



**Shared Space, Shared Surfaces
and Home Zones from a Universal
Design Approach for the Urban
Environment in Ireland**

Key Findings & Recommendations

Executive Summary



Revision History

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Disclaimer

The National Disability Authority contracted TrinityHaus, Trinity College Dublin to conduct this research. The views expressed in the report are those of the authors and do not necessarily reflect the views of the National Disability Authority

This document contains the Executive Summary section of the 'Shared Space, Shared Surfaces and Home Zones from a Universal Design Approach for the Urban Environment in Ireland' report. For a full version of the report including; the research process, the stakeholder consultation process and those individuals and organisations consulted, the research findings and all related references, please refer to the full report on the National Disability Authority's Centre for Excellence in Universal Design website <http://www.universaldesign.ie/>.

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Executive Summary



Introduction

This research has been undertaken by TrinityHaus (Trinity College Dublin), on behalf of the National Disability Authority's (NDA) Centre for Excellence in Universal Design (CEUD). The aim of the research was to engage with a wide range of stakeholders in a discussion about Shared Spaces, Shared Surfaces and Home Zones in the Irish context. The research seeks to explore contemporary national and international practices and thinking on Shared Spaces, Shared Surfaces and Home Zones and to investigate these concepts from a Universal Design approach in the Irish urban environment. This report sets out key evidence based findings and provides key recommendations in relation to the implementation of Shared Spaces, Shared Surfaces and Home Zones in Ireland.

Definition of key terms

Shared Space - A street or place designed to improve pedestrian movement and comfort by reducing the dominance of motor vehicles and enabling all users to share the space rather than follow the clearly defined rules implied by more conventional designs. (Department for Transport UK, 2011).

Shared Surface - Shared space schemes sometimes used what is often referred to as a 'shared surface', where there is no kerb or level difference to segregate pedestrians and vehicles. The term 'level surface' is also used in some situations and this simply refers to "A street surface with no level difference to segregate pedestrians from vehicular traffic" (Department for Transport UK, 2011).

Home Zone - Home Zone is the UK term for a [residential] street where people and vehicles share the whole of the road space safely, and on equal terms; and where quality of life takes precedence over ease of traffic movement. (Jones and Institute of Highway Incorporated, 2002).

Shared space design – For the purposes of this report the term shared space design will be used to refer collectively to Shared Space, Shared Surfaces and Home Zones.

Universal Design - Universal Design is the design and composition of an environment so that it can be accessed, understood and used to the greatest extent possible by all people, regardless of their age, size, ability or disability. This includes public places in the built environment such as buildings, streets or spaces that the public have access to; products and services provided in those places; and systems that are available including information and communications technology (ICT). Disability Act 2005 (<http://www.universaldesign.ie/>)

Vulnerable Pedestrians – Vulnerable pedestrians is a term used in this report to identify pedestrians such as older people, children, or those with mobility, sensorial, or cognitive difficulties.

Project outline

This research project has been conducted over six months and has involved an extensive literature review of national and international best practice, guidelines, reports and peer reviewed journal papers in relation to Shared Space, Shared Surfaces and Home Zones. In addition to this, engagement with over twenty organisations, interviews with over thirty individuals, site visits and analysis of urban spaces and Home Zones, and two workshops has informed the research. Key urban issues, road design and end user concerns in have also been examined and these form the backdrop to Shared Space, Shared Surfaces and Home Zone concepts in the Irish context. Figure 1 below illustrates the process that has led to the key research findings and recommendations contained in this report.

