

13 Case study: sustainable cities and communities (SDG11)

Making safe, sustainable and resilient cities through improved mental health

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Introduction

For all of the investment in the built environment, infrastructure and core services, ultimately cities are made by their citizens. To ensure key Sustainable Development Goals (SDGs) are met, the citizens of the city need to be engaged in inclusive decision-making. Such activities require a sense of community and belonging, often key features that are disconnected for people experiencing mental health crisis. Urbanisation is one of the most pressing challenges of the 21st century. Although city living promises economic gain, it often comes at a wider and profound social cost. Studies highlight that the increased crime, pollution, social isolation and other environmental stressors of urbanisation can increase the risk of developing mental health issues (Adli, 2011). In its most serious form, the consequences can be critical; global suicide rates have risen by 60% over the last four decades (World Health Organization, 2014), and within the UK suicide is the leading cause of death amongst 20–34-year-olds (Mental Health Foundation, 2016).

This chapter addresses the ambitions of SDG11 (“Make cities and human settlements inclusive, safe, resilient and sustainable”) through the case study of design research that was undertaken in Derry/Londonderry, Northern Ireland.

The project Our Future Foyle focused on the issue of increasing wellbeing in the city through design interventions around the river Foyle, the city’s natural landmark. The focus of this investigation was in direct response to a spiralling mental health crisis in this area of the UK and an increased rise in suicide attempts taking place around the river environment.

Led by multidisciplinary researchers based at the Royal College of Art Helen Hamlyn Centre for Design and in partnership with creative studio Urban Scale Interventions and the Public Health Agency, Northern Ireland, Our Future Foyle extended inclusive design methods, usually focused on singular or small group participants, to the community level. A specific method of interactive events and focused engagement was incorporated to capture citizens’ experiences, thoughts and ideas for the research team to explore.

Incorporating three distinct interventions, the project has gained considerable support from both local and central government, key strategic and community

stakeholders including the strategic growth partnership, government departments and key agencies. The project is now moving from design and feasibility to planning and delivery with an estimated GBP 25 million cross-departmental regeneration fund.

This chapter highlights how the inclusive engagement undertaken in the Our Future Foyle research is linked to the key challenges of SDG11, and how consideration of citizens' wellbeing is key to meeting the urgent challenges currently faced by many cities in meeting sustainable development. The project specifically aims to tackle the following targets of SDG11:

- 11.3: By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
- 11.3.2: Proportion of cities with a direct participation structure of civil society in urban planning and management that operate regularly and democratically.
- 11.4: Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
- 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.
- 11.A: Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning.

Whilst the project specifically relates to SDG11, it also crosses a number of other goals and targets, notably SDG3 ("Good health and wellbeing"):

- 3.4: By 2030, reduce by one-third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and wellbeing.

Project aims and objectives

An initial review of the banks and bridges of the river Foyle in 2010 by the Public Health Agency (PHA) in Northern Ireland recommended that considerable challenges needed to be addressed to respond to growing safety fears around mental health and wellbeing along the river. PHA looked at traditional approaches to addressing suicide prevention in respect of rivers and bridges but found possible resolutions are often ineffective or fail to address the core reasons why people choose to die by suicide. PHA also acknowledge that the Foyle is a very unique situation. It is not about one bridge, but three. It is not about one point of access, but many. And it is not about the river itself, but why people are attracted to it as a means of ending their lives. As a result, PHA commissioned a design research approach to look at creative co-designed responses to develop

a safe, resilient and inclusive city space that responds to this mental health challenge. Key objectives include:

- An inclusive and sustainable approach that involves local stakeholders, citizens and community groups in the design and build of interventions.
- Changing the mindset and mentality of public spaces in the city, from those of negativity to those of positivity and celebration.
- A holistic approach that includes physical, social and cultural interventions.

The context

Derry/Londonderry is a border city of approximately 85,000 inhabitants in the north-west of Northern Ireland. It is a historic city that dates back to the sixth century and is one of the last walled cities in Europe. It is a small city with a vibrant feel, bustling artists and a burgeoning live music scene. The river Foyle, the fastest-flowing river in Europe for its size, flows through the heart of the city and divides the Cityside from the Waterside areas.

