Chapter 6
Confronting the Conundrum of Shared Space Street Design:
The Design, Development, and Delivery of the University of Central Lancashire's Masterplan

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ABSTRACT

This chapter discusses the challenges and debates related to the concept of shared space street design via demonstrating the case of the ongoing Masterplan development scheme of the University of Central Lancashire (UCLan), in Preston, North West England, United Kingdom. Based on hands-on experience, being involved with the project on multiple layers, in project management, working, and living in Preston City, the authors employ observational analysis methods to explore and reflect on the challenges UCLan Masterplan has faced, how it learned from the city's most recent Shared Space development (the Fishergate Project), and they further expand on their prediction on how the project may influence the transformation of Preston's public realm. This chapter aims to start a debate on how Shared Space tactics can lead to near-to car-free urban zones and contribute to the enhanced people-focused urban experience.

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INTRODUCTION

The Institution for the Diffusion of Knowledge was founded back in 1828, and continued to contribute to the development of Preston and the North West England under this state until 1932, when it was named The Harris Art College. Then it further developed into The Harris College in 1952, followed by two more developments in 1973 and 1984, to become The Lancashire Polytechnic. In 1992, the latter was granted the full university status, to become The University of Central Lancashire (UCLan) (Pope & Philips, 1995). As a result of evolution and expansion throughout the years, UCLan ended up occupying various separate buildings scattered within the town, most of which are located to the North of Preston's town center, in what is common with many universities in United Kingdom and known as open city campus. In the past few years, UCLan has launched a new evolutionary project, which targets to transform the University campus' public realm; The project has been known as UCLan Masterplan.

This chapter examines the design, development, and delivery of the University of Central Lancashire's Masterplan Programme of Capital Projects in the City of Preston, England, and the impact that shared space streetscape concept design has had on the historical dominance of motor vehicles within a strategic city center interchange. The authors investigate the origins of the shared space design concept, the challenges posed in the context of an urban regeneration scheme, and the reactions of the communities and stakeholders to those opposing this specific type of development, in addition to the predicted urban impact of the project on the city.

This study mainly employed observation, relying on the authors' experience, both in practice and research; bridging across architecture, urban design/planning, and project management. The study introduced here can be perceived as an approach to establish a debate on the usefulness of adopting shared space design tactics within an urban hierarchy. The study also reflects on feedback received from public consultation sessions with different public stakeholders in relation to the UCLan Masterplan, as well as references to consultations with Ben Hamilton-Baillie, conducted back in 2017. The study refers to Preston recently completed street renovation scheme: The Fishergate Project, and explains its relation to the Masterplan. The Authors are aware that there are various similar and/or comparable cases exist in the UK and beyond, but for the scope of this study demonstration, comparisons were not being adopted as a method in this chapter.

The chapter provides a background on Preston, Fishergate Project, and it demonstrates the challenges of employing Shared Space tactics in urban development, with a focus on the Fishergate Project, for implementation in UCLan Masterplan. The chapter concludes by emphasizing how updated, and detailed formal legislative guidance in the United Kingdom (UK) and a better appreciation of cultural context

from the perspective of traditional pedestrian and vehicular behaviors is paramount to the successful implementation of shared space projects in the future. It also stresses the importance of planning the shared space strategically as a part of the wider urban/city development scheme towards a 'near' car-free implementation.

BACKGROUND

The University of Central Lancashire (UCLan) Masterplan is not the first application of shared space streetscape design in Preston. The most recent and controversial highway redevelopment schemes Preston City Centre has witnessed was the first phase of the Fishergate project; located along the City's main shopping street, which was opened in October 2014. The redevelopment included the widening of existing pavements and footways to increase pedestrian footfall, removed traffic signal-controlled crossings, and significantly lowered standard kerb heights that traditionally separate and provide a level of protection between vehicular users and pedestrians. The substantial reduction of road width, from a double-lane to a narrow single-lane carriageway, made pedestrian movement from one side of the high-street to the other less challenging for the majority of users, but continues to pose difficulties for some users who have conventionally relied on, and continue to rely on traffic controlled crossings. The completed 2014 scheme removed and replaced traffic-controlled crossings with a series of regular 'courtesy crossings', an informal feature reliant on the reciprocated courtesy of both pedestrian and driver. With the single-lane carriageway still open to public transportation and taxis (not to mention the private car drivers who are either confused of the change of traffic routes, or could not adapt to the new street format) within a major section of the Fishergate street, many locals felt uncomfortable, and sometimes even unsafe, with the new streetscape; particularly pedestrians with special needs and vulnerable groups, who are not trained to share public spaces with vehicles. The achievements and frustrations of the Fishergate scheme have had a significant influence on prejudicial resistance to the UCLan Masterplan Highways design.

There is no official classification as to what constitutes a courtesy crossing, and by their very nature, a precise definition is awkward; given there is no public agreements on the shared format, where an individual can and will choose to cross the highway at any juncture that suits their needs, regardless of the provision of formal crossings, and principally based on a conscious, or subconscious, desire to traverse the shortest conceivable route. Combined with the timeliness of opportunity via visual observation of surrounding vehicular movements, crossing the carriageway at any given point in time to avoid preventable interaction with vehicular and bicycle users, in theory, should provide pedestrians with superior connectivity and accessibility

to a greater array of pedestrian-friendly footway areas, relying on drivers to allow pedestrians to cross the road safely, 'out of courtesy' (Jones & Di Guardo, 2019). Kaparias et al. (2015) noted that the shared space concept was received by mixed reactions, and they classified users into opponents, (particularly some elderly and disabled road users) who perceive the space as 'less safe', and proponents, who considered the introduced ambiguity as contributing to the improvement of road safety, as both drivers and pedestrians become more watchful.