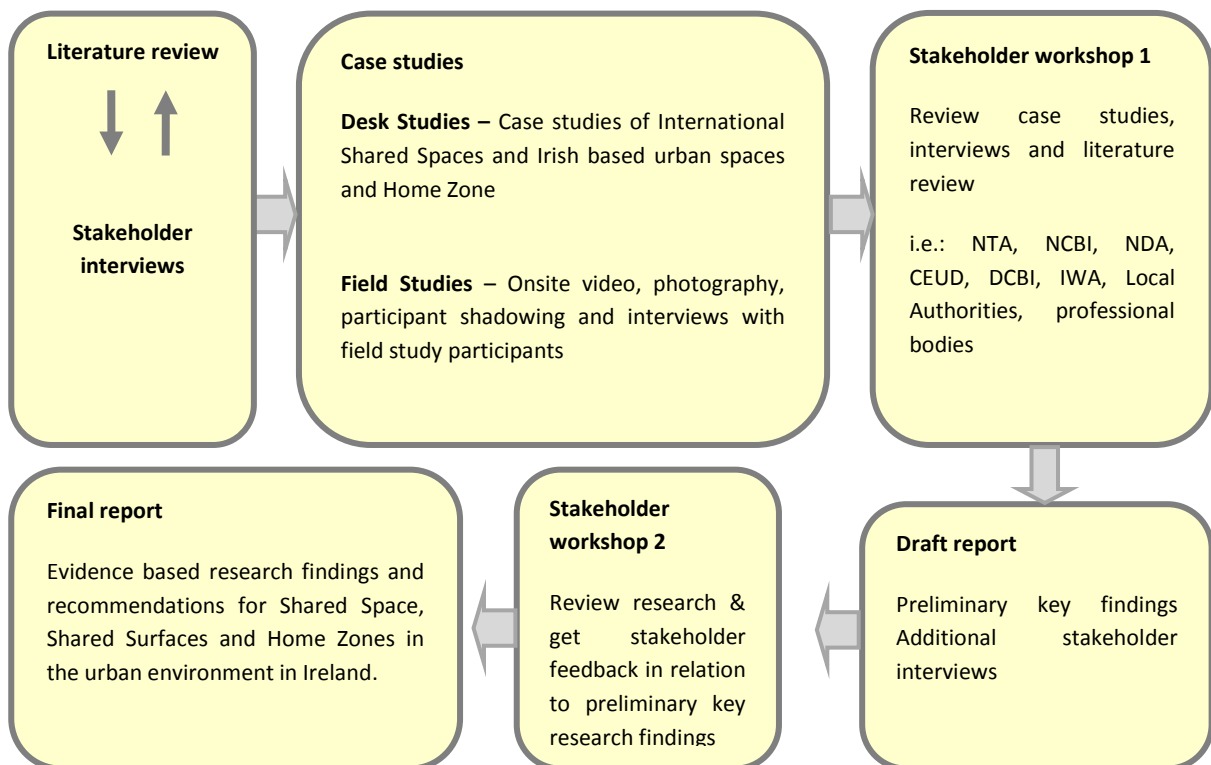


Figure 1 – Flow diagram of the research process.

Following the completion of the stakeholder interviews and having conducted a large part of the research, a draft report was prepared which outlined the key preliminary findings up to that point. This was circulated to all stakeholders prior to the second stakeholder workshop and was used as the basis to discuss all the findings with the stakeholders at the workshop. This document was subsequently amended to include all feedback and now forms a large part of this final report.

Key findings

During the research a range of issues were highlighted by the stakeholders, however the following views quickly became apparent;

Lack of awareness - While the concepts of Shared Space, Shared Surfaces and Home Zones are now being used more commonly in mainland Europe and the UK, there is very little awareness of these design approaches among the general public in Ireland. Among specific organisations who represent more vulnerable pedestrians such as the National Council for the Blind Ireland and the Irish Guide Dogs for the Blind, there is a greater knowledge due to their concerns about the impact of specific shared space design features such as kerb removal and Shared Surfaces. Design professionals and local authority architects and engineers also had a good level of awareness although in some cases there was little knowledge about specific design features or best practice guidelines such as those recently published in the UK.

