; a livable city should:

- Protect the history, neighbourhoods and the environment;
- Provide accessibility and connections of neighbourhoods;
- Appreciate local products and support and invest in people;
- Be affordable, proactive, and walkable and plan for the future.

Evidently, Sara’s thoughts were explained better in her proposal about uninterrupted bicycle routes which were supported by easy access to public transport and safe pedestrian areas. She was concerned about the quality of life of the citizens in modern times. Therefore, she considered the notion of livability in her discussion and final scheme proposed. Her research focus was on livable cities by exploring cities which were classified as the most livable cities of 2017 in Mercer’s 19th annual Quality of Living ranking. According to Mercer’s survey, “despite increased political and financial volatility in Europe, many of its cities offer the world’s highest quality of living and remain attractive destinations for expanding business operations and sending expatriates on assignment.”

Ilya Bonic, senior partner and president of Mercer’s Career business affirms that, “in uncertain times, organisations that plan to establish themselves and send staff to a new location should ensure they get a complete picture of the city, including its viability as a business location and its attractiveness to key talent.”

Obviously Sara is aware that Derby has already started marketing itself as a city aiming at high quality of life for its citizens in many occasions. Derby is the city of people who wish to prosper by working in manufacturing and investments sector; yet again people moving in the city may wish to populate suburban areas, which have been abandoned in years of economic crisis and shrinking of the industry. Thus, Derby should now strive to be nominated as a livable city. In Mercer’s ranking, cities around the world are considered and challenged against multiple factors, such as the economic and political environment, infrastructure, public transportation, health, ecology, housing and leisure.

The top twenty livable cities in 2017 have put a lot of effort in the development of ecological living, connection of neighborhoods and happy living as a whole. Amongst these top twenty cities, in ninth place we find Copenhagen characterised as the one of the greatest food focused cities. However Sara was impressed and inspired by its urban planning and growth; she used it as her main case study and precedent for both Derby City Centre regeneration and connectivity proposal with bits suburban areas, such as Normanton. According to Sara, Copenhagen shows as active, colourful, creative and sustainable with its main focus in bicycle transportation via accessible and safe routes, therefore,
encouraging people to a healthy lifestyle and commuting across the city in a fast, easy and enjoyable way. People on bicycles, pedestrians and boat travellers have the opportunity to enjoy green spaces, heritage, local products, and innovation in architecture and planning in a relaxed way. The way in which this student saw Derby developing is almost identical to what Copenhagen has achieved; at first, bicycle routes should be re-defined and expanded in all directions. Green infrastructure, such as parks, for example, Markeaton Park or other green areas such as Shaftsbury area in Normanton or in areas along the Derwent riverside should be re-developed. Figure 1.

![Figure 1. Exterior view of the Market Hall Square annex. Daylight and Artificial LED lighting at night. Courtesy: Sara Butkiewicz-Stępień](image)

Sara has considered five areas in Derby: the green (Markeaton Park, contiguous to the University of Derby campuses), the fun (Derby City Centre), the quiet (Riverside), the technology and business (Pride Park), and the multicultural (Normanton). All these areas should be connected with revamped pedestrian and bicycle routes and linked to public transport as an integrated system of connectivity of all neighbourhoods. The identity of Derby as a healthy city should expand across its whole territory and would also welcome visitors, being encouraged in the same way as the locals to bring their own or rent a bicycle at Derby.

Sara believes that making people happier should not be limited to the regeneration of buildings of any kind in Derby; she affirms that being “healthy is [feeling] happy.” Public health should be high up in the policymakers’ agenda; nature should be introduced in all areas as healthy living. Thus, in her project proposals, not only nature entwines traditional with modern architecture in the city centre, but also makes a statement in the peripheries by reinventing spaces and places, such as Shaftsbury area in Normanton, for example.
This student has managed to add value to the Old Market Hall at the centre of Derby by designing an annex to that and reinventing the surrounding urban space. Here, the paths of citizens and visitors meet or cross either indoors or outdoors; the proposed interpretation of public space can easily attract people to enjoy the city; perhaps citizens are now convinced that this concept could easily expand in their suburban areas. Added value to real estate means getting people feeling happier and healthier in any part of a city and in any moment of their life. Figure 2.

By referring to her project ideas for Derby City Centre and its transferable features of a livable city to the suburbs, Sara affirms that:
The building concept proposed as my final bachelor’s degree project is a result of detailed research, consisting of the precise study of the site itself, Derby city centre, architecture as well as the cultural, social and business aspects. The site is located between the back of the Quad and Market Hall. The idea behind the design of the building itself is the result of ‘place-making’ concept interpretation. What exactly does this mean? In architectural and urban design it is the respect to the existing surroundings, the ability of the building to ‘blend in’, but on the other hand to stand out without creating chaos.

Place making is the ability to create an inviting space for its users that is both hybrid and liveable. The proposed building is a result of incorporating the above. The multi-purpose space consists of the winery, wine and deli store and an open plan restaurant and bar on the ground floor. The first floor of the building is an open space, used mostly for temporary art exhibitions, art shows or other public or private venues. The exterior of the building is the extension of the interior space. Thanks to the
translucent walls, there is no strict division between the two areas. The greenery wrapping the steel structure and green walls create the image of harmony and cosiness, both inside and outside of the building.

Although the design of the building extremely differs from the structures it is being surrounded with, it fits perfectly with them. Thanks to the translucency, greenery wrapping multiple linear components (almost like grape vines wrapping wooden poles), additional seating and multi-dimensionality, the building becomes a lively place, inviting to be discovered in a number of ways, indoors and outdoors.

**CASE STUDY TWO: Does Derby City lack identity?**

Will Bywater struggles a bit to find out evidence of a particular identity for Derby. He says that, as it looks, “Derby lacks identity. The small county town with a city status has a clear issue with its identity. The city plays with several individual identities, such as Joseph Wright’s hometown, its engineering and rail industries, and its relationship to the Peak District. However none of these sections of Derby’s character resonate with the majority of the local population.”

Will has identified at least three points of interest in need of redevelopment in the city centre: the Assembly Rooms, Middleton House and the Market Hall. He has been mainly attracted by the Market Hall as well. Although currently this building is underused, Will has been fascinated by this building in such a way that he believes it has got “the potential to bring surrounding communities into the town centre.” He also affirms that the Cathedral Quarter, which is close to the Market Hall, contains some of the most visually stimulating streets in the city centre. According to him, this would be a great area to develop Derby’s character and identity: “It should be used to help bring the communities of Derby together.” He also admires the Market Hall building: “The Market Hall was once the gathering place of the public due to the trading held in that kind of space.”

Being inspired by the main lectures’ content, Will read more on people’s place attachment theory; he understood that place attachment is the emotional bond between person and place, which is the main concept in environmental psychology; he found out that there is a considerable amount of research dedicated to defining what makes a place “meaningful” enough for place attachment to occur. Since 1991, Schroeder notably discussed the difference between “meaning” and “preference”, defining meaning as “the thoughts, feelings, memories and interpretations evoked by a landscape” and preference as “the degree of liking for one landscape compared to another.”

Thus, Will wishes to have communities participating to develop a quite radical idea inside the old Market Hall by proposing its transformation into “a new and vibrant botanical garden” with the involvement of the local community. Community members would be encouraged to assist in the design for the landscaping within the botanical gardens, be able to select plants throughout seasons, etc. Along the interiors of the building, some flexible space units could be used as coffee shops or pop up stores. The layout of the proposed Market Hall Botanical Gardens is developed by the meandering shape of the Derwent River, thus, linking the garden with the exterior natural landscape and the community according to the place attachment theory. Figures 3, 4 and 5.
Will proposes that the centre of Derby City should get trams re-introduced, by providing more links from the peripheries to the city centre itself. Since there have been advancements in technology since the previous city centre tramway, new transport solutions would be more a sustainable way of accessing the city centre than current transportation of the public by buses or private cars. This would be enhanced by creating more bicycle lanes: “The introduction of these links to the city would fuse what currently a disconnected city is in relation to its surrounding suburbs and community hubs.”

Will found that the area between Derby City Centre and Normanton Peartree area consists of predominantly housing and retail centres located on heavy traffic roads. So, Will proposes more efficient tram public transport, so that cars could be avoided. Figures 6 and 7.
Then, the concept of the communal garden expands within the residential area of Normanton, as the fragmentation of the back private gardens is eliminated in a very smart way; these spaces will now have the potential to “bring local communities together in the sharing of whole area than just limited private spaces. This intervention alongside the place attachment theory should increase life quality and will help reduce negative social experiences.” Figures 8 and 9.
The proposal introduces more pedestrianised areas within the city centre as well as green infrastructure, which links the residential areas with the centre of the city. The proposed communal back gardens in between housing coincide with this green infrastructure; they are proposed as such space to improve local communities’ well-being and combat crime and other negative issues. Figure 10.

**CASE STUDIES THREE AND FOUR: Energising urban space by applying Biophilia**

Elena Luca refers to the past of Derby as a vibrant town with its Market Place uniting the local communities on many special occasions; she has recognised the fact that nowadays this is no longer the case: “The Market Place has become a dull and unpopulated place, having the Intu Shopping centre become the main and sole destination point within Derby City centre.” However, Elena has faith to the Masterplan 2030, which focuses on the regeneration of Derby as a whole by considering all suburban areas to be re-connected with the city centre and bringing communities together once more. The aim is to transform Market Place and surrounding areas into dynamic and eventful places.
and spaces. Elena decided to focus on public movements and flows, enhancing of Biophilic properties and connectivity and add value to Heritage and other assets within Derby.

Elena proposes the creation of various social and interactive opportunities to be introduced within the Market Place area in order to attract not just the local people, but also visitors and, in this case, growth and prosperity would be sustained and secured. This student has been proactive to investigate on ‘hidden’ places such as back alleys and courtyards and get them back to the attention of both residents and passers-by. She showed sensitivity about safety and comfort of the users of abandoned and rundown areas, which exist either in the city centre or in the suburbs, such as Normanton.

This student found out that: “Derby City possesses a wide variety of historic and full of character buildings which enhance the unique ‘quirky’ style it has been developing for years. Unfortunately, there are a lot of buildings and areas which have been to deteriorate. This aspect began creating hidden pockets which are now unpopulated; they attract anti-social behaviour and contribute towards the recent increase in crime rates.” Elena finds that Derby centre lacks of green infrastructure and relaxing areas, and especially the Market Place lacks of pleasant and attractive urban design, with no pleasant artificial lighting at nights or outdoors furniture for the people to rest and socialise eventually. She also finds that some areas have pedestrian routes, but often disturbed by noise from traffic. Figure 11.

![Figure 11. Noisy car traffic (on the left) and pedestrian routes (on the right)](image)

*Courtesy: Elena Luca.*

Elena’s ‘Vision’ is to promote Derby as “inviting, interactive, illuminating, colourful, sustainable, exciting, green and connecting.” She is aware that Derby City centre has started becoming counter urban in relation to current tendency of people to move out of cities towards the surrounding areas and secluded, exclusive suburbs in general. Urban areas are becoming increasingly unpleasant places to live. People are now working from home with the use of technology; new businesses appear at the edges of cities. People prefer to live on the outskirts of cities; they no longer have to travel to the city centre. At the moment the daily population within Derby centre is decreasing, while in the suburbs there is a steady increase.

This student explored more the fact of emergence of certain urban morphology named as ‘pod’ developments; that is dense blocks of buildings with certain allocated spaces, such as parks and playgrounds. This is the case of buildings defining space rather than buildings in space. In a typical urban setting, the buildings tend to be built directly adjacent to one another, the walls of which act as limitations of the open space. With time, an urban transformation occurred, accommodating new forms of transport and pedestrian access; streets began expanding, introducing selective widening,
waiting restrictions, one way roads, etc. for quicker and easier flow. This fact has affected the building patterns, thus, creating more dense blocks of buildings, the so-called pod developments, which are also obvious in Derby City and suburbs maps.\textsuperscript{21}

Having attended lectures on Biophilic Design and Biourbanism, Elena was further attracted by the principles and practices of them, the main aim of which is to respect the mind-body systems as indicators of health and well-being. “\textit{Above all, Biophilic design must nurture a love of place}.” \textsuperscript{22}

Elena affirms that environmental generational amnesia could be also a serious issue affecting people living in urban areas which have no or very limited memories of the real natural environment. Thus, Biophilic design is a way of helping the community reconnect with the natural system and reinforce the importance of environmental quality. Elena affirms that: \textit{“Biophilic design follows specific patterns, with each pattern being defined by designers; then, it is considered how this pattern may affect the way a space feels, explaining the human biology in connection to the built environment which then will present different opportunities towards new Biophilic design strategies.”} She looked at international precedents of tactical and ephemeral installations, such Melbourne Pavilion, an artificial forest installation for events in open space or other public space community involvements, such as the Backyard Experiment (Australia).

Elena also feels that, similar interventions/tactical/guerrilla urban designs including fun furniture and popular art could also transform Derby by transforming hidden alleyways and abandoned piazzas into safe, inviting and exciting places. Being directly involved, the local community would enjoy team fun and colourful atmosphere. The student proposes fun furniture designs in Derby piazzas, outdoors easy-to-use equipment and pop-up structures around the Market Place to be used regularly in order to shelter various activities, from DIY workshops to playground and even space for public lectures and live bands. Figures 12 and 13.

She also feels that artificial lighting, as an illuminating forest, could create attractive compositions and safe trails all around dark and currently unsafe areas. On special nights, these lighting trees, especially in Normanton, could change colour and intensity to grab more attention and add fun. Figure 14.
Finally Patricia Nimo proposed ideas “to instil a sense of pride within the community through a grass roots action plan of colour and play…a people-sensitive approach will be taken to address the needs of those in some particular area. Public spaces can change perceptions and encourage unity in areas that seem to be rundown.” Patricia affirms that: “by collaborating with artists, designers, specialists, experts and the general public, this scheme aims to tackle the problems that underdeveloped areas create, such as crime and vandalism, threats to safety and lack of pride. Using public realm interventions of art, sculpture, colour and play, the overall aim is to encourage people to engage with the built and unbuilt environment in which they live.” Figures 15 and 16.

Patricia has explored ideas through sketches and colour. She proposes urban design tactics of low cost and sustainable in any given context. She says that “urban design has the potential and the ability to change people’s perceptions, to give life back, to improve the aesthetic quality of a space and place with minimal cost implications.” Her proposal for the centre of Derby should be mirrored in similar interventions at Normanton; people will start populating all streets again, not only big shopping centres. By encouraging community participation in the centre of the city, she believes that people from the suburbs will be able to appreciate the history, the past and a playful present. Figures 17 and 18.
This student’s vision is that regeneration programmes should target young people in the peripheries to design and play in sustainable and safe community public spaces. Education is a vital part of this process; the community should be able to understand the built environment in which they live. She suggests a bottom-up approach to blur the lines of politics within architecture and urban design; everybody would be able to co-create in order to generate a livable city for all residents. Family oriented activities should be introduced within the city streets and ongoing year round activities should bring residents from the suburbs into the city centre. And we should encourage youths from the suburbs to engage in community led activities by giving them active paid roles. Temporary installations hacked into open public spaces should be devoted for games for locals and visitors (spontaneous and non-lucrative use). Local businesses could also help people with provision of cheap materials to co-create playful and relaxing places. Tactical design should also keep people healthy and fit in body and mind.

CONCLUSION
It is understandable that education should be at the heart of any participatory initiatives as a start. As a first attempt and trial, during the delivery of the module mentioned above, the author and her students had started some contact with some representative from a group of local youths in order to investigate on the needs and urgent necessities of the younger generations living in that suburban area. On this occasion of her teaching activities for this module, she was able to get her students motivated on the real issues in that area. Students and locals should participate actively in the social and urban regeneration of those areas, if we wish to get a real impact with all scheduled future and ongoing interventions and events. Social and educational activities can be eventually organised/coordinated and supervised by academics; innovative methods and tools of e-planning are going to be used for research and proposals in the near future, and follow-up projects year-by-year. Thus, all sides will benefit from learning skills at a variety of levels; activities of urban acupuncture and co-working spaces have been already discussed. These solutions will not only have youths getting specialist skills, but also be able to feel confident to start their own local businesses and/or carry on with further studies. It is envisaged that ongoing efforts in that way could have a better result rather than penalties, exclusion/expulsions, and perhaps in some cases detention.
NOTES


3 Ibid.


5 Alexander, C. (1965) 'A city is not a tree', Architectural Forum 122 (1) 58-61; 122 (2) 58-62.


9 ‘This is our city’, accessed February 5, 2018, https://www.derby.ac.uk/study/undergraduate/why-choose-derby/this-is-our-city/


14 Ibid.

15 Ibid.


18 Ibid.

19 Ibid.


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Introductio
1 April 2012. A significant day for east London, for it marked the day that the London Legacy Development Corporation (LLDC) was established to oversee the planning and delivery of urban development within London’s Olympic area, east London. East London suffers from some of the highest levels of socio-economic deprivation seen within England. Ostensibly, the urban development and regeneration within London’s Olympic area is geared towards addressing the socio-economic needs of east London’s multi-ethnic working class communities. But, what policy agendas and whose interests are the LLDC actually privileging within its urban development plans? Critically, what role does the English planning system play in shaping what policy agendas and whose interests are being privileged within the LLDC’s urban development plans?

I address these questions by exploring the production of the LLDC’s “affordable” housing plans for London’s Olympic area. I draw on interview material, ethnographic research, and planning document analysis to highlight the conflicting national, metropolitan, local and neighbourhood level interests that are attempting to shape the LLDC’s “affordable” housing plans. I particularly discuss the role that the English planning system plays in structuring the power that various governance actors and various policy agendas have had to shape the LLDC’s “affordable” housing plans. Theoretically, I engage with, and critique, perspectives mobilised by planning scholars within the post-politics discourse. I make two arguments. Firstly, I argue that the English planning system’s structural privileging of neoliberal policy agendas mean that social need is ceding to financial greed within the LLDC’s “affordable” housing plans. Secondly, contrary to framings of statutory English planning spaces made by post-politics scholars, I argue that within the LLDC’s statutory planning spaces communities have brought antagonisms to the fore.

London’s Olympic area, Planning for Housing, and Post-Politics
London’s Olympic area, otherwise known as the LLDC’s planning boundary, is located within the heart of east London and falls within the borough boundaries of four Olympic host boroughs—Hackney, Newham, Tower Hamlets, and Waltham Forest (see Figure 1). Perhaps because London’s Olympic area fell within four borough boundaries, former London Mayor, Boris Johnson, set up the
LLDC in April 2012 to oversee the planning and delivery of urban development and regeneration in London’s Olympic area in the aftermath of these Olympic Games (the Games were held in the summer of 2012). When setting up the LLDC, Boris Johnson, reflecting wider local government ambitions, harboured ostensible aspirations for Olympic related development and regeneration to distil direct benefits to east London’s communities:

The Olympic investment in east London, and the recognition arising from association with the Games, should be used to affect a positive, sustainable and fully accessible economic, social and environmental transformation for one of the most diverse and most deprived parts of the capital.

For Boris Johnson and London’s metropolitan government, the Greater London Authority (GLA), development and regeneration within London’s Olympic area was thus ostensibly aimed at “lessen[ing] inequality across London.” This ostensible aim to ensure that Olympic related development and regeneration would be “for the direct benefit of everyone who lives there”, in particular east London’s working class communities, was to be the social and economic legacy arising from London 2012.

Figure 1. London’s Olympic area/the LLDC’s planning boundary

On a housing front, these ostensible government aspirations should have required the LLDC to plan ambitiously for high-levels of social-rented and “affordable”-rented housing within its boundary.

There is an acute demand for social and “affordable” rented housing within east London, and more broadly within London (see Table 1).
Indeed, within a housing need assessment for London’s Olympic area that the LLDC commissioned Opinion Research Services (ORS) to conduct in 2013, ORS concluded that the LLDC’s planning boundary had an “extremely high total affordable housing requirement of amounting to more than 100 percent of planned dwelling delivery in the study area”. The LLDC are planning for over 24,000 new homes. Consequently, ORS’s report highlighted that, from a needs-based approach, the LLDC should have been planning for in excess of 24,000 new “affordable” homes. However, as we will come to see, English planning’s current operation as a form of governance, and broader financial considerations, inhibited the pursuit of such an ambitious “affordable” housing target by the LLDC.

An important discourse which has come to powerfully impact upon critical conceptualisations of English planning over the last 10 years has been the post-politics discourse. Phil Allmendinger and Graham Haughton have perhaps been the most prominent planning scholars to mobilise the post-politics discourse within English planning. Allmendinger and Haughton have argued that in the current conjuncture:

Spatial planning in England needs to be analysed as a form of neoliberal spatial governance, underpinned by a variety of post-politics that has sought to replace antagonism and agonism with consensus. Conflict has not been removed from planning, but it is instead more carefully choreographed and in some cases displaced or otherwise residualised. Allmendinger and Haughton’s concern is that this ostensible residualisation or displacement of conflict from state planning spaces, and its replacement with consensus, serves as a powerful technique of governing for state planning actors. Importantly, they argue that this technique of governing bolsters the state’s (at a variety of imbricated scales) pursuit of neoliberal policy agendas (e.g. economic growth agendas) and governance rationales (e.g. profit-making informed financial rationales) within planning. This is because Allmendinger and Haughton view the ostensible residualisation or displacement of conflict from planning, and its replacement with consensus, as a technique that “mobilises and reproduces acquiescence” within statutory planning spaces for these neoliberal policy agendas and governance rationales. In the following sections, I use my empirical findings to assess these key arguments made within the post-politics discourse. Building on emerging critiques of the post-politics discourse, I challenge the contention that within statutory planning spaces there is broad-ranging acquiescence for neoliberal policy agendas and governance rationales.

### STATE-LEVEL INFLUENCES ON THE LLDC’S AFFORDABLE HOUSING PLANS

The production of the LLDC’s “affordable” housing plans coincides with the broader production of their *Adopted Local Plan* (Figure 2). The production of this *Local Plan* took place within a hierarchical and rules-based (but also discretionary) planning system. The effect of these combined technologies of governing is that the planning policies laid out in a local planning authority’s (LPA’s)

<table>
<thead>
<tr>
<th>Local Authority area</th>
<th>Number of households on housing waiting lists by year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td></td>
<td>344,771</td>
<td>354,401</td>
<td>380,301</td>
<td>344,294</td>
<td>255,729</td>
<td>263,491</td>
</tr>
<tr>
<td>Hackney</td>
<td></td>
<td>11,956</td>
<td>13,423</td>
<td>14,171</td>
<td>15,090</td>
<td>7,926</td>
<td>10,715</td>
</tr>
<tr>
<td>Newham</td>
<td></td>
<td>31,851</td>
<td>32,045</td>
<td>30,975</td>
<td>24,179</td>
<td>15,582</td>
<td>16,755</td>
</tr>
<tr>
<td>Tower Hamlets</td>
<td></td>
<td>22,707</td>
<td>23,128</td>
<td>23,406</td>
<td>24,428</td>
<td>20,425</td>
<td>19,783</td>
</tr>
<tr>
<td>Waltham Forest</td>
<td></td>
<td>15,624</td>
<td>16,153</td>
<td>21,864</td>
<td>25,054</td>
<td>20,635</td>
<td>15,405</td>
</tr>
</tbody>
</table>

*Table 1. Number of households on local authority housing waiting lists in London and within Hackney, Newham, Tower Hamlets and Waltham Forest, 2010–2015.*
Local Plan needs to conform with the strategic planning policies laid out within higher-level plans (Figure 3). Importantly, these technologies can arguably be regarded as chief ways in which lower-level planning bodies are made to consent to pursue localised expressions of the policy approaches and governance rationales that are mobilised by higher-level planning actors.
For the LLDC, these technologies of governing mean that the policies found within their Adopted Local Plan have had to conform with planning policies in relevant iterations of the GLA’s London Plan and central government’s National Planning Policy Framework (NPPF). Additionally, a senior LLDC planning officer that I interviewed highlighted that the LLDC were also simultaneously attempting to “bring together” the planning policy approaches adopted by the surrounding host boroughs into “one plan that deals with the LLDC area as a whole”. In this section, I highlight the extent to which the LLDC’s “affordable” housing plans conform with the policy approaches mobilised by central government, the GLA and the Olympic host boroughs.

Within the NPPF central government adopt an approach to “affordable” housing delivery which initially appears to be chiefly driven by social need considerations. Paragraph 47 of the NPPF states that LPAs should plan for “the full, objectively assessed needs for market and affordable housing in the[ir] housing market area”. However, when you delve deeper into the NPPF—in policy paragraph 173—you also importantly see a financial rationale emerge which has notable ramifications for central government’s approach to “affordable” housing provision:

Pursuing sustainable development requires careful attention to viability and costs in plan-making and decision-taking. Plans should be deliverable. Therefore, the sites and the scale of development identified in the plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened. To ensure viability, the costs of any requirements likely to be applied to development, such as requirements for affordable housing, standards, infrastructure contributions or other requirements should, when taking account of the normal cost of development and mitigation, provide competitive returns to a willing land owner and willing developer to enable the development to be deliverable. This policy conspicuously highlights the central role that viability considerations—which is fundamentally about not jeopardising the ability of landowners or developers to gain competitive returns from the delivery of development—should play in shaping the planning and delivery of development, including “affordable” housing, within England. Importantly, as Jerry Flynn has highlighted in his research into viability assessments, this means that the NPPF’s approach to planning for “affordable” housing puts “developers’ need for profits” above a “local community’s need for homes it can genuinely afford to live in”. This approach also takes place within a broader context where, despite the urgent need for social and “affordable” housing in England, central government slashed the “affordable” housing budget for 2011-2015 to £4.5bn, which is nearly half the £8.4bn budget allocated from 2007 – 2010.

Within London-level planning, the GLA’s London Plan has adopted a similar policy approach to “affordable” housing. Although, The London Plan highlights that London LPAs “should, seek to maximise affordable housing provision”, it also highlights that the provision of “affordable” housing should ultimately be contingent on financial viability considerations:

Negotiations on sites should take account of their individual circumstances including development viability, the availability of public subsidy, the implications of phased development including provisions for re-appraising the viability of schemes prior to implementation (‘contingent obligations’), and other scheme requirements. The GLA’s policy approach was to be expected given that English planning’s structure structures the GLA into consenting to adopt the strategic policy approaches pursued within the NPPF. Additionally, this policy approach was to be expected given Boris Johnson’s own developer friendly approach, as this interview response from a Green Party London Assembly officer highlights:
A few of the Assembly workers that I work with think that the Mayor is too quick to accept the arguments of private developers that if you don’t let us get away with this low level of affordable housing nothing will get built.

This planning policy approach to “affordable” housing has also come to be adopted by the Olympic host boroughs. Notably, the simultaneous mobilisation of social need considerations and profit-making informed financial rationales within each of these LPAs has meant that each borough has an overall target that 50 percent of new housing to be delivered within their respective borough boundaries should be “affordable”; although, for Newham Council and Tower Hamlets Council their planning policy only requires between 35 percent and 50 percent affordable housing on sites providing 10 new residential or more (subject to viability).

Given that the LLDC sits below the GLA and central government in the planning system, and given the surrounding Olympic host boroughs’ policy approach to “affordable” housing, it is unsurprising that when the LLDC was initially devising its “affordable” housing target it adopted a similar policy approach. Notably, the LLDC chose to depart from the needs-based target for London’s Olympic area because as ORS themselves highlighted, “affordable” housing requirements “must also be considered alongside…the viability of delivering affordable housing”.

As the LLDC’s planning policy approach was ostensibly drawing the Olympic host boroughs’ planning policies, I was expecting the LLDC would have adopted a 50 percent “affordable” housing target. However, within the early iterations of the LLDC’s Local Plan it was clear that they would adopt a much lower target than this. The LLDC would come to pursue a 35 percent “affordable” housing target. This deviation can be explained by bringing in conversations about the broader financial agendas that development and regeneration within London’s Olympic area is ultimately meant to be serving. Operating in the shadows of development and regeneration planning within London’s Olympic Park is a financial requirement for the LLDC to pay the National Lottery back the £425m that Tony Blair’s Labour government borrowed from them in 2007 to fill a shortfall in the budget for the Olympics. A senior development and projects officer at the LLDC highlighted to me that the LLDC have subsequently been required to “grow the values, in terms of the financial values, from the residential and commercial development that [they’ve] got coming forward”. Given this profit-making objective that the LLDC has, it is unsurprising that they have adopted a lower “affordable” housing target than the surrounding LPAs’ respective “affordable” housing targets. Adopting this lower target will enable the LLDC to enhance the capital receipts that it can generate from housing development within London’s Olympic area.

COMMUNITY-LEVEL CHALLENGES TO THE LLDC’S “AFFORDABLE” HOUSING PLANS

The LLDC’s pursuit of a 35 percent “affordable” housing target calls into question the extent to which the housing needs of east London’s working class communities are at the heart of the LLDC’s housing plans. Indeed, these concerns informed the indignation that local working class residents had towards the LLDC’s “affordable” housing plans. The main avenue through which these communities voiced their discontent with the LLDC’s “affordable” housing plans, and attempted to transform them was through the statutory consultations that comprised part of the LLDC’s Local Plan production process (Figure 4). In England, statutory planning consultations have been heavily criticised by critical planning scholars and community campaigners for not offering genuine spaces for state-level plans to be debated and challenged. Consequently, there was the concern that the statutory consultations into the LLDC’s Local Plan could have operated as a form of post-politics.
However, local communities actually displayed their power to bring antagonisms to the fore within these consultations, regardless of whether or not the LLDC desired this. For instance, during the consultation into the Draft Local Plan (from 2 December 2013 to 7 February 2014), and as part of broader contestations over the LLDC’s proposed planning policies, local residents strongly challenged the LLDC’s “affordable” housing target. They were “very unclear how existing and less well-off communities will genuinely benefit” from these “affordable” housing plans. They argued that the LLDC should adopt an “affordable” housing target that more closely reflected the social need target provided within ORS’ report on the LLDC’s local housing needs. These residents also argued that the LLDC should ensure that most of the “affordable” housing that the LLDC was planning for was social housing, due to the evidenced need for social housing within east London (see Table 1).

However, the statutory consultation in which the LLDC’s “affordable” housing plans were most forcefully challenged was the Examination in Public (EiP) into the second major version of the LLDC’s Local Plan. The EiP was held from 3 March 2015 to 13 March 2015 in the LLDC’s offices. Within this EiP, an array of governance actors engaging with the LLDC’s Local Plan production process came together in a number of sessions to debate and seek alterations to the LLDC’s Local Plan; the proceedings were adjudicated by an independent planning inspector. In the “affordable” housing session, the LLDC received strong challenges over their “affordable” housing plans, with particular dismay being expressed over the LLDC’s “affordable” housing target:

We consider that policy H.2’s target for affordable homes is inadequate…You see Newham has set a target of 50 percent, while Hackney has the same target. Why should the LLDC be setting their own target, you know, at 35 percent, which is under what the SHMA which they rely upon for the boroughs indicate (local resident).

The LLDC’s response highlighted that they were not intending on modifying their target:

[T]he affordable housing 35 percent [target] has been based on the requirements of Policy 3.11 of the London Plan which specifically mentions viability. And so the Local Plan affordable housing viability testing has looked at different scenarios and concluded that 35 percent is the most…appropriate target to be set (LLDC representative).

Notably, the LLDC’s response further reveals just how much credence that the LLDC were giving to the profit-making informed financial rationales that are also privileged throughout the planning system. Importantly, in the aftermath of this debate, the independent inspector thought that the LLDC had sufficiently justified their “affordable” housing target. Thus, despite the significant and continuous community challenges to the LLDC’s “affordable” housing plans within consultation spaces the LLDC’s profit-making informed “affordable” housing target remained intact within their Adopted Local Plan.
CONCLUSION

Discussing the production of the LLDC’s “affordable” housing plans has highlighted the policy agendas and governance rationales that have contributed to the LLDC developing a highly unsatisfactory “affordable” housing target for its boundary. Social need considerations have not been absent within the LLDC’s “affordable” housing plans—as is evidenced by them actually adopting an “affordable” housing target. However, what is apparent is that these social need considerations have played second fiddle to profit-making informed financial rationales informing the deployment of viability assessments. Importantly, the LLDC have “justifiably” been able to do this because the LLDC operates within a planning system, and political economy more broadly, that also privileges the pursuit of profit-making informed financial rationales. Consequently, Allmendinger and Haughton are quite right to characterise English planning as currently representing a form of “neoliberal spatial governance”.  

However, Allmendinger and Haughton are erroneous in suggesting that antagonism has been replaced by consensus within planning. From my study, it was evident that conflict was a persistent feature of the LLDC’s Local Plan production process. So, a more accurate line of argument is that relations of
antagonism and relations of consent currently coexist within English planning. However, what has also been evident is that community representatives’ mobilisation of antagonisms within the LLDC’s planning spaces has not engendered alterations to the LLDC’s “affordable” housing plans. Evidently, communities need to do more than just participate within statutory planning spaces to engender serious alterations to the most financially driven aspects of an LPAs plans. But, questions remain about the sort of community-level activities and actions that can successfully bolster the role that social need considerations play within the determination of “affordable” housing plans within English planning. Thus, there is an urgent need for planning research to begin to theorise radical, yet practicable, strategies for enabling social need rather than financial greed to be the chief architect of “affordable” housing planning.
NOTES

1I will use the terms ‘London’s Olympic area’ and ‘the LLDC’s planning boundary’ interchangeably in this paper.
2The other two Olympic host boroughs are Barking and Dagenham and Greenwich.
5Ibid., 4.
8Social-rented housing is widely regarded as the only housing tenure that is actually affordable to working class and low income groups. Rent levels are wide-ranging, but are below 50 percent of local market rates. “Affordable”-rented housing rent levels are typically anywhere between 50 and 80 percent of local market rates. Consequently, “affordable”-rented housing is in fact unaffordable for those eligible for social housing. This is why I put the term affordable in quotation marks.
9For brevity, I now refer to the combination of social-rented and “affordable” rented housing as “affordable” housing. The term affordable remains in quotation marks to reflect the fact that “affordable” housing encompasses the controversial “affordable” rented housing product.
15Allmendinger and Haughton, Post-Political Spatial Planning in England, 89.
16 Ibid., 93.
23Department for Communities and Local Government, National Planning Policy Framework (Department for Communities and Local Government, 2012), 12.
24Ibid., 43.
25Ibid., 132.
33Ibid.
35Allmendinger and Haughton, Post-Political Spatial Planning in England, 93.

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IN A CLIMATE OF CHANGE: CHALLENGES FOR SOCIAL INTEGRATION THROUGH HOUSING IN A FRAGMENTED CITY

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UNIVERSITY OF CHILE; RMIT UNIVERSITY, AUSTRALIA; FLACSO, OAS (ORGANIZATION OF AMERICAN STATES)

INTRODUCTION
Urban sprawl and rising urban populations create a greater need for new infrastructure to connect with the city and places an increased demand and cost on energy supply. We argue that the impact of government intervention in such a landscape becomes increasingly more difficult and less effective in terms of housing as a strategy and instrument to mitigate the effects of a fragmenting city. This paper is based in research undertaking between 2013-2016 into two key housing projects within the Chilean government’s Socially Integrated Housing program (SIH) (Proyectos de Viviendas de Integracion Social). The authors focus on two key aspects of the SIH program: the quality of the design and construction of the dwellings and the access to and distribution of services and connectivity within the neighbourhood and with the city. Firstly, we consider social integration through the location of the housing developments, the access to services and the related levels of satisfaction with and participation within the created neighbourhoods. Secondly, we consider social integration by assessing the typologies and performance of housing in the two SIH developments and the social-spatial relationship of the housing to the public spaces and amenity. Thirdly, from the aforementioned studies and in the absence of a social measure of integration other than household incomes as a percentage mix of the neighbourhood population, we develop the concept of conviviality. From this concept we identify that the SIH program, which is ostensibly designed to address social segregation, creates a new category of social segregation within the housing development and within the city. In conclusion, we propose a redressing of the financial incentive for lower-middle class residents (affordable housing) to live within the SIH housing developments. This alternative is based in renewable energy as infrastructure to alleviate lifelong and rising housing energy costs for climate control.

A note for the reader. The SIH program is essentially designed for two lower income social groups. Housing for the lower-middle class income group is described as affordable housing. Housing for the low income group is social housing. In effect and until 2015, the SIH introduced an extra housing subsidy (a social integration bonus of approximately US$4,000) as an incentive for lower-middle class (poor families) to live with even poorer families. In a market economy some describe the lower-middle class euphemistically as aspirational.
BRIEF HISTORICAL CONTEXT OF SOCIAL HOUSING IN CHILE

Social housing as a form of social integration in the cities of Chile commenced in 1906 with Welfare State Workers Housing. However, it was the period of modernisation of the Chilean economy from 1935 – 1960s that social housing responded to rapid urbanisation and the mass migration from rural to urban areas through housing policy. From 1960, the instrument for the solution to the growing informal settlements in urban areas was needs based state housing as part of city planning and urban development policies. This approach ended with the military coup in 1973. During the 17-year dictatorship that followed, the most extensive market lead restructuring of the economy was implemented. The deregulation and privatization of urban land release and development, coupled with the introduction of housing subsidy by voucher in 1979 created a new relationship between the State, the individual family and the private sector, the state as subsidy provider to the poorer families as housing consumers, who purchase housing as a product provided by the private sector. While this triadic form of housing subsidy did reduce the housing deficit, it delivered this with a legacy of poor quality and performing housing and greater social and urban segregation. The deterioration of social cohesion and the seeds of a growing inequality of access to and distribution of services and urban connectivity were sown during this suspension of democracy (1973-1989). In 1990 democracy was returned to Chile with the continuation of the role of the State as facilitator for the private sector to build social housing.

Social housing in Chile is built for ownership and 3 out of 4 houses are owned by their occupants. This represents one of the highest ownership rates among OECD countries. Two thirds of houses/apartments in Chile receive some type of government housing subsidy.

TWO SOCIALLY INTEGRATED HOUSING DEVELOPMENTS

In 2006 the then Chilean president Michelle Bachelet, referred to social integration in the following terms, “Urban and housing policies that ensure a better quality of life and better neighbourhoods for people and that promotes integration while reducing inequality”. In the same year, the Chilean Ministry of Housing and Urbanism (MINVU) declared social integration as one of the main objectives of the urban housing policy. Social Integration was defined in 2009 by MINVU as housing that provided:

- Equity in the access and distribution of services and urban infrastructure.
- Location that offers access and connectivity to services and urban infrastructure
- Social and economic mix
- Peaceful and tolerant social engagement

MINVU identified the following instruments and strategies to implement social integration through housing:

- Social rehabilitation of neighbourhood plans
- Location subsidy for young people to live in the city’s centre
- New subsidy for used homes
- Socially integrated housing developments (SIH)

Based on these definitions and instruments, the developments created under the SIH program must include between 20% and 30% of social housing, and between 20% and 80% of affordable housing, in effect targeted to lower middle class. Private developers who build the SIH housing determine the social mix of residents within these percentage ranges. MINVU’s Selection Guidelines of Projects and Families (SGPF) identify the eligibility criteria for these two social groups – social housing and affordable housing. Subsidies are offered to eligible applicants, who then “shop around” for their
house, in a market with limited options defined by the developers. In addition to a purchase subsidy, further subsidies are available after purchasing the home for modifications or extensions to the house. Geographically, Chile is a long, narrow country of 4300 km that is 350 km at its widest point. The metropolitan area of the capital, Santiago, has 7 million inhabitants who represent 40% of the national population of 17.5 million. Santiago has 7 times the population of the next largest city in Chile. Chile’s population is highly urbanised (90%) and the location of Socially Integrated Housing (SIH) projects on the growing periphery of the Capital is rationalised on the basis of land prices yet, this same pattern of development is repeated in smaller urban centres. This reality provides a national context to examine the response to the social segregation of cities through SIH projects. As such, the two case studies of Socially Integrated Housing (SIH) examined in this paper represent housing on the outskirts of the metropolitan areas of the capital, Santiago and that of the city of la Serena, 500 north of Santiago (Figure 1). The first case study is Casas Viejas located in the metropolitan area of Santiago in the municipality of Puente Alto. Casas Viejas contains 2088 houses and was built in 2008. The second case study is Villa las Araucarias located on the outskirts of the main city of the IV Region, la Serena which had a population of 217,000 in 2015. Villa las Araucarias contains 144 houses and was built in 2009. In both cases, projects are located in areas already defined by their socio-economic homogeneity (low-income residents) and deficiently equipped.

![Figure 1. Social integration through housing: the two case studies. Left, Casas Viejas, Santiago; Right, Villa Las Araucarias, La Serena (source: authors).](image)

Two aspects of MINVU’s key terms (2009) for social integration define this investigation of social integration through housing as a strategy and as an instrument to address urban segregation. The first includes the question of the physical and spatial access to services and general amenity determined within and by the location. This has a social dimension in terms of participation and use of public and community services and spaces. The second is in relation to an implicit notion of social sustainability inherent in the definitions of social integration through a socio-demographic mix and the term “peaceful and tolerant social engagement”. Combined with the quality and performance of the housing types, we further consider the question of environmental sustainability as a social, economic and equity issue in terms of household energy consumption and its rising environmental and financial costs in relation to modes of transport for access to services and employment. From this complex matrix of elements involved in social integration through housing, we derive the term of conviviality—“the art of living in community”—, as a measure of the success or otherwise of social integration in the two case studies.
The planned routes around and within both housing developments were mapped and analysed. This enquiry revealed an appropriation and expropriation of public spaces by residents. Within Casas Viejas, Puente Alto, by 2015, 77% of the extensive network of cul-de-sacs, integral to the development’s urban design layout, had been closed. The residents of the cul-de-sac had closed these public spaces for their private entry and use. In addition, half of the grilled fences of all of the houses in the estate had been enclosed with semi-permeable or impermeable materials.

Within Villa Las Araucarias, La Serena, the housing development layout design had divided the estate in two by an open public space located in the middle that was used by no one. On one side of this space was located the social housing and on the other the affordable housing. With such a physical barrier to integration it was of no surprise that the community was divided along social economic lines. Initially built in 2009, without enclosed fencing for houses, by 2014 37% of houses were enclosed with visually semi-permeable or impermeable fences (Figure 2). The following year this rose to 85% of houses having been enclosed with visually semi-permeable or impermeable fences. The elimination of the passive surveillance in both developments and the consequent exclusion of private homes from public view have an aesthetic and public safety implication for public space (Figure 3).
Interviews with residents from both housing developments and more than 500 surveys were undertaken to investigate the levels of satisfaction with the housing and neighbourhood. Some answers revealed a set of contradictory findings which will be addressed later in this paper. In Villa las Araucarias, residents of affordable housing spoke of those in social housing in terms such as the “others”, “those at the back”, “the ones that don’t pay a mortgage” and the “kept ones”. When asked, 80% of residents of Villa Las Araucarias said they would like to move and the two the main reasons cited were anti-social behaviour and deficient security (Figure 4). In addition and in both housing developments there was limited use of public space and little or no participation in community activities. In Villa Las Araucarias 94% of those consulted claimed that they did not participate in any community activity. In Casas Viejas this figure was 87%. From the survey results and the spatial analysis “peaceful and tolerant social engagement” was not evident in either of the SIH projects.

However, the satisfaction levels with the housing that had been provided at the point of purchase were exceptionally high. In Casas Viejas this is reflected in 70% satisfaction levels (this is higher in social housing than affordable housing). In Villa las Araucarias this satisfaction is 50%. Like other studies of isolated or isolating housing developments, the expectation of the housing is met because this is housing that can be afforded i.e. the expectations are low.16 It is the impact of the location that is both the cause and perpetuating factor in the perception and the reality of segregation. This is particular to the lack of transport alternatives and car dependency as a further social divide.

While access to essential services (schools, police, or health centre) in both housing developments was met, the choice of, rather than access to, educational facilities distinguishes the residents of affordable housing who chose the subsided private schools outside from the housing development, from those of social housing who overwhelmingly used the local school. This self-segregation adds another layer to the existing segregation created by the location and quality of housing of the typology of housing built under the SIH program.

In Casas Viejas, Puente Alto, Santiago, the analysis of exiting housing conditions showed that 17.7% (369) of the total 2088 houses had had extensions or modifications made to the housing with little or no discussion with neighbours. An analysis was undertaken of existing conditions of the two housing types that define the households that constitute MINVU’s “social and affordable mix”. As a result of these observations, we drafted new condition house plans for the residents. This process enabled the occupants to comprehend the home as a designed environment that could be improved
and which had a relation and impact on the neighbours and the neighbourhood. All the extensions made by residents had a negative impact on the energy performance of the individual houses due to poor quality of the design, the poor quality of building materials, little or no insulation and the increased energy consumption of this additional floor space that lowered the overall performance of the existing dwelling. It should be noted that the social housing is small (50 sqm) for a two bedroom semi-detached home and those of the affordable houses in the same development are only marginally larger (55 sqm). The need to extend and modify the dwelling is essential for households marketed to young couples and/or young growing families (Figure 5).

Figure 5. Example of an extended house (white room) in Casas Viejas.

The above spatial and social surveys of residents and the analyses of the two housing developments provided a measure against which to assess the four criteria of social integration that were developed by MINVU for its SIH program, (source: authors).

In terms of Equity in the access and distribution of services and urban infrastructure there is limited access to the city centre of major and provincial cities by default of the location. Irrespective of the distance from the centre (6km from the city’s centre from Villa Las Araucarias), poor transport connectivity and poor quality urban spaces define this segregation. In Villa Las Araucarias, while essential services are close to the housing development, the lack of design and maintenance of open public spaces result in their abandonment, or appropriation by gangs of youth at the exclusion of others. In relation to a Location that offers access and connectivity to services and urban infrastructure, the peripheral location combined with limited public transport limits connectivity and promotes car dependency. In Casas Viejas, 64% of the residents respond that they drive to work. In Villa Las Araucarias (although closer to the city centre) 70% of residents use their private car. In both cases, most residents living in affordable housing work far from their homes. The Social and economic mix in the two case studies shows only subtle diversity of household types regarding income. However, there is greater difference in educational levels. In both cases and housing typologies, most residents have completed secondary school, with many living in affordable housing having a technical or university degree. It is in the absence of a measure of Peaceful and tolerant social engagement that the idea of conviviality (or lack thereof) arises. In regard to conviviality, the housing development in La Serena is distinguished from Casas Viejas, only in the form and magnitude in which this fails to take place.
In *Villa las Araucarias* the failure for conviviality to take root is witnessed in the collapse of the resident group, the abandonment of the main open public space and the near complete enclosure of all individual houses with a consequent elimination of passive surveillance. In *Casa Viejas* this lack of conviviality is evident in the collective enclosure and privatization of 77% of the public spaces of the cul-de-sacs. The remaining streets as thoroughfares become the public space that is abandoned to the dominance of the automobiles, purchased by necessity of poor location and poor public transport connectivity to adjacent urban areas. These automobiles are parked on the street for lack of space within the private property. When asked, “what is your favourite place in the neighbourhood”, 44% of residents in *Casas Viejas* responded “none”, and another 40% said “my home”. In *Villa Las Araucarias* 51% responded “none” and 24% of residents said that the “street produce market” was their favourite place. This answer is telling in that the produce market is culturally valued as a place of casual social interaction.

Conviviality in a community can be restored or built but it cannot be retrofitted into an urban design that does not consider jobs, transport and the potential adverse uses of public space together and in concert with housing design that does not accommodate the growth of families or the multiuse needs of a neighbourhood, within the estate. The location of large-scale housing developments, in the case of *Casa Viejas*, cannot build conviviality when they are self-reliantly located on the periphery of cities. Smaller housing developments similarly located on the outskirts of metropolitan areas, like *Villa las Araucarias*, has less amenity within the development. Segregation within is exacerbated when the physical division of the self-contained socio-economic mix is a strategic part of the urban design of the development to sell housing to lower middle class who are guaranteed separation on one side of the estate. In both housing estates, the visually identifiable differences in the quality and size of the housing for this socio-economic mix may or may not be well designed to disguise this fact. Irrespective of this difference in housing, the obligatory extensions to the houses exacerbate the high financial and health costs of housing that in its original state complies with the minimum standards required.

The research shows a discrepancy between the objectives of the policy of social integration and its implementation through the Socially Integrated Housing program (SIH): social integration as an objective v/s social integration as an instrument. The results of this research suggest that the approach to social integration through housing as an instrument should be inverted within the three levels at which it currently operate to prioritize the city, then the municipality and thirdly the housing development as part of the city’s development. Three related questions for the SIH program are raised by this research. Is the social integration through housing program the most effective way to curb segregation of the city? Is housing an effective vehicle to address urban segregation? Might there be another way to promote social integration?

**EXPLORING SOCIAL INTEGRATION BY OTHER MEANS**

It is within relation to this last question that the authors began an investigation of what might be possible to consider within the current constraints of the SIH given the scale and location of the housing developments and the cost and source of infrastructure for energy at the point of construction in greenfield or brownfield sites. Since the commencement of the SIH program, there have been several important changes in the national government policy in regards to energy, including the creation of two new ministries in 2010, the release of the National Policy for Urban Development: Sustainable Cities and Quality of Life in 2013,17 and the adoption of a new national energy policy in 2015. The target for renewable energy of 60% by 2035 is reinforced in public policy terms by a
commitment to 100% of the poorest households having access to continuous and quality renewable energy by 2045.\textsuperscript{18}

We worked closely with the Faculty of Engineering, University of Chile to investigate the technical viability and the cost effectiveness of utilising geothermal energy for the climate control of housing being one of the highest household energy uses. Chile is one of three OECD countries with the lowest electrical power costs, due to the abundant sources of hydro-electricity associated with the mountainous geography and permanent glaciers for the length of the entire country. While hydroelectricity is deemed to be renewable it comes with an environmental cost through the necessary infrastructure, which is threatened by receding permanent glaciers due to climate change. In addition to hydroelectricity, Chile also has the geological conditions that make geothermal a feasible renewable localised energy solution for the climate control of housing in specific regions.

From the central region of Chile to southern extremity of the country, it is essential to have heating in housing. In the north of the country, in the desert and in the high plateau the need and solution for heating and cooling has a different context and probable alternative energy solution. As an assessment of the problem and to establish a baseline for Casas Viejas, Puente Alto, Santiago we compared the performance after modification and extensions to the ratings provided by MINVU’s at the point of construction. The thermal performance of the original housing is D and the modifications lower this further to E.

Our proposition of alternative energy for the climate control of Socially Integrated Housing was underpinned by a practical and proven example of geothermal power being used in private housing developments,\textsuperscript{19} and many commercial and industrial infrastructures in the south of Chile.\textsuperscript{20}

Our investigation was framed to undertake a design and feasibility study of a geothermal heat pump system for the climate control of the Casas Viejas Social Integration Housing project (Figure 6) where the main sources of heating and cooling are natural gas and electricity. We estimated the energy demand for housing, identified the geothermal resource in terms of aquifer temperatures and availability of flow for extraction, and calculated the distribution network to make available this renewable energy source to households within the existing estate. We then specified the different components of the heat pump system and analysed the economic and social feasibility of the system. It should be noted that Casas Viejas is used as a hypothetical model and that the infrastructure for geothermal must be fitted before the construction of housing.

![Figure 6](image_url)

*Figure 6. Feasibility study of a geothermal system for climate control in Casas Viejas. The blue dots show the location of the aquifers; yellow areas = affordable housing, green areas = social housing.*
CONCLUSION

The national emphasis and policy shift towards alternative energy and sustainability (social, economic and environmental) creates the climate to consider different incentives to construct and live in Socially Integrated Housing. We believe there are opportunities to introduce sustainability guidelines to social housing that, as a by-product of this economic and environmentally sustainable measure, would make it also attractive to a larger cross section of society to live in such housing developments. This would promote social sustainability through social integration for different reasons for different socio-economic groups.

Such a change would lead by example in terms of the housing subsidised by the State and contribute to the sustainability objectives of the National Policy for Urban Development with housing as an effective instrument. Similarly, it would challenge the stigma associated with social housing that is demonstrated by the limited and conflicting “social and economic mix” of the existing SIH program. It would lower the lifetime energy costs of all housing in the socially integrated housing estate (when designed and installed at the point of construction) and generate monthly economic savings for the residents. A subsidy that reduces monthly household expenditure would, for the poorer residents, create new disposal income for essential costs – transport, food, clothing etc. For the aspirational class, this would create an incentive to purchase SIH housing as an appreciating aspect of the investment in light of rising household energy costs.

The potential of geothermal energy for the climate control of housing resides in the specific geology found in central and southern Chile, the sustainability benefits (economic, environmental and social) that increase with the scale of neighbourhood housing developments and the necessity of climate control of housing in these regions while energy costs continue to rise. It is possible to create an environmentally sustainability geothermal heating system for Socially Integrated Housing developments such as Casa Viejas that are located due to land prices on the periphery of Santiago and other urban centres. This does not alleviate the lack of connectivity inherent in the location but may hold the incentive for a greater social mix, promote better thermal performance of housing and create real benefits in the reduced energy cost to the household and the environment.
NOTES


3 Alfredo Rodríguez and Ana Sugranyes, eds., Los con techo: un desafío para la política de vivienda social (Santiago, Chile: Ediciones Sur, 2005).

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7 Ibid.

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9 MINVU and CEHU, "Déficit Urbano-Habitacional: una mirada integral a la calidad de vida y el hábitat residencial en Chile" in VII Política Habitacional y Planificación, ed. Comisión de Estudios Habitacionales y Urbanos (Santiago de Chile: Ministerio de Vivienda y Urbanismo (MINVU) y Comisión de Estudios Habitacionales y Urbanos (CEHU), 2009).

10 Eligibility to housing subsidy is based on the applicant’s Social Protection Card Score.

11 Sabatini et al., "Conciliando integración social y negocio inmobiliario: Seguimiento de proyectos integrados (PIS) desarrollados por inmobiliarias e implicancias de política."


15 The notion of conviviality as an indicator of success or otherwise in social integration was discussed in Beatriz Maturana and Ralph Horne, "Towards socially integrated housing in Chile: assessing conviviality through two key housing projects," Open House International 41, no. 2 (2016).

16 Expectations are low, as often they have no experience of better places. Lyn Richards, Nobody’s Home: Dreams And Realities In A New Suburb (Oxford University Press, 1990).


20 University of Chile’s Research Institute SIGA works in collaboration with industry (timber industry, apiculture, district heating, industrial scale greenhouses), to design systems and explore the potential of this renewable energy source. See http://www.cega.ing.uchile.cl/investigacion/#publicaciones

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THE ROLE OF CULTURAL ORIENTATION IN THERAPEUTIC LANDSCAPE DESIGN

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INTRODUCTION
Internationally, the population of people over 60 years of age is predicted to triple from 2010 to 2050, raising the number of aged citizens from 8% to 16% of the population. This ageing population is expected to create challenges for planners and designers to find more effective ways of maintaining health and social wellbeing into old age. Ethnic diversity will be a primary concern for addressing uptake barriers in relation to physical activity and exercise for this demographic, whom experience great disparity in health outcomes. According to the World Health Organisation (WHO), indigenous people embody a diverse range of cultures, religions, and traditions, yet are continuing to be undervalued and often experience great inequality in health than non-indigenous populations due to lack of fiscal or cultural accessibility. It is summarised that "indigenous peoples remain on the margins of society: they are poorer, less educated, die at a younger age, are much more likely to commit suicide, and are generally in worse health than the rest of the population." With the number of disabled elderly expected to double from 2013 to 2038, there is the risk that with an increasing inaccessibility to health care, the demographic groups which are already experiencing uptake barriers and poor health may be further disadvantaged.

However, due to New Zealand’s increasing rates of immigration, concerns for health inequality is not limited to the indigenous population. The country is increasingly experiencing a shift from a bicultural to multicultural society, resulting in a more diverse range of cultural barriers and resultant problematic health outcomes, of which the country is ill prepared for. This can be seen in the higher rates of disability not only in Maori persons, but also Pacific, Asian and other, comparative to the dominant European cohort. It is predicted that the biggest demographic rise will be from Asian groups, rising from 12.2% to 20.9% of the population in 2038. With the growth of the older population expected to increase not only in size, but diversity, planners and policy makers will be forced to consider the future needs and expectations of higher proportions of Maori, Pacific and Asian people.

While international research has determined that the frequency of general disability has declined, the prevalence and distribution of chronic physical morbidities has shifted. In the coming decades, this ageing population will place a greater pressure on the health care system, to manage the rising cohort of elderly persons whom are experiencing a range of costly comorbidities, with high care requirements. If unaddressed, elderly morbidity will have excessive outlays not only for the health system but for individual independence and quality of life. Widespread effective population-based
preventative or rehabilitative measures will be imperative for developing resilience in older adults, to mitigate these negative health implications. The framework known as ‘aging in place’, is globally considered, “the ability to live in one’s own home and community safely, independently, and comfortably, regardless of age, income, or ability level”. Planning and urban designers are increasingly using frameworks such as this for developing urban environments, which support ageing populations.

Elderly are a main user of open green space, therefore, the usefulness of the public realm for population-based interventions, must not be undervalued. These outdoor environments offer an important platform for engaging older adults from a variety of social, cultural and ethnic orientations for the purpose of improving or maintaining their physical and mental health, as well as facilitating their social and cultural connections. Furthermore, through targeted physical activity these landscapes have the potential to combat costly morbidity, not limited to, heart disease, diabetes and cancer. In addition, reduced strength and lack of balance contributing to elderly falls, the most common cause of injury and fear, can be combatted through targeted physical activity. Beneficial exercise and engagement with nature has proven mental health benefits by reducing stress and aiding mental disorders including dementia and depression. Consequently, a potential solution to rising elderly morbidity is to deliver therapeutic landscapes which incorporate age-specific outdoor interactive equipment or landscape elements, eHealth technologies or motivational strategies, into public green space, to encourage beneficial physical activity for a range of capabilities. This may be a cost-effective, sustainable approach to assist with supporting the increasing proportion of physically impaired elders in our communities.

A primary concern however, is that the ethnically diverse people identified, often most in need of these interventions are unreachable through standardised western methods, despite the accessibility of the public realm.

**METHODS**

This project broadly investigates the many different landscape requirements that contribute to the accommodation of ethnic diversity. Using a multidisciplinary lens, the project compares existing technologies such as exercise equipment for the elderly, motivational strategies and eHealth technologies with research that addresses health benefits and wellbeing. The methodology of the research involves an exploration of literature of relevant participation barriers for engagement with the outlined physical activity strategies. The published literature was reviewed to identify studies on sociocultural barriers towards physical activity among various groups of elderly. Primary considerations included: different age ranges, gender, impairment types, physical capabilities, socio-economic status, and ethnic, religious and cultural orientations. Secondary considerations include: residential status, family compositions, marital relationships, and child care responsibilities.

**FINDINGS**

It was found that exercise interventions which combine mixed types of physical activity such as aerobic, strength and balance training across a range of intensities were most effective in combatting a range of problematic disorders including cardiovascular diseases, neurological disorders, cancer, osteoarthritis, frailty, type 2 diabetes, obesity, depression and sleep problems. It was found that currently outdoor exercise equipment is appropriate for training cardiovascular fitness, balance and muscle strengthening, however there are low adherence rates in this kind of exercise among older adults. Findings suggest that there are numerous barriers which prevent certain user demographics from engaging in this type of beneficial physical activity. While there were, many studies related to the benefits of using outdoor spaces for overall wellbeing and the adherence barriers for elderly
people, very few studies analysed the suitability of outdoor exercise equipment for seniors of different demographic groups and cultural backgrounds. However, preliminary studies do suggest that physiological disparities because of detrimental inactivity, could be related to socio-cultural conditions and circumstances in the built environment. While strategies such as the Green Prescription has significantly reduced inactivity in community-dwelling elderly New Zealanders, research has shown that residential-dwelling individuals have been harder to reach, and may be missing out on these benefits. Furthermore, elderly persons over 80 years were considered the least active, as are women comparatively to men, increasing their susceptibility to chronic health conditions, reduced balance and mobility which commonly leads to injury from falls. In addition specific minority ethnic groups were also disadvantaged, and may require the provision of culturally acceptable solutions for promoting physical activity in a more diverse manner.

The research found that the barriers which sustained physical inactivity, could be considered under the following broad headings: practical barriers; socio-cultural barriers; and knowledge barriers. Practical barriers regarding physical activity of older adults refers to physical, medical and economic obstacles to physical activity that individuals face, often causing lack of accessibility. Socio-cultural barriers of elderly refer to societal cultural beliefs, and social or religious practices which influence perceived barriers, or prevent persons from engaging in activity. Knowledge barriers concerning inactivity of elderly refer to linked socio-cultural factors which mean that people from ethnic groups might not have accurate or full access to knowledge of the benefits of physical activity or health resources.

**Practical barriers**

Self-efficacy is a person’s perceived abilities to perform a certain behaviour to achieve a desired result. Research suggests that regardless of cultural difference, the barrier of self-efficacy is a problem to all elderly people. Therefore, identified barriers may be genuine issues, or could be perceived barriers which equally impact the senior’s ability to participate in physical activity. Main physical barriers were concerns regarding mobility and capability. Many older people felt that certain health conditions prevented participation. This may be due to recommendations from health professional or merely a perceived barrier. Furthermore, with or without existing conditions, many articles recorded the concern adults had for becoming injured as they entered later years, as over 30% of elderly persons over 65 year, fall at least once each year. Furthermore, more than 70% of seniors suffered from fear of further falls, resulting in lack of confidence, and avoidance of physical activity leading to a greater chance of falling. Some seniors emphasised that they were wary of being knocked over by younger persons, which discouraged them from using facilities in public space. To address these issues, it was suggested by seniors that separate recreational facilities should be provided which only cater to elderly needs, however this creates issues around exclusivity, in a context which is aiming to promote inclusive recreation in public space. Other concerns for safety were in respect to lack of supervision in outdoor situations, and/or lack of feedback in terms of the suitability of certain types of exercise. Further practical barriers included: lack of access to health resources; and time pressures which limited engagement with physical activity. It was found that although the majority of elderly persons agreed that exercise was important for maintaining health and wellbeing, yet nearly two-thirds do not include it as a high priority.

**Socio-cultural barriers**

Socio-cultural barriers were found to be the most difficult to overcome in a design sense. Cultural expectations, such as lack of social acceptability for older persons to exercise, was a significant
external influence. It was found that there were certain stigmas around elitism and notions of masculinity, which discouraged females of various cultures. This was not helped by societal, cultural or religious perceptions about wearing tight/exercise clothing or performing physical activity in public places. Additionally, a significant percentage of the demographic have social structures different to that of ‘individualist’ western values. Complex relationship with other family members, such as lack of support from spouse and family, or living in extended families significantly contributed to exercise participation. Furthermore ethnically diverse people from multi-generational family units may stay active differently to that of the dominant culture. Another dimension to this was childcare responsibilities which took priority over engagement with physical activity. Therefore, it can be interpreted that the relationships with other family members or friends, may have a significant impact on a senior’s engagement with physical activity, a factor often not considered in the design of elderly exercise equipment or health strategies. Furthermore, many religious or cultural beliefs such as perceived acceptability of elderly or ethnic persons to exercise or the appropriateness of certain types of physical activity and clothing, were found to contrast with standard western views, thus, preventing certain demographic groups from undertaking physical activity in certain contexts.

Knowledge barriers
An important knowledge barrier in New Zealand, is an education issue involving lack of awareness around why or how to participate in physical activity. Studies showed that people of lower socio-economic status had less educated individuals who had less knowledge around the importance of fitness, undertook less beneficial exercise and spent less time participating in physical activity per week. On a different note, it was also acknowledged that language or cultural barriers may be a problem in the success of exercise promotion, or in terms of signage which demonstrates correct ways of using interactive elements. Furthermore, we conclude that that existing systems do not often align with traditional healing methods, which presents a significant gap in the appropriate conveyance of health care.

DISCUSSION
In response to these participation barriers it can be concluded that a therapeutic landscape needs to incorporate the following design parameters: progressive and adaptive design and feedback technology; intergenerational and inclusive design; landscape integrated solutions and traditional healing systems.

Progressive and Adaptive Design and Feedback/eHealth Technology
Physical barriers such as mobility and capability concerns may be addressed through appropriately designed age-specific equipment which takes into consideration reduced ranges of motion, strength and balance. This could be further enhanced with suitable hand rails, safety materials and flooring, and simplified designs which are related to daily activities. Additionally, accessibility for persons with walking aids must be incorporated. This has been seen in some equipment currently available on the market such as the “handicapped fitness series”, which focusses on upper body strength, however it is not inclusive to other capabilities. This needs to be addressed in an adaptive approach, whether it be in the equipment itself or in the layout, to provide adequate challenges which increase difficulty for a wide range of capabilities and progress. Furthermore, if feedback systems were integrated into the equipment, which measured the suitability of each activity based on individual performance, it would allow elderly persons to gain confidence. In addition, it would ensure their own safety, while effectively rehabilitating existing health conditions, and delaying the onset of other age related
illnesses. This technology may also help people with limited access to health resources to gain important knowledge for improving their physical wellbeing. Furthermore, research found that eHealth technology such as this could increase individual sense of wellness, including physiological, psychological, social and health well-being, as this patient-centred approach could provide progressive engagement with long-term physical activity participation.