Whilst the adoption of courtesy crossings and other shared space concepts along Fishergate made sense from both an aesthetic a socio-economic regeneration perspective, it was obvious to any observer how collective awareness of street users who have been programmed for years to streetscapes that separate between pedestrians and vehicles, made it difficult for some to appreciate how the introduction of informal courtesy crossings along an 800metre stretch of perpendicular highway with no significant urban obstacles or friction could foster an environment conducive to the safe crossing of pedestrians.

Every street represents a balance between movement (the capacity to accommodate through traffic) and a sense of place (the quality which makes a street somewhere to visit and spend time in, rather than to pass through). Shared space is a way of enhancing a street's sense of place while maintaining its ability to accommodate vehicular movement (DfT, 2011)

By observation, the accessibility of the Fishergate scheme appears to work best at peak commuter and shopping times when the carriageway is most congested, with vehicle speeds decreasing to 5mph and under. This level of congestion offers multiple opportunities to cross the carriageway at various marked and unmarked junctures based on natural individual desire lines and 'safe' opportunity. On the other hand, the street occasionally witnesses vehicles travelling in excess of 40-50mph during evenings, which stresses the importance of public awareness and individual responsibility as key elements to support adopting the concept of public shared spaces. There remains contrasting arguments and evidence as to the comparative safety of this stretch of highway as per its current and historical design.

In advance of divulging Masterplan proposals and adopting the same shared space concept design across the Adelphi Quarter, UCLan sought to work in conjunction with the Design Team responsible for the Fishergate Project, including the Local Highway Authority (Lancashire County Council) and their incumbent design consultants, (Planit IE). The theoretical proposals for the surrounding Masterplan highways scheme were already in place and were primarily developed as means of framing a new large, relatively flat, and unencumbered public realm events space to be delivered as part of UCLan's £57m Student Centre & University Squares

(SCUS) Project. The SCUS Project forms an integral component of the University's Masterplan to deliver a one-stop-shop for all frontline student and visitor inquiries and to provide civic outdoor space for the community to enjoy a variety of events of differing scale throughout the year.

With a university city-campus, UCLan aimed, through the new Masterplan, to reduce traffic density crossing through the central city campus area, while enhancing the experiences of both pedestrians and cyclists. The Masterplan Highways proposals adopted similar design strategies of those conducted at the Fishergate scheme, yet accommodating two-way traffic carriageway, rather than one-way; yet, significantly narrowed road, with ultra-low kerbs, tactile paving and a large number of informal 'courtesy crossings' to be identified only by a change in material colour and layout/pattern. Detailed design proposals had not been fully developed and were subject to public consultation, however the scheme had already attracted the attention of national campaign groups whose primary concern was based around the difficulty and inability of blind and visually impaired users to cross the road at any point other than via a traffic signal controlled crossing, a congenital provision across the UK that does not predominantly assist in diminishing traffic congestion within busy city center locations. Despite being a radically different scheme to Fishergate in terms of contextual setting, it was expected that the project to be challenged by the public perception resulted from the community experience of the latter scheme, which has caused public/political controversy.

The introduction of shared space in the Adelphi Quarter aimed to facilitate the retention of key vehicular movements whilst encouraging the greater prominence of non-vehicle use across the central campus area. The assumption being this would reduce vehicular dominance on key streets surrounding campus by introducing extended pedestrian and cycle links, generating a greater sense of place within the areas within and in-between the University campus. To facilitate access between the SCUS scheme and the integrated Highways scheme, this was primarily to be achieved through the introduction of new informal courtesy crossings, supplemented by other design elements aimed at introducing vehicular friction such as roundels, and pedestrian/cyclist pause points e.g. median strips.

Understanding the Challenges of Shared Space Design

Courtesy crossings must take into account the comfort and safety of all road users but especially pedestrians, given that the car driver is under no obligation to stop and give priority to the pedestrian (Jones & Di Guardo, 2019)

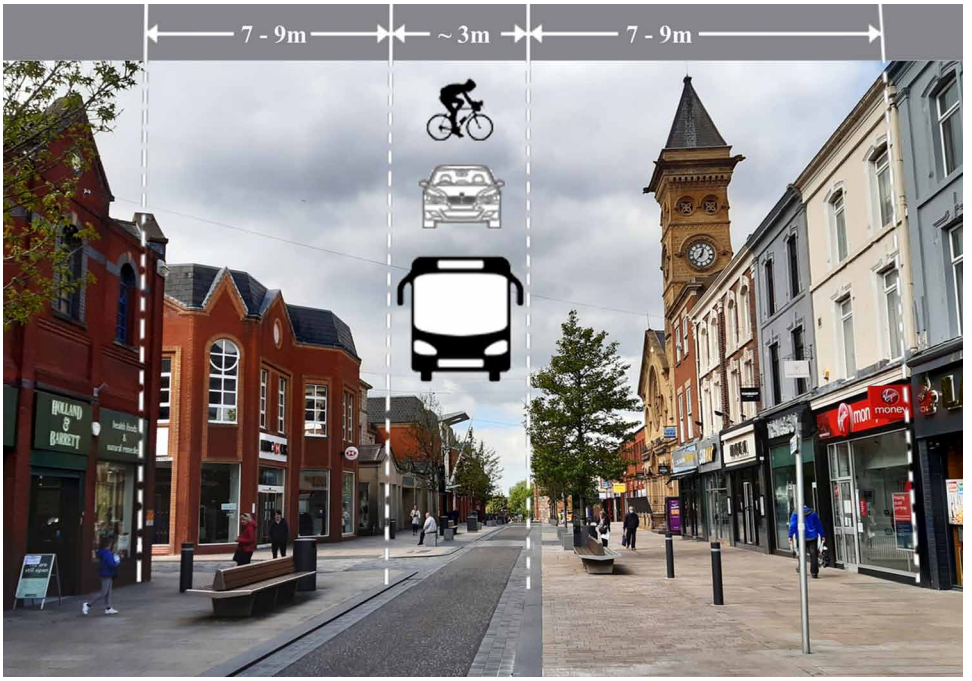
Shared spaces are town streets where kerbs, crossings and safe walking routes have been partially or completely removed, requiring pedestrians to share the roadway

Figure 1. Transformation of the streetscape of Fishergate Street in connection to Corporation Street- between 2009 and 2015 (Source: Google Earth Pro)

with moving vehicles, and to negotiate their right-of-way with drivers by sight. Blind and certain other vulnerable people cannot do this and are therefore effectively excluded from these streets, which they may have safely walked for many years. (The National Federation of The Blind (UK), n.d.)