While there are quite a few built examples of Home Zones throughout the country, especially in the redeveloped Ballymun and the recently constructed Adamstown area, both in Dublin, there was little awareness of the Home Zone concept among the many user groups interviewed. In fact, in some cases there was limited awareness of the rationale behind this concept among those actually living in areas designed as Home Zones. All stakeholders reported that the definitions presented to them in this research for Shared Space, Shared Surfaces and Home Zones, provided them with a clearer understanding of these design concepts.

While most designers and local authorities acknowledged the challenges of shared space design in relation to people with visual difficulties, many were surprised to hear that other organisations such as the Irish Wheelchair Association also had reservations about shared space design and agreed that there needed to be greater awareness among designers and providers about the full range of end user needs.

Support and concerns - Having discussed the main issues, all of the stakeholders supported the general aims of shared space design, as long as the focus was on improving the usability of the urban environment and providing more liveable streets. However, many stakeholders

expressed very strong views about specific design features such as Level Surfaces which remove the typical delineation between traffic and pedestrians and they stressed the importance of best practice guidelines and design approaches which protect more vulnerable pedestrians.

Universal Design - In line with these concerns many stakeholders were supportive of adopting a Universal Design approach to shared space design as they believed this would help address many of the needs of more vulnerable pedestrians. The stakeholder engagement process which is central to the Universal Design was considered a key attribute to adopting this approach.

Evidence based guidelines - There was broad consensus that Ireland needs a set of national shared space design guidelines specific to the Irish context that would include advice on both Shared Space and Home Zones, which should be guided by Universal Design principles. It was also agreed that further research and pre and post construction data gathered from pilot studies would be needed to underpin any guidelines. In addition an education and awareness campaign would be required to inform all users about the intentions of shared space design and how the priority is shifted away from the car towards a more shared environment where individual responsibility, awareness of other users, especially vulnerable pedestrians, and courtesy must be exercised.

Maintenance and ongoing success – Finally, many stakeholders emphasised the need for ongoing management and maintenance of all public urban spaces, but expressed particular concern for shared space design schemes where they believed a sense of local stewardship was required. It was acknowledged that while shared responsibility was the key to long term success, the local authority would also have to help foster this sense of shared ownership, but would also need to be proactive in terms of management and enforcement if required.

While carrying out the research and stakeholder consultation, the key findings started to cluster around a number of themes which broke down into seven headings including; Evidence based decision making; Legislation, design guidelines and enforcement; Education, awareness and training; Consultation and Planning; Design and appropriate locations; Economic implications; and finally Maintenance, management, durability and sustainability. Figure 2 below outlines these main themes and illustrates how they were presented to the stakeholders.



Figure 2: Key finding themes for Shared Spaces, Shared Surfaces and Home Zones.

The research findings have been organised under these seven headings and are detailed further in chapter 12 of the full report. Following each set of research findings there is a number of key recommendations based on the evidence presented. Firstly, these recommendations represent the views and concerns of the key stakeholders which have both informed and been informed by this consultation process. Secondly the recommendations provide advice on how to best advance shared space design practices in Ireland at a local authority and national level while providing for the needs of all street users. The following sections outline these key recommendations.

4.1. Evidence Base Decision Making



- At national level Shared Space pilot studies are required in association with selected local authorities in a number of urban and rural locations. These pilot studies need to be

guided by a set of national level preliminary site selection and assessment criteria, local stakeholder consultation and design guidelines to ensure consistency of site selection and research findings at all test sites.

- Examine international examples of pre and post construction design assessments along with key performance Indicators and develop an appropriate national assessment methodology and indicator suite to measure the impact of shared space design on specific locations in line with international best practice and standards appropriate to the Irish context. This assessment procedure should follow Universal Design principles and also include a range of selected end users including older people, children and those with visual, mobility and cognitive difficulties to be involved with pre and post construction on-site assessments.
- Such assessment could be conducted presently in selected existing Home Zones to determine the usability and success of such spaces in terms of Universal Design. This assessment could provide initial feedback and help inform the preliminary guidelines used in connection with the pilot studies.