**Intergenerational and Inclusive Design**

The time barriers which many elderly face may be better understood as the prioritisation of other activities above physical activity which limits the time available to exercise. This may be addressed by changing the perception of what exercise activities are. If the landscape is designed in a way which integrates physical activity with other daily activities such as spending time with children or socialising, then more successful uptake may be achieved. This may also address identified socio-cultural barriers such as adjusting for influential relationships within multi-generational family units and childcare responsibilities. To design for this there may be a need for elements which require group input, or perhaps have a fun intergeneration layer to promote beneficial social interaction. This may create a cultural shift which contradicts the familiar expectations associated with exercise. Considerations such as making equipment less intimidating, or ‘gym-like’, by developing the materiality and form, may take away negative exercise connotations and reduce stigma barriers regarding appropriateness.

**Landscape Integration and Traditional Healing Systems**

Another technique for achieving more approachable interactive installations is through integration with the landscape. Using landforms, natural settings and existing structures, to set interactive challenges for the ageing public may redefine what an exercise intervention is, broadening the scope to include a therapeutic landscape. In this context, another strategy for raising awareness and participation in culturally diverse demographics may be to consider traditional healing systems. This may bridge the gap between health professionals, the built environment and indigenous people to deliver education around why or how to participate in physical activity, in ways which may have been lost throughout generations, or which is perhaps not supported in current landscape design. An assessment of elderly exercise equipment currently on the market showed that some elements are designed based on international traditional exercise, such as Tai Chi Wheel, based from the Chinese Tai Chi martial arts; or the Cross-walk, inspired from Nordic walking. To the best of our knowledge there is currently no research or development regarding the adaptation of traditional Maori or Pacific exercise techniques, for contemporary health promotion. Our recommendation is that integration with the landscape will be imperative, due to the strong connections Maori people hold with the land, and the native flora and fauna. If research in this area is done in the future, it will be imperative that kaitiakitanga, or ‘guardianship’ from tangata whenua is sought, or equivalently with different ethnic groups, to ensure appropriate processes and implementation.

It can be surmised that there are many barriers which older New Zealanders face in terms of exercise, thus, there is a need for interventions which provide a platform for elders to engage in physical and social activity, coupled with eHealth technology, to improve confidence and progressive engagement. This may assist seniors to overcome physical and perceived barriers, to allow them to effectively participate in physical activity. Furthermore, lack of cultural suitability substantially limits the effectiveness of exercise interventions, by not appropriately encouraging physical activity for non-western people. Therefore, the design of outdoor therapeutic landscapes must encompass an approach
that is sensitive, receptive and responsive to a diverse range of cultural perspectives, not just a western paradigm\textsuperscript{57}.

**CONCLUSION**

In the last decade, several researchers have called attention to the importance of outdoor built environments for successful ageing\textsuperscript{58,59,60}. It has been concluded that public green spaces provide an important foundation for engaging older adults from various social, cultural and ethnic backgrounds for increasing or preserving their physical and mental health, as well as enabling essential social and cultural connections\textsuperscript{61,62}. Yet, while it is well documented that physical activity in public green space has numerous benefits for health and well-being, it is found that culturally diverse uptake barriers are still prevalent regarding exercise participation, in these landscapes\textsuperscript{63,64,65}. Findings suggest that many current exercise strategies are predominately designed under a western paradigm and are ineffective at incorporating the role of cultural orientations. We suggest there is a need for a successful cross-cultural and inter-generational design methodology whereby responding appropriately to the physical and cultural context.
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INTRODUCTION
This paper reports on recent research into the social processes underpinning development of the urban built environment in Sydney, Australia. It reveals a fundamental tension between advice from a cross-disciplinary consensus among non-government researchers and planners, and government plans to expand the network of toll-roads across the metropolitan area. This paper offers new insight into the connections between the social positions and views of decision-makers and the processes by which changes are made to the physical built environment. It finds that financialization of toll-road projects is consolidating physical urban centralisation at a single node of radial, or star-shaped transport links that take people and freight in and out of the city centre. Meanwhile, advice from university and other non-government researchers is that a multi-centric physical urban form, supported by highly networked urban transport infrastructure, is a requirement for improving access to services and jobs. Bourdieu’s field theory\(^1\) can explain why government and non-government views differ and why non-government experts have limited capacity to influence planning decisions.

In this paper, a major infrastructure project called ‘WestConnex’ is used as a case study of the urban infrastructure field. WestConnex is a 33-km collection of new motorway connections, and was Sydney’s most high profile and controversial infrastructure project in 2016-17, with an estimated cost of 16.8 billion Australian dollars. Public resistance against WestConnex has included protests and civil disobedience\(^2\), especially since the commencement of evictions and the demolition of homes in inner city suburbs of Sydney\(^3\) (see Figure 1).
WestConnex was initially proposed by the NSW Government in 2012 as a public private partnership⁴. However, the private sector was reluctant and cautious about investing in road infrastructure after suffering losses with previous large-scale tunnel projects in Sydney and Brisbane⁵. With this general sentiment towards road projects, it was very difficult for government to entice the private sector into a partnership and thus novel institutional arrangements were set up to ‘re-invigorate the private sector to get into the toll road space’ according to a government official who participated in this study. These arrangements resulted in limiting public scrutiny through freedom of information laws⁶.

To make sense of the data produced in this case study, urban infrastructure development is analysed as a Bourdieusian ‘field’ with complex links to the fields of government, international construction conglomerates and the research community. These fields determine distinct types of ‘habitus’⁷, within which individuals understand and experience their world, defining the types of planning goals, or utopian ideals, that they strive to realize. Thus, a university based researcher, a real estate developer and a treasury official can be expected to each have a different habitus, which determines how they access and use the ‘capital’⁸ (or means of participation) available to them.

This paper begins with a summary of the planning utopias that emerged from the data produced for this study. Then the non-government expert planning vision is defined. Competing planning utopias are analysed in terms of who supports these visions, what ‘field’ they are working within and how this relates to the composition of political capital. The paper argues that financialization in the toll-road space is a direct result of the so-called ‘revolving door’⁹ between government and the finance sector.

**Methods**

The research comprises an empirical study in which data was produced by document analysis and semi-structured interviews with key actors in the field. Fifteen participants agreed to be interviewed, and have been anonymized using alphabetical pseudonyms from A through O. These included representatives from government, non-government and intermediary organizations that operate at arms-length of government, such as statutory bodies or transnational research organizations.

The study uses Applied Thematic Analysis¹⁰ to code the data according to Bourdieusian analytical categories. Features of the conflict over urban infrastructure can thus be viewed from each participant’s social position. The concepts of *illusio, habitus* and *capital* theorize types of relationships between people to explain their practices and the meanings ascribed to them. *Habitus* can include the notion of world-view or orientation and explains the actions people take whereas *illusio* is the stake they have in the game being played in the field.
PLANNING UTOPIAS
The study shows that distinct social positions can be mapped and are associated with unique planning utopias. Table 1 shows the map of the WestConnex field produced for this study, and illustrates the relationship between participant support for WestConnex and organisational type. The first column shows the level of support for WestConnex, with three levels arranged into rows. The findings show that attitudes toward WestConnex are directly correlated with attitudes toward government use of private sector finance for public infrastructure. A second column was added to represent this in the map of the field. Specifically, those who did not approve of WestConnex, believed that ‘the taxpayer’ would bear the risks associated with the project, while private finance firms would benefit from it financially. The third, fourth and fifth columns group participants according to the types of organisations they belong to. The table shows that an individual’s position in the network of fields can be expected to predict the stance they take.

Two distinct planning utopias emerge from the data. Government utopias aim to create value for the private sector and promote ‘economic growth’ through agglomeration, as discussed in the next section. By contrast, expert utopias are concerned with ‘liveability’ and its distribution across the metropolitan region.

The Expert Vision
This study finds considerable agreement between transport and planning experts working within universities, and activist experts working in non-government organisations. As each sub-field in the research community produces its own ‘competing principle of legitimacy’, arguments from one cultural sub-field (such as transport economics) would be expected to have limited legitimacy within another cultural sub-field (such as public health). However, the data from this study indicate that there is significant cross-field support and shared legitimacy in the struggle between these sub-fields and government or the private sector. Thus, the knowledge that maintains ‘cultural capital’ within the university setting is often used by activists and advocates to support their arguments.

An example of the concerns of those who work primarily with cultural capital is provided by a transport economics researcher, describing how government ought to approach the provision of urban infrastructure:
‘...asking what kind of city we want, and for me that's a healthy city, where there's equitable access to social and economic opportunities for everyone...It's also about bringing jobs and services closer to people where they are already living and providing affordable housing closer to existing employment centres so that low income people can live closer to employment’ [Participant J, researcher, Non-Government].

Democratic values feature prominently in the urban design and planning literature and also outside of the planning field. For example, Participant O agreed that ‘public debate is at the heart of all good decision-making’ [Participant O, MP, Non-Government]. Experts also produce and defend substantive ideas about what constitutes liveability. Decentralization, or multi-centric city planning, is thought to be important and achievable through a combination of tax incentives for businesses to relocate to designated areas, and direct public investment in multiple ‘cities’ outside of the current city centre.

Other indicators of ‘liveability’ include ‘health’, ‘sustainability’, ‘efficiency’ and ‘attractiveness’. Chance meetings of neighbours at local shops, playgrounds, dog-parks or other local attractions ‘build’ the local community. Providing shops, childcare and schools within walking distance of homes is thus important according to experts. As a planner notes, ‘I want to make urban environments attractive and walkable’ because this ‘increases overall health and the enjoyment of life’ [Participant I, planner, Non-Government].
<table>
<thead>
<tr>
<th>Attitude towards WestConnex</th>
<th>Attitude towards private sector financing for public infrastructure</th>
<th>Non-government organisation (NG)</th>
<th>Intermediary organisation (IO)</th>
<th>Government Agency or Department (G)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supportive of WestConnex</td>
<td>Supportive of private sector interests in government funded infrastructure</td>
<td></td>
<td></td>
<td>Finance Directors within government agencies and their staff (Participants D, E, F and G)</td>
</tr>
<tr>
<td>Neutral or ambivalent about WestConnex</td>
<td>Guarded or nuanced support of private sector interests</td>
<td></td>
<td>Researcher employed by government owned research body (Participant B) Employee of statutory body (Participant L) Employee of private consultancy firm under contract to government (Participant M)</td>
<td></td>
</tr>
<tr>
<td>Critical of WestConnex</td>
<td>Limited support for Government funding to go towards private interests.</td>
<td>Member of public advocacy association (Participant H) University researcher or affiliated (Participants I, J and K) Activist (Participant N) Member of Parliament (Participant O) Employee of private development firm (Participant A)</td>
<td>Employee of government owned research body (Participant C)</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Stances towards WestConnex compared with social position

**Political Capital and Financialisation**

In this paper, political capital is theorized as the power of the State. Though the concept of the State is controversial, it can be understood as ‘the product of the gradual accumulation of different kinds of capital - economic, physical force, symbolic, cultural or informational’ that have accumulated in
multiple public institutions and act as a ‘nodal sector in the general field of power’\textsuperscript{17}. Though the links between political power and economic capital are considered to be very dense, and the State’s legitimacy is theorised to depend on economic growth and accumulation\textsuperscript{18}, in this paper they will be analysed as distinct forms of power. Bourdieu theorizes the state as ‘the central bank of symbolic capital’\textsuperscript{19}, in which the State acts as a ‘principle of orthodoxy’ providing a critical mass of ‘logical conformity’, where people share assumptions and ways of thinking that maintain a core of relative social order. The State constitutes political capital, and this study shows how the priorities of the governing Executive structure the field and shape the strategies of individual government officials according to their habitus.

The increased importance of the private sector, and especially private sector finance\textsuperscript{20}, can be explained through the social capital of members of the government Executive, and in particular their professional and personal connections. For example, at the time this study was conducted the Premier of NSW was an investment banker before entering politics, with experience in ‘securitisation’, ‘debt capital markets’ and ‘project finance’\textsuperscript{21}. After resigning from politics in January 2017, Baird became ‘chief customer officer, corporate and institutional’ at one of Australia’s biggest banks\textsuperscript{22}. This is an example of the career trajectories of many senior politicians and has direct implications for government policy as described by Beetham\textsuperscript{23}:

‘With private firms hovering like vultures over the easy prey afforded by the guaranteed income of taxpayer-funded contracts, there is a ready market for the employment of newly retired ministers, civil servants and military commanders who can bring their inside knowledge and contacts to bear on the commissioning process’.

This phenomenon, known as the ‘revolving door’\textsuperscript{24}, influences the public sector, by determining the habitus of public servants. For example, Participants D and E enthusiastically noted the sense of increased importance of their department since 2011 when the Liberal-National Coalition formed government and worked to strengthen the links between government and the finance sector. Directors from a funding agency claim that it is their department’s job to look after the private sector, because the rest of government is looking after the interests of the government. The influence of their department is increased by the government’s engagement with ‘the market’ to make state resources ‘go further’. They claim their activities make more resources available to the government but admit that costs are thereby pushed into the future. All agencies are said to be increasing their ‘sophistication’ in dealing with ‘the market’ and bringing ‘discipline’ to government projects. Participant E notes that their department is now ‘facilitating projects rather than being the compliance unit’ [Participant E, public servant, Government]. This suggests that some projects may be chosen over others primarily based on private sector finance criteria. The increased importance of finance is thus deployed and built upon by government officials who thereby also further their careers. This illustrates how the strategies of individuals, within the opportunities and constraints of the government field, facilitate the ‘permeation and penetration of finance into daily life’\textsuperscript{25}.

However, from the point of view of the research community and those working with cultural capital, these kinds of relationships are considered illegitimate. For instance, Participant O notes that:

‘it’s a very tangled web of liberal party insiders and rent seeking construction and finance companies who are influential. The genesis of WestConnex was actually in a report by Infrastructure NSW. … instead of referring to the public servants, who have experience and a depth of understanding, he [The Premier of NSW] established a separate body, called Infrastructure NSW. He put his mate, Nick Greiner, as the chairman of that body, and as you know he was the chairman of one of Australia’s very important infrastructure companies, he put him in charge of Infrastructure NSW, and Infrastructure NSW came up with, surprise, surprise, a toll road option. It’s interesting that Nick
Greiner is now an advisor to Transurban, Australia’s largest private toll road company’ [Participant O, MP, Non-Government].

Participant O belongs to a political party with a platform based on resistance to the economic forces which other fields, such as the infrastructure field, are subject to. According to the Bourdieusian framework, this party participates in building cultural rather than economic capital which allows its MPs to publicly critique the connection between firms and governments. A senior planning researcher makes a related assessment of WestConnex:

‘Somebody makes big money out of roads, Macquarie Bank, Transurban…it's a huge vested interest machine, which demands to be fed, so when they’ve done one road, you've got to find another one, and another one, you've got to find a bigger one, you know, all the time soaking up billions of public money’ [Participant K, researcher, Non-Government].

In its current form, political capital thus prioritises the goals of the private sector, while also maintaining the social capital of individuals who are part of the government Executive. Although this is a result of the strategies of individual actors, government policy confers legitimacy on the practices that favour private sector growth, such as awarding large infrastructure projects to private firms. Connections between political and cultural capital are considered much weaker. A participant at arms-length of government notes that:

‘Those people who are in political decision-making positions don’t necessarily have any background in transport planning or any understanding of it, but they have strong opinions about how things should be done...Ultimately that individual does have a lot of power’ [Participant C, research employee, Intermediary Organisation].

Australia’s productivity commission, at arms-length of government, supports this view, claiming that ‘institutional and governance arrangements for the provision of much of Australia’s public infrastructure are deficient and are a major contributor to unsatisfactory outcomes’26. The following section documents the cultural view of WestConnex as a dystopia.

Centralisation as Dystopia

Participants from the research and activist communities claim that urban centralisation, described as intensified use of a single city centre (uni-centric) rather than distribution across many centres (multi-centric), results in undesirable consequences. They have concerns about increased economic inequality, impacts on work-life balance, and social isolation. Housing affordability is also considered a factor in the centralisation problem. For example, a transport economist notes that there are ‘constraints’, or ‘economic limits’, on centralisation:

‘I think [transport issues are] possibly a constraint ... it's not only the cost of housing. If people are forced to move further and further out away from the CBD their transport costs tend to go up so obviously the percentage of their household income which goes on transport is going to be an important aspect to that’ [Participant B, research employee, Intermediary Organization].

However, the lived reality of these limits is embodied. Commuting times of more than an hour each way between work and home, and the daily cost of multiple road tolls add to the difficulties experienced at this economic limit of centralisation. A community services consultant expresses some of the problems in terms of stresses on families and communities:

‘Look at people in regional communities, where there’s work available. They are five minutes from home, they get to spend time with their children and families, and they have very different life outcomes compared to people who have to commute an hour to work and an hour home’ [Participant M, Consultant, Intermediary Organization].
Thus, even if it were possible to achieve the utopian goal of ‘economic growth’ through centralisation, experts warn that the average or low-income resident will not benefit. Instead, according to researchers, centralisation causes ‘car-dependency’, ‘social isolation’ and ‘stress on families’. Increased urban sprawl allows similar travel times to work. However, greater distances and additional tolls result in greater travel costs for road users. Non-government experts argue that centralisation should be avoided because it increases wealth inequality and places additional costs on those who can least afford it.

**CONCLUSION**

This study shows how connections between individuals holding government decision-making positions, and those in the private finance and construction sectors, influence habitus within the public sector. This habitus prioritises the concerns of finance and construction firms in government decision-making. The increased importance of private sector finance in urban development decision-making therefore has a distinct impact on urban form and the distribution of liveability. The planning visions found in the government field are associated with a unique social position and are distinct from those in research and activist fields. If non-government expert advice on urban planning is classified as a type of cultural capital, the status of this capital can be measured in its inclusion or exclusion in government decision making processes on urban development. Independent planning experts are concerned about the trajectory of urban development decisions, but appear to be increasingly marginalised in the political process. Urban form is becoming more uni-centric, with radial transport routes leading into and out of the city. Even though planning experts argue for decentralisation and redistribution of liveability, uni-centric infrastructure continues to be the focus of government decision-making.
NOTES

14. The three city plan proposed by the Greater Sydney Commission, "Towards Our Greater Sydney 2056," (Sydney: Greater Sydney Commission, 2016). is an example of an attempt to create multiple centres.
25. Moreno.

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OVERCOMING URBAN ALIENATION: REREADING THE SOCIAL HISTORY OF ‘BUILDING HOME’ IN THE TUZLUÇAYIR NEIGHBOURHOOD IN ANKARA IN THE 1970S

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INTRODUCTION
The effects of post-industrial capitalism have created commonalities across various geographies around the world in terms of the crisis of the human being. These include the negative effects of dominating architecture or the spread of new kinds of technology around communities and cities. The praxis of architecture has sought to transform these effects by objectifying spaces and producing knowledge of the objectified spaces. The human being of the twenty-first century faces issues—such as migration, urban diversities and refugee crises—which relate to architecture through concepts like deterritorialisation or belonging. In addition, disciplines such as geography and critical theory have sought to interpret the historical grasp of the body as a social and spatial agent, specifically since the 1960s. Parallel to their engagement with space and the body, critiques of architecture have shifted since the Neo-Avant-Garde theory of the 1960s; in a manner of speaking, there has been a shift in architectural ideology from the humanism of the Enlightenment to the ‘new humanisms’ of the Neo-Avant-Garde. It could be claimed that post-humanist approaches were a distinctive part of the humanisms of the twentieth century, and that its discursive and representative face changed in the 1960s. The emerging meta-theories on the body and spatial relations are a critical part of this shift. The emergence of meta theories on the body as a political and spatial agent overlaps the distinctive histories of urbanisations belonging to different geographies. This paper initially intents to interpret one of these overlapping to find new problematics on the body, space and urbanisation. The alienating roots of urban spaces insinuate the semiotic, bodily and socio-spatial processes that constitute subjectivities. On the other hand, overcoming urban alienation requires a position of counter-resistance. Within this frame, the social history of informal housing built by marginal communities in major urban areas could be explored. In this paper, then, urban alienation and overcoming urban alienation will be elaborated through a look back at the distinctive history of a marginal and counter-resistant neighbourhood in Ankara, Turkey during the 1970s. The narrative of Tuzluçayır Neighbourhood points to two important features that provide insight into the issue of overcoming urban alienation: Firstly, this was achieved by breaking the usual socioeconomic production processes and thereby resisting hegemony; the second factor relates to the collective and bodily experience of building home that characterises Tuzluçayır. To frame this special field, two major conceptualisations
will form the backbone of the discussion: Marx’s conceptualisation of the theory of alienation, and Bloch’s three motives of Utopia. The aim of this paper is to interpret the social history of informal housing through a spatiotemporal lens, and consequently to problematise urban alienation and how to overcome it in light of its multiple dimensions, including production, collectivity, the body and politics.

**Evolving Meta Theories and Marginal Urban Histories of the Late 1960s**

Looking back on the 1960s’ critiques of Modernism, one striking critique was about the ‘alienating’ roots of modern architecture.¹ There has been no comprehensive explanation for this shift in architectural terms and concepts. For instance, in the Doorn Manifesto, ‘the house’ was taken as a fundamental ideational architectural unit, and was reconceptualised along with ‘housing’, ‘community’ and ‘habitat (as the convenient environment of communities)’. Thus, the new paradigm of ‘habitats’ depends on the debate over ‘housing’ versus ‘house’.² Although theory in architecture and its terminology have shifted in the post-industrial world, the attempt to understand the alienating affect of architecture with ‘housing, community and habitat’ has remained valid and implicit in urban studies up to the present.

The revival of the term ‘alienation’ in architecture in the late 1960s recalls the possible critical links between architectural theory and history and the 1960s’ self as a historical crack. These links extended the discussion from the conditions of modern architecture to the conditions of urban space transformation. Over and above this, the 1960s is described as the period in which the world began to be characterised as a ‘global village’,³ sharing economic, technological, political and cultural consequences in unprecedented ways, and as well as experiencing the transformations of urban space to absorb capital accumulation. Thus, in the transformation of urban spaces, within the interlaced modes of urbanisation/suburbanisation, architecture has become concerned not just with ‘a house’ but the interaction between houses.⁴ Harvey (2017) claims that the rebellion that marked the 68 Student Movements was a response to this rising urban crisis:

Worldwide, the 1960s is often looked at, historically, as a period of urban crisis. (…) It was being modernised around the automobile; it was being modernised around the suburbs. Now, the Old City, or what had been the political, economic and cultural centre of city throughout the 1940s and 50s, was now being left behind.⁵

Against the urban crisis, The Neo-Avant-Garde theories of the 1960s were a visible repositioning with architecture, one questioning spatial alienation. ‘The human’ to the Neo-Avant-Gardes is both the subject and object of ideology; therefore, they see new architecture as a mode of emancipating the body from its alienating contribution to space, and of the reproduction of space. Their critiques underline that the reproduction of space through subjectivities and the reproduction of subjectivities through space have a reciprocal effect which determine the borders, the relations, the psychology of urban daily life.

The socio-spatial history of Ankara has also marginal narratives of repositioning against the urban crisis of the 1960s. What makes different human geographies unique are their socio-spatial histories. Although these histories were the lives of some communities and were lived for some years, they were strongly affective, being influential and productive within and beyond its own geography. Generally speaking, postwar Turkey, as also the case around the world, saw the rise of urbanisation through the end of the 1940s, followed by massive rural-to-urban migration and a radical shift from peasant labour to worker labour in the 1950 and 1960.⁶ As in various European countries, economic
liberalisation between the late 1940s and 1950s flowed through American funds. Under these circumstances, the shantytowns that emerged in Turkey's cities can be seen as an informal response to large-scale urban transformations. As one of these emergent shantytowns, Tuzlucaïyr became a marginal part of the history of Turkey in the 1970s for various political, social and economic reasons. But what will be emphasised in this paper is its capacity to overcome urban alienation in the face of an increasing urban crisis. This can be attributed to two features of the neighbourhood: firstly, its breaking with the usual socioeconomic production processes, and secondly, the collective and bodily experience of ‘building home’ that characterises the Tuzlucaïyr narrative.

To elaborate the contradictory becoming of this patio temporal sociality, the evolution of the meta-theory ‘alienation’ will be re-called. From Marxist roots to a redefinition of alienation in the light of becoming in performance, this research will also emphasise Bloch’s three motives of Utopia.

THE NARRATIVE OF TÜZLUÇAYIR

The post-WWII condition of the world has been a centerpiece of urbanisation studies. It is claimed that urbanisation was largely due to economic developments which triggered massive migration. However, in Turkey, urban transformation between the 1950s and 1980s cannot be understood simply as an adaptation to the economic shift from peasant labour to worker labour; it also includes political and socio-cultural dimensions. These dimensions initially relate to the struggle of counter-resistant communities, in this case mostly Alevi and Kurdish inhabitants who tried to sustain their cultural identities against the hegemony in Tuzlucaïyr. It was this resistance that had forced them to resettle in the first place, to flee political pressure. In neighbourhoods such as Ege and Tuzlucaïyr in the Mamak district of Ankara, marginal communal life and its spatiality so emerged. To put it a different way, the community of Tuzlucaïyr was primarily made up of small communities pushed not only by economic but also social and political pressure. This contributed to the politicisation of the 68 Generation in Turkey, and the Tuzlucaïyr of the 1970s became associated with the cultivation of left-wing activists. Thus, the community shifted a struggle from the periphery of the country to the periphery of the capital city itself.

The urban space of Tuzlucaïyr carries a socio-spatial history which is both a history of informal housing and the history of a counter-resistant marginal community. Wright (1981/1993) points out histories of marginal communities and housing through their separation from 'home' as a commodity object:

In many cases consumerism became institutionalised in home decoration as advertising promised new ways to promote family togetherness, social prestige, and self expression. All too often, in suburbs and in cooperative apartments, community has meant the exclusion of those who are not like ourselves. These reactions, too, have a history.

The social and spatial history of Tuzlucaïyr exemplifies how a marginal community can produce neighbourhood spatiality with the capacity to overcome the intensifying crisis of urban alienation, firstly by breaking the usual socioeconomic production processes, and secondly through the collective and bodily experience of building home. These ‘revolutionaries’ organised the collective act of building home, as a result, their houses had use value rather than exchange value. This informal housing was produced through bodily experiences of collectivity. To elaborate these two features and to redefine the notion of overcoming spatial alienation, the emergence of the meta-theories of alienation and their relation with the body as a spatial and political agent can be interpreted.

There are many disciplinary paths for rethinking the concept of ‘alienation’, including the psychoanalytic, the anthropological and the social. It is a contemporary and fashionable term, but
the point of origin for its evolution is Hegel and Marx. The psychological approach to the term has been dominated by Existentialists such as Heidegger and Kierkegaard. It denotes a negative human condition in which the human or its condition is not specifically situated in history. In contrast, in the social approach of Marx, alienation is a historical process pertaining to the human. Therefore, it could be claimed that Marxist alienation is contradictory, historical and social (Sayers 2011: p. 5).

The four interrelated modes of alienation for Marx—alienation of labour, alienation of production, alienation of society and alienation of the self—can be together considered as a politico-economic interpretation of human estrangement in the modern world. But what is more important than being part and parcel to production systems is that this framework contains the epistemological and ontological dimensions of human life. First of all, it points to ‘a process’. Alienation and overcoming alienation are positioned as processes. In this regard, to understand spatial alienation, it is crucial to ask questions about ‘production, labour, society and the self’ not only with regard to the political economic base of the modern world, but also to try to grasp human life and its spatiality from a paradigm which constructs the human as a socio-historical becoming. Production in this Marxist paradigm is not just material production, and labour is not only material labour; there is also life, and within it the human is the agent that produces itself and produces history via material and immaterial labour. Marx and Engels emphasise the primacy of process over product in their writings; therefore, the estrangement of the human does not refer to a negative condition within an end, as assumed in existentialism, but to a process or processes pertaining to human life.

Analysing action and the processes pertaining to human life serve as an attempt to define alienation within space. Ingold (2011) describes history as processes of production and production as processes of being alive (p. 10). The human has the capacity to produce itself within processes, within history. Such a viewpoint suggests that process—that is to say, ‘how to produce’—contains the embodied and immanent features of action and space. In a general framework, it could be claimed that the usual process of building houses in Tuzluçaşyr was broken by excluding the exchange value; instead, community members built houses with their own hands. Thus they had use value rather than abstract value. The houses were not fetishistic objects mystifying labour in its process of being built. The labour, the worker and the revolutionaries were the same bodies composing the community as a unity to objectify their homes.

Community and communal action could extend the discussion of the spatial alienation of the 1960s. Not only was the abstract value in the process of housing excluded by the residents of Tuzluçaşyr, but also the communal act of building also broke the dominant subject formation processes. To define alienation in the epistemology of subject formation, the questions arise: How does alienation come about? Is alienation an internal process of change? If K. Michael Hays stated that alienation is a process pertaining to the activity of the human, then what else would free the human from the process of alienation: to emancipate it, or to create a resistant space?

Geyer and Heinz (1992) indicate that Marx and Engels had defined de-alienation as a part of the emancipation project of the human, and interpreted it as a progressive process of freeing the human from the domination and exploitation of ideological practices. But in this utopian process of change, during de-alienation, new forms of alienation emerge continually (p. 42). In this regard, to reinterpret the term, it could be claimed that de-alienation is not necessarily the reverse of alienation; on the contrary, it includes newly emerging moods of alienation:

de-alienation differs by focusing on the reconstruction of peoples’ relationships with themselves, others, with the fruits of their labor, the labor process, and nature. This makes de-alienation explicitly anti-capitalist and foregrounds the constructive processes (the intrinsic value accorded to creativity) amongst those engaged in what we would say is de-alienation. (Geyer & Heinz 1992: p. 42)
To elaborate, ‘de-alienation’ according to Marx and Engels can be thought of as overcoming ‘alienation’, concentrating on the epistemology of subject formation process. Unlike alienation, the conceptualisation of performativity directly concentrates on the epistemology of the body. Nelson (1999) indicates that performativity is an unstable and partial process which is repetitive and regulating. In this repetition of the norms of dominant discourse, there are spontaneous moments in which discourses can be replaced or reread (p. 351). De-alienation may therefore refer to both a process and a repetitive moment of the body. Being designed or undesigned it contains emergency and spontaneity; it is both a process and moments, and it represents the hope of opening up new discursive spaces. ‘Discursive practise’ is characterised by this potential for resistance and change; this paper claims that this potential can be associated with the body through performativity.

Performativity contains the bodily processes of alienation and overcoming alienation. Neither body nor space has a zero point; in other words, there is no pure body or pure space without discursive formations, but at the same time, the subjugated body and discursive space are not totally closed by discourse. In this regard, performativity provides a grasp of the body which is not reduced to an alienated subject, but is reinterpreted as a becoming in performance of subjectivities, identities, discursive norms. The implications of ‘performativity’ in theorising space with alienation and de-alienation enhances the reinterpretation of spaces for resistance and change (Figure 1). Performativity is being in the process of seeking; on one side it includes alienation as obedience, and on the other side it includes de-alienation as resistance and as an act of constituting and reconstituting the self within society.

Various concepts have emerged to help understand the body as a spatial and political becoming, but among these performativity is the most helpful for understanding the body, space and action in a unity, so redefine overcoming alienation. The body that performs identities and social norms is the body that is situated in the geography and materiality of history. While the community of Tuzluçayır struggled for a better future, building home became the performative face of this process. Performativity refers to a complex, nonlinear process of which alienation and overcoming alienation are a part. However, although the human is characterised by complex operations, Bloch claims that there are basic drives which emerge at different times and under different conditions in history. These
basic drives are the body, time and collectivity. In the narrative of the informal urbanisation of Tuzlucaýır, the body and collectivity can be glimpsed, and these features of becoming in performance of housing lead to ‘overcome spatial alienation’.

**CONCLUSION**

As one of the most fashionable concepts of the late twentieth century, the term ‘alienation’ has been overused, but it was a striking critique pertaining to the body that emerged from 1960s architecture. The 1960s marks a shift in world systems, and one of its manifestations is the urban crisis. Hence, as a global turning point characterised by resistance and crisis, the 1960s makes an appropriate departure point for remapping theories on the body as a political and spatial agent. From the Hegelian roots of the term alienation, it could be claimed that the Marxist conceptualisation of alienation highlights processes of production. But how it manipulates or orders the body in processes could be developed through the notion of performativity. The alienated and de-alienated body could be defined as a becoming who performs social spaces. Performativity posits these processes as a complex of drives. And what leads to overcoming alienation is the basic operations in this complex: the body, time and collectivity. The marginal history of Tuzlucaýır overlaps these conceptualisations. The social history of informal housing in Tuzlucaýır in the 1970s shows that overcoming urban alienation was possible through a production process in which bodily and collective experiences broke socioeconomic processes.
NOTES

3 Hobsbawm refers to the 1960s as a turning point at which the world became a ‘global village’ which has economic, technological, political and cultural consequences. Eric Hobsbawm, Kısa 20. Yüzyıl, 1914-1991 Aşırılıklar Çağı (İstanbul: Everest Yayıncılık, 2006), 9.
4 This was stated by Team Ten, URL: http://www.team10online.org/team10/text/doorn-manifesto.htm, Last accessed: 10.09.2016.
6 Burcu Şentürk, Bu Çamuru Beraber Çığnedik, Bir Gecekondu Mahallesi Hikâyesi (İstanbul: İletişim, 2015), 22.
7 Yelda Yüreikli, Küçük Moskova: Tuzluçayır (İstanbul: İletişim, 2016), 54.
8 Ibid., p. 52.
10 Yelda Yüreikli, (2016), 46.
17 This remapping was carried out under the PhD elective course Arch 512 conducted by Prof. Dr. Güven Arif Sargin in the academic term Spring 2015-2016 at METU.

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THE SOCIAL PERCEPTION (AND CONSTRUCTION) OF SPACE: ASSESSING THE SOCIO-ENVIRONMENTAL IMPACTS OF URBAN DEVELOPMENT PROJECTS

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INTRODUCTION
Since the 1970s, residential tourism has been the leading model of tourist development in Spain. This has been widely challenged in the academic world, since its basic features have more to do with city planning and the property market than with tourism per se (Aledo, A. 2008; Girard & Gartner 1993; Tur & Martinez 2005). In recent years the model has evolved gradually to embrace certain features of ‘sustainable development,’ and a ‘new residential tourism’ has arisen which is more respectful towards environmental considerations, less densely constructed and more hotel-based, but at the same time more elitist and more extensive, i.e., requiring more land for building. The typical tourist-urban development project based on this new model is destined for coastal areas: it includes low-density housing (up to four dwellings per hectare), four- or five-star hotels and at least one gold course. This represents a cluster of activities (hotels, building and sport) articulated around the prestige or status represented by golf, since the golf course adds value to both the land and the hotels. Marinas are also built in these areas, with the same social-symbolic signifier of prestige, and similarly linked to the concept of ‘tourist and environmental quality,’ which since 2000 has habitually featured in municipal city planning and development programmes (Amelung & Viner 2006; H. Briassoulis 2007; Helen Briassoulis 2011).

This new model, increasingly present on the Spanish coast since the 1990s and the turn of the century, has also been widely disputed. Criticism has mainly focused on its distortion of the concept of sustainability, i.e. that in the environmental sphere, its impacts are still unacceptable; in the economic, its profitability and structuring capacity are doubtful (compared with other alternatives for strategic management of affected areas); in the political, it suffers from a deep democratic deficit, often including legally suspect links between developers and politicians; and in the social, it worsens inequality and creates a dynamic which separates the population from its traditional territory and culture. Despite this, the regional and municipal governments in charge of urban planning have generally supported these initiatives, arguing that they yield benefits in the areas of tourist trade profitability, de-seasoning, sustainability and landscaping (Dominguez 2008).

Almost simultaneously with the evolving complexity of the concept of the environment, a concern with the impacts of human activity on it has arisen. Thus since the 1970s academic production in the area of socio-environmental impact assessment has expanded, though this has been reflected only
very unevenly across the world in terms of regulations committing projects to respect SEIA recommendations (Albergaria & Fidelis 2006; Becker & Vanclay 2006). Throughout these developments an unresolved structural concern has persisted, i.e. that the socio-cultural and political aspects of socio-environmental impact assessments (SEIA) are still clearly neglected. Further, these socio-cultural and political aspects often condition the understanding and consideration of the other risks and impacts involved. Thus they are the most important for a true risk and impact assessment.

In the area of social risks and impacts, the way that social actors perceive their environment is key. The environment is socially constructed, and the position of each actor in the social network has a bearing on how it is constructed. Thus in this paper we offer some research findings demonstrating the importance, for both the environment and the project, of a proper social analysis in the assessment of the social impacts of tourist-urban development projects. Understanding how the actors interpret/construct their environment is the key to including an awareness of their positions in the project design, thereby making it more democratic, ethical and economically sustainable.

THEORETICAL PREAMBLE

An urban development project can be defined as an initiative undertaken by one or more social actors aimed at altering the socio-environmental situation in a specific local context. The project developers design and execute it according to criteria consistent with their perceptions, interpretations and positions in relation to the context; and their criteria do not necessarily coincide with those of the other local social actors. Thus the context of the project’s implementation is not restricted to the biophysical environment but also includes the social actors, principally those linked in some way to the project (interested and affected parties, etc.) (Anzoise 2017; Principles & Assessment 2004).

The main argument of this paper is the following: that determining stakeholders’ interpretations of their context (including the project itself) is fundamental to improving the sustainability of development projects. Thus, in the light of the above definition of an urban development project, and in line with the central argument of this paper, we can establish some theoretical coordinates which will help to structure our analysis, namely social constructionism, stakeholder theory and actor-network theory.

Briefly, social constructionism (Berger & Luckmann 1991) is a classical sociological theory which, when applied to the present object of study, argues for the relativism of socio-environmental reality; i.e. each social actor perceives and interprets their environment (both physical and socio-cultural) in line with their own position in this environment. This presupposes that the relationship between the actor and the environment (which includes other social actors and their relationships) is particular to each actor. It also assumes that, given the dynamic nature of social relations, the actors’ interpretations can change. Thus a development project promoted by one or more actors sets in motion a chain-reaction of changes in the way all the other actors see and interpret the social and environmental features of the area affected by the project.

The network-like structure of contemporary society has increased the relevance of constructivist theory. According to actor-network theory (Latour, B. 2007), both social (actors and their relations) and physical elements of a network constantly interact and redefine their positions. Particular development projects will be interpreted in different ways according to the actors directly and indirectly involved in them. The development of a specific plot of land (a physical element), for example, forming part of a wider project, can be interpreted as ‘an environmental aggression,’ ‘a loss of traditional economic resources,’ ‘a medium-term investment,’ or as ‘a necessary evil in favour of a better future,’ depending on the actor. As the project progresses, and according to the way relationships between the actors develop, new interpretations appear: the owners of plots that are not
affected, seeing substantial short-term profits for other actors, may assess the project negatively, but for different reasons than those put forward by non-land-owning actors, etc. Also, the landowners who have made these fast gains may also, in time, come to judge their decision to sell negatively, if their new investments do not develop as foreseen, or if their new situation leads them to hanker for the previous one.

The concept of the stakeholder, within the constructivist approach to socio-environmental reality, affords a focus on the self-interest of each actor in relation to the project. It also offers a view of the project as a new element of the social network, in the light of which the new dynamic it creates is evaluated. Stakeholder theory (Rowley 1997) contributes an interesting political nuance to our theoretical framework, foregrounding power relations. Each stakeholder (SH from here on) initially positions him/herself towards the project according to a starting point in her/his interpretations of it and of the socio-environmental context, including the other SH, their relations between each other, and the biophysical environment. Every decision taken by an SH, especially by the project developers, modifies the network anew, and thereby the other SHs’ positions and their interpretations of its other elements.

Social constructionism, actor-network theory and stakeholder theory are sociological approaches widely used in a whole range of fields of knowledge production. Also, on a more specific level and closer to the subject of this study, social or sociological interpretations are on the increase in analyses of landscape and urban planning and land use change (Sairinen 2004). These studies in particular show the importance of taking different social perceptions into account and their usefulness in land and landscape planning and management (Anzoise 2017; Auken 2009). All this research shares the theoretical assumption that physical reality is a reflection of social action, and that the latter is the product of tensions between the differing perspectives of stakeholders (Cheung & Leung 2012). Yet more specifically, a productive political debate around the topic of ‘landscape governance’ has arisen among academic specialists (Beunen & Opdam 2011; Bodin & Crona 2009). Social participation in decision-making on urban expansion and changes in land use has become a highly transversal subject (Carpini, Cook, & Jacobs 2004).

While urban planning is gradually absorbing these ideas, there is still much ground to cover. As is usually the case, academic ideas and analyses are in advance of everyday social reality. Even when regulations recognize the land or landscape involved in a planning initiative as democratic entities, empirical findings show clear inconsistencies between theory and practice, even between theory and the laws applied in each context. Planning, supposedly, seeks general well-being, the common good, sustainable development, etc., and therefore on paper it recognizes both the importance of social actors in the management of space and the city and the need for actors to participate in project development; however, in practice, social actors are more often treated as outsiders, due to the high level of abstraction and the vagueness with which projects refer to them (Butler 2014).

CASE STUDY

Here we present some findings of a study which set out to assess the socio-environmental impacts of a golf-based tourism development project (golf-based project, GBP from here on). As we remarked above, the decade from 1997 to 2007 saw unprecedented growth in the Spanish property sector, with residential and hotel complexes including one or more golf courses as the star products in coastal areas. Many towns and cities opted for this model of territorial development, but without any proper environmental and socio-economic planning. Hence during the crisis years these GBPs were seriously challenged for a wide variety of reasons: their negative impacts on the environment; the economic dependence created by exclusive reliance on the property sector; corruption; the deterioration of local

The case that we take as a model here, the El Rompido Golf Project, is located in the protected natural area of Cartaya in the Province of Huelva in south-west Spain. It features two golf courses with a total of 36 holes over 50 hectares, in addition to a 4-star hotel and aparthotel development, a luxury housing estate and private sports and leisure facilities.

Cartaya, with 19,168 inhabitants, has become one of the most economically and socio-politically important towns in Huelva, mainly due to agro-industrial growth, increasing its population by 29.8% in the last decade with the arrival of workers from the Maghreb, sub-Saharan Africa and Eastern Europe (IECA 2014). Also within the municipal borders is El Rompido, a small coastal fishing village which had earlier seen sun-and-sand tourism development. In this area, tourism industry growth began in the second half of the 1990s, based on a high-status model with greater extension and lower density than previous projects, and GBPs were henceforth enshrined in Cartaya town council’s General Urban Ordinance Plan as high quality, sustainable projects.

The two main golf-based projects in this area, El Rompido Golf and Nuevo Portil Golf, are officially designated as ‘high-quality’ tourism. They are located in idyllic natural surroundings and combine golf with low-density hotel and housing developments. Since the late 1990s they have represented a prototype for the expansion of golfing on the south coast of Spain, a model advocated by developers and political institutions alike as an innovative development strategy capable of diversifying and de-seasoning the tourism industry (Villar-Lama, A. 2012).

**METHODS**

The socio-environmental impact assessment of this GBP was designed to mix both qualitative and quantitative techniques. The methodological phases may be summarized as follows: (1) investigating context; (2) investigating the project; (3) identifying and evaluating SH; (4) identifying and evaluating impacts. In the table below the research techniques used are summarized and the partial outputs of each phase are shown.

<table>
<thead>
<tr>
<th>Phase 1: Context</th>
<th>Phase 2: Project</th>
<th>Phase 3: Actors</th>
<th>Phase 4: Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research sources and techniques</td>
<td>Secondary sources Specialised literature</td>
<td>Consultation with experts / academics (15 cases) Semi-structured interviews (26 cases)</td>
<td>Consultation with experts / academics Semi-structured interviews</td>
</tr>
<tr>
<td>Sub-products</td>
<td>List of context indicators</td>
<td>Overall list of impacts</td>
<td>List of SH (18) Views of each SH</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>List of impacts according to SH Overall prioritised list of impacts</td>
</tr>
</tbody>
</table>

*Table 1. Complete summary of the project methodology.*

In this study we present some findings from phases 3 and 4, in particular some of the data collected from the semi-structured interviews and the survey of the local population.
Thus, after consulting 15 experts (local academics from a range of different disciplines specialized in urban development, sustainability and tourism), 18 SH linked to the project were identified. Thereafter a total of 28 people representing these SH were localized, with each SH group represented by at least two people. These representatives then participated in a semi-structured interview in two phases: ‘actor assessment’ followed by ‘impact assessment.’ In this way the semi-structured interviews yielded data suitable for both qualitative and statistical analysis.

In addition a CATI+CAWI survey was administered among the population of El Rompido village, on the basis of a sample of 202 cases (N=1433) with a 95% confidence level and a 6% maximum margin of error. Informants were asked for their sociodemographic data, and then requested to evaluate the impacts of the GBPs on the area. The list of impacts to be evaluated was obtained from the 20 impacts most frequently cited in the semi-structured SH interviews. The evaluation criteria centred on whether the impact was positive or negative, its intensity and time (speed and reversibility of the changes).

RESULTS

The basic descriptive data resulting from the survey of the population showed that 46.6% did not feel benefited by the tourist-urban expansion (Graph 1). The average score only reached 4.01 points out of 10 (see Table 2). The argument of the ‘common good,’ of the benefits to the community of a high-quality, sustainable tourist development, was key to the promotion of the model, as we remarked above. It was staunchly defended by local government and developers, but the figures show that it was not endorsed by the population.

The dominant actors’ developmentalist discourse had been absorbed by the population, but only on a symbolic and general level. In Figure 2 we can see this positive vision of the ‘common good,’ but when contrasted with first-person references (Figure 1), we see the contradiction between the two results. In other words, the population’s general feeling about GBPs can be described as positive, consistent with the most influential actors’ discourse. We find precisely the opposite, however, in the local people’s perceptions of their own benefit.

To what extent have the GBPs benefited you? (%n)

![Figure 1](image-url)
When we examine the statistics (see Table 2), the low perception of personal benefit (an average score of 4.01 out of 10) coincides with the strong dispersion of scores (standard deviation 3.96). This would suggest that there is one part of the population declaring itself to have benefited highly and another that has not benefited at all. Further, the changes caused by the GBPs are seen by the population in general as large (6.83) and fast (6.45), but the clearest agreement is seen in the perception of their irreversibility: the average score is almost 9 out of 10 (8.85).
Original survey questions:
(1) To what extent have YOU PERSONALLY been benefited (by the urban-tourist expansion)? (1-10)
(2) In general, are the changes created by the tourist projects (golf courses, hotels and housing developments) in El Rompido (NOT WITH REGARD TO YOURSELF, BUT FOR THE TOWN AS A WHOLE) (very negative 0 – very positive 10)?
(3) In general, are the changes created by the tourist projects (golf courses, hotels and housing developments) in El Rompido (NOT WITH REGARD TO YOURSELF, BUT FOR THE TOWN AS A WHOLE) (very strong 0 – very weak 10)?
(4) In general, are the changes created by the tourist projects (golf courses, hotels and housing developments) in El Rompido (NOT WITH REGARD TO YOURSELF, BUT FOR THE TOWN AS A WHOLE) (very slow 0 – very fast 10)?
(5) In general, would you say that El Rompido will completely recover its original state, as it was before the projects and the arrival of more tourists (0), or has it changed permanently (10)?

This hypothesis of polarized benefits was compared with the degree of influence that SH could exercise on decisions affecting the GBPs. Thus we selected the extreme scores from the non-influential/ influential scale (0 = with no influence, 10 = highly influential), using the SH sorted into the 1st quartile (scores below 25% of the distribution) and the 4th quartile (above 75%) respectively.
In the light of the data, we can see in Table 3 that among the NI SH (non-influential SH) there was a wide spread of scores in the harm – benefit scale (distribution range = 4.4). Among I SH (influential SH), on the other hand, there was much less variability (range = 0.96) and the scores were noticeably higher. In other words, the most influential SH were at the same time those who perceived themselves to have been most benefited by the tourist-urban expansion caused by the GBP’s. Hunters, farmers and local residents’ associations were the SH who were furthest from decision-making on the projects, and at the same time those who benefit least from them.

The qualitative phase of the analysis provided the necessary clarification of these figures. The impacts defined by the 18 SH were characterized by their high number (around 240), the wide diversity of areas they affected (we grouped them into a total of 40 areas), and for their effects on every single dimension of the environment (understanding the environment in its broad, contemporary sense: in this case the biophysical, territorial, demographic, economic, social and cultural dimensions). The actors with the most influence on decision-making in urban growth exhibited a classical developmentalist discourse centred on positive impacts: tourist quality, infrastructures, environmental improvement, economic growth, employment, tourist publicity for the town, de-seasoning, etc., were some of the most frequently mentioned arguments. The negative arguments (deforestation, local price rises, that the model was foreign to the local context, etc.) were defined as ‘external’ to the model.

The least influential actors, coinciding with those least benefited by the model, had a much denser and more complex discourse, with arguments centring on the negative impacts and the loss of opportunity which the GBP’s had represented for the area: loss of traditional values and local ‘charm,’ environmental aggression, the reduction of traditional economic activities, profits for the few, little or no positive effects in the local productive fabric, scarcity and poor quality of the employment created, etc.

**DISCUSSION AND CONCLUSION**

Democratic, sustainable planning requires local SH analysis prior to the design of an urban development project. The data resulting from this case study illustrates the diversity of SH linked to these projects (Byrd, Bosley, & Dronberger 2009; Hossain, Alam, Islam, & Hecimovic 2015) and shows how SH perceptions affect the sustainability of the project, particularly when many of the actors involved or affected see them as alien, as affecting them negatively or when they simply feel discriminated against since no one consulted them when their home surroundings were reshaped. We should understand ‘sustainability’ as multi-dimensional: from the socio-environmental and territorial
point of view, changes in land use create impacts which are assessed differently, sometimes in opposing ways, according to the SH whose discourse is analysed. We wish to stress here particularly that differences in power and influence in decision-making correspond to major differences in group discourses, which reflect interpretations of space and day-to-day interactions with it. We have seen that the most influential SH were also those who benefited most from a development model which was consistent with their vision and interpretation of the environment. On the other hand, the least influential SH were those who were least benefited and also those who mainly stressed the negative impacts of the GBPs. These findings clearly illustrate the deficiencies in ethics and good governance exhibited by these projects and, by extension, the model of territorial planning they represent (Aledo, Garcia-Andreu, & Ortiz 2007; Beunen & Opdam 2011).

Socio-environmental risk and impact assessments have been found to be important tools in ameliorating these deficiencies (Aledo-Tur & Domínguez-Gómez 2017; Khodyakov, Mikesell, Schraiber, Booth, & Bromley 2016). SEIA methods can clearly reveal the complexity of the local context, the object of planning; they can analyse in depth and to a fine degree of detail the different elements making up the context; and they can facilitate processes of participation and the management of governance. The local network of socio-environmental interaction needs to be analysed in detail in order to determine how each node relates to the others, to understand the nature of these interactions and to set up mechanisms for identifying changes in the network (Duim, Ren, & Jóhannesson 2013; Meagher & Wilson 2002).

The case study we have set out here is an example of this complexity and multi-dimensionality and demonstrates the need for trans-disciplinarity in approaches and mixed methods in analysis and assessment. Although it is a case lacking in social conflict (the main source of dynamism, complexity and difficulty in the design and carrying out of projects), it clearly evidences the multitude of interested and involved SH, their diversity of positions, etc. The GBPs in the area currently suffer from a lack of positive relationship with the locale and the community, and this affects their social legitimacy and that of the SH who made the decisions in the design and execution phases. The general local community feeling is reflected in dense discourses, clearly expounded and justified with specific examples of the phenomena and processes affected by the GBPs, which have not shown themselves to be the model of ‘sustainable development,’ ‘good for everyone,’ that the decision-makers promised at the end of the 1990s.
NOTES

1 The representatives of two of the SH groups declined to take part in the study.

BIBLIOGRAPHY


‘I’M SORRY FOR THE DIRECTION MY HOT-AIR BALLOON IS TAKING’: IN SEARCH OF EVIDENCE FOR AND IMPACTS OF TERRITORIAL STIGMATISATION

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INTRODUCTION
This paper critically engages with the concept of territorial stigmatization. This concept has enjoyed considerable academic attention in recent years through the work of Loic Wacquant which forms the theoretical framework for this paper. However, the paper also reflects on what can be seen as earlier version of this type of theoretical approach as well as other contemporary applications. Having critically examined the theoretical basis and reach of this concept the paper proceeds to report on data generated from a series of in-depth, qualitative interviews conducted with residents of a large, peripheral predominantly social housing estate in the Thames Valley. The paper demonstrates that residents can provide detailed and long-term understandings of how and why the area they live in (and they themselves) has been territorially stigmatized and provide numerous examples of how this impacts on their lives. However, the paper also presents data that demonstrate that residents’ readings of their own lives, where they live, their neighbours and communities are frequently more nuanced, multi-layered and complex than other research sometimes suggests. Participants do discuss the issues that they feel directly affect them and their families, friends and communities but this data does not suggest that residents accept the ways in which the area and they themselves are portrayed and, indeed, they present multiple counter-narratives that dispute the validity of the territorial stigmatisation of the area. In this case a large social housing estate located on the periphery of Oxford: Blackbird Leys and Greater Leys or ‘The Leys’ as it is now known locally and how it will be referred to throughout this study. The area is home to 13,500 residents and would be the eighth most populous town in Oxfordshire if it was a separate development instead of a peripheral housing estate on the edge of the city. This area has experienced a long-history of territorial stigmatisation, poor reputation and negative associations in Oxford, the wider region, nationally and even internationally on occasion. In relation to the theme of this conference - on whether or not the future city can be made liveable the paper raises questions regarding the extent to which present, let alone future cities, are truly liveable for large numbers of citizens as well as illustrating how cities can be divided in multiple ways.
METHOD
The study has developed out of a long-term engagement with an area of Oxford over the last twenty five years and the paper presents an analysis of data drawn from twenty in-depth interviews with residents as well as additional ethnographic material gathered during that twenty five years of experience of working on and around the Leys in a variety of capacities: as a social researcher, as a director and trustee of two drugs intervention providers, a founding director of a community development initiative and as a member of various bodies, boards and advisory groups that have worked on regeneration and community development plans for the estate. This particular aspect of my research has been shaped by three main research questions and these are: First, to what extent do people who live in an area of large social housing provision experience ‘territorial stigmatisation’? Second, how do people narrate their experiences of territorial stigmatisation and how do they account for the impact on their day-to-day lives? Finally, to what extent do residents present counter narratives and discourses that provide alternative readings of the experiences of living in a territorially stigmatised area? It should be noted, of course, that given the word length of this paper my reflections here represent only a summary of some key aspects of my research.

CONCEPTUALISING TERRITORIAL STIGMATISATION.
In recent years the notion of territorial stigmatization has become most readily associated with a series of works developed by Loic Wacquant and is currently enjoying considerable popularity as a theoretical approach in urban sociology and other related disciplines. However, the significance of stigmatisation (and other synonyms) in relation to the description and analysis of forms of social and spatial divisions in cities has been a recurrent theme in urban sociology since at least the time of the Chicago School and the lineage of this concept can be traced, on and off, through to the contemporary social theory. Thus, to name but a few, Foucault, for example, talked of ‘heterotopias of deviation’. Krase wrote about the ‘stigmata’ on inner city living and Damer utilizes this approach in his studies of ‘wine alley’ and Edinburgh and he notes: It is alleged that it is the lack of ‘defensive space’ on the deck-access walkways which causes the problem. This, in the orthodoxy leads housewives to become Valium junkies and prostitutes, toddlers to hurl themselves from the balconies, and teenage boys to turn to generalized mugging and raping. Lynch notes the representational importance of areas of spatial stigmatisation as he notes how they are a consistent and recurrent feature of the public image of cities when he states. There seems to be a public image of any given city which is the overlap of many individual images. Or perhaps there is a series of public images, each held by some significant number of citizens. Such group images are necessary if an individual is to operate successfully within his environment and to cooperate with his fellows. Each individual picture is unique, approximates the public image, which in different environments, is more or less compelling, more or less embracing. An approach echoed by more recently by Hastings and Dean when they state ‘every city and town in the UK has neighbourhoods which have reputations for problems such as poverty, crime, drug abuse or physical decay’. For others the use of terms such as ‘stigmatisaton’ can be seen as a contributing element of the on-going and peristent use of pathologising discourses in relation to analysis of spatial inequalities and area deprivation, along with those who live there. For Atkinson and Jacobs residents are of such areas become ‘thrice damned’ by space, place and politics. For Skeggs, the conceptualisation of localities as stigmatised (and stigmatising) is linked to a wider process of the representation of the working-class as a fixed and problematic social category across a powerful...
conglomeration of symbolic systems, government rhetoric, institutionalised practices, popular and academic representations.

DIMENSIONS OF TERRITORIAL STIGMATISATION
I am not trying to argue that the ideas raised above and the approach of Wacquant are reducible to a relatively simple continuum; indeed many aspects of Wacquant’s approach offer new theoretical and empirical detail. Specifically, Wacquant seeks to link localized territorial stigmatization to structural economic and political factors whilst detailing the different manifestations of this process in France and the USA. This he identifies a ‘new regime of marginality on both sides of the Atlantic’ that result in distinctive spatial properties that manifest as concentrations of social and economic deprivation in isolated and bounded territories as neighbourhoods of relegation15. In this analysis, under the dual pressures of a functional disconnection from macro-economic trends and the deregulation and degradation of wage labour, territorial stigmatisation becomes concentrated in specific (and named) isolated and bounded territories rather than across throughout working-class areas. In addition, the experience of territorial alienation and the dissolution of place through which marginalised groups and individuals experience the loss of a locality which they can identify with and feel secure in. Furthermore the loss of what Wacquant terms as a ‘hinterland’ also impacts on the sense of this loss and sense of security through the erosion of traditional social networks and support that might once have been found in ‘traditional’ working-class areas. This symbolic fragmentation results in the further loss of a shared frame of reference and language that might have once provided a source of resistance to the collective problem of marginalization16. Wacquant identifies five specific factors that characterise territorially stigmatised areas both side of the the Atlantic. These are a peripheral location; isolation, entrenched social and economic deprivation, an absence of economic infrastructure and the existence of historical stigmatisation. In ways not disimilar to Lynch17 noted above he concludes:
In every metropolis of the First World, one or more towns, districts or concentrations of public housing are publicly known and recognised as those urban hellholes in which violence, vice, and dereliction are the order of things. Some even acquire the status of national eponym for all the evils and dangers now believed to afflict the dualized city.18
At the level of the community and the individual the impact of these developments manifest as defeated, internalised, alienated and fatalistic characteristics in the residents of these stigmatised areas19 and in the case of the UK Wacquant identifies Toxteth, Saint Pauls, Bristol, the Meadowell, Newcastle as specific (but not exclusive) examples of areas of territorial stigmatisation20. In the next section of this paper I aim to briefly examine whether these characteristics can be identified and mapped within a specific location that whilst fitting Wacquant’s five characteristics of territorial stigmatization and what residents of this area report of their own experiences of living in a territorially stigmatised locality.

THEMES FROM THE DATA
In this section of the paper I briefly report on and illustrate some of the key themes from the data generated by my research and how these compare with Wacquant's accounts of territorial stigmatisation. Participants did report that they are aware of how the area they lie in is stigmatised as noted in the two following examples.
I mean, the general reaction of people when I tell them I’m from the Leys is sort of almost fear I suppose, from people, unless they’re from sort of Barton, Rose Hill, one of the other estates or anything. (Will).
I think they (people who live in other parts of Oxford) think it’s [un] a crowded slum, or a forest of high rise towers (There are two). Neither of which is even remotely near the truth. I think they think it’s a crime hotspot and a dangerous area. I’m very sure they think it’s a dangerous area. But yes, there is that ignorance. It’s partly the geography that Blackbird Leys is out on the periphery and there are no through roads. It’s conveniently out of the way. (Mike). In addition, as Mike notes, the peripheral and ‘out of the way’ location of the estate helps cement the imagined conditions on the estate. Furthermore, participants report on how non-residents claim to avoid the area because of its reputation. The power of this reputation extends to the response of a hot-air balloon pilot that inspired this paper’s title as reported by Ella below. I went for a balloon flight once on my fortieth birthday and the man, the pilot of the balloon apologised when here realised we were coming over to Blackbird Leys, which was really funny actually because I was so pleased, right. I saw my friends, my neighbours, and he really enjoyed it in the end, because we were waving, and you know, shouting hello to people and it was great fun. (Ella). Another participant, Ulla, emphasizes the way in which the area has become a functional site of relegation when she states: I think that ties in perfectly with the idea that, yes, we know where the drug dealers are, and that’s it, we know, are we going to do anything about it? No, we know where they are, so that’s fine, and if they’re on Blackbird Leys we at least we know where they are. (Ulla). A view echoed and reinforced, in relation to the view of service providers and the local authority by Les when he comments on the attitudes of some members of the city council. When people from Oxford City Council come and sort of look at the community centre and say the only thing we can do really is to pull it down and put on a supermarket for the people here, then I think its’ absolutely awful, and ignorant, and treating people like second class. (Les). Other participants report on how significant they feel the impact of being from the area has on their life chances. For Ella, for example, possessing a Leys residential address potentially limits her employment prospects. I know when I put on a CV where I live I don’t put Blackbird Leys or Greater Leys, because I know there’s a reputation. Unless I’m applying for a job really close by, like say Cowley Centre or the Retail Park. I won’t put I live on Blackbird Leys or Greater Leys. Furthermore, Liz notes that even when positive developments — on this case the creation of a Women’s Business Network — happen they are met with considerable stereotyped derision from residents of other parts of the city. We had an article about Women’s Business Network. So I was looking in the Oxford Mail and I was looking at the article on the Oxford Mail website and the comments, and the only comments was somebody saying, “Women’s Business Network on Blackbird Leys. What’s that about cutting up Charlie and making it go further?” (Liz). However, throughout the data I have collected residents report on highly positive experiences of living where they do. These include multiple community strengths, neighbourly co-operation, individual and collective resistance and social value. Clearly there is not enough space here to justice to these counter-narratives and experiences but they are summed up forcefully by Iz below: I’ve lived in Blackbird Leys and never had a break-in, never had anything stolen. Most people I know in Cowley have had their cars broken into, had all sorts of issues, and when I’ve lived up on the estate, in both Blackbird Leys and Greater Leys there’s never been an issue in my life or the people closely connected to or around me. (Iz).
CONCLUSION

It would seem that aspects of Wacquant’s arguments can be identified in regard to the area of the Leys and in the experiences of those who live there. Residents do recognise that they and the area they live in are stigmatised and they identify a number of reasons for and agents of this stigmatisation. They articulate concerns that this process significantly impacts on them as individuals and the way others interact with them and they articulate concerns (and provide examples) of how this impacts on their life chances (for example in relation to education and employment), service provision, the attitudes of others and access to resources. In short the participants in this research recognise that they and their communities are seen as lacking of value, as underserving and as in this way the experiences of territorial stigmatisation both create and reinforce multiple barriers to social and economic inclusion. Importantly, however, participants do not respond with passive acceptance nor do they appear to have internalised the views of others as suggested by Waucquant (and others). Indeed, they report on community strengths, positive experiences accompanied by a knowing sense of how external (manufactured) territorial stigmatisation operates at various structural and social levels. As Joel notes, in the following quote that reflects both Lynch’s (1960) and Wacquant’s arguments about the social and political function existence of areas of ‘relegation’ that takes no account of the experiences and voices of those who live in such areas:

… I think every English City has and possibly in other countries too, of you know, a mythical area where all the problems are. I think this is part of our, you know, mythology, cultures, way of seeing the world, that we are a city and we have our downtown area, our sort of troubled spots where no one goes. And in Oxford it must be Blackbird Leys. (Joel).
NOTES


4 See for example, Steering Group Member – Blackbird Leys Communities Against Drugs Project (CAD), Home Office funded community development initiative, April 2002-2005, Partnership Board Member, Leys Linx, SRB-5, Oxford, 2002 – 2004, current member of the Oxford Strategic Partnership Sub Group on Health and Social Inclusion, Founding Trustee and Director, Community, Action, Development Ltd., Trustee and Director Substance Misuse Arrest Referral Team, (SMART CJS), Oxford, Trustee (Chair) and Director, Oxfordshire User Team, (OUT), Steering Group Member - Health Provision for Ethnic Minorities funded by the NHS and organised by the Oxfordshire Bangladeshi Association in partnership with east Oxford Action, 2003-2005, Steering Group Member – Blackbird Leys Communities Against Drugs Project (CAD), Home Office funded community development initiative, April 2002-2005, Steering Group member, Regeneration Framework Oxford City, 2009-present


11 Kevin Lynch 1960), The Image of the City, Cambridge, MA, MIT Press. 46
17 Kevin Lynch (1960), The Image of the City, Cambridge, MA, MIT Press

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CARE, PHYSICAL ENVIRONMENTS AND DEPENDENCY: 
THE DESIGN OF HOUSING FOR THE HIGH NEEDS ELDERLY TO LIVE INDEPENDENTLY

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YUKIKO KUBOSHIMA, JAQUELINE MCINTOSH, GEOFF THOMAS

Institution: 
VICTORIA UNIVERSITY OF WELLINGTON, NEW ZEALAND

INTRODUCTION
Globally, the ageing population is projected to increase rapidly. As people age, they have greater difficulty performing everyday tasks, as well as a higher prevalence of psychological concerns such as insecurity, loneliness and isolation. At some point, typically in their 70s or later, these experiences induce them to seek a more suitable dwelling. The New Zealand government policy is to encourage ‘ageing in place’. To successfully achieve ageing in place, which puts the focus on avoiding entering institutional residential care, housing for the elderly needs to provide an adequate environment for the provision of support and care. However, there is a scarcity of suitable independent housing options for the elderly who need assistance to live on their own in New Zealand.