At the turn of the century, Ben Hamilton-Baillie, one of Europe's most prominent and influential advocate of shared space design, travelled across a number of European countries to investigate the impact of urban designed Home Zones where the highway becomes an equally shared asset with improved emphasis on the sense of place and people compared to vehicular movement, concluding that "removing certainty, consistency and clarity for traffic appeared to offer significant benefits" (Hamiltion-Baillie, 2001), which helps improving safety through ambiguity (Hamilton-Baillie, 2004). He observed that the introduction of different materials and patterns across

Figure 2. The completed Fishergate Central Gateway Project, including 'courtesy crossings' (©E. Kamel)



the streetscape had dispelled the notion of the carriageway as a vehicle-only space, creating an enhanced sense of place to an extent where children were comfortable playing in-between moving vehicles. Hamilton-Baillie also highlighted that reducing traffic speeds remains the most critical factor for a successful shared space. Improvements in safety, more efficient use of space, improved traffic flows and huge improvements in the environmental quality of towns and villages were evident from the progress made in the countries concerned, yet, he emphasizes that creativity and development are needed to achieve a perception of safety for visually impaired user groups (Hamilton-Baillie, 2008).

Inclusion

The shared space concepts Hamilton-Baillie observed in Europe slowly gathered momentum within the UK, becoming significantly more recognized, established, and popular amongst the Urban Design community from 2010 onwards. Yet, there is increasing momentum and objection nationally to shared space design, specifically by blind and visually impaired (VI) user groups and supporters. *The National Federation*

of the Blind UK (NFBUK) actively campaigns for the retention of traffic-controlled crossings and traditional kerb heights to be available across all towns and cities. It opposes the introduction of shared space design that seeks to erode traditional measures to segregate traffic and pedestrian interactions (NFBUK, n.d.).

The UK Department for Transport (DfT) first formally acknowledged shared space design in their 2007 Manual for Streets (DfT, 2007) noting the key aims as to:

- Encourage low vehicle speeds;
- Create an environment in which pedestrians can walk, or stop and chat, without feeling intimidated by motor traffic;
- Make it easier for people to move around; and
- Promote social interaction.

The manual acknowledged that the absence of a conventional kerb poses problems for blind and partially-sighted pedestrians; hence, it emphasized the importance of providing alternative means for visually-impaired people to navigate by at shared surface schemes (DfT, 2007). Yet, although the problem had been acknowledged, there were no evidence-based design guidelines on such new alternative design elements, were the document concluded by encouraging further research to be carried out by the *Guide Dogs* for the *Blind Association* to consider how the requirements of disabled people can be met. The need for inclusive street layout designs was supported by various bodies, including the House of Commons' Women and Equalities Committee (2017). It is worth mentioning that the UK Highway Code, which at the time of writing was last updated in August 2019, (along with all earlier versions) covers how to cross zebra, pelican, puffin, toucan, equestrian, staggered and human-controlled crossing points, but still does not address newly designed and verbally designated courtesy crossings, many of which have become commonplace through UK towns and cities over the past ten years.

UCLan Masterplan's public consultation process clearly noted opposition from national campaign groups through verbal feedback; the groups consistently complained that every transactional process between vehicle and pedestrian relied on visual eye contact between the driver and the person crossing the road. This point of view was backed up with anecdotal stories of the new Fishergate shared space scheme being a 'no go' area for many, although the Local Highway Authority carried out a visual study within the central shared space area that observed a significant number of the white cane and guide dog users safely utilizing the shared space.

The UK's *Guide Dogs for The Blind Association* have consistently stated that visual contact with drivers is an absolute necessity when crossing the highways, stating: *Pedestrians, motorists, and cyclists have to make eye contact to decide who moves first. This obviously compromises the safety, independence and confidence*

of people living with a vision impairment (Guide-Dogs, 2020). Confusion and contradiction still surround this issue with the Department for Transport (DfT, 2011), acknowledging that whilst some drivers and pedestrians may infer things about the intentions of each other. Yet, there is no reliable data that eye contact is used predominantly as a means of communication between drivers and pedestrians.

In general, the achievement of most of these recommendations are perfectly valid and makes sense. Yet, there is a counter-argument, particularly raised by city authorities, that it can be incredibly difficult to fully achieve complete satisfaction, particularly when specific user groups have contrasting and contradictory requirements, and when some have legally recognized and protected characteristics compared to others whose specific and often individual requirements are not yet fully understood or recognized nationally at a constitutional level. In addition, the recommendation that controlled crossings and kerbs are non-optional is somewhat understandably delivered with dictatorial defiance and offers no attempt to open a dialogue with urban designers in trying to understand the wider aims, objectives, and potentially increasingly accessible outcomes of shared space design.

Speed Limit Signage

There is a debate regarding the purposeful removal of vehicular speed limit signage within shared spaces. Those in support of signage removal argue that the confusion and lack of confirmation of the upper-speed limit lead vehicular drivers to air on the side of caution and slow down. On the other hand, the counterargument raises concerns that this encourages drivers to behave irrationally and to drive at greater speed, given there is no visible evidence of an upper-speed limit in operation. If this argument contributes anything to urban planning practice, it mainly highlights the reliability of public space engagement on common trust. Conventionally, the trust evolves as a result of clear regulations and firm monitoring of application, including penalties for traffic violations; while the case of shared spaces, which break down the conventional publicly agreed street settings, this may require a transitional period for comprehensive public training and raising awareness.