4.2. Legislation, design guidelines and enforcement



- Use of the term ‘shared space design’ as an overall term when referring generally to design which includes specific terms Shared Space, Shared Surfaces and Home Zones.
- National level legislative change to define the specific terms; Shared Space, Shared Surface, Level Street and Home Zones in the appropriate Irish road traffic or development acts.
- Legislative and regulatory changes at a national government level to incorporate shared space design measures to provide Local Authorities with clear consultation and design guidelines as well as clarity around the function of shared space design, permitted uses, permitted road user behaviour and liability and responsibility for designers, Local Authorities and users.
- Create a national level shared space design guidance document built around the principles of Universal Design, and the Universal Design process. This document could support the forthcoming ‘Design Manual for Urban Streets’ which is currently being finalised by the Department of Transport, Tourism and Sport and the Department of Environment, Community and Local Transport. It could also support other existing national level design guidance such as the recently published ‘Building for Everyone: A Universal Design Approach. This document should provide detailed best practice design

and construction detailing guidance to include Shared Space, Shared Surfaces and Home Zones. The guidance should include advice on local consultation and the carrying out of local pilot studies and mock-ups as part of the community consultation.

- The adoption of guidance by local authorities could be expedited through the use of Section 28 of the Planning and Development 2000, which allows the minister to issue guidelines directly to local authorities (See Section 12.2 of the main report for more information).



4.3. Education, Awareness and training

- At a national and local authority level training should be provided to key design professionals in private practice and those working with local authorities. This training should educate practitioners about the necessary consultation process associated with Shared Space design, end user needs and the specific design requirements of Shared Space design. This training should also extend to key contractors who will carry out the construction work as correct detailing and consistency are vital to successful shared space design.
- Relevant government authorities and departments such as the Road Safety Authority (RSA) to undertake an education and awareness campaign to extend to all road users to fully explain how shared space design has been implemented are supposed to work. The campaign should instil in all road users an understanding that in Shared Space there is a different set of priorities, that the carriageway is to be shared and that a greater level of communication, negotiation and courtesy is required.
- Any rules of the road, safe cross code, or similar road safety guidance prepared by the RSA to include information and instructions about shared space design and responsibilities of each user within such spaces. The road safety campaigns currently run by the RSA in partnership with the Department of Education and local community groups would also need to include information about shared space design schemes.
- Where shared space design pilot schemes or redevelopment takes place, the local authority need to provide accessible information onsite, online and using other relevant media to inform and educate the street users about the intentions of shared space design or the aims and objectives of the pilot study



4.4. Consultation and planning

- The consultation process and stakeholder engagement must be seen as one of the central components of shared space design. All national guidelines should make this explicit and provide guidance to design practitioners and local authorities on how to best engage with end users, carry out local pilot studies or on site mock-ups. Beyond the national level guidelines, all local authorities must make the stakeholder consultation central to their process of implementing shared space design.
- Any guidance must stress that the objectives around a higher quality of life and increased liveability must be kept to the fore and that the process must focus on the key local issues and not get sidetracked by the pursuit of shared space design as the ultimate goal.



4.5. Design and appropriate locations

- The appropriate location of shared space design schemes is critical to the success of these designs and this often includes avoiding areas trafficked by heavy vehicles or excessive volumes of traffic. A set of national level selection criteria must be defined in order to guide local authorities and design practitioners in selecting appropriate locations for the implementation of shared space design.
- Any national guidance developed should be based on the principles of Universal Design and the Universal Design process should be employed throughout any shared space design process. Emphasis should be placed on key shared space design measures such as gateways, comfort zones, delineators or crossings points. Surface treatments should also be used where appropriate to provide audible warning for quieter vehicles, electric cars and hybrids.
- Further research is required to fully understand the impact of raised kerbs or dedicated comfort zones on the level of 'sharedness' within a Shared Space or Home Zone and to what extent this has a negative or positive impact on the quality of the space. In line with this, further research should be conducted by relevant government departments in conjunction with local authorities, to examine acceptable delineators other than kerbs that could be used to demarcate comfort space and space shared with vehicles.
- Recent guidance from the UK in relation to shared space design makes it clear that kerb removal and Shared Surfaces are not compulsory in achieving Shared Space or Home Zones. Therefore, until satisfactory evidence exists, through data gathered from national