Derry/Londonderry was named the UK's city of culture in 2013; however, it has overcome a troubled past. For 30 years from the late 1960s, Derry/Londonderry was a central city in the 'Troubles' in Northern Ireland – a sectarian and political conflict (the largest and longest-running civil conflict in Europe) that claimed the lives of more than 3,500 people.

Despite being Northern Ireland's second-largest city, its economy lags significantly behind. In 2017, accountancy firm PwC published its *Good Growth for Cities Report* that ranked Derry/Londonderry at the bottom of the UK's 57 cities for economic health (PwC, 2017). The unemployment rate in the city is more than twice the Northern Irish average (7.9% vs 3.8%), making it one of the 10 lowest-ranked cities in the UK, especially among young people (Rutherford, 2017). Other indicators are also worrying: Derry/Londonderry is well below UK averages in levels of entrepreneurial activity, graduate retention, higher education places and homeownership (Bradley, 2018).

Whilst the 'Troubles' of course hindered the economy, the reliance on manufacturing and subsequent relocation of factories to more economically viable areas of the world had a fundamental impact on the city's economy. As Bradley (2018) noted, "In 1990 Derry had 18,000 manufacturing jobs, today it has only 3000". Despite these issues, many local people lay the blame of low economic prosperity on the Belfast-centric outlook of government funding and public officials. Belfast has benefitted in recent years from a construction and tourism boom. Bradley's analysis found that "between 2011 and 2014, Invest NI gave Belfast's four constituencies £211.4m in assistance, while Foyle received twelve times less (£17.8m)". In arts funding alone, Belfast receives GBP 15 per capita, compared to GBP 9 for Derry/Londonderry (Derry Now, 2018).

Derry/Londonderry has seen further funding cuts in community-based arts initiatives such as the Millennium Forum, Verbal Arts Centre, the Playhouse and the Nerve Centre, whilst Belfast-based arts organisations such as

the Metropolitan Arts Centre and the Ulster Orchestra have been awarded substantial funding.

Making cities inclusive and safe: mental health and suicide

The World Health Organization report *Preventing Suicide: A Global Imperative* (WHO, 2014) found that suicide is a major public health concern and estimated that globally, a person will die by suicide every 40 seconds. Using data collated from the Office of National Statistics (ONS – England and Wales), the National Records of Scotland (NRS – Scotland) and the Northern Ireland Statistics and Research Agency (NISRA – Northern Ireland), the *Suicide Statistics Report* by the charity Samaritans (2016) found that 6,122 suicides were registered in the UK for 2014. The report noted that for Northern Ireland the suicide rate is “significantly higher than it was thirty years ago” (Samaritans, 2016, p. 6). Table 13.1 compares the 2014 suicide rates among Northern Ireland, Scotland, England and Wales.

Knapp et al. (2011) estimated that each instance of suicide in the UK has the equivalent financial cost of GBP 1.7 million. This calculation includes direct costs (the services used by the individual leading up to and immediately following the suicide, including medical visits, prescribed medication, counselling, funeral costs, court costs, use of emergency services, insurance claims and medical services) and indirect costs (the costs to society of each suicide including time lost from work and lost production from an exit or absence from the workforce). Knapp et al. also consider the human cost (lost years of disability-free life in addition to the pain and grief experienced by family and friends).

Addressing suicide in Derry/Londonderry

In a 2013 report by the Men’s Health Forum Ireland (MHFI), Derry/Londonderry was found to have the highest rate of suicide in Northern Ireland; MHFI described the instances of young male suicide, coined ‘the Ceasefire Babies’, to be at ‘crisis’ level. Within the locality of Derry/Londonderry, the phrase “I’m ready for the Foyle” has become embedded within the city as a saying associated directly with the river and with feelings of despair, distress or desperation.