Currently, there are three main types of housing which provide some levels of care and support; retirement villages, public-sector housing (central government housing and local council housing), and private-sector rental housing, which includes housing provided by community housing providers and various other groups. Retirement villages provide some levels of services and care as well as company and security, and are viable options for current homeowners and the relatively affluent. However, they are not viable options for those without substantive savings because the majority require some form of capital contribution. 12% of those over 75 live in retirement villages, and the demand has been projected to increase at more than 2.5-time between 2014 and 2038.

Demand for rental housing for the elderly is also projected to increase. New Zealand will have increasing numbers of people getting into retirement that do not own a home, who cannot afford to live in retirement villages. Local authorities provide affordable housing and some of them provide social support for older people to live independently. Central government also provides affordable housing but mostly not with the support for older people to live independently. Of private-sector rental agencies, not-for-profit agencies have been withdrawing from the elderly’s residential accommodation sector. Shortages are currently reported in rental housing for the elderly in Auckland. Recent government initiatives are seeking to address this situation, encouraging community housing sectors to grow.

AIM AND METHODS
The aim of this study is to research the current circumstances of housing for the elderly as a basis for its design, focusing on care, physical environments and residents’ dependency, and to seek the requirements regarding them which result in the highest quality of life. While information on the
models of care and physical environments is publicly available on retirement villages, there is a scarcity of information on rental housing for the elderly. The dependency of residents in these types of housing was unknown.

Focusing on retirement villages and rental housing for the elderly in the Wellington region of New Zealand, data on models of care, physical environments and resident dependency were collected through two surveys for housing operators and for residents. Ethics approval was obtained from the Victoria University of Wellington Human Ethics Committee, for this study.

First, data on models of care and physical environments were collected using online questionnaire software from housing operators. 47 housing operators were invited and 24 participated. Next, the information on personal care was obtained through questionnaires from residents. The housing operators who participated the previous survey and were interested in the following survey were requested for permission for this survey. Residents who lived in housing operated by 12 operators participated.

For the analysis for this paper, the data were limited to those on housing whose response rates in the second survey were more than 35% (39-80%). Five retirement villages and rental housing operated by three private-sector housing operators were included. The public-sector housing was excluded because the sample size was too small. The data on each theme of the physical environments, models of care and residents’ dependency were analysed, and the relationships between them were examined.

**FINDINGS**

The aim of this study is to research the current circumstances of housing for the elderly as a basis for its design.

**Services and care for residents**

Retirement villages often offer a continuum of care by providing different levels of services and care for residents in different types of units; independent-living units and assisted-living units. For the analysis of the services provided for residents, units in retirement villages were divided into these two types. Of five retirement villages, two included assisted-living units as well as independent-living units.

The services provided for residents were collected through questionnaire for housing operators focusing on; regular staff visits; organising activities in communal areas; outing (including shopping trips); transportation; emergency on call 24 hours a day; meals; laundry service; assistance in household tasks; shopping on behalf of residents; and personal care. To compare the levels of service, the services were given scores: ‘provided without extra cost’=2, ‘provided with extra cost’=1, ‘not provided’=0. Each housing complex was given the ‘service score,’ which is the total score for 10 types of services.

The services for residents in retirement villages and private-sector rental housing were compared, in terms of the service score as shown in Table 1. Retirement villages provide much higher levels of care for residents than private-sector rental housing. Residents in assisted-living units are provided with higher levels of care than those in independent-living units.

<table>
<thead>
<tr>
<th>Retirement villages (5 sites)</th>
<th>12.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent living units (5 sites)</td>
<td>10.8</td>
</tr>
<tr>
<td>Assisted living units (2 sites)</td>
<td>15.5</td>
</tr>
<tr>
<td>Private-sector rental housing (9 sites)</td>
<td>3.5</td>
</tr>
</tbody>
</table>

*Table 1. Average service score of housing sites*
Physical environments
Each housing complex was classified into two building types: detached/semi-detached type or apartment. The detached/semi-detached type includes villas, townhouses and flats which have only the access directly to outdoors. The apartment-type units refer to those which have access through indoor corridors. Assisted living units in retirement villages were all apartment-type, while other housing/unit types have both types. To compare between these two types, one rental housing which contained both types was regarded as two complexes in the analysis.

The data on proportion of units that have access and facilities for the disabled and the adjacent facilities are shown by the housing type and the building type in Table 2. Most units in retirement villages have access and facilities for the disabled. Particularly, all apartment-type units which participated in the survey had access and facilities for the disabled. As for private-sector rental housing, the proportion of units that have access and facilities for the disabled is lower than retirement villages. It is high in all apartment-type units, which is likely to be facilitated by the access through the internal corridors.

Retirement villages have a greater variety of adjacent facilities, while private-sector rental housing has fewer facilities, most of which included multi-purpose communal space. The adjacent facilities were distinguished by whether they are accessed going by internal corridor or only outdoors. All apartment-type units have access to facilities by going internal corridors as well as by going outdoors, while all detached/semi-detached units do not. The internal access between residents’ units and facilities might be preferred by residents with limited mobility as well as by the staff, who wish to provide services and care for residents efficiently.

<table>
<thead>
<tr>
<th>Housing/unit type</th>
<th>Building type*</th>
<th>Average unit number **</th>
<th>Average proportion of units that have access and facilities for the disabled**</th>
<th>Adjacent facilities (excluding outdoor facilities) ****</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Multi-purpose communal space</td>
</tr>
<tr>
<td>Retirement villages, Independent living</td>
<td>Detached / Semi-detached (4)</td>
<td>95 (14-196)</td>
<td>90% (47-100%)</td>
<td>O (100%)</td>
</tr>
<tr>
<td></td>
<td>Apartment (3)</td>
<td>32 (20-47)</td>
<td>100% (100-100%)</td>
<td>I (100%)</td>
</tr>
<tr>
<td>Private-sector rental housing</td>
<td>Detached / Semi-detached *** (9)</td>
<td>11.1 (7-29)</td>
<td>0% (0-0%)</td>
<td>O (50%)</td>
</tr>
<tr>
<td></td>
<td>Apartment (2)</td>
<td>11 (10-12)</td>
<td>41.5 (0-83%)</td>
<td>I (100%)</td>
</tr>
</tbody>
</table>

* The bracket shows the number of housing sites. ** The bracket shows the range of the unit number.
**** O: Facilities accessed only going by outdoors. I: Facilities accessed going by internal corridors. Brackets shows the percentage of housing complexes that have the facilities.

Table 2. Physical environments by the housing/unit type
Dependency of residents

Through questionnaires to residents, the data on the status of personal-care were collected for assistance in six types of daily activities: bathing, dressing, personal hygiene, moving from bed to wheelchair/chair, walking indoors and eating. To compare the levels of dependency, the assistance in all activities were given the scores of 0-2 or 0-3 (0: the lowest level, 2 or 3: the highest level). Each person was given the ‘dependency score,’ the total scores for assistance in six types of activities.

The average dependency score of residents and the proportion of residents who receive personal care were compared between retirement villages and private-sector rental housing (Table 3). While the average dependency score is slightly higher in retirement villages, the proportion of personal care recipients is higher in rental housing. This implies that the elderly with higher levels of dependency are more likely to live in retirement villages than in rental housing. In retirement villages, both the average dependency score and the proportion of personal care recipients are much higher in assisted-living units than independent-living units.

<table>
<thead>
<tr>
<th></th>
<th>Average dependency score of residents</th>
<th>Proportion of residents who receive personal care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retirement villages (5 sites)</td>
<td>0.93</td>
<td>15%</td>
</tr>
<tr>
<td>Independent living units (5 sites)</td>
<td>0.42</td>
<td>12%</td>
</tr>
<tr>
<td>Assisted living units (2 sites)</td>
<td>2.19</td>
<td>50%</td>
</tr>
<tr>
<td>Private-sector rental housing (9 sites)</td>
<td>0.86</td>
<td>19%</td>
</tr>
</tbody>
</table>

Table 3. Average dependency score and proportion of residents who receive personal care

The types of personal care

The data on status of personal care were compared between two groups with different levels of dependency; low levels (dependency score:1-3), and high levels (dependency score: 4 and over) (Figure 1). Of those with low levels of dependency, the proportion of people who receive assistance in bathing is the highest at over 60%, followed by in dressing and in personal hygiene at approximately 50% and 25% respectively. When the levels of dependency get higher, the assistance in moving from bed to chair/wheelchair and eating increases.
Relationships between building types, levels of care and average levels of dependency of residents

The relationships between building types, levels of care and the average levels of dependency of residents were shown in Figure 2. The average dependency scores are highest assisted-living units in retirement villages, where the service scores are also highest. The service score of private-sector rental housing is lowest; however, the dependency score varies from low to relatively high. With regard to building types, apartment types in each housing/unit type have the highest average dependency score of residents regardless of the service score, which implies that apartment types are likely to accommodate the higher levels of dependency than detached/semi-detached types.

![Figure 2. Relationships between building types, levels of care and dependency levels of residents](image)

DISCUSSION

This paper has explored the models of care, the physical environments and residents’ dependency in current housing for the elderly, through two surveys. In this section, the requirements for design of the housing to accommodate the dependent elderly to live with greater quality of life will be discussed.

The housing/unit type that accommodates those with highest levels of dependency is retirement village/assisted-living units, which provide residents with the highest levels of services and care, suitable environments for the disabled and the greatest variety of adjacent facilities. In private-sector rental housing, the levels of services are low; however, the proportion of residents who receive personal care was greater than in retirement villages. Not being provided with personal care by housing operators, these people receive care provided by external agencies. However, it has been revealed that this type of housing has failed to accommodate those with high levels of dependency, compared to retirement villages. To provide housing for high-dependency elderly to live independently, the optimal combination of models of care and physical environments should be well considered in the planning of the housing for the elderly. In the case of rental housing, there should be greater consideration for the ways to achieve it in limited resources, such as collaborating with service providers and using existing resources in the community.

The apartment-type housing, which provides internal access between residents’ units and adjacent facilities, are more likely to accommodate those with higher levels of dependency than the detached/semi-detached type. It provides less mobile residents with the greater barrier-free
environment and thereby the larger space for them to live in independently. This type also allows the staff office to be located proximately in the same building and helps the staff to provide flexible and efficient services and care for residents, which enhances the quality of care, one of the significant elements for the quality of life of the dependent elderly\textsuperscript{1213}. In the design of the housing for the dependent elderly, care proximity should be considered as well as barrier-free environments.

In retirement villages, assisted-living units provide higher levels of care for those with high levels of dependency. However, it is reported that residents’ quality of life are low in this type of units; residents perceived loss of privacy from care staff as well as neighbours\textsuperscript{14}. Most dependent elderly require care in the most private activities, such as bathing and dressing. As the dependency levels increase, caregiver’s visits become more frequent and may occur for the whole day; for example, they may need help when they get out of/go to bed and at each meal. It is reported that their privacy becomes ambiguous by caregiver’s undesired presence in private space, by personal care being conducted in relatively public space and by the lack of space where they could be completely private\textsuperscript{1516}. In the design of housing for the elderly, attention should be paid to provide residents with appropriate privacy, while the availability and proximity of care is not undermined.

**CONCLUSION**

Having increasing demand for housing for the dependent elderly as background, the models of care, the physical environments and residents’ dependency in current housing for the elderly has been explored through two questionnaires for operators and residents of retirement villages and private-sector rental housing for the elderly.

While the proportion of residents who receive care is higher in rental housing than in retirement villages, the levels of dependency of residents are lower in rental housing, which may attribute to the lower levels of services and care provided for residents. In the planning of the housing for the elderly, there should be greater consideration for the provision of care as well as suitable physical environments. It has been revealed that the apartment-type units accommodate those with high levels of dependency. This building type not only provides greater barrier-free environment and internal access between residents’ units and facilities, which facilitates them to live in larger space independently, but also facilitates the staff to deliver greater services and care for residents efficiently.

Attention should be given to strategies that maximise the availability and proximity of care to enhance the quality of care. Even those with lower levels of dependency require assistance in their most private activities and requirements for privacy become more complex as the levels of care increase. The design of housing, as seen in the apartment-type, assisted-living in retirement villages, has often failed to provide optimal privacy between residents and caregivers, which undermines their quality of life. Close attention to the balance between availability/proximity of care and reciprocal needs for privacy can provide the best outcomes.

This study didn’t include public-sector rental housing for the elderly, which plays a significant role to provide rental housing for the elderly. Further study on the circumstances on this type of housing would serve to the comprehensive understanding of current housing for the elderly. Additionally, more detailed study on the elderly’s experience, perceptions and expectations will bring important knowledge to the design of the desirable housing for the elderly that improve their quality of life.
NOTES

1 Judith Davey et al., Accommodation Options for Older People in Aotearoa/New Zealand. (Centre for Housing Research, Aotearoa New Zealand, 2004): 22-23.
9 Dennis M Povey, Ulrika Harris, With My Boots On!: A survey of housing quality and preferences of a selected group of older people in Dunedin. (Dunedin, Presbyterian Support Otago, 2006): 9.
10 Seniorline, Rental Accommodation for Older People - Auckland. (Auckland, 2016).
14 C.R. Hayward, "A Home Away from Home?: The Transitions of Older People within Two New Zealand Retirement Villages" (Master of arts diss., the University of Canterbury, 2012).

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INTRODUCTION

Objectives: The argument

Part of the concern is we are living beyond our means in more ways than one, in the use of the resources on the planet and also our life styles. 2008 was the start of a dramatic recession which was brought about by living beyond our financial means. How to review this excessive life style and move to a more sustainable way of living in the twenty-first century that is to the betterment of all, will be under question.

It will be necessary to look at the way we have developed small house living through a historical perspective and how through necessity and in times of crisis small houses have developed and functioned. Additionally, I will look at how in the UK the demographics of the family has changed and how the Government has had to develop its housing strategy to apply to the shrinking size of the family and an ageing populous and how is this working towards the development of new small housing. Through independent research the existing housing stock of a sample people will be taken, what they are looking for when possibly downsizing their home and what possibly they require and see as important in a new low energy home.

A review of the traditional way of thinking and how the philosophy of 'keeping up with the Joneses' is fuelling the excess culture, will also be of focus in the latter part, and how we draw ourselves back from the brink and live a more compact life style and still be happy.

How can we achieve a low energy, small footprint home? Live comfortably without resorting to high embedded energy that blight today’s current housing stock.

Historical back ground to small house living

This chapter will consider the historical back ground to small living looking at nomadic peoples, vernacular architecture and the introduction of industrial processes that led to the manufactured and factory constructed system buildings of today. The intention was to see how this progression of man in forms of shelter as the worlds populous expanded. The idea that man uses the indigenous materials available to him and using the resources carefully in a sustainable way as the nomadic peoples understood, allowed their way of life to continue through many generations. The size of their accommodation would be limited by what they could transport easily. The design of these shelters has changed little over the centuries.

The idea of a small footprint for a house has been seen as a frugal way of living and that the more you can afford, the house increases accordingly. This also applies to the materials available and the
Vernacular houses were limited to size by the materials available and the skill and the knowledge of the builder.

The introduction of factory component building has led to many innovations in house design and materials used. One of which is the prefabricated house that has seen many developments and some of the variations are discussed in this paper.

The industrialization of Great Britain at a similar time of global expansion saw a massive influx of people from the country to the towns and cities that were springing up due to the expansion of mechanical processes. The mechanization of producing building products such as brick manufacture, and the ease of transportation on canal, rail and road led to the decline of the use of vernacular materials.

Since the 1860’s the size of households has been reducing from 4.5 people to 3.9 in 1930 this dropped to 2.9 in 1971 and finally to 2.4 in 2001. This has also been reflected in the size of dwellings the average size of a dwelling since 1850 has steadily reduced to approximately 80 and 100 square meters.²

![Figure 7. Terraced Housing built in the 1900's shown in the 1960's³](image)

**Modern developments**

The austerity after the Second World War led to a great need for new homes mainly for returning forces and replenish the bombed out houses of the towns and cities. This lead to the introduction of small prefabricated component dwellings, commonly and affectionately known as the “prefab”. This housing form was designed using the technology from the factories producing armaments for the war effort. The use of aluminium is the primary material from aircraft manufacturing technology. This design was called the ‘aluminium temporary’, designed to be fixed in four sections it had all services and fittings incorporated in the design.
Other types of prefabrication designs were also developed using the industrial processes of the war machine, such as the use of concrete, steel, timber and asbestos. Prefabs were aimed at families, and typically had an entrance hall, two bedrooms a bathroom (a novel innovation for many British families at that time), a separate toilet, a living room and an equipped kitchen. Most of these systems were never intended to provide permanent housing with an expected life span of 10 years. It was felt that, as after the First World War, there was a shortage of materials and of skilled workmen. A more urgent provision of housing needed to be made instead of the traditional building forms which the industry struggled to cope with. The answer was thought to be to supplement traditional building methods with industrialised building techniques - the use of factory methods to produce houses, large parts of which could be prefabricated in factories and then erected, using relatively unskilled labour, on the site. The result of this was that, all over the country, estates of "prefabs" appeared. The prefabs had a floor space of approximately 60 square metres. Generally set out on estates, these were to become a very much loved home and despite being originally designed as temporary accommodation, some still survive today. The idea of a detached home with a garden surrounding each unit provided an identity for the occupiers and a space to call their own.
Today owner occupiers are reluctant to relinquish their homes but many UK councils are beginning to demolish the last surviving examples of World War II prefabs in order to comply with the UK government's Decent Home Standards.

<table>
<thead>
<tr>
<th>House</th>
<th>Average Area in Sq Metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post WW 2 Prefabricated house</td>
<td>60</td>
</tr>
<tr>
<td>Terrace house</td>
<td>80</td>
</tr>
<tr>
<td>Average Semi detached</td>
<td>100</td>
</tr>
<tr>
<td>Average Detached house</td>
<td>150</td>
</tr>
<tr>
<td>Average Flat</td>
<td>60</td>
</tr>
<tr>
<td>Average Bungalow</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 1. Average sizes of dwellings post World War 2.

Western cultures divide up their families with a family consisting of parents and children, older members of the family are looked after by a welfare system when too old to look after themselves. Rooms became an issue with separate bedrooms and division of living accommodation western housing reflects this diversification. Space increased accordingly as more space was demanded, by the introduction of internal personal washing and toilets in bathrooms. Size of accommodation has remained steady in the UK since 1860’s somewhere between 80 and 100 square metres. For terrace houses and semi detached, flats have remained at approximately 60 sq metres. The idea that generally small houses are below 80 square metres but by enlarge this is arbitrary dependent how many people the house is designed for. But a four person family could easily live in this sized accommodation. While small houses are designed and constructed in times of depression, war and disaster to house a homeless or influx of humanity, there is a pressing need to consider the requirement for small houses in times of population decline and in the changes in the nuclear family. The average number of people living in a household in England and Wales is 2.36 in 2001, down from 2.51 in 1991. This statistic from central government also goes to on to say that less than forty per cent of houses is lived in by nuclear family and thirty-five per cent are occupied by people living alone. The overall decline in occupants in homes in Europe at present is at 2.2 and falling. Should this decline continue a radical rethink of how house design is developed in the UK and Europe? There is an urgent need to review our design strategy of housing need in the UK and Europe if we are keeping up with the demographic requirements. There appears to be a need for well designed and modern small dwellings in all guises, generally due to the lack of building sites within the confines of the United Kingdom.

**SUSTAINABLE SMALL HOUSE LIVING IN THE 21st CENTURY**

The changing demographics of the family are requiring a rethink of modern housing. Many more single people and one parent families are requiring their own homes, with the prospect of an ageing population requiring housing to suit their needs. Small succinct design is required to reduce the land requirement the idea is to have a site density of sixty houses per hectare.

**Government Housing Policy**

The breakdown of the nuclear family in the developed world is due to population movement, small family sizes and marital breakdown. The need is developing for smaller dwellings for single people and couples. There is a requirement to make this ‘affordable housing’. There is a pressure on countries to provide housing for its ever increasing populations, and in Britain’s case, an immigrant influx. The Government has a structure to
build two and a half million new houses in the next ten years. This will put a great strain on our countryside as it planned that most will be built on greenbelt land. It is therefore imperative that the housing reflects on the requirement of the modern society. From the green paper ‘Homes for the future: more affordable, more sustainable’ 

The Government has issued various green papers on the need for sustainable housing and issued targets, but we face new challenges today. Demand for homes to buy or rent is growing faster than supply. As house prices have grown faster than wages, it is becoming increasingly difficult for young people to get a step on the housing ladder. The challenges of climate change mean we need to provide greener, better-designed housing for the future. The challenge set by the Government is to provide more homes.

Housing supply has increased substantially in the last few years and is now at its highest level since the 1980’s, but supply is still not keeping up with rising demand from our ageing and growing population.

While the housing stock is growing by 185,000 a year, the number of households is projected to grow at 223,000 a year, many of them people living alone.
Estimates and projections of average household sizes
The estimated number of persons in a household has gone down from 2.6 persons in 1981 to a projected 2.2 in 2026. This is borne out by the United Nations statistics that Europe is now averaging 2.2 persons per household and falling. The predicted size of the average household decreasing in size will add to the pressure of demand.

This graphic above illustrates that it is predicted demand for one person living will rise significantly in the next twenty years. The pressure on existing land requirements will be further exacerbated by the requirement of one person homes, from approximately 17 million in 1981 up to a projected 26 million by 2021. This is by far the highest predicted social change in the UK. The prediction that married couple households will fall, but that cohabiting couples will remain static along with single family homes. Other multi person homes will rise slightly. While these are predicted changes it shows that single person living is a factor that the UK and initially Europe need to tackle.
Demographics: An Ageing Society

The UK has an ageing population and in the publication ‘National Strategy for Housing in an Ageing Society’ designed as a consultation document, stating that 30 per cent of households are headed by an older person. Over 60 per cent of over-85s live alone, and older people living alone account for a quarter of the total projected year on year household growth currently. In the future, there will be many older people requiring appropriate housing and services. For example, there will be 85 per cent more people over 85 by 2031. The ageing population is often more pronounced in rural areas. In the most rural local authority districts, almost half of residents will be aged 50 and over by 2028.16

The need is to build much more inclusive and flexible housing to meet future demand in an ageing society. In particular, we need to build homes that will be adaptable enough to match lifetimes changing needs. This can be achieved by building to Lifetime Homes Standard. (Fig 8.) Lifetime Homes Standards are a set of simple home features that make housing more functional for everyone including families, disabled people and older people. They also include future-proofing features that enable cheaper, simpler adaptations to be made when needed. For example, they make getting in and around the home easy for everyone, whether they have small children or limited mobility. These guidelines are being used in housing developments today.

THE CONCEPT SCHEME

Introduction

The idea is to produce a series of sketches that culminate in a concept scheme to show how a housing site can be developed to approximately Code 6 of the Code for Sustainable Homes Standard. The scheme represents the idea of Lifetime Homes and my idea that compact housing is possible and a housing site can accommodate families, couples and singles. The idea is that growing and shrinking families can move around the site or adapt their homes when time requires. Housing developments require some social binding for them to work.
The use of sustainable materials and renewable energy sources is also a major issue.

**The site**
The site is a Brownfield site previously a middle school and community centre in the small market town of Otley in West Yorkshire.

Otley is a Yorkshire market town of about 15,000 people, set on the banks of the River Wharfe. It is an ancient, picturesque town with a diverse commercial and community life, based around the farmers market. The town lies in the attractive countryside in of Mid-Wharfedale at the centre of the rural triangle between Leeds, Harrogate and Bradford. The sites orientation is north to south with a stepped slope from the north to the south. The area of the school buildings is relatively flat. There is a brook running to the west side of the site and public footpaths to the west and south. Mature trees form a divide between two playing fields as well as to the boundaries of the site in varying degrees. The site of the football pitch is a levelled space with a bank down to the community centre. (Fig 9)

![Site Plan](https://www.google.co.uk/intl/en_uk/earth/)

*Figure 15. The site*

The previous occupation was a middle school with a large area of tarmac play ground a community centre and playing fields. (Fig 10) The Community centre remains and also the existing playing fields, they all are available to be incorporated into the scheme.
Planning requirement is that the footprint of the school and playground be the only available land for housing development. The surrounding area of the site has a cottage hospital to the east and mixed housing some local authority owned as well as private to the other boundaries. The site is on an existing public transport route on Weston Lane. (Fig 10)

The Scheme
The idea of the scheme is to provide small affordable housing in three, two and one bedroomed town houses or apartments. The houses would be split and be available to both part purchase ownership and rental. The layout is designed to maximize the community spirit and encourage wildlife within the curtilage of the site. The football field would be turned into allotments for the residents. The playing field turned into a native species woodland and wild flower meadow. Encourage native bird species by adding nesting boxes. This would be continued into the housing site with facilities for swifts designed into the houses.20 The addition of a pond will attract aquatic invertebrates. Also along the Sustainable Urban Drains (SUDS) that picks up the water from the porous paving and create a wildlife corridor among the houses. The idea also would be to use the water out of the pond in watering the allotments. The water would be pumped from the pond to an irrigation system when required. The design is very much based on the ethos of encouraging wildlife to the site. The Invertebrates Conservation Trust is known as ‘Buglife’21 and they encourage wildflower meadows and living roofs, (on the community centre) which are proposed on this site. (Fig 10&11)
The house types are designed to be adaptable as Lifetime Homes and have a small footprint in Nett floor space. (Fig 13)

The Nett areas of the dwellings:

- Three-bed townhouse 80m². (Fig 13)
- Two-bed townhouse 67m².
- Two-bed apartment 58m².
- One bed apartment 46m².

The sizes of the dwellings are in line with the idea of small house living.
The materials play a major role in the design of the houses. The use of Hemp is the main external envelope material. The structure is a timber frame which will be from a local renewable source. The frame would be pre-manufactured away from the site and craned into position, with the interior permeable boarding attached along with the intelligent membrane fixed and sealed, requiring the final sealing of the adjoining panels on site after the spray application of the hemp wall. This should allow for factory condition sealing to be carefully done especially around door and window openings. The same operation would be carried out on the roof.

Super insulated homes that do not require space heating is the essence of the scheme along with low air permeability to Passivhaus standards using a highly efficient mechanical heat recovery system. (Fig 13) The problem is convincing the British public of the merits of permanent mechanical heat recovery. The building materials are very important in this and the walls are to be built up using
timber frame as the structure and 500mm of blown hemp.Externally a 20 mm render finish and internally a 20mm lime plaster finish. The overall exterior wall is designed for a U value of 0.11 Wm²/K. The roof a U value of 0.078 Wm²/K. The overall specification of materials is designed to meet the Building Research Establishments BRE Green Guide. At a level of C or above (the scale goes from A+ to E).25

SUMMARY AND CONCLUSION
The thought process throughout this paper is think ‘small and simple’ I have tried to review the housing back ground and where we are going in terms of population. Confusion reigns when discussing the size of houses. Clarity is required over square metre sizes (as used in Europe) to gauge the sizes and not by the number of bedrooms as we do in the UK. The final section ‘concept scheme’ is an attempt at a Code for Sustainable Homes Code 6 development. As always the cost of achieving this and what is commercially viable is possibly some way apart.

The idea is that maybe we can all buy into the home, not been a status symbol of our wealth and success in life, and live more within our requirements the ‘keeping up with the Jones’ idea will all ways be prevalent, but the scheme is a possible way forward that like-minded people can move around a housing scheme as their needs change through life and be happy. Commercial housing developers need to engage further in this dialogue of what the populous of the UK need and what presently is being offered.
NOTES

3 Figure 1. Terraced Housing built in the 1900s shown in the 1960s: accessed on May 15, 2017. http://i.dailymail.co.uk/i/pix/2014/10/01/1412192609188_wps_30_These_images_are_supplied.jpg
4 Figure 2. Prefabricated house built using ‘war’ technology: accessed May 15, 2017. http://brickfields.org.uk/htt/htt_postww2_homes.htm
5 Figure 3. Prefab owners fight to stay in their homes: accessed May 15, 2017. http://www.dailymail.co.uk/news/article-1347259/Britains-prefab-estate-residents-battle-save-homes-built-10-years-ago.html#ixzz4k4wiX75y
18 The site as existing layout St Martin’s Fields, Otley. West Yorkshire (from archive) April 2004. https://www.google.co.uk/maps/@53.9144953,-1.7020939,328m/data=!3m1!1e3
19 Brownfield site area St Martin’s Fields, Otley. West Yorkshire April 2004. https://www.google.co.uk/maps/@53.9144953,-1.7020939,328m/data=!3m1!1e3
22 Proposed site layout (from archive) April 2004. https://www.google.co.uk/maps/@53.9144953,-1.7020939,328m/data=!3m1!1e3
23 Housing area of the site layout (from archive) April 2004. https://www.google.co.uk/maps/@53.9144953,-1.7020939,328m/data=!3m1!1e3
24 P. Hogg design sketch Typical 3 bedroomed house: April 2017.
26 P. Hogg Design sketch, typical house section: April 2017.
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'CISADANE RIVERSIDE TOURISM' AS A STRATEGY TO EMPOWER 'KAMPUNG KEJEPIT' COMMUNITY IN TANGERANG REGION, INDONESIA

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INTRODUCTION
As a developing country, Indonesia always has a mutual relationship between modern-and-traditional, formal-and-informal, planned-and-unplanned development. Jakarta as the capital city of Indonesia happens to be the best example about this co-existence, where the traditional settlements exists behind big, modern and prestigious development. The residents support the formal sector with cheap labor and informal economy such as street vendor, hawker, housemaid, etc. This traditional urban form also known as kampung, which literally means ‘village’, but which has come to denote a poorer neighborhood that is contained within a city. However, as it comprises a mix of lower and middle class and frequently contains permanent buildings, it is not really synonymous with slums. Squatters are few and most residents have some sort of title to the land. Kampungs are really remnants of original villages upon which cities have encroached and not vice versa. Since Indonesian independence, Jakarta developed into megacities that populated with approximately ten millions of people; along with the JABODETABEK metropolitan area. Tangerang is a transit region between the port of Merak in the west and Jakarta in the east; thus making it suitable for industrial factories. As a suburban area, Tangerang offers cheaper land price compared to Jakarta, hence the developer invested their real estate product and developed a suburban landed housing that offers a modern and less congested than Jakarta. Before acquired by the developer, most of the land were kampungs that owned by a low income traditional community, they lived like any other rural community in Java which practice agricultural lifestyle. Apparently the property business attracted so many customers that the developers expanded their property line big enough to become a town, and soon after that, a city. Only within 30 years, the rural kampungs of Tangerang transformed into bustling modern city covering more than eighty-seven square kilometers which managed by multiple real estate developers. This phenomenon has similar characteristic with the development of Jakarta, but initiated by private company.
There are four major real estate developer operating in Tangerang region: *Lippo Karawaci, Sinarmasland, Summarecon,* and *Paramount Land.* These developers have so much land banks and ambitious development that will convert their land into high density development with malls, apartments, offices, schools, etc. As can be seen in figure 2, such development only be able to accommodate middle-to-high income community which only portrays small segment of Indonesian society. There is no attention for the low-income community in Tangerang due to the planning of Tangerang region conducted by private company which has no obligation to provide social housing and considered not profitable enough.

**WHAT IS ‘KAMPUNG KEJEPIT’?**

The remaining *kampungs* that persists to exist in the middle of this massive development in Tangerang, may have benefited by the development by the new job vacancies—such as securities, gardeners, technicians, drivers, etc—but never fully integrated into the development itself. While the estate created gated clusters to ensure the security for the residents, it also gives firm segregation from the *kampungs* outside with three-meters-high wall. This co-existence but without cohesion is the type of unwanted development because it doesn't comply to the sustainable development index that promote cohesion among community members.
The regional government—known as Pemerintah Kabupaten or Pemkab—of Tangerang considered the kampungs as an image of poverty that needs to be alleviated. That is why the Pemkab launched a program to improve the well-being of the low-income community member in Tangerang, but the program only addresses the physical improvement such as 'house rehabilitation' for the poor people with poor house condition. Realized that they did not obtain the required resources for the program, the Pemkab collaborated with Pelita Harapan University (UPH), Indonesian Institute of Technology (ITI), and Trisakti University, accompanied by the community architects and planners that recommended that the greater issue is to create a cohesion between the kampungs and the real estate by accommodating them into the development itself.

'Kejepit'—literally translated as 'being pinched'—is an informal Indonesian language to express the situation of being 'cornered', 'pinned', 'tightly squeezed', 'besieged', or 'distressed'. It portrays the 'ugly truth' of the development itself, but covered with intensive advertisement about the luxurious lifestyle offered. The Pemkab has identified approximately four hundred locations of the kampungs that needed to be improved but then decided to take four of them as the pilot project, each one of them accompanied by one university. Universities as a research institute will conduct the study about this phenomenon along with the raised questions: (1) how can we create the cohesion between the kampungs with the real estate development? and (2) what is the role of each stakeholder to create this cohesion? the purpose of this study is to obtain a new understanding about how to plan an equal development, particularly in Tangerang.
Development Problems and Issues in 'Kampung Kejepit'

Like any other undeveloped areas, the poor physical condition is a result from the poverty that disabled people to gain education, knowledge and skills to compete in the markets. Trapped in poverty and barred from opportunity, poor people live with little expectation that tomorrow will bring anything good, despite their arduous work; thus making it even harder to exercise better neighborhood when they have to struggle with daily provision. We all can agree that physical improvement is one indicator of prosperity, but it will only last for a while without the agenda of empowerment. This agenda supports development effectiveness by promoting growth patterns that are pro-poor. This involves reducing inequalities by investing in poor people's capabilities through education and access to basic health care, as well as by increasing their access to land, financial capital and markets.

Outsiders' comfortable views of the poor as improvident, lazy, fatalistic, ignorant, stupid and responsible for their poverty, are reassuring but wrong. Case studies show that poor rural people are usually tough, hard-working, ingenious and resilient. They have to be to struggle against five interlocking disadvantages which trap them in deprivation: poverty itself, physical weakness, isolation, vulnerability, and powerlessness. All are important, but vulnerability and powerlessness especially deserve more recognition and analysis. With the lack of these accesses, the kampungs have been living with the reality of being treated as second class citizen that unable to participate and benefited from the development.

PROPOSED PROGRAM

The idea of Cisadane Riverside Tourism occurred to accommodate the kampungs development into something beneficial for the real estate and vice versa. It combines and exercises planning, design and entrepreneurship method to empower the kampungs. In planning realm, we acknowledged the place-making method as a tools to revitalize particular area or building; this method can be useful to inject new values to the kampungs, so that they may have equal bargaining position for the development. While the kampungs are unable to compete alone, all four of them have to create collective action because to overcome problems of marginalization in society, poor people critically depend on their collective capability to organize and mobilize so as to be recognized on their own terms, to be represented, and to make their voices heard (Narayan, 2005: 11). Social capital, the norms and networks that enable collective action, allows poor people to increase their access to resources and economic opportunities. While poor people are often high in 'bonding' social capital, it is not enough. However, it must be accompanied by 'bridging' social capital in order to generate social movements that can bring about structural change.

The four kampungs share the similar character, which is located along the Cisadane river. If they can utilize the river as an attraction, then the kampungs can support the required facilities such as docks, bridges, restaurants, shops, etc. This new attractive destination will be managed with sustainable tourism approach. The UN World Tourism Organization—UNWTO has defined sustainable tourism as an enterprise that achieves a balance between the environmental, economic, and socio-cultural aspects of tourism development so as to guarantee long-term benefits to recipient communities. According to UNWTO, it should:

- **Make optimal use of environmental resources, maintaining essential ecosystems and helping conserve biodiversity**
- **Respect socio-cultural authenticity, conserve built and living cultural heritage, and contribute to cross-cultural understanding and tolerance**
• Ensure long-term socio-economic benefits, fairly distributed to all community stakeholders, including stable employment and income-earning opportunities, social services, and poverty alleviation

The tourism activities are expected to generate new economic scheme which need a business entity to operate it, thus entrepreneurship skills requirement is a must. Based on the community character of the kampungs, it is recommended to apply the social entrepreneurship concept to run the business. The consideration is because social entrepreneurship has a social mission to accomplish. Social entrepreneurs play the the role of change agents in the social sector by: (1) adopting a mission to create and sustain social value (not just private value), (2) recognizing and relentlessly pursuing new opportunities to serve that mission.

Attained to the vision, several strategies needed to be done first, which are to ensure the community’s capacity being improved by series of trainings. The intangible issues on sustainable tourism and social entrepreneurship already become a necessity towards the vision. The tangible issues such as mapping and planning on spatial and social context also required to ensure physical changes that will indicate improvement of the community. Architects, urban designers or planners, are the most capable profession to conduct such activities, but to conduct the capacity building on tourism and entrepreneurship needed to be done by the relevant professionals.

With the better understanding on tourism and entrepreneurship, then the community will be able to determine the tourism products (i.e. river cruise, culinary, and other river related experience) and establish the ventures needed to operate the business. While the mapping and planning on spatial and social condition will determine the location and style of the of tourism facilities (i.e. lodges, docks, bridges, etc). After running on several years, the communities are expected to improve their capacity regarding experience, skills, and capability on running the business, indicated by the economic improvement; another indicator is also the physical improvement that turn the neighborhood into a well-planned and well-designed one. In the long term, the desired impacts are the poverty alleviation and also the nature conservation of Cisadane Riverbanks, done with the participation of the communities. The scheme for all phases can be described as followed:

Figure 5. Conceptual scheme of the 'Cisadane Riverside Tourism' program
**Expected challenges**

The possible challenges for implementing the project are: (1) the resistance from the *kampungs* community due to unable to envision the greater purpose or simply does not offer the solutions for their problems, (2) the land is bought by the developer and turned into their real estate uses, (3) the universities—as the facilitator and partner of the community—withdraw or being inactive from the process, and (4) the *Pemkab* suspend or annul the program.

The resistance from the *kampungs* community member is based on trust issues, being surrounded by such a development has caused insecurities about their land status. They are fully aware that someday the *kampung* might be transformed into something and they have to relocate somewhere else. The proposed approach for this issue is to have capacity building on the development itself, by elaborating its purpose and how can they be benefited from it; particularly, the issue on sustainable development.

Being aware that development programs cannot be forced and be imposed from the outside—no matter how noble the motivations—this process could fail when the community member unable to perceive the vision thus demotivated.

The reason why developers turning *kampungs* into real estate is because the developed land has more economic value for them. The financial strength of the developers has enabled them to be taken account by the *Pemkab*, and has to be considered as one of the stakeholder in this program. The real challenge is to assure the developers that these *kampungs* should be kept because someday they will deliver economic value for the real estate. The failure to do so will only justify the developers to claim the land someday.

In the beginning, this program was initiated by the *Pemkab* and collaborated with the universities because *Pemkab* has the highest authority to regulate and appoint the prompt partner. The five-years period agreement between the *Pemkab* and the universities was signed to ensure the whole process conducted properly. The universities have included this program into the research and community development agenda while the *Pemkab* has put it as one of the priority program. The agreement will be evaluated on every year based on the report by each university, whether it can be continued or not.

The whole process will take a seemingly long and slow process because development is like a tree, it can be nurtured in its growth only by feeding its roots, not by pulling its branches. Addressing a fast and short term program without having the master plan for its sustainability will not generate the expected impact for transformation. It must be underlined that there is another possibility, that the process will generate a different output than *Cisadane Riverside Tourism*, it will depend on the capacity of the *kampungs* to perceive this idea. Whatever the output is, the objective is to empower the *kampungs* and to ensure the participation process from them.

**The role of architect, urban designer/planner in the project**

It is quite common to have architects or planner to establish a plan as requested by the wealthy clients, who are probably well educated and aware about design. In this scheme, the initiative would have come from the clients, asking for a better improvement on their property. But as for the unempowered community like *Kampung Kejepit*, the initiative would not come from them. The design or plan could not be elaborated as their needs; for as long as they couldn't see the affordable and applicable goals, then the initiative would be ineffective. The planners—in this scheme represented by universities—then hold responsibilities to bridging the gap from the government and the community, in order to deliver *Pemkab*’s agenda but still answer the community’s necessity. The universities have the resources for planning, urban design, architecture, tourism, entrepreneurship; making them the most reliable partners for the *Pemkab*.
While the planners and architects are capable in visualizing the future of Cisadane Riverside Tourism, but they still couldn't stand alone to facilitate all the changes needed. The same principle of collective actions among the four kampungs is also expected for the experts/professionals as mentioned earlier to collaboratively conduct the development. This cross-discipline approach is what needed to address the development issues in developing country like Indonesia. The development of the kampungs will be sustained when the economic growth is maintained.

CONCLUSION
One of the development characteristics in Tangerang is the existence of traditional development—or kampung—in the middle of modern development. The kampungs then surrounded with the modern development causing a ‘kampung kejepit’ phenomenon which portrays the ugly truth of the development scheme because it creates coexistence without cohesion. This unequal development is a result from the poverty that disabled people to gain education, knowledge and skills to compete in the markets\textsuperscript{11} and if such development continues to exist will only caused the low income community more marginalized. This is against the idea of sustainable development that promotes inclusivity regardless the economic and social background. In order to create an equal development, the local government (Pemkab) initiated a collaboration with Pelita Harapan University (UPH), Indonesian Institute of Technology (ITI), and Trisakti University, accompanied by the community architects and planners which recommended that the greater issue is to create a cohesion between the kampungs and the real estate by accommodating them into the development itself. The idea is to propose a program that combines and exercises planning, design and entrepreneurship method to empower the kampungs—thus called Cisadane Riverside Tourism.

There are some challenges that might occurred since this program involves stakeholders with different roles and capabilities. The possible challenges for implementing the project can be: (1) the resistance from the kampungs community, (2) the land is bought by the developer and turned into their real estate uses, (3) the universities—as the facilitator and partner of the community—withdraw or being inactive from the process, and (4) the Pemkab suspend or annul the program. To anticipate such challenges, it will take whole stakeholders participation—not just the community; and the universities has the most important role to bridging the gap between because of its capability to provide multidisciplinary resources that can address the issues. While the program asserts multidisciplinary approaches, it must be understood that the architects or planners have a primary role to establish the plan and facilitating the community, not merely providing designs because development programs cannot be forced and be imposed from the outside—no matter how noble the motivations\textsuperscript{12} — this process could fail when the community member unable to perceive the vision thus demotivated.
NOTES

2 Abbreviation of Jakarta-Bogor-Depok-Tangerang-Bekasi (the nearest cities around Jakarta that formed Jakarta metropolitan area), Bogor in the south, Depok in the south east, Tangerang in the west and Bekasi in the east.
4 Narayan, Deepa. Conceptual Framework. Ibid. p.3-4
7 Narayan, Deepa. Conceptual Framework. Ibid. p.11
10 Serageldin, Ismail. The Architecture of Empowerment People, Ibid. p.28
11 Narayan, Deepa. Conceptual Framework. Ibid. p.3
12 Serageldin, Ismail. The Architecture of Empowerment People, Ibid. p.28

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ALAMEDA: A MODEL FOR STRUCTURING LINEAR NETWORKS

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INTRODUCTION
In spread-out, densely populated contemporary cities where neighborhoods are often isolated by physical obstacles as well as invisible barriers of race, ethnicity, and economic status, linear spatial networks can provide the venues to facilitate social and cultural exchange. Linear urban spaces are often assumed to be analogous with green infrastructure corridors, a term that can be interpreted in various ways, but which generally describes interconnected landscape sequences intended to mitigate the disruptive impacts of city fabric on animal and plant habitats. Some green infrastructure strategies focus on biodiversity, others on conservation programs or management of water resources, including use of natural drainage and vegetation to capture, slow down, and filter storm runoff, allowing it to replenish ground water aquifers. Mark A. Benedict and Edward T. McMohan define green infrastructure as interconnected networks of spaces that primarily emphasize conservation of ecosystems and the protection of air and water resources while mostly excluding human activities. As linear outdoor environments in which interactions between people and the natural world are accepted as complementary, alamedas provide an interesting precedent for expansion of the green infrastructure concept to include closer integration of human activities with endangered ecosystems.

Origins of the Alamedas
In City Trees, historian Henry Lawrence refers to the rise and persistence of nationally distinctive ways of using trees, notably the French linear promenade, the tree-lined canals of the Netherlands, the residential squares and pastoral parks of the United Kingdom, and the street trees of the United States. Absent from Lawrence’s list are the alamedas, which first appeared in sixteenth century Spain as paseos flanked by parallel rows of poplars, well before the appearance of precedents generally accepted as having led to the development of the French boulevards in the 19th century, including the Cours la Reine, a public park along the Seine created by Queen Marie de Medicis (1616) and the gardens of the Tuileries Palace designed by André Le Nôtre (1666). The origins of the alamedas are not precisely known, but some authors believe that as the Habsburg Monarchy of Spain controlled the Netherlands in the first half of the sixteenth century, their development originated with the trees planted to stabilize embankments along canals in the Low Countries, or possibly to disguise the presence of defensive ramparts on city walls after medieval fortifications became obsolete; others cite the possible influence of the geometrical alignment of trees in ancient Rome described in the first edition of Leon Battista Alberti’s treatise De re aedificatoria.
Initially developed as private pleasure grounds for aristocrats and eventually popular as public urban amenities throughout the Spanish colonial empire, *alamedas* featured promenades shaded by rows of *alamos* (poplar trees) irrigated by narrow canals known as *ascequias*, statues, fountains, and plantings, as well as spaces for recreation and socializing. By establishing connections with the surrounding streets, *alamedas* increased access to park-like settings for city dwellers, many more of whom lived within walking distance than would have been the case given a larger, more regularly proportioned space with equivalent square footage. Whatever the genesis of their development as a typology, the *alamedas* were an original invention that often consolidated and reorganized spaces previously used for a variety of activities, sacred and profane, and attracted both commercial and residential development. The significant amount of capital investment required to build *alamedas* was initially provided by the Spanish monarchy and local elites but by the beginning of the nineteenth century, they had become a requisite urban amenity throughout the Iberian Peninsula and in Spanish colonial towns around the world. The first *alameda* was built after King Philip II (r. 1556-98) relocated the Spanish Habsburg court from Valladolid to Madrid. Through one of the greatest urban transformations ever in European history, the provincial city became an imperial capital and in the process provided the impetus for a nascent urbanism that would soon have a significant impact on town design throughout the Spanish empire and its colonial territories. Among the new works built between the old walled city and the palace was the Paseo del Prado, a tree-lined promenade intended for the king’s triumphal processions with Madrid’s first decorative fountains that soon became a fashionable site for a variety of urban developments as well as lovers consecrated by Venus⁵.

At roughly the same time, the Count of Barajas was laying out the Alameda de Hercules in Seville (1574), an elaborate *paseo* for aristocrats which also featured avenues of poplars and fountains, as well as twin columns topped with statues of Hercules, Andalucía’s mythical founder, and Julius Caesar, who served briefly as governor of the Roman province of Spain in 61-60 BC.

By the end of the sixteenth century, there were *alamedas* in many other Spanish cities including Alcalá, Ávila, Córdoba, Écija, Granada, Jaén, Úbeda, and Valladolid, all except Úbeda located outside the city walls. The *alamedas* in Écija, Segovia and Valencia were sited next to rivers, and the Alameda Apodaca in Cádiz was built on the coastline of the Atlantic Ocean, each one celebrating and reinforcing the water’s edge while simultaneously facilitating municipal drainage. In the northeast regions of Spain including Catalunya and the Balearic Islands, *alamedas* were known as *ramblas*.
from the Arabic word *ramla*, meaning a dry river bed that temporarily fills after seasonal rainfall, an indication that the *ramblas* had been built adjacent to or on top of dried up river courses. Perhaps the most famous of all the *alamedas*, the tree-lined La Rambla pedestrian mall in Barcelona, which is actually a continuous sequence of five shorter street segments that extends for nearly a mile, was built in 1761 five years after a portion of one of the original city walls adjacent to a stream bed was demolished and replaced with parallel rows of trees. The early *alamedas* frequently marked transitions between medieval city fabric and the territory outside the surrounding walls but in time, as cities began to expand beyond their fortifications, they became integral elements of the urban layout. Not quite streets as they had predetermined lengths, and not planted as intensively as gardens, *alamedas* were hybrids of the two with a few variations, mostly limited to the length, width, numbers and layouts of tree rows, types of benches and sculptures, paving materials, patterns of tiles, and tree species. Despite similarities among *alamedas* in different locations, their shared internal logic, and absence of any formal concessions to the surrounding urban context, each one is wholly integrated and particular to the cities in which they are located.

**Alamedas in Latin America**

Because the majority of the main public social and commercial spaces of Spain’s colonies in the Western Hemisphere were plazas significantly larger than their European counterparts, most Latin American cities had no need to expand beyond the city walls to accommodate their growing populations. In contrast to *alamedas* in Europe, those in Latin America were often created to establish connections between places of significance located outside the urban core with the city center. Just as the rigidly geometrical gridiron layouts of colonial towns were in part designed to impose the conquerors’ sense of civic order on the indigenous peoples, linear columns of trees were intended to demonstrate their control of nature. The first *alameda* built in Latin America was the Paseo de la Alameda, built by Mexico’s Viceroy Luis de Velasco (1590-1595) in the form of a perfect square on the site of a drained swamp where an indigenous market had previously been located. A short time afterwards, the Alameda de los Descalzos in Lima, Peru (1611), initially called the Alameda Grande, was built by Viceroy Juan de Mendoza y Luna, Marquis of Montesclaros on rugged terrain covered with the stony, sandy debris deposited by floods of water of the nearby Rimac River to connect the city with the Franciscans monastery located outside the walls in the foothills of the Cerro San Cristobal. Inspired by the Alameda de Hercules in Seville, the design of the passage to the monastery consisted of eight rows of willows, olive, orange, and nut trees lining three parallel traffic lanes, two for carriages flanking a central portion for pedestrians, as well as three ornamental fountains. After its destruction in 1746 by the worst earthquake in Lima’s history, the Alameda de los Descalzos was refurbished by Viceroy Manuel Amat y Juniet, its original length extended by the addition of *paseos* to create an impressive sequence consisting of the Paseo de las Aguas, or water promenade, initially called La Navona after the celebrated Piazza Navona in Rome, and the Alameda de Acho (1768) located on the banks of the Rimac, depicted in contemporary illustrations as densely planted with rows of trees.
Alamedas as Inspiration for Urban Theory

While traditionally a purpose-built public linear space or sequence of spaces within the city, the *alameda* played a prominent role in the development of the influential Ciudad Lineal (Linear City) by visionary Spanish urban planner Arturo Soria y Mata (1844 – 1920).

Intended for application in Madrid and elsewhere, the Ciudad Lineal (1882) was envisioned as a new form of urbanism to replace the concentric diagrams based on the traditional polarities of center and periphery with a continuous street comprised of linear infrastructural elements having other components of city fabric attached to either side. Through the center and entire length of this extraordinary thoroughfare, railroad and trolley lines would be complemented with pedestrian *paseos* lined with parallel rows of trees that essentially were extended *alamedas*. Houses would be constructed on individual plots of land on a strip running parallel to the main street, and as elements on a continuum the city would merge with the countryside, one city connected to another through a rational, additive process of expansion that would limit urban sprawl. Farms located some distance from the railway lines and business districts would have access to them using streets perpendicular to the main axis, an increase in outlets that would stimulate agricultural production. Soria saw in this the union of city and country the ruralization of urban life and the urbanization of the rural, a concept succinctly summarized in his description of the modern urban ideal: "For each family a house, for each house an orchard." Soria’s linear city failed to materialize as he envisaged it but the concept of organizing urban growth along linear corridors inspired numerous 20th century urbanists including Le Corbusier, Nikolay Alexandrovich Milyutin, and Tony Garnier.

In contemporary Latin America, Bogotá’s recently built network of *alamedas* is an outstanding example of their potential for application as basic urban structural elements in cities throughout the world. Located on a flat savannah immediately west of the Cerros Orientales, Bogotá has abundant rainfall and is traversed by numerous streams flowing down from the mountains, creating many
wetlands. Placement of the current system of *alamedas* follows the tradition begun by Viceroy José Manuel de Ezpeleta y Galdeano of Nueva Granada who built the Alameda Vieja and Alameda Nueva between 1789 a 1797 as tree-lined promenade entrances to Bogotá. These spaces have long since disappeared but served as a precedent for the new Red de Alamedas de Bogotá, a network of tree-lined pedestrian and bicycle paths connecting parks, natural systems, residential areas, and urban amenities. Developed during the administration of Enrique Penalosa, Bogotá’s mayor from 1998 to 2000, the Red de Alamedas was one of his government’s priorities and a key element of the Plan de Ordenamiento Territorial de Bogotá, D.C. (2000), the new general plan which sought to provide low cost, ecologically sustainable transportation alternatives, recreational and leisure opportunities for all of Bogotá’s residents. In developing areas as well as those yet to be developed, *alamedas* can help to define the structure of future urban initiatives and indicate the appropriate placement for new buildings, roads, and other city infrastructure. Usually thirteen meters wide, Bogotá’s *alamedas* are well integrated with its the existing urban fabric, often taking advantage of the city’s natural landforms. Defined by pavements, trees and planting strips, contemporary *alamedas* in Bogotá have lost the clear boundary definitions of the old *paseos*; the resulting lack of differentiation with their surroundings suggests that the extension of the Alameda de los Descalzos in Lima might have provided an interesting design precedent. Similar to their traditional function when built as formal rows of trees outside the city walls, the *alamedas* run through ecological preserves, providing organizational elements in contexts where they are otherwise absent, with minimal compromise of their surroundings and protection from pollutants produced by informal developments and industry for water courses in Bogotá’s western neighborhoods. The Alameda el Porvenir passes through the central portion of green preservation areas, connects to the Transmilenio bus routes and local transportation of the SITP (Sistema Integrado de Transporte Publico), the El Tintal library, as well as the Campo Verde y El Porvenir and Ciudadela El Recreo housing developments, the latter the first housing complex developed in 1999 by Metrovivenda, an institution that acquires privately-owned open space on the urban periphery through negotiated purchase or the use of eminent domain to build market rate affordable housing. Located adjacent to a linear park with pedestrian and bicycle routes as well as a canal southwest of Bogotá in the watershed of the Bogotá river on an 84-hectare site that is also well-connected to schools, community and health centers, the Ciudadela el Recreo was planned by architect Germán Samper Gneco as a gridded neighborhood and its proximity to the Alameda el Porvenir recalls the typical relationship of *alamedas* to expanding settlements during the period of Spanish colonization. While adversely impacted by physical discontinuities, maintenance problems, and limited financial resources, the *alamedas* of Bogotá have stimulated excellent community planning initiatives and residential design in adjacent neighborhoods. Recently, the Colombian city of Medellín, has received major international recognition and some of the world’s most prestigious architectural and planning awards for its integrated network of library parks and schools, in particular. Medellín’s achievements are deserving of the high praise, their prominence attributable in part to dramatic local topography which provides enhanced visibility and a photogenic backdrop for the new buildings, but the visionary initiatives undertaken by Bogotá’s civic leaders to improve its quality of life with better neighborhoods in which to live, work, and play have been no less remarkable.
Despite their obvious advantages, linear spaces such as those typical of alamedas have not found favor with some prominent planners and theorists. Kevin Lynch, an expert on the perceptual form of urban environments, categorically dismissed their effectiveness as definers of city form.\textsuperscript{12} and New Urbanism proponent Andrés Duany rejected the concept of linear parks as providing “an extended venue for crime”, perpetuating the “matrix of green as a buffer” and extending the problematic dispersive propensities of the modern city.\textsuperscript{13} These arguments ignore many of the evolutionary developments in communication and transportation technologies underway since the beginning of the 19th century which are unlikely to be reversed, and also the flexibility inherent in community planning processes. The marginalization of linear pedestrian spaces since their heyday in the 18th and 19th century European cities began as they were gradually replaced by wider boulevards, and promenading as a form of socializing declined. In recent decades, widespread public policy initiatives emphasizing the preservation of natural corridors coupled with the increasing popularity of outdoor recreational activities which are themselves linear such as running and cycling have resulted in the construction of tracks, trails, and paths often located beneath freeways, alongside canals, and parallel to ocean and river fronts, as well as other natural features in urban areas. Often described as green connective tissue, these linear spaces are typically not designed beyond the requisite conformity with such large-scale planning considerations as view corridors, patterns of land use, presence of suitable vegetation, trail topography and surface.\textsuperscript{14} A notable exception is the High Line on the Lower West Side of Manhattan, a 1.45 mile long elevated linear park built on a disused section New York Central Railroad that features lounge seating, built-in benches, textured concrete walkways integrated with naturalized plantings inspired by the vegetation which once grew on the disused tracks, a lawn, a children’s play area, and performance spaces for cultural events, as well as temporary art installations. Inspired by the Promenade Plantée (1993), a similar project in Paris, the High Line’s first phase was completed in 2009, the second phase in 2011, and the third and final phase in 2014. From vantage points along the route, there are views above city streets, into the upper floors of adjacent buildings, and spectacular vistas of the Hudson River. The High Line has been wildly successful, attracting over five million visitors annually, and substantially increasing land values and real estate investment in the surrounding neighborhoods, in part because rather than the typical path flanked by native vegetation, it is an artfully constructed public space.
CONCLUSION

Unlike green corridors or other natural preserves which mostly exclude human activities, alamedas are complex, hybrid spaces combining social functions and constructed natural arrangements. In many post-industrial cities with disused industrial infrastructure, much of it also linear, including railroad lines, canals, areas along rivers, creeks or seashore or wide downgraded commercial corridors, alamedas could provide the links to vital urban networks essential to repurpose degraded urban sites as residential developments, conservation areas, commercial, and recreational spaces. By creating habitats for nature but also providing public spaces for relaxation and socializing, alamedas can accommodate natural ecosystems in urban contexts where subordination of social and aesthetic factors to ecological is not a requirement. Like the assumption that the city is an exclusive habitat for humans, the notion that urban trails or paths must retain the appearance of untouched natural environments establishes a false dichotomy between nature and artifice. Cities consist of both natural themselves constructed and buildings serving social as well as ecological and environmental purposes. As synthetic elements belonging to both worlds, alamedas can provide both the structure and connective tissue to form an integrated whole.
NOTES

4 Antonio Albardonedo, Freire La alameda, un jardín público de árboles y agua. Origen y evolución del concepto / Anuario de Estudios Americanos, 72, 2. (Sevilla, España (julio-diciembre, 2015): 421-452.
6 Antonio Collantes de Terán, and Ramón Gutierrez. Las Alamedas de Espana e Hispanoamerica Materiales para su Estudio. (Sevilla: Centro de Estudios Paisaje y Territorio, 2016): 1-188.
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FLEXIBLE DOMESTICITY, ADAPTABLE STRUCTURES: TWO CASE STUDIES, MADRID AND BERLIN.

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INTRODUCTION
The crisis in contemporary domestic space is a relevant motivation for an analysis of the proposed case studies, a condominium located in Madrid (Arturo Soria neighbourhood, Calle Ángel Muñoz 22) and a cooperative ecological housing complex in Berlin (Tiergarten) whose architects were Emilia Bisquert, Carmen González, Ricardo Aroca and Jose Miguel Prada Poole in Madrid, and Frei Otto in Berlin. Both projects date from between 1970 and 1980, but they are undoubtedly topical for the current theme, given their conceptual architectural characteristics and their enormous possibilities of flexibility and hybridization that will be analysed later. In this sense, it is important to consider, on the one hand, the role of the architect Emilia Bisquert in promoting the hybridization and mutability of domesticity in the Madrid project housing. Her contribution seems to be visible in the Arturo Soria project (see interview with Prada Poole, (pp. 11–14). On the other hand, Frei Otto and his team in Berlin were concerned with carrying out an experimental project in the domestic sphere, in the context of the IBA (International Building Exhibition) of 1987.

In order to achieve the objective proposed, this work is organized as follows. The following section presents the methodology and information used. Section 3 reviews the existing literature. Section 4 discusses both case studies. In sub-sections 4.1 and 4.2, we present the Berlin and Madrid case studies, each with interviews, as well as the plans and graphic analysis. Section 5 contains the main conclusions.

PROJECT SELECTION AND METHODOLOGY
The case-study selection process was carried out in three phases. In the first phase, we developed a database of a total of 150 projects from different sources of information, such as bibliographic references, international conferences or visits to projects that could be accessed. The database considered several factors, such as Likert scale, which allows changes, scale, participant agents of a continuous type (age, budget, etc.), and these were identified as characteristics of the case studies according to the binary type (built, standardization, diversity, surface). From the proposed objective, the information available, the correlation and the interpretive relevance from the architectural point of view of the variables, we were able to select 12 case studies and five descriptive variables of the characteristics of the cases. Figure 1 shows the cases and the variables.
As Figure 1 shows, most cases show possibilities for diversification, have been constructed and are not standardized. The variables related to scale and possibilities of changes vary according to the case. The second selection process was carried out through a cluster analysis, because of the exploratory nature of this methodology and the possibility of its classification. We used Ward’s clustering method\(^1\), which merges clusters which contribute the least to the overall sum of the squared within cluster distances. It then proceeds by finding the closest pair of clusters, combining them into a new larger cluster, and then computing the distance between this and the other remaining cluster. The process starts with every project treated as a single cluster, so the first new cluster will be a two-cases cluster, and so on. Clustering ceases when the two final clusters have been combined, so that all the data are in one cluster.

Figure 2 shows a Dendrogram with a clear description of the groupings. The first groupings, where the distances are smaller, are related to Nemauses – Next 21 (group #1) and Housing Ángel Muñoz – Ökohaus (group #2). Later, a traditional Japanese house groups with group #1 and Schröeder House with group #2, and the process was repeated until the incorporation of l’Unité d’habitation.

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\textbf{Figure 1. Case studies and their descriptive analysis. Source: Own elaboration}

\textbf{Figure 2. Cases study Dendrogram. Source: Own elaboration}
From the results obtained, the analysis of group #2 was chosen. This was due to the variables analysed, the European continent, the selection of a national case, temporary proximity, and similar characteristics in relation to the exterior and construction systems. The methodology used in this work is based on qualitative research via case study and closely follows the research process carried out by Koolhaas and Obrist. We compiled information using an iterative processes. The approach is based on field work in situ, in Madrid and Berlin. In the case-study approach, an intermediate position is chosen in terms of contents or conceptual structure, thus accompanying the initial phase of the research project. For this reason, the time spent at the project locations, collecting information through interviews, drawings, plans and videos, is also related to some limitations derived from the problems of access to other information that would have been relevant (for example, the inability to interview Frei Otto).

The dynamics of the research is reflected in Figure 3, where we can see how the process has been very iterative and diluted. Authors such as Glasser and Strauss indicate the existence of three levels of compression in the case-study classification: subjective, interpretive and positive. The positive level is based on the method of statistics and the analysis of contents based on objective reality. In addition, the researcher and reality at this level are two separate units. The interpretive level is based on the method of anthropology, hermeneutics and phenomenology. The ontology of this level is part of the researcher (person) and reality (real life) as inseparable; and building knowledge through the experiences of the person. These last two levels are those used in the present research.

Interviews as a documentary source have been key to understand each of the projects in depth from the conceptual framework, obtaining on-site information, planning, analysis and reflection in an iterative and cyclical way, towards new proposals.

The fieldwork has greatly enriched the article, without which important knowledge would not have been acquired for an overall understanding of the projects, and to develop graphic documentation with detail and special emphasis on aspects of the current users of both projects.

**Review of the Literature**

A qualitative secondary research was carried out, through the literature review of the two case studies. Articles of the period were reviewed in British, German, Spanish, French and Swiss journals. The housing cooperative in Ángel Muñoz 22 and the Ökohaus in Berlin have been previously researched and analysed separately. However, except for error, they have not been previously compared.
CASE-STUDIES ANALYSIS

1. Case-study 1: Berlin

The Ökohaus project was originally proposed for the IBA in 1984, and was developed because of “critical reconstruction”\(^5\). Developed under a coalition of governments (social democrats and green), it was part of the ecological rehabilitation of West Berlin construction\(^6\). However, it was postponed in 1987. Frei Otto was part of the project until 1980 when Professor Josef Paul Klehues proposed designing a building with ecological characteristics\(^7\).

In 1959, Frei Otto researched the concept of green homes for a proposed tree house in New York where branches would be mixed with tall gardens between houses. The original location of the Ökohaus was the Askanischer Platz in the district of Kreuzberg (Figure 4), where it was planned to build three skyscrapers with orchard and vegetable patches every six metres arranged as hanging gardens. In the space between these intervals, each user would insert his “nest”\(^8\) in contrast to the “honeycomb”\(^9\).