pilot studies or verification from rigorous international research, which demonstrates successfully the operation of an alternative delineator to kerbs, shared space design, in the short term should maintain an appropriate kerb to indicate the comfort zone for vulnerable pedestrians.

4.6. Economic Implications



- This research has found that while a better quality street environment and pedestrian experience has positive implications for the local economy, the economic value of a high quality urban environment is not appreciated by many businesses. In fact British research shows that many businesses overestimate the value of vehicular access while underestimating the value of pedestrian traffic to their business. Using tools such as the ‘Pedestrian Environment Review System’ or PERS as developed by TRL limited (TRL Limited, 2012), or the ‘Valuing Urban Realm (VUR) Toolkit’ (Transport for London, 2012), or a similar methodology developed for the Irish context, a cost-benefit analysis is required to help quantify the economic implications of improvements to the urban environment in the Irish urban areas (See Section 12.6 of the main report for an explanation of these terms). Whether existing tools are used, or a new Irish specific tool is developed, a consistent set of evaluation criteria is needed, similar to those outlined in 12.6 of the main report. If a scoring system similar to PERS is employed then the PERS score of the existing street can be used as baseline in terms of judging the proposed, or completed improvements. While the ‘VUR Toolkit’ automatically monetises the benefits of urban space improvement, rental values, property prices, or pedestrian footfall can also be used as a indicator proxy for the economic benefit of improving the public realm.
- Further to this, as part of any pre-and-post assessment of the implementation of shared space design, a local cost benefit exercise, along the lines of that outlined above, should be carried out by an objective team of multidisciplinary experts to quantify the affect of shared space design on local businesses. Any such team should be composed of professionals such as; retail experts, architects, landscape architects, roads or civil engineers, and quantity surveyors. Depending on the complexity of the project, the project team may also need to include a traffic or transport engineer.

4.7. Maintenance, management, durability and sustainability



- Successful long term maintenance and management of streets and public spaces requires a sense of stewardship amongst the local residential and business community. Any guidelines should stress that the consultation process should have as one of its

goals the full participation and support of the community. The physical design and layout of shared spaces, and Home Zones in particular, should carefully consider the interaction of 'defensible space', accessibility to non residents and 'routine activities of place'. In line with this, every effort must be made to ensure that the design process and resulting built environment engenders a sense of ownership, stewardship or territorial guardianship in the local community (See Section 12.7 of the main report for an explanation of these terms). This must be driven primarily at the local authority level.

- Continuing maintenance of the shared public or semi-public spaces is critical to the ongoing success of shared space design. 'Broken window' thinking is useful in terms of preventing neighbourhood deterioration, especially in shared public and semi-public spaces where obvious ownership and responsibility may not as clear as privately owned space (See Section 12.7 of the main report for an explanation of 'Broken Windows' theory). Management and maintenance schemes should acknowledge that initial minor damage or graffiti can often lead to more widespread disorder and thus undermine the community and any territorial guardianship.
- While a certain level of local authority enforcement is required, the design guidelines should enable a final product that encourages self regulation and self enforcement at a local community level.

Conclusions

The research findings and key recommendations emphasise the current issues associated with shared space design in general and specific concerns expressed by key stakeholders in the Irish context. There is a belief held by many stakeholders that the standard of much urban design in Ireland to date was not of a sufficient quality, and this had some bearing on their opinion about the potential success of shared space design in Ireland.