Table 13.1 2014 suicide rates: Northern Ireland, Scotland, England and Wales

	<i>Male (per 100,000)</i>	<i>Female (per 100,000)</i>
Northern Ireland	22.9	6.5
Scotland	19.3	7.2
England	16	4.9
Wales	15.3	3.4

Source: Samaritans (2016).

The river Foyle is a natural formation within the urban area of Derry/Londonderry, Northern Ireland. The city's riverfront is a six-mile loop with three bridges connecting the areas known as City-side and Waterside. The Foyle Bridge is the longest bridge, and at 866 meters it is also the longest in Ireland. To the far south of the city, the Craigavon Bridge is one of the only double-decker road bridges in Europe. Between these two iconic structures is the Peace Bridge, a pedestrian-only walkway built as part of a wider regeneration linking a public events space known as Ebrington Square and the city centre. Its intent was to improve relations between the two divided communities by improving access. The east bank of the river has a railway line (towards/from Belfast) that runs along its edge and acts as a boundary between the water and pedestrian walkways. The banks include large areas of park and wetland with residential clusters offset towards the east. The west bank is more urban and includes a hardscape riverfront. There are some commercial and residential blocks in the city centre, whereas the south-west of the riverfront is disconnected from the city centre by a busy road, the A2. The north-west of the site emerges into a retail park and then industrial land connected along the water's edge to a nature reserve which encompasses the Foyle Bridge.

The more intangible but central impact of suicide is how it affects the mental health and wellbeing of friends, family, the community and the sense of place to other citizens. Suicide in a public place can lead to further instances, and spaces can become stigmatised. Suicides that occur in public places have far-reaching consequences for the health of others and thereby contribute to the overall burden of mental illness and psychological distress (Reisch & Michel, 2005). Pirkis and Blood (2001) note that the use of a place as a suicide hotspot, for example through the media, reinforces its stigma as a place with suicide connotations and suggest that such identification can potentially influence others to take their own lives at that location.

With area associations evolving over generations, it is recognised that it will take time to shift public and community perceptions. As with many other public health initiatives, this shift will involve a complex and broad approach that empowers people and communities to collaborate as agents of change. Active design innovation will contribute to creating the right conditions and most importantly developing collaboration with other agencies and developments in the city. Such innovation offers the focus of designing healthy, safe, resilient cities with inclusive and people-centred engagement.

Methodology

The Helen Hamlyn Centre for Design at the Royal College of Art are recognised leaders in inclusive design research. Over 20 years they have worked on a number of social impact projects for private, public and third-sector organisations to improve life for older, vulnerable and excluded groups in society. Urban Scale Interventions are a creative studio that use the tools of inclusive design to improve the places we live, work and play in.

Inclusive Design is a way of designing products, services and environments that include the needs of the widest number of people as possible without the need for specialist equipment or re-engineering.

(Spencer, 2018)

In essence, inclusive design uses the methods of co-design and participatory design to gain empathy with a range of citizens, acknowledging that people are experts in their own lived experience (McGinley & Dong, 2011). This action research approach involves people as authors of their own experience and helps to bring ownership and buy-in from key stakeholders to innovative final solutions.

The project followed the four-stage design process of the double-diamond (UK Design Council, 2005), which captures the convergent and divergent nature of design. Typical activities in each of the four phases are as follows:

- 1 Discover phase (divergent): exploration of brief and hypothesis, contextual research and definition of project participants or communities.
- 2 Define phase (convergent): designing and conducting design ethnography. People-centred design briefs defined from the research insights.
- 3 Develop phase (divergent): development of a number of ideas through co-creation and design ideation processes.
- 4 Deliver phase (convergent): selection of ideas to take forward and delivery of outputs in the form of prototypes, service ideas or guidance.

Whilst inclusive design has been used to understand and involve a number of minority groups and individuals, it has rarely been used to understand communities as a whole or cities and their citizens. However, the theory and methods make it an appropriate tool to include communities in the design of their environment and experience where peace is still relatively new and tensions still remain around access to shared resources.

A number of creative research and engagement techniques were therefore developed to “avoid separate research enquiries with each community and to also draw on the neutrality of the river as a symbol of the shared home of the city” (Richard et al., 2018).