![Figure 4. Berlin urban diagram explaining the areas of IBA'87, Ökohaus urban approach map and cross-section. Own elaboration.](image)

Finally the building, given the experimental and apparently “undetermined” character, was transferred to the Tiergarten (Figure 4) on a plot of 3,940 sqm of building area. The distribution phase of the project took two years. The project was developed with 18 families selected from 1,300 consultations.

Ökohaus interviews: tenants.\(^10\)

Five interviews were carried out. There was also an interview with Christine Kanstinger, Frei Otto’s daughter.\(^11\) From the questions\(^12\) previously planned, the following questions were combined according to the responses issued,\(^13\). Along with the interviews, graphical documentation is shown as a common thread, with a tour of the plan depending on the location of the tenant and the interviewer.

Interview #5 “The passionate neighbour of the project” (reduced interview)

Kim, a 37-year-old architect, lives with his son Alexis of 5 and his girlfriend. Kim invites me to go to the “private garden” that forms part of a continuous intermediate space of the entire second floor of the neighbours.

The plans have been modified several times, he says. The biggest change has been in the greenhouse, which has been mostly suppressed since it was too hot in summer and very cold in winter (Figure 6). Almost all the neighbours have changed this part, gaining more space in the house. In the case of the
family, they changed the lodge as soon as they entered through a diaphanous space, creating a continuous through dining room\textsuperscript{14}.

“A few years ago Philippe came to visit the project, Philippe Vassal from Lacaton & Vassal Architects, given that for them is a reference in their projects, in particular for the University of Nantes and the greenhouse houses are delighted with this project and say that it was a true inspiration for its later developments”\textsuperscript{15}

When talking about budgets and whether it is more or less economic to live in a house in the Ökohaus or another building in Berlin, the higher price of Ökohaus is given as one main reason.

“The ground rent. The IBA did not sell the base floor to the tenants so they currently pay, more or less like, twice. Two types of land. Base floor (for rent, belongs to the Berliner institutions) and its domestic interior floor. The second reason for the higher cost of this home compared to another is the uniqueness. That is to say, each tenant in his origin wanted specific materials, different constructive systems, wooden carpentries one site or another and that caused that the budget was increased since they could not share costs”.

To the question of whether he believes that the project could be repeated, the answer was clear and direct.

“Of course, it should be repeated, not one, but many times, gradually be implemented and improved experimentally, as well as the germ of the project of Frei Otto plus team and future participants of the houses.”

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure5.png}
\caption{Seasonable Elevation. South building. Half structure base origin. Design developed by the tenants on the basis of structural concrete frames. Half growth vegetation and preexisting trees in the project. Own elaboration}
\end{figure}

Finishing this first case study, one of the forecasts made by Frei Otto in 1971 was the beginning of the era of the many roads referring to the future of housing. The ecology and the variable and experimental domestic habitat is a strong highlight of the Ökohaus. If ecology is the science that studies living beings as inhabitants of a medium, and the relationships they maintain with each other and with the environment itself, the definition is carried out in all its aspects in the Ökohaus. This means understanding housing as a process of life, as a progress (Figure 5B), and not as a finished
product. In the houses of Berlin, ecology is part of this progress, and the exterior is filtered in the interior. Frei Otto’s earlier sketches of the treehouse for New York show two separate but interrelated aspects. The tree or structure is at first invariable, which sustains the branches with the second part, sheltering the nests. (Figure 7)

The action of “how to put yourself in the place of the person” who will live in the domestic space would be the goal to start the project. Future housing should be the opposite of “honeycomb” of which Frei Otto speaks as a metaphor for standard constructions in the domestic sphere.

1. Slabs

2. Porticos H.A. . . . . . 4+2

3. Secondary structure
   dwellings
   Balloon frame
   Muros de técnica de leguro

4. Familiar units . . . . . . 9

5. Levels . . . . . . . . . 6

6. Ensemble

*Figure 5B. Ökohaus housing as a process of lifestyles. Diagram own elaboration*
2. Case study 2: Madrid
The cooperative housing project at Ángel Muñoz 22 (Figure 8) was proposed based on a legal loophole of the M30 ordinance, in the neighbourhood of Arturo Soria of Madrid, with the only restriction being suitability of construction, allowing parameters such as height free between slabs. This case study is based on fieldwork, as is the first case study and on the interview with Prada Poole.

The entrance is located in the street San Nemesio 19A. An intimate semi-public space in an “L” shape on the left of the entrance invites you to sit and to observe. As soon as you enter, the patio is half closed. The internal faces of the continuous body in “G” are turned to this green micro-lung. The height of the reinforced concrete frames of ground floor, 3.5m, allows a fluid space between the...
continuous portico that unifies the upper body of houses and the garden. Through the transition of pavement, hard in the porch, soft in the yard.

The proposal starts from the variability of dimensions and square meters required by the tenants. For this, two solutions could be interpreted a priori to solve the project. You could express variability, as in the project built in Berlin, or suppress it. Here the second option was chosen. It was initially designed to save costs and time. Costs given the uniformity and standardization of using a single construction system to close the façade and homogenize it. The time was reduced to cancel the approach of possibility of opinion on the part of the tenants who will be part of the building once it finishes its execution. So, is Architecture based, as a goal, to save costs and time? Could you have a choice of different materials, as there are 45 different families in the same building, without increasing the final cost of the building? With a strategic organization of the project process based on heterogeneity or customization, thus preventing obsolescence\textsuperscript{17} Of it, the project development time would be the same as with the first option? Or at least with the irrelevant time difference as to implement it as an equally feasible option than standardization and absolute standardization?

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{distribution_plans.png}
\caption{Distribution plans of different houses. Own elaboration}
\end{figure}

Architect interview with Prada Poole\textsuperscript{18}.

These are conversations with Jose Miguel de Prada Poole, an architect of the city, specializing in the geometry of infinite polyhedra, minimal housing and pneumatic structures. The interviews were carried out during January and August 2016. This interview follows a semi-structured format, with open and closed questions.
Author: Prada when did the project start? And, what was the context?
José Miguel de Prada Poole (PRADA POOLE): The building started in 1974 but the works finished between 1978 and 1979.
In 1974 the project was already done, that is, to the point ... but, until almost four years later the project of execution was not started since we did not have the permission of works.
It consists of two phases. They are two owners communities. The first part is the one in I really collaborated, the other part was made by Aroca with his studio. They are all cooperative, every floor, housing did as they wanted.
We were lucky, the ordinance was open. An ordinance peak of the M-30. It was not a housing ordinance. The only limitation we had was the total built surface. The height was free.
Here before, in the linear city of Arturo Soria, there were many houses, isolated single-family houses that demolished. So some of the owners of this building lived before in those houses. … (Figure 10) I really was, well and I consider myself a supporter of the continuous city. In a broad sense. As of the “minimal” housing that is capable of being deployed depending on the use or the situation determined.
The garden you see there is interesting (Point 1, Figure 12). Well, if you think about how the growth of the city of Barcelona arises, “La manzana y el ensanche de Cerdá” (Cerdá city block) and its application in Madrid. Or the open block implemented by regulation (...) repeated as an autistic pill, pattern after pattern. We didn’t want to repeat that again.

Figure 9. Housing of the linear city of Arturo Soria, 1882, in the infrastructure of Ángel Muñoz, 2017.
Source: Own elaboration.
Author: How many houses are there?
PRADA POOLE: There are 4 floors. Each plant is different from the previous one (Figure 9). Actually there are 45 houses, but each one has its square meters, from 45 to 400sqm according to the tenants and their preferences (...) The truth, that was the most difficult of all. Fit that into a single plant (6, Figure 11).

Author: What type of home is it? VPO\textsuperscript{21}? Private Housing?
PRADA POOLE: The project was joined by a community of owners, a cooperative. It is private housing.

Author: who did the project?
PRADA POOLE: The project was carried out with Carmen González, Ricardo Aroca, and Emilia Bisquert along with the community of owners \textsuperscript{22}. In fact, Emilia Bisquert promoted the idea of variation, the use of different materials, freedom of distribution. It was her way of thinking, projecting and living.

CONCLUSION
This research analyzes the idea of domesticity and the space existing "in-between" the public and the private spheres. In addition it focuses on the participative process by taking into account different agents in its development. It values some parameters as the "hybridization" of housing types, by mixing types of homes in terms of space and time, depending on the budget available. The "infrastructure" analyzed is therefore flexible in terms of changeability spaces, generating "livable spheres", lasting months, years or decades.

The comparative research is focus on the strategies and analysis of five key concepts. First, the participative process as part of the project. Second, the housing type hybridization. Third, the search for flexible open systems and infra-structures to support new living concepts. Fourth, the research about alternative ways of project construction management and fifth the ecology and change in domestic practices as starting point. The research presents two existing case studies in Madrid and Berlin in the period 1970-1980. The first, a cooperative housing building in Arturo Soria constructed between 1974 and 1980 by Jose Miguel de Prada Poole, Emilia Bisquert and Ricardo Aroca, with the involvement of the community of owners. The second, developed in 1979, is a participative ecological housing located near Tiergarten in Berlin. This case study is contextualized within the IBA 1987, developed by the architects Frei Otto, Katherine Kanstinger and their team proposed in collaboration with the future community neighbours.

In order to come up with possible strategies, the project analyzed the key points the cases had in common in terms of experimental living and the possibility of re-developing new living typologies in the same adaptable "infrastructure". This point is possible thanks to the differentiation of two systems, a fixed system and the personalized one. The second key point is the relationship between the context climate properties and the development of new ways of living in community. This could perhaps be an approach that could help shape future liveable cities in terms of a sense of community and new and changing housing needs.

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August 19, 2016. Marcel. To Kim, resident of the Ökohaus since 2014, for the interview on August 20, 2016. Christine Kanstinger. Partner - Architect Atelier Frei Otto. On the other hand; To Aroca for the conversation in his studio on Wednesday, January 13, 2016. To Prada Poole, my sincere thanks, for the conversations held in January and August 2016. For showing me the role of Emilia Bisquert, All the corners of the project, details insitu, context, architecture, ideas and proposals for the houses in Calle Ángel Muñoz 22.

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NOTES

(Quotes and interviews from German, Spanish or French references were translated for this paper by the author and an official copy-editor.)


2 These allow for change, diversity, relationship to exterior, views, standardization, possibilities for growth, typology, city, country, scale of city (size), year, age, complexity of team work, cost or budget if available, square metres (area), scale project, constructive system, innovation factor, association and experimental prototype.

3 Koolhaas and Obrist (2011).


7 “The trees were maintained and also the arrival of solar rays was quantified to be able to take advantage of all the energy of the sun that was available” (Section 3). Extract from interview with Christine Kanstinger, study partner and daughter of Frei Otto. Der Traum Vom Baumhaus (The Dream of a Treehouse). Documentary by Beate Lendt (Rotterdam: ximage, 2011).

8 Frei Otto, “¿Cambia de rumbo la arquitectura?”, La construcción y la vivienda en el último tercio del siglo XX (Barcelona/Madrid: Revista Temas de Arquitectura, 1971), 8.

9 Otto, Frei. La construcción y la vivienda en el último tercio del siglo XX.

10 In order to save space, just two interviews have been selected to give a taste of the subject.


12 What was the motivation for your choice (to live here)? What was the source of information? When did you decide to live here? Have you ever modified your home? What part(s) of your house did you design? To what degree do you find your home adaptable/flexible? What is your profession? Age? Budget? Maintenance? Renewable energy? Would you repeat this experience again?

13 giving rise to other information chained, which each of the interviewees in their specific case, qualified.

14 This data is relevant: the possibility of making changes over the years in a simple way allows the housing to adapt, be adaptive and the family nuclei can evolve without having to change their place of residence. The domestic space adapts to the biological rhythms of the person who inhabits it.


16 “Even though I may be shocked by many of my colleagues and urban planners, I suppose that the home of the future will not be a multi-storey ‘honeycomb’, which is now commonplace, where people live in a very small space. To be better, but in terms of housing there is no reason to compare them with bees.” Otto, Frei. La construcción y la vivienda en el último tercio del siglo XX, p.8.

17 Habraken, “La ciudad de soporte no tiene por qué quedar determinada de antemano; puede ser objeto de cultivo”, p. 127; “La ciudad de soporte nunca contendrá slums … ninguna de sus partes llevará hacerse obsoleta.”, p. 128.

18 The interviews have been summarized in order to fit a 3,000-word long article.

19 The Theory of Supports, by John Habraken was developed in 1964 by the SAR in The Netherlands. José Miguel de Prada Poole was invited to MIT in the 60’s. John Habraken in that same decade was in the USA of professor at the University of Massachusetts.

20 In this article, only the first part is treated as a case study.

21 Spanish initials for a type of social housing. VPO: Vivienda de Protección Oficial.

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THE WAY WE LIVE NOW: HOW ARCHITECTURAL EDUCATION CAN SUPPORT THE URBAN DEVELOPMENT OF SMALL SETTLEMENTS

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INTRODUCTION
Continuity in Architecture, a postgraduate atelier for research, practice and teaching at the Manchester School of Architecture, has been working directly with local communities to develop meaningful and productive proposals for the development of new homes that are appropriate for the changing needs of a 21st Century population, while also remaining sympathetic to the environment in which they are constructed.

This paper will examine the evolution of Neighbourhood Planning and discuss the projects that the atelier have undertaken in recent years, before offering some thoughts for the development of future initiatives. It is split into a number of parts; part one describes the aims, aspirations and agenda of Continuity in Architecture, part two discusses the nature of a ‘research through doing’ project within an academic institution, part three describes the background to the research, the particular circumstances of the relationship with the Neighbourhood Planning Committees and the projects that have been completed so far, and part four will reflect upon what has been achieved and will look to the future.

CONTINUITY IN ARCHITECTURE
Continuity in Architecture is a postgraduate atelier, which has been established at the Manchester School of Architecture for more than 20 years. The atelier runs programmes for the design of new buildings and public spaces within the existing urban environment. The emphasis is on the importance of place and the idea that the design of architecture can be influenced by the experience and analysis of particular situations. This interpretation of place can provide a contemporary layer of built meaning within the continuity of the evolving town or city.

The atelier is built upon the principals of Contextualism and agrees with Thomas Schumacher that: “Some middle ground is needed. To retreat to a hopelessly artificial past is unrealistic, but to allow a brutalising system to dominate and destroy traditional urbanism is irresponsible”1. The text emerged as a reaction to Modernism and is now more than a generation old, but given how critical the significance of heritage and the built environment is to our cultural future, it is now more relevant than ever.

Continuity in Architecture is inspired by the efforts of architects working within the existing urban fabric to produce a responsive architecture of narrative, space, intervention, and detail. We aim to
show that the ideas and methods we examine in the studio have real and profitable applications. The main source of our architecture is the place itself. We reflect upon the persistence, usefulness and emotional resonance of particular places and structures. We are interested in the qualities of places that have persisted and we prefer a reading of history that stresses the permanence of tradition as the subject of architecture.

Tradition in architecture in this context is the embodied meaning of buildings and cities produced by centuries of lived experience. Discovery and recognition are a vital part of the design process – the architect has a duty to analyse and describe a place before it can be altered. As stated by Zucchi when discussing the work of De Carlo, “De Carlo refers more frequently to morphology than typology because, according to him, typology isolates a form from its use (and potentially from its context) whereas morphology is interested in a form only in as far as it relates to other surrounding forms and to the pattern of activities that produced them.”

RESEARCH THROUGH DOING
The aim of a ‘research through doing’ project within a school of architecture and design is to construct knowledge through the acquisition of insight and understanding. Design lies at the heart of the educational programme, and certainly within the design studio itself, it is the central locus; thus doing within architectural and design education is the design process itself. At post-graduate level, the design process is inquisitive and analytical. Research is an activity signified by the gathering of insights about an object of research; the aim of this process is the collection of knowledge. Since design and research are inextricably linked, there is a direct relationship between knowledge production and the design process.

Design and scientific problem solving can be vastly different in that scientific understanding generally leads to a logical and concrete solution, while more artistically orientated problem solving can generally be compared with the deciphering of a riddle. Research into architecture is a hybrid subject located at the interface of connecting fields of art, science and technology; an activity defined primarily by production, of physical or virtual products. Thus it can be argued that architecture and design are concerned with production.

Within all research, but especially research by doing, there is a fundamental difference between understanding and examining. Understanding is based upon a comparison, while examining requires a penetration of the object. That is, understanding is exercised at the surface of the object, whereas examining takes place on the inside; examining is more profound. When examining an object, place or thing, the investigator is involved with it; there is an insightful relationship between the investigator and the investigated. This implies a coming together of the theory of the design and the
practice of design. This suggests that the knowledge gained from doing is less objective, and so it is more revealing. Therefore, in research by design projects, it is the design process that forms the route through which new insights; knowledge, practices or products come into being. The inclusion of live agendas within architectural education have been increasing in popularity in recent years and this is in contrast with the tendency of the twentieth century for architectural education to be ‘product’ orientated most commonly concerning a traditional design brief to create a given building on a given site⁴. One of the key advantages of a ‘Problem Based Learning’ (PBL) approach is the development of employability and life long learning skills which begin to set the context for a lifetime of continued professional development, both formal and informal. The job of an architect requires architectural design skills alongside the ability to analyse, organise, collaborate and communicate ideas; that is to solve problems. Within architectural education there has been a inclination to create a simulated setting which allows students to show off the full range of drafting and design skills but not necessarily the additional skills required to deal with a real life problem. “Much design education is very remote and esoteric and even where design work has a ‘real life’ context there is a tendency to ‘tailor’ the design brief, often for valid educational reasons, in order that the creativity of the student is not limited by the reality of the context of the design problem.”⁵ Continuity in Architecture are determined that the students should have the opportunity to react to the live context of small settlements, while also taking into consideration the wider context and the live agenda of a small urban environment, whilst also meeting the wider curricular requirements of the course.

THE WAY WE LIVE NOW

It is well documented that the UK has a shortage of well-constructed and affordable housing. The situation is still deteriorating and is now commonly referred to as the ‘Housing Crisis’. The Royal Town Planning Institute have reported upon this and explain that the cost of housing, whether in private ownership or rented, now commands a disproportionate amount of peoples’ income. This is not actually a current trend, the cost of housing and people’s earning have for sometime been divorced, indeed since 1975 real house prices have increased by 126 per cent. The RTPI support this statement with an explanation of the current situation:

“More than three million households in the UK now spend more than a third of their income on housing … The number of 25-year-olds who own their own home has more than halved in the last 20 years (20 per cent, compared with 46 per cent two decades ago) … Average house prices are now at 7.9 times average earnings; this is particularly difficult for many young aspiring homeowners … There has been an 88 per cent fall in the amount of social housing built compared to 20 years ago … The number of homes being built which are classed as “affordable” has fallen to its lowest level for 24 years (only 32,000 new homes) … The UK is building 15 per cent fewer homes than it was in the five years before the downturn in 2008 … The number of “working households” living in poverty (7.4 million people, including 2.6 million children) has reached record levels in part as a result of the housing crisis (especially in London and southern England) and high rents in the private rented sector.”⁶

There are a number of reasons why this housing crisis has arisen, these include 1) Legislation - the power for the construction of affordable housing was removed from Local Councils, and very rigid planning legislation that makes it difficult to build within the countryside (or Greenbelt), 2) Nimbyism - the idea that many residents do not want the tranquillity of their current situation spoilt by the influx of a great many new residences, 3) Wealth tied up within property - if house prices drop, so does the individual worth of the population, 4) Land not being available in the places where the housing need
is greatest, and finally 5) Land Banking - owners are not prepared to do anything with their land, they would rather just let it accumulate value. 7

Neighbourhood Planning was part of the Localism Bill introduced in 2011 by the British Government. It passes responsibility for important decisions about the development of the built environment from centralised government to the local community. This was a laudable attempt by the then Conservative government to redistribute decision-making powers and thus speed-up the construction of new homes. The Localism Bill was very much part of the twenty-first century movement towards the primacy of the individual and the placing of importance upon ideas of community, family and civic responsibility. One of the most significant aspects of contemporary society is the need for the individual to lay claim to the control of many aspects of the circumstances of life.

Traditional government, in which policy is formed by experts and administered by state officials, is increasingly being challenged. Top-down enforcement of regulations, rules or directives is no longer acceptable to many people who feel that the individual or small collective is much better placed to make important decisions about things that happen within their own neighbourhood. Thus Neighbourhood Planning should, in theory, be a very good thing. The community is much better positioned to understand the needs and capability of their environment. Neighbourhood Planning certainly enables communities to play a much stronger role in shaping the areas in which they live and work, it provides an opportunity for communities to set out a vision for how they want their community to develop in ways that meet identified local need and make sense for local people. However, there is the danger of well-meaning, but ill-informed individuals making decisions that have massive implications for the community. Town and Country Planning is difficult; it involves an intimate understanding of the qualities of what is already there, combined with a specific knowledge of the economic, political, social and cultural power structures of the place, and the needs and aspirations of the current population. To be truly effective as a vehicle for social change, the Neighbourhood Planning Committee need to have the ability to envisage an alternative future. The other problem with Neighbourhood Planning is the possible infiltration of the group by parties with less philanthropic and much more vested interests in developing the area.

Continuity in Architecture has been working on developments within small towns in northern England and Wales for a number of years. This encourages theories and ideas to be developed and tested at a small and controllable scale within the studio context. Projects have been completed in: Preston, Cartmel, Grange-over-Sands, Colwyn Bay, Bollington and Bakewell. The more recent projects have begun with two simultaneous investigations; the first examined the actuality of the place, the second considered what “home” means in the twenty-first century.

Colin Rowe and Fred Koetter describe ‘the city (and by our own extension, the town) as a didactic instrument’ 8 that is, a place in which a desirable discourse can be formulated - and it is through these conversations that the evidence for the argument of interpretation is collected. The reading and understanding of the message of the built and the natural environment provides the basis for the discussion. We have developed a range of ways of summarising our approach, the most persistent of which is a distillation of our pedagogic method into three words: ‘Remember, Reveal, Construct’.

The nature of the home has, over the last generation, radically changed. Many of us are no longer able to live or even desire to live in comfortable three bedroom homes with small gardens and parking for two cars. Shared housing, family homes, co-housing, communal living, affordable housing, live work units, starter homes, multi-generational living, adaptable home, homes for life, downsizing, up-scaling, and homes with shared facilities are all relevant issues and pertinent to the way we live now. This duel investigation means that all of the subsequent design projects are informed by highly contemporary ideas about the modern lifestyle combined the strong tradition of the locality. A
sympathetic reading of place and culture introduces alternative views, difference, variation and change that leads to design projects which consider the surrounding vernacular traditions, the history of the site and the needs and aspirations of the future local population (much of which the local residents may not be aware of).

Over the academic year 2016-17, Continuity in Architecture has been working in the Derbyshire town of Bakewell. This is small settlement, about 50km to the south of Manchester, set within the beautiful and highly protected Peak District National Park. The town has a higher than average elderly population, income, and house price. Development of the Bakewell Neighbourhood Plan had already begun; the town was aware that they would be obliged to construct about 150 new homes within the next decade, and they had established where exactly the social need for housing was, but they had not decided exactly where the housing could be constructed. This number of new homes was a somewhat controversial proposal within the extremely conservative conservation area.

The project lasted for the whole academic year, the first semester of which focussed upon the design of a theoretical home on a small, complicated site on the edge of the town centre. This allowed the students to develop their own ideas about the manner in which the home should be occupied, combined with a particular reading of the place. This was a ‘research through doing’ project. The students developed some initial ideas about the physical and social context before they started to design, but these were extensively explored through the design project. The process of design encouraged reflection, which in turn highlighted further aspects that needed greater investigation. This cyclical exploratory process yielded highly productive results that formed the basis for the second semester project. Three distinct housing types emerged: Live-work units, Multi-generational living (Figure 2) and housing with shared facilities; which challenged the housing types currently on offer in the town. The results were shared by the whole group, so for example, one student who was exploring
live-work units would pass on their findings to another student who had maybe looked at communal-living. The design proposals were deliberately radical, but not gratuitously inappropriate. The ‘ideal’ was for a design that completely served the needs of the contemporary society, was obviously of the 21st Century, but also looked as if it could have always been there.

![Figure 3. Analysis of potential sites in Bakewell using the BIMBY toolkit. Continuity in Architecture. 2016.](image)

The second semester project involved working very closely with the Neighbourhood Planning Committee and the Town Council. Through a process of negotiation, and using the BIMBY toolkit (Figure 3), eight sites were selected within the town that could potentially be developed. ‘Beautiful In My Back Yard’ (BIMBY) is a planning tool that is designed to encourage interaction between the local community and the planning authority in the selection of appropriate sites for potential development. BIMBY looks at such factors as walking distances, accessibility, bus routes, available resources, etc. Each of the sites could potentially contain between 20 and 50 homes.

The cohort of students was then subdivided into small groups, and each was allocated one of the proposed sites. The students were expected to develop contextually driven solutions based upon the earlier ideas and concerns that had been rehearsed in the first semester. They developed an organisational plan for the site, as well as determining the exact type of housing to be established upon it. All of the projects included a variety of house types, thus providing affordable, market price, live-work, and homes for a variation upon communal living. All design solutions included a detailed examination of the exterior space, the relationship between the façade and the public space, and a meticulous investigation of the interior.

The solutions responded to the specific policies developed within the Draft Neighbourhood Plan. This was beneficial to the residents of the town, but also provided a useful and complex situation for the educational priorities of the curriculum. The three policies that the project proposals observed were:

- **POLICY H1 (Provision of Affordable Housing)** recommends “a mix of social rented, shared ownership or a mix of the two be progressed”\(^9\). One example included four compact starter home benefitting from shared courtyard, outdoor storage and guest house to create an affordable solution. (Figure 4).
POLICY H2 (Age and Disability Related Considerations) states that developments “must meet the housing needs of the town’s ageing population”\(^\text{10}\). This was noted in a number of the student projects including one that created a community of homes that included such aspects as level access bungalows mixed with apartments, and family homes. The social facilities were a series of shared outdoor squares, a café, allotments, a play area and multipurpose community building. (Figure 5).

POLICY H3 (Housing Mix Development) states that “all housing should be of a size in accordance with affordable housing requirements”\(^\text{11}\). This is evidenced in a vacant building site behind the Town Hall, which has been denied planning permission to develop housing a number of times because the proposal was unsympathetically large and involved the demolition of important structures. The student scheme buffered the contentious acoustic conditions of the Town Hall with a series of live-work units, which overlooked the quieter garden to the rear.
The design proposals were exhibited in Bakewell Town Hall. The end of the first semester exhibition proved to be somewhat controversial; there were many positive comments, however there was also obvious objection to any development in the town. Surprisingly one local resident commented, “This is too good for Bakewell”. The local press reported upon the exhibition (we would have made the front page of the weekly paper if a naked intruder had not been caught on the same day the exhibition opened). By the time the second exhibition was staged, the local population had accepted the idea that development within the town was going to happen, so it was met with a much more positive reception.

REFLECTIONS
In a recent review of Neighbourhood Planning, Nicholas Boys Smith, the Director of ‘Create Streets’ quoted a senior planning inspector who expressed his frustration at the process: “Half of them are barely worth writing. They just parrot the local authority’s plans”12. Boys Smith goes on to ask: “How we can make for more effective plans? Some of the answer lies at the local level. The most powerful and effective neighbourhood plans have a very strong sense of place, of what will get built and where. The two most powerful, yet insufficiently used, tools in the Neighbourhood Planning armoury are allocating sites for development and setting out a clear and predictable Design Code for what that development should be and look like.” 13

This project takes the Neighbourhood Plan beyond what is normally expected by generating real proposals, through drawings and models. This allows the general public to comment on ideas that they can visualise. The projects should be viewed as an example of best practice in Neighbourhood Planning and disseminated further on both a local and national level.

The series of projects developed within Continuity in Architecture will lead to the establishment of the Small Settlements Research Unit, this will allow the projects to develop beyond the confines of the academic year and the architectural curriculum. To a certain extent this has already happened, Bollington Town Council commissioned project for traffic calming entitled ‘Reclaiming the Road’ (2017) which was completed in collaboration with ARCA Architects and based upon the ideas developed by the students in the academic year 2015-16.

Design is not a linear process; it is a cyclical practice that continually involves using informed research to make design decisions that in turn creates the need for further investigation. Design through research, and research through design practices are highly productive vehicles for student progression, and when conducted in an almost live situation can prove to be beneficial for the students and the client. The information that was produced by the students reacted to the live conditions of the Neighbourhood Plan but required academic application to make it impactful. Each output was designed to challenge policy makers and propose a more place specific solution to Neighbourhood Planning.
NOTES

12 Boys Smith, *Is Neighbourhood Planning flourishing or withering? And how can communities do it better?*. 2016.
13 Boys Smith, *Is Neighbourhood Planning flourishing or withering? And how can communities do it better?*. 2016.

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THE ROLE OF SPACE IN URBAN COLLECTIVE LIVING ARRANGEMENTS – KEY TO SUSTAINABLE COOPERATION IN COMMUNITIES?

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INTRODUCTION
On a September evening in 1979, about a hundred people squatted the vacant former hospital building ORKZ in the city of Groningen, Netherlands. Almost 40 years later, the building still hosts a thriving self-managed community with common public socio-cultural facilities. This type of housing can be characterized as an urban collective living arrangement (UCLA). UCLAs are participatory, intentional communities in an urban context, based on voluntary membership beyond kinship ties with a strong emphasis on sharing (e.g. space, food, childcare), and a common group identity(1). They range from multigenerational multi-household communities to collaborative housing arrangements with a common mission, like eco-friendliness, spirituality, or inclusion. UCLAs are marked by a frequent exchange with their outside environment through their embeddedness in the urban context.

Sustainable Cooperation in UCLAs
But how do such communities manage to sustain themselves over time? And which role does the space they inhabit play in this? To investigate this matter, we pose the following research question: How does the spatial structure of the UCLA contribute to sustainable cooperation in the community? Sustainable cooperation in UCLAs is characterized by their ability to keep up the production of valuable material (task-oriented) and immaterial (relation-oriented) goods under changing circumstances. However, hardly any systematic scientific evidence on sustainable cooperation in UCLAs exists. Most insights on collective living arrangements come from explanatory panel studies modeling survival rates in large samples of communes(cf.2-4), and descriptive cross-sectional case studies focusing on singular factors distinguishing these communities from others(cf.5-7). Official European statistical institutes do not monitor alternative housing forms(8).

Previous research on communes has mostly elaborated factors of commune survival, but no specific research on cooperation in UCLAs has yet been conducted, let alone the role of space herein. On the community level, the longevity of a commune as well as the size of the community have been shown to have a positive relationship to commune survival (2,3,9). Moreover, the form of ownership of the land and physical structures influences commune survival by providing security about the community’s base of existence if the land is owned(5). However, meso- and micro-level evidence on the influence of the (physical) structures within the communities is lacking, despite of the fact that previous research
in organizations has pointed towards the importance of physical space for cooperation within organized social groups with a common goal\(^{10}\).

**METHOD**

To explore the role of the spatial structure in an UCLA, an ethnographic grounded-theory approach was chosen\(^{11}\). The importance of the spatial structure for cooperation was identified on the basis of observation and interviews.

**Data Collection and Procedure**

For this study, the well-established multi-generational and diverse community Oude RKZ (ORKZ) in the city of Groningen, the Netherlands, was chosen as an in-depth case. The ORKZ is located in an urban district of the 200,000-inhabitant city. The community lives in an old hospital that was squatted in 1979, but legalized by the housing ministry five years thereafter. The ground is owned by the municipality and the building by a housing association.

Participative observation took place between June and November 2015 and between February 2016 and June 2017 after moving into the building and engaging in the community’s activities.

In addition, data was gathered by conducting ten semi-structured interviews (nine face-to-face, one telephone) with residents that were treated as informants about the community. The interviews rendered roughly 20 hours of interview material. All interviewees gave their informed consent.

Half of the interviewees were selected due to their membership in a committee to inform about the organizational structure. The other half of the interviewees was selected randomly, sampling from the living units in the community. All participating interviewees were approached personally to ask for their participation. Two approached residents rejected participation.

A third way of collecting data was through archival data, obtaining documents of the community (introduction booklet, statutes, minutes of meetings, weekly community newspaper), videos, pictures, and following the community’s Facebook group. The community was informed of the study conduction by means of the community newspaper with the possibility to object. Beforehand, the board of the community gave permission to conduct the study.

**Research Methods & Analysis**

To generate a thick description of the community and learn about its physical, social and organizational structures, the domain of cooperation and the self-perception of the community were identified in the UCLA. For this purpose, free listing techniques and type of-questions were used in the interviews with informants\(^{12}\).

For analysis, the interviews were transcribed and selected material (including notes of observations and obtained documents) was coded in an iterative process with the software MAXQDA. All cues related to space were highlighted during the analysis and were cross-analyzed with cooperation. To investigate the sustainable character of space-cooperation interactions, cooperative critical incidents\(^{13,14}\) were outlined and analyzed with regard to structural elements. In the iterative process of analysis, the researcher went back and forth between analyzing the obtained data and going back into the field to collect more data. During analysis, assertions were used to extract general principles and conclusions from the material, i.e., declarative statements about the data content that were revised during the analytical process according to (dis)confirming evidence from the data\(^{15}\).
RESULTS
Spatial Organization and Cooperation
The building is divided into 29 corridors which form smaller sub-units of (self-)organization. Nowadays, it has 229 living units with different sizes approximately between 16 and 120 square meters (excluding some outliers) and roughly 250 inhabitants. It also has several non-inhabitable spaces that are rented as ateliers and storage spaces to both residents and non-residents as well as several social-cultural facilities such as a cinema, a bar, a restaurant, a café and a theater run by the residents themselves voluntarily and open to public visitors. Building structures change across time with renovations and redistribution of space for different activities (for example, the former cinema storage room is now the biological shop). Cooperation takes place among residents on corridors and in the main organizational, socio-cultural and meeting spaces both bilaterally, in groups and on the community level.

Sustainable cooperation is firstly facilitated by various contact opportunities in jointly used central parts of the building. The old hospital building is spacious with long hallways and perceived as large by residents, providing ample opportunities to meet but also avoid others. Central meeting places are the blackboard at the main entrance of the building, the office for all formal matters, the socio-cultural facilities and three main common gardens (see green triangles in Figure 1), which are used seasonally and multi-functionally (including social gatherings, sport events, parties, physical activities), as well as a large roof top terrace with a garden. Just like these central meeting places, the spacious hallways (both general ones and the ones on the corridors) are important for meeting other residents. Chitchatting, exchanging gossip, but also asking for help and cooperation occur frequently on the hallways. When residents do not feel like meeting others, various entrances to the building and corridors enable them to take shortcuts and alternative routes throughout the building. Several corridors have their own (multiple) entrances from the street or garden.

In addition to jointly used parts of the building such as hallways and central community meeting spaces, corridors are essential spaces for cooperation. Corridors usually share a living room, a kitchen and bathrooms. They differ in size, ranging from one to 14 living units (see Table 1). Eight corridors can be considered small in terms of living units with up to four living units; five rooms are not associated with a corridor. Thirteen corridors can be considered middle-sized and have between five and ten living units. There are two middle-sized corridors without common spaces. The front doors of their rooms open to general hallways. Eight corridors can be considered big and have between eleven and 14 living units. Most living units are occupied by single inhabitants. However, there is also a...
There are three different price categories for the rent the inhabitants pay for their living units. The first and lowest rent category is for very small rooms (<20 square meters) without warm water basins. The second and most common category is for “non-independent” rooms, of which the inhabitants share common cooking and sanitary facilities. The third and highest rent category is for independent rooms or apartments that have an own shower, toilet and kitchen and usually provide the most space in terms of square meters. The rent in all categories is affordable with a Dutch minimum income or social welfare. Spaces from all categories are distributed among the building according to the original building structure, thus not in a planned and systematized way.

Residents use both corridors and other social sub-groups for cooperation related matters because the opportunities and occurrence of social contact play a role in facilitating cooperation. Social contact on the corridor differs depending on the size of the living unit (residents with smaller rooms more easily hang out in common corridor areas if they perceive these areas as cozy or social), the atmosphere and mind set on the corridor with regard to sociability, and social subgroups (e.g. friendship groups). Corridors form social subgroups through being immediate neighbors and sharing sanitary and cooking facilities and, depending on the activity level on the corridor, organizing social activities together.

<table>
<thead>
<tr>
<th>Number of living units</th>
<th>Number of corridors</th>
<th>Rooms without an associated corridor*</th>
<th>Corridor without common spaces</th>
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</thead>
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<td>14</td>
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</tbody>
</table>

*Table 1. Distribution and size of living units among corridors.
For both task- and relation-oriented cooperation on different levels, corridors as social meeting spaces are important: residents can ask each other for help, set up joint (cooperation) projects (for example to fix something together) and discuss matters important for the community. As such, they form pre-structuring community sub-units functioning as incubators of ideas and plans. For example, a resident who has the idea to change the way a community space is used (e.g. turn an atelier into a common movement room) can first check with her corridor mates if they would support such an idea. This way, she can estimate the likelihood of other community members to cooperate on her idea or plan.

The latter example illustrates additionally the function of physical space as a strategic asset. Initiatives and groups within the community can use spaces they occupy as an asset for obtaining the say over other community spaces (e.g. reach the mutual use of formerly reserved spaces by two or more parties), but also use room distribution or the need for a room (e.g. a movement group needs a movement space) as arguments for their interests. Moreover, private rooms within the community are assigned in a strategic fashion, i.e. as a reward for contributing to the community. In this latter case, physical space as a strategic asset serves social control within the community and therefore signals the importance of the social dimension interacting with the physical dimension within the community.

Interestingly, using physical space in the mentioned ways as a strategic asset shapes social relations and social interactions in the community in two main ways. Firstly, alliances according to interests related to physical space are formed (e.g. physical movement interested residents form a social (interest) group). Secondly, the physical space that people frequent forms social groups and the possibilities for social interactions, in turn influencing the possibilities of forming new interest groups.

In summary, physical space and social interactions are intertwined and community space is subject to a continuous negotiation process among community members to accommodate diverging interests.

On the community level, cooperation evolves around the organizational structure of the community. The organizational community structure is therefore introduced shortly in the following to understand the intertwining of space and cooperation. The community is self-managed, meaning that it maintains the building and its services and facilities itself. All residents are part of the association De Koevoet, which decides in its general assemblies held a minimum of three times a year about the community budget (of the association, the maintenance committee and the technical service), rules, proceedings and important organizational matters. These assemblies are held in a multifunctional space, namely the largest atelier room of the community.

The community has institutionalized several services in and around the building in working groups called committees. The so-called self-sufficiency service forms the basis of engagement in voluntary committee work. The community currently counts 16 committees (see Figure 2). Double-arrowed lines represent cooperation relations in Figure 2. Arrows with a square head represent a control relation with the party at the square head being controlled. A dotted arrow indicates an insecure relation and a one-sided arrow indicates advice giving to the other party. Starred committees are trusts, including the black knot connecting several committees. Dotted squares indicate that a club is not a committee, but is recognized as community volunteer (self-sufficiency) work.
Daily community-level cooperation evolves around two main multifunctional spaces. The first one is the office, where committees from the communication and organizational cluster hold their meetings. On the right-hand side of Figure 2, the purple bubble depicts the communication cluster. These committees all facilitate communication among residents and committees and have therefore multiple relations to different committees at different times, depending on the needed service. The ORX Network has its own office with IT facilities. The other two committees use the general office for their organizational matters, just like the organizational cluster represented in the orange bubble. The latter cluster consists of the committees necessary for maintaining the organizational functioning of the association and building.

The second important multifunctional space is the socio-cultural area commonly used by the well-established socio-cultural committees, depicted in the blue bubble of Figure 2. The socio-cultural area accommodates a kitchen, a bar, restaurant tables, a pool corner and a semi-separated corner for the give-away shop all in the same room, as well as the entrance to the bio store, to the cinema and to the theatre and attached bathrooms and storage rooms. It thus accommodates different activities in two ways. Firstly, it assigns parts of the space to different activities, so that, for instance, the kitchen is used by the restaurant and the give-away shop has its own designated area. The second is a common use of one spatial facility by different committees. For example, the cinema bar runs on the days on which there is no restaurant/café.

CONCLUSION
In conclusion, physical space in the ORKZ community produces sustainable cooperation in three main ways. Firstly, it creates opportunities for both social contact and privacy through its size and spaciousness (various entrances and hallways). Especially common areas provide residents with opportunities for socializing and social contact from where cooperation can evolve. For the public areas in the community, this is also true for contact with the outside public. Secondly, common physical areas facilitate exchange of goods and information. Both socializing and exchange opportunities facilitate cooperation among residents. Certain types of cooperation are tight to certain spaces, as was discussed for the socio-cultural area and the office accommodating different organizational committees. Thirdly, physical space can be used as a strategic asset within the
community, producing for example social control[10] in common physical spaces. Social control can be exerted through seeing each other and observing each other’s behavior, which, in turn, supports cooperative behavior.

Consequently, this study indicates that particularly common physical spaces contribute to cooperation within the community, but that also a fit of the physical structure to the organizational structure functionally benefits sustainable cooperation. Additionally, the opportunity for social subgroups to meet and pre-discuss ideas and plans regarding the community in socio-cultural as well as common corridor areas appears conducive to stable cooperation over time.

Future research should thus take the interaction of the physical with other structural dimensions into account. The spatial divide of functional clusters within the community implies the importance of the organizational structure for sustainable cooperation, whereas the role that social interaction and social relations shaped by physical space play indicate that a close examination of the social structure yields relevant insights.
NOTES


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COMMUNITY LAND TRUST SOLUTIONS TO LOCAL HOUSING ISSUES

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INTRODUCTION
In the last few years the United Kingdom has experienced the rise of the ‘Community Land Trust’ (CLT) movement. In the last three years over 130 new CLTs have been formed, with a total of 225 currently in existence in England and Wales. Community Land Trusts are also being formed across the globe from Canada and Kenya to New Zealand and Australia. The base model for a CLT has been developed over the last 50 years in the United States of America where it originally began in the Deep South to ally the issues of racial inequality in relation to land and housing provision. There are also other types of successful local initiatives used to allow community ownership and stewardship of land and buildings. This paper however, will focus on the CLT model and its possibilities, and hopes to enlighten the reader to the valuable potential CLTs have to offer in a time of global crisis. It will discuss how CLTs can act as a beacon in the social housing sector by providing low energy, carbon neutral homes for their local communities, thus demonstrating some of the reasons they have become so popular in the UK since 2014.

A Community Land Trust is an organisation specifically created to hold land and/or buildings in 'trust' for the local community in perpetuity. The ‘National Community Land Trust Network’ acts as an umbrella organization in England and Wales for all CLT’s and they explain on their website that although a CLT is not a legal form in itself like a ‘company’ would be, they are defined in law and therefore there are legal specifics that a CLT must be, and do:

- A CLT must be set up to benefit a defined community;
- A CLT must be not-for-private-profit. This means that they can, and should, make a surplus as a community business, but that surplus must be used to benefit the community;
- Local people living and working in the community must have the opportunity to join the CLT as members; those members control the CLT (usually through a board being elected from the membership).

In this way CLTs offer the means to provide permanently affordable housing as well as securing other community facilities such as pubs, allotments, farms & gardens, and workspaces so that the community profits from this forever; this paper will focus on housing specifically. The benefit of this model means a CLT can be flexible in their set up depending on the requirements of the locality. It also means they can vary in size and operate as effectively in rural situations as in city suburbs. The term ‘community’ here means a group of people working or living in an area such as a street, a village...
or an urban neighbourhood, that share an ambition; they have their own community's needs at the heart of their concerns.

SOCIAL HOUSING ISSUES
The Housing Act of 1980 in England and Wales introduced 'The Right to Buy' into the social housing market. The rate of building replacement properties has never reached the targets of the social housing needs since this time as there was no commitment to use the capital gained from these sales, nor any government policy to replace the sold dwellings. The UK is therefore experiencing an ongoing shortfall in decent quality homes for the low-waged and more needy sectors of the population. To compound this issue, austerity measures bought in after the formation of the coalition government of the Conservative & Liberal Democrats in 2010 meant that there have been further cuts in benefits available to tenants as well as a reduced investment in new social housing. In affluent areas of the country local people are being regularly priced out of their own home areas due to rising house prices and expensive private rental properties.

From April 2016 rents charged by housing associations and other landlords in the social sector across the nation are being cut by 1% each year for the next four years, to combat a steep increase in rents over the last 'austerity' years. However, the Office for Budget Responsibility has suggested that fewer ‘affordable homes’ will be built as a result to the change in the rental regime. Simple calculations show that the reduction in the landlords’ income will have a direct relationship to the spare capital available to invest in new house building. Yet nationally the Government is calling for 260,000 new homes to be built each year so the urge for another social landlord is pushing the CLT solution further into the playing field.

COMMUNITY-DRIVEN SOLUTIONS
There has been global recognition that the UK’s current Conservative government have been taking a 'step backwards' in the global battle to reduce carbon emissions. The UN’s chief environment scientist, Prof. Jacquie McGlade, directly criticized them and stating "What's disappointing is when we see countries such as the United Kingdom that have really been in the lead in terms of getting their renewable energy up and going - we see subsidies being withdrawn and the fossil fuel industry being enhanced." This emphasises the call to communities to take the lead as suggested by Naomi Klein in her book 'This Changes everything’. Here she concludes that the solution to our global environmental crisis lies in the hands of each local community as Governments, who are supposed to be protecting us and our countries interests, are proving untrustworthy as they choose to side with big corporate industries, like the fossil fuel industry, that are responsible for destroying our planets resources at an alarming rate. The Community Land Trust movement offers one potential for communities to act holistically both locally, whilst thinking globally, with a strong network of support offering help nationally. Already there is a track record of inspirational projects taking placing place in the UK. In Liverpool, the Homebaked CLT have started their program for renewal in an area of Anfield which was mainly earmarked for demolition by the local ‘housing initiative’. A co-operative bakery with flats above is the starting point which hopes to then stretch into the renovation of the boarded-up streets of terraced housing; helping to rebuild and restore the community spirit of the area.
At the other end of the scale there are many ‘desirable’ rural areas that suffer from exponentially rising house prices; meaning local people working for rural wages are forced out of the now unaffordable accommodation. The villagers of Rock in the St Minver lowland area of Cornwall formed the St Minver CLT and have now 20 self-build homes in their portfolio which local workers and people from the area have preferential access to. This is a common problem shared with other rural CLTs although particularly troublesome in the South-West of England where “the average house price in 2012 is eleven and a half times the average salary across the region, in rural areas it is up to 13 times the average salary. Social housing waiting lists have increased over the last few years more in the South West than in any other region of the UK up 26% from 148,422 in 2010 to 186,305 in 2012. One in twelve households in the South West is on a social housing waiting list.”

As a CLT holds these community facilities and land in trust forever, there has been a keen interest in providing high quality facilities that are affordable to maintain and run. This situation sits hand in hand with providing a low-impact, low-energy and healthy housing stock as part of their portfolio: a definite bonus.

LESSONS FROM THE CALDER VALLEY COMMUNITY LAND TRUST (CVCLT)
The author is both a local architect and a member of the charity Calder Valley Community Land Trust (CVCLT) situated in a rural area of West Yorkshire in the North of England and as a recent trustee has first-hand knowledge of the workings of a CLT.
The upper part of the Calder Valley is where the CVCLT is initially focusing its efforts. The main two towns are Hebden Bridge and Todmorden; both are traditional market towns built mainly in the industrial revolution for the woollen trade and have numerous outlying villages both in the valley bottom and up on the hilltops. The valley is susceptible to flooding. Hebden Bridge is a moderately famous town in the UK for many reasons including its unique collection of individual shops, so rare these days in the UK and in 2010 and again in 2017 it won the Academy of Urbanism award of ‘Best
Town in Britain and Ireland’. Interestingly, Todmorden was also a finalist for the same award in 2017\textsuperscript{11} and is the home of ‘Incredible Edible’, a local food growing project which sees food growing areas around the town where people can help themselves to the produce.\textsuperscript{12} The bountiful effect is obvious everywhere in the town with growing plots around the health centre, along the canal, next to the railway station, in all the parks, along many of the roads and there is now a farm too; you can pick easily yourself a meal during the summer months. However, behind the success stories of the town sits other less heartening information. In a recent report by the Community Foundation for Calderdale, ‘Todmorden’s Vital Signs’\textsuperscript{13} shows the town has higher than average for the Calderdale area: levels of unemployment, children living in poverty, all-cause mortality rate and people living in rental accommodation plus the amount of all homes with no central-heating is double the national average. In fact, no Calderdale neighbourhood ward has the benefit of reaching this national average for central-heating which may help the comprehension of a wider view of the demographics of the area.

In the Calder Valley, each town and ward has its own specific housing issues. In Hebden Bridge houses prices and rents are high in comparison to the rest of West Yorkshire and there is a lack of availability of good quality, low-rental homes for the people who were either born, brought up or work in the area, whilst the richer incomers buy the lower priced properties to refurbish, reducing the accessibility again to cheaper accommodation.

The housing need for the area is well documented by the Calderdale Metropolitan Council. This includes the number of households wishing to obtain property in the area and the size (number of bedrooms) of the dwelling they want, the number of bids made on the available properties in the area, plus recommendations for minimum floor space requirements. A CLT can quickly ascertain the local housing need. However, there are still many people who are not on the council’s housing list that still are in a housing need as the slow and laborious system to gain a home using this method is often bypassed and private rentals are commonplace. The situation is exasperated by a lack of suitable accommodation. In a recent supportive letter to CVCLT from Calderdale Council regarding a site in Hebden Bridge they highlighted the following; “46 properties have been let in Hebden Bridge between June 2015 and June 2016 and in total attracted 405 bids”\textsuperscript{14}.

Analysing data gathered from the council is one small part of the CVCLT’s work, as mentioned previously it is part of a CLT’s requirements is to involve both its members and the local community in the decision-making process regarding any proposed developments. Initial consultations for a CLT are to gain support and gather information from the surrounding community. A ‘See it and Believe it’ fund of up to £500 is available from the Community Land Trust Network to fund visits to well established CLT’s within England and Wales to share knowledge and experience. This enables good networking opportunities, and in turn offers the external support from other CLT’s who are willing to come to talk about their experiences at community consultations. The relationships formed between the various CLTs are an important aspect which help maximize this initial and rapidly expanding knowledge base required by the committee members of a CLT and is actively encouraged.

**UK GOVERNMENTAL CHANGES TO HOUSING REGULATIONS**

In March 2015 the Code for Sustainable Homes was removed\textsuperscript{15} by July the 2008 Parliamentary Act requiring all new house-buils to be Carbon-neutral by 2016 was scrapped\textsuperscript{16} and in March 2016 the Zero Carbon Hub was closed (this non-profit organisation had been set-up in 2008 by the UK government to help achieve zero carbon buildings) citing “the aim of striking a balance between zero carbon goals and the stimulation of growth in the house building industry”\textsuperscript{17}. However, as part of the European Union the UK has an obligation to comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) which has set a long-term goal to reduce
greenhouse gas emissions by at least 20% below 1990 levels and to maintain the global temperature rise below 2°C. As yet only reliance on building regulations standards are in force and the amendment 108 to the Housing and Planning Bill currently states that a 'Review of minimum energy performance requirements' by the Secretary of State is required. This re-emphasises the concern that the current Conservative government is taking an uneducated opinion on climate change issues.

Over the last 30 years Universities have been involved in carrying out research to show that zero-energy, zero-carbon, and carbon-neutral housing is achievable. Designs such as the straw bale constructed ‘BaleHaus’ developed at Bath University and the ‘Smart’ positive-carbon energy house at Cardiff University, which is suggesting to use housing as energy production units that feed the national grid to replace the cost of power-station generation which increase daily household bills and burn fossil fuels offer a place where CLT’s can look for inspiration.

Many companies have strong environmental principles and procedures written into their policy documentation, and architects across the land are striving ahead to secure better environmentally-friendly buildings. And in that surge of wisdom that seeks to sustain us into a healthy future in harmony with our Earth resources the CLT movement sits in the heart of a community, serving its best interests, acting locally in a global body of like-minded people. The CVCLT has already worked up its own sustainability policy creating an environmental, social and economic vision for the future and it is being developed and honed for each new project undertaken.

CONCLUSION

As a fledgling CLT in the Calder Valley the organisation is being successful in gaining public awareness and backing, council trust and funding since it started in September 2014 and shows that there is a great willingness to support community-led solutions. So far the CVCLT has benefitted from:

- Land donated from the council in Walsden to build housing for the elderly and infirm partnering with local Alms-house charity John Eastwood Homes.
- Donation of the Fielden Centre, a grade 2 listed building used as a community space in Todmorden, by private philanthropists The Pennies.
- Brownfield land donated from the council in Hebden Bridge. After three months of community consultation designs for a terrace of housing are ready to submit for planning.
Figure 7. View of proposed terrace design for Calder Valley CLT High Street scheme (left-hand-side, top row of terraced housing with a route through) set within the context of hilly Hebden Bridge. Image courtesy of Bauman Lyons Associates.

For more information, all the UK’s CLT successes are shared via the CLT Network on their website. ¹ Securing a building stock of low-energy/positive carbon will be cheaper to run and is to the benefit of every place in the UK, particularly as the government’s drive to build 260,000 new homes per year is at the forefront of their housing policy⁵ and as energy tariffs increase. There is a genuine concern that climate change issues need to be addressed more rigorously as the building industry creates 40% of the carbon emissions in the European Union according to the European Parliament. ²¹ Action needs to be taken to prevent further global catastrophes that are internationally recognised as being due to rising CO2 emissions, which in turn are due to fossil fuel use for energy production. Community Land Trusts across the country are striving to secure the best for their locale providing much needed access to good-quality affordable homes helping to replace the dwindling social housing stock that has been occurring since the 1980’s. Positioning themselves at a micro-level and working closely with local people ensures that the housing they provide is both apt for the area, designed for the people that need it and backed by the surrounding, supportive community. Clearly Naomi Klein⁷ is correct in her conclusion; governments appear to be supporting wealthy corporate companies who persist in their flagrant disregard for sustainability rather than seeking the best and most beneficial solutions for the planet and its inhabitants. It is important that all three pillars of sustainability are holistically understood and practiced; where economics are fair and ethical, where the planet is safe, and all living beings are treated fairly and with respect. Only when the three pillars are strong will we gain a truly sustainable future and grass-root organizations such as Community Land Trusts are playing an important part of the collective solutions to the planet’s problems.
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SPECIAL HOUSING AREAS: A PRACTICAL PATHWAY TO LIVABLE HOMES?

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INTRODUCTION
New Zealand’s housing unaffordability has been worsening since the early 2000s. Described as unprecedented in recent history, this period involved one of the longest and steepest trends of house price increases.\(^1\) The 2017 *Demographia* International Housing Affordability Survey identified eight New Zealand cities as seriously or severely unaffordable.\(^2\) The 2013 National Affordability Benchmark puts two-thirds of renter households and 81.4% of first home buyer households below the benchmark.\(^3\)

Housing unaffordability in New Zealand has been attributed to various factors including mortgage-lending deregulation, small scale and inefficiencies in the building industry, construction and materials costs, slow and costly planning and regulatory processes, slow infrastructure development, inadequacies in social housing, natural growth and in-migration, and restricted land supply.\(^4\) Central government has assumed restricted land supply to be the primary cause of housing unaffordability and sought to address it through the establishment of Special Housing Areas (SHAs) under the Housing Accords and Special Housing Areas Act 2013 (HASHAA). SHAs are land sites where housing development can be fast-tracked. They have been called “a key historical moment in the politics of housing supply and planning in New Zealand.”\(^5\)

This supply-side response is a departure for New Zealand, where housing policy since the late 1980s has been strongly focused on addressing housing unaffordability through the demand-driven Accommodation Supplement, an untied payment to consumers to assist with, but not fully subsidise, unaffordable housing. In contrast, international responses to housing unaffordability are multi-faceted, targeting both supply- and demand-side barriers. Responses have included mixed tenure and social mix programmes, social housing provider support, housing allowances, community regeneration, inclusionary planning and financial and tax instruments.\(^6\)

This paper focuses on SHAs in Tauranga and Western Bay of Plenty (WBOP). Together these two councils\(^7\) comprise one of the fastest growing urban areas in New Zealand, and the second least affordable, according to *Demographia*, with housing costing 9.7 times the median household income.\(^8\)

New Zealand’s National Affordability Benchmark shows that 74.5% of Bay of Plenty renting households and 83.5% of first home buyer households are below the benchmark, indicating housing is not affordable.\(^9\)

Documents setting out the establishment and operation of SHAs are examined, including regulatory impact statements, policies, housing accords and monitoring reports. Documentary analysis is used to
identify the rationale, critical actors, implementation processes and expected and actual outcomes. In particular, there is consideration of whether the SHA intervention is likely to result in both affordable and livable dwellings. This analysis is the first stage of a case study about resource-holders and decision-making concerning SHAs, in Building Better Homes, Towns and Cities, a multi-disciplinary research programme to develop better housing and urban environments for New Zealanders.10

**THE HOUSING ACCORDS AND SPECIAL HOUSING AREAS ACT**

The purpose of HASHAA is twofold: to increase the volume of land for residential development; and to increase the pace of consenting developments in order to bring sections and ultimately housing on to the market more quickly.

Both land release and rapid consenting are expected to improve housing affordability. HASHAA is predicated on the assumption that land supply is artificially constrained by councils’ restrictive planning controls, which inhibit the operation of the market and drive up the price of land. Loosening up these controls by zoning land for residential use and ‘fast-tracking’ consents for land subdivision, infrastructure development and building is expected to reduce the costs of supplying housing and consequently improve affordability for consumers.

A council that is defined in Schedule 1 of HASHAA as experiencing “significant housing supply and affordability issues” may set up a Housing Accord with the Minister administering the Act. Under an Accord the council can recommend to the Minister the establishment of SHAs. In turn the Minister recommends to the Governor-General that the SHA be established by an Order in Council.

In proposing a SHA, a council must demonstrate that there is existing or planned infrastructure to support the development, evidence of supplier-led demand to create the development, and evidence of consumer demand for housing. The impetus to create a SHA is driven by the market. A council receives a proposal from a developer or land owner for land to be created as a SHA. There is no requirement on the council to consult with its community about the establishment of a SHA, although some councils have done so. Furthermore, in keeping with the fast-track, permissive consenting process for SHAs, development within a SHA does not require community consultation, usually required for residential developments. There is no public notification of the proposed development and no legal appeal.11

HASHAA prioritises land release as the mechanism for ensuring affordability. Although councils may prescribe a percentage of dwellings in a SHA to be affordable, it is not mandatory. Some have done so, including the Auckland Council, which requires most large developments within SHAs to provide at least 10 percent affordable housing.12

SHAs were only ever envisaged as a short-term measure, while the Auckland Unitary Plan was finalised and reforms made to the Resource Management Act (RMA), the main legislation concerned with the supply, development and subdivision of land for residential housing. In September 2016 HASHAA was amended to allow it to continue until September 2019, since other measures to address housing unaffordability had not progressed and SHA development over the three years had been slow. By September 2016, nine of the fifteen councils named in Schedule 1 had signed Accords and 213 SHAs were established.13 One third of all SHAs were established in 2016, and had had no time to bring housing on-stream by HASHAA’s original end date.14

**SHAS IN TAURANGA AND WESTERN BAY OF PLENTY**

Tauranga is the fifth largest city in New Zealand, with a population of 114,789. The WBOP district surrounding Tauranga has a population of 43,692 spread across rural areas and six main urban settlements.15 Both councils experience significant internal in-migration and have a growing
population aged 65 years and over. Together they make up the sub-regional housing market and operate as a sub-regional economy. SmartGrowth, an integrated settlement planning approach encompassing the sub-region, has been pursued since 2000. This has been reinforced by the designation of the sub-region as a ‘high growth area’ under the 2016 National Policy Statement on Urban Development Capacity, which requires planning for land demand and intensification.

Both councils are listed in Schedule 1 of HASHAA as experiencing significant housing supply and affordability issues. In response to housing unaffordability, two Housing Accords were established. The aim of the Tauranga Housing Accord, signed in August 2014, is to increase the number of dwelling lots by at least 1,000 in the first two years of the Accord. The Western Bay of Plenty Housing Accord, signed in August 2014, has a target of 350-500 dwellings to be built. By August 2016, eleven SHAS had been established in Tauranga, and one SHA had been established in WBOP, in Omokoroa, the district’s main growth area.

Figures 1 and 2 show two SHAs. Figure 1 is a brownfields site currently zoned industrial and adjacent to existing light industrial premises and residential housing. Figure 2 is a greenfields site, one of six SHAs on the eastern outskirts of Tauranga city.

Figure 21. A brownfields SHA on which 130 apartments and townhouses are proposed.
Key Actors

Key actors in the establishment of SHAs are the private sector, regulatory agencies, and housing consumers. Private developers and land owners are critical, as one of HASHAA’s three criteria for SHA establishment is that evidence of demand to create a development must be demonstrated, i.e. there must be private sector capacity and willingness to build houses. The Tauranga and WBOP accords state explicitly that private sector leadership is fundamental to the establishment of SHAs. The Tauranga Accord notes that the Accord will “maintain a well-functioning, private sector-led housing market.” Applications for establishing Tauranga SHAs have been driven by developers and land owners. In WBOP, the majority of the SHA land is in council ownership, however, the development is being undertaken in partnership with a private developer. The Accord confirms the key role of developers, stating it “is about providing the conditions for private investment in housing and will require both Council and Government to work closely with the development sector.”

While supply-side actors are critical to SHA decision-making and implementation, housing consumers and the general public have no role in the decisions to establish SHAs. The legislation does not require public consultation to be undertaken, either in the establishment of a SHA, or in the consenting processes for residential development after a SHA is established. However, both councils consulted with their communities about the establishment of SHAs. WBOP Council consulted with directly affected and adjoining land owners, local community, iwi, and developers. Tauranga conducted public consultation, including open days and requesting written submissions.

SHA Outcomes

Monitoring reports for the WBOP and Tauranga Accords provide data on outcomes against targets. However, the number of new houses in SHAs cannot be identified, because only ‘whole of market’ data is reported, including house price growth, the number of sections developed and building consents in the area, not just those in SHAs. Central government does not collect data on the number of building consents issued, or the number of houses completed in SHAs.

The Tauranga Accord set four targets: increasing the number of future dwellings to 1,000; promoting the development of smaller dwellings (less than 189 square metres); promoting the development of
smaller sections (less than 500 square metres); and maintaining supply of undeveloped zoned and serviced residential capacity for 8,000 dwellings. The most recent report, August 2016, noted the establishment of eleven SHAs in two years, with an estimated addition of capacity for 2,970 dwellings. Six SHAs have been issued with consents for the first stages of development, and three additional SHAs have lodged development consent applications. There have been 183 building consents issued in two SHAs. The report does not give the number of completed dwellings, but indicates that house building has commenced in one SHA. 22

The WBOP Accord set three targets: consideration of two SHAs in the district; an increase in building consents throughout the district (not confined to SHAs); and 100 property titles issued in SHAs. The most recent monitoring report (August 2016) shows only one SHA established, with a capacity for 240 dwellings in future. A consent application for stage one of the development has been received for approximately 38 lots. To date no houses have been completed. No interest has been received from developers for the establishment of a second SHA. 23

These data suggest slow progress in building new houses. Monitoring reports give no indication of the expected development pipeline timeframe, nor whether the establishment of SHAs has sped up the pipeline. Nor is there information about why consenting and completion of houses might be slower than expected.

WHAT’S WRONG WITH SHAS?

Initial comments from Tauranga developers suggest that they see SHAs as more likely to deliver affordable housing because the legislation excludes public notification of SHA development applications and increases housing density. However, commentators argue that SHAs neither result in more housing, nor increase the supply of affordable dwellings. It has also been contended that SHAs are not facilitating livable homes and communities.

More houses?