It is also important to stress that speed limits can be controlled by several design elements other than signage; for example, the use of narrow roads, varying materials, and colors (e.g., cobblestone), or reducing the straight stretches of the roads where vehicles can build up speed.

Middle-Ground Solution

The concept of 'shared spaces' can be perceived as a middle-ground solution; meaning that it neither improves the roads for vehicle use (therefor drivers are not pleased),

not it fully prioritizes pedestrians to provide a safe car-free people-focused public space (therefor pedestrians are not pleased). Although there is no doubt that projects adopted a shift towards shared space designs aimed for enhancing the public realm (and surely it did in the case of Preston), none of the street users' groups feel they have been looked after. This could easily be observed following up comments of local groups on social media; e.g., Blog Preston, where all parties were communicating their anxiety and fear of change, particularly during construction and the first few months following the project opening.

In this chapter, the authors argue that Shared spaces can do the best work within a hierarchical order of urban spaces, where shared space provide a transition between conventional road systems that support vehicles and pedestrianized public/civic urban spaces and paths. This has been confirmed by Kaparias et al. (2013), who observed a decrease in a conflict between pedestrians and cars in shared spaces, due to the decreased number of vehicles over time. Alternatively, authors here also argue that shared spaces, on the long term and if well planned, can perform a soft pressure towards car-free urban zones; for example, slowing down car traffic at shared spaces may, by time, be less appealing for drivers, who may accordingly avoid such spaces unless necessary. When locations of such zones are strategically planned, shared spaces can create poles of attractions for pedestrians, which can develop new pedestrian routes in between to connect. This will be explained further in the following section in the case of UCLan's Masterplan and its relation to Preston's Flag Market square.

UCLan Masterplan Development

Coinciding with several development schemes taking place in Preston City and enthusiasm for improving the public realm and infrastructure of the University of Central Lancashire back in 2015, UCLan launched a £200m project to develop a new masterplan that intends not just to transform its Preston campus, but that will change the urban settings of the City Centre.

It is noteworthy that Preston has always been a city keen to pioneer change and discussions remain ongoing with City partners to partially pedestrianize further areas and key arterial routes through city with a re-focus on public transport, pedestrian and cycle accessibility. The UCLan Masterplan was based on a design philosophy that the public realm had equal importance to the new buildings being constructed between the connecting spaces. The Masterplan has been subject to a Section 247 (Stopping Up) Orders to prohibit vehicular movements along St Peters Street (to become a contemplative garden), Rodney Street (enhanced surface treatment/ landscaping) and part Fylde Street (previously carriageway, now forming part of a significant civic plaza space). The noteworthy drawback in this process is the

excessive costs involved in the physical disconnection, removal, and diversion of the Statutory Body apparatus, which has already cost in excess of £3million, and this remains for the known utilities identified in advance of physical excavation. There remain underground services that have not been identified on statutory records and are inconclusive as part of Ground Penetrating Radar (GPR) surveys. In conclusion, creating a new public realm in city center locations can be an expensive business.

The Masterplan is not limited to developing the streetscape, but rather includes the construction of new buildings, green spaces, class-leading technologies, and infrastructure; to showcase UCLan's key principles of openness, transparency, and accessibility, whilst developing a skilled workforce which meets local, national and international needs. This encompassed constructing the University's Engineering and Innovation Centre (EIC), a Student Centre (to perform as the campus' main gateway), students' social spaces, and the transformation and development of the Adelphi Quarter, which consequently requires major reconfiguration to the surrounding highways (Masterplan, 2017).

Figure 3. Image of the completed UCLan Masterplan Central Projects – Engineering Innovation Centre, Student Centre, Adelphi Square, & Highways Project

The Process of Making

On an informal consultation back in 2017, between Ben Hamilton-Baillie and Robert (Bob) Turner, a project manager for UCLan Masterplan and co-author of

this chapter, the first stressed that one issue that might be given more emphasis in the Equality Analysis is an audit of the very poor state of the existing public realm of Preston, and its implication for people with disabilities. Although the collection of crossings and facilities allow, in theory, controlled access to/from the university's open campus, the overall effect of the highway measures creates an extremely uncomfortable and discouraging environment. Crossing busy roads will always present concerns and discomfort for pedestrians, especially those with physical or visual disabilities. However, Hamilton-Baillie advised that imposed reductions in car speed, and changes in drivers' expectations, will contribute to a significantly more forgiving and safer environment, and is likely to be a substantial improvement on the inclusiveness and accessibility of this area of Preston.

Given the levels of local criticism received from the Fishergate scheme, it was important the Masterplan Highways design team to review lessons learned from the project; hence The Masterplan Team requested this from Lancashire County Council, who consequently prepared a whitepaper covering three key learnings: Consultation, Design, & Communication, which are explained below.

Consultation

The first and most important lesson highlighted by the Lancashire County Council (LCC)'s whitepaper on the Fishergate project emphasized the importance of public engagement through public consultation sessions with stakeholders. The paper stressed the need for consultations to include as wide a coverage of community groups as possible, especially disability groups. As a result, UCLan arranged a series of consultations, which were extensive and included multiple off-campus sessions held at various locations and times to suit different public stakeholders.