From April 2016 to December 2019, a team of designers, researchers, anthropologists and mental health experts worked closely with key stakeholder groups to deliver the project. A key element in the early phases of the project was to establish a steering group to help shape the project. These included the Derry and Strabane City Council, the Loughs Agency, Derry Healthy Cities, the City Centre Initiative and Foyle Search and Rescue. Wider stakeholders include the Western Emotional Wellbeing and Project Life Implementation Group, who are tasked with supporting suicide prevention strategies for the river. To include the widest number of possible citizens and groups in the engagement, a number of different creative techniques were utilised, as outlined in the next section.

Workshops and creative sessions

Through community and interest groups the team conducted a number of creative sessions with 70 members of the public in focused workshops to understand peoples' perception of the river through annotating maps and plans of the river and surrounding area (see Figure 13.1). As well as positive and negative emotional mapping, they also noted down any particularly strong ideas that could be referenced at a later stage. These results were then analysed and themed to see if these areas were reflected by the community as a whole. In the negative areas, concerns were often due to low lighting, high incidences of anti-social behaviour and lower flows of people.

One-to-one interviews and vox pops

In addition to focused workshops, the team also conducted a number of one-to-one interviews to get more in-depth knowledge of the local area and people's aspirations, challenges and priorities. There wasn't a specific target for the quantity of interviews, but it was more to gain a broad knowledge of the subject area from a variety of sources. These included mental health experts such as Professor Siobhan O'Neill (professor of mental health sciences at Ulster University, whose research looks at trauma and suicidal behaviour in Northern Ireland), local civil servants (tasked with changing a range of health, social and environmental challenges through the city council's community development plan), community leaders, politicians across all local parties such as elected MP Elisha McCallion, business owners, organisations established in the city as a result of peace-building such as the Nerve Centre (a youth self-help charity



Figure 13.1 Creative public engagement sessions

supported by the Hamlyn Foundation), on-patrol interviews with the local search-and-rescue service (tasked with prevention and recovery on the river), people with lived experience through the regional health and social care trust and the public. Overall, over 200 interviews were conducted at this stage.

Public events and festivals

In addition to small groups and community members, the team also wanted to engage with the public by attending a number of events and festivals throughout the year in the city to capitalise on diverse footfall and individuals they might not normally reach. At these festivals, people were stopped for short periods of time to answer surveys or questions on the river or to complete mapping exercises. Events included the city's Halloween festival, which sees over 40,000 local, national and international visitors, and the Maritime Festival, which hosts a leg of the around-the-world clipper boat race. This was a key way of broad-ening the participant engagement with those less likely to seek out activities or workshops.

Pop-ups and public art

The team also hosted a series of citywide events, pop-ups and public art installations to include the wider community and those less likely to engage in traditional consultation and to help to bring a level of activity and 'branding' to the project as a whole. One such activity was the creation of a temporary public art installation modelled on a local historical incident that became a local legend, a whale that swam up the river in the 1970s. During a nine-day Maritime Festival, members of the public were invited to share their hopes and aspirations for the riverfront by engaging with the art installation (Bichard et al., 2018). Other public events included an outdoor film festival that premiered Alessandro Negrini's award-winning film *Tides*. The event sold out of its assigned 1,000 tickets in just five days and instigated a novel online survey during the ticket purchase through which the community gave feedback and ideas for the future of the riverfront. Further installations included pop-up playful objects on one of the bridges over a bank holiday weekend to understand how playful distractions can change behaviour in public spaces. Through these events more than 15,000 people engaged with the project, with a further reach of over 30,000 followers and interactions on various social media outlets.

These engagements with the local community and key stakeholders generated a large number of insights that not only captured the functional elements that people wanted to see around the riverfront but also, importantly, some of the emotional experiences of being along the river. Raising awareness of the issues of safety and mental health and being able to identify and support people at crisis point along the river became an obvious focus. However, reframing the riverfront as a place of positivity through activity and festivity in day-to-day life is an important community-driven response that reduces the clinical stigma. As a

result, a holistic approach to the redesign of the riverfront that includes physical, social and cultural interventions was needed for inclusive, safe spaces in the city.