HASHAA’s intention was not only to facilitate the release of land for housing, but also to mitigate against land-banking by signaling less certainty for capital gains from holding land, 24 and to bring on-stream “previously marginal development opportunities.” 25 The Act’s 2016 amendment provides for revoking SHA status if no development progress is made in 12 months. However, there is no penalty for land-banking in a SHA, and the (then) Minister of Housing stated that he had only limited power to stop it. 26 His response was to write to owners of SHA land to encourage them to start development, or risk losing SHA status. 27

Despite the expectation that SHAs would make land-banking unattractive, numerous commentators have asserted that it is actually facilitated by the zoning change achieved through a SHA. 28 It may also be that the mere designation of a SHA encourages land-banking of nearby land. In Auckland, land adjacent to SHAs is being marketed as having land-banking potential, due to benefits of infrastructure development for the SHA. 29

Commentators propose several reasons for the slow pace of building and potential land-banking in Auckland, including: lack of builder capacity, difficulties in accessing finance, lack of infrastructure to service residential development and developers preferring to extract value-uplift from SHA designated land, rather than build housing. 30 In Tauranga, initial comments from developers about slow progress highlight what they perceive as stronger requirements for infrastructure design at the application stage, compared to usual consenting requirements.
Affordable?
The Act has no mandatory requirement for a percentage of SHA housing to be affordable or for affordable housing to be retained, however a council may prescribe an affordable housing percentage in a SHA.\textsuperscript{31} Around three-quarters of SHAs have affordability requirements for around 10 percent of houses in the development.\textsuperscript{32} The approaches of the Tauranga and WBOP accords to housing affordability are different, although neither places strong affordability requirements on developers. Initially the WBOP Council included affordability criteria in its Accord. Council officers recommended a minimum of 50\% affordable housing in the development, at a maximum price of $350,000. However, it was also noted that the Ministry of Business, Innovation and Employment had advised that the Minister would be uncomfortable with a proportion of affordable housing as high as 50\%.\textsuperscript{33} Eventually the Order in Council for the Omokoroa SHA stated that a minimum of 25\% of dwellings in each qualifying development must have a maximum land and house price of $350,000 and a minimum of 25\% of dwellings must have a maximum land and house price of between $350,001 and $400,000.\textsuperscript{34} Eventually this requirement was revoked and replaced by the 2017 Order, which does not prescribe any affordability criteria for the SHA.\textsuperscript{35} The Tauranga Accord refers to affordability in its aim to “deliver smaller dwellings at a more affordable price point.” \textsuperscript{36} However, the Orders in Council for Tauranga SHAs did not include any house price affordability criteria. Associated policy simply states that affordable housing outcomes will be negotiated for each SHA on an individual basis, and will cover the type and size of dwelling and section, dwelling and section price in relation to median prices, and potential for targeting housing needs. Policy also states that delivery of affordable housing will be balanced against the need for development to be profitable and commercially viable.\textsuperscript{37} It was also made clear in public consultation documents that SHA developments do not need to be for affordable housing. At this early stage, it cannot be determined whether SHAs in Tauranga and WBOP will result in any increase in affordable housing. One local developer has already signaled that there may be difficulties in achieving affordable housing in SHAs. Furthermore, there are indications in Auckland of developers withdrawing from SHAs because of a number of difficulties, including the costs of providing the requisite proportion of affordable housing.\textsuperscript{38}

Livable?
Dwelling features that enhance accessibility, comfort and sustainable resource use, not only increase livability, but also increase the affordability of dwelling running costs. Improvements in residents’ wellbeing due to such features have demonstrated benefits. There is evidence that accessible dwellings reduce public and private expenditure on home-based and residential care, as well as public expenditure on injuries.\textsuperscript{39} There is considerable evidence for public and private savings from sustainable features, including reduced hospitalisation due to respiratory illness caused by cold homes, and reduced household water and energy expenditure.\textsuperscript{40} While there is nothing in HASHAA that refers to livability, SHAs present an opportunity for improving livability. Mandatory criteria already include requirements for small dwelling and lot sizes, and height/storey restrictions, which potentially deliver a lower environmental impact. Councils could strengthen the livability potential of these criteria by adding accessibility and sustainability requirements in SHA establishment criteria.
Very few councils appear to use SHAs to promote livability. One exception is Auckland Council, which requires SHA housing to incorporate features to improve the dwelling’s comfort, performance and reduce environmental impacts based on 6-star rating from the NZ Green Building Council.
Homestar tool, or certification under the living Building Challenge. In an effort to achieve best practice in “good quality” housing in the Omokoroa SHA, SmartGrowth issued a Registration of Interest in May 2017, calling for proposals to deliver affordable, sustainably-designed housing.

CONCLUSION
Despite widespread public concern about housing unaffordability and apparent governmental desire to provide affordable homes, New Zealand’s policy responses have been piecemeal. The SHA model is a short-term, stop-gap and partial supply-side response to housing unaffordability, which was not expected to extend beyond 2016. It is a strong private sector led approach that prioritises land owner and developer interests. It also subsumes local government planning frameworks to central government directives. There is no requirement to consult with local communities over the establishment of a SHA, or about the nature of residential development planned within a SHA.

This paper has focused on documentary analysis to understand the establishment of SHAs in the Tauranga/WBOP high-growth sub-region, characterised by significant housing affordability and supply problems. There is no indication yet that SHAs will speed up building. The Accords do not have mechanisms to ensure housing affordability. Notably, neither Accord mentions promoting affordable rental housing through SHAs. Groups in the sub-region identified as experiencing housing stress, such as first home buyers, households in the intermediate housing market, renters and older owner-occupiers wishing to downsize, could potentially benefit from SHAs but there is little indication that their needs are recognised in SHA establishment criteria and targets. Similarly, while SHAs present opportunities to promote livable housing, there is little evidence of this occurring.

The second stage of this project will involve interviews with key actors (land owners, developers, councils, housing consumers and others) in order to establish their decision-making logics, objectives and intentions around SHAs. Explanations suggested for the slow pace of building will be explored. The extent to which key actors consider livability and affordability, and if so how they expect to achieve those objectives through SHAs, will also be examined. There will be a particular focus on the opportunities SHAs offer for housing the ageing population, a key driver of growth and housing demand in the sub-region.
NOTES


5 L. Murphy, “The politics of land supply,” 2530.


7 Councils are local government bodies with territorial responsibilities, including for settlement planning, infrastructure and land use.

8 Cox and Pavletich, International Housing Affordability Survey, 57.

9 Only regional, not sub-regional, level housing affordability data is available. Since the Western Bay of Plenty sub-region comprises the most populous and urban part of the Bay of Plenty Region, these affordability measures are likely to under-estimate the unaffordability of rental and first home buyer stock in the sub-region. See Ministry of Business, Innovation and Employment, Housing Affordability in New Zealand, 15.


14 Ministry of Business, Innovation and Employment, Regulatory Impact Statement Amending the Housing Accords and Special Housing Areas Act, 1, 10.


20 There are statutorily defined roles for iwi Maori organisations in relation to environmental and resource management, and land use planning.


29 For example, five properties listed on TradeMe between December 2016 and May 2017 near or adjacent to Auckland SHAs on Bremner Road, Oraha Road and Brigham Creek Road, www.trademe.co.nz. See also Todd Niall, “Auckland land prices soar in targeted areas”, Radio New Zealand, October 19, 2014, http://www.radionz.co.nz/news/preview/257254/auckland-land-prices-soar-in-targetted-areas

30 Tookey, The Mess We’re In, 12-13.


32 Ministry of Business, Innovation and Employment, Regulatory Impact Statement Amending the Housing Accords and Special Housing Areas Act, 2.


36 Minister of Housing and Tauranga City Council, Tauranga Housing Accord, clause 19.

Developers walk away from fast-track process as Auckland house prices top $1m”, The New Zealand Herald, August 28, 2016.
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HOUSING AGENDA: PAST-PRESENT-FUTURE

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INTRODUCTION
Housing issues have numerous social, economic, spatial and environmental aspects. United Nations (UN) has held Habitat Conferences since 1976 which housing debates have been discussed from various approaches. An agenda, was declared for each conference related to human settlements. This paper focuses on the main housing debates, which have remained in the agenda of Habitat Conferences since the 1990’s.

HABITAT CONFERENCES AND HOUSING AGENDA

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Figure 1. Housing Agenda
(Adapted by the author from the agenda of Habitat II and Habitat III)

Agenda of Habitat II and Habitat III can be summarized as in figure 1. Many of these topics can be shared under more than one title, making it difficult to define and group under one umbrella.
AFFORDABLE HOUSING

Affordable Housing (AH) is housing of a reasonable quality that is affordable to people on modest or low incomes. It includes various kinds of housing provision, each with its own eligibility criteria for meeting different needs. The price-to-income ratio is used to measure housing affordability. Empirical evidence reveals that when housing prices rise, housing affordability decreases. But, housing affordability involves many problems and cannot be analyzed by using only the average or median housing price. Cai and Lu propose a broader housing appropriateness concept with four dimensions—affordability, accessibility, amenity, and adequacy—which goes beyond the price and income terms widely used in research to measure housing affordability. They suggest that a more dynamic and holistic view is needed when evaluating housing affordability problem. Housing finance has risen to the top of research and policy agendas in recent years because of the argument that correctly structured finance systems can deliver improved housing. Community funding, for example, is argued as an innovative way of financing housing. Government intervention that aims to stabilize prices in the housing market has been another popular approach. Since the housing market is an imperfect, competitive market, governments have always justified intervention in the housing market. But the deregulation policies led to a decrease in the housing supply and an increase in housing prices during the financial crisis of 1998. On the other hand, some governments have reformed public finance institutions to make them more prudent and regulatory regimes to encourage private finance institutions to go down-market. In developed countries, the ability to borrow funds to finance housing investment is generally a key determinant of whether a family can afford to become a home owner. Access to institutional housing finance has largely failed for low-income groups since neo-liberalism has spread around the globe. Low/moderate income residential development requires a broad spectrum of credit methods suited to many types of housing and income levels. Over the years, several studies have investigated the influence of different factors on housing prices. Empirical studies start with supply and demand. They use exogenous macroeconomic variables, such as income, population, land, and construction cost to explain housing price. At the city level, environmental factors, such as urban landscape, effect the price. Location within an urban area is assumed to be a determinant of housing prices within standard urban economic models, which reveals that the urban spatial structure has a significant impact on housing price. Some researchers investigate the impacts of some facilities, services, and urban infrastructure in housing price, such as transportation, educational facilities, and accessibility to community facilities.

ADEQUATE HOUSING

The right to adequate housing can be traced to the Universal Declaration of Human Rights, which was unanimously adopted by the world community in 1948. The right to adequate housing has been consistently re-affirmed as a distinct human right by various bodies in the UN system, Istanbul Declaration and the Habitat Agenda, national constitutions, and civil society organizations across the world. Components of the right to adequate housing are legal security of tenure; availability of services, materials, facilities, and infrastructure; affordability; habitability; accessibility; location; and cultural adequacy. Many researchers have focused on quality of life related to adequate housing in the literature.

Quality of Life

The concepts of urban livability and quality of life enjoy a great public popularity forming a central issue in research-programs, policy making, and urban development. There are many factors affecting quality of life. Gross Domestic Product (GDP), measuring economic development has long been...
considered the best predictor of Quality of Life (QOL) in international comparisons. In recent decades, researchers have tried to find a better measurement of country QOL (e.g. Human Development Index, Legatum Prosperity Index). Few indexes have been proposed for measuring QOL at the scale of cities, for which there is a lack of tools. Quality of life indicators include the basic needs and desires of people. The measurement of quality of life is usually undertaken using different kind of indicators such as overall crime index, vehicle per person, literacy rate, population, density, size of house, the distance to a bus stop, and the quality of public transportation. Residential and neighbourhood satisfaction is an important indicator of housing quality and condition, which affects individuals’ quality of life. In a complex decision-making process, households select their residence by considering various criteria. Several academic studies have sought to understand how consumers make their housing decisions and to explore locational preferences or housing preferences of people.

SOCIAL DIMENSION

Social characteristics of urban neighborhoods is a complex phenomenon with multiple space, time and attribute dimensions. Many researches try to explore the urban social patterns through investigating different social groups; especially vulnerable groups such as elderly people, migrants, homeless, as well as social cohesion or segregation between them. Housing needs of these social groups have also been paid attention to within literature, as they effect the housing policy in many countries. The ageing issue is becoming a global concern as the baby boomers born after World War II are entering into the elderly age cohorts. “Continuum of care” and “ageing in place” are seen as the guiding principles of elderly policy. The provision of housing to the elderly is always of a special concern. It is important to understand how various attributes, from residential to institutional, influence the housing satisfaction of the elderly people and their location choices. Migrants’ housing preferences play a crucial role on shaping housing demand. There are many crucial determinants, such as employment, affordability and social networks, affecting relocation decisions of people.

In developed world debates on homelessness, increasing focus has been placed on the concept of home as a way of further understanding the experience of homelessness and to highlight appropriate responses. Tipple and Speak argue that a single definition of homelessness may be inappropriate and that a range of definitions may be needed to underpin interventions and policy development. They use some criteria for homelessness such as lifestyle, location, permanence of occupation or security of tenure, housing quality and welfare entitlement. It would be beyond contradiction, which poverty is the main underlying cause of homelessness.

Social cohesion within a neighborhood, which refers to harmonious interactions and mutual support among residents, is integral to the social sustainability of the neighborhood and results in residents’ satisfaction with life. However, existing research is divided about the interplay among neighborhood homogeneity, cohesion and life satisfaction. For instance, one view suggests that neighborhood heterogeneity, rather than homogeneity, is favorable to sustainable development. On the other hand, residential segregation is an urban phenomenon, which can be defined as the allocation of residential space by state or market mechanism to a particular social group and the consumption of that space by the social group. It has been argued that residential segregation has its various causes and consequences. It may occur because of social prejudice, malfunction of an economic system, political, economic and social transition, globalization and its neoliberal economic approach. The
response to spatial segregation should be based on an understanding of local needs and factors such as age, gender, socio-cultural and economic activities.

**HOUSING POLICY**

Housing policies have passed through many permutations in the last 50 years, based on differing, even conflicting approaches, which have not really solved the housing problems faced by the majority of the world’s population. For most people, the challenge of housing is a simple one: the need for a healthy shelter at an affordable price.²⁴

After 1945, a series of developments led to the emergence of a field of action that we may refer to as international housing policy. Agencies of the governments, notably the British Colonial Office, US Housing, Home Finance Agency, became active in the international housing field. These agencies offered guidance and assistance to national governments. The policies that agencies recommended and the programs that were actually implemented by national governments in the developing world could be different. Although their purposes differed, they consistently endorsed a mixed strategy of self-help and market supports. Self-help was given priority from the mid-1960s to the 1980s, when the balance shifted to market ‘enabling’.²⁵

Informal housing solutions have been propagated by many practitioners and academics of the 1970s and 1980s, following the path-breaking work of self-help housing pioneers like John Turner. Such self-managed construction had the great advantage that the households could decide for themselves when to expand or improve their dwelling, in accordance with their needs and priorities.²⁶ In the 1970s his ideas influenced the World Bank to initiate major sites-and-services projects. In sites-and-services projects, low-income groups were given plots of land including basic infrastructure, such as electricity, drinking water and sewerage.²⁷ During HABITAT I (1976), the focus was on self-help ownership on a project-by-project basis. Since the 1980s, international research and policy agendas focused more and more on a broadened habitat approach and attention for self-managed house construction gradually declined. Yet, self-help housing is still a widespread phenomenon, although mostly unattended or even ignored by governments.²⁸ But, some researchers underlined the disadvantages of self-housing. They are self-initiated urban settlements, characterized not only by informality, irregularity and illegality, but also by their flexibility and their resilience.²⁹ In 1980s, however, there was an almost universal acceptance of reducing the role of the government in direct provisory roles in the economy and increase reliance on the private sector. This was particularly advocated by the World Bank with enabling strategy for private market activity in housing provision in developing countries. Since the late 1980s, the UN-Habitat has promoted this enabling strategy for its global goal of adequate housing for all. The strategy contends that markets should be the primary housing delivery mechanism and that the public sector's role is to introduce incentives and facilitate housing actions by other actors, through partnerships of local government, the private sector and nongovernmental and community-based organizations (NGOs and CBOs). The strategy accepts the limitations of the market for housing the poor. It stresses the need for government to recognize and upgrade informal settlements and to develop innovative approaches to low-income housing.³⁰ Meanwhile HABITAT II (1996) pointed out that the provision of adequate housing for all requires action not only by government but by all sectors of society including the private sectors, non-governmental organizations (NGOs), communities and local authorities as well as partner organizations and entities of the international community. Four decades since HABITAT I, many developing countries have undergone social, economy and political transformation. Globalization, demographical changes, and rising income level since 1970s clearly had influenced housing provision system. Croese emphasizes that the supply-driven housing programs are currently emerging in many
countries. There is a need to query and further study the causes and drivers of the current return to supply-type provision practices. In recent years, UN-Habitat has come to acknowledge that previous enablement policies have not effectively tackled the housing challenge and that there is a need for government to reassert a leadership role in housing provision. Consequently, the role of different actors in providing housing has been discussed for a long time. Two paradigms are identifiable in terms of approaches to housing development. They include the “provider” and the “enabling” (supporter) paradigms depending on the extent and nature of public involvement in housing delivery, particularly, to low-income households. The “provider” paradigm advocates that public authorities essentially should control the production of houses in order to reduce housing deficits and improve the quality of housing. For Harris and Giles, there are only a limited number of ways in which governments can act to improve housing conditions for low income households. Governments can build housing cheaply, usually for rent; they can help households to build their own homes; or they can try to make the housing market more efficient at delivering affordable homes. Some governments’ efforts in providing adequate, affordable and quality houses for all income groups with emphasis on the development of low-and low-medium cost houses, two main problems have developed in the housing sector. First, quantitatively the number of housing provided do not meet the demands for the low-income group. Second, qualitatively the type of housing has not been satisfactory to the family housing needs, comfort, social, cultural and religious needs. Many researchers provides an assessment of residential satisfaction of public housing as well as social problems and exclusion in these areas. On the other hand, the enabling paradigm does not favour government production of houses, preferring instead, the encouragement of householders, small scale builders and corporate firm developers by facilitating and enhancing their ability and capacity to deliver houses or services. Some researchers argue that low-income housing development requires a careful combination of public and private efforts, thus demanding a careful articulation of multiple participants. Public private partnerships, for instance, have been seen as a promising way to integrate the advantages of the public sector and private sector. Yap emphasized that the housing problems of the urban low-income population cannot be solved unless the urban poor have access to urban land, but this requires urban planning and government intervention in the urban land market. It has been emphasized by many researchers that cities have been put at the forefront of neo-liberalization especially since the early 1990s with the increasing importance of market led development. Urban governing institutions have been restructured so as to respond more to the need of securing private investment and creating business friendly environments. However, most of these efforts to promote a marketable, modern city through megaprojects, reinforced urban spatial and social inequalities. For Yetişkul, urban redevelopment policy has also become an increasingly central focus of neoliberal urban policy driven by inter-urban competitiveness and urban entrepreneurialism. As neo liberal public policies shape the skyline of cities in developing nations, the initiative towards development of affordable housing for the disadvantaged group remains largely unaddressed. In many developing countries, insufficient provision of affordable housing for a fast growing urban population is leading to informal squatter settlements and slums. Informal housing is still an important phenomenon today. Bredenoor and Lindert emphasize that governments in the developing world face with immense challenges in the field of housing provision for the urban poor. Faced with the lack of so-called conventional or formal housing solutions, the urban poor have virtually no other option than to resort to unconventional or informal modes of housing provision. Slums pose a significant challenge for urban planning and policy as they provide shelter to millions of poor urban dwellers in developing countries. Slum upgrading is accepted as a priority for sustainable development. Slum upgrading has politic, socio-economic and physical.
elements. It can focus on improvement of the physical services, increase the quality of housing as well as enhance the job opportunities. On the other hand, slum clearance and resettlement schemes have increasingly become a feature of everyday life in some countries. The right to decent housing can involve relocating slum families to places that not only fulfill the precepts of adequate housing but also enhance the self-respect and quality of life of these families. However, resettlement can also heighten their vulnerabilities.

Issues of homeownership and rental housing also affect housing policy in many countries. Public policy that encourages homeownership has often been justified by claims that it has a variety of benefits to both individual and society. It has been argued that homeownership is strongly correlated with income, education, employment types, liquidity constraint and relative price of owning. Many studies investigate the factors affecting housing tenure choice, such as gender, marital status, occupation type, educational level, family size, permanent income, demographic background, social attributes, and economic factors. Although the general policy trend across the globe since 1970s has been in favor of home ownership, across the world, approximately 1.2 billion people live in rented accommodation. For Gilbert, rental housing is an essential ingredient in any shelter program. Renting provide a shelter for many groups in society, such as the young, migrants, recently independent households, job seeker. Tipple argued that instead of concentrating on the small and relatively inefficient formal housing supply at the top end of the market, attention should be turned to enabling the parts of the housing supply system that successfully provide most housing the informal builders and construction artisans. Finance for rental housing is a potentially fruitful direction to increase supply at the lower end of the market.

**SUSTAINABILITY**

In recent years, the concept of sustainability has become central in housing debate. In fact, the concept of sustainability may be one of the most overused and misunderstood urban policy component in use today. Choguill (2007) attempts to clarify the concept of sustainability. Sustainability includes the need for poverty reduction and slum eradication, as well as the broader goal of environmental preservation and the importance of developing channels for making viable finance available. Of course, without improvements in employment opportunity and incomes, whatever is done within the housing policy area is likely to lead to disappointing results. Any future policy package designed to achieve sustainable housing would necessarily have to be designed to meet three primary objectives. The first of these is that future policies must provide the basis for household improvement. The second objective of the policies which could result in sustainable housing improvement are concerned with the empowerment of poor people. The third objective of such policies must be to psychologically give this lower segment of the urban society a feeling of self-worth. However, much of the sustainability debate centers around the issue of the environment and particularly on the way that the built environment impacts on the natural environment.

Regarding to sustainability, there are many researches investigating the measurements to be taken from city to building scale. The design of sustainable cities is a key issue that addresses most of the global environmental problems. Eco and low-carbon cities have been burdened with expectations of solving the environmental problems since the 1990s. Researchers contribute to identifying strategies to reduce energy consumption and greenhouse gas emissions. Qin and Han argue that higher population density, mixed land-use patterns, better accessibility to public transportation, and job-housing balance are important planning parameters that reduce household carbon emission. It is argued that increased construction activity could end up with negative economic, social and
environmental impacts. Recent years have seen an increased focus on the role of house construction within the broader agenda of sustainable development and climate change. Over the last two decades, urban regeneration has been widely recognized as a comprehensive and integrated vision and action to resolve the multi-faceted problems of urban areas and to improve the economic, physical, social and environmental conditions of deprived areas. Ercan argues that the preset principles and measures for sustainable communities may change from one locality to another. Alternative models for localities need to be searched according to the social, economic, political, cultural and institutional structures and characteristics of localities. However, a broad section of literature suggests the need for questioning the impacts of urban regeneration projects as an integral part of neo-liberal policies.

Urban sprawl and city congestion have become the inevitable development trend in the process of economic growth. The pursuit of better living conditions and the expansion of car ownership induce the outward spreading of a city and its suburbs. Such encouragement of sprawl development leads to low-density land-use patterns. Residents of sprawling neighborhoods also tend to emit more pollution per person and suffer more traffic fatalities. The rise of New Urbanism brings new energy and new ideas to communities that commit to manage growth. Planners begin to connect more strongly with affordable housing advocates and public health professionals, broadening their focus beyond the more traditional set of issues revolving around land-use, transportation and the environment. All of these changes contribute to the transition into the Smart Growth movement, which concentrates growth in compact walkable urban centers to avoid sprawl. New Urbanism and Smart Growth have been seen as alternative approaches to suburban sprawl in urban planning and architecture. Planning principles of New Urbanism are walkability, connectivity, mixed-use & diversity, mixed housing, quality architecture, traditional neighborhood structure, increased density, green transportation, sustainability, and quality of life. New Urbanism and Smart Growth are relatively new approaches to urban design that deals with environmental problems, housing issues, and community well-being.

CONCLUSION
This paper has focused on the main housing debates which have been remained in the agenda of Habitat Conferences since 1990’s. As a methodology, the journal of Habitat International, which was established in the Habitat Conference in 1976, published between 1996 and 2017 as well as reports of Habitat II and Habitat III have been overviewed. One of the outstanding debates in housing issue is the concept of «Adequate». It has been discussed so much with many attempts to measure it, such as quality of life indexes using different parameters. However, it is not easy to evaluate the adequacy as it includes many subjective and objective indicators.

Housing for lower income groups has always been an important issue in the agenda. Neoliberal housing policies, some important result of these policies, such as megaprojects and urban regeneration, have been discussed and criticized within this framework. In the context of neoliberal policies there is a risk to disregard the needs of poor people. So, we may have to address and discuss their increasing problems including housing in the near future. Moreover, the role of different actors, such as government, in housing delivery, seem to be continuing this discussion. Housing need of different social groups affects the housing policy in many countries. When ageing population is considered, housing problem of elderly people will take more attention even in countries where family relations are strong. Needs and problems of different social group require focus on social cohesion and integration, which are emphasized in the literature quite often. Especially,
migrants continue to be a global concern when economic, social and politic developments in the world are regarded. Discussions related to effects of technology on housing and social relations are much limited in the literature when compared with other issues. But it can be estimated that these issues are going to take part in the literature more in the future.
NOTES

13 Marino Bonaiuto et al., “Perceived Residential Environment Quality Indicators (PREQIs) relevance for UN-HABITAT City Prosperity Index (CPI),” Habitat International 45 (2015): 57.

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MASS HOUSING ESTATE LOCATION IN RELATION TO ITS LIVEABILITY: BUDAPEST CASE STUDY

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INTRODUCTION

The conditions of mass housing estates in post-Communist countries have long been of concern for their inhabitants, while they have also begun to generate research interests. Some authors advocate for upgrading and renewal of these buildings; yet, others see them as a mass of aesthetic and socioeconomic burden reminiscent of the past, centrally planned economy, and therefore propose gentrification and/or urban regeneration to replace them. However, economic realities often dictate the social housing policy of the day. While in most Western European countries mass housing constructed from prefabricated building elements represent about 8-10% of the housing stock, in Central and Eastern European cities, this ratio varies between 15 and 80%. This is the consequence of a complex social, economic and environmental legacy of the previous political system. Through the case of Budapest, this paper explores the conflicts between micro and macro scale development of prefab housing estates and how they are influenced by the criteria of liveable urban environment. The main factor that defines today’s housing market situation with respect to prefabricated panel housing stock in Budapest is the location of its micro-districts. Location is essentially the basis for residential housing market. In this way, the hypothesis of this paper is based on the premise that purports location to be able to override any other advantages of a housing estate, suggesting a rethink of today’s housing rehabilitation process in practise. When evaluating liveability of housing estates in Budapest, location has been found to play a fundamental role.

Overview

At the turn of the twentieth century there was a need for urban planning reforms which were capable of improving the then living standard and also offer an effective and quick architectural solution to the increasing shortage of housing. By the end of the 1930s, the answer of the architectural profession to the pressing problems were delivered at a CIAM (International Congresses of Modern Architecture) conference in 1928. In 1933, the functional city theory was laid down in the Athens Charter, after which this typified design and construction gained ground. These series of events did not just define Western Europe’s architecture in the subsequent years, but were also reflected in the Eastern ‘block’, including the Soviet Union. Hans Schmidt, a German academic, who served as an advisor to the then Soviet government, developed an ideal plan he called the “socialist residential complex” that, though
based on a functional unit, operated with a quantitative method during planning. In this way, blocks of flats and services in a living unit were calculated based on the number of inhabitants. The interpretation of this conception was in line with the Soviet ideology, because community scale solutions were embraced against individualism. The concept was further improved and advertised as equality and finally became one of the central tenets of the Soviet political structure after World War II in Central and Eastern Europe. In their homogeneity and plot structure, housing estates formed a ‘whole’ image of the cities. Mass housing estates could have from 100 inhabitants to more than 50,000 in Budapest; the largest estate is Újpalota with 70,000 inhabitants. The large-scale nature, the building technology and other socioeconomic characteristics of these units influence the housing market and portray an image of their liveability.

![Construction of Óbuda Housing Estate in 1967](image)

**Figure 1. Construction of Óbuda Housing Estate in 1967 – prefabricated modern housing replaced the former historic urban fabric**

**Technology**

To realise the large-scale housing development the building construction system had to be in progress. In 1949 the first set of housing developments were constructed using the traditional construction methods. After the large-scale housing estates entered the urban planning practice, the first experiments showed up in many professional practices as well. In Central and Eastern Europe, prefabricated big panel technology was appreciated as the most efficient method. Prefabricated big panel technology is a special construction method; the building construction is produced from concrete with room-scale elements prepared in house factories. The whole construction process, including the transportation and assembling of block elements were pre-planned and mechanised with the help of highly skilled workmen. The process was a very well-engineered technology that was able to maintain the same quality, at the same maximum mass housing production rate. The speed of construction was made possible as the element set contained not just walls and slabs, but completely equipped bathrooms were prefabricated in a factory and subsequently lifted into position on the construction site. In Budapest in 1961 the first 15-year housing development plan was commissioned to erect thousands of new apartments. To cope with the resulting demands, three house factories were built around the capital, with a fourth added as demand increased. In the initial period, the technology came from the Soviet Union. However, in the 1970s, a so-called Larsen-Nielsen Danish panel housing factory was built to offer alternative types and sizes of apartments. Due to this technological method, the largest-scale residential development of the twentieth century came to fruition. Today in Europe, approximately 176 million people live in prefabricated blocks of flats, which are generally found in
smaller or larger housing estates. In Hungary, the number of inhabitants of prefabricated housing blocks is 1.9 million, who live in 837,000 apartments, 33% of whom are residents of Budapest.9

**Socioeconomic situation**
While in Western Europe social housing provides shelter for the underprivileged members of the society, in Eastern Europe virtually most groups of the social stratum are present. In Budapest between 1965 and 1985, in response to an acute shortage of housing, nearly 75% of the capital's annual budget was spent on housing construction.8 Consequently, a significant stock of the block of flats were state-owned. Over time, some of them were financed by National Savings Bank (OTP), while others were bought by private investors. This ownership structure was no different compared to the current practice in Western European countries. However, after 1991, as the Eastern part of Europe switched to democratic political systems, the housing regimes also changed. One of the most important moments of this transformation after the change of the political system was the privatisation of the housing stock. At the national level only 5-6% of prefabricated block of flats remained in government ownership.10 The transformation of real estate ownership had led to significant problems. The most acute problem was the increasing costs of heating these blocks of flats, due to technological shortcomings, which surfaced in housing estates built in the 1970s.11 The inhabitants of these estates were simply not able to pay for the maintenance of their own apartments; in some instances, residents could not cover the costs of maintaining the communal areas of their living environment. For this reason, by the early 1990s and through the year 2000 the conditions of housing in most of the estates had deteriorated in Budapest, though a condition survey of the block of flats predicted a lifespan of between 50-100 years.3

**Towards actualities**
The government and professionals recognised the difficulties around the housing stock and with the help of the National Panel Program and European Union funding schemes, the refurbishment of these block of flats could commence.10 However, after many successfully presented renewal projects, an assessment of how the investment reflects the global situation of housing estates nowadays is required. While some neighbourhoods can achieve several liveability goals through renewal processes, accessibility can only be changed through large scale urban development over an extended period of time.4 In this respect, the principal issue that define today’s housing market situation of the panel stock in Budapest is the location of some micro-districts.

**METHODOLOGY**
The quality of housing estates can be assessed from a range of perspectives, while the surrounding environment can be rated at different urban and architectural levels. This research is based on a three-scale analysis system, that evaluates housing estates from the city (development and planning), neighbourhood (planning and urban design) and architectural levels (design and technology).4 The current renewal process is concerned with an obsolete technology (scale: “building”), which typically focus on changing the windows and the insulation of the building envelop to reduce the effects of thermal bridge and internal technical building system interventions to reduce the utilities cost.12 Nowadays, it is becoming increasingly necessary to rethink housing estates as sustainable neighbourhoods (scale: “neighbourhood”).13 It is necessary to devise new development criteria that could attenuate the current situation; however, a sustainable neighbourhood is defined today by size.14 This study brings to bear the characteristics of housing estates in large urban areas in which the location within the city is the most important component. Location is a complex notion, which defines
position of the housing and its accessibility through urban infrastructure that is capable of overshadowing many other quality preferences.

<table>
<thead>
<tr>
<th>CITY OF BUDAPEST</th>
<th>NEIGHBOURHOOD</th>
<th>BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Historical inner city</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Highland areas</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Section of the River Danube</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Transition area</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Outskirts</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Housing estates</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Three-scale analysis of housing estates

Location
Location is a basic and intrinsic feature of a housing estate that generally determines its prospects in the housing market. To analyse the situation of housing estates in Budapest, two main principles will be presented. Position will present Budapest’s basic urban structure to understand the differences between areas, while accessibility is based on the capital’s traffic system, which is particularly important, because many of the public transport lines were developed alongside the mass housing projects.

Position
Each housing estate has a different geographic position, one may be located in a high-quality mountainous area and others may be neighbourhoods of industrial or peripheral zones. During the research, we focused on the current administrative area of Budapest that was formed in 1950, when 23 neighbouring settlements were connected to the historical Budapest. The capital demographically came up against difficulties, because it soon grew to three times of its original size over a short period of time, with a current population of 1.8 million people. As a result, successive governments have had to formulate new strategies to address social, economic and environmental issues. From urban planning perspective, the Hungarian housing development followed somewhat international trends, when the new scale of the city organisation was conceived and constructed. Building up a unit meant not just housing development, but also implied the construction of the associated infrastructure and service outlets. It is not a coincidence that they were called new towns or micro-district in the UK and Großwohnsiedlung in Germany, Микрорайон (micro-district) in Soviet Union and ‘lakótelep’ (housing estate) in Hungary. The housing estate developments fundamentally changed the dwelling stock in Budapest. The listed 121 units, including 7 huge estates account for 35% of Budapest housing stock. In most Eastern European cities, we can find these housing estates close to the historical inner part of the city. Obviously, the position of new housing estates in a capital city creates a ring-like location around the inner city, and also chronologically show the building processes toward the outskirt area. New construction projects were made possible either after the demolition of built-in areas or by taking new zones into the city fabric. This was how mega-structures, such as the Újpalota housing estates, located 8km from the inner city of Budapest, were constructed. Sampling was conducted by selecting housing estates, which had more than 2000 apartments; accordingly, the study shortlisted 24 housing estates in the capital of Hungary (Figure 3).
The zoning map of Budapest serves as a basis of the study. After the 1994 Master Plan, Budapest is segmented into five zones that reflect the urban development, city usage and the relative unity of urban and architectural form. In this sense, we can identify the five zones as: historical inner city (1), highland areas (2), section of the River Danube (3), transition areas (4) and outskirt (5) (Figure 3).

Each zone defines a different urban position. At the same time, the zoning system is an indication of the liveability of a large part of the housing estates. In the course of this study, the urban positions of housing estates were reviewed by the displayed zoning structure.

**Accessibility**

Accessibility is a major issue in Budapest. The development of metro lines in the 1950s and 1960s shaped the structure of the city, by connecting most of the mass housing projects. The review of a 1970s development plan showed 9 metro lines that could have connected the city centre and the housing estates. For instance, Metro line 2 was completed according to plan, with all the stations. However, the construction of Metro line 3 was suspended, meaning the line could not reach the lastly built housing estates in Budapest Káposztásmegyer, which have since been grappling with accessibility issues until the present time (Figure 4). After 40 years of delay the recent commissioning of Metro line 4 in 2014 has transformed the connected housing estates with respect of accessibility. The block of flats located along this new metro line underwent markedly appreciation in market value, which confirms the importance of accessibility of housing estates. But earlier versions of the plans did not materialise, as some rapid transit and commuter rail supplement the public transport system in Budapest today (Figure 4).

The accessibility of housing estates is examined by their linkage to the main public transport hubs. These hubs are four main squares on the Small Boulevard around the old historical inner city: Deák Ferenc Square (D), Astoria Square (A), Kálvin Square (K) and Fővám Square (F), where the main metro, tram and railway lines intersect (Figure 4).
Figure 4. Public transport development plan from 1970\textsuperscript{18} and metro lines (continuous line) and additional lines (dashed line) in Budapest in 2018, “DAKF” transport linkages, / drawing by authors

**RESEARCH RESULTS**

After the determination of these two basic elements, the study collated the property prices of the housing estates with respect to their location. The data of selected units is imported into a database system that is presented in Figure 5.

Firstly, we reviewed the position of the units according to zoning map. It can be seen that all of the 7 major estates (Óbuda, Békászmegyer, Újpest, Kőbánya, Újpalota, Kispest, Csepel-Pesterzsébet) are located on the peripheral area and there are only a few units in the inner city (zone 1).\textsuperscript{8}

Additionally, housing estates in zone 2 are more conspicuous because of their riverbank connectivity. The same applies to housing estates in zone 4, where the building blocks overlook panoramic view to

<table>
<thead>
<tr>
<th>Number</th>
<th>More than 2000 apartments</th>
<th>Year of construction</th>
<th>District</th>
<th>Real estate prices 2017</th>
<th>Position (zones)</th>
<th>Accessibility (min)</th>
<th>BKV/ Deák square</th>
<th>BKV/ Kálvin square</th>
<th>BKV/ Astoria square</th>
<th>BKV/ Fővám square</th>
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<td>13 529</td>
<td>x</td>
<td>x</td>
<td>30</td>
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<td>34</td>
<td>36</td>
<td>26</td>
<td>31</td>
</tr>
<tr>
<td>20</td>
<td>Óbuda-Centre</td>
<td>1980-1989</td>
<td>XVII</td>
<td>7 634</td>
<td>x</td>
<td></td>
<td>33</td>
<td>33</td>
<td>41</td>
<td>49</td>
</tr>
<tr>
<td>21</td>
<td>Újpest</td>
<td>1977-1985</td>
<td>XVIII</td>
<td>6 222</td>
<td>x</td>
<td></td>
<td>43</td>
<td>41</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td>22</td>
<td>Újpest</td>
<td>1976-1983</td>
<td>XIX</td>
<td>11 467</td>
<td>x</td>
<td></td>
<td>31</td>
<td>39</td>
<td>39</td>
<td>37</td>
</tr>
<tr>
<td>23</td>
<td>Pesterzsolcai Centre</td>
<td>1976-1983</td>
<td>XX</td>
<td>7 820</td>
<td>x</td>
<td></td>
<td>38</td>
<td>33</td>
<td>37</td>
<td>31</td>
</tr>
<tr>
<td>24</td>
<td>Csepel Centre</td>
<td>1968-1982</td>
<td>XXI</td>
<td>10 568</td>
<td>x</td>
<td></td>
<td>37</td>
<td>33</td>
<td>38</td>
<td>30</td>
</tr>
</tbody>
</table>

Figure 5. Research result database
the mountain area. The accessibility of housing estates is typified by the travel time from the assigned 4 main hubs. The data shows the shortest and longest time spent by public transport travelling. The highlighted units reflect not just the time-distance relation, but it also visualises the metro lines in the city (Figure 6). To support the hypothesis, the study made reference to the apartment prices per square metre from 2017 on the selected estates and search relation across the three parameters, namely accessibility, position and price, for each unit.\(^\text{19}\)

![Figure 6. Studied housing estates according to the lowest (light) and highest (dark) property prices, / drawing by authors](image)

In the outskirt zone the furthest estate has the lowest prices, while housing estates with the best traffic connection on a riverbank area, are associated with highest prices. Furthermore, it is evident that in some instances, access to natural green areas overrode the importance of accessibility. However, the position of the researchers of this study is that access to natural green areas only partially explains this discrepancy. Further research may be needed to unpick the exact cause-effect relationship across the three parameters.

**Results**
The Vizafogó (row 16, Figure 5) housing estate is one of the most valuable residential areas with its direct metro connection, its proximity to the inner city and its riverside position. Interestingly, during the renewal process, the emphasis was on the public space rehabilitation and the modernisation of the building structures were far from complete at the time of data collection in case of Vizafogó.\(^\text{20}\) The property prices in this housing estate were generally well above the average market prices due to its green space quality and connectivity to the inner city.
Havanna housing estate (row 21, Figure 5) has the lowest real estate prices due to its very peculiar situation. As the number shows, transportation connectivity is in an abject condition. Inhabitants have to change transport several times to commute, hence it is a highly segregated outskirt area. While evaluating this unit, it was important to note that it has been inhabited by low income population right from the onset and even today by ethnic minority groups. After several attempts, at the turn of the millennium, the housing estates applied for various social and building rehabilitation grants, which enabled vital renovations on the Havanna housing estate, and currently has some of the best built environment units, from the selected estates.\(^{21}\) While continuous social rehabilitation projects have contributed to the success of the regeneration of the place, these efforts seem to have reached their limits.\(^{22}\) For as long as Havanna is separated from the dynamic public transport system, the change of population is very unlikely, social mobility is out of reach and the housing estate will remain a slum area.

From accessibility perspective, the best housing estate is the Józsefvárosi unit (row 7, Figure 5) in district VIII, the Szigony quarter. Historically, district VIII was characterised by its diversity and in the last 20 years, it has undergone dramatic changes. While the Corvin quarter – neighbourhood of Szigony – is developing dynamically as the biggest ongoing investment in Budapest,\(^{23}\) the other parts of the district still have inhabitants with rather low social status. A remarkable process took place in the district, because despite the renovation in some parts of the district, the dwelling stock degraded in quality. This is coupled with the fact that a significant proportion of the population belong to the ethnic minority groups.\(^{24}\) Nevertheless, property prices were well above the average market value. This phenomenon happened against the backdrop that the surrounding new developments transformed the earlier status of the district, and a change in the composition of the population slowly began, as new homeowners started to anticipate the complete renewal of the district. The question is, which investors will shoulder the revitalisation of a segregated housing estate in the historical city centre, where the demolition of a block of flats with 11 floors would not simply be a construction issue, but a social problem that would agitate the public and design profession’s opinion. There are opinions that suggest the city government may decide on a high-quality rehabilitation plan in order to create a liveable district VIII.

The second most expensive housing estate is the Gazdagrét (row 14, Figure 5), which is in a relatively isolated area. While public transportation is suboptimal in the area, it is probably one of the most popular housing estates in Budapest.\(^{25}\) Its inhabitants basically consider reference to this part of
Budapest as a ‘housing estate’ to be derogatory. This kind of public perception also, implicitly depicts the contemptuous attitude of Hungarian society to people living in this type of dwelling.

Whether this negative opinion is justified or not, the fact remains that Gazdagrét is embedded in the mountainous part of Budapest, while being close to the capital’s circulation. Moreover, it is a recreational green paradise, where many parents would like to raise their children.

CONCLUSION
The liveability position of a housing estate can influence many liveable goals such as safety, social integration, diversity and cultural identity, preserving its cultural value, balancing mixed land use, providing a variety of services, and the presence and protection of green spaces.\textsuperscript{26} In case of Budapest’s housing estates, most of these liveability characteristics were present. However, these do not necessarily translate into higher property prices. The thriving units’ prices could increase to the levels of the newly constructed areas, while the less popular ones underachieve on the presented list. Although the government and also the EU offer different supports to renew in micro scale, in the case of this panel building dwelling, there are only a few exemplary macro scale developments\textsuperscript{14}. The position is an unalterable characteristic of a unit, and the infrastructure of a city can be developed or transformed in a long-term process, so the estates with high accessibility problems are generally disadvantaged. The most questionable is the destiny of those huge housing estates in Budapest, to which public transport development was planned at the time of their construction, but which were not eventually realised. Such housing estates are therefore isolated from the mainstream social, economic and cultural circulation of the city. Above all, these housing estates cannot rely on the changes of the surrounding areas that can generate positive processes, while the inner units can only make changes for their immediate neighbourhood city blocks, which will be continuously developed over time. All of these demonstrate that in Budapest, it is not enough to focus on micro scale renewing, as there has to be a balance between micro and macro developments for a liveable urban environment.
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NEIGHBOURHOOD COOPERATIVES. A MODEL FOR THE COLLABORATIVE MANAGEMENT OF THE RENEWAL AND MAINTENANCE OF URBAN AREAS

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INTRODUCTION
This paper tries to give response to liveability problems of twentieth-century neighbourhoods in need of comprehensive rehabilitation, facing challenges posed by the international community such as sustainability, climate change and energy agencies, and focused primarily in the urban environments. Research focuses on management processes for the regeneration of urban environments, aiming to the humanization of the urban habitat and prioritizing participatory solutions. The result is the theoretical development of a management model -based on the idea of a cooperative entrepreneurship- to face the issues of conservation, maintenance and modernization of the communities.

The project has proposed the implementation of a model of Neighbourhood Cooperative (NC) in order to manage neighbourhoods’ comprehensive rehabilitation, analysing the parallel benefits of its implementation, and obtaining new and better services for its inhabitants. The idea of management associated to the cooperative model is understood from two different points of view: on the one hand, as a mechanism of rehabilitation and maintenance of the neighbourhood’s buildings and spaces; on the other hand, the model constitutes a very suitable tool to enhance the solidarity between inhabitants, to obtain benefits and economic savings, to stimulate better understanding of the needs of others (share, communicate, collaborate), and to establish mechanisms for optimization and common management of daily community expenses such as cleaning, transportation or maintenance services.

In parallel to the renewal and updating of residential buildings and public spaces, the neighbourhood cooperative model aims to create one platform able to promote the activation of life in disadvantaged neighbourhoods, generating both business and social fabrics, and building collaborative work networks that can help to solve employment and dwelling issues.

The problem of urban regeneration in the global crisis
The political-administrative discussion and the current legal framework are clearly oriented towards meeting the European objectives of the 2020 horizon. In them, the consolidation of the low-carbon economy as the central axis necessarily translates referred to an urban scale, into several measures to reduce emissions, improve energy efficiency and incorporate renewable energies. The
implementation process of these measures is extremely complex, since it implies a radical change in the way of operating, for decades, regarding to the model of city, infrastructures, energy and mobility. Unfortunately, these strategic policies often collide head-on with the socio-economic reality, particularly in a country such as Spain, which has been badly hit by the financial crisis and an oversized housing sector. According to the National Statistics Institute data, the family income in 2013 fell by 2.3 per cent compared to 2012, 22.2 per cent of the Spanish population was at risk of poverty, 16.1 per cent of Spanish families make ends meet with great difficulty, 42.4 per cent of the households cannot handle unforeseen expenses, and 10.2 per cent of households had delays in payments related to housing.\(^2\)

Faced with the harsh reality revealed by these data, it is obvious that the expense of housing renovation -whether for updating or to comply with the legal duties of maintenance and conservation- is an extraordinary expense that many families cannot cover. If we add the cost of universal accessibility measures, as well as the improvement of the envelopes or the incorporation of renewable energies proposed by numerous demonstration projects, we are faced with a situation that is difficult to assume from the family economy of a large proportion of citizens.

The NC responds to this difficult situation that confronts the undoubted need to revitalize obsolete neighbourhoods with their social reality. By understanding the cooperative as a tool for the self-financing of the neighbourhoods by obtaining parallel resources that would reduce the direct contribution of the members of the neighbourhood, it was necessary to analyse the economic viability of the model. In addition, the project shows the synergies that the neighbourhood cooperative model can generate from the initiative of its inhabitants in the construction of a more efficient and sustainable collaborative neighbourhood.

**NEIGHBOURHOOD COOPERATIVES**

An NC is a collaborative management system based on the participatory relations of citizens to solve the problems of cities. This neighbourhoods’ management model is based on a cooperative society that allows favouring the regeneration of residential communities. The NC is established as a source of employment and training, as well as a boost for the economy of the district, to induce job creation within the cooperative, and enhance the business activity of the neighbourhood and local companies. This model facilitates the development of cooperative mobility services without CO\(_2\) emissions, which would allow the almost total elimination of the private car fleet in the neighbourhoods, or the creation of cohousing communities for older people with almost free care benefits.

The NC implements the concept of ‘common-life services’ as a regeneration mechanism to foster housing solidarity, economic benefits and savings (both community and personal); it stimulates a better understanding of the needs of community (sharing, communicating, collaborating), establishing mechanisms for optimization and common management of daily expenses of cleaning, transportation or maintenance of buildings and communities, as well as the use and care of public space. In addition, with the renovation and updating of residential buildings and public spaces, this platform promotes the activation of neighbourhoods’ life, creating a business and social fabric, as well as collaborative working networks capable to solve the current housing problems.

**The neighbourhood cooperative and the cohousing model**

There are many international success cases in relationship with the development of the NC, for instance, the *Coin Street Community Builders* (CSCB) or The Eldonians in England. In these cases, community-based housing associations and cooperatives have been an important part of that success.\(^3\) NC shares cohousing features, especially in terms on equality, democracy and horizontality in the
Stewart highlights four of McCamant & Durrett’s features to define the philosophy of cohousing: participation, interaction, common facilities and spaces, and self-management. Cohousing is a form of home ownership that emphasizes community and shared space. Both of them are private homes around a network of services. Cohousing improves pro-environmental behaviours on driving moderation, energy conservation, household food procurement and recycling and composting. They have a participatory development process, neighbourhood design, resident management, common facilities, non-hierarchical structure and decision-making, but a NC shares economy. There are three important differences:

1. A cohousing community is quite smaller than an NC – around 12-36 dwellings vs. a minimum of 2000 dwellings for NC.
2. A cohousing community is mainly a new-building project; the NC is a process of regeneration of an existing design.
3. An NC is a special form of social enterprises focused to corporate social responsibility. The aim of an NC is to develop a supportive tool to encourage the creation of collaborative living spaces in neighbourhoods and housing blocks. Mutual support networks and a social fabric are established in order to create more sustainable communities, improving a better use of public-private areas, and sharing accessible houses. According to Sandstedt & Westing, the idea behind the cohousing model is that common work is the basis for personal contacts. Cohousing may have a “solidarity fund” (to which all households contribute and from which anyone may draw in time of accident or emergency), NC must have a “cooperative fund”.

The NC is a consumer cooperative constituted to obtain goods and/or services for its partners on advantageous terms as well as the cooperative of associated work (whose purpose is the provision of third-party work and services). There may be several "sub-cooperatives" for different services and sub-cooperatives of associated work if it is intended to offer services out of the community and get incomes for the cooperative fund.

**Collaborative social network**

According to Cuchi and Sweatman, the neighbourhood’s regeneration is not only an architectural and urban operation, but also requires a new business model where new areas of activity can be integrated. The NC establishes an action framework or an ecosystem of relations (Figure 1), where it is necessary to locate all the inside and outside stakeholders (neighbours, administrations, associative and productive fabric of the neighbourhood, socially responsible business network...) that take part in the urban rehabilitation processes. The map of relationships (Table 1) determines the role of each of them.
Stakeholder | Role
--- | ---
Public administration | 1. Develop municipal strategies that favour the creation of neighbourhood cooperatives to transform the slums and sustainable mobility
  2. Collaboration with cooperatives for the transformation of public space, including the assignment of spaces
  3. Exemption of fees and tax incentive measures
  4. Promotion and dissemination of the model

Corporate social responsibility enterprises | 1. Adapting traditional business models to the benefit system related models of neighbourhood cooperative.
  2. Commitment to quality employment and corporate social responsibility, as well as with the community and the neighbourhood.
  3. Creating stable, sustainable and viable links and relationships with neighbourhood cooperatives.
  4. Servicing and supply goods to cooperatives during periods of time guaranteed

Cooperative enterprises | 1. Create a relationship of consumption to boost the economy of the neighbourhood and proximity trade.
  2. Promote the diversity of services in the neighbourhood.

| Stakeholders’ role of a neighbourhood cooperative

The analysis of physical and social conditions determined a series of strategic interventions, establishing priorities according to the real needs of its citizens, as well as the legal requirements of its implementation. The implementation was also done according to the relationship between the NC’s incomes and the expenses resulting from improvements in buildings and public spaces, forcing to establish criteria of priorities.

![Figure 1. Example of NC’s stakeholders network of a case study of 900 dwellings in Málaga (Spain).](image)

**NEIGHBOURHOOD COOPERATIVES’ BENEFITS**

The economic study was carried out on the formulation of a cooperative business model based on the sum of two basic principles:

1. The economy of scale, which allows reducing costs in contracts of large volumes.
2. The provision of habitability services as an alternative to the sale of goods.
The NC analyses the economic viability of savings, obtained by the economy of scale and managed through the model of the consumer cooperative. These savings can become into income for the cooperative fund through several mechanisms. Also other sources of savings related to the consumption of families are included, both in the possible internal commerce of the neighbourhood and in external services. In addition, the NC can implement complementary services for neighbours, such as sustainable mobility, care for the elderly, managing the rent of vacant housing in the neighbourhood, or renting common-places (e.g. building roofs) for solar collectors of electric companies (Figure 2). Moreover, the NC also promotes the use of empty housing, fostering the rent at affordable prices and facilitating access to housing, while generating economic resources to cope with rehabilitation.

Figure 2. An example of funding scheme of the neighbourhood cooperative: Incomes for solar production are destined to accessibility and the improvement of facades.

The optimization of consumptions by the economy of scale and the improvement/provision of habitability will also have a repercussion in the improvement in the social and environmental aspects. For example, improving water and sanitation networks promotes the reduction of losses in water consumption, or the contracting of energy services for all the members of the cooperative with companies that guarantee their production of 100% renewable energy. It makes the bill cheaper while collaborates in the reduction of gases of greenhouse effect.
Table 2. NC’s benefits on a case study of 900 dwellings in Málaga (Spain)

<table>
<thead>
<tr>
<th>Concept</th>
<th>Without NC</th>
<th>With NC</th>
<th>Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rehabilitation cost</td>
<td>25,054,593.82 €</td>
<td>16,134,117.39 €</td>
<td>8,920,476.43 €</td>
</tr>
<tr>
<td>Percentage</td>
<td>100.00 %</td>
<td>64.40 %</td>
<td>35.60 %</td>
</tr>
<tr>
<td>Annual loan payment</td>
<td>1,455,423.23 €</td>
<td>939,743.54 €</td>
<td></td>
</tr>
<tr>
<td>Annual revenues</td>
<td>-</td>
<td>668,291.90 €</td>
<td>-</td>
</tr>
<tr>
<td>Difference</td>
<td>1,455,423.23 €</td>
<td>271,451.64 €</td>
<td>-</td>
</tr>
<tr>
<td>Annual quota per household (914 dwellings)</td>
<td>1,592.00 € (100%)</td>
<td>296.99 € (18.75%)</td>
<td>1,295.01 € (81.25%)</td>
</tr>
<tr>
<td>Monthly charge per household</td>
<td>32.66 €</td>
<td>24.75 €</td>
<td>107.91 €</td>
</tr>
</tbody>
</table>

The greater the resident population integrated in the cooperative is, the more possibilities of financing will count the neighbourhood; thanks to the increase of the returns obtained by the economic efficiency in the consumptions, and to the greater volume of business of the cooperative as service provider (see Table 2). In addition, the NC is a source of employment that will give priority -as far as possible- to hire neighbours, joining it as working partners. The NC responds to a comprehensive project of neighbourhood’s regeneration that is built on a collaborative economy to create a more adaptable society, which can deal with the constant changes.

CONCLUSION

Starting from the original objective of rehabilitation and regeneration of neighbourhoods, the management platform proposed is not limited in time to the rehabilitation period. The NC is a long-term incentive to improve the economic and social activation of the neighbourhoods. In this way, the project verified the positive effects of the NC in the following points:

1. The integral rehabilitation of neighbourhoods is addressed from a self-financing system, generating benefits derived mainly from the reductions of costs and the capacity of the cooperative to generate income through its own activity. The case study results showed that NC is able to reduce the cost of rehabilitation by 36%, and to generate more than 80% of the annual quota that would have to be faced to finance the whole project.

2. It encourages companies that want to participate in the rehabilitation process to comply with ISO 26000 standards of corporate social responsibility.

3. It is an agent that revitalizes the economy of a neighbourhood and induces the creation of employment on several levels. At a first level, the collaborative work within the own cooperative is developed, besides the creation of jobs associated to the services directly managed by the cooperative. At a second level, the activity of the business fabric, usually constituted by small companies, is strengthens since it foments the consumption of the partners. At a third level, for larger actions, the model prioritizes local companies that are able to adapt their business formulas to the proposed service delivery model and that meet the social responsibility criteria mentioned.

Finally, we can conclude that the implementation involves a wide range of stakeholders, but it is in the complexity of its formulation and its implementation where its greatest advantages reside. Rather than a project, it is a process capable of giving rise to a sustained transformation in time, and at the
same time generates resources, activity and social relations, empowering citizens as the main architects of the transformation of the neighbourhoods.

**FUNDING SOURCE**
The R&D project "The Neighbourhood Cooperatives. Model of Collaborative Management in Rehabilitation and Conservation " (RecoBA) has been funded by the European Union's ERDF program in the framework of R & D & I Projects related to Mobility, Infrastructure, Housing, City and Others, within the area of competence of the Agency of Development and Housing of the Junta de Andalucía for the years 2014 and 2015.
NOTES

1 For instance, UK has the “neighbourhood renewal fund”, which focuses to be spent on the social regeneration of the most deprived area.

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REFLECTING INDIVIDUAL PREFERENCES AND SPATIALITY IN LIVABILITY MEASUREMENTS: A LIVABILITY ASSESSMENT PLATFORM FOR THE CITY OF SALZBURG

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INTRODUCTION
Livable urban environments are a focus of many decision makers, urban planners and, above all, the citizens.¹ For effective livability enhancement, it is crucial to examine the initial condition of livability-related factors, to identify where and how to perform changes. Spatial characteristics, along with the subjectivity of the individual perception and preferences, are significant in this process. At the same time, interpreting and reflecting spatiality and subjectivity are among the most challenging tasks of livability assessment.² In this regard, many questions arise, such as: How can we weight the livability factors to determine overall livability? What is the optimal spatial scale to map livability factors? And, most of all, how can we integrate the citizens’ perceptions and preferences into the assessment process?

To further investigate these questions, we developed an assessment platform where user preferences regarding urban form and urban functions can be mapped, considering other social and non-physical modifying effects such as demographic characteristics and safety. The overall goal of the platform is to capture the important but usually neglected aspects of livability assessment within the city, by integrating individual preferences towards a set of livability factors and their spatial characteristics. The scope of use of our platform ranges from research to planning purposes. It can support public participatory planning, analysis of the completeness of neighborhood functions, or the collection of user responses regarding the interpretation of livability for further analysis.

THE COMPLEXITY OF URBAN ENVIRONMENTS
Cities are the living environment of hundreds of millions of people all over the world. Satisfying the diverse needs of so many people results in a complex system of networks, ranging from transportation to shopping facilities or even public services. To reduce this complexity, urban environments were represented by two main elements in our platform development process: the urban form, and the urban functions. The former involves the physical environment, while the latter describes how this environment is used by the citizens, both in a physical way (e.g., traffic) and for social activities.³ The aspects of urban form and function can be distinguished, but they depend on each other, which makes their complete separation impossible. For instance, the urban form influences most of the human activities in the urban environment, and, at the same time, changes in urban functions can affect (on a
different time scale) planning and other urban form-related aspects. Therefore, as a first step, it is essential to explore the underlying interrelationship between urban form and urban function to understand the livability of our cities.

**Urban form and the human scale**

Describing and analyzing the physical structure and characteristics of a city has its own discipline called urban morphology. This physical structure, also referred to as urban form, is a fundamental element in urban livability analysis. Although there are well-established methods for describing urban form, in the case of livability the subjective perceptions of the individuals also need to be integrated (Figure 1) to define the optimal characteristics of a livable built environment. Therefore, we used the concept of the human scale by Jan Gehl. Most of the statements in the human scale concept rely on biological and evolutionary findings of the human body and mind, such as the perception of distances, speed, directions, and scales to objectively describe good urban environmental quality. This good urban environmental quality is a prerequisite for spending discretionary time in public places, which is the result of good urban form (and good urban function). In this case, ‘good’ refers to a human-scaled environment, which is (amongst other factors) lively, safe, and aesthetic.

**Urban function and mobility**

Urban functions are essential to fulfill human needs. These functions can be categorized and analyzed according to different principles, but in the case of livability assessment, the accessibility of these functions is the most significant. The way in which people move within the city and access urban functions to fulfill their needs can be shown by their mobility patterns. All of these movements within the city have a specific purpose, either it is something essential (e.g., going to work), or related to the citizens’ free time (e.g., visiting a park). However, better functionality by itself cannot compensate for weaknesses in accessibility because those functions also need to be reached somehow. Yet, it does not imply that the closest facility is the most suitable, some people might travel further for a specific function based on their personal values. This illustrates why analyzing mobility and spatiality is connected to urban functions and why it cannot be neglected when assessing livability.

**The difficulty of livability assessment**

Livability can be interpreted as the quality of the person-environment relationship. If the expectations of a citizen, based on their preferences and needs, are fulfilled, higher livability is achieved. However, this also means that even the physical and measurable environment play a different role in every individual’s life based on their varying preferences and needs. Therefore, an overall assessment by applying general weights to each livability factor is almost impossible.
Figure 1. shows the graphical interpretation of livability, as it illustrates how the elements of the urban environment are related to the expectations of a person. In order to apply this scheme for livability assessment in practice, we should provide information on the urban form, urban functions, and the preferences and expectations of a person. In the case of the first two, the integration in the assessment platform can be achieved by appropriate datasets; but for the preferences and expectations, we need to involve citizens directly, to collect their preferences and perception of the urban environment.

The role of Geographic Information Systems (GIS)
GIS was used for the integration of spatial aspects in our platform. A GIS is a computer-based system where geo-referenced, spatial data can be collected, stored and processed to extract information, which can then be analyzed spatially to extract knowledge. Results can be visualized on maps to provide information (e.g., for decision making). Using GIS is especially advisable in a geographic context to investigate complex spatial problems.

THE DESIGN OF THE PLATFORM
Factors and scales
As a first step, we defined a set of livability factors to assess (Table 1-3). We used the above-described categorization for urban form and urban functions to specify these factors, and we added a third category to represent aspects that are not inherently part of urban form and function, but have some modifying effects on them, such as safety or demography.

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban fabric continuity</td>
<td>General measurement of urban form, continuity means that the area is homogeneous in terms of building structure, density, style and maybe even in age and functionality. Due to this variety of different factors measuring urban fabric continuity is also complex.</td>
</tr>
<tr>
<td>Mixed land use</td>
<td>Enhances urban vitality by activating different parts of the area at different times due to the different functionality. In contrast with the first factor, here heterogeneity is better because it reduces the average distances of each function it terms of accessibility.</td>
</tr>
<tr>
<td>Building height category</td>
<td>The height of a building floor is relevant in terms of connection to the street surface. After the fifth floor there is no more connection between the ground and the building. In a human scale environment buildings below five floors are preferable.</td>
</tr>
<tr>
<td>Block sizes</td>
<td>Shorter block sizes enhance pedestrian permeability which means that it makes getting from A to B easier, without unnecessary bypasses. Block is the area defined by intersecting roads, the smallest area unit within a city, surrounded by roads. In European cities blocks are less regular, compared to the American rectangle shapes. Therefore, this factor was rather interpreted as walkability, namely how big is the area covered by a 5-min walk from each building</td>
</tr>
<tr>
<td>Storefront</td>
<td>Soft-edges (where indoors meet outdoors) are important along the streets while walking, such as shop windows.</td>
</tr>
<tr>
<td>Building density</td>
<td>Buildings per km²</td>
</tr>
<tr>
<td>Streetscape</td>
<td>How does the street look like? Are there trees, shop windows? Aesthetic values in general</td>
</tr>
</tbody>
</table>

Table 1. Urban form factors\(^{10}\)
Transferability was an essential principle in the selection of the factors, meaning that the same factors can be used for any other city regardless of size. However, cultural and climatic characteristics might influence the optimal values from place to place.

Regarding urban form, the aim was to reflect each dimension of the physical urban environment. Urban fabric continuity is a complex and very general factor which tries to grasp the urban form according to the human perception.\(^\text{11}\) This value represents homogeneity in terms of many different aspects ranging from functionality to the building structure. However, heterogeneity also has an important role in urban vitality so we added mixed land use as a factor.\(^\text{12}\) Even if land use refers to urban functionality as well, our purpose with this factor was to represent heterogeneity; therefore, the accessibility of these different land use categories and their role in fulfilling human needs is less significant. Two and three dimensional aspects are included using block size, building height and

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### Table 2. Urban function factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DEFINITION</th>
<th>Accessibility to leisure facilities</th>
<th>Accessibility to public transport</th>
<th>Accessibility to parks &amp; green urban areas</th>
<th>Accessibility to waterways</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street network connectivity</td>
<td>It eases mobility regardless of transportation mode. With a well-connected network, the distances are shorter from A to B</td>
<td>Average walking time in minutes to the closest leisure facility within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest bus stop and the average frequency of the bus in that station within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest park/green urban area within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest waterbody within each MPU (from each residential building)</td>
</tr>
<tr>
<td>Traffic-calmed areas</td>
<td>Although, connectivity is important for faster and shorter trips, traffic-calmed areas can increase traffic safety and reduce noise and air pollution on a finer scale e.g. in a residential area right in front of the houses</td>
<td>Average walking time in minutes to the closest leisure facility within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest bus stop and the average frequency of the bus in that station within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest park/green urban area within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest waterbody within each MPU (from each residential building)</td>
</tr>
<tr>
<td>Bikeability</td>
<td>A pre-calculated index based on traffic safety for cyclists and available bicycle infrastructure (bicycle pathway) etc.</td>
<td>Average walking time in minutes to the closest leisure facility within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest bus stop and the average frequency of the bus in that station within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest park/green urban area within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest waterbody within each MPU (from each residential building)</td>
</tr>
<tr>
<td>Accessibility to parks / green urban areas</td>
<td>Average walking time in minutes to the closest park/green urban area within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest leisure facility within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest bus stop and the average frequency of the bus in that station within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest park/green urban area within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest waterbody within each MPU (from each residential building)</td>
</tr>
<tr>
<td>Accessibility to waterfronts</td>
<td>Average walking time in minutes to the closest waterbody within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest leisure facility within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest bus stop and the average frequency of the bus in that station within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest park/green urban area within each MPU (from each residential building)</td>
<td>Average walking time in minutes to the closest waterbody within each MPU (from each residential building)</td>
</tr>
</tbody>
</table>

### Table 3. Modifying factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>DEFINITION</th>
<th>Accessibility to squares, plazas*</th>
<th>Accessibility to squares, plazas*</th>
<th>Accessibility to squares, plazas*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population density</td>
<td>Number of people per km(^2)</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
</tr>
<tr>
<td>Population age</td>
<td>How homogenous is the population in terms of age groups?</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
</tr>
<tr>
<td>Population nationality</td>
<td>How homogenous is the population in terms of nationality?</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
</tr>
<tr>
<td>Safety risk</td>
<td>Existing risk model for assault, robbery, and burglary</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
<td>These public places has a prominent role in public life. How the people can access them and how they use (functionality) are worth further investigation</td>
</tr>
</tbody>
</table>

*not included in the platform at this stage
building density as factors, while the factors storefront and streetscape are responsible for the evaluation of the quality of the environment.