Design

The whitepaper stressed the importance of adopting the New Roads and Street Works Act procedures, including the use of Section 58 and Section 85 notices to predict and co-ordinate planned utility work. The paper stressed that design should intend to minimize disturbance to the newly finished scheme(s). Consequently, UCLan's strategy adopted to address and either to remove or to re-route many statutory utilities and services in advance of the commencement of the main highways' construction contract. The design had to provide a future-proofing consideration for partners' medium and long-term plans; for example, to providing proper infrastructure suitable for future networks and energy expansions, in order to minimize disturbance of finished scheme. UCLan adapted to provide a wide network of Joint Utility Trenching

and ducting at the same time as excavation works across the various highways' construction phases.

The County Council's study on Fishergate scheme also recommended attention to be particularly paid to improve the design to better suit visually impaired users; particularly to increase the color contrast between kerb and channel in the Masterplan scheme, especially to avoid ambiguity between surfaces when wet (which is the normal of Preston). LCC ensured increased and acceptable color contrast in final design proposals, but more significantly an increase in kerb height from 30mm (in Fishergate's case) to 60mm – which is criticized by the design team as a move away from the traditional shared space concept.

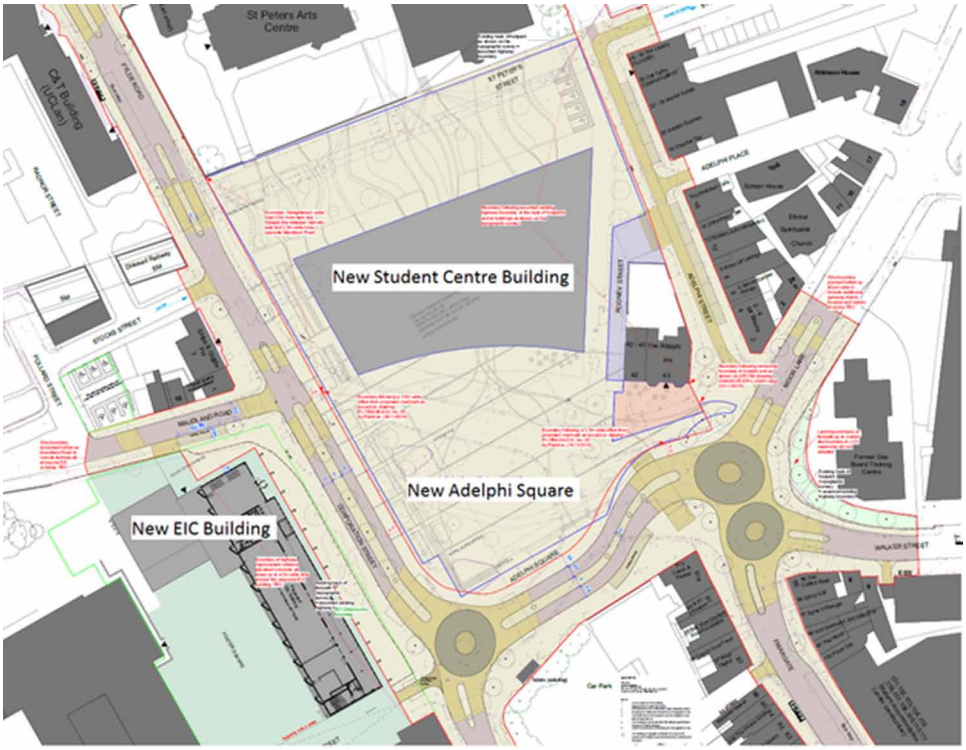
The specific design responses addressing the lack of connectivity include the introduction of further 3-meter-wide median strips as a resting point for both pedestrians and cyclists, along with the introduction of trees and curves to the highway to provide some visual friction for vehicular users in an attempt to reduce the speed of cars passing through the area regardless of familiarity. Kerb height was originally in line with the Fishergate scheme at 30mm. However, detractors wanted standard kerb in excess of 100mm. In addition, those opposing the scheme wanted every single courtesy crossing eradicated and replaced with a sensible number of signal-controlled crossings. Following an elongated, controversial and confusing planning committee, it was loosely agreed the issues raised should be reflected within planning conditions imposed on the development, the exact wording of which could not be agreed at planning committee and was retrospectively inserted without identifying the exact locations any new controlled crossing points – an underwhelming emotional/political response from all perspectives to a misinterpreted difficulty.

Communication

Communication was the last key highlight of LCC's whitepaper on lessons learned from Preston's Fishergate development project. The paper stressed the importance of podcasting regular updates, especially in areas experiencing disruption from active works. Accordingly, UCLan employed a dedicated Masterplan Communication Officer, who worked with an external PR company to provide written and visual updates on final scheme designs, phasing, disruption, and alternative access routes for pedestrians and vehicle users. In addition, the project team was keen to keep key stakeholders engaged throughout the different project phases; hence, UCLan held multiple face-to-face meetings with wider public stakeholders and local businesses and continues to do so as the Masterplan draws to a conclusion.

For maintaining efficient communication, CGI/3D visuals of designs were extremely useful for engaging and getting press coverage. UCLan commissioned CGI final scheme images and released it to the press in October 2019 to provide

Figure 4. UCLan Masterplan Adelphi Quarter Buildings, Public Realm, and Highways overlapped against original roads layout



a better visual understanding of the completed scheme. UCLan was also asked to commission and subsequently provide a tactile model of the proposed highways scheme highlighting all newly proposed courtesy crossings within the scheme and all retained controlled pedestrian crossings in the immediate vicinity so blind and visually impaired consultees could kinaesthetically navigate the proposed layout.

It is important to highlight that, in terms of communication and at its most controversial peak, those involved in the scheme have decided to move away from referring to it as 'Shared Space' and instead re-branded the updated design as 'Informal Street Scene', in an attempt to reduce ongoing controversy.

Wider Urban Considerations

Towards a near Car-Free Zone

As a University, UCLan aims to improve the general settings for its city campus, so students feel safer and to develop a memorable experience throughout their study years. On the other hand, the University also has a responsibility towards Preston, being the largest employer, and occupying a large zone in the City. Accordingly, the Masterplan scheme had to engage with the wider local community to improve the City's public realm.