Design outcomes

From the various engagement and consultation activities a number of key themes were identified, such as the mindset change, disconnection from banks and bridges, the need for destinations and things to do, poor lighting, improved tourism potential, gamification, poor navigation, the need for small enterprise and start-up training. These themes then formed the basis for the following more refined designs.

Foyle Experience

A series of creative and innovative sensory installations and events took place, which added to the residents' and visitors' experience of the city whilst improving connections and decreasing isolation around and across the river and city centre.

The Foyle Experience is a series of cultural and contextual wayfinding points around the riverfront designed to increase people's desire to use the space while promoting digital innovation through social media and event interaction.

Sensory and playful sculptures will draw people around the river, increasing footfall and improving navigation whilst reducing isolation and enhancing city connectivity. The main theme of each installation will look at the integration of digital technology and social media into the city. This will be community focused, encouraging public participation and civic interaction so the sculpture adapts and changes with the community, and an annual events programme will promote immersive content innovation.

The Craigavon Bridge will become the signature project within the 'Experience' trail linking the Cityside with the Waterside, creating a welcoming middle ground where people feel safe and connected. A listed double-decker heritage bridge looks at the application of "The Sound of the Craigavon" – a playful sound and light interactive installation that will increase footfall and promote activity in the local area but also reduce the feeling of isolation and negativity associated with the bridge.

The proposal for the bridge will look at how design can engage, challenge, educate and surprise us and ultimately change a static environment into one that encourages movement. Through the use of lighting and sounds programmed to the movement of people that cross the bridge, the exhibition comes alive.

As people walk across any of the pedestrian routes on the bridge, the cultural memories and symbolism that surround the Craigavon Bridge and its neighbouring communities will be shared through speakers and sensory lighting that extend the length of the bridge.

The soundscapes will derive from 12 annual rotating sound exhibitions that will be developed through local community groups where cultural diversity and community sense of belonging is celebrated.

Foyle Reeds – the largest proposed sculptural installation in Northern Ireland and the most innovative suicide prevention barrier

The interactive installation would be the largest public art sculpture in Northern Ireland. Through its sculptural form and dynamic illumination, it aims to promote a new perception of the bridge as a positive landmark with a sense of community ownership whilst also acting as an effective suicide prevention barrier (see Figure 13.2).

Marking the liminal space between the water of the river and its banks and linking the Atlantic Way and Causeway Coastal routes, the sculpture on the bridge will act as a gateway between Ireland and Northern Ireland. By reimagining the Foyle Bridge as a sculptural landmark, it has the potential to match and enhance the tourism profile of its sister Peace Bridge and the wider city.

It will create an iconic and dynamic tourism attraction that can change colour via the control of a smartphone application, marking occasions for celebration in the life of the city, groups, sponsors and individual citizens.

The potential for sponsorship and crowdfunding through the use of the app is a unique opportunity for substantial annual revenue towards maintenance and further digital regeneration interventions tackling mental health. A first of its kind globally, this project has the potential to lead the way in community digital interaction within Europe and worldwide.

Foyle Bubbles – riverside spaces to stimulate enterprise and job creation whilst acting as a community response to creating safer, more resilient public spaces

More than 40 portable spaces will occupy the river banks and bridges of the river. Each pod or 'bubble' will offer affordable space to existing arts and commercial organisations, business start-ups and individuals to animate the river



Figure 13.2 The Foyle Reeds: largest proposed art installation in Northern Ireland



Figure 13.3 The Foyle Bubbles: riverside spaces as a community response to better mental health and wellbeing

bank, creating an experimental workplace which can become the physical embodiment of innovation in the urban landscape (see Figure 13.3).

Each occupier, in turn for occupation and peppercorn rent, will undertake mental health training and offer educational alternatives as they interact with the community. They will act as an onsite community response to any incidents on the river, creating a network and ecosystem of support on the riverfront.