In the case of urban functions, accessibility was the key characteristic we intended to describe in as much detail as possible. The first three factors, street network connectivity, traffic-calmed area, and bikeability reflect general accessibility characteristics. Connectivity is important for easy mobility, but in a residential area the goal is to restrict transit traffic so we measure traffic-calmed areas as well. Each of the remaining factors is responsible for the measurement of the accessibility of one specific function such as public transport, free time activities, nature (green areas, water fronts), or shopping facilities.

The third category highlights modifying factors in terms of the characteristics of the population and safety. In the updated version of the tool, noise and air pollution will also be integrated. All of these aspects can modify or even override the perception of characteristics about urban form and urban functions, so their integration is essential for a successful assessment platform.

Regarding scales, we were able to distinguish three different spatial scales after collecting all the relevant factors for assessing livability. The finest spatial scale includes all factors that have an effect on people’s perception within the sight distance. Most of the urban form factors and all the accessibility-related factors where the calculation is point-based are interpreted on this scale. The next, coarser spatial scale is the neighborhood level, where most of the functionalities fit because a good neighborhood should provide all the necessary functions in a relatively short distance. Finally, there are factors that can be analyzed on the city level. For example, hospitals and most of the cultural facilities (theaters, museums) are relevant on this scale because their importance regarding livability is higher when we compare different cities and not areas within the city. In both cases, the functionality is primary, and the accessibility is secondary – either because of the frequency or the purpose of the visit.

Datasets
In the next step, we found appropriate datasets for the previously designed factors. During the development of the platform, one of the main guiding principles was transferability, for selecting both the factors and the datasets. Currently, our platform is designed for Salzburg, but depending on the available datasets it can be re-designed to any other city by changing the two input datasets (spatial units and calculated factors). Our general goal was to use datasets that are open and available for other bigger cities, at least within Europe. The two main resources are Urban Atlas for land use information (Table 4) and Open Street Map for extracting urban functions. Using these resources, even some of the more complex factors such as the route network with attributes or land use can be derived, if necessary.
Table 4. Urban Atlas categories according to main land use categories

<table>
<thead>
<tr>
<th>LAND USE</th>
<th>URBAN ATLAS CATEGORIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>Continuous Urban Fabric (S.L. &gt; 80%)</td>
</tr>
<tr>
<td></td>
<td>Discontinuous Urban Fabric (S.L. 50% - 80%)</td>
</tr>
<tr>
<td></td>
<td>Discontinuous Medium Density Urban Fabric (S.L. 30% - 50%)</td>
</tr>
<tr>
<td></td>
<td>Discontinuous Low Density Urban Fabric (S.L. 10% - 30%)</td>
</tr>
<tr>
<td></td>
<td>Discontinuous Very Low Density Urban Fabric (S.L. &lt; 10%)</td>
</tr>
<tr>
<td>Transportation</td>
<td>Fast transit roads and associated land</td>
</tr>
<tr>
<td></td>
<td>Other roads and associated land</td>
</tr>
<tr>
<td></td>
<td>Railways and associated land</td>
</tr>
<tr>
<td></td>
<td>Port areas</td>
</tr>
<tr>
<td>Institutional and public</td>
<td>Industrial, commercial, public, military</td>
</tr>
<tr>
<td>buildings, industrial,</td>
<td>and private units</td>
</tr>
<tr>
<td>commercial</td>
<td>Mineral extraction and dump sites</td>
</tr>
<tr>
<td>Open space and recreational</td>
<td>Green urban areas</td>
</tr>
<tr>
<td>land</td>
<td>Sports and leisure facilities</td>
</tr>
<tr>
<td>Other (not included in the</td>
<td>Construction sites</td>
</tr>
<tr>
<td>analysis)</td>
<td>Land without current use</td>
</tr>
<tr>
<td></td>
<td>Isolated structures</td>
</tr>
</tbody>
</table>

However, to show the real potential of the livability assessment platform, some factors require a more detailed or reliable dataset such as the street network, the building cadaster provided by the municipality, or the calculated ‘bikeability’ values, from the GI Mobility Lab at the University of Salzburg’s Department of Geoinformatics – Z_GIS.

Meaningful Place Units (MPU)

The third step was to define spatial analysis units (Meaningful Place Units - MPU) within the city based on physical and psychological barriers according to the human perception. Usually, traditional administrative units do not fit the perception of the people regarding physical and psychological barriers. Therefore, we delineated these units using primary and secondary roads, railways, rivers and other water bodies, building density, etc. The first part of the delineation was automatically performed, but according to the particular characteristics of Salzburg, we manually modified some borders. The reason for this was that outside the city core the urban structure is highly heterogeneous and there are huge areas without any buildings. The subdivision of these areas had to be done manually. As a result, the city was divided into 117 distinct spatial units. The final values of the factors were aggregated within these units to generalize the results.

Calculating factor values

The last preprocessing step for the platform was to calculate and normalize the factor values for each spatial unit on a scale from one to ten, where ten refers to the most desirable and one to the least desirable values, from a human scaled environment perspective (Table 1-3 and Appendix).
1. Preparation: Data input
2. User input
3. Algorithm for ranking
4. Result

Figure 2. Outline of the platform

User input
The data inputs for the online platform are the MPUs in spatial file format (shapefile) and a normalized value of every defined livability factor attached to each of these spatial units, as a result of the above-mentioned data pre-processing (Figure 2). At the same time, the input from the users of the platform reflects the importance of each livability factor according to the user’s preferences, on a scale from one to ten, where ten represents the most important factor. This contrast is worth highlighting: While the livability factors are calculated referring to the optimal state within a human scaled environment (according to the literature), the user should define only the importance of the factor and not the desired condition. For example, in the case of the building height, the livability factor is calculated based on the number of floors, and the lower the building, the higher the factor’s value, which means it is more desirable. However, when the users set the value for the building height factor they refer to their individual preference about the importance of living in an environment where the majority of the buildings are lower than five floors and not the actual building height.

Ranking
After the user sets the weights according to the importance of each factor, the algorithm (Figure 3) compares the given weights with the pre-calculated values of the MPUs and selects the area which is the most similar to the user input. The value of a whole spatial analysis unit (MPU) is calculated using the pre-defined optimal value and the weight based on the importance value set by the user.

\[
\text{Score}_{\text{MPU}} = \sum_{\text{factor}=1}^{20} \text{Score}_{\text{factor}} \quad (1)
\]

\[
\text{Score}_{\text{Factor}} = \min \left( \frac{\text{value}_{\text{factor}}}{\text{weight}_{\text{factor}}} \times 100, 100 \right) \quad (2)
\]

Figure 3. Ranking method for factors based on the weight set by the user

As a result, the MPU with the highest score is highlighted on the map, and the performance of the matching is also calculated, which shows the grade of similarity between the expected and the actual state.

The other use case might be that the user simply selects one of the units on the map after setting the importance values for each factor. In this case, the similarity between the user’s input and the actual conditions for the selected MPU will be determined and communicated. This scenario can be used when someone is interested in the livability of a specific area, for instance where they live or which they visit frequently.
CONCLUSION
With the development of our livability assessment platform, we intended to provide a system that integrates spatial and individual aspects into livability analysis. We pointed out that these aspects are important, but usually underrepresented in research and practice. Therefore, we identified a set of possible livability factors, their calculation, and source of data, to design an online platform where citizens can directly share their preferences towards a livable environment with the planners or researchers.

The current version of the assessment platform is the result of a pilot study for the city of Salzburg and is still in a developmental phase. At the moment we are designing tests to analyze the usability and utility of the platform by collecting feedback from the users. Another step to improve the platform is to elaborate the details of the factors that were not included in the current version of the platform such as streetscape or housing-related information.

In this paper, we emphasized that our intention was to allow the application of the platform for other cities or even a specific (planning) purpose where there is a need for collecting individual responses on the person-environment relationship. This depends mainly on the data available, but, in a later stage, we also aim to publish the calculation methods and the technical background as an open access tool to offer a flexible possibility for planners, decision makers and researchers.

Acknowledgment:
We thank our colleague, Dr. Martin Loidl from GI Mobility Lab for providing data and professional advice for this paper. We also thank for Milena Kocher, Dr. Michael Leitner, and the Municipality of Salzburg for providing valuable data for our research. We would like to show our gratitude to Shi Gege and Meihui Wang, students of the Applied Geoinformatics master program, who helped in the data pre-processing stage.

Appendix
I. Calculation of the urban form factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>CALCULATION</th>
<th>ORIGINAL VALUES</th>
<th>NORMALIZED VALUES</th>
<th>SCALE</th>
<th>DATASET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban fabric continuity</td>
<td>The values for the factor are calculated based on the area of the three biggest urban area land use categories (Table 4) in percentage - compared to the size of the spatial units (MU).</td>
<td>-30% to 90%</td>
<td>10</td>
<td>free scale</td>
<td>Urban Atlas</td>
</tr>
<tr>
<td>Mixed land use</td>
<td>There are six land use categories distinguished (Table 4) where all the six are present gets ten points.</td>
<td>5 3 1</td>
<td>10</td>
<td>neighborhood</td>
<td>Urban Atlas + building data</td>
</tr>
<tr>
<td>Building height category</td>
<td>No need for calculation; simply the original floor values are classified.</td>
<td>2 or below 3.5</td>
<td>5 2</td>
<td>neighborhood</td>
<td>Building data</td>
</tr>
<tr>
<td>Block size</td>
<td>The size of the polygons on average within an MU - which represents the area covered by a 5-men scale from each residential building (the bigger the better).</td>
<td>Area is in m² categorized by natural breaks into ten categories</td>
<td>1-10</td>
<td>neighborhood</td>
<td>Street network + buildings</td>
</tr>
<tr>
<td>Streetfront</td>
<td>Those areas are measured where there are less than 100m to between two shop windows. (number of shop windows within a continuous polygon - the bigger, the better).</td>
<td>10 8 6 4 2</td>
<td>free scale</td>
<td>Building data</td>
<td></td>
</tr>
<tr>
<td>Building density</td>
<td>Number of buildings per km² within an MU. Where this value is lower than the city average gets a higher point and where it is higher gets a lower.</td>
<td>5 categories (1 below average, 2 higher)</td>
<td>10 8 6 4 2 2</td>
<td>neighborhood</td>
<td>Building data</td>
</tr>
<tr>
<td>Streetscape*</td>
<td>*not included in the platform at this stage</td>
<td>-</td>
<td>-</td>
<td>neighborhood</td>
<td>Google Street View, free data</td>
</tr>
</tbody>
</table>

* Appendices can be included at the end of the document.
## II. Calculation of the urban function factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>CALCULATION</th>
<th>ORIGINAL VALUES</th>
<th>NORMALIZED VALUES</th>
<th>SCALE</th>
<th>DATASET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street network connectivity</td>
<td>Number of functions for each 1km² area calculated as a normalized value</td>
<td></td>
<td>1-10</td>
<td>neighborhood</td>
<td>road network</td>
</tr>
<tr>
<td>Traffic-calmed areas</td>
<td>The area of roads with a speed limit of 30 km/h were measured together with pedestrian areas</td>
<td></td>
<td></td>
<td>fine scale</td>
<td>most network speed limit, pedestrian area</td>
</tr>
<tr>
<td>Riskbility</td>
<td>A proxy calculated index based on traffic safety for cyclists and available bicycle infrastructure (bicycle pathways) etc.</td>
<td>Between 0 and 1</td>
<td></td>
<td></td>
<td>road network + safety, road category</td>
</tr>
<tr>
<td>Accessibility to parks / green urban areas</td>
<td>Average walking time in minutes to the closest park/parkland urban area within each MPU (from each residential building)</td>
<td></td>
<td></td>
<td></td>
<td>Urban Atlas + building data + road network</td>
</tr>
<tr>
<td>Accessibility to waterfronts</td>
<td>Average walking time in minutes to the closest waterfront within each MPU (from each residential building)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## III. Calculation of the modifying factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>CALCULATION</th>
<th>ORIGINAL VALUES</th>
<th>NORMALIZED VALUES</th>
<th>SCALE</th>
<th>DATASET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility to leisure facilities</td>
<td>Average walking time in minutes to the closest leisure facility within each MPU (from each residential building)</td>
<td>10 categories based on natural breaks</td>
<td>1-10</td>
<td>fine scale</td>
<td>bus stops and schedules + building data + road network</td>
</tr>
<tr>
<td>Accessibility to public transport</td>
<td>Average walking time in minutes to the closest bus stop and the average frequency of the bus in that station within each MPU (from each residential building)</td>
<td>10 categories based on natural breaks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shopping facilities</td>
<td>Average walking time in minutes to the closest shop (basic and special shopping facilities are distinguished)</td>
<td></td>
<td></td>
<td></td>
<td>Open Street Map</td>
</tr>
<tr>
<td>Meeting facilities</td>
<td>Average walking time in minutes to the closest meeting facility (e.g., bakery, bar, restaurant etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recreation facilities</td>
<td>Average walking time in minutes to the closest meeting facility (e.g., bakery, bar, restaurant etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accessibility to squares, parks*</td>
<td>These public places have a prominent role in public life. How the people can access them and how they use (functionally) are worth further investigation</td>
<td></td>
<td></td>
<td>depending on the purpose of the analysis</td>
<td>Open Street Map + most network + residential buildings</td>
</tr>
<tr>
<td>Benches in public spaces*</td>
<td>Shorthauls also has an interesting role in how the people use public places</td>
<td></td>
<td></td>
<td>fine scale</td>
<td></td>
</tr>
<tr>
<td>Healthcare*</td>
<td>Might be pre-defined zones for each institution – accessibility is not the criterion for choosing one</td>
<td></td>
<td></td>
<td>neighborhood or city</td>
<td></td>
</tr>
<tr>
<td>Education*</td>
<td></td>
<td></td>
<td></td>
<td>neighborhood or city</td>
<td></td>
</tr>
<tr>
<td>Housing*</td>
<td>Real estate prices, empty buildings quality etc.</td>
<td></td>
<td></td>
<td>depending on the purpose of the analysis</td>
<td></td>
</tr>
</tbody>
</table>

*not included in the platform at this stage
### Calculation of the modifying factors

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>CALCULATION</th>
<th>ORIGINAL VALUES</th>
<th>NORMALIZED VALUES</th>
<th>SCALE</th>
<th>DATASET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population density</td>
<td>Number of people per $\text{ha}$ compared to the average of the city (2416 persons)</td>
<td>13,540/33 - 841,306/83 840,350/84 - 1800,257/80 1809,237/80 - 2438,800/89 2436,000/91 - 6091,580/91 6090,580/92 - 1047/6197/90</td>
<td>8</td>
<td>8</td>
<td>neighborhood</td>
</tr>
<tr>
<td>Population age</td>
<td>The sum of the two biggest age groups in percentage (all categories: children 0-19, young adults 20-64, adults 65-89, elderly 90+ years)</td>
<td>96,694/85 - 76,491/85 64,493/82 - 55,693/82 59,768/86 - 62,187/82 56,769/87 - 59,769/87</td>
<td>10</td>
<td>8</td>
<td>neighborhood</td>
</tr>
<tr>
<td>Population nationality</td>
<td>The sum of the two biggest citizenship groups in percentage (according to the statistical categories: Austrian, EU, etc.)</td>
<td>92,800/89 - 97,543/89 89,857/86 - 90,857/89 81,778/89 - 80,057/85 73,652/83 - 73,779/85</td>
<td>10</td>
<td>8</td>
<td>neighborhood</td>
</tr>
<tr>
<td>Safety risk</td>
<td>Existing risk model for assault, robbery, and burglary (doctor and nurse, 2015)</td>
<td>1 (low risk) 2 3 4 5 (high risk)</td>
<td>2 (high risk) 4 6 8 10 (lowest risk)</td>
<td>6</td>
<td>Crime data</td>
</tr>
</tbody>
</table>


NOTES


Ibid

Ibid

Ibid

Ibid

Ibid

Ibid

Ibid


17 https://www.openstreetmap.org/


BIBLIOGRAPHY


LESSONS FOR URBAN DESIGNERS: ENHANCING A CITY’S LIVABILITY, SUSTAINABILITY, AND SENSE OF COMMUNITY FROM THE BOTTOM-UP. CASE STUDIES FROM HAVANA, CUBA.

Authors:
MAIBRITT PEDERSEN ZARI, FABRICIO CHICCA

Institution:
VICTORIA UNIVERSITY, NEW ZEALAND

INTRODUCTION: CITIES AS PART OF THE SOLUTION TO ECOLOGICAL PROBLEMS
It is well known that cities cause large impacts on ecosystems and the global climate. For example, estimates of how high the contribution from cities is to global GHG emissions vary from 30% to as high as 80% (Spiegelhalter and Arch, 2010). The built environment uses approximately a third of all materials on the planet and is responsible for a third of the world’s waste (Spiegelhalter and Arch, 2010). Huge amounts of energy and water are used to support cities, and hinterlands are drawn upon to provide food and other vital ecosystem services to keep cities functioning (Rees, 1999). These impacts are compounded by the rapid urbanisation of populations along with population increase (Moran et al., 2008, Rands et al., 2010). More than half of all humans live in urban environments, a figure predicted to rise to 60% by 2030 (Eigenbrod et al., 2011). Although the urban built environment occupies only approximately 3% of global land area (Ruth and Coelho, 2007), it is the main site of human economic, social and cultural life in terms of both magnitude and significance. The city therefore must be a vehicle for rapid positive change as society collectively grapples with changes in climate, declines in ecosystem service provision, and changes in human wellbeing indicators worldwide (Pedersen Zari, 2012). Although the built environment cannot alone be tasked with solving all ecological issues, the way people inhabit the built environment does make a large contribution to these issues. It could also therefore be a medium where these problems are potentially addressed (IPCC, 2007).

BEHAVIOUR CHANGE AND ACTIVE CITIZENSHIP
Cities are major sources of ecological and climate degradation because of the behaviours of the people that reside within them as they work to obtain the food, water, energy and shelter needed for quality of life (Bloom et al., 2008). Although 33% of urban residents live in slums worldwide (14% of the total human population), urban populations tend to be more wealthy and consume more (Bloom et al., 2008, UNEP, 2011). Per capita carbon emissions are typically lower for people living within cities than their rural counterparts within the same country however (Dodman, 2009). This means that blaming cities themselves for climate change and other ecological issues diverts attention from the main drivers of these negative changes; namely unsustainable consumption behaviours, especially in...
the world’s more affluent countries. Part of engaging cities as solutions to ecological and climate degradation has to focus on human behaviour therefore. How then can the behaviour of people in cities be challenged or changed?

Top down initiatives (meaning directed by local or national government laws, policies, incentives and penalties) are in many cases effective means to alter or direct behaviour and to determine collective social norms. These kind of top down approaches may reduce peoples’ sense of individual responsibility however. A bottom-up approach, where individuals in a community work alone or together to affect changes may be a more effective way to incite lasting behaviour change that cannot be mandated by law (Patrick et al., 2016). Behaviours such as urban food growing, protection of urban trees, reduced use of private vehicles, and harvesting of rain water are examples. This ties in with notions of voluntary behaviour change (Brög et al., 2009). Finding ways to enable people to make changes to their behaviours, and therefore their cities, and in turn to reduce or remEDIATE impacts to climate and ecosystems is a fundamental part of sustainable development.

Active citizenship means people becoming involved in their local communities without direction from governmental bodies. Active citizenship is a combination of knowledge, attitude, skills and actions that aim to contribute to building and maintaining a healthy and just society (Tandon, 2002). Civic ecology is a related idea referring to self-organised, bottom-up local environmental stewardship actions people take to enhance ecological and human wellbeing in urban settings (Krasny and Tidball, 2012). By looking at examples of active citizenship or civic ecology in cities that have led to pro-environmental behaviour change, professionals of the built environment may be able to gain insight into how to design and manage cities to encourage and support such initiatives.

**URBAN FORESTS AND ACTIVE CITIZENSHIP**

There is a clear link between urban tree planting and active citizenship (Buijs et al., 2016, Krasny and Tidball, 2012). This research focused on this area to look for lessons that can be applied to other situations where change is needed in cities so that they can become more sustainable and livable, and where bottom-up activities are appropriate to initiate behaviour change.

Briefly, urban trees make cities more livable. This is why this research focused on looking for case studies that exemplify this kind of tangible community led urban adaptation action. Figure 1 illustrates some of the multitude of benefits of urban trees (for reference see: (Samson et al., 2017, Donovan, 2017, Livesley et al., 2016, McDonald et al., 2016, Dwyer et al., 1991).

![Figure 1. Benefits of urban trees](image-url)
**CASE STUDIES: HAVANA, CUBA**

This research examines two examples of effective citizen initiated change in Havana, Cuba, that over medium terms, have led to demonstrable ecological and social benefits. One details an effort to galvanise citizen led protection of urban trees, while the other relates to the greening of a suburb to enhance community engagement in urban tree planting and to reduce rubbish dumping. The case studies demonstrate that the influence of one individual can be significant in creating change in broader communities and that the power of individual citizen-led change should not be overlooked as a suitable way to affect quantifiable positive change in cities.

Havana was chosen as the site of the research because there are in general few examples of citizen led initiatives for environmental action and behaviour change there. This is due to the political climate of the country and to a certain extent to the economic conditions most people live in (Kellogg, 2016, Hill and Tanaka, 2016, Hernández and Herrera, 2017). This makes the following case studies quite remarkable and demonstrates the tenacity and bravery of the people involved to affect meaningful change.

**CASE STUDY 1: THE FOREST GUARDIANS EL GUARDABOSQUES**

In late 2006, frustrations of local citizens of Havana, who had become increasingly unhappy about indiscriminate logging both within and nearby the city, came to a head when a hundred year old Ceiba tree was cut down in San Agustín. The Ceiba is a ‘solemn traditional’ symbol of Havana and is a sacred tree that is important in terms of cultural heritage to many Cubans, particularly the indigenous Taíno people, Afro-Cubans, and Guajiro (white rural Cubans). The tree means different things to different groups but essentially it functions as a symbol of the diverse Cuban Nation and is rooted in national Cuban identity. For some Cubans, the sacredness of the Ceiba tree is related to veneration of ancestors and belief in the power of nature. For others the leaves, soil or bark are used in various ceremonies and rituals or as medicine. Still others believe it is árbol santísimo - the holiest tree. Related to the Virgin Mary and indestructible. To cut the Ceiba is often seen as a grave offense (Hartman, 2011).

In reaction to the cutting down of the sacred tree, a group of people came together to work towards better management of green spaces and preservation of urban trees. The project, which has been in operation since January 2007, is called El Guardabosques. It has evolved to focus on environmental monitoring of other deforestation in the capital, and over time extended its concerns to other problems affecting Cuban ecosystems. Some of the stated aims of the group include:

- Supporting the formation of identity values that contribute to a community sense of responsibility and belonging to their environment.
- Support of autonomous actions of people or groups related to environmentalism.
- Contribution to the empowerment of citizens by encouraging self-management as the main mechanism to address the challenges of environmental protection.

Since its inception, the group has generated a free digital bulletin monitoring ecological issues in the city and in wider Cuba. Issues discussed include the introduction of transgenic crops in Cuban agriculture, and urban pollution associated with the mismanagement of solid waste. The Digital Newsletter is received by more than 3000 email recipients, despite difficult and sporadic access to the internet for most Cubans (Dye et al. 2016). Most are located in universities, research institutes, or cultural or artistic institutions within Cuba. El Guardabosques also organises public lectures when environmental scholars or activists visit Havana and promote environmental thinking, as well as designing and participating in reforestation and environmental education actions.
Urban tree planting is often a focus for the group, where small groups of people come together to plant trees on vacant areas. Permission is not sought, trees are simply planted. Planting days often relate to the birthdays of the people in the group to make the activities related to the personal experiences of the people involved, and to therefore increase the value of the activities and perhaps the long term care of the trees in question. Isbel Diaz Torres, one of El Guardabosques’ key people explained that by using birthdays, the emphasis is put onto everyday experiences of the people involved rather than international dates and programs outside of people’s own lives.

Havana’s ocean drive sea wall is a site for gathering of many Cubans and foreigners alike. Unfortunately the water tends to be littered with rubbish thrown into the water. In response to this, the members of the El Guardabosques network have carried out clean-up campaigns in the area since 2010 (Martinez, 2014). Sacks of rubbish, bottles, paper, plastic bags, cans, broken glass, and other waste has been removed from the water. The group point out that: ‘people always give us a strange look – we look “suspicious” to them – but, when they approach us and we have a chance to talk, after we explain to them why we do what we do, some help us, others praise and congratulate us and others tell us we’re crazy and that what we do is pointless’ (Martinez, 2014).

While the tangible result of such actions is removal of rubbish, the wider reason for this visible action is to try to influence people’s behaviour regarding rubbish dumping in the ocean, but also to encourage the ‘leading of more independent lives’ and to positively ‘impact people’s mentalities’. Such actions may seem small, particularly in countries where similar voluntary work is common, but in Cuba this is quite extraordinary. El Guardabosques has no state subsidy for its work or legal status. Torres states: ‘The results are more to do with the galvanising people and providing a self-supporting network of like-minded people and a way to disseminate information. What started from one tree and four people, is now a network of active people working on a variety of environmental issues’.

Since 2009 El Guardabosques has been an important part of Observatorio Critico (OC) (Critical Observatory Network) which is a social network based in Cuba that brings together groups and individuals with diverse cultural, spiritual, and intellectual interests, that work on social change projects (Hernández and Herrera, 2017). Recently, the group also joined the Regional Public Mechanism to promote Principle 10 of the Rio Declaration on Environment and Development, which addresses the right to access to information, participation and justice in environmental matters. This initiative involves the most countries in Latin America and the Caribbean, but not Cuban state institutions.

![Figure 2. reactions, actions and results: El Guardabosques](image-url)
CASE STUDY 2: GREENING OF A SUBURB LA ECOLOGIZACIÓN DE UN SUBURBIO

In 2017, the research team conducted interviews with people involved with this project. They asked to remain anonymous. In 2000, one woman began a project to green a neighbourhood near Fuente Luminosa in Havana, one street at a time. Figure 3 is a view of where the project is located across approximately 9 city blocks. The idea to plant the wide street verges with vegetation was in reaction to rubbish dumping in the neighbourhood. Havana often has difficulties with municipal rubbish collection and it is common to see piles of rubbish in the street. Concern about decreased food security and lack of sustainability knowledge were also catalysts for the project as was frustration that environmental education initiatives for local children had ended or were seen to be ineffective.

People began by digging up the wide street verges and planting a variety of native and edible plants. School children and other volunteers did the work initially and there was a gradual joining in by the wider community as people saw the benefits of the street planting. These benefits included less rubbish dumping in the community, less dust and noise, greater storm water control, increased access to fruit, greater use by children and the community of the streets and reported stronger personal relationships formed between neighbours.

![Figure 3. location of the greening the suburbs project](image)

Activities extended to experimenting with roof top gardens (many roof tops are flat in Havana) and green walls. As local people began to know more about this woman’s work they started to let her and the core people involved in the group in to the back yards too to improve the food growing activities in back yards. Connections were made and strengthened with a nearby privately owned piece of land that functions now as a community garden. Children and local residents now make use of this more and it acts as a neighbourhood orchard and medicine growing place. An emphasis was placed on working with the young in the neighbourhood to build up community skills and interest.
Figure 4. Left: Site in 2001. Right: site in 2016 with evidence of increased planting

Figure 5. Close-up views. Left: Site in 2001. Right: site in 2015 with evidence of increased planting
The project has resulted in cleaner streets (less rubbish dumping), and the street plantings have also acted as a catalyst for people to start to grow more in their private back yards or roof top spaces as knowledge, tools, seedlings etc. are shared and revegetation becomes a local social norm. While difficult to quantify the impact on the community in terms of pride and cohesion has been positive. The streets are more beautiful and pleasant, less dusty, and are sociable. People involved also pointed out that the streets felt safer, people were using outdoor areas more, people knew each other more, and that there was an increased level of ecological literacy in the neighbourhood. The project is essentially the work of one woman (with the help of others) over ten years to green her local neighbourhood. She started with her own street verge and then simply continued. No permission was sought, no funding has been received, and very little external recognition for the transformation of the neighbourhood acknowledged. Again this may seem like a small initiative, but within the context of Havana this is very unusual.

**FINDINGS AND OBSERVATIONS**

What these case studies demonstrate is that even when barriers exist to practicing active citizenship or civic ecology, certain people will endure and work towards change. These people and actions then become catalysts for wider community behaviour change and education. If active citizenship is to be encouraged to affect behaviour change in cities there are several things that professionals of the built environment can do or provide to encourage such activity and to not stifle these ‘bottom-up’ initiatives. This involves spatial design considerations and also policy initiatives. A brief summary is provided here:

**Working towards urban active citizenship: lessons for urban design / architecture professionals**

1. Consider how to work alongside communities to empower people. Design ‘with’ not design ‘for’.
2. Create regular and frequent feedback mechanisms between citizens and urban planners / designers
3. Encourage urban spaces to evolve over time. Enable people to change / adapt their surroundings
4. Allow time and free space for citizens to express and organise ideas for change
5. Link ideas for change and project benefits to local and personal everyday experiences
6. Support and provide funding without strings to citizen led initiatives to improve the city
7. Empower and encourage citizens to affect their own changes from ‘the bottom up’
8. Empower youth and women
9. Celebrate and document successes

CONCLUSION
Individual citizens, with some diligence and vision, can and do make substantial quantitative and qualitative positive differences to urbanscapes with or without ‘permission’. These case studies from Havana have been used to illustrate the point, but there are numerous other examples of this in other cities. Perhaps if urban designers and planners and architectural professionals can begin to consciously encourage and support such projects and people, city wide changes will occur more rapidly. In order to make cities more livable, and more sustainable people, and their behaviours, need to be part of the change equation. When people are included, city design and management must allow for greater citizen-led change to occur alongside top down methods. To conclude, El Guardabosques point out: ‘We show people one needn’t sit around and wait for “tasks” to be handed down from above, that one can work independently and do what one considers to be necessary and just. We must acquire the habit of making our own decisions’ (Martinez, 2014). In a similar way professionals involved in planning, designing and making cities can enable, resource, and contribute to such citizen-led initiatives.


MICROAREE PROGRAMME: HEALTH, HOUSING AND COMMUNITY-BUILDING IN TRIESTE

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INTRODUCTION
Community building can be identified as a key issue of urban regeneration, particularly in those urban areas afflicted by vulnerability, socio-economic deprivation and social exclusion processes related to poor health, unemployment or rather bad conditions of public housing estates. This paper explores the field of social cohesion processes in deprived urban areas, purposing the analysis of a local welfare programme composed by a socio-health policy-making, and developed in Trieste, the capital city of Friuli-Venezia Giulia Region, located in the northeast of Italy. Microaree Programme, Health and Community Development was launched to improve the living conditions of some deprived public housing neighbourhood of Trieste, characterized by several deprivations associated with poor health, poverty and unemployment, together with the dire straits of the buildings. The aim of the Programme is to develop community building among the inhabitants of these areas with an approach based on both social and health issues. The paper stresses the possibility to generate an urban regeneration process focusing more on welfare provision rather than on urban renewal aspects. At the outset, it should be clear that my intention is to provide a descriptive analysis of a local welfare programme bringing an Italian contribution into the debate about the inclusive city.

The first section of the paper introduces the theoretical configuration, between two main aspects of the local welfare framework: the capability approach and the territorialisation of social policies, drawn up to look at the integration processes of social, health and welfare policies within a single framework tailor-made for the specificities of local contexts. Second, the analysis grounds its reflection in an overview of Microaree Programme: governance, territorial distribution and the socio-demographic profile of the inhabitants are mentioned. Then, I will focus on the typical approach adopted to cope with the socio-health issues, followed by a description of the three main devices for local intervention: the Microarea’s headquarter, the Contact person of Microarea, and Coordination & Discussion meetings. To conclude, particular attention is given to the three main strengths and weaknesses of the Programme.

THEORETICAL ASPECTS: POLICY INTEGRATION, PARTICIPATION AND VOICE
During the last decades, cities have become political actors in the European space and they search for legitimization and representative roles. New forms of local governance based on inter-institutional partnerships, synergies between public and private sector, and new policy instruments were developed to reassemble a multitude of interests in the urban spaces. Moreover, the cities are also the places of
specific vulnerabilities and social polarization phenomena\(^6\), particularly in public housing neighbourhoods, usually located in peripheral areas, identified as pitfalls for social exclusion\(^7\), despite being designed to generate cohesion among working-class population. The social exclusion experienced by these areas since the 1970s, called for a rearrangement of welfare provision shifting the attention on the local scale and the local networks resources\(^8\).

To stimulate and build social cohesion, local welfare emerged as both the input and the outcome of the development of cities and regions as political spaces, with respect to: (i) the central role performed by local administrations; (ii) with respect to the agenda and issues, the consider the interdependence of factors conditioning well-being, such as housing, work, access to health services, etc.; (iii) with respect to policy approaches aimed to favour integrated interventions in harmony with the needs and requests of a community\(^9\). Based on this framework, the concept of Local Welfare Systems has emerged as a consequence of bottom-up and top-down pressures. Local welfare systems are defined as dynamic arrangements in which the specific local socioeconomic and cultural conditions give rise to different mixes of formal and informal actors, public or not, involved in the provision of welfare resources, in seeking to build social cohesion among local inhabitants\(^10\). Microarea Programme has been developed to integrate welfare and health policies with a strong link to the territorial specificities of the deprived urban areas of Trieste. Its approach can be read through two important aspects of local welfare paradigm: the capabilities of inhabitants\(^11\) and the territorialisation of social policies\(^12\).

The first aspect is related to the community-building process: the capability approach by Amartya Sen stresses the important to stimulate citizens’ capabilities and, in particular, their voice\(^13\) in the public debate where health, welfare and housing service provisions are discussed. The term capability for voice\(^14\) indicates the capacity of citizens to express their opinion and thoughts, and to make them visible in a public debate\(^15\). This kind of capability positively afflict the community-building in a context affected by lack of resources and social cohesion, and stimulate the inter-institutional and public-private relationships designed to contrast deprivation and vulnerabilities of urban areas, and hence to foster well-being.

The second aspect of local welfare that defines the theoretical framework is the process of territorialisation of social policies. It mainly concerns two intertwined phenomena: the territorial reorganization of public powers and the tendency to take the territory as the reference point for policies and interventions. The former is directly connected with the rescaling of statehood\(^16\), while the latter is linked to the development of policy approaches and tools tending to perceive the contexts of public action in terms of resources, targets and actors\(^17\). Territorialisation in policy approaches, put simply, «consists of the tendency to adopt an integrated approach to a complex of problems (social, physical and economic) concerning the specific needs and resources of delimited areas»\(^18\). This integrated framework, combined with the capability-building processes, refers to a twofold relationship between place and people in policy approach, that gives attention the participation of inhabitants in the programmes for their well-being.

**MICROAREA PROGRAMME: AN OVERVIEW**

The programme described here, officially named Microarea Programme: Health and Community Development\(^19\), is a case of local welfare policy characterized by an integrated framework among social, health and housing issues, and it refers to the repertoire of programmes and projects aimed to the activation and participation of citizenship\(^20\). The programme, based on a previous experience called Habitat dating back from 1998, was launched in 2006 with rearrangement objectives in the socio-health policy-making, promoting a street-level bureaucracy within an inter-institutional framework that combines the citizens’ needs and initiatives with a policy instrumentation\(^21\) tailored
for a recognition of the voice of inhabitants. The approach adopted by Microaree Programme stresses the importance of territory, seen as the outcome of a project action that aggregates a network of actors. At the same time, the neighbourhood is considered as the place for integrated urban programmes able to deal with the issues of housing, the private sphere of inhabitants, and the problems relegated in the invisibility of the private lives, to be openly and publicly discussed and solved. The socio-health policy making designed for Microaree Programme is disciplined by 10 Objectives of Microarea [see Table 1], which are the guidelines for the actors involved in the street-level services within each targeted territory. The regeneration of the areas through a twofold place-people focus is determined by the fulfilment of the 10 aims.

| 1 | Achieve the highest possible knowledge about health problems of inhabitants |
| 2 | Optimise the interventions for the socio-health assistance at home |
| 3 | Increase the appropriateness in the use of medicines by the inhabitants |
| 4 | Increase the appropriateness of diagnosis |
| 5 | Increase the appropriateness of tailor-made healing or rehabilitative therapies |
| 6 | Promote self-help among inhabitants and administrations: building community |
| 7 | Promote the collaboration among administrations, profit and non-profit institutions, to increase and develop well-being in deprived urban areas |
| 8 | Achieve an efficient coordination among several services acting in the same territories |
| 9 | Promote equity in the access to healthcare services |
| 10 | Increase the daily well-being of most vulnerable inhabitants, in their living place |

Table 1. The 10 Objectives of Microarea. Source: AAS 1, Strutti (2007)

Microaree Programme tests an approach that holds together three dimensions: local, plural and global. This threefold approach concerns the attachment of public action to the local contexts, the involvement of the plurality of actors and the potential formal and informal resources carried by the citizens, and the entirety of vulnerabilities and difficulties experienced by the inhabitants of the target-areas, by intervening together on places and people.

Governance

Microaree Programme (MA) was set up by the Alderman for health and social policies of Friuli-Venezia Giulia Region, albeit it was launched in 2006 by an agreement – disciplined by a Memorandum of Understanding – between three institutional actors: the Health Authority (ASS 1), that is the main actor of the Programme, the Municipality of Trieste, and the agency for Public Housing (ATER). In the political agenda for years 2005 and 2006, the Programme has been included into the PAT (Piano delle attività territoriali), which represents a policy plan focused on local action focused on welfare issues. In addition, during the following years, the Third Sector has been included in the policy-making of MA, in particular the social cooperatives entrenched in the Trieste territory. Although social inclusion and citizens’ participation are two main points of the Programme, the governance is directed by an institutional network lead by the Health Authority, aimed to apply WHO’s guidelines about the adoption of a social viewpoint on wealth and health issues, assumed here with the 10 main objectives of MA [see Table 1]. In order to foster social cohesion, the Programme found during the last years the help of volunteering associations and single people, included in social activities to stimulate cohesion among inhabitants and local actors. The governance arena made up for the Programme can be synthetized as shown in Figure 1.
The micro scale of the intervention of MA is legitimized by the selection of a narrow band of territories within the Municipality of Trieste, coinciding with the public housing neighbourhoods, particularly widespread in the city. Therefore, the Programme is designed through an area-based planning that redefines the territory as a dynamic entity that is active and under construction\textsuperscript{25}. The core of the governance is not the urban regeneration of the areas, but rather the promotion of local development through an integration of multi-sector actions\textsuperscript{26}, focused on social and health issues. The regeneration of the areas can be seen as a consequence of the local welfare system developed through socio-health policy actions.

Today, 16 Microareas are established in Trieste and its surrounding area: within the Municipality, the first 10, established in 2006, are under the control of the Health Authority (together with Municipality and ATER help), whereas the newest are managed by the Third Sector (see Figure 2). In the surrounding areas two more Microareas are established: Zindis, in Muggia, backed up by the Municipality of Muggia, and Villa Carsia, in Opicina Municipality, to assist the mental health facility (CSM, Centro di Salute Mentale). The latest Microarea was launched in Monfalcone, a multicultural
town up north to Trieste. In all of these Microareas, some devices are designed for local intervention on place and people to guarantee the territorial action of the Programme.

Demographic profile
The number of inhabitants of these areas legitimizes the intervention on the micro scale of public housing neighbourhoods. The population of the target-areas of the Programme goes from 800 to 2500 inhabitants. A more detailed overview per each Microarea within the Municipality Trieste is illustrated in the pie chart below (Figure 3), dated 2014. These data provides a first glance about the population of the areas.

![Figure 3. Number of inhabitants in each Microareas](image)

Source: author’s construction on SIASI-AAS1 data (2014)

But the main demographic feature that affects MA, and the whole city of Trieste, is the high number of elderly people. SIASI-ASS data (2014) count 3973 over65 inhabitants in the 10 historical Microareas, equivalent to the 34% of the whole population (13429 inhabitants). In order to gain a better insight of these numbers, Figure 4 illustrates the ageing index values for each of the 10 Microareas launched in 2005. Simply, if the value is higher than 100, more elderly people (+65) lives in the area than the youngest population (0-14).

![Figure 4. Ageing index in the 10 historical Microareas](image)

Source: SIASI-ASS 1 data (2014)
From places of care to the care of places

The high presence of elderly population implicates some issues related to socio-health assistance. MA considers health and social as one dimension; its policy-making focus the attention to the social determinants of health (WHO), seen as the main element for inhabitants’ well-being, within their living environment. A long process of psychiatry de-institutionalization, historically rooted in Friuli-Venezia Giulia Region, determines the attention on the social issues of health. Indeed, the so-called Basaglia Law introduced in 1978 the fundamental switchover from psychiatric hospitals to territory, implying the definitive closing of the first ones, together with new community-based healthcare services, embedded in the territory. More than twenty years later, the National Framework Law 328/2000 introduced the integrated system of social services, pursuing, in a way, the de-institutionalization pathway begun with the Basaglia Law, hence focusing the social services on the street-level. In 2006, Friuli-Venezia Giulia promulgated the Law n. 6/2006 (Act of Enforcement of the National Law 328/2000), to restructure the appropriateness of expenditure for health services, together promoting street-level socio-health services. The Regional Law moves citizens’ positioning «from a non-choice condition of passive consumption in socio-health benefits, to an active position arising their voice».

This approach can be summed up in the shifting from places of care to the care of places, where territory turns into the field of action to cope with citizens’ needs. In other words, territory is seen here as a setting of services and amenities, where to activate service-to-citizens in an inclusive way, working for the co-production of well-being. This approach also moves closer the local institutions, in particular those dedicated to health and social services, to the inhabitants. In addition, it implies a change of perspective in health issues that moves from the curing disease to promotion of health in deprived territories.

DEVICES FOR LOCAL INTERVENTION

The setting of services deployed in the target-areas of MA Programme shall consist of some devices designed for the concrete local intervention. Within an integrated socio-health perspective, the neighbourhood can be seen as a core where to aggregate different forms of vulnerabilities, and at the same time, where to set off new forms of participation, starting from a common field of interest related to well-being. The MA allows the redefinition of territory as setting of services, acting as a medium between the socio-health service and the urban target-areas, hence affecting the co-production of well-being. MA Programme has developed new forms of intervention over the years, opening up new scopes of inter-institutional discussion, until receiving European support in one precise project.

The target-areas of MA Programme are the destination of socio-health interventions activated through specific devices drawn up of a reach-out action that transform the public spaces in a mediator for an active listening of citizens needs by the local actors involved in MA’s policy-making. The devices enhance the citizens’ capability for voice on the one hand, and the role of MA’s operators on territory, on the other hand; they are fundamental tools of a socio-health street-level structure designed by the Health Authority, which constantly monitor their outcomes. The devices of local intervention can be summed up in three categories:

1. Headquarter of Microarea: it is the physical place where all the local activities within each Microarea take place. The headquarter is usually located in an apartment of the public housing estates, and it contributes to the decentralization of health services, working on the strengthening of the ties between citizens and institutions. It is the place of social cohesion of Microarea Programme. Each headquarter has the own map of the target-area.
(2) Contact Person of Microarea: he/she coordinates the Microarea, promoting socio-health integration processes and community-development; he/she manages all the networks of actors involved in the policy-making of a single MA acting as an active tutors for health, especially for taking-over the most problematic health conditions.

(3) Coordination and Discussion Meetings: devices aimed for the confrontation between MA governance actors and Health Authority, on a monthly basis, and within each Microarea, on a weekly basis, to observe and discuss the critical points within every single target-area. These devices allow the local intervention aimed for the community-development, stimulating a pathway that, despite a lack of physical urban regeneration, has revitalized the numerous public housing estates contexts over twelve years.

CONCLUSION

Community-development, together with the regeneration of deprived urban areas, is a key issue of the local welfare. *Microarea Programme* has positively affected the health service provision in Trieste on one hand, and the social cohesion in the target-areas, on the other hand. The micro scale responds to a twofold need: on one hand, it acquires a zoom lens on the territories able to improve the efficacy and the appropriateness of the socio-health expenditure. On the other hand, it transforms the territory itself in a field for community-building and citizens’ participation and activation. With regard to the first point, the health indicators certify the considerable effect of MA Programme. In particular, the Programme affected the reduction of the hospitalization rate. A research made by the Health Authority (ASS 1; 2014) show a 28,7% decrease of the rate in the first 10 historical Microareas: from 192,3‰ (year 2005) to 163,6‰ (2013).

With regard to the second point, a wide range of social inclusion activities has been developed over the years. *MA Programme* supports the autonomous initiatives purposed by the inhabitants, providing an institutional framework to strengthen and improve them (for e.g. an handmade laboratory called *Made in Zindis*, community gardens, participative lunches held at the Headquarter of Microarea, etc.). It can be argued that *Microarea Programme* concretely applied the guidelines traced by the local welfare conceptualization, both paving the way for an urban regeneration process through a socio-health policy-making.

However, three main weaknesses affect *Microarea Programme* and its outcomes. First of all, the local welfare system developed in the public housing estates of Trieste can be identified as a good practice within a fragmented framework as it is the Italian local welfare, where practices of community development on local scale are not widespread in the entire country and their effectiveness depends upon regional intention to focus on local welfare development to regenerate deprived urban areas. Hence, there is a problem of reproducibility of the Trieste’s best practice, that at the same time enhance the limits of local dimension: local policies are likely to be confined in the local dimension itself, and to run out tout-court, hence remaining exposed to that uncertainty typical of the experimentalism.

Secondly, in *Microarea Programme* the issue of urban regeneration is incomplete due to less attention paid to the physical and aesthetic renovations of deprived estates. The health-led regeneration of *Microarea Programme* is a fundamental informational basis on which is possible to build further regeneration processes, but it needs to be more integrated with urban planning. Thirdly and finally, the data provision is at stake, because the Health Authority – main actor of the governance – calls for new kind of data to certify the efficiency of the Programme, but this challenge is still under examination because the main problem faced by the local operators concerns the difficulty to measure all the activities and the duties carried out. Therefore, the need of data arises the issue of
quantification\textsuperscript{37} that must be taken into account. In this respect, the constant increasing of associative relationships built within the MA Programme is under analysis: a research unit from the university of Turin and Udine is working on data-building to certify the success of the implementation in terms of social capital\textsuperscript{38}. The MA planning corresponds to the policy-instrument of urban projects\textsuperscript{39}, «made up to caring places and people […] to enhance the existent social practices and to mobilize local resources»\textsuperscript{40}. The description of Microaree Programme purposes, finally, one main suggestion: the micro dimension as a field of regeneration practices and projects shall be identified as an essential tool to reduce the divergence between the policy design and its implementation, where usually the best policy intentions evaporate.
NOTES


2 Amartya, Sen (1992), Inequality Re-examined, Oxford University Press, Oxford; Id. (1999), Commodities and Capabilities, Oxford University Press, New Delhi


7 Marco, Cremaschi (eds.) (2008), Tracce di quartieri. Il legame sociale nella città che cambia, Franco Angeli


11 Amartya, Sen (1992), Inequality Re-examined, Oxford University Press, Oxford; Id. (1999), Commodities and Capabilities, Oxford University Press, New Delhi; Id. (2010), L’idea di giustizia, Mondadori, Milan.


pratiche d’intervento in Italia e in Europa. Alinea, Florence; 77-91. Id. (2012), Il fuoco nel cuore e il diavolo in corpo. La partecipazione come attivazione sociale, Franco Angeli, Milan
24 The Health Authority AAS (Azienda per l’Assistenza Sanitaria) n.1 Triestina, replaced the previous ASS n.1. It belongs to the Regional Health Service and it has been established in accordance with articles 3 and 5 of the Regional Law n. 17, October 16, 2014, and with the decree of the President of Friuli-Venezia Giulia Region, n. 264, December 31, 2014, applied from January 1, 2015.
27 An Italian documentary has recently dedicated an episode to the local government of Monfalcone and its main challenges: http://www.raiplay.it/video/2017/04/FuoriRoma-56266aae-4e40-4057-9410-0266306f7616.html
29 Basaglia Law: L. 180/1978. Italian Mental Health act, aimed which signified a large reform of the psychiatric system in Italy, contained directives for the closing down of all psychiatric hospitals and led to their gradual replacement with a whole range of community-based services, including settings for acute in-patient care.
32 The Microarea of Zinds, launched in 2011 in Muggia, has been the target-areas of Project SHoW (Social Housing Watch), a cross-border project between Italy and Slovenia focused on housing regeneration, and funded by European Union. See also: http://www.lacollina.org/notizie/item/633-progetto-europeo-s-ho-w-inaugurazione-a-muggia-della-nuova-sede-della-microarea.html
38 About social capital: Pierre, Bordieu (1980); James, Coleman (1990); Robert, Putnam (2000); Arnaldo, Bagnasco et.al., (2001); Theda, Skocpol, (2005).
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THE SIGNIFICANCE OF PUBLIC OPEN SPACE TO PHYSICAL ACTIVITY AND PREVENTION OF OBESITY IN JEDDAH, SAUDI ARABIA

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INTRODUCTION
According to the World Health Organisation, non-communicable diseases have become a major cause of mortality and morbidity globally scale and are increasing rapidly. These diseases include obesity and other related heart diseases, hypertension; Type2 diabetes, hyperlipidemia and some cancers. In recent years, obesity has become an issue of international concern because it is rapidly rising across both developed and developing countries. It is linked to these serious chronic diseases. It has become a major public-health threat and a leading cause of preventable death. In England, for example, it is estimated to be the fourth largest risk factor contributing to deaths after hypertension, smoking, and high cholesterol.

In Saudi Arabia, recent research has confirmed the results of international studies in which the high prevalence of obesity has been attributed to differentiated exposure to unhealthy food stuffs and obesogenic built environments that discourage physical activity. The obesity crisis has become a leading public-health concern. This, in turn, has led to campaigns to combat obesity. These promote a healthy diet and encourage an active lifestyle by enhancing access to safe places for walking and physical activity at the city and neighbourhood levels. However, there is still little understanding of how physical environments and social factors affect the low level of physical activity which has promoted obesity and health inequalities in residential areas. There is extensive literature examining the relationship between obesity and the built environment, but these studies are mostly restricted to the developed world. They not only focus on exploring correlations rather than direct cause and effect, but they also provide contradictory evidence about the links between the built environment, physical activity and obesity.

This study addresses the significance of public open spaces for physical activities and the prevention of obesity in Saudi Arabian cities. The paper is based on a trans-disciplinary approach of urban planning, design, and public health. It summarises the outcomes of empirical survey conducted in Jeddah between September 2015 and March 2016. The survey utilised qualitative focused group technique for data collection and explore the collective perceptions of users of public spaces within residential areas in Jeddah in relation to physical activity. Based on the results of the previous research study that commenced in Jeddah, the themes of the qualitative approach have been developed. The recent Saudi Health Interview Survey (SHIS) reveals a trend of increasing overweight and obesity among Saudi population.
Moreover, despite the fact that the age structure in Saudi cities the last two to three decades has demonstrated a trend towards an ageing population, the population still young. This can be attributed to the large number of foreign immigrants who are mainly middle-aged and to prevailing social attitudes which favour large families. In line with this, our research focuses on a population of young people (16–20 year olds) where incidence of overweight and obesity is high. Moreover, we make recommendations for the establishment of effective government intervention in order to develop healthy life-styles, while suggesting legal ways to improve the design quality of open spaces in our cities and neighbourhoods.

**Obesity, Physical activity and the built environment**

Evidence from the literature shows that obesity is a multifactorial epidemic caused by biological, social, cultural, behavioral, and environmental factors; but its two major risk factors are physical inactivity and extended high energy-dense food intake. Current solutions, carried out at individual and community levels, are based on pharmacosurgical interventions, but these seem to be insignificant for weight control. These encouraged researchers to look at other significant factors that may help reduce obesity and promote a healthy lifestyle. As a result, recent studies confirm that the form of the built environment is relates strongly to people’s health and well-being.

Physical activity has been defined as ‘any bodily movement produced by skeletal muscles that require energy expenditure’. Different types and levels of intense physical activity have been identified, including bodily movement, active play, walking, dancing, biking, water activities and organised exercise. Physical inactivity has been identified as the fourth factor causing mortality, causing an estimated 3.2 million deaths globally. Physical activity is an essential foundation for physical and mental health and an important factor in reducing the risk of obesity and its related diseases. It also serves to reduce stress, anxiety and depression. Despite the known risks of physical activity and the difficulty of getting enough of it to prevent many diseases, there is a global trend towards inactivity. Recent WHO estimates reveal that one-third of adults across the globe are insufficiently active. In Europe, 10% of mortalities can be attributed to inactivity. In the US, the Centers for Disease Control and Prevention indicate that, although most people understand the potential of regular physical activity in protecting them from chronic diseases, thereby improving and extending life, only half of all adults and about one-third of children and young people reached the recommended level of physical activity of 150 minutes per week. This in turn means that the vast majority of the population experience inactive lifestyles and are consequently at risk of cardiovascular diseases.

In public health studies, the term ‘built environment’ refers to the habitat that influences a person’s level of physical activity. Much evidence suggests that the environment has various effects on health, including physiological, emotional, social, spiritual and intellectual wellbeing. In this sense, the obesogenicity of an environment refers to the influences that our surroundings, their spatial and socio-cultural features, opportunities, or conditions of life have the potential to increase energy-dense food intake and encourage sedentariness. This, in turn, raises obesity levels. Research on the effects of the environment on health has been growing rapidly because the treatment of obesity based on behavioral and educational interventions has been limited and unsatisfactory. Therefore, many researchers believe a multi-disciplinary approach is needed in order to tackle how the built environment influences physical inactivity and obesity. This holistic approach to healthy urban environments must be employed for investigations into which environments encourage high food intake and sedentariness. This is urgently needed in order to explore prospective long-term and effective approaches to reducing obesity.
In contemporary urban environments, it is difficult to maintain sufficient levels of physical activity (e.g. walking, exercising and cycling). This is due to objective environmental measures as well as theoretical socio-cultural factors. The first can be categorised as follows: safety, availability, convenience, local knowledge, urban form, aesthetics, and neighbourhood support. Social barriers to exercise include community relationships, personal preferences, cultural and language hindrances, self-esteem, and issues un-conducive to physical activity.

Physical activity and obesity in Saudi cities

Before the surge in economic growth that began in the late 1970s, the social environment in major Saudi cities was relatively cohesive, with well-integrated communities. The physical environment was organised around centrally located squares and streets which supported pedestrian travel for daily activities such as travelling to mosques. Urban spaces were not only reserved for assembly and everyday communication, sociability and trade; they were also the major elements providing cities and neighbourhoods with their unique character and aesthetic experiences. Such neighborhoods were compact and characterized by high-density dwellings, neighbourhood shops, and narrow streets that provided direct paths from place to place. These traditional areas facilitated walking and, in the modern period, cycling, providing daily activities. It was then common for children to walk and cycle to and from schools, making for robust demands on energy almost every day.

With the growth of oil revenue, strategies were created to implement housing and transportation projects in major cities. This resulted in a drastic fragmentation of the urban fabric. As in Western countries, new zoning regulations and the creation of modern residential and commercial areas allowing for a range of lifestyles, the traditional compact city disappeared. These changes in the nature of the built environment altered the patterns of daily life dramatically and changed people’s attitudes towards outdoor areas and their perception of public spaces. Streets and public spaces became utilitarian areas rather than facilitators for social interaction. All this contributed to the emergence of an obesogenic built environment. Such an environment encourages unhealthy eating, sedentary lifestyles and weight gain. This resulted in increased obesity among children, adolescents, and young adults as well as the middle-aged and elderly. Al-Hazzaa, Abahussain et al point out that the high rates of obesity in Saudi adolescents are not inherent, but reflect major changes in lifestyle. Saudi Arabia now has the highest rate of obesity in the world, which exposes its population to great risk for Non-Communicable Disease (NCD) mortality.

Obesity affects all segments of the Saudi population. In a comparative study of Arab regions, 34.7 of the population in Saudi Arabia are obese and about 69.6 are overweight. This suggests that age-adjusted rates of obesity and excessive weight in there are among the highest in the region. Data from the 2013 Saudi Health Interview Survey [SHIS] involving 12,000 households show that 28.7% (3.6 million) of the total population aged 15 years or older were obese, being about 33.5% for women and 24.1% for men. This is based on a body mass index of 30 kg/m2 or greater. Moreover, the findings of the 2013 survey confirm a strong association between obesity and inactivity in Saudi Arabia, demonstrating that 46.0% of men, and 75.1% of women are physically inactive. The results of a more recent cross-sectional study reveal a higher prevalence of obesity among adolescents in private schools in Saudi cities. According to this study, higher rates of obesity were remarkably high among adolescents across all ages. Excess weight and obesity extended from 39.9% to 45.6% in men and from 30.4% to 38.7% in women.

Comparing these results with the 2005 national survey (which had a similar sampling frame and methods as the 2013 survey), It can be observed that between 2005 and 2013 obesity decreased by 4.4% for men and 10.7% for women (Fig 1).
This overall decline in obesity can be attributed to the policy changes in health affairs. Although obesity has diminished, its health concerns have not been addressed. The findings of the 2013 survey indicate that obesity and body mass create most of the leading NCDs, such as ischemic heart disease, diabetes, elevated blood pressure, hypercholesterolemia, and hypertension. This confirms the results of the Global Burden of Disease studies of 2010 and 2016 which reveal that body BMI, high fasting plasma glucose and dietary risks remain the top risk factor for disability-adjusted life years (DALYs) in Saudi Arabia. Life expectancy in Saudi Arabia in 2013 was 75.8 years for men and 80.7 years for women. Although Saudi people live longer lives, they are not in fact healthy. This in turn increases public health expenditure and reduces the quality of life.

The high level of sedentariness among Saudis has intensified the prevalence of excessive weight and increased obesity and the burden of related diseases – a major public-health concern over the last decade. This has forced the government to make extensive investments in implementing several public health programmes to reduce the risk of obesity, focusing on self-awareness and behavioral changes. Although the government has made tremendous improvements in this objective in a short period, rapid changes in lifestyle have led to a disease burden which requires quick intervention to resolve the prevalence of excessive weight and obesity. As some researchers argue that an environmental approach is urgently needed in order to promote greater health through physical activity and healthy eating decisions. Without this, government interventions will prove ineffective.

METHODS
Our basic objective is to explore the significance of public open spaces for physical activities and the prevention of obesity in Saudi Arabian cities. We hypothesize that Saudi urban open spaces discourage a healthy lifestyle. To test this, while reviewing existing literature, we combine data gathered from an empirical survey conducted in Jeddah between September 2015 and March 2016. This gauged the perceptions of public space users regarding physical and social measures supporting or constraining physical activity. Jeddah (the second largest city in Saudi Arabia and the biggest in the Mecca governorate) was chosen as a case study to examine new public spaces on the basis that wealth
from oil revenue created an extreme example of a rapidly developing and expanding city in an economy emerging since World War II (Fig 2).

![Figure 2. Geographical setting of Jeddah](image)

We conducted our empirical survey using a flexible qualitative research approach informed by focused groups to gauge collective perceptions of public space users. We explored aspects of the built and social neighbourhood environment regarding physical activity. The sample consists of 51 participants (26 males, 25 females) aged between 16 and 20 years. The sample focused on secondary school (high school) and college students, whom we divided into six separate focus groups. Saturation was reached with 51 participants (Table 1).

The focus groups were conducted within the school and college. Four schools and two colleges were invited to take part (female students from CBS public administration and male students from Science collage, KAU). Respondents were given opportunities to question further inquiries. The focus groups were digitally recorded, anonymized and transcribed in order to generate a substantive code. The collected data were managed and classified into themes, then analysed and categorised to establish an analytical framework for the issue.
FINDINGS; VIEWS OF RESPONDENTS

Our study reveals concerns about the relationship between perceived and objective environmental factors and a health-related lifestyle. These are concerns regarding the barriers to and the enablers of greater physical activity in public spaces. Respondents were asked: When you go out for recreational purposes, where and when do you usually go and with whom? Are there parks or outdoor spaces near your home that you visit? How often do you use this park per week? About how long would it take you to walk from home to this park? Which activities do you engage in when you go to the park? Which chief factors limit activity in your local park? How friendly is your neighbourhood? Do you enjoy walking there? How satisfied are you with safety concerns? To what extent do gender differences and work affect physical activity?

Limitations of the natural environment on physical activity

When respondents were asked how often they used outdoor spaces, their answers varied. One man, living in a high-density residential cluster close to endless ribbon commercial developments along major roads, spoke of pollution from vehicle exhaust fumes alongside land pollution caused by fly tipping. Hot weather and a lack of shaded areas reduced public presence in outdoor spaces (Male FG4 Ms). Another commented:

In our neighbourhood, the municipality usually irrigates the plants and grass of parks with sewage water. This emits unpleasant odours. Moreover, people and shopkeepers dispose of waste in the streets. Given our unfavourable climate, all these things discourage people from sitting or exercising outside (Male FG4 Ms).

A female respondent said ‘we don’t go to these spaces and don’t like to walk in our own neighbourhood, where people may recognise us. Instead we go to a bigger open park away from buildings or to the Corniche where we can breathe fresh air in the evening when the temperature declines’ (female FG5 Fs). Others commented that high temperatures and sunlight in Jeddah are unbearable for most of the year. Male secondary school pupils said they usually play football in the playing field after sunset in summer and one hour before sunset in winter, when the weather becomes moderate (male FG4 Fs). One declared that daytime attendance is higher in winter than summer. Thus...
morning use of open spaces is limited in both winter and summer, and most people start outdoor activities in the evening (male FG4 S).

We went further, asking respondents who use public open spaces within their neighbourhood how many times a week they go there; responses revealed summer/winter variations. One said they go twice or more per week in summer and four times or more per week in winter. Others agreed that ‘The basic problem of extreme weather conditions in Jeddah for most of the year has been ignored in designing these spaces, most of which are exposed to extreme heat and sunshine’ (male FG3 Ms). Although the difference in the number of visits to public spaces is especially marked in winter, it can be inferred that the inclement microclimate conditions play a major role in deterring outdoor pursuits.

**Limitation of the physical environment on physical activity**

Asked how far respondents thought their physical environment encouraged physically activity they agreed it did the opposite. The fragmented urban fabric of dispersed residential areas widens distances between buildings, forcing people to use cars. One respondent pointed out that wide streets separate people, establishing a feeling of being unable to move freely and safely within their borders. This, in turn, reduced personal contact (Female FG2 B). Another said the gridded subdivision of his neighbourhood encouraged depersonalised public spaces that limit public access and physical activity (male FG3 Ms). Another maintained that the way their neighbourhood was planned with open spaces surrounded by wide streets encouraged speeding vehicle noise. All these discouraged any public presence in outdoor areas and diminished the quality of social interaction (Male FG1 S). A colleague added that ‘the speed of cars is the main obstacle to letting toddlers play outside, as well as to adult socialization’ (Male FG1 S).

Regarding the quality of residential public space, one respondent said ‘the lack of integration in how segmented urban spaces are designed, constructed and maintained signifies a lack of quality in the physical environment’ (Male FG1 S). Another from a different group argued that ‘traffic movement without pedestrian walkways makes it difficult for residents to access available outdoor spaces (Male FG4 Ms). A classmate commented: ‘this explains why these public spaces are lifeless, since they don’t offer greater opportunities for physical or cultural activities’ (Male FG4 Ms). Describing open spaces within his neighbourhood, another added that:

They are not designed to fulfil human needs, since many basic aspects of comfort, like environmental protection, suitable sitting areas and accessibility, are ignored. They are neither suitable areas for families to sit in, nor are they safe for children, teenagers or adults to play in’ (Male FG4 Ms).

From this it is clear that existing public spaces have insufficient features to attract people to them. Moreover, the separation of buildings and public spaces by streets, and the emphasis on motor car movement, allowing cars to be driven directly to every single house means these spaces are no longer regarded as areas where people can exercise in a relatively safe environment.