One of the main challenges for those working on The Masterplan has been attaining the early buy-in to the shared space concept at the highest level within the institution on the understanding the narrowing of carriageways and expanded pedestrianized public realm and footways will discourage the use of cars in this part of the city, without any real empowerment or ability to address specific design and end-user concerns. The institution has not led on any decision surrounding potential amendments to the existing highway design to accommodate specific user groups. The issue has largely been one for the Local Highway Authority (LHA) to deliberate and to make ultimate decisions on. The LHA's Equality Impact Assessment for Highways was included as part of the planning application, and it is the LHA who owns, maintains, and takes full responsibility for the adopted highway upon handover of the works.

Reflecting on the DfT (2011) Local Transport Note on Shared Space, the case for Masterplan Shared Space in the context of creating an approximate additional 7,000sqm of public realm space remains relevant and evident: *Shared space is often applicable where the buildings fronting the street have a strong heritage or cultural significance. It is particularly suitable where the quantity and type of surrounding land-use generates a high level of pedestrian demand for uses other than simply movement through the space. Shared space can also be appropriate at junctions or squares, where pedestrian desire lines are more diverse. Such settings, where streets come together, can provide good opportunities for creating distinct focal points (Ibid).*

This chapter argues that there is a need for a broader debate about the discriminatory effects of conventional road and street design, and especially the limitations placed on vulnerable pedestrians by having to defer to the primacy of traffic flow. The fundamental problem with controlled pedestrian crossings (as with other measures such as guardrails) is that it reinforces such deference. Drivers assume a right-of-way, and each controlled crossing makes the broader street context less forgiving. The green light shown to drivers is particularly damaging in this respect. Any error by either driver or pedestrian can lead to more severe incidents. It is noteworthy that, for the last five years of records, over 80% of pedestrian fatalities and severe injuries

Figure 5. Adelphi Quarter under construction- a sketch of new carriageway layout (©E. Kamel)

were located at controlled crossing points. Lights do not make crossings safer; they create the illusion of safety. This is particularly important in contexts such as the University campus, where multiple crossings will occur and be necessary. It will never be a realistic prospect to install signals at every side road, or every crossing point. There is, therefore, a difficult and important balance to be struck between the installation of crossings and the need to change driver expectations over the broad area, to reduce speeds, and to create a more forgiving and less discriminatory streetscape.

Until the Masterplan Highways scheme is fully complete and in active use (due August 2021 at the time of writing), it is difficult to predict whether or not design compromises offer a better overall solution in comparison to the original scheme with 100% courtesy crossings, or indeed the ideal scenario for blind and VI users with 100% traffic signal-controlled crossings. But Since the construction of the project has started, and for several months (up to the time of writing this chapter), the university campus area of the city has already been witnessing road closure and traffic diversion. The area suffered traffic jams for the first few weeks until drivers started 'avoiding' the route crossing the construction site, and obviously finding alternative routes. Even for university staff and students who regularly drive in, UCLan provided new large parking zones on the campus' boundaries, which helped to reduce their need to drive through. On the other hand, the University has been encouraging green commuting alternatives, such as cycling, public transportation, and shared car parking, through various supporting schemes. This all support the prediction of reduced traffic density when the project is completed.

Power to Reform Street Typology

Preston is a well-known ancient market town in North West England, where its roots can even be traced back to the Romans but were more known for housing a guild merchant, the right that has been granted by King Henry II. The Town was granted city status as part of the Queen's jubilee celebrations in 2002, yet the relatively new city is characterized by keeping its town scale was.

Although Preston is known for being the house of seven historic parks, three of which are Grade II listed, this is in addition to Winckley Square (a central pocket garden), and Preston Docks, which all provide breath for the local community, yet the City has only one civic center; the Flag Market Square, overlooked by Lancashire's most famous building, The Harris (Museum, Library, and Art Gallery), in addition to the City Council building and the Old Post Office (currently being renovated into a hotel). The Flag Market Square, tangent to Fishergate road, the main (and only) Highstreet in Preston, was connected down to the City's train station through the recent Fishergate scheme discussed in this chapter. Historically, the square was

connected to the rest of Preston 'Town' via a tramline passing through Friargate road (one of the few remaining roads of the old town's urban grain) (See Figure 6).

Figure 6. Historical map of 1824 Preston, prior the construction of The Harris Museum; showing Fishergate and Friargate connecting at the Market Place (now, Flag Market Square) _ [Source: Preston Digital Archive]

At present, all civic activities and public celebrations in Preston (e.g., Christmas lights, Christmas Market, New Year, Preston Guild, Preston Caribbean festival, etc.) take place at the Market place. On the other hand, a Ringway currently cuts through the Friargate, which has been interrupting the historical connection for several years now.

The significantly wider footway in front of the adjacent Masterplan EIC building combined with the new Adelphi Square opposite two narrow single-lane carriageways with a 3metre wide median strip should improve the current level of pedestrian comfort and allow for ease of movement. Fundamentally, the Masterplan Highways Project, in one sense, is simply an enabling development to facilitate the delivery of one of the UK's biggest new public spaces in the past ten years. The legacy of UCLan's investment in the public realm and adopted highway surrounding the central campus

will create a new type of public realm space within a highway-dominated urban setting. The reconfiguration of the road structure will help rebalance the street scene in Preston and will improve accessibility for the vast majority of pedestrian users as well as provide the City and the local community with new multi-purpose events spaces with attractive landscaped areas in which to dwell, interact and enjoy. This fact should not be undervalued, and the newly created opportunity for community, cultural, and artistic interactions and interventions should be celebrated.