While this report contains over sixty key research findings and twenty recommendations it is understood that these need to be prioritised and consideration given to shorter term achievements.

Many stakeholders, particularly those representing end-users had little awareness of shared space design and those that did tended to represent people with visual difficulties. These groups were therefore more aware of the potential difficulties presented by certain existing features of shared space design. However, all stakeholders were supportive of the core principles of shared space design which focus on increased pedestrian priority and the overall improvement of the street environment.

The other reoccurring themes coming out of the stakeholder engagement process centred on the need for evidence based design guidelines specific to the Irish context, serious

concerns about Shared Surfaces and the lack of delineation for certain vulnerable pedestrians and the necessity for in-depth stakeholder engagement in relation to both the preparations of guidelines and ongoing local consultation regarding any proposed shared space design schemes. The stakeholders agreed that the Universal Design approach would be critical in meeting end user needs. Upon presenting the preliminary research findings the stakeholders reported that the key research findings now captured the majority of their concerns.

One of the main conclusions of this report finds that pilot studies are necessary immediately to inform end-users about the intentions of shared space design and to learn from direct onsite interactions between selected end-users, the public and local businesses and shared space designed pilot study schemes. Where local authorities are considering urban upgrade or trial pedestrianisation, this would provide an ideal opportunity for such pilot studies. Such pilot studies need to be informed by preliminary site selection criteria, draft design guidelines and an assessment methodology with an associated indicator suite to measure the impact of the alterations. These guidelines and assessment criteria need to be developed prior to the pilot study phase. Once the research has been completed a set of evidence based national guidelines can be created based on these preliminary guidelines.

Such assessment can be carried out immediately on selected existing Home Zones to determine the usability and success of such spaces in terms of Universal Design. This assessment could help inform the preliminary guidelines in relation to Home Zone design specifically. It could also be used to provide initial feedback in connection with any pilot studies associated with non residential Shared Space, and to test an appropriate pre and post construction assessment methodology.

In the short term, if there is still a genuine absence of a reliable alternative to the traditional kerb as a delineator of comfort zones, any shared space design that proceeds should maintain a kerb to act in this capacity. When evidence exists that demonstrates the successful application of an alternative delineator such as a wide tactile strip or similar, then Shared Surfaces may be considered, in consultation with local stakeholders and end-users.

In general there was much support for the Home Zone concept among the stakeholders interviewed, however the same concerns about Shared Surfaces exist. This report finds that Home Zones can bring many benefits to a local community and that with proper guidelines, addressing the concerns of vulnerable pedestrians that Home Zones could be widely implemented throughout Ireland in new build or retrofit schemes.

This report highlights the gaps in knowledge that exist in relation to Shared Space, Shared Surfaces and Home Zones, while the key findings and recommendations propose further research in the Irish context to address these issues. This research acknowledges the

potential benefit of shared space design towards the creation of more liveable and pedestrian friendly street environments. Notwithstanding this, the report stresses the need for evidence based design informed by ongoing stakeholder engagement and the ongoing development of best practice. In adopting a Universal Design approach, local public involvement as advocated by Manley (Manley, 2011), an understanding of the local cultural context (Steinfeld, 2010, Steinfeld and Danford, 2007) and a continuous evolution of a design approach (Preiser, 2011), are all central to the sustainability of any high quality, people friendly and Universally Designed streetscape.

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“Life between buildings comprises the entire spectrum of activities, which combine to make communal spaces in cities and residential areas meaningful and attractive”

(Jan Gehl)



“The major challenge for urbanism in the Information age is to restore the culture of cities. This requires a socio-spatial treatment of urban forms, a process that we know as urban design. But it must be an urban design able of connecting local life, individuals, communes, and instrumental global flows through the sharing of public spaces”

(Manuel Castells)



“The built environment has traditionally been built with the average young, healthy male in mind. Until the design of the built environment takes into account the diverse needs of users, many people will be restricted or excluded from the outside world”

(Burton and Mitchell)





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