**Perceptions of the social environment**

Across all focus groups, perceptions of individuals’ own neighbourhoods and the city displayed negativity toward multiculturalism. Perceptions of over-saturation by international immigrants and low-skilled workers accompany a growing sense of uncertainty, anxiety and insecurity; these have become important factors shaping attitudes. One respondent living near commercial facilities described the social mix of his area as dangerous, saying it had been appropriated by street vendors (Male FG3 Ms).

Another said the undefined territories within her neighbourhood had led to an uncivilized public attitude towards the disposal of domestic waste, litter and vandalism (Female FG2 B). Such a situation, another respondent said, makes residents feel unable to cooperate with their
neighbours, degrading the quality of outdoor spaces and negatively affecting the public sense of safety and security (Female FG2 B).  
A respondent from al-Zahra, a low density neighbourhood, described outdoor areas there as dangerous, lifeless and neglected (Male FG3 S). A classmate from the same area said it was a place for young outsiders to drink alcohol or take drugs (male FG3 S). Respondents in his focus group agreed that the area has a reputation for drug taking at night. Participants’ perceptions of their environment confirm previous findings that modern planning and design regulations in residential areas have intensified ethnic heterogeneity, creating a cosmopolitan urban environment in older areas and producing lifeless suburban neighbourhoods. This limits physical activity in outdoor areas.

**Perceived safety and gender differences**

When asked how safe their neighbourhoods are, respondents were concerned about open spaces used as hide-outs for criminal and anti-social behaviour, as well as areas permitting the free movement of strangers without any controls. Although responses varied, there were similarities. All groups viewed the absence of safety and security measures as major limiting factors for physical and social activities. Most agreed that insecurity can be linked to the social mix of their areas (Male FG1 S). This made it difficult for residents to interact with each other, resulting in a lack of responsibility, encouraging uncivilised behaviour and a reduced sense of safety (Male FG3 Ms). There was broad acknowledgment that children and females were more at risk because of harassment by teenagers, workers and strangers (Male FG4 MS). One female respondent confirmed that the heterogeneity of her area increased anti-social behaviour, raising the risk of harassment or theft, especially after sunset (Female FG5 Fs).  
Regarding how far gender differences and concerns for privacy affect physical activity, CBA respondents said that because religious and social norms restrict women in public places, they did not like to walk or exercise in their own neighbourhoods. Instead they went outside their district to places like the modern mall in the city (Female FG2 B). They also went to the northern seaside (Abhor Beach), where they usually have out-of-town houses where they could exercise and enjoy a sense of privacy from men (Female FG2 B). Others, who live in poor and middle class areas such as al-Salamah, said they stayed at home to avoid the harshness of public places, enjoying indoor recreational facilities or going out to the Corniche area where they could freely enjoy walking activities while covered with their veils (Female FG6 FS).

**Cultural change and the sedentary lifestyle**

As a part of the process of re-shaping society in a modern image, the built environment has been shaped to suit the new economic development. The prevalence of low-density residential suburbs at a distance from places of work, shops, and communal and recreational facilities has stimulated increasing private car use, reducing opportunities for walking and cycling which were previously integral parts of daily life. Cultural change created a fragmented urban environment promoting excessively sedentary behaviour and inhibiting physical activity. This promoted weight gain and obesity as nutrition grew more Westernized, encouraging a high intake of unhealthy high calorie food.  

Throughout our discussions, most respondents argued that daily routines in a harsh climate discourage physical activity (Male FG4 MS). Most did not have part-time work, as full-time students they lack time for physical activity (Female FG5 Fs). Those with part-time work indicated that getting a job has prevented their participation in exercise and sport activities (Male FG1 S). One respondent, who used to go to with friends to a nearby football pitch, got a part-time job as a salesman in one of the biggest
city malls and could no longer play regularly on week-days and week-ends (male FG1 M). Another said lack of time and changes in entertainment culture forced him to resort to indoor recreation while contacting relatives and friends through social media (Male FG3 MS).

**DISCUSSION**

Barriers for Saudi city-dwellers (especially for the 16 –20 age group) differ across participants. We stress physical factors such as well-maintained public open spaces and perceptions of socio-cultural qualities like a low sense of security. Respondents mentioned other factors limiting their physical activity, including school homework, sociability, family obligations, long commutes, television, and generational change. As Leyden (2003) argues, these contribute to a decline in levels of physical activity and social capital.

Perceptions of environmental qualities varied between the six groups, and between different residential areas. Understanding how lifestyle behaviours contribute to obesity alongside people’s attitudes towards outdoor areas could serve to guide urban design practices by establishing effective intervention strategies. This study is a first step in an on-going research programme to explore qualitatively how far perceptions of spatial qualities in Saudi cities affect the physical activity of the above age group, where the probability of becoming obese is great and health consequences high. Respondents confirmed what Johansson, Sternudd et al had pointed out – that perceptions of urban design qualities such as upkeep and order, and the presence of well-maintained parks and streets can motivate physical activity. Despite the decline in physical activity, male participants engage in formal physical education in secondary school, through gym membership, or organized sport activities. They take regular exercise, play football on pitches or informal spaces, and walk along pedestrian trails, at the Corniche or in commercial streets. Women indicated that shopping malls with cafés or gated compounds at the seashore which encourage passive activities and a sedentary lifestyle are best for exercise. The way people interact with their built environment to inspire walking could resolve barriers to physical activity and serve as guidance for urban planning and design intervention.

Regarding the social environment, there are too many international immigrants and low-skilled workers who create uncivil behaviour, anxiety and insecurity. These are important factors shaping attitudes towards outdoor areas. Our findings confirm that modern planning and design either increase density or social heterogeneity or produce lifeless and fragmented suburban neighbourhoods. These districts have created undefined territories which encourage antisocial behaviour and jeopardise the social realm. Subsequently, individuals withdraw from public life, reducing their physical activity. How far does Jeddah’s built environment discourage women’s physical activities? In Jeddah, as elsewhere in the country, gender segregation is strictly applied in all public spheres. Traditional requirements for privacy impose social restrictions on women’s dress, regulating their movement in public areas by socio-cultural and religious norms. This reduces their physical activity. Concerns about safety affect women’s walking, limiting their presence in public places. Shopping malls are the most important places for women. This is because a most malls exclude single men during afternoons and evenings. These locations are regulated by a security and surveillance system which increases the sense of safety for women. Moreover, air conditioning helps increase the level of comfort, creating attractive places for women to walk while wearing their veil.

**CONCLUSION**

Our findings expand current urban design and public health literature by illustrating ways in which modern built environments have discouraged physical activity in public spaces everywhere. Several previous studies have documented links between objective and subjective attributes of the built
environment and physical activity carried out within it. The World Health Organization pointed out\textsuperscript{35} that the standard of urban living is key to people’s health. Creating fresh or under-used opportunities for physical activity can reduce obesity through a healthy lifestyle. In recent years, the Saudi government has realized the urgent need to combat obesity, which has become a leading public-health concern. It has promoted organised campaigns to combat obesity through a healthy diet, but this still lags behind expectations. Fundamental changes in public policies are urgently needed to tackle the negative impact of the built environment on health and inequalities in physical activity.

Our study shows deficiencies in the way Saudi urban public spaces are planned and designed in relation to needs for physical activities for people aged from 16–20. It suggests that, if an active lifestyle is to be achieved, interventions are needed to enhance access to safe places for walking and physical activity at city and neighbourhood levels.

We indicate an urgent need for further empirical studies exploring links between public spaces within residential areas and physical activity to discover which types of public places can encourage exercise. Further case studies will provide a greater database concerning the causes and impact of inactivity across various groups differing in terms of age, gender, ethnicity, education and employment. This will provide multiple perspectives about promotion of physical activity in Saudi cities, allowing us to reach broader conclusions. Future work should ensure homogeneity among participants (e.g. recruitment from the same neighbourhood or stratification by comparable areas). Future research should use objective measures such as accelerometers and GPS to give a more precise picture of activity levels.

Our study offers a valuable baseline for studying countries of emerging economies like the Gulf States, all of which struggle with high obesity rates linked to inactivity. Despite its limitations, this is a timely contribution to urban design and public health literature. Our primary research is robust, asking and as far as possible answering many questions about the links between built environment and physical activity. This study is specific to a particular region which may not be widely covered in the literature. It is one of the first qualitative studies exploring physical activity and perceptions of the environment in our selected age group, building a bridge to older public health literature. We consider it a valuable reference for policymakers and academics, whom it may help by providing fresh community-planning strategies to promote an active and healthy lifestyle.
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5 Mandeli, K. “Promoting public space governance in Jeddah, Saudi Arabia.” Cities, 2010 (27); idem, “Public space in a contemporary urban environment: Multi-dimensional urban design approach for Saudi cities”, Ph.D, Newcastle University.
11 Ibid.
12 Ibid.
16 Lake, A. and T. G. Townshend, “Exploring the built environment”.
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GOVERNING LIVEABLE CITIES: A QUESTION OF AGENCY? PUBLIC HOUSING AND NEIGHBOURHOOD COMMUNITIES IN THE CITY OF BOLOGNA

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INTRODUCTION
The city has been always considered an economic and political promise of emancipation. It represents the possibility for self-government, integration and also freedom from local communities’ constrictions. Nevertheless, as Park and Burgess write, the city is a space of individualization to which we owe the major economic and cultural productivity, but also the scenery where all the pathologies of the modern society arise. Urban inhabitants lay opposite hopes on the city: it has to be both homeland and machine; site of both anonymity and identification; place of indifference and recognition at the same time. Authors such as Simmel and Goffman, analyzing urban life, underline that “civil inattention”, indifference and distance are the most frequent interaction models. Due to processes of urbanization and globalization, moreover, several transformations have affected the city. For instance, spaces traditionally destined to favor extra-familiar socialization interactions have lost their characteristics and have been replaced by sites producing simple fun or by dormitory neighbourhoods. Consumerism, tourism and cultural industry have become fundamental aspects of urban policies; the quality of urban life has become a merchandise itself with the proliferation of «non-lieux», namely transition spaces not characterized by identities and relations, but by anonymity with the only function to increase the consumeristic desire and/or to accelerate daily practices. Eventually the rise of «network society» has empowered the space of flows, disfavoring the space of places and leading towards a detachment of social practices from physical territories. In this sense, cities are currently agglomerates of fragments, privatized public spaces and mono-functional sites, that have caused what Becattini calls «sfarimento dei luoghi»— «pulverization of places»: the bond between places and individuals has been lost; these ones have forgotten their personal capacity to take care of and to reproduce the territory and, in particular, the urban territory, considered as the life environment of citizens and local communities.
In the light of all this and wondering whether the urban future is liveable, this work aims to present two dimensions of urban life specifically addressed by the conference – home and community – focusing on the agency-institution duality that characterizes both.

LIVING FOR BEING CITIZENS, BEING CITIZENS FOR LIVING
Two dimensions of urban living are taken into consideration as two sides of the same coin: living as the need of having a house and living as the need of being part of a community. Both needs are
considered here as basic conditions for making a city liveable. Moreover, what joins these two sides is the dependency on personal choices taken by individuals on the one hand and from public policies implemented by local governments on the other hand. The former is part of individual agency, seen as «meaningful human behaviour, individual or collective, that makes a significant difference in the natural and/or social worlds, either by direct, unmediated action or through the mediation of tools, machines, dispositives, institutions, or other affordances»\(^6\). The latter – local government – as a form of institution, a miscellany of social forms, including conventions, rules, rituals, norms and values lodged in particular types of social structures. The term is commonly applied to specific formal organizations of government and public service\(^7\). In other words, an institution is a «socialized structure, that is, a relatively enduring ensemble of structural constraints and opportunities; it comprises a more or less coherent, interconnected set of routines, organizational practices, conventions, rules, sanctioning mechanisms, and practices that govern more or less specific domains of action»\(^8\). The interaction between actors and institutions is a dialectical interplay, defined as «reflexivity-recursively dialectical», characterized by two dimensions: «the “structurally inscribed strategic selectivities” of the institutional frame toward actors and the “structurally oriented strategic calculation” of actors toward institutions»\(^9\). Actors may contribute to reproduce or transform institutions, taking into account structural constraints and windows of opportunity, while institutions select or privilege some actors’ strategies and tactics recursively, responding to actors’ strategic behaviour in a more or less consistent way\(^10\).

The activation and recognition of citizens’ agency, on the one hand, and the variation in institutional definitions within the state, on the other hand, are leading towards the conceptualization of a new form of citizenship and new governance arrangements. Traditionally the citizenship was assumed as a “package” of rights and duties that individuals received on an imagined natural national identity; it was, indeed, a received citizenship. Nowadays, rights and responsibilities are more linked to residence in the city, based on a scale-sensitive and inhabitant centred conception. Moreover, citizens directly contribute to achieve their status as citizens by actively participating in city management: this is called achieved citizenship\(^11\). Intertwining definitions of urban citizenship – e.g. cit(y)zenship by Kazepov\(^12\) or urban and regional citizenship by Eizaguirre et al.\(^13\) – with the one of active citizenship by Moro\(^14\) gives the following statement: citizenship as the self-organization of citizens in a multiplicity of forms for the mobilisation of resources and the exercise of powers in public policies; for the protection of rights to achieve the end of caring for the city and developing common goods.

This more active role of citizens is also a consequence of deregulation processes from central to sub-national governments, that during the last decade in all Europe have led to forms of multilevel governance\(^15\). What is called «governance-beyond-the-state»\(^16\) is, indeed, characterized by the increasing importance of non-state actors, among which private economic subjects and parts of civil society that share and overlap tasks and responsibilities\(^17\). When bottom-up initiatives implemented by these actors are integrated with traditional top-down policies as a method to combine different practice of participation and to produce social innovation, it is possible to identify forms of bottom-linked governance. Their aim is to include alternative mechanisms of negotiation between various groups and networks, potentially empowering local governments and communities\(^18\).

Therefore, one way to evaluate the extent of democratic and liveable governance in cities will be to consider the extent to which institutions favour a public sphere in which citizens can argue their cases and present innovative proposals for local practices of citizenship. As obvious, this is not always the case: is citizens’ voice heard? Are new forms of governance really inclusive? Are policy instruments really personalised? Below, two cases within the urban context of Bologna will present two different
assets of interaction between actors and institutions, certainly affected by the type of resources and decisions that the local government has to deal with.

Public housing in Bologna

The housing issue emerged after industrial development processes from the late 19th century in Italy as well as in other European countries when large flows of people moved from rural to recently urbanized parts of cities. In 1901 in Italy: «1,204,908 families occupy 1,158,049 houses; 46,859 families cohabit with others. 12,633 families live in cellars (especially in Southern cities), 342,870 families live in slums, 16,172 families in Milan and Turin barns and attics. [...] In Milan, over 70% of 330,000 inhabitants is forced to live in houses with two rooms; 39% of houses has only one room, very often with bathrooms in common, in yards or landings. [...] The situation is similar in other cities that are experiencing their first real “industrial moment” during the same years». In this period, the Luzzatti law was implemented (L. 31 May 1903, n. 254) from which the I.A.C.P. (Istituto Autonomo Case Popolari) was instituted, that was the managing authority of public houses whose purpose was to deal with the housing problem of the lower classes.

With the passing of time, the need for housing suffered deep changes. On the one hand, the meaning of “house” itself changed; on the other hand, the need for housing increased: above all, after the economic crisis started in 2008, the level of absolute poverty also increased as well as the “area” of vulnerability, or so called “grey zone”, that caused for people huge difficulties to support the houses costs. Additionally, an important part of the public stock was alienated after 1993 and, with the Constitutional reform of 2001, the housing issue passed from the state authority to local decisional power and budget redistribution. If today the term “housing policies” concerns different types of support or intervention, in this case we are considering the territory of Bologna and the tool of public housing, that is the main welfare instrument to allow families with specific socio-economic conditions to access a public house with evidently lower prices than the ones on free market.

We have to point out two fundamental elements of this welfare instrument. The demand for houses evolved over time. The latest report on Bologna highlights its evolution. A total reduction in demand was recorded: at a percentage level, the demand presented by foreigners is on the increase, the demand for family units of one person or two people has decreased and the entire demand for family units with three or more people has increased. From another point of view, we emphasize the modification regarding the requirements that one family unit needs in order to apply for a public house and to produce valid documents. From 2015 to 2016, two relevant transformations occurred. Regarding the working location, it is no longer possible to apply, if the applicant is working in a foreign country; it is, instead, possible to apply for a public house if the applicant is about to start a new job in the city of Bologna. Moreover, a time limit has been introduced based on the criterion for the applicant to have been living or working in the territory of Emilia Romagna for at least three years, an element that was not present in 2015.

Following these modifications, the waiting list has continued to diminish and it is plausible to conclude that this results in the attempt to enhance the demand presented by local resident and rooted Bologna citizens.

Social Streets: active neighbourhood communities

The Social Street is a form of neighbourhood community. The first group was born in September 2013 in Bologna. Today it is possible to count approximately 450 Social Streets, around 40 of which located outside the Italian borders. In Italy, they spread more in the North and gradually less in the Centre-South of the country: Milan and Bologna are the cities with the highest number of groups –
around 80 and 70 respectively. «The goal of the Social Street is to socialise with neighbours […] There must not be profit purposes but just social ones. Social Street does not support any political, religious or ideological vision; it brings together people with the only criterion of proximity among residents in the urban area»28. Indeed, since every group is organized around a specific urban area – street, square, park, part of neighbourhood – the territory takes on strong importance, because it becomes the basis for the construction of a shared identity among Social Street members. These share, moreover, three main values: sociality, gratuitousness and inclusion. The sociality, as well as being the primary need from which the experience was born, also becomes the most important goal to reach. All the initiatives organized have the single purpose to stimulate citizens in socialising and participating in common projects. Semantically the gift, used as first mean of interchange, implies gratitude and allows to activate virtuous circles of reciprocity and trust29; in addition, every donated goods and services implies a «bonding value»30. Lastly, the access to Social Street is open to everyone for total participation, regardless any ethnical, political or religious differences.

Among all the neighbourhood groups there is a huge diversity due to geographical position, collocation within cities, birth year, type of activities, internal organization and relational network established with other socio-political subjects of the territory, such as the Municipality, the local administrative institutions and any other kind of associations. The following analysis is based on soft data collected for an explorative research on two of the older and more active Social Streets in Bologna: Via Fondazza – the very first group – located in the centre of the city and Via Duse, in the “San Donato” neighbourhood in the outskirts31. The motivation for participating in meetings and activities is the same for both groups: meeting neighbours, creating new relationships, sharing the daily life in the area and exchanging help and tools when possible. Although in both cases the first aim is the sociality among members, once the latter gather and organize activities in the urban area, the attention towards the care of territory arises. The result is an attempt to improve the public space and the management of common goods. Nevertheless, the two Social Streets have carried out different strategies to reach a similar result. Since the beginning, the residents of Via Fondazza have preferred to avoid any formal dialogue with the local institutions, underlining that this kind of relationship is not strictly necessary to achieve the sociality among neighbours. This choice is also affected by two other aspects: the fear to be exploited by the public administration and the will not to be identified as a possible solution to local collective problems. Moreover, an official collaboration with the Municipality would imply the mandatory institution of an association, which is totally against their main principles. On the contrary, the Social Street of Via Duse immediately tried to establish a network of collaborations with other actors in the area, in order to foster citizens participation and activation for the management of commons. To do so, the administrators of the group32 decided to formally sign a pact with the local government, through which citizens can have the task to take care of an abandoned or no longer used public space and the Municipality admits to them economic and factual helps. This policy tool, known as Regulation for commons’ shared administration, was implemented for the first time in 2014 in Bologna. The collaborative acts signed between citizens and the local government need to «care, re-generate and manage urban commons, tangible and intangible, functional to the individual and collective wellbeing»33. Already in 2001, the Italian constitutional reform – Article 118 – defined the principle of subsidiarity, underlining the support that State, regions and municipalities must give to the free exercise of general interest activities by citizens as individual and as organizations.

Although the two Social Streets used different strategies – informal and formal – they both have been able to increase the sense of community, by consequence of taking care of urban commons and of experiencing this in common34: in the case of Via Fondazza, the dialogue with the institution allowed
them to install two benches and some bicycle parking areas; in the case of Via Duse, the collaborative act formalized the use of a public notice board by the group’s members for advertising their activities/events/projects and for exchanging useful information.

CONCLUSION
Is governing a liveable city, therefore, a matter of agency? Is citizens’ agency activated and recognised? In the cases presented above, the interaction between institutions and agency is completely different. Within the housing framework, public policies turn out to be a disincentive for specific categories of population, in particular foreigners and people who have not been living or working in Emilia Romagna – the region of Bologna – for at least three years. These individuals do not have the possibility to apply for a public house anymore. On the contrary, residents of the two Social Streets have the opportunity to dialogue with the local government in order to share a little part of the city care. In this case, public policies – through an informal help or an official regulation – turn out to be an incentive for the activation of citizens.

Considering about the two different situations, public houses are a private – meaning that in any case it has an owner - and scarce resource and it regards, moreover, an economic issue. The urban territory is, instead, a common and open resource, less related – or at least less directly – with monetary issues. This results in opposite behaviours of the institution: an “extra-management” of the houses and the criteria to have access to them in the first case and more accountability – or sharing of responsibilities – in taking care of specific public spaces in the second case.
NOTES

20 Ibidem, p. 41. This is a translation from the original text.
21 We underline two important housing plans realized by the Italian government during the ‘900s. With the law 28 February 1949 n. 43 the Italian Parliament approved the plan to increase employment supporting the construction of worker's houses, under pressure from the ministry of labour. The multi-year life plan (seven years, then duplicated) well-known as Ina-Casa was based on State and employees' taxes and allowed the building of 335,000 houses. After that, the Gescal Plan (GEStone CAse per i Lavoratori) was launched with the law 14 February 1963 n.60, financed like the latter and concretely subsidized until 1992.
25 Being in a waiting list does not imply that the applicant will receive a new house immediately, because this is subjected to the availability of an empty usable apartment with the qualitative housing standard required by law.
26 Università di Bologna (Dipartimento di Sociologia e diritto dell’economia) and Comune di Bologna (Settore Politiche Abitative), Bologna. La domanda di casa. Una lettura delle graduatorie comunali (Comune di Bologna, 2016), p. 32.
27 Ibidem. Data have been analysed during the development of a PhD thesis.
28 Translation from the website: www.socialstreet.it.
31 Giulia Ganugi. Tecnologie e social network: nuovi strumenti per creare relazionalità. Studio sulle Social Street e il loro valore sociale. Tesi magistrale, Università di Bologna; relatore: Prof. Prandini R., correlatore: Prof.ssa Macchioni E., 2014.;
32 The administrators are the founder of the Social Street and all the other citizens who support him/her actively to organize and manage the group.
33 (www.labsus.org; www.labgov.it).

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MAINTENANCE AS ALTERNATIVE TO GROWTH: NORTH MILAN BRIANZA RECOMPOSING POTENTIALS FOR SPREAD SETTLEMENTS AND OPEN LANDS BEYOND THE ECONOMIC CRISIS.

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INTRODUCTION

The urbanized region in the North of Milan is a dense built nebula, determined by the interaction of intricate and complex dynamics. These dynamics were not generated only by the exponential urban growth which followed a long phase of economic prosperity. In the same way, the deterioration and increasing abandonment of this context is not just the outcome of a deep economical and industrial crisis, but the demonstration that the spatial and social relationships of this context have changed. The economic recession has only exasperated the many contradictions and the deep conflicts that were already part of the context. If indeed, this urban territory has always been composed of fragmented identities, singularities, and autonomies, it is equally true that such elements have gradually shifted to a very extreme individualized framework. This pulverized the historical interdependence between the urban configurations and the communities that connoted the area for long.

This paper analyses and reinterprets the Milan’s wide urbanized territory in the light of the conflict between its actual physicality and the end of main settlement patterns. The aim is to, therefore, investigate its elasticities, in which new declinations of welfare can be established, intended as new forms of well-being in the definition of the urban territories.

The concept of “Maintenance” will be proposed as a strategy to address the deep metamorphosis to which Milan’s metropolitan area is currently subjected to, and where this term addresses the development of a scenario able to interact with incremental and long-term transformation processes of the urbanized territory and open lands. The focus will be on Brianza, a Milan’s metropolitan area located in the north of the region between Milan-city, the lakes and the pre-Alps. It is a low-density, but deeply urbanized urban system, which includes major factory concentrations of all sizes and a dense network of historic towns immersed in a spread that grew steadily between the 1960s and the first decade of the new millennium.
2015, Vescovi 2009). From the Industrial Revolution through the phase of post-Fordist production reorientation since the end of 1970s, this area has been for long a fertile cradle of industry. In recent decades, it has been specially focused on design furnishings, high tech components production and mechanical industry (Foot 2001). Its urban framework is characterized by thick infrastructures, compact historical nucleus, around which widespread urban fabrics have developed, finally resulting in extremely superimposed habitats. The environment is defined by three river-valley systems along which agriculture was originally developed in order to supply textile industries that had been in the area since the beginning of the industrial development (Boeri et al. 1992, Carera, Cesaretti 2011). This had given rise to an extra-fragmented agricultural plot structure, though this is not the only reason which had reduced the agriculture to cropped fragments among low-density urban sprawl. Indeed, a soil consumption without rules has definitely played a more decisive role.

The contemporary organization of the extended Milan metropolitan territory, of which Brianza is the area that more than others condenses its main features, originates from a network of ancient towns and following developments, with Milan as its most intense point of concentration, but in a relationship of interdependence. Industries of all scales have been widely dispersed across the urbanized region, all linked to a trans-European infrastructure since the late nineteenth century. Brianza was from the beginning one of the most dynamic and rich industrial areas of Italy. Its complex and articulated configuration has been able to accommodate for long the different forms of urbanization that have followed, apparently without significant fractures (King 2015).

**From interdependence to autarchy.**
The urban evolution of the area has been through agriculture, industry, infrastructure, and a myriad of towns, giving rise to an extremely resistant and flexible framework. In the past, this framework has withstood profound political and social change, but without ever altering the characteristics of the fundamental settlements. The pattern of dense relationships between heterogeneous environments has always been deeply resilient. But since the end of 1960s, every urban element in this area has been individually conceived piece by piece, contributing to the formation of a fragmentary urban landscape of autonomous objects (Indovina 2009). This has been particularly evident not only in the multitude of superstores, business parks, and single homes located in the metropolitan area, but also and even more significantly, in the spread of industrial activities that are independent from the infrastructural nodes and the motorways network. In fact, their size, the family style managing, the perfect integration into low density environments, have made possible for them to develop a high spatial degree of autonomy (Bauman 2001, Settis 2010).

The economic and social microcosm scattered in infinite individualities, has been at the base of industrial prosperity until the last economic crisis (Bonomi 2012). But this growing parceling of land has slowly come to dismantle a system of relations that, at various scales, had previously constituted a textural datum within which new and disruptive urban dynamics had been elastically absorbed for centuries. The governance of Milan’s metropolitan dimension was then split into a multitude of directions, leaving a free field to any local initiative and urban approach, and restricting possibilities for a unified, coordinated, and pervasive plan for Milan’s metropolitan area (Secchi 1994). With the last word mostly left to local municipalities, when not to real estate developers, they then have followed individual goals (Figure 1.). A tolerance of incremental expansion that created a scattered “go at it alone” spatial culture, and in which the previous frameworks have begun to crumble (Ingersoll 2008).
THE BRIANZA CASE-STUDY. DESTRUCTURING CONTRADICTIONS.

Brianza is an area of about 880 square kilometers, a population of more than 1 million people, a density of 1400 inhabitants per square kilometers. This huge density highlights the level of soil consumption, especially if we consider that the European average is of 113. The total number of active companies, which constitutes the largest economy in the area, is about 63,000. In 2011, there were 67,000 (ISPRA 2015). However, these data don’t represent the actual economic crisis of the area. Indeed, unlike before the crisis, many of the companies consist of one or at most few workers. However, since the crisis begun in 2008, more than 9000 historical large manufacturers shut down, giving rise to a massive loss of workplaces, provoking the youth unemployment rate to reach 32%.\(^3\)

The decline process had of course a domino effect: shrinkage of habitats, demographic stasis, lower immigration inflow, and dramatic levels of youth emigration and mobility. At the same time, there was also a surplus of housing, collective utilities, and infrastructures. It needs to be pointed out though, that the deepest crisis manifested itself in the settlement model, which currently is no longer supported by a demand (Van Kempen et al. 2016). The issue of the lower demand cannot simply be analysed through the lens of quantity, but more critically, in regard to its consequences over a complex network of spatial relationships. The physicality of Brianza is in fact closely interconnected with the individualized communities that inhabit it, with their being on the territory as singularities disengaged from one another. In the territory that we are observing, it is therefore possible to see that the inhabitants do not recognize themselves anymore as part of a community – as there are no more personal interests that are shared – while the economic crisis emphasizes the weaknesses of the territory. The spatial effects of this in terms of end of a settlement and productive model have been mostly perceived as individual breakages, as punctual phenomena, hence compromising the possibility of any common constructive reaction.

While this widespread retraction dynamic is in progress, Brianza continues to be extensively built for speculative reasons, but also because of the central government policy to support agonizing business economy. To this we should add a dominant culture inertia in terms of investments by lending banks (Sassen 2017, Newman 2009). In our analysis, such twofold phenomenon is not set in terms of an aprioristic controversy between space and the bodies that occupy it. Rather, the focus of our attention
is placed on the overall imbalance between the transformations produced in space and the dissipation of energy used to produce them (Figure 2).

**Figure 2.** Despite spread shrinking dynamics, the economic culture inertia still chases old building logics and speculations. Images by Marco Baccarelli.

### DISTORSIONS

Three forms of ‘distortion’ can be therefore pointed out in the ongoing construction of the territory. Firstly, there is a mismatch between the measure of what is built and the actual infrastructure development that supports it, both in terms of population and production. Secondly, a contradiction emerges from ongoing territorial dynamics, which are moving in contrary directions and have opposite signs, since processes of addition are combined with phenomena of contraction in the utilization of existing resources. Finally, incremental, autonomous and self-referred processes of transformation seem to have worn out a large part of the social overhead capital, for example in terms of landscapes and infrastructures which define the primary quality of the territory (Innocenti 1985).

The spread allowed the inhabitants of the metropolitan area to realize their implicit and individualistic project accessing a diffused welfare. This had relied also on a very solid historical frame, which guaranteed a high and extensive quality to suburban and spread environments. In fact, the collective imagination sustained a living and working model which aspired to locate out of town, but with the facilities typical of a city at hand; to be part of a homogeneous social dimension, but cultivating the individualism; to open its own small factory or activity, but autarchically sharing the lot with the home; to lean on low traffic road network, but one step away from big interchange nodes. These are opposing and overlapping processes which excessiveness have in the long run caused rigidity of the general urban structure (Sapelli 2001).

Today, this urbanized landscape is deeply questioned by an emptying dynamic, resulting blocked, exhausted, and extremely expensive in the maintenance of the logics that generated it (Schlappa 2016, Tocci 2009). The territorial competition as paradigm of the relations between cities, forced by globalization and acknowledged in the European project, highlighted the limitations of many Italian territorialisation models and of their economical and social processes at the base (Secchi 2010).
The dynamic of incremental development of Milan’s metropolitan area and Brianza, was first of all the outcome of a policy which counted on the individual initiative to implement a general urban development without much public investments. At the same time, there is in place a convenient permissive attitude of which to take advantage, and in which personal and local interests never linked to a wider common framework could proliferate (Amendola 2007). In this lack of shared strategies, new settlements were built both as expansion of already existing urbanized areas and also from within the rural and densely parcelled lands, which thus gradually urbanized from within (Rosso and Tarocco 2008). The single families, with their human resources and capitals, have been the main makers of the contemporary metropolitan’s region. But over time, such extreme DIY mechanism has become more refined, further being taken over by a network of specialized players, claiming their voices in formulating the urbanization agenda. Today, they keep on forcing the demand, thus deeply impacting a territory in the middle of a structural crisis. This has also affected the dominant urban forms. If at the beginning of this self-construction process the prevalence was a low density, made of single objects on lots - whether they were houses or factories or a mixing of the two - giving rise to a very thin sprawl, in recent times the urbanized spread landscape has changed (Amendola 2010, Sennett 2011). Currently, it is in fact urbanized through the diffusion of low density islands. These individual and wider units, colonizing the territory, increase the difficulties of managing the abandoned spaces. Assuming the economic and population recession increase as the basis of reasoning, if new spaces were to be occupied, others would be left, with the aggravation that the left space would be usually used and deteriorated, thus more difficult to recycle (Ross 2014). Furthermore, if the built islands will not be occupied, the effects on the land will be even greater. The containment of urbanized land and the rethinking of fixed capital does not only correspond to a logic of defence of the natural soil, but it is the condition for the redevelopment and recapitalization of already urbanized areas. Without any policy of containment in the next years, conditions of problematic coexistence between underused punctual and unit development are also to be expected (Lanzani and Zanfi 2011, Guggenheim 2010).

MAINTENANCE
The thesis presented in this paper is that new paradigms for the common good should be now taken into consideration, and that ‘Maintenance’ is to be firmly considered as a priority horizon for this kind of spread and already largely urbanized territories. In other terms, it means finalizing human activities to an economic and sustainable use of existing resources, while planning and managing the larger anthropogenic and natural systems that surround them. In the Italian planning context in particular, a ‘Maintenance’ strategy could allow a positive redefinition of compensatory criteria, for example the “public standard” as a regulatory instrument in planning, intended as sets of actions taken by individual developers in favour of the common good. The goal may thus be linking the building practice to win a planning permission to more widely strategic development scenarios for the territory, shifting from the concept of benefits for locals’ to the one of benefits for whole urban systems.
Fitting within the actual conditions of the territory, compensatory actions could take the form of an individual participation to the ‘Maintenance’ – or the enhancement – of existing structures and spaces, rather than being conceived as an addition of extra spaces and structures to be destined to public services, as it currently is. ‘Maintenance’ should be therefore conceived as a project for the urban territory, and a concrete action. It should refer to a public project of the city, which includes a set of ‘positive’ individual actions, but that needs to be reformulated. Following the definition of a larger scenario of transformation, the identification and realization of concrete goals could finally expand the responsibility of individual transformations, in opposition to the current monetization of
compensatory duties and public rights, which merely benefits public administrations, rather than communities. Consequently, strategies for the discouragement of soil consumption should be made integral to a broader policy of territorial renewal. In this way, the intervention of urban development should be connected to policies promoting a redesign of the public, semi-public or private open spaces that are close to the development itself, in a genuine renewal of the existing policy. This should be defined as a form of intervention that departs from the autonomy of the single parcel, and engages not only the private lot, but also the surrounding streets and the small landlocked open spaces in the urban fabric, as well as the peri-urban agricultural areas which are intrinsically connected to them (Figure 3).

Figure 3. - The transfer of volumes coming from the thinning of the urban fabrics to be re-qualified, towards areas of high concentration for new construction or through the consolidation of free empty spaces. Images by Marco Baccarelli
The design of Maintenance

Within this interpretative framework, a design project can be intended as a powerful cognitive tool, able to formulate, at different scales, spatial strategies and articulations of space that could serve as additional and alternative models for urban transformation (Figure 4).

On the one hand, the design focuses on ongoing transformations and relations among different parts of the territory. Taken as a whole, the complex areas of forthcoming transformations hold a topical role both in structuring the urban environment they belong to, and in their collective potential as a system of areas spread throughout the territory. This is relevant especially in regard to the overall redefinition of forms and relationships with ‘intermediate’ scales. This means that the project should include dimensions considering the territory relationships among its local parts, that are reference scales often excluded from the territorial planning, as well as from the projects of single fragments.

For instance, the project could enhance the residual spaces of environmental systems which are now landlocked and densify the urbanized borders.

On the other hand, the project should try to grasp the meaning of the emergent dynamics expressing an opposite sign to the additive processes that are prevalent today, trying to establish new ways in which the dynamics of transformation of certain urban fabrics may take place.
For instance, the project should set rules to requalify and concentrate changes within the already densely built urban fabrics rather than create dispersed expansions.

Two different tactics could be implemented, and from which to derive a series of design actions and attitudes to an overall strategy: the structuring of processes of splitting, through punctual densification of existing fabrics, instead of the consolidation of services or empty spaces in those places that should be areas of expansion; the shift of planned volumes from unbuilt areas whose value is recognizable in their emptiness, to areas that prove to be more suitable and strategic for densification (Figure 5).

**CONCLUSION**

The Maintenance Design under the conditions identified by this research means, therefore, to concretely investigate and deal with issues of spatial and social justice, and the ways in which the social opportunities might be more equally distributed. Furthermore, it begins to address the ongoing environmental crisis, and the ways in which urban planning might provide an ecological agenda.

![Image](image.png)

*Figure 5. - Project exploration: Seregno "green-room": last 7 years development (gray) + project (colors) - Image by Marco Baccarelli*
NOTES

1 This paper is the result of the intersection of different research experiences gained by the authors on the Milan’s metropolitan area. In particular, Marco Baccarelli PhD Thesis discussed on 2013 at the Polytechnic of Milan and further ongoing deepening and Martina Orsini research and teaching activities on the same area conducted at the Polytechnic of Milan between 2003-2015, and later ongoing investigations as independent researcher and scholar

2 Each second, 7 square meters of unbuilt land are urbanized in the area. The 35% of land in the Brianza area has been consumed, thus resulting the most built in Italy. For an exhaustive overview see ISPRA Report 248/2016 (Rome: ISPRA 2016).

3 See Monza-Brianza Province ISTAT 2015 data. Furthermore, the 2016 NEET rate observed in the area is of 240,000. ISTAT, Rapporto Annuale 2015 [Annual Report 2015] (Rome: ISTAT, 2015), 41-95

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INTRODUCING IN THE CITY: CO-DESIGNING NEIGHBOURHOOD INFRASTRUCTURE WITH RESIDENTS OF A LONDON HOUSING ESTATE

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INTRODUCTION

Infrastructure is about norms, standards and social organisation. It shapes categories like gender, family, citizenship. Infrastructure is about power and politics. It determines who has access to standards of living and the political ecology that results from differentiated access. Infrastructure is also about resources and sustainability. Centralised supply-driven systems have been critiqued for hard wiring the resource intensity of everyday life at unsustainable levels. Infrastructure is rarely about co-design, although end users, even residents in their homes, are increasingly seen as key to achieving system aims and are described as ‘co-managers’ of national infrastructure systems by van Vliet et al. Demand-side response activities provoke new research on how parts of infrastructure can be designed to bring users more reliably into the frame of resource management. However the resident’s role is typically restricted to using the equipment on their side of the meter appropriately. From shower timers to time of use tariffs, information and equipment are being designed to bring user interaction in line with networked utilities’ distribution priorities.

Engineering Comes Home takes a different approach, embedded in critical social theory. It challenges the starting point of infrastructure design, looking first to the home and it’s occupants in order to involve them in the design of systems that supply water, energy and food. Co-design of domestic WEF infrastructure is new area of research, although it builds on the theories and practices of design for sustainability and on value-sensitive design. In this paper, we outline the co-design pilot project that ran in 2016-2017 in a housing estate in south east London.

CO-DESIGN AS RESEARCH METHOD

Engineering Comes Home drew on two strands of design thinking to form the co-design methodology. The first strand focused on engagement using participatory design practices developed in the information technologies field. The second focused on disruptive interventions using product design approaches from the sustainability design field.

Participatory design

Participatory design has been a field of research and practice in ICT since the 1970s. In its early forms it focused on improving workplace ICT systems and supporting the users of technologies to
create humane and ethical workplace environments. As IT systems have expanded beyond the workplace, participatory design theorists and practitioners have moved into domestic and other settings. This field has led to specialisms such as Value-Sensitive Design which incorporate alternative design principles based on ‘human well being, human dignity, justice, welfare, and human rights’ 11. It has also led to more open design practices moving first to user-centred design which observed people’s practices to improve design, then to user-led design which put users in charge of identifying the design problem, to co-design which embraced both suppliers and users to work together in defining problem spaces and design solutions 12. At its core, participatory design is about improving the systems that serve people and emancipating the users through engaging them in the design process.

**Design and Sustainability**
If participatory design focuses primarily on human agency and social institutions supported by ICT, design for sustainability focuses primarily on the environmental impact of goods and services. It’s origins lie in improving product performance although challenges such as the ‘rebound effect’ led design theorists to also consider product use. This has led to fields such as ‘design for sustainable behaviour’ which use design to change behaviour 13. This approach has been criticised for prioritising the individual as the locus of agency and understanding behaviour through a rational choice paradigm based on normative assumptions which can obscure broader political questions about resource consumption 14. Recent approaches to sustainability and design tackle some of these issues by drawing on Social Practice Theory to engage with resource using practices 15, and Actor Network theory to move beyond the individual as the source of agency 16. Design for sustainability as method can be speculative and allow for new possibilities to open up. It draws in the non-human world as partners and questions embedded power relations. Co-design as method widens the circle of those involved in the task and enables alternative knowledge and value systems to be part of the projection of the alternative arrangements. This combined approach was followed by the Engineering Comes Home team.

**THE ENGINEERING COMES HOME CO-DESIGN PROCESS**
The project put these design principles into practice in order to test whether the co-design of inner city infrastructure was possible. In this section we discuss the co-design process employed in our project on the Meakin Estate in Southwark17.

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**Figure 24. Co-design process for community scale WEF infrastructure**

The co-design process was carried out in three half day workshops held in the estate’s community hall and involved 19 residents (15% of all households). The process was run by the research team,
supported by an external facilitator, videographer\textsuperscript{18} and the local Tenants and Residents Association (TRA).

**Workshop one: Discussing values**

Workshop 1 elicited values relevant to domestic WEF resource management on the estate and generated ideas for interventions that might fit these values and the material configuration of the estate. 13 residents participated. We started small group discussions of ideas until we had a list of values reflecting all members’ inputs.

We then used bespoke co-design tokens and equipment for discussing systems ideas. The tokens had icons representing aspects of WEF systems, a toilet, a flower, a plug for example. Participants were invited to play with these tokens, and construct narratives attached to locations within the estate (Figure and Figure 25).

In total participants created six narratives; food growing, electricity generation, gardens, food banks, two boards about re-using things and one with multiple narratives. As participants discussed each
story key themes emerged. Waste came across as the most important issue for the group; reducing the volume of waste, and repurposing it into something useful. For example, Georgina explained “my idea [...] is to have a compressor that could make the bulk smaller. [...] now everything on the floor and everything is blowing everywhere so those things could be avoided with proper bins.” Flo commented “If we had [...] a notice board for household items, [...] we could pass it on, like a cot [...] someone on the estate could possibly want that cot, and we’re recycling it. Plus from the money we collect from the glass, the clothes, could go into other factors for our estate, our environment, and for all of us for future generations.”

A second key concern was water. Mary commented “I think water would be the best, to be able to recycle the water and to use it in something else .... Personally to me that would really help the estate”. The issue transcended the local estate level as Georgina argued ‘it’d also be an example to other communities as to how much water we save. It’s not just for us, if we transmit to other areas, other cities in Europe, other countries”. Although not everyone agreed. Neil argued against the ideas “We don’t need to recycle on the estate, it’s already recycled, centrally [by Thames Water]”. He did not see any value in the small scale savings offered by an estate scheme.

We had planned a narrowing strategy whereby a single issue emerged that the whole group would like to explore in detail. However we had more participants than planned which meant groups worked together on stories and were reluctant to narrow down the number of issues. Instead the group identified a set of ideas that they wanted the team to explore further. These were:

- water reuse for garden / home
- composting for garden
- reduction of food and material waste
- management of material waste / cleanliness of the estate

Through analysing the discussion the team were also able to draw out a matrix of participants’ values that could be used to shape the design (Table 1).

<table>
<thead>
<tr>
<th>Human Concerns</th>
<th>Aesthetics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Building</td>
<td>Pleasant to look at</td>
</tr>
<tr>
<td>Buy in from other residents</td>
<td>Reduced rubbish</td>
</tr>
<tr>
<td>Wider education</td>
<td>Scalable</td>
</tr>
<tr>
<td>Shared stewardship</td>
<td>Impact</td>
</tr>
<tr>
<td>Care for others</td>
<td>Necessary</td>
</tr>
<tr>
<td>Resilient / future</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Residents’ values for the design

The team created a shortlist of existing technologies that could fit into the estate and align with the values elicited. The five systems were wormeries, food growing, food sharing, rainwater harvesting, and waste compacting. For workshop two we prepared fact sheets for each of these systems and we developed a bespoke LCA calculator that participants could use to gauge the fit of the technology to their community and their estate.
Workshop 2: feedback on design options
Nine residents came to the second workshop to assess the technologies and explore how they could be implemented within the estate. We presented the five ideas, providing participants with fact sheets and showing them how to use the LCA calculator to assess different design criteria. The calculator had a scenario for each technology with adjustable input parameters such as volume of food waste, quantity and scale of technologies. These changed the volume of food that could be grown, or amount of CO2 savings realised. Residents explored each scenario in pairs adjusting the calculator according to their assessment of what was appropriate for the estate. These context sensitive adjustments included:

- Levels community involvement: Clare, who’d been involved in other estate projects, decided only 50% of households would participate and limited inputs to this proportion of engagement for all scenarios. By contrast Penny decided some of the technologies could be designed to increase engagement. For the waste compactor, she put small manual compactors at each stairwell on the basis that residents would regularly see them and be encouraged to use them.

- Aesthetics and estate layout: Participants used their knowledge of the estate and of different community members’ use of communal space. For example in the gardening scenarios participants anchored their designs in parts of the gardens the community would accept as food growing areas.

- Utility of outputs: Although the LCA calculator was designed to show the resulting CO2 emissions reductions, these savings were not very meaningful to the group. Participants tailored designs according to other outputs. For example, when assessing the wormeries options, Mary looked at how much fertiliser could be produced and whether the TRA would be able to sell or exchange this amongst local gardening groups.

After exploring each scenario, we regrouped to discuss each pair’s design options, sharing the priorities and assessments that had informed their decisions. After the group had explored all five ideas, participants voted on a single design option to move forward with. Discussing the vote, participants raised other context specific values and knowledge they felt should be factored into the group’s selection. Governance was a key concern, particularly how much management any design would require. Another concern was misuse by “uninitiated outsiders”. For example waste compacting was seen as potentially dangerous if people didn’t know how to use the compactor properly, likewise food sharing was felt to be open to mismanagement. All participants had a first and second vote and rainwater harvesting won the most votes.

The vote gave the research team one idea to turn into a more detailed design. However workshop 2 had also shown limits to the residents’ knowledge of unknown systems. Although we worked to address this during the workshop by providing information sheets and responding to questions, the research team wanted to provide hands on experience of a rainwater tank prior to workshop 3. We sought permission to install a smart rainwater tank on a downpipe on the estate and were able to show participants a working system21.

Workshop 3: detailed design
Workshop 3 aimed to get residents’ feedback on the prototype and create a detailed design for rainwater harvesting on the estate. The research team created a bespoke rainwater harvesting module for the LCA calculator which let residents explore design details such as tank size, number and location, rooftop area to be used to catch rain, position of outflows and whether or not to pressurise and pump water. Seven residents joined for the third workshop to experiment with the detailed design. The workshop started with an overview of rainwater harvesting covering technical and operational details as well as its role within the broader picture of London’s water governance and infrastructure.
We then split participants into groups and walked round the estate mapping existing drainage infrastructure and potential uses for stored rainwater. Figure 26 shows one of the maps created by the participants. The residents have marked the downpipes that are free from household wastewater and identified points where water could be used. The walkaround was an opportunity for residents to fully engage with the socio-material context of their estate and how a rainwater harvesting system might be integrated into this context. For example we discussed who would use the water. Participants felt it would be useful for the shared gardens, residents’ own gardens, for cleaners to clean common areas, and for residents to wash their cars. We discussed tank positioning. Upper walkways meant there could be a pressurised supply without the need for a pump, but raised questions about how the pipework would look. Participants also discussed access and safety concerns. All these details and were then used by the participants to come up with detailed designs. They worked in pairs using the LCA calculator to gauge different technical modifications. We regrouped and reviewed the designs, discussing additional factors such as implementation and maintenance. Workshop 3 ended with a reflection on the project overall and an evaluation survey.

**Figure 26. mapping rainwater infrastructure for detailed design**

**REFLECTIONS AND EVALUATIONS**

The objective for the Engineering Comes Home project was to pilot the co-design process. Therefore, we invited evaluation and feedback from the participants, but also had an on-going process of evaluation and reflection amongst the team.

**Participant evaluation**

Participants were encouraged to provide feedback on the process. This was managed through formal mechanisms such as seeking group consensus on next steps, but informal feedback was also captured. For example Justin commented at the end of the first workshop “Nice to see so many people interested. I want to make the estate better and I’m pleased to see that there are other people here interested too”. This helped us gauge motivations for participation that we formally tested with an evaluation questionnaire at the end of workshop three. The nine questionnaires we received were
overwhelmingly positive, but did show some variation. Seven of the nine strongly agreed with the statement that ‘the ideas came mostly from the community’, but only four strongly agreed with the statement that ‘I’ve helped influence the outcome of the project’. This may indicate people supported other ideas that did not get selected. It may also be a result of our inclusive process for participation as we allowed new residents in at every stage. This meant some people participated at later stages who’d not helped establish the value-based criteria or of assess the range of alternative ideas. The free comments provide further insights. Four respondents cited ‘coming together as a community’ as a benefit of the project and two stated they had learnt through the project.

Research team evaluation
The team’s reflections were captured through observational notes on the workshops and written pieces on the process. Four themes are clear.

Technology literacy
Participants having little prior knowledge of the shortlisted technology options was an important learning outcome. We struggled over the question of how much to “educate” participants. An engineer in the team commented “what’s the balance between participants coming up with ideas and being educated with alternative ideas, at a co-design workshop?” We needed to gauge how far to challenge participants’ assumptions about existing or potential systems, aware that we would then shape the outcome of the process. We also found it hard for people to engage deeply in the design of an object or a system as an abstract concept. However by the third workshop we had a working prototype for people to use and the team felt that by the end of the workshop we had managed to raise levels of technical literacy about urban drainage and water management.

Design thinking
Throughout the workshops the participants tended to focus on established design solutions and the practicalities of implementing these within their estate. As one of the design team said ‘there was a definite jumping in with pre-formed solutions’ which limited the ‘problem space’, the process of generating new questions based on personal experiences and values. We felt that overall the process was closer to user-led design than co-design. In other words we had successfully led participants through the ‘process of describing and solving problems for themselves’ but had not managed to get to the stage where the participants were helping the designers to understand a problem / solution they’d identified through their own experience.

Participation
Our recruitment strategy and decision to allow newcomers at every stage of the project meant 15% of the estate’s households were involved in at least one activity. Our approach meant that we had some difficulties with continuity; previously dismissed ideas were revisited by people who’d not been part of the initial screening steps for example. Nonetheless, as the Principal Investigator pointed out ‘we managed to have enough participants throughout to test the methods and to get some meaningful data for research. It would have been better to have a more consistent cohort and even more people participating, but it is impressive that people have been willing and interested to engage so far.’ Our approach also meant we were able to engage with people motivated by very diverse reasons, including those interested in improving their local environmental quality as well as those more interested in community building activities.
Institutional context

The institutional context also shaped the process. We worked with the estate’s governing body (Leathermarket JMB) and the TRA. Both were supportive and helped us recruit participants. The management board adopted a hands-off approach, by contrast the TRA had more at stake and therefore took more control of the process, steering it to align with existing initiatives or previous agreements within the community. The PI reflected that ‘this has placed some constraints on the ‘design thinking’, closing down options early in the ideation process’. The social researcher also reflected that later workshops ‘felt like TRA meetings’ meaning those used to this governance structure were more vocal in expressing their opinions and proposals, while participants who weren’t TRA regulars were less vocal. Nonetheless the surveys from participants showed people found it easy to contribute to the discussions. And, as the PI pointed out, working within an institutional context is ‘an important part of the design lifecycle, [and involves] understanding local capabilities and constraints. In adapting the process in the future to enable deeper engagement in the co-design process we might think about how we can capture this more productively, to acknowledge local context, knowledge and risks, whilst still keeping design possibilities open.’

CONCLUSION

Engineering Comes Home demonstrated that residents were willing and able to play a meaningful role in the design of neighbourhood scale infrastructure. We started the co-design workshops completely open to any form of WEF nexus intervention and ended with a rainwater tank providing water for the TRA’s flower beds. This specific design solution evolved from the participants’ values of managing waste and pioneering water stewardship. The co-design process was iterative and responsive to the context. Through it we have found

- A willingness to engage in the co-design process
- That people are motivated by the idea of saving WEF resources beyond rational choice models
- We could generate a set of shared values to create a design brief
- It was possible to build technical literacy amongst participants

The pilot has allowed us to test the process and create a set of co-design method statements that are freely available for others to build on\(^3\). This first case-study provides an encouraging example of how residents can be included in the technical work of creating less resource intense, more liveable cities.
NOTES

1 Star, “The Ethnography of Infrastructure.”
2 Graham and Marvin, Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition; Kaika, “Interrogating the Geographies of the Familiar: Domesticating Nature and Constructing the Autonomy of the Modern Home.”
3 Shove, Comfort, Cleanliness and Convenience: The Social Organisation of Normality.
5 for example Strengers, Smart Energy Technologies in Everyday Life on smart electricity grids; Jeffrey and Gearey, “Consumer Reactions to Water Conservation Policy Instruments” on water demand management.
8 Lockton, Harrison, and Stanton, “Making the User More Efficient: Design for Sustainable Behaviour.”
9 Friedman, “Value-Sensitive Design: A Research Agenda for Information Technology.”
10 Simonsen and Robertson, Routledge International Handbook of Participatory Design.
13 Jelsma and Knot, “Designing Environmentally Efficient Services; a ‘script’ Approach.”
16 Teh, “Hydro-Urbanism: Reconfiguring the Urban Water-Cycle in the Lower Lea River Basin, London.”
17 The recruitment of the residents as partners in the process is discussed by Johnson et al. (Forthcoming), this paper focuses specifically on the co-design process.
18 Videos of the three workshops are available to watch at http://www.engineering.ucl.ac.uk/engineering-exchange/video-articles/
19 Pseudonyms are used for all participants.
21 Installing the tank exposed some of the difficulties of implementing neighbourhood scale WEF infrastructure. At the Meakin there were a number of different departments involved in the installation and use of the water. The tank would have to be located in the garden of the housing management board (Leathermarket JMB), connected to a downpipe managed by a different department and the water was to be used by the TRA for their planters. The groups had different interests and levels of scepticism towards the tank and it’s usefulness. Nonetheless we managed to get all parties to agree to the installation.
22 (McDougall 2012)
23 The full methodology and tools are available at https://ech.iilab.org

BIBLIOGRAPHY


SIGNS OF A CITY: SEMIOTIC MARKERS AT ODDS WITH CONSTRUCTED NARRATIVES IN BELFAST

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INTRODUCTION
The past twenty years has been a difficult transitional time for Belfast and those who would envision a robust economic future for a city scarred by events of the Troubles, a period roughly from 1969 to 1994. Currently new construction in the city’s centre has reached, along with the number of cranes in the Belfast skyline, (Fig.1) unprecedented levels. On social media planners, architects and heritage bodies report daily on ongoing development.¹ The former are concerned with building and regeneration, the latter with the disappearing architecture of a city with no desire to remember the past through associations bound up in an enduring built environment.² Historical structures that withstood bombings during the conflict are being systematically destroyed.³ A once Georgian, then Victorian city centre is being slowly eradicated, with very few buildings in the former style remaining and ever-declining numbers of latter. Where Victorian buildings are allowed to remain ‘Facadism’ has seen them gutted, with only an exterior remaining as a reference to what was once there.⁴ The city has become an architectural composite, with postmodern development reaching a saturation point and the city’s identity, through eradication of tangible and visible structural evidence of its industrial provenance, under threat. This reimaging, borrowing from the architecture of ‘other cities’ is creating a situation where ‘we are currently in danger of reifying our regional city as a retail-focused abstraction of place at the expense of the communities and the people’.⁵ Despite ongoing attempts to rebuild the city as a neutral place, a narrative of truth, of the divisiveness underpinning Belfast culture, refuses to be buried in the rubble. ‘Belfast was, and still is for many, a place synonymous with violence’.⁶

This paper examines the reimaging of Belfast for the 21st century as a gentrified reconstructed place aiming to entice tourists and to bolster the economy, through an overarching theme of safety, neutrality, and ‘culture’. The city’s troubled past is being concealed behind new development and shifting narratives that pose a threat to authenticity. In contrast, once the city’s main streets have been departed, in communities located on arterial routes to the North, South, East and West of the city’s core, a different image of place is apparent. The paper examines the contrasting urban environments of Belfast city centre and arterial routes, to demonstrate stark bi-polar narratives of place. A supporting photographic archive shows living places and spaces of the city’s communities with a less appealing image of place where still prevalent ideologies and societal divisions, are often expressed on an isolated semiotic landscape imbued with meaning.
A new narrative for Belfast

Since 1998’s Belfast Agreement, the rebuilding of Belfast has relied on an agenda of ‘forgetting’ the past, achieving this through planning, architecture and the replacement of history with heritage. The Belfast story, recreates, or creates, the ‘best bits’ for public consumption while ‘hiding out of sight’ less palatable truths. Although the geographic map of Belfast has been redrawn since the 1960s, the city’s citizens retain a cognitive map in memory. The enormity of past experiences cannot be easily erased. A highly visible city, Belfast was established circa 1600 in the Lagan basin, framed by mountains, hence a long history endures as a challenge to any fresh manufacturing of place. ‘Every citizen has had long associations with some part of his city, and his image is soaked in memory and meanings.’

Belfast now emulates other great cities, Paris, New York, or London, having created ‘identifiable quarters to which artists and cultural entrepreneurs are attracted’. While generally such places emerge, or are established over time, in Belfast they have been manufactured as part of the future vision for the city, while lending some suggestion of historical provenance. The recent Cultural Quarter phenomena in Belfast is part of a global trend whereby ‘they have been (and are being) used as a deliberate model for urban regeneration of declining inner urban areas… adopted as policy mechanisms for urban regeneration’. In defiance that the term itself implies a restriction on number, they include the Cathedral Quarter, Titanic Quarter, Queens Quarter, Linen Quarter, Market Quarter, Smithfield and Union Quarter and Gaeltacht Quarter.

With the new vision for Belfast having, up until now, relied heavily on arts and culture, there is no small irony that a lack of desire to retain historical architecture now threatens to eradicate much of the city’s culturally led Cathedral Quarter. In Belfast city centre there are no outwards expressions of culture, no flags, political murals, painted curbstones or references to tribalism. Postmodern shops, restaurants, cafes and indoor ‘disneyfied’ shopping spaces, offer the chance to worship consumerism. City living, so long absent from Belfast, is returning slowly, but not in the once bomb
damaged main streets, or Royal Avenue, where upper stories of buildings remain empty. This is a long-term result of initiatives at the height of the Troubles which saw an inner-city population forcibly migrated to ‘growth centres’, manufactured towns on the periphery of the city, complete with out-of-town shopping facilities.

Contemporary city living in Belfast concentrates on high-rise developments located in freshly manufactured tourist hubs. In the city’s Titanic Quarter, exclusive apartments offer walkable proximity to the city centre via recently constructed pedestrian bridges. The high cost of tenure in this area ensures gentrification, excluding working class inhabitants. The apartments, overlooking Belfast Lough and harbour have been built to underpin a carefully established theme at the core of the new Belfast narrative. Here, ‘consumption and lifestyle patterns…bestow distinctive place identities’ on a place, once the site of shipyard toil, now with a more glamorous past posthumously fitted. In what has been a highly effective marketing campaign, Titanic Quarter has been branded with sanitised historical narratives to appeal to visitors and those who can afford to live there. If, as ‘space becomes place as we endow it with value’, the value endowed here is a lifestyle equated with a desirable address and perceived class differential. Titanic Belfast, a visitor centre and museum, shadows the new development, alongside various shipbuilding-related paraphernalia.

The new Belfast narrative is that of a city with a proud history, an international tourist destination, where, at least in its centre, no evidence of the ‘troubles’ may be seen. The Belfast story invokes ‘normalization strategies employed after conflict seek to reshape cognitive understandings of violent spaces through reconstruction’. Yet the retention of memory, through generations of people living in the city’s communities, retains the ‘potential to disrupt these efforts’.

Non-conforming places
The built environment of the reimagined city centre stands in striking contrast to many ‘other parts of the city where the conflict and memories of it are omnipresent; alive in the burgeoning memorial landscape’. In the city’s housing estates, located on arterial routes to the North, South, East and West of the city, in the vicinity of the Antrim Road, Falls Road, Newtownards Road and Ormeau Roads, newly crafted narratives don’t apply. In these estates the city’s past is retained through the perpetuation of cultural norms and hegemonies, by older and emerging generations, the latter often too young to remember the ‘Troubles’.

New roads infrastructure ensures isolation of communities on these routes, once key access roads to the city centre. The tourist would seldom see these places unless electing to undertake one of the increasingly popular tours of the city’s troubled places. The Belfast where the people of the city live is not included on tourist maps and is difficult to access for the pedestrian on foot. These roads, which once boasted continued commercial activity and were ‘walkable’ to the city centre, are now isolated, fractured by physical firebreaks created by motorway over and underpasses. (Fig.2)

This isolation is further emphasized by large interface areas, framed by vast swathes of unused and unusable land, acting as contemporary moats, to separate housing estates belonging to one or the other of the city’s core Nationalist (Catholic) or Unionist (Protestant) communities. According to the Northern Ireland Housing Executive, over 90% of social housing areas are still segregated into single identity communities. Attempts, through housing creation, on unused land in interface areas, in order to encourage integrated living, have largely failed. (Fig.3) These new developments are becoming home to the city’s migrant population, for whom settlement within established estates often comes at the price of harassment and intimidation. This sense of ‘if you are not from a place you should not be in that place’, is still enforced by local paramilitary organisations from ‘either side’, who, in the words of Gerry Adams, even now, ‘haven’t gone away you know’.
On arterial routes people live in housing estates with shared surface courts and limited vehicle access. Designed in accordance with security dictates these visually uninviting and philosophically excluding places provide functional housing, often with little or no green spaces. Since the 1980s social housing solutions have been centred on two storey red brick houses ‘served by “shared surface” courts’ with an emphasis on ‘defensible space’ and limited vehicle access – further isolating communities in accordance with security concerns. (Fig.4) In Northern Ireland, ‘since the mid 1970s all major development projects had to be previewed and approved by the British Army’. Additional security sees closed-circuit surveillance cameras throughout community spaces.

![Image](image1)

*Figure 28. The city’s Westlink, joining the North and West of the City, dividing communities either side*

![Image](image2)

*Figure 29. Wasteland and blighted space caused through the creation of major roads, which act as additional interfaces reinforcing societal segregation, seen here on Belfast’s Crumlin Road*
Throughout housing areas various devices, from small walls, to bollards block wider urban pathways and metal fencing in various forms and heights ensures the ‘uncongenial-sounding urban framework’. Currently planning legislation requires that 10% of any housing site should be provided as ‘amenity space’. However, the legislation doesn’t define how the space is used, leading to often unsatisfactory results. Space that could be used for green areas is often paved, with places for bins, or washing to be hung out, although, on the estates, these areas frequently remain unused, as to leave bins or washing out would be an invitation for thieves.

There is clearly a correlation between green space and lower levels of crime, in stark contrast to dense housing in areas of high social deprivation. Many of these tightly packed terraced houses have rear communal parking areas without surveillance or streetlights where vehicles are often damaged or destroyed. Entrances to flats are often located to the rear of properties without adequate security lighting and they have become places where swift entrance and exit by tenants is the norm. Similarly, the sometimes-squalid state of these communal hallways presents a disturbing, unsafe, inhuman void before the safety of the home beyond. In contrast, more recent multiple dwelling buildings have street facing hallways with large windows and all-night lighting as some assurance of personal safety.

Many estates are almost entirely deserted during the hours of darkness, punctuated occasionally by crowds of youths gathering in the streets at night, they are often perceived to be inebriated, on drugs, or causing trouble.

In the run up to the tribalism of the Orange Order celebrations annual 12th July, in loyalist estates, a greater than usual number of flags are being flown on property, on rooftops, draping windows, in window sills or gardens, on lamp-posts or any other available public facing space. (Fig.5) Interestingly, there seems to be a correlation between flag size and statement of loyalism manifested in the bigger the flag the more ‘loyal’ or, ‘connected’ the owner is perceived to be, with huge flags sending a message to neighbours that the family is to be ‘respected’. In these areas flags must be
flown, as to ‘disobey’ the unwritten rule often results in damage to property by vandals who require residents to show their loyalty by displaying a flag.