This chapter raises the question of whether shared space schemes, when well planned, have the power to reform street typology softly? The UCLan Masterplan development is predicted to reduce the vehicular traffic flow at the new Adelphi Square, while turning it into a civic center. If successful, the two civic centers of the city: The Market Place, connected to The Harris Museum (cultural center), and the Adelphi Square, connected to UClan (knowledge center), would likely attract more pedestrian flow in-between. Currently, while the project is still under construction, the deteriorated Friargate has been witnessing new restaurants and cafes, in addition to students' halls projects, in preparation to receive the new civic center.

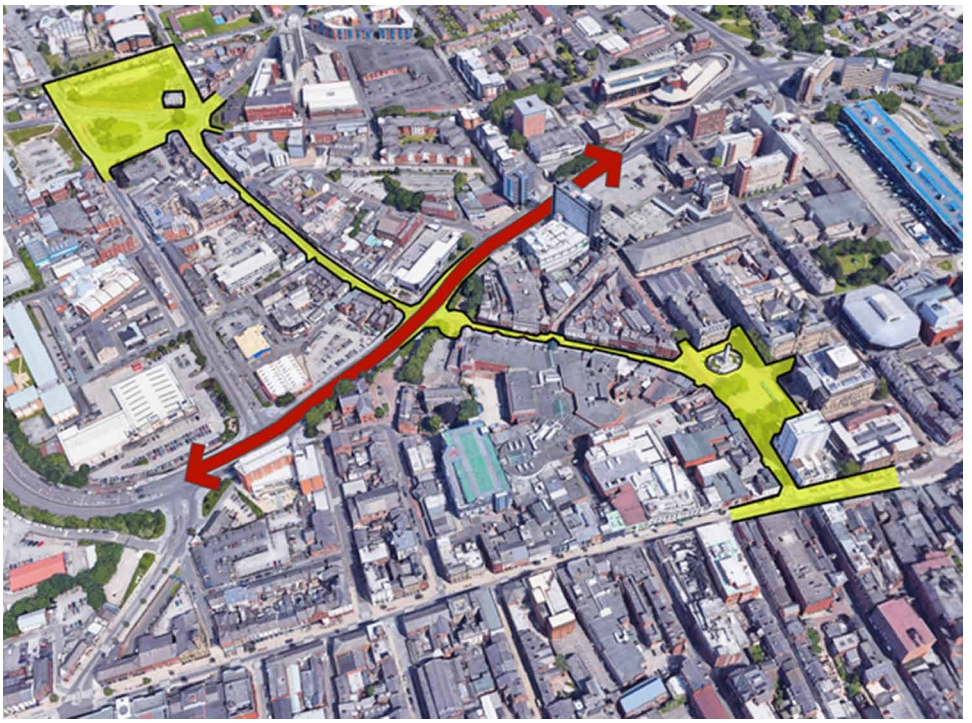
It is worth highlighting that Friargate was known for its restaurants and fast food places, yet, some of them were very unstable; simply because of the competition with similar businesses at the near-by city center. In addition, the street itself did not experience high car traffic in the near past. Yet, since the start of the Masterplan project, the road has been temporarily closed down where it connects to the Adelphi Square. This has significantly limited the street use for driving through, where currently (while writing this chapter), no cars other than residents' and shops' users utilize the street.

For the reasons explained above, it can be suggested that Friargate can easily be transformed into a pedestrian route to connect the two civic centers, while the only obstacle remains for planners to solve is where Friargate intersects with the Ringway. It is important to note here that the section of Friargate, extending from Market Place to meet the Ringway, has been used as a shared space for a few years now, where cars are only allowed to access within controlled time intervals during the day (See Figure 7). This has massively affected the traffic density within this section of the road throughout the years.

DISCUSSION

There are multifaceted challenges relating to shared space design within the UCLan Masterplan setting. The project's team must reflect on how the final Highways Project design proposals attempt to address stakeholder attitudes towards various pedestrian crossing types in an attempt to provide equilibrium in the quest for truly accessible

Figure 7. Sketch showing Friargate connecting between the Flag Market Square and Fishergate (right) and the New Adelphi Square (left), with the Ringway cutting through (©E. Kamel)



environments in which everyone feels confident and comfortable to navigate and inhabit. Cultural climates can impact on the pressure for comprehensive design solutions unintentionally affecting access; for example, the UK is seeing an increase in significant hostile vehicle mitigation measures now being formed between the boundary of carriageway and footway in urban city centers following the numerous terrorist attacks utilizing vehicles in Europe during 2016 and 2017. On Fishergate, the LHA has retrospectively installed large, unattractive concrete blocks in a post-project completion response to this threat. It is a shame such reactionary measures are required, particularly when the physical response could have been incorporated into street furniture and/or public art. Indeed, the history and culture of the place itself and the learned behaviors of inhabitants engaging the highway largely dictates the success of introducing changing public realm infrastructure and configuration, which is perhaps one reason why shared space concepts are deemed more successful in Europe than they are in the UK.

It is impossible to ignore the direct impact that Shared Space design and Informal Streetscene concepts have on the accessibility and safety of blind and visually impaired users. Evidence suggests that shared space was introduced in Preston approximately 200 years ago. Winckley Street is located directly off Fishergate, and even today, numerous shoppers and solicitors remain content traversing the cobbled street. Yet, no one appears to have seriously complained about the poor accessibility for wheelchair users nor the fact there exists no formal pavement separating pedestrians from vehicles. Maybe there is a habitual Lancastrian cultural aching for cobbled streets and a historical sagacity that has avoided contemporary resurfacing and remodeling works along Winckley Street and the introduction of structured segregation. The cobbles provide sufficient friction to reduce vehicular speed along such a narrow carriageway and combined with busy pedestrian activity; drivers have a greater sense of awareness of such activity whilst navigating the city center. But mainly, this proves that Shared Space has been functioning satisfactorily in Preston for centuries.

Figure 8. Image of Winckley Street, Preston illustrating level surface between footway and carriageway (©E. Kamel).