The pods will interact with passers-by through the use of assistive technology with embedded actions that can answer questions from tourists, change colour, play songs and calculate human behaviour through sensor technology from pedestrian flow to day-and-night activities in which its data will inform longer-term regeneration of the riverfront.

The pods will have the ability to communicate with one another through lighting and sound outputs to influence how people move and occupy the streets and walkways of the city. Their portability will allow them to respond to negative associated areas along the river and be moved as required to respond the 6 miles of banks and bridges. They can be facilitated within the local tranquil riverside park for an artist or pulled together for larger city wide events.

Discussion

The exponential growth of cities over the next 30 years is set to have one of the most fundamental impacts on our society. Whilst on a very practical level there needs to be considerable innovation in how we provide basic services,

infrastructure and sanitation that relieves congestion, supplies stable homes and reduces the environmental impact of our urban lives, at a more fundamental level we need to ensure our citizens can lead safe, productive and healthy lives. Going beyond this, cities should be playful places of joy, with democratic and inclusive decision-making and design interventions.

Our Future Foyle is a holistic and broad approach to citywide regeneration that focuses on delivering key targets to SDG11 as well as SDG3 around good health and wellbeing. Unlike traditional development or urban planning, the inclusive design approach has enabled civic participation in the identification of key challenges and priorities for the riverfront and innovative design solutions to overcome these. The project has shown the true power of design as a facilitator of 'bottom-up' engagement and insight generation with citizens and stakeholders in meeting top-down priorities from strategic groups such as health organisations and governmental targets. This facilitation of bottom-up engagement to meet top-down strategies and policies is an area where design methodology and designers can play a key role in addressing the world's most pressing challenges.

Further to this, the design approach has led to innovative place-based context specific solutions that citizens have helped to shape. A safety barrier along a city bridge could be a functional, traditional form of road barrier, however this does nothing to change the mindset of negativity within the space and certainly goes no way towards improving the feeling of safety in a negative city space. A co-created art installation changes the mentality of the space from one of negativity to one of celebration and enhances further economic, tourism, social and cultural benefits. This in itself can help to foster a community pride and civic ownership that brings life and festivity to our streets and acts as a natural 'safety mechanism' improving isolated, underlit and negative spaces.

Of course, challenges still remain. Despite considerable public desire and a willingness from government departments, the project still remains at concept and prototype level. A cross-departmental project board, the first of its kind in Northern Ireland to look at the delivery of a suicide prevention strategy with wider economic, tourism and regeneration benefits, has been established demonstrating significant political aspiration. However, the project moves beyond the realm of engagement, co-design and prototyping to territories of economic business cases, bureaucracy, governance and political bartering, which leads to questions over the role of design: at what point does the designers' responsibility end? Who continues to resource projects of such broad appeal? And whilst the methods and tools of design have been hugely developed over the last few decades to generate innovative co-created ideas, does design lack the relevant tools to be able to deliver on projects of such scale? For critical global projects, in the case of the SDGs and in particular SDG11 which focuses on the complex socio-physical environment of cities, design should factor not only in the needs of citizens and the physical environment but also in the systems they sit within. If a design cannot be procured, governed or sustained, it will only ever make it to concept level.

Further to this is the challenge of defining and measuring critical success factors in SDG design projects. Our Future Foyle started with the remit of "creative

responses to mental health and wellbeing concern along the river”. Whilst there are certain success factors that can be clearly measured, such as reducing completed or attempted suicide, other less clearly defined factors such as ‘improved community wellbeing’ are much harder to measure. As a result, there is the danger these factors will become less important or less valued. In reality, the project touches on a number of health, tourism, infrastructure, economy and connectivity targets, with some quantifiable and others not. Future design projects could have a particular focus around a specific goal and indicator, or be more broad in appeal but risk falling through the gaps of specific goals. UNESCO’s recent Culture 2030 Indicators (UNESCO, 2019) might go some way to understanding how cultural led development can help to inform the SDGs and help to measure outcomes of safety, inclusivity and resilience in our cities.

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