The vigilante nature of these estates allows for graffiti and slogans (Fig. 6) spray-painted on walls and those causing ‘unauthorised’ trouble for residents are given warnings by local paramilitaries, before being ‘put out’ of the estate. This is a world of hushed conversations, vigilante law, illegal protection rackets, and paramilitary rule in an environment where visible loyalism acts as the veneer to wider social, political, and economic problems.
Even recently built housing, perhaps not obviously from a distance but on closer inspection, reflects the need for security measures to prevent against missiles or other threats to the persons within. This is particularly evident in interface areas, where homes often have metal facades or roofs; and on those directly bordered by Peace Walls defensive building measures are often extreme. (Fig.7) Contemporary news stories of petrol bombs and harassment of people in their homes underpin the continued need for fortified housing.\textsuperscript{33}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figures/figure33.jpg}
\caption{Defensive architecture on homes beside the Bryson Street peace wall, East Belfast}
\end{figure}

\textbf{Semiotic landscape of division}

The isolation of the routes extends beyond the physical, in the sense of buildings, homes, living, or dwelling places\textsuperscript{34}, places of work and places to shop, to economic isolation. The robust economy of the city centre stops at the edges of the core city. There may be no physical walls to designate these edges, as there once would have been, but cognitive walls remain for those in living memory of outbreaks of trouble.\textsuperscript{35} As an example of how ‘walls can be used to control urban populations’,\textsuperscript{36} the walls are concentrated on defensible spaces surrounding and within the series of villages\textsuperscript{37} circumventing the city. An enduring phenomenon since the 1960s, the walls do have historical provenance, with boundaries being marked between Protestant and Catholic areas of the city ‘in every decade between the 1870s and 1930s’.\textsuperscript{38} The walls, ‘have been erected by the antagonistic communities themselves, but the desire to maintain and strengthen them comes from both communities’\textsuperscript{39}.

Peace walls have grown in size and number since 1998, ranging in length from a few hundred metres to over 5 km (3 miles) and up to 7.6 metres (25 ft) in height. A proposal for their removal by 2023\textsuperscript{40} has been met with both skepticism and objection, with the majority likely to remain in place beyond that date. Meanwhile, ‘new data shows 21 structures not included in that target’.\textsuperscript{41} Even if walls belonging to the Northern Ireland Housing Executive and Department of Justice were to be removed (the key actors in the proposal) there would still be 21 structures outstanding.\textsuperscript{42} Although, the exact
number of interface barriers is subject to differing views due to approaches to counting and categorising barriers. (Fig. 8)

A 2011 report commissioned by the Belfast Interface Project revealed 99 different security barriers and forms of defensive architecture in the city. Their online interactive map has an option to view barriers that will remain in place even if all of those structures on the list are removed by 2023.

Many of those living in interface areas are concerned for their safety should walls are removed, ‘if you're pushing a narrative of peace of reconciliation, walls don't fit…if you're not part of that global conversation, they are an everyday part of life.’

The quality of life for people living in Belfast’s communities can be evidenced through census data, which demonstrates high unemployment, low expendable income and often-high rates of crime and disorder. The built environment of these places visually demonstrates ‘a social pattern, a kind of mental layout of the census data’. Ad-hoc shops on arterial routes sell basic goods, groceries and home-wares and are denoted by often-ramshackle commercial signage, located on the front stage setting, or ‘mise-en-scene’ of main roads. The lettering on signage ‘lying in a no-man’s-land between architecture and graphic design’, provides vital visual cues on the nature of place, as ‘words speak while doors and windows remain mute’. Without signs the low-rise red-orange brick buildings on arterial routes would seldom differ, as the core architecture is a result of the industrial age of the 1800s. This was a boom time for industry leading to the creation of two and three storey houses, now commercial premises, for the factory workers. While shop signs are significant co-creators of the genius-loci, other graphic marks often take visual precedence.
CONCLUSION

In interface areas, where ‘personal meaning retains the potential to undermine efforts to induce historical amnesia’, murals, flags and flagging of related messages and graffiti reinforce the territorial nature of place. These outwards expressions of culture contradict the ‘new’ Belfast narrative. Murals are often intricate, with the time taken to create them evident, the graffiti and tags are more immediate and less artful expressions of culture. The messages are clear, communities are divided, Belfast is not culturally neutral. There is a sense of danger in these places and an inherent message that strangers are unwelcome. The walls and blighted spaces are isolated, often far from street lighting or eyes on the street. The rebranding of Belfast stops at the edge of the city’s core, beyond which there is no reimaging, beyond which the true nature of the divided city is evident with every turn down a side street. Should the uninviting built environment itself not convey that unwanted guests, tourists, or those from the ‘other’ side are unwelcome, the graphic marks, as co-creators of the built environment, the words, signs and symbols of division, will. Through this combination of graphic elements an honest image of place and sense of the ‘real’ Belfast, of the lives of those living in its communities and their enduring hegemonies and ideologies, emerges.

![Figure 35. Paramilitary mural Newtownards Road](image-url)
Figure 36. Flagging on lamp-post off Falls Road, West Belfast
NOTES

1 “Belfast Crane Count” Gary Potter, accessed 10/05/17
https://www.scribblemaps.com/maps/view/Belfast_Crane_Count/LmgU_NaQzG. While the figure varies almost from day-to-day, the Twitter site @futurebelfast, an online resource established by @BelfastGary in 2006 ‘to independently document Belfast’s changing built environment’ provides an interactive map tracking cranes in the city. Clicking on each of the currently cranes reveals its location and a photograph of the area. A further link gives planning details, from proposal through to suggested completion date, to include details of the architect, developer, contractor and artist’s impression of the finished project.

2 Robert Bevan, The Destruction Of Memory: Architecture At War, (London: Reaktion, 2006) 8. Bevan refers to the destruction of architecture associated with memories, in association with conflict, as ‘the active and often systematic destruction of particular building types or architectural traditions…where the erasure of the memories, history and identity attached to architecture and place – enforced forgetting–is the goal itself’.

33 “Outrage over demolition of old buildings in city centre”, Belfast Telegraph, accessed 4/02/17, http://www.belfasttelegraph.co.uk/news/northern-ireland/outrage-over-demolition-of-old-buildings-in-city-centre-35263810.html. In one of the many news articles concerned with the destruction of the traditional built environment, the Ulster Architectural Heritage Society UAHS (uahs.org.uk) declared, ‘we are unnecessarily losing historic buildings in Belfast which any other city or jurisdiction would give priority to preserve, in a city that has ample vacant development land’. The Belfast Telegraph commented, as far back as 2009, that, ‘the buildings the terrorists didn’t manage to destroy are eventually demolished by the property developers. “Building That Symbolises A City”, accessed 20/04/17 http://www.newsletter.co.uk/news/building-that-symbolises-a-city-1-1888965

4 “Swanston’s Warehouse”, Ulster Architectural Heritage Society, accessed 6/04/17 http://www.uahs.org.uk/campaigns/current-campaigns/swanstons-warehouse/ The work of celebrated Belfast architectural firm Young and Mackenzie, Swanston’s Warehouse was internally demolished in 2017, despite objections from the UAHS, who declared the building as an “historic asset which strongly contributes to the architectural character and historic context of the Belfast City Centre Conservation Area in which it is located”.


The basic tenet of Brett’s ‘The Construction of Heritage’ whereby ‘popular histories’ are recreated, through ‘places, buildings and institutions’ as a ‘representation of the past’, with ‘deliberate connotations’ and associated ‘ideological implications’ of such imagery. The author asserts that, in Northern Ireland in general, ‘the idea of “cultural traditions” is used in a very loose way to defuse issues of political legitimacy’.

8 “Back Then: Belfast Inspired the Tall Tale of Gulliver’s Travels”, Belfast Telegraph, accessed 1/05/17 http://www.belfasttelegraph.co.uk/archive/places/back-then-belfast-inspired-the-tall-tale-of-gullivers-travels-30977711.html One such mountain, known as the Cave Hill, is widely purported to have been the inspiration for Jonathan Swift’s Gulliver’s Travels.


11 Ibid.; 293

12 “Call to ‘develop not demolish’ iconic Cathedral Quarter”, ITV News, accessed 24/05/17, http://www.itv.com/news/utv/2017-04-01/call-to-develop-not-demolish-iconic-cathedral-quarter/ ITV News reported on the online campaign by local agitators, planners and heritage bodies, calling for plans to be amended with a view to developing, not demolishing the Cathedral Quarter.

13 Hakam Ertep “Chaos Or Homogenization? The Role Of Shop Signs In Transforming Urban Fabric In Beyoğlu, Istanbul”. Visual Communication (2009): 269, accessed 11/02/16, http://vcj.sagepub.com/content/8/3/263. Ertep explains disneyfication as ‘a neologism taken from the name of the Walt Disney company to describe what some see as the way in which the principles of Disney theme parks are spreading throughout our societies’.
16 Judith Williamson, Decoding advertisements, (Marion Boyars, London 1978): 13. Williamson discusses how people can be made to 'feel that we can rise or fall in society through what we are able to buy and this obscures the actual class basis which still underlies social position'.
17 Concept architects Eric Kuhn and Associates, 2012, with Todd Architects as lead consultants. The building's design is intended to reflect Belfast's history of shipmaking and the industrial legacy bequeathed by Harland & Wolff. Its angular form recalls the shape of ships' prows, with its main prow is angled down the middle of the Titanic and Olympic slipways towards the River Lagan. The construction of the building cost £77 million with an additional £24 million spent on pre-planning and public realm enhancements.
The authors assert that during 'three decades of conflict, Belfast, its largest city, experienced some of the worst levels of violence... (becoming) a highly segregated city in which its citizens understandings of the urban fabric were mediated through their ethno-religious backgrounds'. They add that in a new post-conflict society, physical changes to the built environment of the city have seen 'an effort to remove evidence of the conflict from the 'new' city centre, despite more than 70 conflict-related deaths occurring there'.
19 ibid.; 337
20 ibid.; 337
21 Ibid.; 337
23 An appropriate analogy if we consider the definition of 'moat' (French word 'mote', meaning 'mound') to be 'a deep, wide ditch surrounding a castle, fort, or town, typically filled with water and intended as a defence against attack', accessed 03/05/17 https://en.oxforddictionaries.com/definition/moat.
In Belfast, often water, in the form of Belfast Lough, or inner city rivers, is used as a geographical device to separate physical spaces belonging to the Unionist, Protestant, or Nationalist, Catholic, residents of the city. Roads too have been constructed for this purpose, particularly motorways, or the city's high-speed "Westlink". The construction of these roads has ensured that vast vacant urban areas, once the location of houses, create defensible spaces on the approach to interfaces.
24 Housing Executive, accessed 07/05/17 http://www.nihe.gov.uk/index/community/community_cohesion/bric.htm
27 "adams warns ministers ira has not gone away", independent, accessed 15/05/17 http://www.independent.co.uk/news/ira-has-not-gone-away-adams-warns-ministers-ira-has-not-gone-away-1596152.html
28 Fredrick W. Boal, Shaping a city: Belfast in the late twentieth century, (Queen's University of Belfast, Institute of Irish Studies for the Northern Ireland Housing Executive, Belfast, 1995): 151.
30 Martin Pawley, Terminal Architecture. (London: Reaktion, 1998): 152. Recently declassified documents from the 1970s and 1980s show that the security agencies in Northern Ireland played a key role in shaping planning in Belfast by bypassing traditional pre-requisites in order to spatially isolate and contain the city's communities. The legacy of these measures remains today.
31 ibid.;152
34 Martin Heidegger & David Farrell Krell, Basic writings from 'Being and time' (1927) to 'The task of thinking' (1964), (Routledge and Kegan Paul, London etc. 1978; 1977). Text in reference to Heidegger's explanation that we build in order to dwell, yet not all buildings are dwelling places, for example places of work, whereby we 'work here and dwell there'.

35 P.D. Smith, City: A Guidebook for the Urban Age (Bloomsbury UK. Kindle Edition, 2012): Locations 1237-1238. Smith writes that 'the first city dwellers felt the presence of their defensive wall even when they could not see it. It became a wall in the mind'.

36 Ibid.; location 1242. Smith also discusses how walls have historically manifested unrest: 'Within its protective embrace people gained a new sense of security and self-confidence. But by cutting its citizens off from the outside world, walls also created fertile ground in which seeds of suspicion and even paranoia could grow'.


39 ibid.,168


41 "Flaws exposed in plans to remove Northern Ireland’s peace walls", The Detail, accessed 24/05/17, https://www.thedetail.tv/articles/government-revise-down-interface-removal-target

42 The outstanding walls (from the latest count) are controlled by organisations including Belfast City Council (2), Invest NI (2), Belfast HSC Trust (1), the Department for Infrastructure/DRD (3), private (5) and unknown owners (8). That there are privately owned walls and unknown owners, would seem to undermine official plans for removal, suggesting some possibility of resurgence through the work of independent stakeholders.

43 "Flaws exposed in plans to remove Northern Ireland’s peace walls", The Detail, accessed 24/05/17, https://www.thedetail.tv/articles/government-revise-down-interface-removal-target

44 http://www.belfastinterfaceproject.org/. Belfast Interface Project, accessed 26/05/17

45 http://www.belfastinterfaceproject.org/interfaces-map-and-database-overview Belfast Interface Project, accessed. 26/05/17


47 "Attitudes to Peace Walls", A report conducted by the University of Ulster, accessed 19/10/15, http://www.ark.ac.uk/peacewalls2012/peacewalls2012.pdf. The report revealed that 69% of residents living at the walls maintain that the peace walls are still necessary because of the potential for violence.


52 Ibid.:8


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Williamson, Judith. Decoding advertisements, (Marion Boyars, London 1978)
THE GIANT DOLLS’ HOUSE PROJECT

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INTRODUCTION
The Giant Dolls’house project is an ongoing collaborative arts project that engages local communities and has raised money for the Housing and Homelessness Charity Shelter. The goal of the project is to make people aware of the importance of a home and community for all. It shows that all people are similarly idiosyncratic. The project can also be read as a crude illustration of how communities could grow.

The Giant Dolls’house project works as follows: Each participant (anyone: children, parents, grandparents and students) in the project is asked to make an individual dolls’house room of any function in an empty shoebox. The boxes are assembled onto a black canvas and linked with ramps, ropes and ladders to create a series of connected spaces that form a community of dolls’houses.

THE DOLLS’HOUSE, IMAGINATION AND MAKING
The dolls’house and miniature have proven to be an ideal medium to explore ideas about the home, communities and society. The project united three elements: the dolls’house and what it represents; miniature and the imagination; the art of making.

Representation of the Dolls’house
In Amsterdam in the seventeenth century, a number of women made elaborate dolls’houses. One of the surviving dolls’houses, and arguably the most elaborate one, the dolls’house of Petronella Oortman is displayed in the Rijksmuseum in Amsterdam. Her dolls’house represented ideas about the home that were current in its time. Even though it has been described as a wealthy women’s hobby only, many of its contents coincided with the cultural production of the time and the dolls’house was visited by traveling scientists and royalty from abroad. The dolls’house of Petronella Oortman, contained around seven hundred objects, which together pictured an ideal household and how it was run. In the dolls’house objects, architecture and furniture are all represented in equal measures, picturing a complete household as a model of its society.

In the nineteenth century the dolls’house became synonymous with the bourgeoisie and the way their self-preservation habits turned them away from society. This image was captured in the play A Dolls’house by Henrik Ibsen, first performed in 1879. The Dolls’house in the play is a house, where, removed from the real world and its developments, the hypocritical values of the bourgeois male protagonist rule. Nora, the wife, brought up as a doll in a dolls’house and shielded from any true or real life has to leave her dolls’house, into the real society to become a real person.
In 1972, the artist Miriam Schapiro made with Sherry Brody a dolls’house, as part of *Project Womanhouse* in California. Their dolls’house was placed in a cabinet, not unlike the cabinets of the dolls’houses of the seventeenth-century Netherlands and they used objects to alter the by now tired and what had become the stereotypical ‘gendered space’ of dolls’houses. A studio displays a female artist painting bananas and a male model. In the third instance the dolls’house and it’s interior challenged the established order by offering and imagining a narrative for a new reality in miniature.

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**Figure 1. Dolls’house Petronella Oortman 1685-1712. Copyright Rijksmuseum Amsterdam.**

**Miniature, imagination and Make Believe**

Miniaturisation, as it is interiorised in the dolls’house is often explained as a romantic, nostalgic pass time: the resultant of a desire for a past that is no longer there. The writer Jan Willem Duyvendak argues in his book: *The Politics of Home: Belonging and Nostalgia in Europe and the United States,* that nostalgia as part of the imagination. However, he also sees aspiration, norms and dreams located in the imagination. The anthropologist Irene Cieraad observes in her 2010 essay that university students complete the actual home they live in with elements of their imagination. Imagination is, according to the philosopher Gaston Bachelard a vital part of living in the home; an active ingredient that helps people negotiate their daily life. Through imagination only, we can change the world around us. Bachelard writes in his book *The Poetics of Space:* ‘The world is my imagination. The cleverer I am at miniaturising the world, the better I am at possessing it.’ Miniature could therefore also trigger the imagination in other ways.

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**Miniature, imagination and Make Believe**

The art of making and building is an important aspect of the Giant Dolls’house Project. In the seventeenth century dolls’houses all objects were made by professional craftsmen and the end product was a testimony to their skill. Miniaturisation of everyday objects was often a requirement for admission to a professional guild. The writer Richard Sennett sees making as a social activity. In his book *Together: The Rituals, Pleasures and Politics of Cooperation,* he writes:
'my hope is that understanding material craftsmanship and social cooperation can generate new ideas about how cities might become better made.'

He continues:

‘My quest is to relate how people shape personal effort, social relations and the physical environment. I emphasize skill and competency because in my view modern society is de-skilling people in the conduct of everyday life.’

The Giant Dolls’house Project, as a community arts project, shapes imaginary miniature cities through making. The connecting ladders and ropes and ramps set it apart from purely individual dolls’houses in a shoebox projects. However, the educational value of the latter has been recognised by Audrey Rule, who identified in her analysis of dollhouse story themes and related authentic learning activities six themes: imagination, science fictional changes in space and time, diversity and friendship, courage and independence, creativity, and care of belongings. These themes could provide important social-emotional and intellectual skills for success in today’s diverse, challenging world.

INSTALLATIONS
Since 2014 we have made several dolls’house installations and have therefore assembled over a thousand dolls’house-boxes. And yet, still, each box is different and has a different story to tell. A few of the events will be listed below.

TESTBED01
The first installation was at TESTBED01 in Battersea in 2014. We raised money for Shelter and had around 140 boxes from local school children and from children from North London, Islington. In a workshop, led by Lala Thorpe from Artescape.

Figure 2. Photograph by Karem Ibrahim.

Transacting
At the Giant Dolls’house installation #Transacting, 11th July 2015, organised by Critical Practice, on the Horse Guard parade in front of the London University of the Arts Chelsea, we explored what would happen if not inhabitation of the boxes is the starting point, but their trade value. Empty shoeboxes were assembled onto the canvas before the market opened. The boxes were undecorated and linked with the ramps and ladders, not unlike a newly built, architect’s designed uninhabited housing scheme. The Giant dolls’house didn’t expand during the day and no new boxes were added. We speculated there would be a shortage of boxes at the end of the day and almost hoped for heavily decorated boxes and a queue of disappointed buyers.

At the start of the market anyone could ‘purchase’ a box by donating £1. to Shelter and decorate it. Participants were then encouraged to sell their box again. If the owner chose not to sell, the box remained as it was. On the day, we found that most adult participants were more than willing to sell their shoebox houses after they had bought them and had added some furniture or wallpaper and no-one wanted more than one box. The only group of participants who did not want to sell their shoebox-house, who in fact wanted to bring their box home after the fair were children who had become
attached to their house and had become completely absorbed in the project. The fact that the boxes were pre-assembled, made no difference to them.

![Figure 3. Photograph by Karem Ibrahim.](image)

**LFA2015**

In 2015 the Giant Dolls’house was part of the London Festival of Architecture, as a highlighted event, with an installation at the Headquarters of Shelter. Children from Duncombe primary school made the dolls’houses and Lenny George from Shelter visited the school to explain Shelter’s work. The installation was in collaboration with Lala Thorpe from Artescape. For the theme of the festival: ‘Work and the development of the city’ we wrote:

_The Giant dolls’house is a work in progress that reflects the way in which communities could grow. It also highlights the need for housing as an integral part of work life. In a post-industrial society, where people can work anywhere, the home though important as a site to get away from the grind of work life, has more and more become intrinsically linked to work and is often the site of work itself. The city after all can be compared to a large home where one can eat, sleep and work. The conglomeration of dolls’house spaces that will grow over the period it is exhibited, therefore embodies the idea of a work in progress and comments on the way individual homes and work spaces are linked to one another to form a larger community._
Figure 4. Shelter Installation. The office of Alsop Architects made a dinosaur disco and the architect Ana Araujo contributed a study of a loft. Photograph by Karem Ibrahim.

LFA2016

In 2016 the theme of the London festival of architecture was ‘Home and Community’ and we wrote: The Giant dolls’house is a work in progress that reflects the way in which communities could grow. It highlights the need for people to have a place to call home to be an integral part of a community. The conglomeration of dolls’house spaces is a literal illustration of the idea of community and the role the home plays in it. However, not all participants may choose to make a home: last year one participant made a disco and another a playground. By letting participants free to decide what they want to make, the installation will perhaps become a community with shared gardens, access between homes and a miniature disco, illustrated in a playful manner.

Diony Kiryos from the Bartlett made a diorama of paper. Pepper from T-SA made a study of saint Jerome for the office and children from Saint Joseph’s Primary made dolls’houses and Lenny George came to talk about Shelter again. Many of the children made their boxes at home and one of the mothers, who had helped make her child a dolls’house (bigger than was allowed) confessed:’ I always wanted to be an architect.’ Boys from Tower House school in Barnes as well as children from the Roche Primary School also made dolls’houses.

Figure 5. One of five Panels in the Maestro Arts Gallery. Photograph Karem Ibrahim.
A number of the boxes came the Red Cross Refugee Destitution Support Centre in Dalston. A collaborator on the project and volunteer at the centre, Cindy Hanegraaf, wrote the following:

*The Red Cross Refugee Destitution Centre in Dalston, East London, provides support for refugees who are in the process of applying for asylum and those who have been refused but are appealing, as well as those who have been successfully granted asylum but fall between the benefits of asylum-seekers support and finding employment.

‘Many are homeless or are living in very short-term accommodation. Some spend the night on public transport, some in parks or on the street, some in homeless shelters.’

She continues

‘There was a ready source of shoeboxes thanks to a recent donation of new shoes from a retailer. The materials for furnishing the boxes came primarily from the trash left behind from the packaging of the food parcels; red net bags from onions, cardboard boxes from tinned sardines, cellophane and photographs from food packaging. Other material came from the clothing bank and from bags of donated toys and children’s art kits. At first, it was mainly the volunteers who made the boxes, sitting at tables where the centre’s beneficiaries were reading or chatting or having tea. The questions came slowly; what are you doing, why are you doing this, can I make a suggestion, can I help, can I do one of my own? In most cases the beneficiaries preferred to dictate what would go into a shoebox room, and they had very definite ideas of what a room should have.’

A window
A key
A box for clothes
A bed

Figure 6. Dolls’house from the Red Cross Destitution Centre.
Photograph Karem Ibrahim.

**LFA2017**

On June 19th 2017, the third installation for the London Festival of Architecture finished. The installation was in the lobby of JW3 in Finchley. A direct mailing had gone out to supporting architecture offices and more architects participated. The project was redefined according to the new theme of the London Festival of Architecture, just as Venice in Italo Calvino’s 1972 book *Invisible cities* is redefined. We are, in Calvino’s words ‘simply recounting some of the myriad possible forms a city (or giant dolls’house ) can take.’ For LFA 2017 we wrote.
The theme of the London Festival of Architecture this year is ‘Memory’. Not only does the dolls’house and the community it generates bring people back to a time when divisions were less prominent (see also Putman), the dolls’house is also a medium to process individual memories. Just sitting together and making things is for many adults a memory they want to pass on to the next generation and a skill that is no longer self-evident in an age of computer games, internet and mobile phones. Thereby the dolls’house can be seen as a repository of personal wishes and memories.

The model shop of MAKE made a dolls’house with the theme of memory in the city. Homes Miller Architects from Glasgow sent their box by post and SPPARC and Child Graddon Lewis, and Erika Suzuki contributed dolls’houses. Nursery children from Fitzjohns Primary school, children from Swiss Cottage school Chigwell Primary schools and children from Artescape with Lala Thorpe, who collaborated on the project and ran the workshop, all made boxes.

*Figure 7. Installation at JW3, at the top the MAKE Dolls’house and the Homes Miller Dolls’house below. Photograph by Will Jennings*

**Projects with Students**

The image of the ladder scapes the project generates resembles the idealised Mediterranean cities that the Dutch architect Aldo van Eyck used as a Casbah organise in his Municipal Orphanage. His student Piet Blom built a series of Casbah Houses in Hengelo. He joined standardised housing units with stairs and ramps in order to evoke a what turned out to be controversial urban.

The Casbah, however, always remained an aspiration as the Casbah in Hengelo couldn’t take into account the complexity of life that the real Mediterranean cities have. Could the often ephemeral Giant Dolls’house project be translated into architecture? By starting with the dolls’house, the students start with the life in the casbah, rather than its organisation. The project of the BA Interior and Spatial Design, Chelsea College of Arts, University of the Arts London was a quick study in getting an idea made and in seeing that idea next to all others mounted onto the canvas.
Figure 8. A Giant Dolls’ house was created with the BA Architecture third and fourth year students, University of the arts Bournemouth. The students were encouraged to work in groups of three to explore their own houses as well as the connections between them.

Dubai, AUB
In November 2016, as part of a workshop at the arts department of AUD in Dubai; Art, interior design and animation students made doll's houses as well as their staff and their children. The architecture students helped assembling the boxes and make the links between the boxes. After the introductory lecture, the evening before the workshops started, an electrical engineering professor asked if he could make a box: he liked the idea of thinking with his hands and developing ideas through making, as children tend to do in the project. He worked on his box between 4 and 5 pm for three days (see figure 9.). Artists participating in the project used the idea of the dolls’house as a critique on events in their world: A Syrian arts student, Cham Al Malla made a typical Syrian interior, with material from her home town. She covered the interior with a lid with a crack in it and the interior was only visible through this crack. In January 2017, the project was taken to thejamjar gallery in Dubai in the AL Quoz District. Another Syrian artist, Sylvia Karakit, made a shoebox about the situation in her homeland: a miniature Guernica.
CONCLUSION
The project uses the ideas of miniature, imagination and making to visualise communities of dolls'houses with the dolls'house considered as a medium to imagine and explore individual spaces. Anyone can participate and Participants are absolutely free to do what they want in the space of their box. There are no prizes for making ‘the best’ box, and boxes are only excluded if they can’t be attached to the canvas.

The giant dolls’house project is not a community participating project in the architectural sense, as we are not working towards a specific project. The giant dolls’house is an end product, a fund- and awareness raiser and discussion piece about issues relating to home, inclusiveness and communities. It doesn’t solve anything, unfortunately, but we hope it makes people think. The direction of the project changes per installation and through the people who become involved, but its principle remains the same.
NOTES


13 Rule, Audrey, 2005. ‘Doll's House Story Themes and Authentic Learning.’ Journal of Authentic Learning 2 (1)

14 This conclusion was formulated in conversation with education-expert. Helene van Lookeren.


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MAKING A HUMAN-CENTRED CITY – THE TRANSITIONAL SPACE BETWEEN PUBLIC AND PRIVATE AS A PLACE FOR DAILY LIFE AND ENCOUNTER

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INTRODUCTION
Living in the city is a worldwide tendency which means that the percentage of people living in our cities will grow. The public domain and the private home here exist next to each other. Space in front of, or near the house and the facade enter into a close relationship between public and private. This may be a social one, offering a transition from the one to the other condition, as such the space functions as a transitional space.
The design of this transitional space and its use is influenced by the socio-cultural background of the inhabitants, by ideas about the public sphere and the socio-economic situation of a neighborhood can play an important role. The desire for privacy grows and influences the design of urban residential architecture as well. This paper discusses the design and use of this transitional space. Is this space designed and used as a space for daily encounter or as a threshold? What were the main reasons for the design and use of the space and finally: What makes a transitional space a space for encounter?
First the Dutch culture of living in the city will be shown with a historical example and the development of the collective residential housing in the first decennia of the twenties century. Then this paper will focus on Dutch cases after WWII. The main question will then be put in an international perspective on the example of a research, done in Kyoto, Japan, which is meant as a starting point for further research. The paper shows a research method which can be used in architectural education.

A human centred city
The topic of this paper – ‘Making a human-centred city’ – is very much about the everyday life of the residents. It was used as a topic at The Biennale of Architecture and Urbanism in Seoul 2017. The website explains: “But what kind of city do we want? Italo Calvino stated that the true value of a city lies not in monumental buildings, but is ‘written in the corners of the streets, the gratings of the windows, the banisters of steps, the antennae of the lightning rods, the pole of the flags, every segment marked in turn with scratches, indentations, scrolls.’ Calvino is saying that the truth of the city lies in the everyday. He is asking us to break away from existing concepts of the city in order to build more
humane and democratic urban structures. The city is a community always in the process of becoming, formed by anonymity and ready to tell us manifold stories. It is formed by both physical spaces— squares, parks, streets, and even gaps between buildings—and virtual spaces where strangers gather, commune, and part ways.” 2 Urban spaces can contribute to a human centred city. Depending on the design they are understood as threshold from the public domain or space for encounter, as a place to anticipate on the process of the city and its inhabitants and navigate between public and private sphere or not.

**The public and the private sphere**
The origin of the term ‘public’ lies in the Latin ‘publicus’ which means ‘for the people’. Today the position of a public space often is not that clear. The Dutch townplanner Jan Heeling differentiates between three forms of public sphere: The ‘public domain’ as a property which is open for everybody, ‘public places’ open for everyone through clear accessibility ( street, park, plaza), and the collective goal of a public space.3 In his lecture about Hannah Arendts ‘The Human Condition’ Hans Teerds emphasizes the connection of the ‘public domain’ with the human activities of trading and speaking as men in a world of plurality and synchronicity of people. The free exchange between people was essential for Arendt and this can only happen if the public space offers this encounter and exchange in freedom, not in an ordered, restricted and framed system of spaces. Architecture is a mean to create this condition, states Teerds.4 The Latin word ‘privatus’ means withdrawn from the public sphere. The history shows us that the private sphere was a condition which was not common, it had to be gained. Private is used as the opposite of public. ‘Privacy’ means the sphere in which a person, or a group, can be undisturbed alone. The ‘private domain’ is the opposite of the ‘public domain’, the residential house or dwelling is a physical ‘private domain’. Here the dweller can be free of any rolls everybody continuously has to play at the podium of public life.5

**The transitional space**
*Transitional spaces* are located between two conditions.6 In the built environment a transitional space can be a space between two temperatures, two functions, between outside and inside or between the private and the public. This can be ambiguous, does it belong to the one or the other condition? In this research the transitional space is defined as the area that creates a transition between public and private. This space can be an outdoors or indoors area. It includes the façade of a building, the space in front, and sometimes the inside of the building. The transitional space can be defined as an *intermediary space* between the city, the public and the home.7 Depending on the design, the façade in the urban context, especially the ground floor and first floor zone and the sidewalk can contribute to the transitional space. This space nowadays is often closed up hermetically when it comes to residential areas, and used commercially, when it comes to shopping streets, but often unclear and unpleasant in mixed function areas in the city. Therefore, it is important to understand how architecture can influence the transitional space positively by designing it consciously.

**READING THE CODES OF THE TRANSITIONAL SPACE**
While studying the transitional space a very important aspect is the ability to read the *codes*, hidden in the architecture and users attributes that form it. Understanding the codes that form a border is a complex issue as signs and symbols are culturally formed and often used unconsciously. Being a guest in a different culture shows us how difficult it may be to understand the signs that mark a border.8
According to Herman Hertzberger, the transition from outside to the inside is a complex addition of experiences that can be invoked by architecture: height, width, depth, light accession, illumination, material, etcetera, here summarized as architectonic means. Simon Unwin describes a study of transitional spaces as a search for the movement from outside to the inside with all its sequences and hierarchies. The anthropologist Amos Rapoport emphases the *behavioural codes*, users bring into the space by adding attributes and appropriate spaces. The Danish architect Jan Gehl did research to understand how an urban public space can be a lively and appropriated space instead of a non-place.

The transition from outside to the inside happens by passing different zones, step by step the resident enters the building, and often the transition continues in the inner of the building until the resident reaches the heart of the building. We here talk about visual (and haptic) elements, material and space, and we use the visual research method of observation. One very direct way to note the visual information is the hand drawing, another is the photograph. Gehl used the method of observation of public spaces to understand if and how and when a certain space is used. The method is supported by questions. In addition the researcher should do some interviewing with residents, especially in non-familiar environments and cultures, to get a profound understanding of the codes.

Outside:
1. Are there transitions from outside to inside on the level of the direct neighborhood?
2. Is the façade towards the public monolithic or layered?
3. How do you know that you entered a boundary?
4. What kind of and how many transitions are there?
5. Is there a hierarchy in the transitions?
6. Are elements fixed, semi-fixed or dynamic?
7. Are there “silent distances”, cultural attributes, rules?
8. Are there clearly identified elements for safety and exclusion?
9. Are there spaces in which the borders between outside and inside become ambiguous?

Inside:
1. Is there public space even inside the building?
2. Do you notice a hierarchy from public to private and how do you know? What are the signs?
3. What is the most private room? How do you know that? What are the signs?
4. Are there “silent distances”, cultural attributes, rules?

Suggested drawings
and photographs:
1. Hierarchy from outside to inside by schemes or a fragmental floor plan entrance, section and/ or isometry, material, light, height,…
2. Profile from public to private (street, sidewalk, entrance of the house)
3. Entrance area, section, 3D
4. Sketches of the means that mark a step in the transition

**THE DUTCH CULTURE OF LIVING**

Until the 18th century the street was one of the key public spaces in the living environment of the Dutch residents in the cities. The transitional space, built up by borders between street and dwelling, consisted of a system of small thresholds people were able to recognize and personalize. The sidewalk was one very clear border between paved street, the entrance door and the hall. The front door was divided into two parts, the lower and the upper door. The upper part was open during the day.
people worked and sold their products on the street or in the hall, which often functioned as a workshop.

![Figure 1](image1.png)


In the late 19th century, most workshops moved to the fabric and the former double high public hall got private. As a result, the basement (which was positioned at the backside of the house) was enlarged towards the front and the former hall transformed to a private living room at the front of the house, but elevated and accessible by outside staircases and a small entrance hall or corridor. These changes created a new border between public and private. Today some streets still show this profound elaboration of the transition spaces in front of the door (the photograph shows the elevated living towards the street and some doors to the basement). Over centuries the Dutch were used to a smooth transition, using the sidewalk as a place to work and social encounter. The elevation of the entrance was a very big change of the Dutch home. With this change of the home to a solely living area and the change of the street towards a street for the transport, the Dutch living culture changed drastically towards a much more private and anonymous way of living. The changes of the public sphere, once created by the citizens themselves, later dominated by the transport system, as well as ideas about living in green parks, or later the movement of participation, definitively influenced the transitional space of urban residential houses.

![Figure 2](image2.png)

*Figure 2. The transitional zone in Amsterdam, Prinsengracht 337.*

During the first half of the 20th century architects were faced with a huge lack of knowledge about collective housing, mono-functionality and mass production of housing. As the Dutch were used to
have their own house, the stacking of dwellings to what we call *flats* or *apartments*, the access system and the transition from public to private was a new field to explore. Within only some decennia (1900-1940) all access systems which we nowadays can find in the Netherlands were invented. The articulation of the entrance had to let the dwellers feel comfortable with this new collective entrance and staircase. Some offered each dwelling an entrance directly towards the street, for the upper floors combined with a collective outside stair, like *The Hague Portico* (see photograph under). The *Amsterdamse School* architects, in the second and third decennia, tried to negotiate between the street and the sidewalk, offering little transitional spaces. According to the functionalists the street was dangerous, living had to be protected from it. They broke with the traditional closed building block and invented the open block and later the slab building as modern architecture., the modern movement brought a turning point of the transitional space, turning its entrance away from the street and introducing a long way from entrance towards the individual dwelling. The photographs are a small selection to show the development of the Dutch residential houses in the first decennia of the 20th century.

![Figure 3. 1914 – The Hague Portico Copernicuslaan, Den Haag](image1)

![Figure 4. 1927 – residential houses Hoofdweg Amsterdam, architect H. Wijdeveld](image2)
After WWII the basis for the collective residential architecture was laid and as standardization was a big issue, residential architecture was easily reproductive and sober. The sobriety of the facades was even suggested as a basic design in the Dutch building legislation which makes the government partly responsible for the flat facades which occurred. Concerning the transitional space the flatness of the facades did not support encounter, however in some projects architects worked with architectural elements to introduce extra space. Depending on how such an architectural element was involved in the design, the message as a sign was totally different. The following cases demonstrate this.

1962-68 - Het Breed in Amsterdam, designed by Frans van Gool
The project is the result of the government, pushing the design of residential houses to its production limits. The slab buildings are arranged in groups of two or three. Access is offered on the ground floor with a setback, and on the 3rd floor with the access balcony which forms a connection to the next building and creates a street in the air. To gain a neutral façade, a layer of pillars is set in front of the windows as a veil. For the architect, living in a beautiful park like neighborhood was the quality of this complex and the mass production was no problem at all (more than a thousand dwellings are produced here). The veil of pillars communicates equality and an anonymous sphere with an architectural element, the pillar, that was well-known since Greek Architecture. The transitional space was hidden behind this screen, the balcony worked as a public street, but the buildings had no contact at all with the public domain, street or the sidewalk. The whole complex was more an enclave.
The project is an example of another turning point, this time to more small scale solutions for the residential buildings in the Netherlands in the 70th. Aldo van Eyck and Team X proclaimed a more human scaled architecture, recognizable and appropriated by the residents. After the war the guidelines of the government were the core of the most developments in mass housing. Openness and green were the key terms, blurring all well-known references of front sides, representation, back sides and private gardens, sidewalks and finally the transitional space.

The façades reflected mass production. This project shows how division of a long slab into recognizable parts, almost similar to the old channel houses in Amsterdam, helps to read the building. All entrances and balconies are situated on the south side, orientated towards a pedestrian street. By introducing the well-known pillar as a focus point for all architectural elements that form the transition space, the pillar is used in a very different way and the result is the clear appearance of space that is free to use.
AN EXAMPLES FROM A DIFFERENT CULTURE / KYOTO, JAPAN

During a research period in Kyoto the traditional townhouse ‘Machiya’ was studies to understand the transitions from public to private and to understand the qualities of this old townhouse in general. Interestingly the Machiya had very much in common with the traditional Dutch house. They both had a clear space between public and private. The Dutch house had its sidewalk with elements that marked the borders (material changes, a bench, a step). The Machiya had this space as well, called ‘en’ – bridge, between two conditions, between public and private. But the codes that mark the space were different. The research brought even more understanding of the Machiya neighbourhood, the typical fukuroji neighborhood. The Machiya has a space to encounter in front of the shop, marked by material change of the sidewalk, a bench and attributes like a roof and hedges. Next to the shop is the often open entrance to the house. The boundary to the very private area of the house is not here but inside, at a patio for guests to wait for further entrance. The light in there and a bench make this space inviting and rejecting – both.

The fukuroji consists of small row houses on both sides of a little path (roji), often with a shrine at the end of the path with flowers, which gives a feeling of protection. Little material changes in the path form a border that is – unconsciously – understood and respected and even stressed by plants the dwellers put outside. Machiya and row houses have closed facades with lattice work. As a foreigner you will feel some exclusiveness of the roji.
Figure 10. Codes between public and private: Left: The entrance to the private home – in the back the public patio, where guests have to wait. Middle: A curtain marks the entrance to the waiting area (right).

Figure 11. Sitting on the bench. A view towards the first private garden.

Figure 12. A roji in Kyoto with clear borders between path and house.

CONCLUSION
In this paper the design and use of transitional space between public and private is discussed. Transitional space was interpreted differently in different decennia. The two Dutch cases already show changes of this space from a place to encounter to a protected and again to a lively place. The ideas about ‘public domain’ changed in the 50th and 60th drastically, separating the street as an enemy from the house. Mass housing and estrangement caused a change of vision and lead to projects with elaborated transitional space in front of the house by architectural design. Residents appropriate it which shows that design can invite to do this. The transitional space needs to be understood as a place to encounter and the codes need to be clear. The international example shows the cultural influence on codes and similarities like benches, flowers, roofs. They show that observation is a very practical and
convincing method, often completed with interview to get the right understanding, especially in other cultures.
NOTES

1 The research which is discussed here is part of the PhD research: Birgit Jürgenhake. *The façade as an intermediary element between outside and inside.* (Delft: University Press, 2016). Here the social filter and the face or mask to the public domain is studied on the residential buildings of the Netherlands in the 20th century.


6 As the Latin word *transition* means “going across or over”, the action of a transition is to go from one condition to another.

7 There are different terms used for this area: transitional space; transactional space; plinth; threshold; intermediary zone; hybrid zone; ambiguous zone.

8 Georg Simmel, *Soziologie. Untersuchungen über die Formen der Vergesellschaftung.* Leipzig: Duncker & Humblot, 1908/1983. Georg Simmel described the position of a stranger, seeing more than the initiate he often is not able to interpret the signs in the right way.


12 Simon Unwin. *Analysing architecture.* (Londen: Routledge, 2009) 209: “Experiencing products of architecture involves movement. One passes from outside to inside, or through the serial stages of a route. Even in a simple enclosed space it is not possible to look in all directions simultaneously, so one moves around.”


15 The workshop was held with master students of the Kyoto University of Art & Design, chair of environmental studies, Prof. Yokouchi, together with landscape architect Ken Kawai.

BIBLIOGRAPHY


THE MAKING OF A LIVEABLE COMMUNITY AT NEW WORTLEY, LEEDS

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INTRODUCTION
In 2009 academics and students at Leeds Beckett University (LBU) embarked upon a design project with the community of New Wortley to provide a new community building. What transpired was something much more meaningful and profound. In the eight years since, a collaborative co-design process between LBU and a diverse collective of stakeholders has sought to establish a more cohesive and liveable community environment in Leeds’ most deprived area. Passionate collaboration has empowered this previously marginalised community through a groundswell of mutual action referred to by the writers as ‘Emergent Community Governance’.

New Wortley, an inner-city suburb of southwest Leeds is the city’s most impoverished with 34% of people claiming out of work benefits. Rows of red brick back-to-back terrace housing were collapsed into their basement in the 1960’s slum clearance. In their place, a Radburn design estate of poor quality semi-detached and adjacent high-rise dwellings were erected. The traditional high street has been slowly eroded by legislative moves and piecemeal demolition. Today New Wortley has little urban quality or identity to be proud of or relate to, it is a harsh and disconnected physical environment.

This is matched by the social situation where the needle exchange at the pharmacy next door to New Wortley Community Centre (NWCC) is the most heavily used in Leeds. Coupled with the highest suicide rate in the city, New Wortley has an average life expectancy of just fifty years of age.
New Wortley Community Association’s (NWCA) aspirations had significantly outgrown their existing community centre, a 1982 building no longer fit for purpose and in need of repairs. Although the building has been in continued and popular use, little investment in its upkeep and a total reliance on volunteers created a hand to mouth existence.

Having no funds to commission traditional architectural consultancy, NWCA approached the Leeds School of Architecture at Leeds Beckett University requiring a ‘concept design’ for a new community centre, situated adjacent to the existing. The purpose of the design work would be to act as the catalyst for fund-raising. The brief called for an inspirational multi-purpose space with commercial functions, enabling the centre to expand its reach and sustain itself in the future. Development of the project was overseen by Project Office, Leeds Beckett University’s in-house architectural consultancy organised as a collaborative research facility between staff and students making ethical, social and resilient architecture, working with like-minded communities, organisations and individuals.

The new building opened its doors to the community on 29th July 2016. Funded by a £759,497 Big Lottery Reaching Communities grant. Delivering the new building on time and on budget proved a facilitator for continued further investment including an Our Place initiative grant, an NHS pilot scheme to create a Health & Wellbeing Centre and Power to Change funding to explore the creation of social housing. The new building supports an expansive range of activities, programmes and collaborations managed by NWCA including an ex-offenders programme, housing advice, employability skills, creative arts groups, health and wellbeing activities, youth groups, breakfast club, and much more.

This paper describes a co-design model where university students use their academic learning environments and productive endeavour to co-design meaningful and positive contributions to society with a network of social participants, as one strategy for creating Liveable Urban Futures. The paper goes on to establish the social and economic impact of the collective endeavour upon the community to date. The architecture project is only one part of the co-production practices within New Wortley. The writers have previously described this as ‘emergent community governance’1. The Community of Practice is changing the governance structures and methods of participation within the Community of Place.
DEFINITIONS

Co-design

The term co-design is used in numerous ways, including as an umbrella term for participatory design, and variants thereof, or co-creation. For the context of this paper however it is more specific. Co-design is the act, or methodology, used to enable forms of participatory design where all participants are learners within a ‘situated learning environment’ building on Sanders and Stappers\(^2\) definition as “the creativity of designers and people not trained in design working together in the design development process’’. In New Wortley, this definition is furthered to inculcate the work being undertaken is for the non-design trained group of participants. The initial co-design saw a collaborative process between LBU students and community stakeholders to design and deliver a new community centre building, for that community.

Community

Halsey\(^3\) suggested the word community has “so many meanings as to be meaningless…” but this is the very word residents and activists use to denote themselves. Thus, in the context of New Wortley, the definition builds on Sutton & Kolaja’s\(^4\) description as “a number of families residing in a relatively small area within which they have developed a more or less complete socio-cultural definition imbued with collective identification and by means of which they solve problems arising from the sharing of an area” but goes much further than a number of families to include a diverse collective, not all of whom live in the defined local vicinity, but all participate and have a vested interest in the social coherence, governance and regeneration of the area. Consequently, the notion of community in this instance has an extended affiliation to those engaged with the processes of making a more liveable New Wortley, and cites Wenger-Trayner’s\(^5\) definition, as illustrated in Figure 2:

4. Community of Place.
   Everyone who resides within the geographic locale and subsequently are the intended recipients of NWCA amenities and services.

5. Community of Interest.
   An amalgam of individuals and groups, external to the geographic locale, interested in working, supplying, or engaging with New Wortley.

6. Community of Practice.
   The overlap between the Community of Place and Community of Interest, where members collaboratively work on specific projects to facilitate investment and continued improvement in this previously overlooked locale, including a number of political, professional and academic figures such as LBU, who have embedded themselves over a number of years.
NWCA
The New Wortley Community Association is a volunteer organisation which has “existed since 1982 and works to provide services and support to the people of New Wortley, one of the most deprived parts of Leeds. We operate and run the New Wortley Community Centre, which is a hub for services and support. The Community Centre is owned by the Community Association, a registered charity and an organisation that exists to help the people of New Wortley. New Wortley Community Centre was the first community owned Community Centre in Leeds!”

A board of directors, all giving their time for free, oversee NWCA. It comprises five individuals (four of whom live locally) including a Leeds City Councillor, nursery manager and a pharmacist. It also employs a business development manager who was pivotal in the funding application process and the everyday running of the community centre, a catering manager and numerous others, whilst supervising the volunteer programme discussed in greater detail later. NWCA seeks to represent everyone within the Community of Place looking to engage with improving New Wortley as a liveable urban area and thus NWCA is used throughout this paper as the terminology expressing the output from the Community of Practice’s collective endeavours. This includes numerous projects such as the new community centre building, pocket park, green walkway, Our Place initiative investment, health & wellbeing centre pilot scheme, and various other investments.

CO-DESIGN
The nascent co-design process forged between NWCA and LBU catalysed the series of impacts outlined in this paper. The model creates ‘situated learning environments’ where students, their live project educators, and client team all gain knowledge and understanding. Many third sector organisations are in desperate need of specialist input to improve their facilities and thus the services they offer, but have no finance to achieve this. Seeking support for such improvements requires a design and budget estimate, costing money the organisation doesn’t have, and thus a catch-22 paradox.

The solution advocated by this research uses the productive endeavour of a student body to generate the feasibility studies required for a client to obtain funding. In this instance, a second-year undergraduate architecture project in January 2010, resulted in a £759,497 BIG Lottery Reaching Communities grant to build a new community centre. The process was overseen by the University’s in-house RIBA Chartered Architecture practice Project Office. Students from four further courses
participated: Architectural technology, graphic design, product design and landscape architecture. In total the co-design engaged 196 people, including client team, principal contractor, volunteers and building consultants. Through participation, each individual meaningfully contributed to society whilst simultaneously learning from those around them.

David Harvey9 stated “the orchestrated production of urban image can, if successful, create a sense of social solidarity, civic pride and loyalty to place.” To this end, the New Wortley co-design process and resulting new building, has generated such civic pride in the Community of Place that NWCA has capitalised upon the interest to grow beyond the range of services they had first imagined. Delivering the project on time and on budget has led to continued investment through bodies including Power to Change, Our Place, and the NHS, totalling nearly £750,000. The co-design also continues, a new entrance to the existing community centre building is being developed following another second-year architecture student’s design, though the possibility of totally redeveloping the existing building into a new health & wellbeing centre is also being discussed. Ideas for social housing are about to be developed, with NWCA becoming a registered social landlord. A skills map is being curated to understand more about the social capital. A large proportion of the Community of Place live in four Leeds City Council owned tower blocks, many of whom are asylum seekers struggling to integrate into the area, but may have professions / trades which can be utilised. Thus, the skills map intends to aid migrant integration through deploying their abilities appropriately.

DATA COLLECTION
A series of studies have been undertaken considering the social and economic impact upon the Community of Place by NWCA’s actions. Both are important. The project is about people, evidenced through qualitative responses, yet financial implications are more widely understood, supported and exported as exemplarily practice, through quantitative data, thus, both are collated.

Initially a logic model was created, listing the full range of participants and stakeholders, resulting in a number of realisations. This led on to two surveys focusing upon crime & safety and service usage, followed by focus groups with service providers. A programme of bi-annual data collection is now in place, such that provisions are continually monitored, developed and improved upon.

The logic model is a live document compiled by specific community activists within the Community of Practice including the NWCC manager and Project Office. At the time of writing seventy-three stakeholder groups exist ranging from centre users and service providers, to local government agencies, university departments and many local businesses. It became clear through the logic model that a core component of the influence on liveability in the immediate locale is the range and quantity of interested parties involved.

IMPACT ON THE COMMUNITY
Prior to the new community centre building, NWCA offered fourteen services over forty hours per week, run by two paid members of staff with the aid of eight volunteers. The creation of the new building, the interest generated and the additional space available means NWCA now has fifteen paid staff and fifty-three volunteers providing forty-two services over eighty-five hours per week.

Clearly the increased range of services available is beneficial to those wanting to use the community centre. User numbers have increased dramatically in line with the improved offerings, from just over 200 people per week in 2014, to nearly 900 per week in 2017, illustrating the greater influence upon those living in the Community of Place.
**Impact of Paid Staff**

The effect is further demonstrated when the situation pertaining to new members of paid staff are analysed. Thirteen new salaried employees were economically inactive for a total sixty-six years prior to their appointments by NWCA. Analysis of House of Commons Library\(^{10}\) data shows that in the most recent financial year available, 2011/12, the total UK benefits expenditure was £61bn, distributed across 5.2million individuals. An average unemployed individual claims £4,027 per year. In addition, the loss to the Treasury of potential income tax is an average of £7,703 per claimant. Thus, the overall cost to tax payers of an unemployed claimant is £11,730. Therefore, the sixty-six years of economic inactivity by the now employed individuals at NWCA cost the Treasury approximately £775,000.

The financial benefits are not limited to the Treasury. Eight of the thirteen new employees live within the Community of Place, with a further two living within a wider West Leeds area. A 2013 FSB\(^{11}\) report suggests for every £1 spent locally, 63pence is reinvested in a local economy, as opposed just 40pence of money spent in large local firms (for example Asda). The report focuses upon small scale SME’s, however the writers would assert NWCA is comparable as a small location specific charity offering a basic range of financial opportunities. Thus, through employing and investing in local individuals NWCA is stimulating economic growth within the Community of Place.

The notion of economic stimuli is further enhanced when NWCA’s annual turnover is considered. In 2013 this totalled £80,522, £43,000 of which was trading income, £0 received for service delivery, £5,842 from room hire, and £26,750 from café and catering. In the immediate twelve months following completion of the new building on April 20\(^{th}\) 2016, NWCA turned over £623,000; comprising £145,287 trading income, £43,000 service delivery, £37,500 room rental and £30,200 café and catering. An almost eight-fold increase in turnover in the first year exemplifies the manner of effect NWCA is having within the Community of Place and supports the figures of increased user numbers and service providers. An area to note is the café and catering section, which increased by just 13%. The potential reasons behind this are discussed later.

**Impact of Volunteers**

More difficult to measure is the impact relating to increased volunteer numbers of fifty-three from eight. A 2013 Working Paper by the Department for Work and Pensions\(^{12}\) built on Meier and Stutzer’s\(^{13}\) 2004 study of German reunification in an attempt to determine the value of volunteering using subjective wellbeing data that regular volunteers placed upon their activities. This should not necessarily be seen as an amount that people would be willing to pay to partake in voluntary work, rather it is the monetary equivalent of the wellbeing benefit derived from volunteering. At 2011 prices, the study estimated this value to be £13,500 per annum, thus with fifty-three volunteers each working an average of ten hours per week, NWCA can be said to influence local wellbeing to a tune of £178,875.

The wellbeing estimate is however difficult to interpret in such a manner because the cost is notional. A more relevant expression might be the value of a volunteer when match-funding their time, such as in a grant application. Guidance from Leeds Community Foundation\(^{14}\) to NWCA values volunteers at £11.20 per hour for this purpose. Therefore fifty-three volunteers, each working an average of ten hours per week, are collectively worth £284,928 per annum assuming a forty-eight week working year. This is equivalent to an additional 45% on NWCA’s latest twelve-month turnover figures, and thus the impact and influence of the volunteers cannot be overlooked or underestimated.

The NWCA volunteers are called Team New Wortley; it is a diverse assembly with varying intentions and agendas, unified in their requirement for stability and a purpose enabling them to move forward.
Some individuals have learning difficulties and thus see NWCA as a long-term supporter providing a safe and secure environment outside of their own home. Others are recovering from illness or addiction and use NWCA as a springboard to obtaining employment, some are retired and stave social isolation by integration. A growing number have full time employment but care so deeply about their Community of Place’s continued improvement they offer their free time willingly. Thus, at the core of this liveable urbanity sits an enclave which shelters, feeds, upskills, and ultimately empowers its members to the benefit of the Community of Place. This is the crux, exemplified by the social impact statistics.

![Figure 3. NWCA](image)

**Social Impact**

Building on the logic model two surveys focusing upon crime & safety and service usage have been conducted, followed up by focus groups with service providers. Over 100 individuals have been interviewed to date with the results illustrated below. All questionnaires took place within the Community of Place, however a shortfall in the data is the likelihood of those being questioned to be at least aware of NWCA. A strategy of participation for those unwilling to engage is being developed but not yet implemented, should return more accurate results. Despite this, the clear trend of results indicates the work undertaken by NWCA is having an extremely positive effect on the liveable nature of the Community of Place, whilst simultaneously engaging an ever-widening realm of Community of Interest partners.
Figure 4. How frequently do you use the services and activities of NWCA?

<table>
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<th>N/A</th>
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<td>66.06%</td>
<td>7.34%</td>
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</table>

Figure 5. Are you more likely to use the services and activities of NWCA now there is a new community centre?

Figures 4 & 5 should be considered together, with 66% of people questioned stating they are now more likely to use the NWCA’s services now than before. This is echoed by the 450% increase in participant numbers from 2014 to 2017. It is a remarkably strong indication after only 12 months of the influence the new centre is having upon the Community of Place.

<table>
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<th>GOOD IMPACT</th>
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<td>10.19%</td>
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<td>12.04%</td>
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</table>

Figure 6. Will services provided NWCA have a positive impact on your life?

Figures 6 is substantial in demonstrating the effect of NWCA upon the Community of Place, with 64% believing it is having a positive impact. It is likely that increased services aimed at helping people are the substantive reason for the increased usage statistics illustrated in Figures 2 & 3.

<table>
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<th>QUITE GOOD IMPACT</th>
<th>EXCELLENT IMPACT</th>
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<th>TOTAL</th>
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<td>8.18%</td>
<td>21.82%</td>
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<td>10.09%</td>
<td>16.51%</td>
<td>14.68%</td>
<td>33.94%</td>
</tr>
</tbody>
</table>

Figure 7. Has being involved with NWCA had an impact on your health and wellbeing, education and / or employment?
Figures 7 states approximately 40% - 50% of those questioned identify NWCA as helping improve their health & wellbeing, education and / or employment. The importance of these findings is validated in an area where a third of adults are unemployed, 25% have no qualifications, with a further 37% having GCSE as their highest qualification.15

<table>
<thead>
<tr>
<th></th>
<th>LESS SAFE</th>
<th>NO CHANGE</th>
<th>FEEL A BIT SAFER</th>
<th>FEEL A LOT SAFER</th>
<th>N/A</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00%</td>
<td>0</td>
<td>28.04%</td>
<td>22.43%</td>
<td>32.71%</td>
<td>16.82%</td>
<td>107</td>
</tr>
</tbody>
</table>

*Figure 8. Do you feel safer in the Community now compared to before the new building opened?*

Whilst the reasons have not yet been studied, NWCA feel the sense of greater safety and security felt by the Community of Place likely stems from the increased Centre user numbers and the associated consequence of individuals now knowing a greater number of the Community of Place populous. Further, the work being undertaken by NWCA is helping a growing number of individuals, with a specific target group of young men in danger of engaging in either gang culture or narcotic supply. A final component is the success of the prisoner greeting scheme, discussed below. Whatever the reason, the relevance of safety in social capital is crucial for continued local investment by, and within, the locale as discussed by Paul Whiteley who states that “Social capital is ultimately a set of social values and… that voluntary groups clearly help to facilitate the diffusion of trust throughout society” and perhaps more importantly that “findings support the idea, found in the work of several researchers, that values play a key role in explaining variations in economic performance, and they cannot be ignored in any properly specified model of economic growth.”

**Prisoner Greeting Scheme**

Run by a local ex-offender and NWCA volunteer, now a full-time member of NWCA staff, the Prisoner greeting scheme works with HMP Leeds situated less than a kilometre from NWCC. Already gaining national recognition following a Guardian article, the scheme seeks to help released prisoners from reoffending by aligning them with accommodation, benefits acumen and occupational opportunities.

The scheme has worked with eighty-two individuals to date. According to statistics released by the Department for Justice, the most recent being 2015, the West Leeds reoffending rate is approximately 34%. Thus, twenty-eight of those individuals would usually reoffend. Only two have to date. Given reoffending costs are in the range of £112,500 to £168,750 per person, the scheme run by NWCA has consequently saved the Treasury between £2,925,000 and £4,387,500. Factor in the £30,930 per year cost of an HMP Leeds inmate, and the figure in real terms is far greater.
AREAS FOR IMPROVEMENT

The positive impacts outlined in this paper are improving the quality of life for many inhabitants in the Community of Place, yet there is still a substantial amount still to achieve. The obvious downfall is people within the community as yet not being reached. There are numerous reasons including the range of services not yet providing something for everyone, a continued apathy amongst many members of this marginalised community, and a perceived sense by some of NWCA being a clique difficult to integrate with for newcomers. The Community of Practice will need to keep growing to be able to widen its effect over time.

In a strategic sense, the co-design process embedded at the core of this project highlights a number of issues which could discourage the undertaking of similar processes elsewhere. The single largest factor relates to the sheer investment of person-hours required to oversee and facilitate the project. Project Office has, particularly because of its privileged position within the university and the dedication of its co-directors, been able to provide service to the project over an eight-year duration to date. This means providing continuous facilitation, reflection and direction to the process, individuals and ensemble which manifests as a coherent whole. To do this successfully requires a dedication and sustained period of duty, which for many is unrealistic. The underpinning element in this experiment has therefore been longevity. Leeds Beckett University staff and students have worked with the Community of Place for over eight years to date, and continue to do so, which enables the commitment to be rationalised into appropriate parcels. This suggests educational establishments could contribute so much more directly to society.

A further issue, linked to the above, is reliance on the goodwill of participants in the Community of Practice. The process is open and anyone is encouraged to become involved. This can lead to frustrations and even arguments between collaborators, which are disruptive with potentially negative consequences. In co-design it falls to all participants as co-contributors to mediate when this occurs, attempting to ensure everyone remains engaged and positively contributing. However, as facilitator, Project Office’s role is let this happen as naturally as possible with judicious intervention as required. When co-designing, the aspiration is that all voices should be heard, but strong-willed participants can counter equal opportunity and forging the most beneficial path for the project; the opinion of he/she...
who shouts loudest must not necessarily prevail. In the co-design process therefore, a lead designer is required to remain impartial to safeguard objectivity and parity. On reflection, this is difficult to uphold in all instances. The writers’ experience at New Wortley is amplified by some lovely but opinionated stakeholders who would strongly disagree with each other at times.

Another aspect of the collaboration between the community and the institution that required careful management by the educators is harmonisation of the client brief and the learning outcomes of the educational courses the students are enrolled on. Sometimes these do not match and the educators’ responsibility is to make sure that where required the client brief be expanded in content or complexity to suit the particular course module that the student is engaged with. This can have the complication that without good communication to the Community of Practice there is a misunderstanding of what the aim of the work is. At New Wortley this was managed effectively through the co-design process, an example being the co-design for the landscape. The requirement was for a landscape strategy only around the immediate building. The landscape tutors felt this was not sufficiently complex to meet module learning outcomes, therefore the problem was discussed with key members of the Community of Practice, particularly board members. It emerged they had an aspiration to make New Wortley ‘look’ better. From this the student project was extended to the urban design strategy of an area much larger than that around the building. Students through the co-design process successfully produced a range of expansive and creative ideas. In this instance a simplified version was adopted which met NWCA’s requirements for the area around the building. NWCA unsuccessfully (to date) applied for funding to carry out some of the aspects of the urban design strategy, however the success of the landscape design process is that by working through this paradox collectively, i.e. between the project’s needs and student learning requirements a significant breakthrough was made in identifying and redefining the urban context through co-design. The urban strategy, although not implemented, remains an ambition of the community to achieve when capacity and funding is realised. The writers experience is that apparent paradoxical situations if confronted as opportunities will produce virtuous results.

When considering finances, the café has not performed as successfully as other aspects of NWCA’s business model, probably due to an architectural error in the co-design process. For security, the new
community centre building has one entrance requiring all guests to sign in, from here one may transition into the café. Passing footfall wishing to purchase a coffee are unlikely to undertake the process, thus the café should have been separately accessed. With redevelopment of the existing building a potential future phase, this is an element to address.

The final lesson to be learnt sees NWCA a victim of their own success. In the range of services now offered a number have become so popular advance booking is required, potentially alienating the very people they are designed to serve. The prisoner greeting scheme has outgrown the space available entirely, requiring NWCA to now hire additional offices. Whilst to be celebrated in one regard, these issues raise serious questions relating to the actual possibility of achieving what NWCA aspire to – reaching everyone within the Community of Place. Thus, whilst the existing building will receive a facelift and a small increase in space in autumn 2017, funding is now being sought to at least double the current footprint. The continued influence of NWCA, and impact on the liveable future of the Community of Place, requires it to be found.

Figure 11. New Wortley Community Centre

CONCLUSION

The research outlined in this paper exemplifies a non-standard practice for locally led improvements with the goal of creating a liveable urban future for the Community of Place in New Wortley, a component of which saw a co-design process between NWCA and Leeds Beckett University. The situated learning environment created through the endeavour of staff and students both galvanised a populous to take ownership of their locality, and provided the catalyst required to gain funding and grow influence and impact.

The co-design model undertaken in New Wortley and the aspirations of NWCA are ongoing and thus the areas for improvement identified are to be addressed as the project continues. Indeed, with each milestone reached, NWCA’s intentions grow, meaning the eight years of collaborative working to date are likely to continue for at least that length of time again. The most recent development is a £75,000 Power to Change grant to develop a social housing strategy pilot scheme. The Community of Place’s existing housing stock is inadequate for the majority and thus replacing this will, overtime, ensure many more members of the Community of Place collaborate with NWCA, with the likely outcome being a host of additional ideas for continued improvement.

NWCA now plays a pivotal role in its Community of Place and with a track record of gaining funding and delivering on intentions, intends to keep advancing until all inhabitants are offered a higher quality of life than they have become accustomed to, all of which has been made possible following the co-design process initiated in 2010.
In relation to LBU’s role in this project, the writers have reflected profoundly upon how working with disadvantaged communities fits into education systems, specifically UK universities. The writers’ know there are many more projects in the city region needing help to get off the ground, sadly because of the lack of capacity, Project Office has to turn away many similar projects. It is an objective to undertake further mapping exercises to determine the number of third sector organisations in Leeds who would benefit from co-design input.

Through the writers’ initial enquiry, the range of support required is diverse, implying the model would work across many university subject areas including law, business, quantity surveying, engineering, health, dietetics, marketing, music, social care, etc… This further supports the ethos of this paper; co-design exposure to working professionally in multi-disciplinary environments equips students with the necessary skillset for professional careers whilst simultaneously providing vital support for third sector organisations, which ultimately creates a more liveable urban future.
NOTES


BIBLIOGRAPHY