We must conclude with some consideration of technical advancements and how the highway of the future might incorporate greater usage of information technology and smart applications for mobile phone users. Having spoken to disabled technology organizations and external companies providing services relating to wayfinding, there are GPS and Bluetooth solutions available to help a plethora of pedestrian users reach their destination safely and efficiently. Whether or not the levels of technological intelligence are currently sophisticated enough to offer an improved level of safety compared to traditional crossing types may take another generation to prove. UCLan is currently in the process of developing a new Mobile Application with voice-enabled GPS wayfinding capability from key City Centre locations to any room on campus on an individual building a floor-by-floor basis. This should eventually have the capability to provide our blind and visually impaired students with enhanced assistance in navigating across campus, through public realm and highways, and include an option in time to choose between navigating via controlled or courtesy crossing routes dependent on sight and confidence levels. Technological developments will no doubt change the way we engage with public spaces.

It appears an impossible task to successfully change the cultural and historical behaviors of pedestrians, cyclists, and vehicular users around the globe within such a short timeframe. Common sense would dictate a natural leaning towards the introduction of an International Highway Crossing Code, yet at its most simplistic level, we cannot even globally agree which side of the road our vehicles should drive on.

Across Europe, certain disabilities appear to have greater status and consideration than others, yet there is no International Hierarchy of Accessibility Requirements. In cities such as Copenhagen in Denmark, where 'green' issues have a higher prominence, and dedicated cycling lanes are respected, the pedestrian movement appears equally subjugated for very different reasons. Why do shared spaces work better in the Netherlands or Denmark? Again, we need to consider the culture of the contextual demographic on a case-by-case basis. In terms of progressing the equality agenda, policymakers in collaboration with urban designers, planners, and general public groups may need to start asking further questions on how to design our public spaces and highways schemes to accommodate the specific needs of those without protected rights or characteristics – e.g., people with restricted growth syndrome, people with dementia, people with learning disabilities, those who have varying degrees of autism, and people with other little-understood sensory impairments.

The Chartered Institution of Highways and Transportation (CIHT) in the UK has made a concerted effort at weighting and prioritizing the requirements of successful shared space schemes. However, unless adopted nationally at a political level, each public sector organization will continue to have their own priorities at a local level, typically with blind/VI accessibility issues being deemed as less vital. In the UK, the

term 'accessibility' generally relates to improving access to products and services for those with specific needs and considerations. Yet, in terms of an urban design approach to the public realm, the focus is on 'accessibility for all' in the sense that improving the physical connectivity and aesthetic/functional outcomes in public space mean improving access for all user groups on an equal basis, including non-disabled users. Are Local Highway Authorities through the completion of Equality Impact Assessments and Road Safety Audits best placed to decide the most suitable way to meet the specific needs of individuals with varying degrees of confidence, skills, experience, and disability? There is a duty to consider, but not necessarily to implement design adjustments, and the difficulty remains there is no perfect solution; as an example, in balancing the accessibility needs of a wheelchair user with those of a blind Guide Dog user or a partially sighted cane user.

It is important to consider that many people feel anxious about change, they are unwilling to discuss a compromise, and they believe their specific individual needs have equal if not more important than everyone else's. One must wholeheartedly advocate making a reasonable adjustment in design to address the requirements of those with protected characteristics. However, much like the term 'shared space', the term 'reasonable adjustment' can be misinterpreted and massaged to suit a specific outcome or purpose. In a world where everyone has an increasing sense of entitlement, reactionary outrage can be instantaneously concentrated into a social media soundbite and inaptly authenticated by others, it becomes easy to create a militant approach to quickly and continually deprecate any idea or concept, and then choose to disengage from a progressive dialogue.

Technological advancement in terms of wayfinding continues to develop, however, they can be both an enabler and disabler. Mobile Phone Applications based on GPS technology and Bluetooth beacons can assist with navigation, although informal wayfinding and tactile cues within an uncluttered public realm design should remain intuitive. The emerging development of electric vehicles will make crossing increasingly difficult for the blind where shared space philosophy dominates. The technology question has not gone unnoticed by the WEC, who asks: *How can changes to the way we create and adapt our built environment, such as building information modelling and modern methods of construction, contribute to making environments more accessible and inclusive? (House of Commons: Women and Equalities Committee, 2017)*. There remain simple strategies we can consistently adopt to help mitigate these issues, such as locating traffic signal-controlled crossings and public transport interchanges such as bus stops in close proximity to one another.

What is fundamentally clear, and to all those who have been affected both positively and negatively by the redevelopment of the highway and public realm within the Preston City Centre region, is that there is no perfect answer to addressing the complex needs of individual end-users. Only by entering into meaningful, balanced

dialogue, embracing compromise, and through the production of composed, objective, evidence-based reports where both designers and users are consulted at the same time, will we stand any chance of influencing policymakers and future legislation to ensure our public realm remains safe, legible and as accessible as possible to all users, regardless of background. When negotiating unfamiliar urban territories, confusion is often temporary, and for urban designers to assume driver behavior, confidence and comfort will remain in equilibrium as familiarity increases, is a dangerous assumption to make.

There is a flawed presumption that making reasonable adjustments does not have any further detrimental impact on general users, or indeed other specific user-groups with protected characteristics. Whether or not the UCLan Masterplan deliverables fully achieve all their original aims and objectives is yet to be realized. In due course and through post-occupancy evaluation, we hope to be in a position to measure this. The Authors remain confident that the Masterplan development scheme will initiate a new healthy public debate and will provide a renewed sense of community reconnecting the City with the University. Having the new civic center UCLan introduces to the City sitting strategically in relation to Preston's only public square, is highly predicted to develop enough attraction between both to improve walkability in-between the culture center and knowledge center; the question here is: will Preston authorities use this development opportunity?

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